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CENSUS
OF THE
PHILIPPINE
ISLANDS

1918

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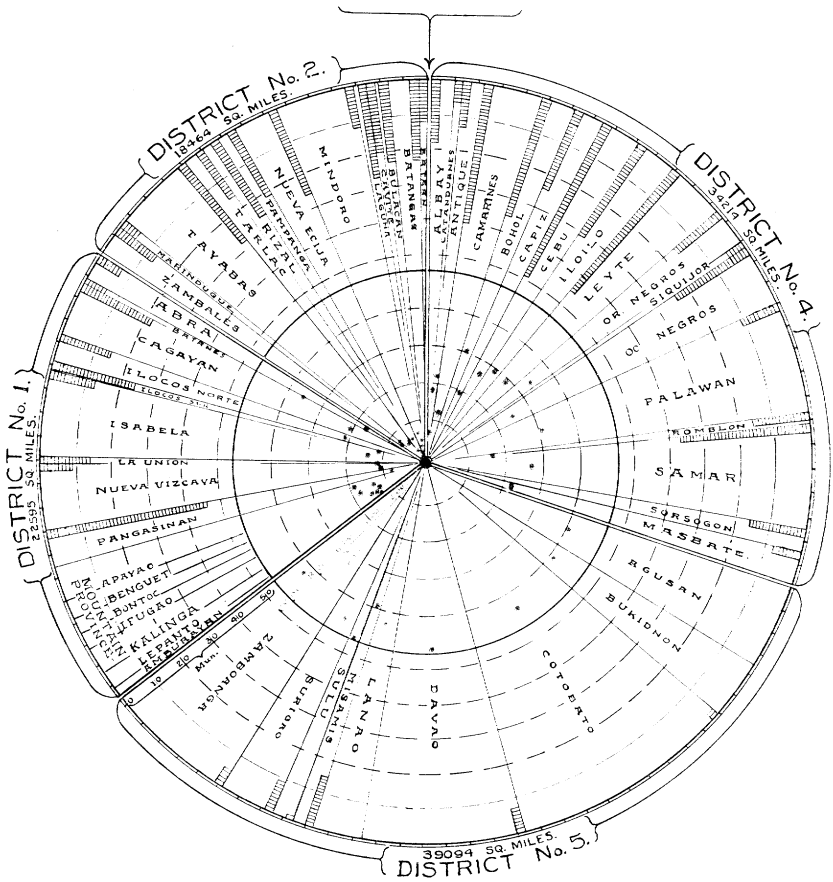
CENSUS OF 1918

GRAPHIC REPRESENTATION OF THE FIVE INSPECTION DISTRICTS, SHOWING THE RELATIVE AREA OF THE PROVINCES AND SUBPROVINCES, THE DISTANCES OF THEIR CAPITALS FROM MANILA, AND THE NUMBER OF MUNICIPALITIES

CITY OF MANILA

DISTRICT No. 3

14 SQ. MILES



CENTER (MANILA) ●
 CAPITAL OF PROVINCE ○
 MUNICIPALITY ○
 AREA □
 SECTOR □

NOTE.

The statistical data given in this VOLUME ONE must be understood as having been corrected by the final statistical data found in Volumes II, III, and IV (Parts 1 and 2).

CENSUS
OF THE
PHILIPPINE ISLANDS

TAKEN UNDER THE DIRECTION OF THE
PHILIPPINE LEGISLATURE
IN THE YEAR 1918

IN FOUR VOLUMES

VOLUME I

GEOGRAPHY, HISTORY, AND
CLIMATOLOGY

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VOLUME I.*—Geography, History, and Climatology.

VOLUME II.—Population and Mortality.

VOLUME III.—Agriculture.

VOLUME IV.—Social Conditions, Judicial Statistics, Manufactures, Household Industries, and Education.

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INTRODUCTION.

Authority for and Scope of the Census—Proclamation of the Governor-General—Plan for the Taking of the Census—The Assembly of Census Inspectors in Manila—Instructions to Enumerators and Special Agents—Difficulties Encountered in the Urban Districts—Difficulties in the Enumeration of Non-Christian Filipinos—Organization of the Office of the Philippine Census—Official Inspection of the Census Office by High Government Officials—Permanency of the Census Office—Scientific Contributions to the Census—Atlas of the Philippines with Geographical Sketches and Historical Accounts—Weather and Climate of the Philippines—Results of the Census Regarding Population, Agriculture, Education, Mortality, Social Statistics, Manufactures, and Household Industries—Indications of Prosperity and Social Progress—Usefulness and Necessity of Census Data for Constructive Measures.

The four volumes of the Census of 1918, as now published, contain an accurate and reliable exposition of the data recorded by the enumerators and special agents appointed in accordance with the provisions of the Census Act.

The taking of the Census of 1918 is authorized by section 2 of Act 2352, approved on February 28, 1914, as amended by section 1 of Act 2766, which reads as follows:

A census of the Philippine Islands shall be taken under the general supervision of the Governor-General and the immediate direction of an officer, to be known as the Director of the Census, who shall be appointed by the Governor-General, by and with the advice and consent of the Senate. The enumeration shall begin on a day to be fixed by the Governor-General, which shall be called Census Day, and shall proceed on consecutive days from daylight to darkness, including Sundays and holidays, until completed; and all data prescribed to be gathered by this Act or by regulations issued under it shall be gathered as of twelve o'clock of the night preceding that day: *Provided*, That if the Governor-General shall deem it necessary to require that the enumeration of any part or parts of the Philippine Islands should begin before Census Day, he is hereby authorized to fix the time when such enumeration shall begin.

In accordance with section 36 of the Census Act, the Governor-General, in August, 1914, appointed a Committee composed of the Executive Secretary of the Philippine Islands, Mr. Charles R. Cameron, Colonel J. Lindsay Johnson, and Mr. Epifanio de los Santos, Provincial Fiscal of Bulacan. The undersigned, as Executive Secretary, then began to render service in connec-

tion with the Census. The committee mentioned dedicated seven months to the preliminary study of the most appropriate methods to be adopted in the preparation of the Census. In February, 1915, it submitted its report to the Governor-General, recommending that the American plan, as adopted for the Census of Cuba and for the Philippine Census of 1903, be followed, with such modifications as the conditions, laws, usages and customs of these Islands would require. The work of that Committee consisted principally in the preparation of regulations for the execution of the Census Act. It also prepared six regular schedules for the taking of the census of the population, agriculture, schools, mortality, social statistics, and manufactures; two special schedules for the census of the non-Christian population, and miscellaneous others, with the necessary instructions for the collection of the data required in the above schedules.

On March 2, 1918, the Philippine Legislature, in amending the Census Act, appropriated the sum of one million pesos (₱1,000,000) for the taking of the Census. Subsequently, the Governor-General, on May 9, 1918, appointed the undersigned as Director of the Census and Dr. Alejandro Albert, Under Secretary of Public Instruction, Judge Percy M. Moir, of the Court of First Instance of Rizal, Dr. Leon Ma. Guerrero, of the Bureau of Science, and Messrs. Felipe Buencamino, Sr., and Epifanio de los Santos, as Assistant Directors. On May 9, 1918, the Census officials so appointed held their first meeting for the definite organization of the Census work and for the preparation of all schedules, instructions, and other printed matter for the use of enumerators, and immediately proceeded to revise the schedules prepared by the first Census Committee, adopting them with certain modifications and introducing new schedules, such as that on Household Industries.

In accordance with section 2 of the Census Act above mentioned, the Governor-General issued Proclamation No. 21, dated May 24, 1918, fixing the 31st of December, 1918, as the Census Day. The proclamation of the Governor-General is as follows:

In ancient times countries politically organized have for military and economic purposes felt the need of possessing exact data with reference to the number of inhabitants, resources and occupations. In the Philippines since the time of Buzeta, in the year seventeen hundred and ninety-nine, several attempts have been made to collect similar data; but a census as it is known at the present time, was not taken until nineteen hundred and three, when by means of scientific methods the work of enumeration was so skillfully prepared that the census of that year is considered a success.

The Census of Nineteen hundred and three was taken not only as a means of determining the number of Filipino people entitled to the right of suffrage in electing members to a popular Assembly, but also of ascertaining their social and industrial conditions as indispensable basis for intelligent legislative action for the development of the material prosperity of these Islands. The taking of that Census, according to the proclamation of the Governor-General, William H. Taft, may be considered a proof of the capacity of the Filipino people to perform important governmental functions; an opinion which was substantiated by the results obtained, according to the testimony of General Sanger, then the Director of the Census. It is acknowledged, however, that owing to the unsettled condition of the Islands at the time when the last Census was taken, there have been noted, particularly with reference to the social statistics, certain omissions or deficiencies which make the conclusions for practical and legislative purposes hard to formulate. For this reason the Philippine Legislature has deemed it advisable to enact Act Numbered 2352, as amended by Act Numbered 2766, directing the taking of a new census which will comprise recent and comprehensive data to show not only the actual state of progress accomplished by the Filipino people, but also to indicate wherein deficiencies which must be corrected may exist, as well as social evils which must be remedied.

It is expected that the new census will be better adapted to set forth the actual condition of the Filipino people, encouraged by their ideals of progress in all aspects of life, ideals never for a moment lost sight of during the last decade and a half. Information relative to inhabitants of towns, besides data concerning associations, social and economic institutions, agriculture, industry and commerce will be collected.

In order that this great task of collecting data in a given moment of the daily life should be beneficial, the hearty and enthusiastic coöperation of the whole people is indispensable, because on them depends the outcome of this work. Without such coöperation given with entire faith and confidence in the results to be obtained and which will surely redound to the credit of the country, it will be impossible to accomplish this task successfully.

Misstatements for the purpose either of exaggerating or of toning down facts, make impossible any accuracy in generalizations, which are only of value when based upon minute details. Such minuteness, however wearisome to the casual person, is of transcendental value for a scientific conclusion. For this reason the law providing for the taking of the new census in the Philippines contains several penal provisions to be imposed upon individuals who in any way raise difficulties or impede the census work, or knowingly misrepresent data required from them.

It is hoped that the census will be a genuine expression of the actual conditions of the Philippines with her riches and poverties fully exposed without pretensions, false modesty, or misrepresentation. The Census will not, therefore, be a dry and confusing

memorandum book, but a collection of social data, information and facts of all kinds, profitable for the statesman, the legislator, the executive, the philosopher, the scientist, the manufacturer, the merchant, and the agriculturist. In a word, the Census will be of indispensable utility to everybody interested in the progress and welfare of the Philippines.

Accuracy in taking down the data should be the rule for all those who are directly or indirectly connected with the work, for, first and last, the Census is a brief in favor of the political and economic ideals to which the Filipino people have always aspired.

There will be no reason for doubting the conclusions drawn from the data published in the new Census, for everybody believes that the Philippines possesses all the elements that go to make up a country with an independent existence.

From nineteen hundred and three to nineteen hundred and eighteen, the progress of the Filipino people has been evident not only in the exercise of self-government but in agriculture, industry, and commerce. In the Government, there exist Filipinos of experience and demonstrated ability in all of its different branches. Likewise, in agriculture, industry, and commerce, and in the liberal and mechanical arts, a great number of persons during this period successfully pursued their respective professions and occupations and their experience constitutes today an asset of inestimable value to the culture and material development of the Filipino people. Along educational lines, there are excellent proofs of the positive results obtained by both the public and the private schools; many of the high-school graduates and those of the different colleges of the University of the Philippines and of other institutions of learning are now playing an important role in the community.

Though the present period of economic crisis through which the world is passing seems a somewhat unfavorable moment for the taking of a census in the Philippines, nevertheless when the time for world peace comes, which we all long for—when the great nations determine the status of the small countries, the Philippines undoubtedly will be included in that general political revision, and therefore ought to be prepared to show the best evidence of her progress, a graphic demonstration of her culture, in the International Court.

Now therefore, I, Francis Burton Harrison, Governor-General of the Philippine Islands, in pursuance of section two of Act Numbered Twenty-three hundred and fifty-two, enacted by the Philippine Legislature on the twenty-eight of February, nineteen hundred and fourteen, as amended by Act Numbered Twenty-seven hundred and sixty-six, enacted by the same Legislature on the eighteenth of March, nineteen hundred and eighteen, do hereby issue this proclamation, announcing as Census Day the thirty-first day of December, nineteen hundred and eighteen, on which day the enumeration of the population shall begin in all parts of the Philippine Islands, including the territory comprehended in the Department of Mindanao and Sulu, and shall

proceed on consecutive days thereafter, including Sundays and holidays, until completed.

It is expected that the enumeration among regularly and specially organized provinces and subprovinces, excluding those of the Mountain Province, and the Department of Mindanao and Sulu will be carried on by the enumerators of urban districts at the rate of not less than fifty persons per day, and of rural districts at the rate of not less than thirty persons per day, said enumeration to begin at daylight and continue until dark. The enumeration in the Mountain Province and the Department of Mindanao and Sulu will be carried on in the manner prescribed by the Director of the Census as circumstances may warrant. Any reduction in any district in the rate of enumeration thus established will be made the subject of investigation by the inspector, and unless it is found that such reduction in the rate of enumeration was due to causes beyond the control of the enumerator, pay for the period in excess of that corresponding to the rate established, may be withheld, pending the decision of the Director of the Census.

In witness whereof, I have hereunto set my hand and caused the great seal of the Government of the Philippine Islands to be affixed.

Given at the city of Manila, this twenty-fourth day of May in the year of our Lord nineteen hundred and eighteen.

FRANCIS BURTON HARRISON,
Governor-General.

Pursuant to the proclamation of the Governor-General, the whole Philippine Islands was divided into five districts, to wit:

No. 1 (Northern District).—Comprising the Province of Nueva Vizcaya and the Mountain Province, with the Subprovinces of Benguet, Amburayan, Ifugao, Lepanto, Bontoc, Kalinga, and Apayao, and the Provinces of Abra, Batanes, Isabela, Cagayan, Ilocos Sur, Ilocos Norte, La Union, and Pangasinan.

No. 2 (Central District).—Comprising the Provinces of Tarlac, Zambales, Nueva Ecija, Pampanga, Bulacan, Bataan, Rizal, Cavite, Laguna, Tayabas, Batangas, and Mindoro, and the Subprovince of Marinduque.

No. 3 (District of Manila).—Comprising the city of Manila.

No. 4 (Southern District).—Comprising the Provinces of Ambos Camarines, Albay, Sorsogon, Samar, Leyte, Iloilo, Capiz, Antique, Romblon, Oriental Negros, Occidental Negros, Cebu, Bohol, and Palawan, and the Subprovinces of Siquijor, Masbate, and Catanduanes.

No. 5 (Mindanao District).—Comprising the Provinces of Agusan, Bukidnon, Cotabato, Davao, Lanao, Sulu, and Zamboanga, or the Department of Mindanao and Sulu, and the Provinces of Misamis and Surigao.

The above districts were assigned for census purposes to the Assistant Directors, as follows: Assistant Director Epifanio de los Santos for the first district, Mr. Felipe Buencamino, Sr., for the second, Justice Percy M. Moir for the third, Dr. Leon Ma. Guerrero for the fourth, and Dr. Alejandro Albert for the fifth district. Upon the resignation of Justice Moir, on November 25, 1918, on account of his appointment to the Supreme Court, Dr. Albert took his place in the third district, and in Dr. Albert's place, Judge Ponciano Reyes, of the Fourteenth Judicial district, was appointed as special inspector, vested with authority and delegated power similar to those exercised by the Assistant Directors of the Census. Judge Reyes, who perished on December 25, 1918, in the wreck of the *Quantico*, was succeeded by the Secretary of the Department of Mindanao and Sulu, Mr. Teopisto Guingona.

There were organized in all provinces and municipalities provincial advisory census boards and municipal and township census boards in accordance with the regulations approved by the Governor-General on May 24, 1918. The members of the provincial census boards acted as inspectors and auxiliary inspectors of the Census, while those of the municipal and township census boards performed the duties of special agents. In the Mountain Province, on account of its special conditions, the provincial governor was appointed as inspector, while the lieutenant-governors were appointed as auxiliary inspectors for their respective sub-provinces. A similar organization was adopted for the Department of Mindanao and Sulu, the Secretary of the Department being appointed as special census inspector, and the governors of the provinces comprising the Department as auxiliary inspectors. Thus, the supervision of the census work was assigned to the officials appointed in accordance with the organic regulations of the census. While the special agents were held responsible for the work in the portion of the municipality or township assigned to each, the inspectors and auxiliary inspectors were likewise held responsible for the work in the municipalities under their jurisdiction.

The provincial census boards are charged with the duty of lending support and assistance to the officers taking the census in each province; to exert all their authority and influence, collectively and individually, over the people of the province to make them coöperate actively and heartily with the Census officers; to divide the province into as many inspection districts as may be necessary, each district to be composed of one or more contiguous municipalities, municipal districts, townships, or other

territorial units, as the case may be; to divide the municipalities, municipal districts, or other territorial units within each inspection district into as many enumeration districts as may be necessary, in accordance with the basis established in the census regulations; to number each inspection district and assign it to one of the auxiliary inspectors; and, finally, to discharge in territory not organized into municipalities or townships the duties herein imposed upon municipal and township advisory census boards.

The members of the municipal advisory census boards are bound to exert all their authority and influence, collectively and individually, upon the people of their municipality in order to make them cooperate actively and heartily with the census officers; to furnish the census authorities with any information that may be desired in connection with the census work, and to act as special agents in the municipality.

To accomplish this tremendous task in such a manner that it would reveal the actual conditions of the country in all its aspects, an extensive organization covering even the minutest detail of the work was necessary. To this end, as has been stated, all the provinces of the Archipelago were divided into five districts, each of which was placed under the supervision of one Assistant Director; each province was in turn divided into three or more inspection districts, and to each inspection district one provincial inspector was assigned. Lastly, the municipalities were divided into enumeration districts of 1,500 inhabitants each in urban districts, and of 1,000 each in rural districts. Each enumeration district was assigned to one enumerator and for every ten enumerators generally one substitute enumerator was appointed. A similar organization was adopted for the Department of Mindanao and Sulu and for the Mountain Province, with the only difference that the enumeration districts there were less extensive, and that the lieutenant-governors of the Mountain Province and the governors of the provinces of the Department of Mindanao and Sulu were required to perform the same duties as the provincial inspectors in their jurisdictions.

As a rule, three census inspectors were appointed for each province and subprovince, with the exception of Manila, Cebu, Leyte, Pangasinan, and Iloilo, where a greater number of inspectors was authorized. The total number of inspectors appointed was 178. For each municipality and township, three special agents were appointed; the aggregate number of these agents was 2,650. Inasmuch as the number of inhabitants of

the Philippine Islands was estimated at 11,000,000, it was necessary to appoint 9,702 enumerators, besides 1,730 substitute enumerators; their number varied from 1 to 5 in each municipality, according to the estimated population of the municipality. In addition to the regular and substitute enumerators, auxiliary enumerators were appointed in places where their services were needed in order to secure a successful accomplishment of the census work. These appointments were, therefore, governed exclusively by the familiarity of the appointee with the locality and the customs and habits of the inhabitants thereof. These auxiliary enumerators numbered 824 in all.

Notwithstanding the fact that the regular enumerators had to enumerate both the inhabitants and the farms, special enumerators for Schedule No. 2 (Agriculture) were appointed in some provinces where the number of farms was very great. The total number of special enumerators for schools and mortality was 3,200. Likewise, special enumerators were appointed for special areas, institutions, and establishments, such as private colleges, convents, hospitals, hotels, steamers, military posts, etc.

In the Census of 1903, the regular enumerators took charge of the schedules relative to population, agriculture, and schools; and the special agents, who were then the municipal presidents, were in charge of the demographic, social, and industrial statistics and of Special Schedule No. 7, which was for territories not regularly organized.

In the present census, the regular enumerators filled in only the schedules relative to population and agriculture; and the special agents, those relative to social statistics, manufactures, and household industries, while the special enumerators appointed from the Bureaus of Education and Health, filled in respectively, the schedules for schools and mortality.

In connection with the appointment of Census employees such as inspectors and special agents, it is gratifying to state that there was no lack of personnel sufficiently qualified to hold those positions. Many persons of social standing and high culture offered their services, animated by the desire to do something for their country, and many of them were, after the taking of the Census, elected to provincial office such as governor or member of the provincial board, while others were elected members of the House of Representatives. There was no difficulty in the appointment of enumerators for the provinces, except in the Department of Mindanao and Sulu and in the Mountain Province. In order to be eligible for the position of enumerator, a person

had to be over 20 years of age, be able to read and write Spanish or English, know the local language and, above all, write a legible and clear hand. The difficulty lay in the selection from so many candidates, who claimed to possess all the qualifications required by the organic regulations. Many regular enumerators have a good knowledge of the English language and have filled in their schedules in this language; all the special enumerators for the schools and some of the enumerators for mortality have done so.

To overcome the lack of personnel in the Mountain Province, it was necessary to bring people from the bordering provinces of Pangasinan and La Union. This circumstance greatly increased the cost of enumeration in that province, because besides their traveling expenses, they had to be paid subsistence for the number of days they stayed in their respective stations before the taking of the Census, in order to receive the necessary instructions from the inspectors, familiarize themselves with local conditions, and acquire some knowledge of the customs of the inhabitants. However, it is a source of satisfaction to state that out of 471 enumerators appointed for the Mountain Province, 80 were young Igorots, educated in the public schools, some of them having completed the intermediate course, while others had finished the first two years of high school.

To solve the difficulty encountered in the Department of Mindanao and Sulu through the lack of Moros qualified to undertake enumeration work, it was found necessary to appoint Christian residents of Zamboanga, the teachers of municipal districts, and even members of the Constabulary, who had been residing in the Department for a certain length of time and were therefore acquainted with local conditions and the usages and customs of the inhabitants. The services of some *datos* or Moro chiefs were utilized by appointing them as auxiliary enumerators, to accompany the regular men in the enumeration work. A similar measure was adopted in the Mountain Province, where certain leading Igorots were appointed to act as guides to the enumerators.

A tremendous task such as the taking of the Census of the country in its various aspects, necessarily requires uniformity in the work and an exact knowledge of the instructions prepared by the Census Office for the filling in of the nine schedules of the Census regarding population, agriculture, social conditions, schools, mortality, manufactures, household industries, non-Christian population, and miscellaneous things. It was deemed

necessary, as had been done when the Census of 1903 was taken, to summon all the Census inspectors to an assembly, which took place on September 30, 1918, in order to familiarize them with the instructions regarding the taking of the census, inasmuch as they, by reason of their position, were charged with the duty of attending personally to the instruction of all enumerators.

At the same time that the inspectors were summoned to attend this assembly, they were advised of their duty to take the prescribed oath of office and organize as provincial advisory census board, with the elective member of the provincial board as chairman. In order to avoid all delay in the preparatory work of the Census, the inspectors were required to prepare, with the assistance of the district engineer, a map without topographical details of their respective province or subprovince, showing the inspection districts into which each province had been divided; the municipalities, municipal districts, townships, or other territorial units included in each inspection district; the barrios included in each of these; the enumeration districts into which the province had been divided by the provincial census board; and the principal inter-provincial and inter-municipal roads and the roads connecting barrios of the same municipality, giving the distances from one place to another.

In order to enable the inspectors appointed by the undersigned to acquaint themselves with the duties assigned to them, as well as with the work intrusted to the special agents and enumerators, each was furnished in due time with copies of Census schedules 1 to 9, the proclamation of the Governor-General, the regulations governing census organization, the Census Act, and the instructions to enumerators, and with forms of the oath of office. Likewise, they were required to submit a list of proposed special agents as well as a list of eligibles for enumerators, carefully selected from among such persons in each locality as had the qualifications required by the Census Regulations.

All the inspectors appointed enthusiastically responded to our call, except those of the Department of Mindanao and Sulu and the Mountain Province, who were afterwards convened in their respective territories by the provincial inspector. The inaugural meeting of the inspectors' assembly was held at the Marble Hall on September 30, 1918, and was attended by distinguished Government officials, including the Governor-General, the President of the Senate, members of the Cabinet, and members of the Philippine Legislature, whose presence gave special importance to the occasion.

General Sanger, the Director of the Census of 1903, in speaking of the assembly of Census inspectors held in Manila on a similar occasion, says that these inspectors were formally received by the members of the Philippine Commission and by the Civil Governor and other high officials, who did everything possible to make them understand the object of the Census and the importance of the duties and responsibilities they assumed as inspectors in accordance with the law. It must have been a source of gratification to the inspectors of the Census of 1918 to have been given opportunities similar to those accorded to their colleagues of 1903, and to have had the privilege of being received by high officials like those mentioned by General Sanger.

The President of the Senate, Honorable Manuel L. Quezon, delivered a speech which was in part as follows:

There is no progressive country without a census. An accurate knowledge of the conditions of the people and the conditions in which they live is essential for the right solution of the great problems of government.

It is particularly necessary to take the census of the Philippines at this time because we are facing a very critical period in our country's history and shall soon be called upon to solve very vital and far-reaching questions.

Your chief object in taking the census should be to secure exact data so that we may find out the assets of the Philippine Islands and the social conditions of our people. We must not hide our vices or our shortcomings. It is only thus that we shall be able to improve ourselves. Rizal said: 'Expose the sick on the steps of the temple.' This is what you should do so that the statesmen and the reformers may apply the necessary remedy.

And His Excellency, the Governor-General, Hon. Francis Burton Harrison, impressing on the inspectors the importance of the census work, said, among other things:

It has been our policy in the Philippines during the last few years to place in the hands of Filipinos every bit of the Government work possible, and we trust to you to respond by producing a census which will not only be a pride and satisfaction to the Philippine people, but a source of security and certainty to the United States. President Quezon has said that the most important feature of this census is accuracy. We must have accuracy. I am confident that in the hands of the census officials and the distinguished inspectors whom I see before me, the facts reported in this census will be accepted at par value by every person interested in this matter in the world. If any doubt is cast upon the accuracy of the census you take, or the conclusions drawn therefrom, the whole work will have been wasted. Mr. Quezon, being a Filipino, was able to say to you that inasmuch as no people is perfect, the Filipino people is not perfect.

You have your defects as well as your high merits. We want this Philippine situation to stand on its own feet, and I am all the more satisfied to tell you that because I am certain that the stand this situation will take will appear very high and noble to all the rest of the world. We do not want anybody to prove any political theory through the medium of this census; we do not want any feature of Philippine life exaggerated or aggrandized at the expense of any other. We want the plain, simple facts, and if those facts are as I have seen during five years of friendship and association with your people, you need not fear their effect in the eyes of the world.

Now, I want you to feel that I am as much interested in the outcome of your work as any one of you can be. For my part, I insist only upon accuracy. The policies, the details, the work itself, is to be carried out by the organization before me today. I am sure it is going to be straightforward, I am sure it is going to be successful, and I am sure it is going to put the Philippines in the place it is entitled to in the world.

It is needless to say that these sentiments uttered by President Quezon and Governor-General Harrison have served as a guiding light to the inspectors and other officials of the Philippine Census.

The assembly lasted for a week. During this time, all questions pertaining to the census work were extensively discussed, and as comprehensive explanations as possible were given in regard to the filling in of the different schedules of the census. In order to put this knowledge into practice, seeing that they had had no experience in this kind of work, the inspectors were given all kinds of schedules to fill in with hypothetical data and were thus able to show their ability to instruct the enumerators afterwards. In the course of this instruction, many doubts arose regarding certain points of the instructions to enumerators, but all were solved, apparently to the satisfaction of all concerned.

The formation of enumeration districts was also discussed in this convention. The appointment of regular, auxiliary, and substitute enumerators in accordance with the lists submitted by the inspectors, was also taken up. This work, however, was left unfinished at that time, as some inspectors had failed to bring a list of eligibles for these positions and some had been unable to arrange the enumeration districts in their provinces in accordance with the instructions given them by the undersigned, upon organizing as provincial census advisory boards. It was, therefore, necessary to postpone the issuance of a certain number of appointments until the inspectors had returned to their provinces and sent to this office the names of the candidates for the positions. This postponement caused

no little delay in the work of organization. After six days of instruction and practice in the enumeration work, when the inspectors had shown their ability to undertake the census work, they were given permission to return to their provinces, with the advice that they visit their respective districts and instruct the regular, auxiliary, and substitute enumerators, as well as the special agents, in regard to their duties and responsibilities, and inform the inhabitants of their respective provinces of the main objects of the census soon to be taken.

As soon as the census inspectors had returned to their provinces, the following material necessary for the use of the enumerators in taking the census was mailed to them: all the forms of schedules mentioned above, the Census Acts and an abstract of its penal provisions, and the proclamation of the Governor-General. Translations of these publications into Ilocano, Tagalog, and Visayan were extensively distributed in the municipalities throughout the Archipelago to inform the people at large of the main purposes of the Census and thus secure their cordial coöperation.

To protect them from any possible destruction, the census forms and other papers mailed to the provinces were provisionally kept in those of the provincial buildings which offered the greatest security, until they were taken to municipal buildings for distribution among the special agents and enumerators. The municipal presidents were designated as depositaries of the portfolios containing the census papers. How the distribution of the census material was to be made and how the census inspectors were to proceed in instructing the enumerators, were the objects of repeated circular letters of the central office. Pursuant to instructions, the census inspectors went out into their respective districts on the days fixed by them. They assembled the special agents and enumerators at the most convenient places, required them to take the prescribed oath of office, delivered to them their portfolios, and instructed them in the performance of their duties. The instruction generally lasted three days in each municipality. The inspectors kept the undersigned in touch with the progress of their work by advising him by telegram, wherever possible, of their arrival at, and departure from, each municipality. The incidents that took place at that period were too numerous to be related in this report. All the difficulties, however, were overcome by the laudable efforts put forth by the inspectors, who certified to the undersigned before Census Day that everything was prepared

for the enumeration work. All measures necessary to insure the taking of the Census on the day fixed by the proclamation of the Governor-General were therefore taken.

Before Census Day, the Assistant Directors of the Census traveled in their respective districts to ascertain whether the provincial census employees were prepared to undertake their work, and to help solve all the doubts confronting them. While the census was being taken, they kept in constant touch with the inspectors, ready to help them to solve all the difficulties encountered, while the undersigned stayed at the Central Office in Manila, answering inquiries from the provinces and supervising the enumeration work all over the Islands.

For the purpose of acquiring a first-hand knowledge of the actual condition of the enumeration work, the undersigned also made three extended trips to the central provinces of Luzon; to the non-Christian provinces, visiting Nueva Vizcaya, Ifugao, Benguet, Bontoc, and Lepanto-Amburayan; and to the South, visiting the Provinces of Misamis, Bukidnon, Cotabato, Davao, Jolo, Zamboanga, Lanao, Palawan, and Mindoro. On the first trip, he was accompanied by Assistant Directors Buencamino and Santos; on the second, by Assistant Director Guerrero, and on the last, by Assistant Directors Guerrero and Albert. No complaint was received by us as to the manner in which the census was taken. We were cordially received everywhere, not only by the Igorot people, but also by the Moros of Mindanao and Sulu, including those of Ganassi and Parang, all of which seems to indicate that the taking of the Census of 1918 was welcomed by the people throughout the Archipelago.

As previously stated, during the enumeration period many inquiries were received, both from the inspectors and the enumerators, as to the procedure to be followed in various matters, which they could have solved themselves by the exercise of sound discretion. This, however, far from denoting lack of judgment on the part of these census employees, was only the result of their desire to evade responsibility, and above all, to coöperate with the central office, in order that there be uniformity in the census work. They all realized the importance of the work in which we were then engaged and the value of the results thereof, and for this very reason they consulted the Director of the Census even in cases of slight doubts, as they were interested in the success of this great governmental task, the accomplishment of which is a test of the capacity of the Filipino people.

On account of the enumeration, many questions as to territorial jurisdiction between provinces, and even between municipalities and barrios arose. However, all of them were settled by directing that the enumeration should be made by the enumerator or enumerators originally assigned to the places in question, without prejudice to the right of the contending parties to appeal to the proper administrative authorities for appropriate action, it being clearly understood that the enumeration made did not at all affect any jurisdictional right concerning the places in controversy.

In the enumeration of rural districts, some difficulties were encountered, especially in those far distant from the townsites, where houses lie at a distance of 6 or 7 miles from each other, and there are no roads or trails connecting them. There the enumerators had to go around many times in a locality in order to avoid omission. Instances also happened where there were no persons who could give them the exact location of the houses in a certain place, and where they found it necessary to travel through their whole district, which caused delay in their work and suffering on their part. In these difficult situations they were upheld by their devotion to duty and by the realization that they were cooperating in a work of national importance in assisting in the taking of the census.

The creation of new barrios, not existing when the Census of 1903 was taken, and the lack of information or visible boundaries marking the territorial jurisdiction of each municipality and barrio constituted a great obstacle to the formation of the enumeration districts. The lists of barrios secured from the offices of the provincial governments, and some available maps, were made the basis, though defective, for carrying on this work. In many cases it was necessary for the census inspectors to obtain information from the municipal authorities about the existing barrios and their respective limits in order to organize the final enumeration districts.

In the organization and distribution of the enumeration districts, the lack of maps with details relative to the location of barrios and other inhabited places, and their approximate population and the rivers, roads, and trails connecting one barrio with another, caused also no little difficulty. The rivers and roads would have been the best boundaries of these districts to prevent one enumerator from getting into another's district. However, thanks to the census notices fixed on the walls of the houses enumerated, duplications were successfully avoided.

The taking of the census having coincided with the harvesting of rice, the enumeration was somewhat retarded, as all or most of the heads of families and other adults were absent from their homes and did not return until after the completion of the work, while others came back at midnight. It was, therefore, not always possible for a great number of enumerators to comply with the requirements of Proclamation No. 21 by the Governor-General, directing to enumerate not less than 50 persons per day in urban districts and 30 in rural districts. In many cases the enumeration had to be made at night, the only time when the enumerators could meet the people in their houses.

The main difficulty in the organization of urban districts lay in estimating the number of inhabitants of a place or locality. In the provinces, where people do not frequently change their residence, and where the approximate number of inhabitants in each place may be obtained from the municipal officials, this estimate was made quite easily. But in a cosmopolitan, bustling city like Manila, where a considerable percentage of the population live in rented houses, which are vacated with the same frequency as they are occupied; where immigrants constantly arrive; and where the rich as well as the poor come to fix their abodes; in a city, in short, where the population undergoes a remarkable change of number, it was in most cases difficult to estimate the number of the inhabitants of a given place. To overcome this difficulty, the inspectors had to exercise a personal and close supervision over the work of the enumerators, which was done to our satisfaction. And in order to prevent omissions and duplications, this office had to publish in the Manila press information about the provisions of the Census Law which provide for the punishment of any person neglecting to give notice of his not being enumerated; or of his knowledge or belief that he himself or any other person or persons were enumerated twice, or concealing the fact of his or any other person's or persons' prior enumeration from any enumerator on the point of enumerating a second time. As a result of this publicity, we received various communications asking for enumeration, which request was immediately attended to by the enumerators. The same was done in the nearby provinces with satisfactory results.

Some of the difficulties experienced in Zamboanga were due to the great distances between the houses and the lack of suitable means of communication. This is especially true with the Su-

banos. They are accustomed to build their houses on the mountain tops, a practice which made it necessary for the enumerators to climb to those places in order to do enumeration work. Another difficulty was due to the ignorance of some people, Mohammedans and pagans especially, who refused to furnish the data courteously requested by the enumerators, believing that the purpose of taking the census was to impose more taxes on them. Some enumerators were charged with carrying poison with them and consequently were refused entrance into the houses. In such cases, the help of the authorities had to be requested.

The enumeration of the Negritos scattered in the mountains of Zambales, Bataan, and Pampanga, on the slopes of Mount Isarog (Ambos Camarines), in the hilly parts of Iloilo, Capiz, and Antique, and in other mountainous regions of the Islands caused no less difficulty, due to their nomadic mode of living. Special enumerators were appointed. These had to travel much throughout their districts to locate the Negritos indicated by no geographical description, due to the absence of a permanent residence. It happened not unfrequently that they tried to avoid meeting the enumerators, and it was sometimes necessary for the enumerators to await the celebration of feasts where the people gather, in order to do enumeration work.

The same may be said regarding the enumeration of the Manguianes in Mindoro Province. Due to their shyness and the difficulty experienced by the enumerators in reaching their settlements, there being no roads or trails, or if there were any, they are in the heart of the mountains, along dangerous precipices, the census inspectors had to make extended trips in order to help the enumerators in their work by advising and convincing the Manguianes of the purpose of the enumeration and its advantages. In fact, Inspector Cipriano Liboro says in his report:

All the Manguianes, both young and old, informed me that they could not remember any occasion of having been enumerated. The only ones who told me that they were enumerated fifteen years ago are the Manguianes living on the sea coast.

The statements made by the inspectors of the Mountain Province will show how the census work in these districts was carried on.

Inspector Tomas Blanco of the subprovince of Kalinga has the following to say:

In many cases, the population of a settlement or barrio was too big to make one enumeration district and too small to make two districts. It was necessary in several cases to unite one, two or three barrios or settlements to constitute one enumeration district. This caused us a great deal of inconvenience in the division of the territory comprised in each district, as it was very hard to know where one district began and where it ended, because the people live in small groups. Not unfrequently one sees four or five houses in one group, and each group of houses is separated from the others by mountains, rivers, brooks, etc., which makes travel extremely difficult. With this difficulty, there was a possibility of omission or duplication of enumeration, and to overcome this, it was necessary to make a list of the names of each group of houses included in each enumeration district, with the approximate number of inhabitants in each group, and this list was handed to the enumerator, for his guidance. And with the assistance of the auxiliary enumerator, who was himself a native and one of the influential men in the locality, there was practically no confusion in the taking of the census. There were no questions of jurisdictional limits of any importance.

Our next difficulty was to get the number of qualified persons for enumerators, for we needed 45 men for this purpose and there were only about 10 or 15 available in Kalinga. We had to take the rest from the lowland provinces. This difficulty was aggravated by the fact that when the time of the taking of the census drew near, many of those who had expressed a willingness to come failed to do so and we had to hustle to get others. Many of those who came from the coast-provinces, on account of their inability to speak the dialect here, had considerable difficulty in understanding the people and in making themselves understood by them. To minimize as much as possible the difficulty thus encountered, we held classes of instruction here at Lubuagan for both the regular and auxiliary enumerators, and efforts were made to solve all the difficulties that they might encounter in the actual work of enumeration. Here the auxiliary enumerators played an important part. This being the first census of its kind taken in Kalinga, the natives were very suspicious as to the motives of the census, and many of them actually expressed the belief that the census work was only a preliminary step toward the imposition of the land tax, etc. (a thing which they do not want, because the education of the people is not yet sufficiently advanced to realize the advantages and benefit of the same). The people, through the special agents of the Census, the auxiliary enumerators, the settlement presidents, the *bacnang* (well-to-do), and others, received as thorough an explanation as we could give them regarding the census work, its purpose, necessity, and importance. The Census Law, regulations, etc., were explained to them. I told the people that when the enumeration work began, they would greatly facilitate the work if they would be kindly enough to try and

be all in their respective houses on the day the enumerators worked in their particular *sitios*, as this would enable the enumerator, without the necessity of asking too many questions, to know exactly the number of persons in a house or family, and their sex, age, civil status, etc. This advice the people willingly followed, with the result that the actual enumeration of the population (on Schedule No. 8), was accomplished in the majority of cases in ten days instead of thirty. It is true that the influenza epidemic, which was at its height when the census work was in progress here, interfered with the work, but everybody tried to do his part and we managed to accomplish everything without serious interruption in the work.

Inspector Donato Ducusin of Apayao, reports:

On the part of the enumerators, some complained of the heavy rains and swollen rivers, and all complained of the difficulties of traveling through the interior of the subprovince in which, due to the absence of trails, there are no means of transportation. It was impossible to communicate with the enumerators during the progress of the enumeration.

So far as the people are concerned, there was no serious interruption except in a few unimportant cases, where an enumerator experienced some difficulty in getting the necessary information regarding certain persons. This happened only among the most ignorant of these primitive people. All the rest freely and voluntarily submitted to the enumeration and willingly gave the data required for the purpose of the Census.

Inspector Dosser of Ifugao gives the following information:

There was considerable difficulty in dividing the province into enumeration districts on account of the houses and barrios being so widely scattered, and there being no means of telling just where one district ended and another began. No questions arose regarding jurisdictional limits.

And, lastly, Governor Calvo, in his report says:

Regarding the taking of the census, there has been little difficulty met in the enumeration, both on the part of the enumerators and the enumerated persons. Our enumerators went through the mountains of their respective enumeration districts accompanied only by Igorots who acted as guides. As it was feared that these people would object to the census being taken, because of the requirement of the instructions that each person be enumerated individually, it is gratifying to note that there has been no occasion for resorting to military or police aid for the enforcement of the census instructions.

As to the difficulties encountered by the enumerators among the mountain people of Nueva Vizcaya, Inspector Lope K. Santos, governor of the province, says:

The recent epidemic disease commonly known as influenza; the fact that the taking of the census coincided with the harvesting of the crops; and the deficient and costly transportation have been the chief difficulties encountered in the enumeration work throughout the province.

Due to the aforesaid disease, many houses were vacated and abandoned. This was especially true in the barrios and other isolated places. Members of families surviving the disease then raging moved to other houses, to other towns, and even to other provinces. Because of the death of many family heads, it was rather hard for the enumerators to obtain certain data required by schedules Nos. 1 and 2.

The period for harvesting rice in this province covers the months of January and February of each year, and during the month fixed for the taking of the census, a considerable number of families were living in the rice fields, with nobody left in their houses in town to give the information required by the enumerators. In many instances, the enumerators had to go back to the same house three or four times to make the enumeration, usually at midnight, when the owners had returned. In many towns, the provincial governor had instructed the municipal presidents to announce by proclamation by the town crier the days on which the enumerators for each barrio would gather data, thus avoiding the absence of family heads from their homes.

As this region is remarkably mountainous, with little population, generally scattered in distant barrios connected only by trails, the travel of the enumerators was always difficult and expensive. Some of them who had hired horses during the month, at one peso and fifty centavos per day, complained of the small compensation granted them.

The enumerators assigned to the mountain regions had to provide themselves with thick clothing to protect themselves from the cold weather. Some enumerators who became ill after receiving census instructions and after beginning enumeration on January 1st, were replaced by substitute and auxiliary enumerators. To minimize these difficulties, we adopted the policy of employing regular and substitute enumerators of both sexes, nearly one-half being females. This was possible because, besides the existence in this province of sufficiently educated women to do the census work of 1918, their coöperation along this line was successful in the Census of 1903. We endeavored to assign the female enumerators as much as possible to the central districts, inhabited by the Christian population.

A great number of regular enumerators filled out their schedules in English, and only a few of them in Spanish. This was due to the personnel having been selected from among teachers and students of the public schools, with the exception of some who had been deemed properly qualified to do the census work on account of their experience in the former census, or their education and influence in the locality.

A thing worthy of mention noted during the enumeration of the Ilongot people is that the enumerators were able to discharge

their duties unmolested in the *rancherías* visited, with the exception of those of Tamsi and Gumyad, where slight opposition was offered at the beginning. However, upon learning the real object of the taking of the census, these Ilongots willingly submitted to enumeration, answering all questions asked by the enumerators.

Regarding the difficulties experienced in the Department of Mindanao and Sulu, Inspector Guingona, in his report, says, among other things:

The appointment of enumerators in remote regions inhabited by Moros and pagans met with difficulty in shape of the lack of adequate personnel. It was necessary that the enumerator should possess a knowledge of the dialect, the customs of the people and the conditions of the locality, and command the confidence of the people, or have ability to inspire confidence, in the regions where he had to work. No Moros or pagans could be appointed, as very few of them were prepared to do the work; and Christians or inhabitants of the coast could not be appointed on account of the objections above cited. However, these difficulties were overcome by the appointment of members of the Constabulary stationed in the regions to be enumerated and by the appointment of teachers. Arrangements were made so that a man of the locality accompanied the enumerators and served as assistant or interpreter at the same time. Some *datu*s were also appointed as special agents and their coöperation was secured in this manner.

Inspector Calvin B. Carter of Cotabato reports:

In forming enumeration districts in the province, the greatest difficulty encountered was the lack of definite knowledge of the territory to be covered. Except in the one organized municipality there was no delineation of barrios, and in many cases municipal district boundaries were more or less indefinitely located. It was necessary to consider the topography of the country in relation to difficulty of travel rather than estimated population. Fortunately, many of the government officials in Cotabato had seen long service in the province and had a fairly accurate knowledge of the territory and people.

Another serious problem was the Moro *datu*'s extreme jealousy of his neighboring chief. If part of one chief's territory was included in the enumeration district with that of another chief, he became suspicious immediately, thinking that he was losing some of his followers and that the census districts were permanent government divisions or organizations of territory. This difficulty could not be overcome in the original formation of districts as it would have necessitated many more enumeration districts, than allotted to us according to population. Much patient explaining, preliminary to beginning actual count, reduced trouble from this source to the minimum, although there still exists ill feeling and suspicion in some sections. These cases could have

been avoided had more assistant enumerators been used and one acceptable to each chief been selected for his limited territory, but this again would have increased the census personnel and expense out of proportion to the good derived. One instance will suffice as an example of this petty jealousy which forms so great a part of the Moro character. *Datu Alimpang* was appointed assistant enumerator for District No. 6, Buldung, and in company with the enumerator for that district visited the houses in order. Sultan Agaos of the northern part of Bundan became highly offended over him even though it had been explained to Agaos that it would be necessary, upon beginning the enumeration, to perform the work in the most expeditious manner to avoid unnecessary expense and hardship. This chief has not yet been convinced that Alimpang did not purposely insult him or try to seduce some of his followers. Agaos was asked the name and location of all barrios under his jurisdiction and through spite failed to give the information regarding one distant barrio. After completion of the enumeration, one of the residents of this barrio notified the provincial governor that he had not been enumerated. It was necessary for the enumerator to travel from Parang a distance of fifty miles to count the sixteen people in this place.

Due to the small Christian population of Cotabato Province, and the fact that nearly all of this population of sufficient intelligence to fill out a census schedule have steady employment at lucrative salaries, it was impossible to secure more than five enumerators who were not Government employees, the remainder being school teachers and Constabulary soldiers. These men, specially the latter, needed most careful instruction and supervision. In fact, the task seemed almost hopeless at times. The enumerators were divided into groups of from five to nine and placed under the immediate direction of a special agent who was made responsible for their instruction and the proper performance of their duties. They then reported to their respective special agents for further instruction and were sent to their districts to acquaint the people with the coming census and the objects thereof, and to learn as much as possible of the territory they were to cover. The assistant enumerators were native Mohammedan residents of the districts to which they were assigned, who assisted in the preliminary work. All municipal district presidents and important chiefs were called to the provincial capital where they were informed of the objects of the census and their assistance requested. Upon return to their homes these called a meeting of the municipal district councilmen and instructed them to spread the information throughout the province. By these methods, it is believed that every single inhabitant knew of the census and its objects, and few cases arose where enumerators' questions were looked upon with suspicion. In such cases the special agent or inspector was notified and proceeded at once to overcome such suspicion by careful explanation. Only one prosecution under the Census Law was necessary.

After deducting from the small force of Constabulary the men appointed as enumerators, and the number of men absolutely necessary for guarding the various stations and other imperative work, it was impossible to furnish escorts for enumerators even in doubtful parts of the province, among the pagan people. Therefore, it is surprising that no single enumerator suffered abuse or death since there can be no doubt that many of them risked their lives by going alone in a country practically unexplored. This can only be attributed to the thorough preliminary work.

The undersigned, he continues, as provincial governor wishes to speak here of the inestimable value to the province of the census work aside from the valuable statistical data obtained. Enumerators were able to talk and become friendly with people who had never before come in contact with a Government official, and also gained a knowledge of the practically unexplored portions of the province which will be of great use to Government here. The census of Cotabato Province in 1903 was only an estimate because of the unsettled conditions at that time, so that no accurate comparison with the present census is possible. Some 3,450 Christian Filipinos including men, women, and children have immigrated to the province and settled on homesteads since 1913. Prior to that date immigration was negligible.

Likewise, the inspectors of Sulu have narrated their experience. Inspector N. C. Page states:

The enumerators themselves, nearly all of whom were Filipino teachers, and the auxiliary enumerators, all of whom were Moros, acquitted themselves with great credit. Theirs was a difficult task, and they did it well, by the use of tact and good judgment, and with the least possible friction, and with no loss of life or brawls.

According to the same inspector, the enumeration of his district is as accurate as possible, considering the character of the people and their suspicious nature. He says that a Moro will not tell one his own name or that of his wife, if the latter is present, unless circumstances make it unavoidable or imperative.

Inspector O. H. Newton says:

The main difficulty in enumerating the Moro people is the reluctance on the part of the Moro people to tell anything regarding their family history. A Moro does not like to tell his name. If you ask a Moro his name, should he have companions, he will in turn ask any question about their deceased relatives, therefore, we probably did not get the correct mortality of 1918. The Census of 1903 of Sulu was only an estimate, therefore, and no comparison can be made between 1903 and 1918.

Inspector P. D. Rogers made the following statement:

Great difficulty was experienced in enumerating the people. First, there was the question of the auxiliary enumerators. The chiefs who were not auxiliary enumerators objected to have their people enumerated, as they thought that the auxiliary enumerators would have the right to claim all the people enumerated by them. Also many wild rumors sprang up all over the province as to the causes of the enumeration, the following being some of the principal rumors afloat as to the cause of the enumeration:

1. That the Government wanted to get a list of all the people, so that all the men could be listed and forced to go to war.
2. That their religion would be changed.
3. That all the women would be required to wear clothes worn by the Christians.
4. That all the babies would be branded on the posterior the same as cattle.

In this connection, Inspector T. W. Coverston of Lanao submitted the following in his report:

The greatest difficulty encountered in organization for census work was found in the lack of personnel sufficiently educated and at the same time possessing a necessary knowledge of local conditions and customs to enable them to work harmoniously among the Maranaos, who were very suspicious of our reasons for taking the census. Our activities in the past have been based upon estimates of the population of the various municipal district the limits of which were sufficiently well defined to avoid confusion or to permit of questions of territorial jurisdiction. When a municipal district was divided into two or more enumeration districts each district was given a certain part of the district divided by barrios.

Several months before the taking of the census a campaign was organized, the object of which was to inform the people in all parts of the province of the coming census and of the reasons for taking same. It was believed by the inspectors that we would not be successful in taking the census if various and conflicting reasons for the census were given. In order that we might all be in harmony, a circular letter in the local dialect was sent to all municipal district presidents informing them that the census would be taken in order that we might receive our share of the revenues and that the census was not for the purpose of taxation. The same reason was disseminated by all deputy governors and the enumerators, and, as a result, we found but one man who refused to permit his people to be enumerated and he later complied with the request of the enumerator when the deputy governor of that district came to the assistance of the enumerator.

The enumerators, who had to deal with people from all the walks of life, occasionally experienced great difficulty in per-

forming their duty. There were educated people who strenuously objected to being enumerated and whom the courteous remonstrances of the enumerator would only exasperate them still further. Then the enumerator would encounter a man of the rough and boisterous type, who would indulge in bad language and make fun of the census officials and of the questions propounded to him. Occasionally, he would meet with a vain individual who would insist upon putting down all the academic degrees which he possessed or claimed to possess and would endeavor to show off his alleged knowledge by engaging in a learned conversation with the enumerator, which latter, not being in his own house, had to endeavor to make the best of the situation. Sometimes a lady of wealth and rank would consider that she had a right to treat the enumerator with contempt and would make him wait for a considerable time and then give him all sorts of information except what he required, or make him come back day after day.

The Chinese and Japanese were objecting most vigorously to being enumerated during the first days of the taking of the Census, but thanks to the circular letters issued by their respective consuls, upon the request of the undersigned, they at last allowed themselves to be enumerated.

We have only one instance where the census officials had to resort to force to secure compliance with the Census Law, and that was the "Kulay-Kulay case," reported by Inspector Guingona, which resulted in the death of some Moros who had to be shot. The Awkasa family refused to be enumerated and offered armed resistance to the force of the Government, in spite of the persuasion employed to make them change their attitude. The force employed in this case was extremely necessary in order to prevent these recalcitrants not only from doing bodily injury to the provincial inspector and his companions, who had come to enumerate them, but also from disturbing the public peace and order in Sulu. As the Director of the Bureau of Non-Christian Tribes says:

No effort appears to have been spared by Government officials and by both, the local chief, Panglima Agga, and the priest or Imam, the latter being the nearest relative of the family. When an individual or group of Joloanos or others of our Mohammedan population make the preparation the Awkasa family is stated to have made, they are practically amok and if the local chief and Imam are unable to bring them back to mental equilibrium, it is absolutely necessary they be taken into custody as otherwise they will inevitably pass to the violent stage of

amok when not only must they themselves be killed but some and perhaps many innocent persons also be wounded and killed.

However, in spite of all the difficulties mentioned, which have been overcome, it is safe to state that the work of taking the census was carried on smoothly, and thanks to the valuable coöperation of the provincial and municipal officials and the influence of the inspectors and their assistants in particular, and to the hearty coöperation of the people in general, as well as the zeal and faithfulness of the enumerators, the enumeration of the inhabitants of the Islands was effected in a very satisfactory manner.

The census records disclose two instances where a reënumeration was made,—the first was the case of enumerator Macario Gala of Candelaria, Tayabas, whose house was burned down with the Census papers in it; and the second, that of enumerator Agaton Peñaflorida of Buhi, Ambos Camarines, whose port-folios containing census papers were lost while he was crossing a lake in a sail-boat.

Generally, the enumeration work was done within the 30 days period prescribed in the Governor-General's proclamation. This period, however, had to be extended in some provinces, such as Cagayan, Isabela, Nueva Vizcaya, Ilocos Sur, Ilocos Norte, Catanduanes, Batangas, Marinduque, Bohol, Mountain Province, Oriental Negros, Occidental Negros, Capiz, and Palawan, and in the Department of Mindanao and Sulu, owing in part to the difficulties of communication and transportation, but largely to the influenza epidemic then raging in the Islands and the quarantine in some barrios attacked by smallpox.

We have spoken extensively of the Census organization, as we are convinced that a good organization insures success in this kind of work. We tried to follow substantially the American plan adopted for the taking of the Census of 1903, as we were sure that it was the most adequate means of obtaining complete and exact data on the various subjects embraced in the census schedules under the provisions of the Census Act. Yet the description of the 1918 Census organization would, without doubt, appear incomplete if we did not give some account of the organization of the central office, which was temporarily established to coördinate the data obtained by the enumerators and compute and arrange the same in the form of statistical tables for publication. In the Census of 1903, the enumeration work was accomplished in the Philippines, but the compilation of data, the preparation of statistical tables,

and their publication were done in the United States, where there was well-trained personnel and all the necessary machinery for census work. This was not the case with the Census of 1918. All was done in the Philippines, the enumeration work as well as the preparation of the statistical tables. We had, therefore, to organize an office with various divisions to cope with the different activities arising as the census work was progressing. The first thing necessary was to properly arrange the papers returned by the census inspectors and systematize the work, in order to avoid the loss and insure the methodical handling of the papers by the compilers.

Accordingly, a division of forms and archives was organized to separate the papers used from the unused, and to classify the former by barrios, municipalities, and provinces. This division was required to bind the schedules into rolls of 25 sheets each as to the schedules of population, and of 50 sheets each as to the agricultural schedules; while the remaining schedules were bound by municipalities, in rolls of from 5 to 20 sheets. It was necessary to adopt this method, not only in order to avoid confusion in the examination of the schedules, but also to have the sheets in such shape that they could be handled by a number of compilers without any danger of those sheets going to pieces.

In this division there was an employee named the "Superintendent of Forms," whose duty it was to take note of all the papers going from the Archives to the different compilation divisions, and to see that they were returned. This afforded a reasonable protection against the loss of any of the papers of the Census Bureau. It is from the office of this employee that all the schedules were distributed to the various compilation divisions, the Archives being somewhat in the nature of a supply department. He also received from the various compilation divisions the forms on which data have been entered and sent them on to the Division of Computation, from which he then received the results of the computation work done, which he distributed among the several statistical sections. This office may be considered as the pivot of the whole of the Census.

The archives are contained in three large rooms, in which all the schedules and other census material are kept with due care in order to prevent their destruction by any cause whatsoever. The archives are arranged by provinces and municipalities, according to the correlative number of the rolls.

To collect the data spread upon thousands and thousands of schedules and group them conveniently in the form of statis-

tical tables, it was necessary to organize the Divisions of Compilation.

For the use of these divisions, several forms were prepared, on which the compilers entered in figures the data appearing on the schedules of the numerators, either grouping in a column of the form the data contained in one column of a schedule, or combining those of two or more columns of the schedules, as required by the character of the form. In this manner, the compilers grouped entries of the same kind under each of the questions appearing in the schedules; the totals thus obtained were then computed by the Division of Computation, and the final results were passed on to the various Statistical Sections for the preparation of the corresponding tables, which contain, in concise form, all information needed for the consideration of measures, whether of a legislative, administrative, social, or other character, conducive to the improvement of the condition of the country, which is the principal purpose of the taking of the Census of 1918.

For the preparation of the personnel which was to take charge of the compilation and statistical work, it was deemed advisable to organize a training department, which was maintained until the schedules returned by the inspectors had been properly arranged and were ready for distribution among the compilers. This work extended over the first two months of 1919.

The compilation divisions began to work at the end of February, when the schedules of the enumerators began to come in; but their work was rather irregular, due in part to the defective system of returning the schedules, and partly to the preparation of new forms of compilation. It can be safely said that the real compilation work began only about the end of May, 1919. Of course, in the beginning of the work of compilation, the compilers newly trained in this work encountered serious difficulties which hindered to some extent the rapid advancement of the compilation. Instructions to compilers for the use of the compilation forms were then prepared. These were given orally to the compilers beginning with the organization of these divisions. But in view of the frequent changes in the office force, due to resignation and other causes, these instructions had to be repeated several times. This increased the work of the chiefs of these divisions, and in order to avoid difficulties and facilitate the work of the compilers, it was deemed advisable to print said instructions which form Bulletin No. 2 of the Census Office.

There are other compilation sections, those for Schools, Social

Conditions, Mortality, Manufactures, Household Industries, and Judiciary, which are at the same time statistical sections, as they compile the data entered in their respective schedules while preparing the statistical tables.

To add up and compute or compare the totals of the data on the various forms filled in by the compilation divisions, with a view to ascertaining the results thereof, it was necessary to organize the division of computation. The personnel of this division consisted of 90 educated young men, properly trained in operating the "Barret," "Burroughs," and "Monroe" adding machines, with 86 of these machines of various makes. If one takes into consideration the fact that the compilation divisions with 400 compilers were able to fill in about 12,000 forms daily, it will be easy to imagine the volume of work done every day by the computation division, which is represented by 7,000 forms, each containing from two to seven columns of figures.

It was not sufficient, however, to have the data compiled by the compilation divisions; it was also necessary to embody in statistical tables the results obtained by the computation division, in accordance with the outlined plan of work prepared for the publication of the Census. Hence, the necessity of organizing the statistical division, which was composed of the most efficient employees of the office, especially trained for this delicate part of our work. This division was subdivided into various sections designated as "Population," "Agriculture," and "Miscellaneous." The latter included the statistical section for Schools, Mortality, Social Conditions, Judiciary, Manufactures, and Household Industries. The Division of Statistics had charge of the preparation of all statistical tables published in the Census, under the direction of its chief, Mr. Braulio Bejasa,¹ and the supervision of the undersigned. In this division there was a tabulating section which had charge of the forms and tables needed by the compilers and statisticians.

There were in the Census Office other divisions, such as the administrative, property, accounting, translating and proof-reading divisions, which performed the duties imposed upon similar divisions in other Government offices.

Inasmuch as this was the first Census Office organized in the Philippines, its activities attracted the attention of the public to such an extent that the Office had the privilege of being inspected by distinguished persons not connected with the Government, and by high Government officials, members of the

¹ On March 1, 1920, he was required to return to the Bureau of Justice when he was appointed assistant attorney.

Legislature, department secretaries, the President of the Senate, the Speaker of the House of Representatives, and the Governor-General.

Certain pessimists expressed the fear that the Filipinos could not make a census of their own, because either the organization would be deficient or the personnel incompetent. Instead of discouraging the Census officials and employees, this only made them more enthusiastic and determined in the performance of their duties.

The Committee on Appropriations of the Upper House of the Legislature contributed to a certain extent to those pessimistic opinions when it submitted an amendment to the Appropriation Bill of 1920, as approved by the Lower House, to the effect that the appropriations for the Census should be made in the form of an itemized statement of expenditures, thus disregarding the temporary character of the office and the many unforeseen contingencies sure to arise in it. This proposed amendment provided, further, that employees of the Bureaus of the Government detailed to perform duties in the Census Office should not be paid the additional compensation fixed in their respective appointments unless authorized by the Council of State, which body resolved, at a session held on January 14th, 1920, that a final decision upon said additional compensation would be made as soon as the Census work was completed, taking into consideration the date of completion and the efficiency shown. Although the task seemed difficult, we accepted the responsibility of carrying out the work contemplated in the Census Act, as we considered that an opportunity had been afforded us to serve the interests of our country and to show, through the efforts of thousands of Census officials and employees from all over the Islands, that the Filipinos, as a people, possess that integrity, accuracy, and diligence which make a people capable of managing its public affairs in a successful manner.

In this connection, it will not be amiss to quote some authoritative opinions on the Census organization. The Governor-General, Honorable Francis Burton Harrison, upon inspecting the Census Office on September 19, 1919, accompanied by the President of the Senate, Hon. Manuel L. Quezon, among other things, said:

I have at heart the functions of the Census a year ago and am delighted to find out in the interesting investigation made by President Quezon and myself this morning that the stupendous work of the census is nearing its prompt termination.

We want to congratulate President Villamor, his assistants,

and subordinates for the spirit they have shown in carrying on the census work and for the patriotism and enthusiasm they have in their hearts, all of which go to demonstrate the ability of the Filipino people to the American public and to the American Congress.

The Speaker of the House of Representatives, Hon. Sergio Osmeña, on the occasion of the inspection of the Census Office by himself, accompanied by members of the Philippine Legislature, on the 11th of November, 1919, delivered this encouraging speech:

It has been gratifying for my colleagues of the Legislature and myself to have been afforded this opportunity to examine the various divisions of the Census Office. You are not splendidly housed; this being only a temporary office, it has not been possible to provide very good premises for it, and therefore we are glad to see that efforts have been made to arrange the departments so that the employees may do their work in an orderly and comfortable manner. But, as the saying goes, even under the nipa roof of a humble bamboo house great things may be accomplished.

We, the members of the Legislature here present, are firmly convinced that in this building—which, perhaps, witnessed important events in the past—you will show Filipino capacity once more, and that the confidence we reposed in you when we placed this work in your hands has not been bestowed in vain.

For the first time the Filipinos are called upon to do themselves this work, which is so important for the country. Since men first began to live in communities, there has been a necessity of taking some sort of census. The tribal chiefs of old had to find out the number of their subjects for the purpose of ascertaining the number of individuals to be taxed. They also had to know the effective war strength of the tribe, that is, the number of able-bodied men available for armed service. In a modern census, much more than that is needed. We are not taking this Census for the mere purpose of obtaining the information referred to, which is perhaps of little use, but to secure complete data which will, as the Director of the Census rightly says, be a graphic representation of our own situation, a living image of the present life of our country, our resources, our land, our territory and its population, the distribution of that population, our mode of living, our education, our vices, our virtues, in one word, the whole substance of our people. All that work, that image, the preparation of which has been entrusted to you, must be exact. Just now, certain Government offices have to come to get data from the office of the Census. In our campaign in America we availed ourselves of the Census to get information, for example, on educational matters, in order to supply the demands of the leaders of Congress. Therefore, we who have come here to pay a visit, cannot say anything but that the work now being done here is highly important.

I wish to say something else. There are problems that the country will be confronted with and which will need your assistance, such as, for example, the increase of population. It is our duty to see how the population increases. We are a comparatively numerous people. There are in other countries of the earth peoples not so numerous as we are, who, nevertheless, live and are respected. But we will not confine ourselves to that; we want facts about the growth of our population, and one of the things we have learned today in this building is that, in spite of the past epidemics, we are going ahead, and that our death rate in 1918 was less than that of 1917, and much less than that of 1903.

There are other very important facts which I am sure will be confirmed by the Census. For example: One of the main factors for a really stable government is an even distribution of property, and it is through this office that the world will know the great number of small property holders of the Philippines who constitute the foundation of our orderly and peaceful life.

In conclusion, I may say that much is expected of the census you are now taking. This is your work, and I am sure, and the members of the Legislature are sure, that it will be done by you with the utmost efficacy. We are anxiously awaiting the publication of your work, and when our men and the men of other countries see it, they will say that you have done not only a useful, but a meritorious work.

The Director of the Census of the United States, Honorable Samuel L. Rogers, in his communication to the undersigned, of January 20, 1920, says: "The report submitted by you to the Governor-General on September 11th, 1919, is very interesting, and I congratulate you upon the good organization you have established. I look forward with a good deal of interest to receiving copies of the census reports which you state will include the provincial maps and descriptive matter as well as the statistical tables."

As has been stated elsewhere in this report, the work of the Census Office was greatly handicapped by lack of preparation on the part of the employees, who had to be trained before they could render efficient service. The experience gained by many Filipinos in this kind of work should be utilized for the benefit of both the Government and the people, and I earnestly recommend that this office be made permanent.

In the great majority of advanced nations there is a central office of statistics charged with the collection, compilation and periodical publication of information relative to population, national wealth, and progress. The taking, usually decennial, of a census through the organization of a temporary office is objectionable from the viewpoint of its high cost and of the

difficulties that in many cases cannot be overcome, because the census work thus accomplished is necessarily done hastily. Furthermore, the decennial census, once finished, leaves an immense lacune, shrouded in darkness, which extends over the entire decade preceding it, and there is no human power capable of forming statistics for that period, where dimness and chaos reign supreme. On the other hand, the leaving of the statistical work to the scattered and isolated efforts of the various Government offices now publishing statistical information would result in confusion, perplexity, and dissatisfaction, and would not respond to the requirements of methodization, integration, and synthesis prescribed by science for the preparation of all national statistics.

Before we consider the results of the Census, I deem it advisable to mention the division of the work among the Director and his Assistants, so far as the analytical examination or descriptive part of the statistical tables compiled from the census schedules is concerned. While the undersigned supervised the preparation of all the statistical tables and had charge of the description of the schedule on population, the other schedules were assigned to the Assistant Directors for examination and comment, as follows: to Mr. F. Buencamino, Sr., the schedule of agriculture; that of schools, to Dr. A. Albert; that of mortality, to Dr. L. Ma. Guerrero; and the schedules of social conditions, manufacture, and household industry, to Mr. E. de los Santos. This arrangement, however, did not prevent the Director and his Assistants from preparing other articles. For example, Mr. F. Buencamino, Sr., wrote an article on the Banks and the undersigned a monograph on criminality, both of which are included in Volume IV, while Dr. L. Ma. Guerrero prepared an article on medicinal plants which will be found in Volume III.

Special mention should be made of Dr. Otley Beyer, Associate Professor of Anthropology of the University of the Philippines, who prepared a paper on the non-Christian tribes which will be considered later; Mr. Francisco Agcaoili, a chemist of the Bureau of Science, who wrote on the food value of the most important Philippine products; Reverend Father José Coronas, the meteorologist of the Weather Bureau, who prepared a report of the Climate and Weather of the Philippines, and, lastly, Mr. Rafael Medina, Assistant Director of the Bureau of Forestry, who wrote an article on the forests of the Philippines. These gentlemen had no official connection with the Census Office and deserve our most profound gratitude for their valuable contributions.

The attention of the reader is called to the Atlas of the Philippines or provincial maps published in this volume of the Census. They were prepared especially for the Census, at the request of the undersigned, by Mr. John Bach, the able cartographer of the Bureau of Coast and Geodetic Survey, who used for this purpose, among other sources of information, the data recently collected by the Census officials. Every map of the series is a new production in the sense that it is a complete compilation of all information existing on the date of publication.

The process of compilation was as follows:

The boundaries of the province were determined and a polyconic projection was constructed for the area in question, using the maximum scale permitted by the size of the page. All shore lines were reduced by pantograph from Coast and Geodetic Survey charts. Interior provincial boundaries were plotted from surveys by the Bureau of Lands, from provisions of the Administrative Code, from Executive Orders or, in a few doubtful cases, from information obtained from local officials. In many inaccessible regions, the available information is not adequate for the exact delimitation of provincial boundaries, but all sources were exhausted in the study of this question and it can be confidently asserted that the boundaries are far superior to those shown on previous maps.

Interior details were filled from various sources. In regions covered by maps of the Coast and Geodetic Survey, these were used as the base for reduction since they themselves contain a digest of all previous information, including more especially the detailed topographic surveys by the United States Army.

In other regions various sources of information were utilized, the greatest weight being assigned to road traverses by the Bureau of Lands and Public Works. These traverses fixed the location of towns, and minor features were adjusted to fit in with these.

For these interior features all maps having any degree of authority were freely used. In Mindanao and the Mountain Province, unpublished blueprints from Constabulary sources furnished a large part of the data. Sixty-eight blueprints of the Census Office compiled from data furnished by inspectors, were used to locate many hitherto unplaced barrios. After all publications and authentic blueprints had been exhausted, recourse was had to sketch maps by municipal presidents. Between 1909 and 1916, the Coast and Geodetic Survey collected sketches of all municipalities from the presidents thereof. Most of these sketches are of no value for absolute locations, but they

frequently show the approximate location of otherwise unidentified barrios or mountains and afford checks on boundaries and streams. None of these informations has hitherto been utilized in publications.

In the Mountain Province many obscure points were settled by direct correspondence with governors, presidents, and district engineers.

The question of spelling received attention not heretofore given. The sketches collected from municipal presidents were accompanied by lists of barrios and sitios under each jurisdiction, with particular reference to the local usage in spelling. These lists were combined by the Coast and Geodetic Survey with similar lists secured from the Bureaus of Education and Posts, from the Census of 1903, and from laws, executive orders, and proclamations. From these combinations, forms were adopted by the Coast and Geodetic Survey for standard use. These standard lists have been used in restricted areas where new editions of maps have recently appeared, but the great mass of these names have not heretofore been used.

Explanations are given in the text regarding the use of conventional signs, as well as a general index of all names appearing in the maps with indications as to the grades of longitude and latitude and the province where the place wanted can be found.

These maps are useful not only for the reader in general, but also for the public and private schools in particular. Filipino educators should encourage school boys and girls to learn the geography of their province and their country to make them conversant with the beauty and wealth of the land where they were born, because the acquisition of such knowledge will awaken and strengthen the sentiment of patriotism in their hearts. *Nihil volitum quin præcognitum.* The geographical sketch and historical account preceding each map were carefully prepared by the provincial section of this office, composed of Mr. Percy R. Angell, Director of Civil Service, and three able members of the Departments of Geography and History of the University of the Philippines—Miss María Valdez, instructor in geography, Mr. Leandro H. Fernandez, associate professor of history and author of "A Brief History of the Philippines," a text-book used in the public schools, and Mr. Nicolas Zafra, instructor in history—who were employed by the Census Office for the purpose above indicated. The descriptions are intended

to give life to the maps; the texts used as reference for the same consisted of sixty-two text-books on Philippine geography, twenty-seven text-books on Philippine history, and others.

The work of the learned Jesuit Father José Coronas on the Climate and Weather of the Philippines is of great practical value. The report published in Volume I of the Census as deduced from the period 1903 to 1918, is original and contains very valuable information not only on the general conditions of our climate, but also on exceptional weather conditions experienced during that period of 16 years. The data given in this report will be of exceptional interest to the public in general and most particularly to those who are engaged in agriculture or in commerce in the Philippines. Never before has any report been published on the climate of the Philippines with such a wealth of data and referring to so many stations distributed throughout the Archipelago.

In the introductory remarks of this report, a short account is given of the Climatological and Weather Service of the Philippines as it existed at the end of 1918. There were in all, 60 official stations and 53 voluntary or coöperative stations throughout the Archipelago. Weather telegrams are being received twice daily from about 50 stations in the Philippines, one station in Guam, ten stations in Japan, five stations in Formosa, five on the China coast and three in Indo-China. A weather map of the Far East based on these telegraphic reports is being prepared daily at the Manila Observatory since 1907, and posted in several public places in Manila. There cannot be any doubt that the preparation of this weather map has helped considerably to improve the forecasting service of the Philippine Weather Bureau, especially as regards the forecasting of typhoons.

Special effort has been made in this report to present in a most comprehensive manner the greatest possible amount of information referring to the distribution of rainfall in the Philippines, as this is considered the most important element of our climate. In fact, it is the cause of the different types of climate which exist in the Philippines within a characteristically tropical climate. A very elaborate and interesting climate and rainfall map and a good number of other graphic illustrations accompany this part of the report. The different types of monthly distribution of rainfall graphically represented in three plates will be of the greatest interest to all. A short account is also given of the principal floods and periods of drought experienced in the Philippines since 1903.

The prevalence of typhoons in the Philippines has always been a matter of the utmost importance to any one interested in our agricultural or commercial activities. The part of the report referring to this subject will prove very interesting. The matter is presented in a new way which will appeal to every one. The author considers first the remarkable typhoons which have actually struck the Philippines during the chosen period of 16 years, and distributes them by provinces and subprovinces; then he takes up the ordinary typhoons of less importance and regular depressions that have traversed the Archipelago, distributing them also by provinces; and finally he gives the number of those typhoons which influenced clearly the weather of the Philippines without touching the Archipelago. Typhoons of the Far East which on account of their distance from our Islands or of their small dimensions had hardly any or little influence on our weather are disregarded in this report. This is considered a very good idea, because what people desire to know is not precisely the frequency of depressions and typhoons in the whole Far East, but the frequency of the typhoons which are apt to work havoc in the Philippines, and also of those which exert a great influence on our weather conditions.

The article of Mr. Francisco Agcaoili, chief food analyst of the Bureau of Science, on "The Value of Food" is an excellent one and contains practical information regarding the nutritive value of our common foods. The selection of foods is of paramount importance to maintain health and growth. It is needless to say that an improperly nourished body can neither properly function nor efficiently keep up the routine requirement of the present-day strenuous life. The article prepared by Mr. Agcaoili not only shows those common foods which may be obtained at reasonable prices and yet have a high nutritive value, but also demonstrates that by proper selection of a daily diet and by not overeating, more particularly not overcrowding the system with a large quantity of one staple food, a healthy body is obtained; a clear mind is ever ready to meet the daily task; and waste and luxury are brought to a minimum.

The importance of the catalogue of medicinal plants prepared by Dr. Leon Ma. Guerrero is self evident. A flora so abundant in endemic species should necessarily contain many plants of medicinal and poisonous properties which have a great therapeutic future and which, if studied pharmacologically, could form the original subjects of a genuinely Philippine Pharmacopoeia. From time immemorial, our quacks have been using many of

our plants for the treatment of the diseases from which the inhabitants of our vast Archipelago ordinarily suffer. Quite a few of our people are opposed to the use of *pharmacy drugs*, because they are laboring under the queer prejudice that such drugs exhaust the force of the patient instead of delivering him from the disease which threatens his existence.

But it must be admitted that, notwithstanding the fact that the knowledge of the quack is extremely empirical and crude with respect to vegetable pharmacology, he knows how to make a timely application of certain matters the action of which in the sick organism is of undisputable and sure efficacy, and sometimes even specific. He displays great ability in the use of purgatives, emetics, febrifuges, vermifuges, remedies for heart disease, dysentery, and diarrhea, etc., which he finds abundantly in our medical flora. He possesses marvelous medicines for healing wounds, and the antidotes administered by quacks have often saved the lives of poisoned persons. On the other hand, many people are not unaware of the deadly effects of many of the plants which they administer judiciously enough to have a curative effect, owing to the simplicity of their pharmaceutical methods, coupled with their poor knowledge of the nature of the beneficent principle of the drug and of the means of extracting the same. The reader interested in this matter is referred to the catalogue of medicinal plants inserted in the proper chapter of Volume III of the present Census.

The report of Mr. Medina on Philippine forests, published in Volume III, contains data of great interest not only to lumbermen, but also to the public in general. More than half of the total area of the Archipelago is covered with forest, nearly one-ninth of which consists of commercial timber. From the investigations and estimates made by the Bureau of Forestry, it appears that the forests of the Philippine Islands contain approximately 200,000,000,000 board feet of commercial timber, which, at the average price of ₱3.50 per thousand board feet, is valued at ₱700,000,000. In the report of Mr. Medina, all kinds of lumber for building construction and furniture, as well as secondary forest products, are described, and an idea is given of the various uses made of the same. It also contains data on the durability and strength of Philippine lumber, and other useful informations on forestry matters.

From the standpoint of statistics, the taking of the Census of 1918 may be considered a success, in the same degree at least as the Census of 1903. This is not intended to mean, however,

that there were no errors on the part of the enumerators. Some of them, of course, made mistakes in making up the schedules, but these mistakes were easily corrected, either by the Census inspectors who revised the schedules before they were turned into the central office, or by the compilation divisions in accordance with rules prescribed by the undersigned,—thus avoiding the necessity of repeating the enumeration work.

To carry out all the Census work, 17,275 persons were employed, 192 of which were females, 12 Americans, 1 Japanese, and 4 Chinese. These figures do not include the employes of the central office, which numbered altogether 887. It may be safely stated, therefore, that the present census was made entirely by Filipinos.

On the Census Day, there were 45 organized provinces, 10 subprovinces, 829 municipalities, 88 townships, 2 cities, 213 municipal districts, and 16,307 barrios. The then Department of Mindanao and Sulu comprised the Provinces of Agusan, Bukidnon, Cotabato, Davao, Lanao, Sulu, and Zamboanga.

The total population of the Philippine Islands is 10,350,730, of which 9,463,731 are Christians, while 886,999 are recorded as non-Christians. Comparing these figures with those of the 1903 Census, it will appear that the total population has increased 35.6 per cent, and while the Christian population shows an increase of 35.4 per cent, the non-Christians have increased 36.9 per cent.

The Director of the Census of 1903, in describing the characteristics of the Christian Filipinos, says among other things:

It may be said that the Filipinos are generally subordinate to lawful authority, that, under competent officers, they make excellent soldiers, and will, in the course of time, it is believed, make good citizens. In fact, it is not too much to expect that, under the guidance of a free, just, and generous Government, the establishment of more rapid and frequent means of communication, whereby they can be brought into more frequent contact with each other, and, with the general spread of education, the tribal distinctions which now exist will gradually disappear and the Filipinos will become a numerous and homogeneous, English-speaking race, exceeding in intelligence and capacity all other people of the Tropics.

Certainly, the Filipinos have demonstrated during the American régime that they are good citizens, love peace and order, and profess high ideals of progress and justice.

The increasing transportation facilities are doing untold good to the people of the Islands. People from various parts

of the country are often seen to commingle and enjoy themselves without in the least taking into account their place of origin. They consider themselves as Filipinos, and are proud to bear this distinctive national appellation. The people are becoming united as they become better acquainted with themselves and each other and realize their common interest and ethnic affinities, which are a potent factor in a united and strong Filipino people. The sectional pride of the people is subordinate to their national consciousness. In order to have the proper internal improvements, sectional or local pride is necessary, but far from being a disturbing element, it is, as in the United States and other enlightened countries, a powerful stimulus for friendly and healthy competition to accomplish the best results in any given line of work.

The forces of democracy and equality have been at work in the Islands since the time of Burgos and even long before. Now the Filipino watches that his rights as a free citizen are not trampled upon and that he does not infringe upon those of other people. It is true that he still falls short of some of his rights and duties, but what he has accomplished makes us hope that he will continue to advance towards his goal, self-perfection. That the great majority of the people are thrifty, ambitious, and hardworking, is a fact substantiated by the census data gathered from the schedules of Population, Agriculture, Manufacture, and Household Industries. Were the Philippines inhabited by a superstitious people depending only upon the blessing of the saints, there would not have been a sufficient foundation for the work of the United States in these Islands; and the unparalleled progress of the Filipinos under the American régime, which has called forth the admiration of the entire world, would not have been realized in such a short period. It is true that there are superstitions among the Filipinos, but what country does not have superstitions? Here they constitute an exception to the rule. The Filipinos in general know that God helps only those who know how to help themselves, and that they have to work in order to succeed in the struggle for life. Let it be said that those Filipino customs—acquired by inheritance or education—which isolate the individual and check him in his progress, have already been modified, and others will undoubtedly be modified as the spirit of investigation and criticism which characterizes the present age, discovers other customs well in accord with the ideals of improvement and perfection which inspire progressive nations.

The description of the non-Christian tribes submitted by Dr. H. O. Beyer, and published in Volume II, is interesting and contains valuable information for the study of the wild peoples of the Philippines in connection with schedules No. 8 and No. 9 of the Census. He classifies the non-Christians into three groups, designating them by the names of Pigmies, Indonesians, and Malays.

The author believes that the Philippine pigmies composing the first group represent the remnants not merely of one, but of three quite distinct aboriginal races, the first of which is the true Negritos, or dwarf men of undoubted Negro affinities; the second a straight-haired dwarf type of strong Mongol affinities which may perhaps be termed the Proto-Malay; and the third a hairy dwarf man intermediate between the aboriginal Australian and the Ainu of Northern Japan, which he calls the Australoid-Ainu. According to the author, the pigmy races have been considered as the most ancient inhabitants of these Islands, whose presence here is believed to date back to a time when the Philippines formed a part of Asia.

The second group is composed of Indonesians. In later times numerous waves of taller migrating peoples found their way to these shores. These tall immigrants were of two quite distinct racial types. Those who came first presented certain marked affinities to the tall races of southern Asia, and this type is what the author calls the Indonesians.

The third group is composed of the migrating people who came later. They were shorter and more Mongoloid, and for this type the term Malay has come into common use.

The Malay race is divided again into Pagans and Mohammedans. The Pagans, by reason of their mental, social and economic characteristics, are considered semicivilized by the author. They are subdivided into four main cultural groups; namely, the Tingguians, Bontoks, Igorot, and Ifugao,—all dwelling in the mountainous interior of northern Luzon. Comparatively speaking, the culture of the Tingguians has little in common with that of the other three groups, while the Bontok culture represents a relatively low state of type which reaches its higher development among the Ifugao and Igorot.

The Mohammedans are divided into at least seven ethnographic groups, differing more or less in culture and dialect, the members of which live almost exclusively in the Sulu Archipelago, the southern end of the Province of Palawan, and the Provinces of Zamboanga, Cotabato, and Lanao, on the Island of Mindanao. In regard to the culture of these people, the author mentions

traits and characteristics which distinguish the Lanaos and Maguindanaos more or less from other Moro groups. Their culture reveals Indian influence. Their industrial arts and agriculture are more highly developed. The more cultured classes are all literate in their own tongue, the Arabic alphabet being used for writing. They have a number of manuscript books, consisting chiefly of religious works, codes of laws, genealogies of the datus, historical works, books of magic, etc. There are a few printed pamphlets in the Maguindanao language. The social life and beliefs of these groups are interesting to know. The institution of polygamy and many other Mohammedan customs, both good and bad, prevail among the upper classes. The older generation is firmly fixed in these customs, but the young people who are attending the public schools are gradually drawing away from them. Education and continuance of peaceful relations will doubtless lead to ultimate assimilation with the Christian Filipinos.

The Moros profess the Mohammedan religion; they follow the Koran and recognize the authorities of Turkey as supreme in religious matters. From the moral and religious points of view, there are many people who consider the Koran as a good book. The trouble is that in its application, the Imams and Panditas twist the meaning of the passages of the book and thus the people become fanatical and are led away from the truth. We have, for example, the practice of going *juramentado*, in which a Moro desiring to commit suicide is put under moral obligation to "die killing Christians." This has been imposed upon the people by the Panditas and other religious authorities as a commandment of Mohammed. It is a politico-religious custom, the origin of which may be traced to the intolerance and hatred which formerly appeared to have existed between Christians and Moros, and which was made use of by the Panditas to persuade certain Moros to "die killing Christians."

The establishment, however, of civil government in Mindanao-Sulu in 1914, under the able and wise administration of Governor Carpenter, who inaugurated and pursued a policy which reached the hearts of the Mindanao-Sulu people, and especially of the Moros, resulted in far-reaching reforms. Considering the past history of these Islands, it is almost incredible that such results have become possible. The majority of the non-Christians in the interior of Mindanao-Sulu have changed their manner of dressing and have adopted the garb of the Christians, whom they are endeavoring to imitate as much as possible, mingling

with them in their work, and assisting in maintaining law and order. The Moros have also changed a great deal; the *juramentado* is practically a thing of the past; they show greater religious tolerance and a high sense of responsibility; they cooperate in every way possible with the Christians and the Government authorities in the maintenance of a government of law and order, and do everything they can to identify themselves with their Christian brothers. For this reason more great and beneficial changes have been accomplished in the last five years, in moral, social, and political respects, as well as in the material development of the people, than had been accomplished for several centuries past. This progress is principally due to the efforts of the Philippine Legislature, which furnished the Department of Mindanao and Sulu with large annual appropriations and thus helped to make the policy inaugurated by Governor Carpenter a success.

A similar course should be adopted in order to promote the cause of civilization among the non-Christian Indonesians and Malays inhabiting the high mountains in the north of Luzon. We agree with Dr. Beyer in his opinion that these inhabitants of the Philippines are a semi-civilized people, with the exception of the Tingguians who live in the townships and *rancherías* of the Provinces of Abra, the two Ilocos, Nueva Ecija, and Pangasinan, and whose culture is of a lower grade than that of their Christian brothers.

These semi-civilized people, however, may be said to have an idea of justice and property and to be law-abiding and industrious people. As to agriculture, their terraced fields show perfect workmanship and are a wonder because of the tremendous labor involved in their construction. The fact is that the mental make-up of the people of the mountains of Northern Luzon, be they Igorot, Ifugao or Kalinga, is confined within the narrow limits of the simple ethics of the family clan, where mutual protection is a duty; where any wrong done to one of the members is considered as an offence against the community itself, since the organization is weakened by it. For this reason it is by no means astonishing that their customs, morals, mode of living, and notions of justice differ widely from those of other Filipinos who have, for a considerable length of time, lived under the civilizing influence of Christianity. We entertain no doubt regarding their capability of attaining social and moral betterment. All that is needed is to adopt such measures, governmental, administrative, and others, as will tend to

improve their habits and bring about their assimilation. Certain Christian missions, like that of the Belgian Fathers, the Episcopalians, the United Brethren and others, are doing wonderful work in this direction. It would be desirable that action be taken by the Legislature extending to the people of the Mountain Province and Nueva Vizcaya, Isabela, and Abra the same financial aid that was given to the late Department of Mindanao and Sulu, for the continued promotion of their progress through the opening of new roads connecting those provinces, and the establishment of schools even in the remotest *rancherías* of the Igorot.

The pigmies, commonly known as Negritos, regarding whom little hope of their becoming civilized is entertained, may yet be induced to adopt the modern social life, if they can be obliged to live in communities near the municipalities, in the mountains of which they are now scattered, and if they can be given the necessary assistance until they shall have become independent and self-supporting, after having been trained to habits of work and order and taught useful knowledge and the practice of civic duties.

Census Schedule No. 2 contains the necessary data to show the condition of agriculture in the Philippines and is similar to the schedule for agriculture of the Census of 1903. The schedule of 1918, however, embodies additional questions which were considered necessary for the study of measures tending to facilitate land registration, prevent the consummation of usurious contracts, which are detrimental to the development of agriculture and, lastly, locate those provinces where irrigation systems ought to be established. Schedule No. 2 was filled in by regular enumerators, with the assistance of other enumerators especially appointed in cases where the great number of farms required it. It was not an easy thing to enumerate the farms, due to the fact that the great majority of our farmers do not keep records of their properties and products. It was necessary to furnish the enumerators with a list of the average production per hectare of rice, corn, tobacco, sugar cane, etc., and the average number of fruits per tree of the most important fruit-bearing trees, to be used as memorandum for the farmers in case of doubt. Likewise, it was necessary to secure from the municipal treasurers, before the taking of the census, a list of the declarations of rural and urban property submitted by the owners or tenants of the land, wherein the area of the property is stated, so that the enumerators, with the aid of

said list, could solve any doubt regarding the area of land to be enumerated.

This shows that the Census Office adopted all reasonable measures to guarantee the accuracy of the data collected by the enumerators. It is not strange, however, to find mistakes made by enumerators, for reasons easy to understand, in collecting data regarding products, though these errors were properly corrected in the Central Office in accordance with the instructions of the undersigned, based on the average of products obtained by the Bureaus of Science and Agriculture. We can, therefore, state that the Census contains exact data on agriculture. No reference to public lands was made in the Census of 1903, due, perhaps, to the difficulties then existing to gather the necessary data. The present Census, which combines the data collected by the enumerators and the results of surveys made by the Bureau of Coast and Geodetic Survey, Bureau of Lands, and Bureau of Forestry, contains a table which gives 29,629,600 hectares as the approximate area of the Philippine Islands, distributed as follows: Of private lands, there were 4,563,723 hectares, of which 2,415,778 were under cultivation, while the rest was not cultivated. The public lands are classified into forest of commercial value, 16,609,108 hectares; forest of non-commercial value, 2,096,985; *cogon* and open land, 4,553,049 hectares; mangroves, 262,633 hectares; unexplored land, 1,541,245 hectares.

Comparing the total number of farms in 1918 with that of the Census of 1903, it appears that 1,955,276 farms were enumerated in 1918, while only 815,453 farms were registered in 1903.¹ As regards the area under cultivation, the statistics of 1918 show 2,415,778 hectares, as against 1,298,845 in the Census of 1903.

The average area of farms in the Islands in 1918 was 2.33 hectares, as against 3.47 hectares in 1903, which shows that in 1918 there was a greater division of property.

Out of the 1,955,276 farms, 1,946,580 were owned by Filipinos, 2,678 by Americans, 949 by Europeans, 1,612 by Asiatics, and 3,457 by other nationalities. As to the extent of irrigation, there were 458,747 farms irrigated with natural current and 13,247 with forced flow; the rest of the farms were not irrigated.

¹ In the Census of 1918, any piece of land not less than 200 square meters devoted to agriculture is considered as a "farm," while in the Census of 1903, any agricultural holding regardless of size was considered as a "farm."

As to encumbrances, there were 26,612 farms encumbered or mortgaged, and 6,917 sold with right to repurchase, while 1,921,749 were entirely free from encumbrance.

The agricultural wealth of the Philippines is shown in the tables published in Volume III of the Census. The principal products are abacá, coconuts, from which copra is made, sugar-cane, tobacco, rice, and corn. The production of these articles in 1918, compared with that of 1903, shows a considerable increase, as may be seen in the comparative tables. Considering one of the most important products, as rice, for instance, it will be seen that there is a general increase of it in all provinces, Pangasinan taking the lead with an increase of 596 per cent over the production of the Census of 1903. Regarding sugar cane, there is no way of making a fair comparison of the 1918 Census with that of 1903, because this Census gives indiscriminately the total production of manufactured sugar and cane sugar by provinces, while the present Census gives separately the production of cane and that of manufactured sugar, but there is no doubt that all sugar producing provinces have increased their cane production. The increase of the production of corn is noticeable in all provinces with a maximum increase of 308.61 per cent over the production of 1903. The provinces which have the greatest production of this grain are Cebu, Isabela, Bohol, Leyte, Misamis, and Cagayan. The existence of many oil factories is a clear indication of the ever-increasing production of coconuts; these factories having been but recently established in the Philippines, have exported a considerable amount of oil according to the statistics of the last few years. Abacá also shows a considerable increase of production; the provinces of Agusan, Batangas, Bukidnon, Cotabato, and Bataan, which had no production in the Census of 1903, in the present Census show a production of from 2,900 kilos for Bataan, to 4,452,484 for Agusan.

The Census data on large cattle show the possibilities of this country so far as stock breeding is concerned. At present the shortage of work animals is one of the principal difficulties encountered by the agriculturists. For many years prior to 1918, rinderpest had been reducing the number of our carabaos, which are indispensable for the cultivation of rice. However, judging by the number of carabaos shown by the Census of 1918, it seems that the efforts made by the Bureau of Agriculture in fighting this disease are bearing fruit and that rinderpest is disappearing. If this satisfactory state of affairs

continues, the country will soon have sufficient cattle for the cultivation of its farms. The hope expressed by the Director of the Census of 1903 with regard to introducing mules and American cattle into the Philippines as a substitute for the typical carabao for agricultural labor still continues to be unrealized, and it is believed that it will remain so while present obstacles such as the high price of those animals and the susceptibility of the mules to surra and of the cattle to rinderpest and texas fever, exist.

The remarkable progress made in agriculture shows that the Filipino people work not only to satisfy their present needs, but also endeavor to provide for their future welfare and happiness. This, however, is not intended to mean that the country has now reached the maximum of its productive capacity. There is still much to be done for the improvement of our agriculture. We should teach more agriculture in the public schools and should encourage the young generation to pursue this career, which is of the utmost importance to the progress of the country. We should extend agricultural education to all rural communities by multiplying the experimental stations and thus facilitating the diffusion of practical knowledge among the agriculturists. We should adopt modern methods of cultivation and use scientific implements, such as tractors, sowing and thrashing machines; and it is hoped that with the employment of sufficient capital and labor and with the establishment of the necessary irrigation systems, the Philippines will be able to produce all that is necessary to meet the needs of the people.

Schedule No. 3 of the Census of 1918, referring to schools, contains almost the same set of questions as that of the Census of 1903. In order to obtain the information required therein, the services of public school-teachers properly recommended by the Director of the Bureau of Education were utilized. These teachers have unreservedly given their valuable coöperation in the work. It can be said, therefore, that the data contained in this table offer all the guarantees of accuracy. However, it should be noted that some of the figures in the statistical data of the Census of 1918 differ from those of the report of the Director of the Bureau of Education for the same year, due to the fact that the latter report includes only data up to the month of March, 1918, while that of the Census comprises data gathered up to the 30th of December of the same year, which was the Census Day. Attention is, therefore, invited to the text on schools, in Volume IV, where the necessary explanations are given re-

garding whatever differences there are between the data published in the Census and those contained in the report of the Bureau of Education.

It will be noted there that the present Census not only contains a greater number of statistical tables than that of 1903, but also its tables include the latest details relative to schools in the Philippines. The statistical tables demonstrate the great progress realized during the last 15 years, not only with respect to the total number of public and private schools, but also with reference to the personnel, Americans and Filipinos, of both sexes, and to the cost of school buildings, school sites, and land reserved for gardens, athletic grounds, and fields.

Wherever a schoolhouse has been built, even in the remotest barrios, there are adjoining lots for gardening and the cultivation of food products, besides grounds for athletic games, such as indoor baseball, outdoor baseball, volley ball, basket ball, etc., etc.

The public school is the center of all social, physical, and intellectual activities. In it, the school boys and girls learn many things that are not taught to them in their homes, and their minds are revolutionized by these revelations. After finishing their studies, they apply the knowledge they have acquired to everyday life, with the results to be expected. They plant flower seeds about their houses, lead a more hygienic life, beautify their homes, and eat more nourishing food. They work harder in order to acquire the things which they have learned to consider as necessary and indispensable to right living. They sometimes act as teachers to their parents, brought up in surroundings devoid of good ideals, and suffering from the results of a limited and deficient schooling in the past. There are many public and private school products of this type, and as the years go by, we shall surely see them multiply, until their influence for higher ideals shall become a decisive factor. The Filipino is a born artist and idealist, and if his artistic temperament and idealistic nature are supplemented by a substantial education, as is being done now, thus enabling him to look upon the problems of life squarely and honestly in the face, there is indeed a great future awaiting him. Not only is the school population affected by the change of régime, but the Filipinos of the passing generation have also shared and are taking part in its blessings in the way of comfort and noble ideals.

The Filipino people have bravely responded to all the needs of the public schools by donations of land, materials, and vol-

untee labor for the construction of schoolhouses. Ninety-five per cent of the so-called barrio schools have been built by the natives, who donated the necessary land, materials, and labor, as well as the school supplies. The Philippine Legislature, on the other hand, has with the utmost liberality appropriated great sums of money for the Bureau of Education during the past years. The last of these is the act appropriating the liberal sum of ₱30,000,000 for additional expenses for the maintenance of barrio schools and for the increase of the salaries of the municipal teachers.

The Census shows that there are 5,720 primary schools, 508 intermediate, 87 secondary, 178 vocational, 15 colleges, and 2 universities. There are 17,172 Filipino teachers, 501 American, 249 Spanish, 58 Chinese, 26 English, and 128 belonging to other nationalities. The total enrollment is 789,046.

The enthusiasm for education is so intense that it has now become an increasingly difficult problem for the Government to give adequate instruction to the great number of students of both sexes who apply for admission to our public schools, colleges, and universities. Our young people, the fair hope of the Fatherland, as Rizal called them, are anxious to educate themselves and conscious of their duty to promote the progress of the country. They pursue all the branches of learning and take up all professions, showing everywhere, both here and abroad, that the Filipino student in general possesses, the opinion of many travellers to the contrary notwithstanding, great mental aptitude for the study of the sciences and arts.

For a long time past there has been a class of cultured persons in the Islands who have had the advantages of a college or university education. They do not differ in any essential respect from the educated class in other countries so far as influence over their fellow citizens is concerned. The number of educated people, those who have secured higher culture in colleges or universities, is rapidly increasing. The privileges of education are now available not only to those who can afford to pay for it, but also to the poor. The Philippine Government showed great foresight when it provided for the education of hundreds of Filipino students in American universities, and it is to be hoped that this policy will be continued until a sufficient number of specialists in the different branches of learning shall have been secured.

Besides the official institutions established in the Islands, there

are some religious and a few non-sectarian schools, which are doing their part to impart higher culture to both men and women. The old University of Santo Tomas, older than the oldest university in the United States, has sent out into the world many of the principal leaders of the country in the political, judicial, and social life of the people. The Jesuit and Dominican Colleges have also done work along these lines. The well-known Silliman Institute in Dumaguete, the Liceo de Manila, the Ateneo de Manila, the National Academy, the Instituto de Manila, San Juan de Letran, the Philippine Law School, the National Law College, San Beda College, the Escuela de Derecho, the De la Salle College, and the Instituto Burgos, for boys, and the Centro Escolar de Señoritas, the Instituto de Mujeres, the Assumption College, and the Santa Escolastica College, for girls, are worthy of special mention among the private institutions, all of which exert great influence along educational lines.

Schedule No. 4 relates to mortality and is found in Volume II. The data shown therein were obtained from the municipal registers by special enumerators. These registers are kept by the municipal secretaries, who are at the same time the custodians of the local archives. The law requires that except in cases of emergency, no dead body shall be buried without a certificate of death (Sec. 1087, Administrative Code of the Philippine Islands of 1917) and likewise provides that "it shall be unlawful for any person to bury or inter, or to cause to be buried or interred, either temporarily or permanently, a dead body of any human being or any human remains in any place other than such as may lawfully be used for such purpose." (Sec. 1073, *Ibid.*) The occultations of cases and the surreptitious burials of persons dying from dangerous communicable diseases—resorted to mainly for the purpose of evading quarantine and other restrictive measures prescribed on such occasions by the health authorities—were practiced only during the turbulent period of the reconstruction (1900–1903). The strict enforcement of the provisions of the law above quoted, which provides a heavy penalty for the delinquent, now insures the recording of all deaths, except in a limited number of cases of undiscovered murder, homicide, or infanticide, the aggregate number of which must be so small that they cannot affect the general conclusions. The certificate of death at present in use in the Philippine Islands is patterned after the American standard and contains the following particulars, to wit: The name, age, sex, nationality, and occupation of the de-

ceased; whether married or single, widowed or divorced; date of death, place of death, cause of death when known; duration of illness; residence of deceased; whether deceased was a permanent or transient resident of the municipality in which he died; whether the deceased had medical attendance, and if so, the name and address of the physician attending; whether there are indications of violence or crime; the date on which the remains were interred, and the place of burial.

The climate of the Philippines, like that of the other countries lying in the tropical belt, is enervating, but only in certain months of the year. The accessibility of certain places during this period—notably Baguio in Benguet, Silang in Cavite, Sibul Springs in Bulacan and Antipolo in Rizal—all within easy reach of Manila either by rail or automobile, offsets in a great measure the nefarious influence of the weather and makes living in the Philippines more agreeable. Nor do the statistics demonstrate that the climate exerts a particularly lethal influence on the health of its inhabitants. The general mortality in the Philippine Islands is influenced to a large extent by the mortality in children under 10 years of age, but the mortality in persons of 10 years and over, compares favorably with that of the registration area of the United States. Moreover, the death rate among the Americans in the Philippine Civil Service in 1918 is only 11.90 per 1,000. However, allowance must be made, for the fact that the majority of Americans in the Philippines are men in the vigor of life and that physical fitness is a prerequisite to entrance in the Service.

A relatively small number of the sick received proper medical attendance, as may be seen in the tables of mortality. A great many people living in rural communities cannot afford to pay for the services of a physician, usually living in a town many kilometers away. They are not entirely opposed to the scientific treatment of disease, but their poverty, sometimes coupled with ignorance, forces them to solicit the ministrations of the local *herbolario*. This is especially true in cases of acute disorders, but in case of a lingering disease, like tuberculosis, the people make sacrifices to secure the services of qualified practitioners. It should be borne in mind, besides, that the number of physicians in the Philippine Islands is far from being sufficient for the needs of the inhabitants. On the other hand, the attitude of the people towards the institutional treatment of disease has undergone a radical change. Where formerly they regarded the hospital with horror, they now flock to it,

bringing their sick, often only to be turned away for lack of accommodation.

The general death rate for 1918 is 40.6 per 1,000 inhabitants, as against 63.3 for 1903. Influenza heads the list of causes of death; it caused in the aggregate 84,936 deaths, representing a mortality of 897.5 per 100,000 inhabitants. As in the rest of the world, when the disease assumed epidemic proportions, the health authorities were utterly powerless to check its onslaught. This is the one epidemic disease that has defied all the resources of modern preventive medicine. It exacted its toll in thousands of lives and only stopped when the infective agent naturally lost its virulence.

Malaria and malarial cachexia follow in the list with a total of 37,703 deaths or a mortality of 398.4 per 100,000 inhabitants. Malaria is still endemic in certain isolated regions. The street ditches so common before the era of good roads, the cesspools beneath the back porch so prevalent everywhere, and the time-worn custom of keeping water in uncovered jars, have undoubtedly contributed a great deal to the propagation of malaria-bearing mosquitoes, but education and the application of recognized hygienic principles and the construction of modern highways have reduced the prevalence and mortality from this disease. The antimalarial work carried on some years ago in the San Jose Sugar Estate in the Island of Mindoro is a standing example of what private initiative and modern sanitation can do. The success of the corporation as a business enterprise became possible only when the place was made habitable, and as a result of this work San Jose is probably the most salubrious spot in Mindoro to-day.

Tuberculosis of the lungs has caused a total of 29,775 deaths, representing a mortality of 314.6 per 100,000 inhabitants. Tuberculosis is eminently the result of the present social conditions: poverty and overcrowding, and it is significant to note as indicative of their awakening, that a *living wage* has become the battle-cry of the proletariat. While tuberculosis of the lungs is still one of the principal causes of mortality, the percentage of deaths from this disease has gone down considerably, due to a better knowledge of its causes and its contagious nature and due, also, to practice of the health authorities to destroy every known focus of infection. Then patients themselves, realizing the seriousness of their condition, yet reluctant to be separated from home and kindred, willingly submit to a partial segregation in their own houses, using separate eating

utensils and sleeping apart from the others. With the progress in sanitary education and the efforts of the Philippine Islands Antituberculosis Society, in intelligent coöperation with the Health Service, we may yet hope to control, if not completely eradicate, one of the greatest scourges that now afflict the Filipino people, and, incidentally, the world.

Cholera and dysentery have caused a combined mortality of 19,775 or a death rate of 209 per 100,000. Of these deaths 7,320 or 77.4 per 100,000 inhabitants, were due to cholera alone. When it is remembered that the epidemic of 1902 caused a mortality of 2,000 per 100,000 inhabitants, the figures for 1918 can certainly be claimed as a distinct triumph of modern sanitation. Indeed, the efficiency of public health administration may be gauged by its ability to keep down the prevalence of and mortality from epidemic diseases. To the improved sources of water supply—attained by the establishment of gravity systems and the drilling of artesian wells—may be attributed the reduced mortality from typhoid fever, dysentery, cholera and other water-borne infections.

Smallpox¹ has caused an unusually heavy mortality. There were 17,428 deaths, which represent a rate of 184.2 per 100,000 inhabitants. The immunity conferred by the general vaccination in 1907 has apparently been lost, and this in spite of the semi-annual vaccinations carried out regularly as required by law. In the years following this general vaccination, the mortality from smallpox was almost negligible, except in very remote places, in certain regions of Mindanao and the interior of the Islands of Leyte and Samar, where fresh vaccine could not be taken.

Diphtheria and croup have caused a total mortality of 562 or 5.9 per 100,000 inhabitants; they, therefore, constitute a negligible factor in the general mortality.

Leprosy caused relatively few deaths, considering the number of persons afflicted with the disease, there being only 124 registered for the year under discussion, or a little over 1.3 per 100,000 of the population. This is due to the fact that the majority of the victims of this disease died, as usually happens, from other intercurrent diseases, notably influenza and tuberculosis of the lungs. With the establishment in 1906 of the Culsion Leper Colony for the segregation and treatment of the sufferers, much has been accomplished, and the possible discovery of a cure bids fair to definitively solve this important

¹ Including varioloide.

health problem by restoring to society some 5,000 of its members and saving the Insular Government an annual expense of nearly half a million pesos.

Beriberi caused a total of 17,689 deaths or 186.9 per 100,000 inhabitants; 9,790, or 103.4 per cent of these occurred in children under one year of age. Infantile beriberi has since 1903 been recognized as a separate entity. It was formerly diagnosed as *alferecia*. The local records used to report it under the head of *alferecia* or as infantile convulsions or infantile eclampsia. The works of Williams and Vedder, of Fraser and Stanton, Guerrero and Quintos, Crowell and Concepcion and, lastly, of Albert, have definitely established the fact that beriberi is transmitted to the infant through the milk of the nursing mother suffering from the disease. Fed largely on polished rice, her vitality must necessarily be low. The diet consists of very little meat, largely pork, and vegetables. The prevalence of adult beriberi, especially in nursing mothers, is due, as has been found again and again, to poverty, faulty diet, and living in unsanitary surroundings.

The principal causes of infant mortality are congenital debility, infantile beriberi, acute gastro-intestinal disorders, and diseases of the respiratory tract. Moreover, the examinations of the milk of nursing mothers, made by the sanitary commissions of the Philippine Health Service, with the proper aseptic precautions, have demonstrated repeatedly the fact that owing to the mother's impaired vitality, the milk was contaminated with various pathogenic micro-organisms, besides being scanty and poor in quality.

The real problem of infant mortality lies from birth to under two years of age. At very little expense domestic sanitation can be much improved and the hygiene of infants raised to a higher level. Much may be accomplished by educating the nursing mother, as the question of raising healthy offspring, while partly economic, is largely one of intelligent motherhood.

These are, briefly reviewed, the outstanding features of the mortality statistics of 1918, and it is gratifying to state that the general death rate of the Philippine Islands for 1918 compares favorably with that of 1903 and also with those of other tropical countries, as shown in the report on Mortality.

Schedule No. 5 has been prepared for the collection of data on social conditions, a subject-matter which is extensively discussed in Volume IV. Compared with the Census of 1903, in which the small number of public hospitals, libraries, and newspapers was noticeable, the present Census, relatively speaking, shows

remarkable progress in these respects. It is true that the country does not yet possess what it ought to have, taking into consideration the number of its inhabitants, but there is a decisive tendency toward that end. The Filipinos realize more and more the advantages of having their ills treated in hospitals, just as they grow more and more fond of reading, as a means of acquiring greater knowledge, and there is no doubt that the necessary action will be taken to satisfy these needs of the people. A symptom of progress not noted in the Census of 1903 is the establishment of centers of puericulture, public dispensaries, and charitable institutions, and the founding of coöperative rural credit associations, clubs, and civic organizations.

The laboring class in the Census of 1918, compared with that of 1903, has also improved in some ways, though not in a degree corresponding to the high cost of living caused by the late European War. This was evidenced by peaceful strikes of the laborers and by the friction between landowners and farm laborers which occurred in some parts of the Islands after the taking of the Census.

The growth of our national life has a great influence on the intellectual life of the country. It awakens the energies of poets, novelists, jurists, philosophers, historians, and statesmen, who, inspired by the same ideal, the ideal of the country, concentrate all their energies upon the publication of newspapers, magazines, books, and pamphlets enriching Filipino culture. The work accomplished by literary men is in many ways worthy of notice. Their works, counting only those that are catalogued in public libraries, cover a vast range of subjects. Journalism, religion, sociology, philology, the sciences, literature, history, and belles lettres, all have been objects of study of the Filipinos.

It is very difficult to estimate the tremendous progress made so far as social conditions are concerned. The changes for the better are evident everywhere. This improvement is not only an intellectual one: it is plainly seen in our dress, in our standard of living, in the houses in which we dwell, in the organization of numerous societies for mental, physical, and social recreation and culture, in the healthier and cleaner sports, in the efficient administration of justice, etc. The manifestations of improvement are manifold and varied. The political parties and meetings and the discussion of public questions also have their social aspect. The theaters where dramas written in local dialects are represented, help to bring the people together and therefore contribute greatly to increase the amenities of social life.

The diffusion of knowledge through the press has also greatly bettered social conditions. The average Filipino of our days reads or hears almost daily about the social and political questions of his country and his views on these things are correspondingly broadened. The day is not far distant when by education, reading, and work, the working classes will reach the social and intellectual plane of the common people of the more advanced countries.

The changes for the better are especially noticeable in the Filipino women. She has been and is being taught to be a good teacher, a solicitous nurse, a woman of society, and a resourceful wife. Not content to confine her talents to these lines of activity, she goes further and devotes her time and intellect to higher duties, studying pharmacy, medicine, and law. Before the advent of modern civilization she was already known as a loving daughter, a helpful wife, an unselfish mother. The present method of education gave her a broader view of life and greater usefulness to her fellow-beings. All this she acquired without sacrificing her natural sweetness and lofty sentiments. It is a remarkable fact, undoubtedly attributable to the Christian religion, that she occupies a most unique and dignified position in the community. Not only in the home does the Filipino woman occupy an enviable position, but also in society, where she is treated with respect and courtesy. An educated Filipino always yields the first place to her. She is considered as an equal by her husband and is generally the treasurer of the household. Her obedience and unselfish love for her husband and family give weight to her opinion on matters affecting the household and even the business or profession of her husband. In this connection we may say that the Filipino family is founded on love sanctified by Christian teaching, which produces the sublime sentiments of self-denial, protection, and gratitude that are the basis of the juridical relations between husband and wife and parent and child.

Another indication of prosperity which the Census reveals is the fact that the provinces of the Archipelago are self-supporting, except a few, some of which are of recent creation and will need help until they are able to standardize the public taxes. However, generally speaking, it is interesting to note that the general income of the Insular, provincial, and municipal governments all over the Islands, aggregating ₱98,387,749.27, is sufficient to cover their general expenditures, amounting to ₱91,830,064.01, which leaves a surplus of ₱6,557,685.26. All

these facts go to prove the stability of these political organizations.

Schedule No. 6, on "Manufactures," is set aside for the enumeration of manufacturing establishments of all kinds which have produced one thousand pesos or more during the year 1918. The result of the present Census, compared with that of 1903, shows a really encouraging state of prosperity in this respect.

When the Census was taken, there were 5,239 factories and industrial establishments in the Archipelago, excluding sugar and rice mills. The total capital invested in real and personal property was ₱164,745,868.27. The cost of production amounted to ₱188,943,637.17. The monthly average number of laborers was 70,329. The total monthly average of wages and salaries was ₱2,195,183.06, and the value of the aggregate production ₱230,485,666.11, which represents a profit of 25 per cent.

There were 2,663 sugar mills, with a capital of ₱52,407,514.09; the cost of production was ₱21,837,596.71; the monthly average number of laborers, 70,722; the total monthly average of salaries, ₱1,406,800.63; and the total value of production ₱82,145,961.59, which shows a profit of 115 per cent. There were 452 rice mills, with a capital of ₱5,320,209.37; cost of production, ₱3,396,437.84; monthly average number of laborers, 2,414; total monthly average of salaries, ₱68,895.40; total value of production, ₱43,462,805.46, which shows profits amounting to 753 per cent. These profits which seem to be quite excessive are really not so, as one must remember that the cost of production does not include the value of the raw material, the rice.

In the year 1918, when the Census was taken, there were, therefore, altogether, 8,354 manufacturing establishments in the Islands, with an aggregate capital investment of ₱222,473,591.73; ₱214,177,671.72 of expenditures; a total value of production of ₱356,094,433.16, and an average profit of 63 per cent. The monthly average number of laborers was 143,465 and the total monthly average of salaries ₱3,670,879.09.

We shall now proceed to state the various manufacturing and important industrial establishments in the order of their importance, giving the number of establishments, the capital invested, the cost of production, the monthly average number of laborers, the total monthly average of salaries, and the total cost of production.

By the number of establishments of each class: The following industrial establishments number 100 or more: Bakeries and cake factories; tailor shops; copra-drying establishments; salt-

works; native confectionery factories; fish and shrimp drying and salting establishments; slipper factories; oil factories; gold and silversmith, watch repairing, jewelry, and optical shops; carriage factories; blacksmith shops; shoe factories; embroidery shops, and distilleries.

By the capital invested: The establishments with a capital of ₱1,000,000 or more are—oil factories; gas, electric light, and power plants; cigar and cigarette factories; distilleries; sawmills; shipyards; abacá pressing establishments; ice plants; coal mining industry; iron foundries and machine shops; embroidery shops; printing, lithographing, and bookbinding establishments; bakeries and cake factories; salt-works; gold mines; shoe factories; gold and silversmith, watch repairing, jewelry, and optical shops, and hat and umbrella factories.

By the cost of production: The manufacturing establishments which expend ₱1,000,000 or more for production, are—oil factories; abacá pressing establishments; cigar and cigarette factories; distilleries; sawmills; bakeries and cake factories; gas, electric light, and power plants; printing, lithographing, and bookbinding establishments; tailor shops; soap factories; iron foundries and machine shops; embroidery shops; shipyards; rope factories; shoe factories; slipper factories; fish and shrimp drying and salting establishments; furniture and cabinet factories; hat and umbrella factories, carpentry shops, and copra-drying establishments.

By the monthly average number of laborers: The establishments which, on the average, employ 1,000 or more laborers every month, are—cigar and cigarette factories; sawmills; oil factories; bakeries and cake factories; tailor shops; embroidery shops; gas, electric light and power plants; copra-drying establishments; gold mines; salt-works; printing, lithographing, and bookbinding establishments; distilleries; coal mining industry; shipyards; slipper factories; iron foundries and machine shops; abacá pressing establishments; shoe factories, and fish and shrimp drying and salting establishments.

By the total monthly average of salaries: The industrial establishments which expend ₱20,000 or more for average monthly salaries, are—cigar and cigarette factories; oil factories; sawmills; gas, electric light, and power plants; printing, lithographing, and bookbinding establishments; tailor shops; bakeries and cake factories; shipyards; distilleries; salt-works; gold mines; embroidery shops; copra-drying establishments; iron

foundries and machine shops; slipper factories; abacá pressing establishments; shoe factories; furniture and cabinet factories; repair shops; gold and silversmith, watch repairing, jewelry, and optical shops, and carriage factories.

By the total value of production: The manufactures turning out ₱1,000,000 worth or more of finished products are—oil factories; abacá pressing establishments; cigar and cigarette factories; sawmills; distilleries; bakeries and cake factories; gas, electric light, and power plants; printing, lithographing, and bookbinding establishments; tailor shops; iron foundries and machine shops; soap factories; ship-yards; embroidery shops; shoe factories; rope factories; slipper factories; furniture and cabinet factories; fish and shrimp drying and salting establishments; hat and umbrella factories; copra-drying establishments; carpenter shops; aerated and mineral water factories; native confectionery factories; ice factories; macaroni, spaghetti and vermicelli factories; gold and silversmith, watch repairing, jewelry, and optical shops, and tanneries.

Compared with the Census of 1903, the manufacturing industries of the country may be said to have reached a degree of development never reached in former years. This is due, among other causes, to the increase in production, the opportunities derived from the past war, the coöperation of Filipino and foreign capital, and, principally, the adoption of scientific methods of manufacturing.

The analysis of the statistical tables made by Assistant Director Epifanio de los Santos Cristobal is extremely interesting, not only to the public in general, but particularly to the manufacturers, since his comments speak of the great opportunities which the country offers for capital investment in manufacturing enterprises.

The enumeration of household industries, as shown in Schedule 7, was made with the object of determining the condition of the small industries and of pointing out the means of promoting their progress.

In the 1903 Census, industries with an output of less than ₱1,000 were not enumerated, but only those which produced ₱1,000 or more. These latter are classified as manufactures in the present Census, while those producing more than ₱100 and less than ₱1,000 a year are considered as household industries.

It was a hard task to enumerate the household industries and the fishing industry, because the people engaged in these industries generally do not keep books of account, and at the best

write down their notes in pencil in notebooks full of erasures. Moreover, the special agents assigned to make this schedule noticed that there was much fear on the part of the owners that the object of the enumeration was the imposition of a new tax. This circumstance explains why the data collected show little production, if not loss, in many industries. Nevertheless, we may consider that the data compiled by the special agents are near the truth.

It will be noted that only the embroidery, textile, hat, and mat industries are to a certain degree well developed, the rest being in a rudimentary state. What the laboring class needs to promote the progress of these industries, is organization and the adoption of modern utensils to improve production. Besides, there ought to be the proper division of labor in order to realize big profits. Judging from the figures in the schedules on household industries, these small industries are only as a supplementary means of earning a living, and generally the persons engaged in these industries devote but a small part of their time to the same. For example, fishing-net weavers do not always weave nets, but employ most of their time in some other work, and weave only during certain hours of the day and night.

There were altogether 124,487 registered household industry establishments, which produced during 1918 ₱31,352,458.74. The provinces that have the greatest number of these establishments are Iloilo, with 14,144; Batangas, with 13,411; Samar, with 9,780, and Tayabas, with 9,241. The industries regarded as the most important, because of their production or wide distribution throughout the Islands, are the following: Native fiber textile industry, native cotton textile industry, native hat making, spinning establishments, native wine making, etc.

The fishing industry is very important to the country, because fish is one of the important foods of the people. The provinces along the coast are all engaged in fishing, and although they use more or less antiquated implements, this industry always yields profit to the people engaged in it. In the Philippines there are 2,107 fish-salting and fish-smoking establishments. The most important ones are in Manila and surrounding provinces, where there is a great demand and where the industry is really lucrative.

The fishing industry is carried on by means of fish ponds, corrals, and fish nets. Fish ponds give greater profits and generally can be used the whole year. Moreover, they are not so exposed to destruction by typhoons as the corrals and

fish nets. On the other hand, the corrals and fish nets at times give almost fabulous profits to the fisherman.

With the exception of sixty-seven Japanese fishermen residing in the city of Manila and fifty-one foreigners engaged in fishing in various provinces of the Archipelago, registered on Census Day, the fishing industry in the Philippines may be said to be controlled by Filipinos.

The data on commerce and transportation, corporations, and banks, were taken from records existing in various offices of the Government, and there is no doubt as to their accuracy. The comments on commerce and transportation published in Volume IV were prepared by one of the officials of the Census Office, Mr. Manuel Sityar, formerly professor of mathematics and commercial and statistical geography in the "Liceo de Manila."

The data on corporations, railroads, telegraph and post-offices, and roads are undoubtedly accurate, as they were taken from official records. The increasing business prosperity of the Philippines is shown by the table of registered corporations, which numbered 1,534, with a subscribed capital of ₱115,225,686, out of a total of ₱242,201,067. Among the mercantile corporations, those organized for the development of natural resources occupy the first place. The agricultural corporations rank second only, notwithstanding the fact that the Philippine Islands are an eminently agricultural country. This may be explained by the fact that agriculture is generally not engaged in by corporations, for the reason that a considerable area of the land suitable for agriculture is owned and cultivated by individuals. There is no way of establishing a comparison with the commercial activities of 1903 on the basis of the table on corporations, because at that time there was not a Corporation Act like the one now in force.

As to the roads of the Philippines, it is gratifying to know the great improvements realized since the taking of the Census of 1903. The Philippine Legislature has authorized the provincial governments to double the cedula tax for the purpose of improving the roads, and this measure, coupled with the effort of the engineers of the Bureau of Public Works, has resulted in the construction of many good roads and strong bridges, a large number of the latter are of steel and cement.

At the time of the taking of the present Census, the total length of roads and highways in the Philippines was 9,595.5 kilometers, of which 4,500.3 were first class roads. As regards

the total length of first, second, and third class roads, the Province of Pangasinan comes first, the Province of Cebu, next; the Province of Occidental Negros, third; and the Province of Iloilo, fourth. The province occupying the last place has 247.7 kilometers of first class roads.

The judicial statistics were reproduced bodily from the official records of the justice of the peace courts, the Insular and provincial jails, and the clerk's offices of the courts of First Instance and the Supreme Court. The analysis of these tables, prepared by the undersigned, appears in Volume IV.

To mention the multitudinous details of the Census would be overstepping the limits of a report like the present one. The attention of the reader is, therefore, invited to the four volumes of the Census in which he may find interesting information.

A careful study of the hundreds of statistical tables deduced from the Census schedules and the comments upon the same will reveal to the impartial observer the great progress realized by the Filipinos in all the phases of life during the fifteen years intervening between the taking of the Census of 1903 and that of 1918. I have examined all the data of the present Census, and in all I have found evidence tending to show that the Filipino people, as a race, possess the energy necessary for progress. Their desire for betterment and perfection, constantly encouraged by their national aspiration, is manifested in all spheres of life. What they need are more ample opportunities to develop themselves completely as a people and a nation.

In view of what the Filipino people have accomplished in the trying years of the past in the development of the country and the maintenance of a stable government, we sincerely believe that upon reaching their ardently desired goal, the independence of their country, they will maintain their place in the concert of nations with dignity and will demonstrate to the world that the United States, in carrying to a successful conclusion her noble work in the Philippines, has added to the annals of civilization what may, perhaps, be their most brilliant page.

Before concluding, I desire to express to the small army of Filipinos who have worked for the Census my high appreciation of the zeal and loyalty with which they have performed their duties.

Likewise, I wish to convey, in the name of the Assistant Directors as well as in my own, the expression of our gratitude to the Governor-General, Honorable Francis Burton Harrison,

to the President of the Philippine Senate, Honorable Manuel L. Quezon, to the Speaker of the House of Representatives, Honorable Sergio Osmeña, to the Department Secretaries, Bureau Chiefs, Census Inspectors, provincial and municipal officials, to the press, and to the public at large, for the decided coöperation they have given us in the fulfilment of our duties. In terminating our task, we are far from entertaining the presumption that we have produced a perfect work, but we do believe the data which we have compiled in the volumes of the Census are useful and necessary for the study of measures conducive to the improvement of the conditions of our country.

MANILA, *May 17, 1920.*


Director of the Census.

**PREFACE TO THE ATLAS OF THE
PHILIPPINE ISLANDS.**

PREFACE TO THE ATLAS OF THE PHILIPPINE ISLANDS.

PUBLICATION.

The maps in the following collection were prepared for the Philippine Census in the Office of the Coast and Geodetic Survey at Manila during the year 1919.

The work of compilation of drawings and construction of lithographic stones was executed by a force of 12 Filipino draftsmen and lithographers under the supervision of Mr. John Bach. Each map is an entirely new compilation from the most authoritative original sources of information.

The printing was done at the establishment of Carmelo and Bauermann, in Manila. Five colors were used in printing; black for outlines and names, brown for mountain shading, blue for coast fringes, rivers, and lakes; red for municipal symbols and either pink, yellow, purple, green, or orange for the land-areas.

MAPS.

The entire collection consists of 61 maps divided as follows:

Philippine Islands, political.....	1
Philippine Islands, relief.....	1
Philippine Islands, forest.....	1
Provinces, entire.....	43
Provinces, halves.....	6
Subprovinces	7
Cities	2
Total	61

The whole territorial extent of each province and subprovince with all outlying possessions is shown in true relation across intervening water spaces, except in the single case of Albay which required the displacement of Catanduanes on a sub-plan.

Three provinces (Tayabas, Sorsogon, and Palawan) are divided into northern and southern parts and are each printed as two maps. The two parts in each case have the same scale.

The Mountain Province is shown twice; once as an entire unit

and again as its seven separate subprovinces on larger scale maps. These seven separate maps are all given the same color as the map of the entire province.

On the map of the Philippine Islands each province is given the distinctive color it bears on its own provincial map.

SCALE.

The necessity of fitting all provinces, regardless of area, to a uniform size of page results in a wide variation in scale. This ranges from 1:305,000 (or 4.8 miles to the inch) in the case of Amburayan to 1:2,113,000 (or 33.4 miles to the inch) in the case of Palawan.

For several maps a diagonal position is used to permit an increase in what would otherwise be an objectionably small scale.

The special map of the city of Manila is as large as 1:66,500 (or 1.0 miles to the inch) while the three special maps of the whole archipelago are as small as 1: 5,000,000 (or 78.9 miles to the inch).

DATE.

Compilation was started in February, 1919, and printing in April, 1919. Changes in the organization of the administrative divisions of the Philippine Islands are so numerous and rapid as to seriously handicap map-making.

After the map of Tayabas was printed the Island of Marinduque was constituted an independent province. Also since the date of publication Act No. 2877, effective February 4, 1920, rearranges the boundaries of the Mountain Province and of Ilocos Sur and La Union. In this rearrangement the Subprovince of Amburayan entirely disappears while Lepanto, Bontoc and Benguet are subject to considerable change. Seven maps are thus affected.

DEFINITIONS.

Provinces and subprovinces are wholly divided into *areas* called *municipalities*. These are in turn subdivided into smaller *areas* called *barrios*.¹ Each barrio-area contains its separate town known by the name of the barrio; and as the municipal area is the sum of a number of barrio-areas a municipality contains a number of scattered towns. Legally the name of a municipality, municipal district or township applies to the whole administrative area, sometimes of considerable extent. Popularly, however, the name is more commonly restricted to the

¹ In non-Christian regions the division is usually into *municipal districts* or *townships* while the subdivision is into *barrios* or *rancherias*.

most important town in the municipal area. This usage arises from the fact that this town as a rule gives its name to the municipality and hence does not have any distinct barrio-name. When considered as a barrio it is merely called the *población*. As the scale of the maps is not large enough to permit the delimitation of municipal boundaries it is necessary to follow popular usage and to print the municipal name and symbol at a town rather than over an area. Generally this town which bears the name of the municipality is also the seat of the local government; but in this respect there are certain irregularities.

Municipal districts frequently, and municipalities occasionally, do not have a *población* or barrio with the municipal name, and hence the seat of government is at a barrio of different name. In such cases the red municipal symbol and the name in heavy type are printed at the barrio used as the seat of government, followed by a parenthesis giving the true barrio name in light type. In other cases there is a barrio bearing the municipal name but nevertheless the seat of government is at a barrio of different name. As in the preceding case the municipal name, symbol, and type are given to the barrio at the seat of government followed in parenthesis by the true barrio name, while in a different location will be found the municipal name repeated in light type but attached to a barrio symbol.

Such cases are fortunately relatively rare. Most municipal names are applicable not only to the entire administrative area but also to the most important barrio and to the most populous town which is also the seat of government. Barrios are the smallest legally-recognized units of area. They do, however, contain a number of localities known as *sitios*. These *sitios* have neither definite boundaries nor areas. Some of them are not even inhabited. They are merely places or localities in the most general sense. When they contain small centers of population these group together to form the barrios, as the latter group together to form municipalities. In a similar way the barrio-name is applied to the principal population-group.

The barrio does not present similar map difficulties since it usually contains only one important population-group and since very few *sitios* are shown on the maps.

CONTENTS.

The maps show all municipalities, municipal districts and townships.

The barrio representation, however, varies with the scale of the map and the density of population of the region.

On large-scale maps or in sparsely-settled regions practically all of the barrios are shown, but on small-scale maps or in crowded regions only a fraction can be shown. Out of a total of 16,307 barrios, 4,998 or 31 per cent appear on the maps.

The selection of barrios presented some difficulty since the population statistics for 1918 were not available during the map compilation, and since many selections had to be made solely from lists of names without adequate data to indicate the relative importance of the barrios. Space limitation also prevented the use of important barrios in crowded sections. The maps also show a few sitios in regions where there are no barrios.

Provincial boundaries are shown carefully corrected for the latest information available to the date of issue. (See subsequent changes in La Union, Ilocos Sur and the Mountain Province caused by Act No. 2877.)

Besides the above political features all the natural geographic features capable of representation on the scale of each map are shown. These include the details of shores and islands, the principal rivers and lakes, and the main mountains and ranges.

Mineral resources are shown with the geological symbol \times (or two crossed hammers) at the locality of each known outcrop. The symbol is followed by the name of the mineral.

GEOGRAPHICAL AND HISTORICAL DESCRIPTIONS.

Each provincial map is accompanied by a short description of the salient facts of its geography and history; and by a brief table showing statistics of population, production, and public instruction.

LIST OF ISLANDS.

The Census of 1903 contains a list showing that the Philippine Archipelago then comprised 3,141 islands.

This list was compiled by the United States Coast and Geodetic Survey at a time when modern surveys were just beginning. The enumeration was based on the best previous charts, although the information in many regions was known to be incomplete.

The progress of detailed surveys has now covered the greater part of the archipelago and large-scale original survey sheets are available which have added thousands of small islets.

For the Census of 1918 the United States Coast and Geodetic Survey has made a new enumeration of islands based on the results of its own surveys to the end of the year 1919.

This list raises the total number of islands to 7,083. The

count is final within the surveyed regions, but is subject to some additional future increase when the surveys are extended to the Sulu Archipelago, the west coast of Palawan, the east coast of northern Luzon, and the islands lying between Luzon and Formosa.

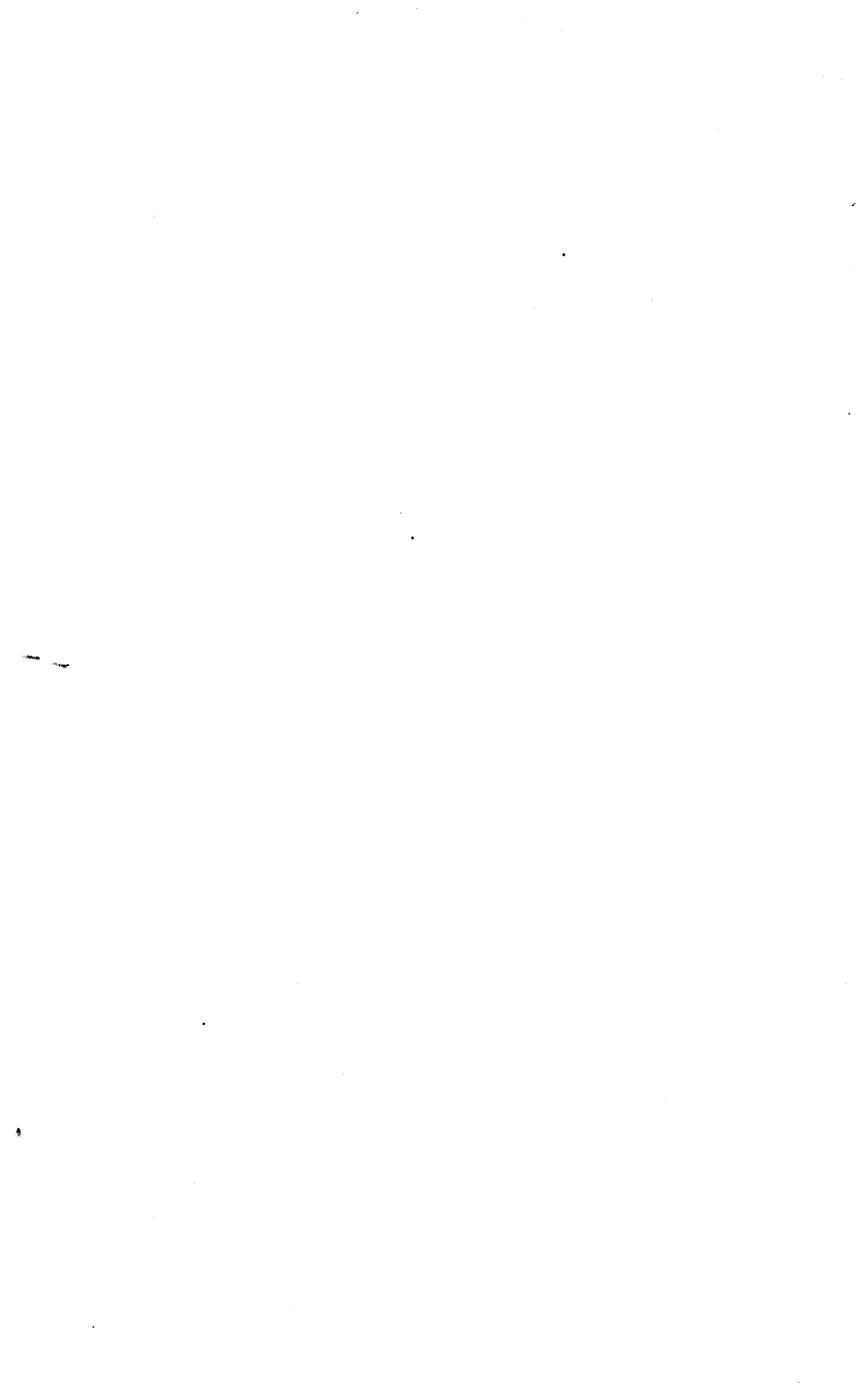
Of the total number of islands, only 462 have an area of one square mile or over, only 2,441 are of sufficient importance to have names, while 4,642 are small unimportant mangrove or rocky islets.

The tabulation gives groups adjacent to the principal islands; and an alphabetical list of names of all islands of one square mile or more in area, for each group.

LIST OF PORTS.

Following the provincial descriptions and maps is a list of ports used by vessels engaged in both interisland and foreign trade.

The list is arranged in alphabetical order of port names. Each port is shown with its province and with the classification assigned to it by the Public Utility Commission. First class ports are provided with wharves and afford protection from storms. The majority of them are ports of entry for foreign trade and hence have custom houses. Second class ports have some limited facilities while third class ports are only open roadsteads.



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**GEOGRAPHICAL AND HISTORICAL
DESCRIPTIONS AND PRO-
VINCIAL MAPS.**



ABRA.

GEOGRAPHICAL SKETCH.

This beautiful mountainous province, drained by the voluminous Abra River and its tributaries, falls away from the western slopes of the Cordillera towards the coastal plain of Ilocos Sur. It is bounded on the north by Ilocos Norte and Apayao, on the east and south by the Mountain Province, and on the west by Ilocos Sur. It is shut off from the coastal plain by mountains except where the Abra River escapes to flow to the sea.

The province has been considered the seismic center of northern Luzon. The land is extraordinarily broken and traversed on all sides by mountains of the third order, hills and rivers. The bed rock is volcanic and igneous, overlaid by limestone, sandstone and by recent alluvium.

The Abra River is the highway to the province of Ilocos Sur. It rises in Lepanto whence it takes a northerly course to Aguet; from this point it flows westward through the Banauang Gap into the sea. In time of heavy rains the river rises quickly and as the gap is narrow the flow becomes so much impeded that destructive floods result. The current, even in normal times, is swift and traveling is difficult. Out of its entire length of about 55 miles, 30 miles can be traversed by bamboo rafts. It is along this river and its principal tributaries, the Sinalang, Tineg, Malanas, Baay, Saquet, and Magayep rivers that most of the towns and villages are situated.

Rainfall is plentiful. During the southwest monsoons hurricanes frequently traverse the region. The northeast winds also bring hurricanes, accompanied by thunderstorms which are made more violent by the presence of thick forests.

The drainage basin is covered with luxuriant vegetation. Corn, tobacco, and rice are the most important products. The mountains are covered with forests containing timber suitable for construction and famous for hardness, durability and size. Of the minor forest products, rattan, honey, and wax are found in abundance. There is gold dust along the Binoñgan River, Lacub. Of other minerals nothing is known, except that traces of copper, coal and iron pyrites have been discovered along the Abra River. Of mineral springs only that of the Icmín River is known. This has a temperature ranging from 70° to 80° Fhr. with a flow of 3 to 4 cubic centimeters per second.

The people occupying the valleys in the west are Ilocanos, while those dwelling farther up the mountains are "Tinguianes."

The latter group themselves into "rancherias," settlements, and townships, and plant rice, corn and sweet potatoes. They lead a semi-civilized life and display an aptitude to follow the path of progress. Greater and greater numbers of them are converted to Christianity and receive the benefits of school instruction. In Lagañgilang there is a school of arts and trades opened exclusively for the "Tingguianes," and there they learn with facility all kinds of household industries.

Commerce in Abra is not very lucrative because of the difficulty of transportation. However, there are a few good roads between the towns, that of Tañgadan, which connects this province with that of Ilocos Sur, being worthy of special mention. Horse trails are numerous, and rafts are floated along the rivers. The industry of large cattle raising is well advanced. The horses of Abra are well-known for their resistance. It may be said that this province supplies Northern and Central Luzon with all the carabaos needed for agriculture.

This province has 17 municipalities and 159 barrios. Its capital is Bangued with a population of 13,895 inhabitants.¹ It is located in the west central part of the province.

HISTORICAL ACCOUNT.

The territory now belonging to the province of Abra was formerly included within the jurisdiction of the ancient province of Ilocos. When this latter province was divided in 1818 into the provinces of Ilocos Norte and Ilocos Sur, Abra became a part of Ilocos Sur.

The early history of Abra records nothing notable in the way of explorations. Missionary work, however, seems to have been undertaken among the mountain peoples of Abra from the early days of Spanish occupation. As early as 1598, Augustinian friars had already founded the town of Bangued. It appears, however, that after 1598 very little success, if any, attended the efforts of religious workers.

The great uprising of the latter half of the eighteenth century, known as the Silang Rebellion, had its effects upon Abra. It is to be remembered that Diego Silang had willing followers in many parts of Ilocos. In Abra his chief lieutenant was Pedro Becbec. Becbec, however, later turned traitor to Silang. It was he who, in company with Vicos, caused the death of Silang. Silang's wife carried on the revolutionary activity of her husband. She gathered together the remainder of his loyal followers and fled to Abra, where she tried to arouse the people against the enemies of Silang. Here she was overpowered by a strong force under the command of Manuel Ignacio de Arza.

The first half of the nineteenth century saw considerable activity on the part of missionaries. During this period there were established in Abra several important missions, among which were Tayum, founded in 1803; Pidigan, established in 1823; La Paz, founded in 1832; and Bucay, founded in 1847.

The same period saw the creation of Abra into a politico-military province. This took place in 1846. As constituted,

¹ Non-Christian population, 282, not included.

the new province included what is now the subprovince of Lepanto and the following towns: San Jose de Manabo, Bangued, Tayum, Pidigan, La Paz, and San Gregorio. In 1847, Bucay was founded and made the capital of the province. In 1861, however, Bangued took the latter's place as capital of Abra.

The effects of the Revolution were felt, just as in most provinces, in Abra. The moving spirit of the Revolution there was Don Blas Villamor. Through his initiative the *principales* of the province set up, about the middle of 1899, a provincial government. Leocadio Valera was chosen provincial governor and remained in power until Abra fell into the hands of the American forces late in 1899.

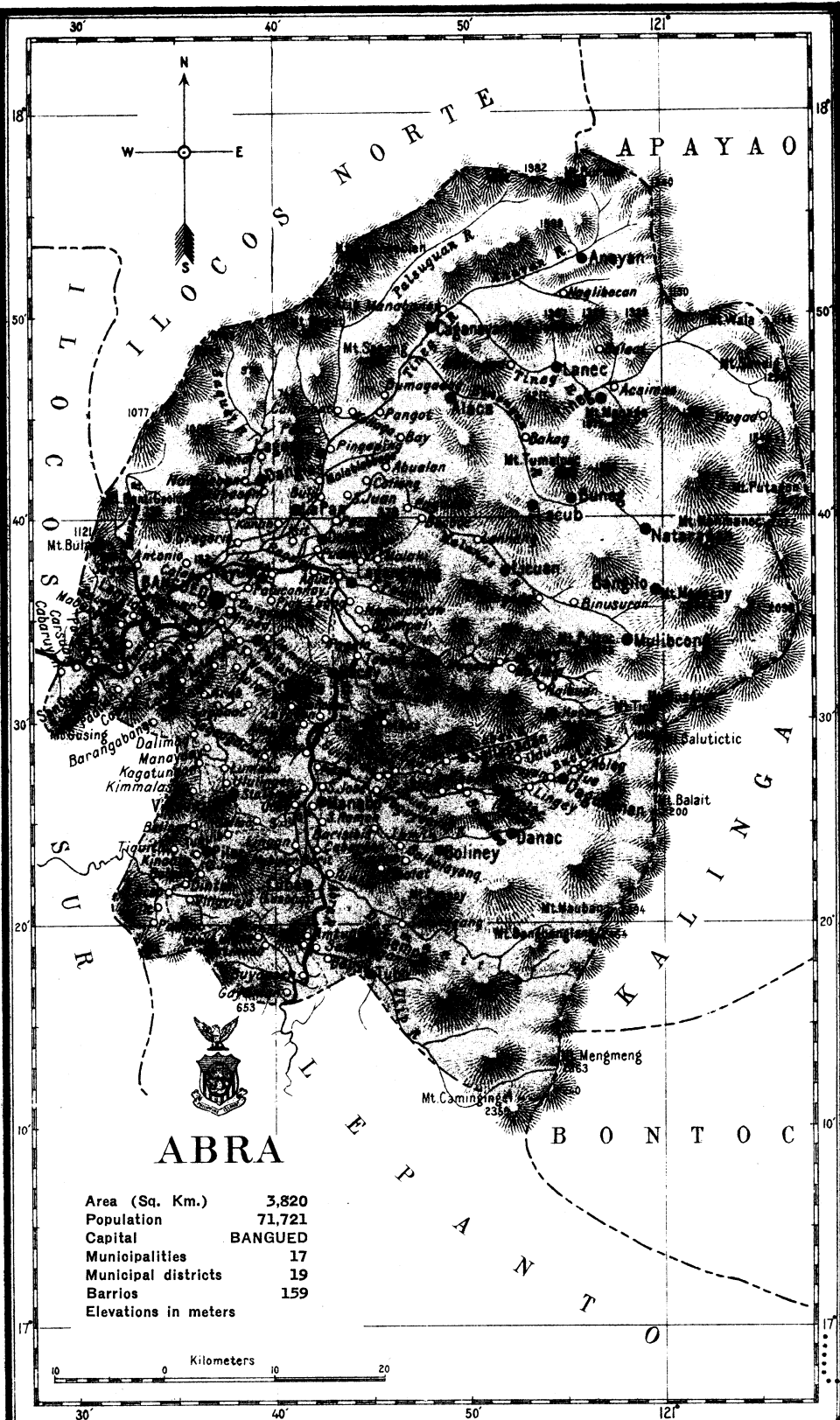
Civil government was established in Abra on the 19th of August, 1901. In February, 1905, however, the province was annexed to Ilocos Sur as a subprovince. It remained as such until March, 1917, when, by the passage of Act 2683 that year, Abra was again made into a separate province.

STATISTICAL DATA.

Approximate area	square kilometers.....	3,820
Area of farms	hectares.....	119,938
Cultivated lands	do.....	19,128
Production in 1918:		
Rice	<i>cavans</i> ¹	231,347
Sugar cane	tons.....	4,260
Corn	<i>cavans</i>	111,819
Tobacco	kilos.....	2,551,500
Population		² 61,655
Number of schools.....		101
Primary	93	
Intermediate	6	
High school	1	
Vocational	1	
Enrollment for 1918.....	6,778	
/ Males	4,549	
Females	2,229	
Rate of mortality per 1,000 inhabitants.....		26.2
Number of establishments of household industries.....		1,274
Production in 1918.....		₱246,104.48
Number of manufacturing establishments.....		28
Production in 1918.....		₱79,114.00

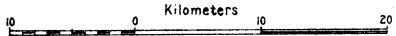
¹ One *cavan* equals 75 liters.

² Non-Christian population, 10,066, not included.



ABRA

Area (Sq. Km.)	3,820
Population	71,721
Capital	BANGUED
Municipalities	17
Municipal districts	19
Barrios	159
Elevations in meters	



11

AGUSAN.

GEOGRAPHICAL SKETCH.

AGUSAN, containing an area of 11,121 square kilometers, is situated north of Davao, bounded on the east by Surigao, on the west by Bukidnon, and on the north by Surigao and the Bay of Butuan, the shores of which make the only seacoast of the province.

Two remarkable features characterize the land; namely, the wide fertile valley of the Agusan River, including its extensive swamps and lakes, and the mountain ranges of the east and west. The mountains are not high, but they are covered with fine timber practically untouched, with the exception, however, of the region along the bay where a little lumbering is carried on.

The soil is in general a rich deep humus of the greatest fertility and holding a constant moisture. The weather is favorable to the growth of plants. The rainfall is very evenly distributed throughout the year. There has never been a drought or a destructive typhoon in the Agusan Valley. Abacá and coconuts thrive well here. Three crops of corn are grown annually in some sections of the province. The climate is sufficiently damp, so that rice produces a splendid crop on the bottom lands without irrigation. Bananas, papayas and other tropical fruits are grown in great abundance, the famous Mindanao papaya attaining its perfection in the region about Butuan. The greater portion of this rich valley is an open grassland, where stock-raising could be profitably carried on.

The numerous lakes and the extensive area of swampy land are sources of incalculable wealth. Choicest fish abound in the lakes, while nipa from which tuba and alcohol are obtained, and mangroves for fuel and tanning purposes, grow wild in the fenlands. These resources, however, have not so far been made use of.

Gold deposits exist in abundance. Most of these deposits are found in the mountains on the eastern side of the valley. The location of these mines is favorable, they being near rivers. There are several gold bearing claims at present under operation. There is one waterfall, the Alalum, but its flow is not rapid enough to warrant its utilization.

Agriculture is the chief industry, although fishing on the Bay of Butuan is carried on an enormous scale. Because of the presence of coral reefs along the seashores, the bay affords a good fishing ground. Sardines, lapulapu, pampano, and mackerel are fished here. The establishment of a cannery could be safely undertaken with the sufficient fish in the bay and with the constantly increasing market for the product.

Butuan, the capital and most important town of the province, is near the mouth of the navigable Agusan River. This river

port serves the same purpose for the settlements built along Agusan River and its tributaries, as the town of Cotabato to the well-scattered towns of the Cotabato Valley. The produce of the land is floated on the river on rafts to the town of Butuan for shipment particularly to Manila and Cebu.

The population is composed of Christian and non-Christian people. The Christian dwellers come from the different parts of the Archipelago. These daring settlers live a pioneer life in this productive, but secluded, valley. They live in groups, as the early settlers of the first thirteen colonies of America, so as to live a life of security in case of any depredation by their Mohammedan neighbors who outnumber them.

This province has 3 municipalities and 101 barrios. Its capital is Butuan, with 9,790 inhabitants.¹ It is located in the northern part of the province.

HISTORICAL ACCOUNT.

THE PROVINCE OF AGUSAN had its origin in the old politico-military *comandancia* of Butuan which formed part of the Province of Surigao at the end of Spanish rule. It was the territory included in this politico-military *comandancia* which in September, 1914, was established as the Province of Agusan, one of the seven provinces of the Department of Mindanao and Sulu.

Late as was the creation of the Province of Agusan, nevertheless it was one of the first places in the Philippines to be visited by the Spaniards. It is believed that Magellan touched there on his way to Cebu. About 17 years later, Francisco de Castro, a Portuguese, visited the same spot, baptizing the inhabitants of the place including the "regulo" of Butuan. Five years after the visit of De Castro, Villalobos appeared at the mouth of the Agusan River. He had come all along the coast of Surigao in search of provisions. In 1565 Legaspi, having received glowing reports about Butuan, also visited it. He was well received by Pagbuaya, the chief of Butuan. He left the town in April, 1521, after staying there for about a month.

Missionary work was undertaken in Agusan in the early years of the period of exploration and conquest. Before 1600, Jesuit missions were already in existence on the banks of the lower Agusan River. In 1622, Recollect missions began to be established in Agusan. By that year the Recollects had ascended the Agusan River and established a mission in Linao, now Buanawen, a place far in the interior of Agusan.

The settlements along the Agusan River suffered disaster at various times. For example, the Moros in 1640 raided Butuan and destroyed considerable church property. In 1649, the natives of Linao rose in revolt, and razed the mission that had been founded there. Later, in 1753, the Moros raided the settlements along the Agusan River and carried away some 200 captives. That the settlement at Linao escaped was due to the difficulty encountered by the raiders in ascending the river.

¹ Non-Christian population, 627, not included.

From the earlier days, Agusan formed part of the province of Caraga. In 1860, with the establishment of a politico-military government for Mindanao, Agusan, with the Province of Surigao, constituted the East District of Mindanao. This district extended from Butuan Bay to Caraga Bay. In 1870, this district was known as the District of Surigao.

At the end of the Spanish rule, Agusan existed as a politico-military *comandancia* of Surigao under the name of Butuan. It was ruled by a military officer of the rank of captain.

In 1901, Agusan was included as a subprovince of Surigao under the name Butuan. It remained as such until 1907, when the Province of Agusan was created by joining the Subprovinces of Butuan and Bukidnon. Later, in September, 1914, with the reorganization of the old Moro Province, the present Province of Agusan was established as one of the seven provinces of the Department of Mindanao and Sulu. Its capital is Butuan.

STATISTICAL DATA.

Approximate area	square kilometers.....	11,121
Area of farms.....	hectares.....	18,279
Cultivated lands	do.....	11,256
Production in 1918:		
Rice	<i>cavans</i> ¹	74,091
Corn	do.....	48,443
Copra	kilos.....	291,420
Abacá	do.....	4,452,484
Tobacco	do.....	123,486
Population		² 38,323
Number of schools.....		48
Primary	20	
Intermediate	2	
Vocational	26	
Enrollment for 1918.....		5,751
Males	3,360	
Females	2,391	
Rate of mortality per 1,000 inhabitants.....		28.2
Number of establishments of household industries.....		43
Production in 1918.....		₱14,852.00
Number of manufacturing establishments.....		4
Production in 1918.....		₱49,595.00

¹ One *cavan* equals 75 liters.

² Non-Christian population, 6,035, not included.

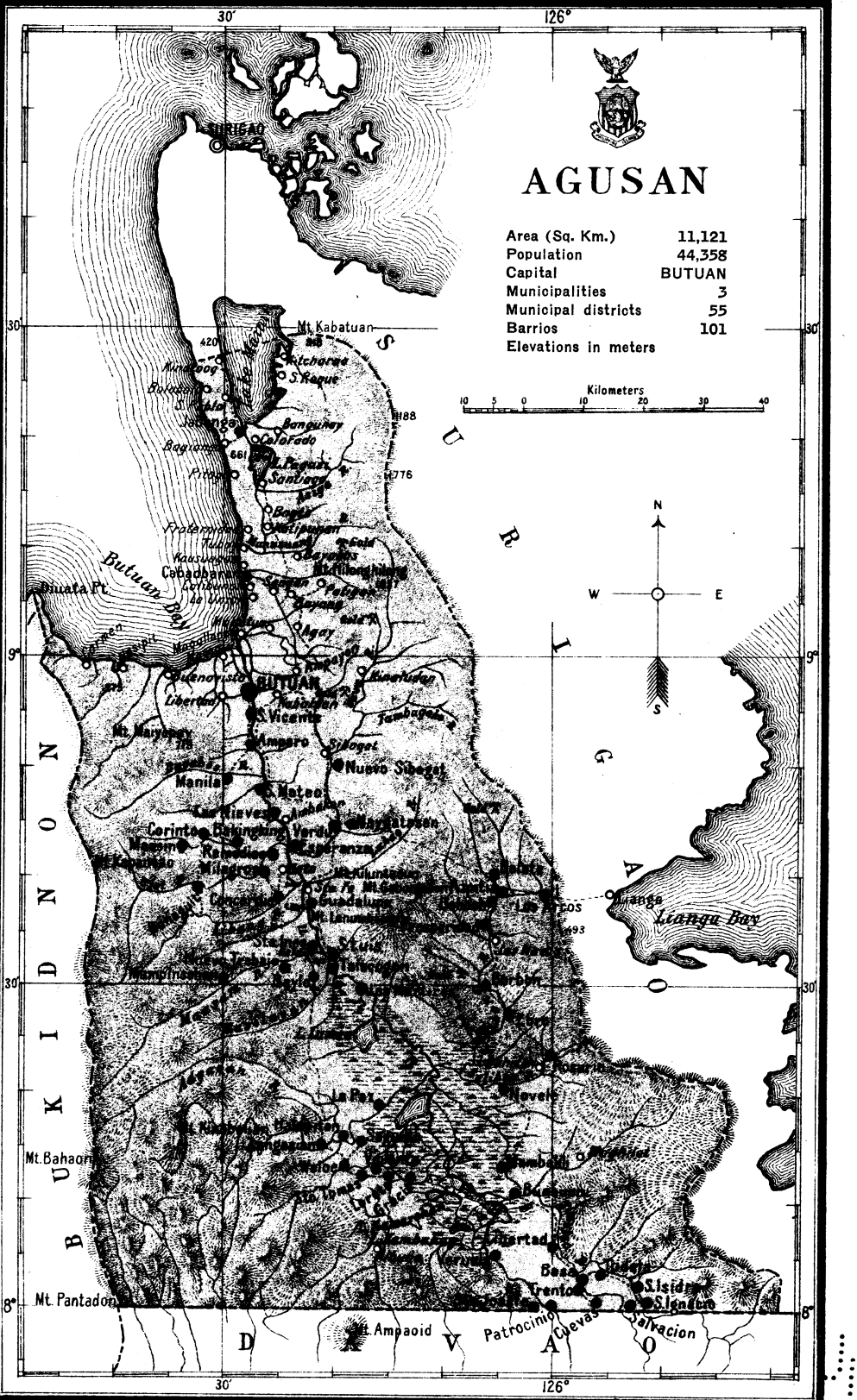
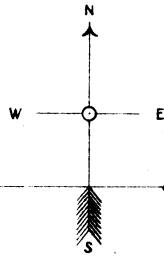
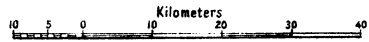
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AGUSAN

Area (Sq. Km.)	11,121
Population	44,358
Capital	BUTUAN
Municipalities	3
Municipal districts	55
Barrios	101
Elevations in meters	



30°

126°



ALBAY.

GEOGRAPHICAL SKETCH.

ALBAY is the central province of the Albay Peninsula through which passes the long range of mountains which extends throughout the eastern part of the Philippines. The coast is very irregular, the most important inlets being Tabaco Bay and Albay Gulf; Rapu-Rapu, Batan, Cacraray, and San Miguel are islands north of the Albay Gulf. Reefs are found along Rapu-Rapu, but elsewhere the coast affords safe anchorage. Bato, Tabaco, Malilipot, Bacacay, Lignan, Rapu-Rapu, Puro, and Manito are important ports. Catanduanes Island forms a sub-province.

Mayon, Masarana, and Malinao in the east and Catburauan in the west are the most important mountains. The first is a semi-active volcano, well known for its beautiful, symmetrical, and perfect cone that rises over 7,500 feet above sea level and serves as landmark throughout the Bicol region. It erupted on fifteen occasions during historic times, the one in 1814 being the most destructive of all.

The most important rivers are the Calaunan, Yana, Soboc, Ugat, Lagonoy, and Quinali. Those that rise on the slopes of the Mayon Volcano fall rapidly and could easily be utilized for power. The Caratagan, Mabano, Manlapoc, Burayan, and that lying between mountains Pinalayanan and Jalabong-tagotoy are the most important lakes. All these teem with fish, especially Lake Bato, between Camarines and Albay, from which they are taken in truckloads.

The climate is one of the most attractive features of the province. The temperature is even, there being no great extremes, and the nights are delightfully cool and refreshing. Albay, being mountainous, is well drained and consequently there is very little swampy land, although the rainfall is heavy. The province is also rich in salubrious mineral springs, the best known of these being the Tiwi hot sulphur springs in Naga; others are in Cawit, near the town of Manito, and in Parian, near Camalig.

The land is rich and well adapted to hemp, the greatest source of wealth, as well as to coconuts, sugar cane, pineapples, vegetables and rice. What little swampy land there is, yields nipa thatch and alcohol, industries that furnish work to a considerable number of persons. The forests are extensive, providing timber, rattan, pili nuts, and gum elemi for export. Gutta-percha and Para rubber trees are extensively cultivated. The low hills and wide grass lands afford pasturage for horses, cattle, carabaos, goats and sheep. The island of Catanduanes will become the center of horse raising in the Philippines, for contagious diseases have never gained a foothold there.

The Subprovince of Catanduanes abounds in gold, copper, and iron. The Batan coal mines which are being operated are supplying several manufacturing and gas plants. In Pantaoon,

Albay, there are quarries of marble; in Ligao, gypsum deposits; and in Guinobatan and Camalig, lime.

The people are reputed to be among the most industrious in the Archipelago, and commerce flourishes. Alcohol is distilled from the sap of the coconut palm. Sinamay and pinolpog (sinamay with the fibers flattened by beating) are woven for export, especially in Daraga. Pots are manufactured in Tiwi.

Commerce has been greatly assisted by the good roads of the province and by the ease with which coal is mined at Batan and loaded onto vessels at the mine. Albay is the capital of the province, having a population of 53,105 inhabitants. It is located in the southeastern part of the province. Virac is the capital of the Subprovince of Catanduanes which has 6 municipalities and 95 barrios. Albay has 16 municipalities and 391 barrios.

HISTORICAL ACCOUNT.

Little is known regarding the first exploration of the region which now constitutes the Province of Albay. It is believed that the brave Spanish military officer, Luis Enriquez de Guzman, who explored the Islands of Masbate, Ticao, and Burias in 1569, also visited portion of Albay. It is probable, however, that Capt. Enriquez de Guzman's exploration was to a great extent limited to what is now Sorsogon. It is also believed that Juan de Salcedo in 1573 explored parts of what is now Albay, founding the town of Libon and visiting the neighboring Island of Catanduanes.

At the time of the arrival of the Spaniards, there must have already been in existence several centers of population in this region. Albay, the present provincial capital, according to Cavada, was not formally created until the year 1636. There are, however, several towns whose foundation dates further back than Albay. Among these may be mentioned Camalig, created in 1569, Libon in 1573, Oas in 1587, Polangui in 1589, and Malinao in 1600.

Until very recently when Sorsogon was made into a separate province, the Province of Albay included the regions now under the jurisdiction of Sorsogon. This whole portion of Luzon was known in the early days of the Spanish rule as Ibalon, although this denomination probably applied to what is now Sorsogon rather than to Albay proper.

During the second half of the 18th century and the first two decades of the nineteenth, the population of Albay showed a great increase. The number of people recorded as living in Albay in 1755 was 28,469. This figure rose to 80,205 in 1799 and to 106,333 in 1810.

In 1818, the recorded population of Albay was only 92,065, showing a great decrease from that of 1810. This was to a great extent due to the destructive effects of the eruption of Mayon Volcano in February, 1814. As a result of this eruption, some 1,200 persons were killed and the towns of Kagsawa and Budiao were destroyed.

In 1846, Albay suffered a slight diminution of territory. This was due to the partial segregation of the Islands of Masbate and Ticao which, in October of that year, were created into a *comandancia politico-militar*. At the same time, Albay ceded to Camarines Sur, Lagonoy, Caramoan, and Sagnay, in the Caramoan Peninsula, in exchange for Camalig, Guinobatan, Maoraro, Ligao, Oas, Polangui, Libon, Donsol, and Quipia.

By 1850, Albay had more than recovered the population she lost in 1814. This renewed growth in population was indicative of the general prosperity of the province at about this time. A great factor that contributed to the general prosperity of Albay at this period was the wise administration of José María Peñaranda who became governor of the province in May, 1834. It should be remembered that it was this engineer-governor who built Albay roads, bridges, and public edifices and encouraged agriculture. For decades after Peñaranda's enlightened rule the general prosperity of the province continued, so that in July, 1860, Albay was made an "alcaldía" of the first class.

At the outbreak of the Revolution, Albay for a while remained at peace. Later, however, like the Camarines Provinces, it came under the Revolutionary Government. During the last year of its resistance, Pawa and Belarmino were the prominent military leaders.

Civil government was established in Albay on April 26, 1901.

STATISTICAL DATA.

Approximate area	square kilometers.....	2,525
Area of farms.....	hectares.....	143,580
Cultivated lands	do.....	110,670
Production in 1918:		
Rice	cavans ¹	537,095
Sugar cane	tons.....	6,743
Corn	cavans.....	6,764
Copra	kilos.....	3,630,788
Abacá	do.....	86,143,464
Tobacco	do.....	2,657
Population		258,770
Number of schools.....		308
Primary	292	
Intermediate	11	
High school	2	
Vocational	3	
Enrollment for 1918.....	22,676	
Males	12,997	
Females	9,679	
Rate of mortality per 1,000 inhabitants.....		40.3
Number of establishments of household industries.....		4,304
Production in 1918.....		₱830,309.87
Number of manufacturing establishments.....		62
Production in 1918.....		₱485,236.19

¹ One *cavan* equals 75 liters.

STATISTICAL DATA (CATANDUANES).

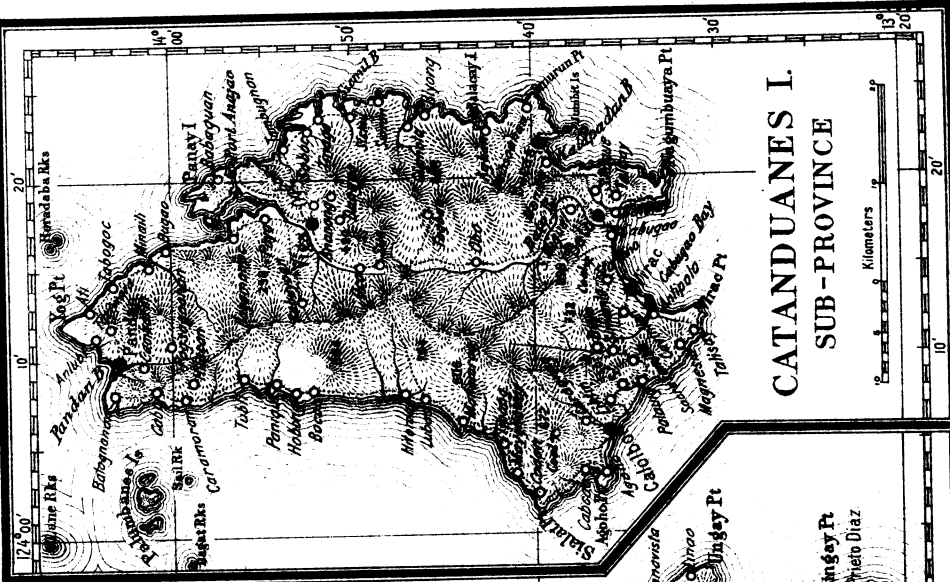
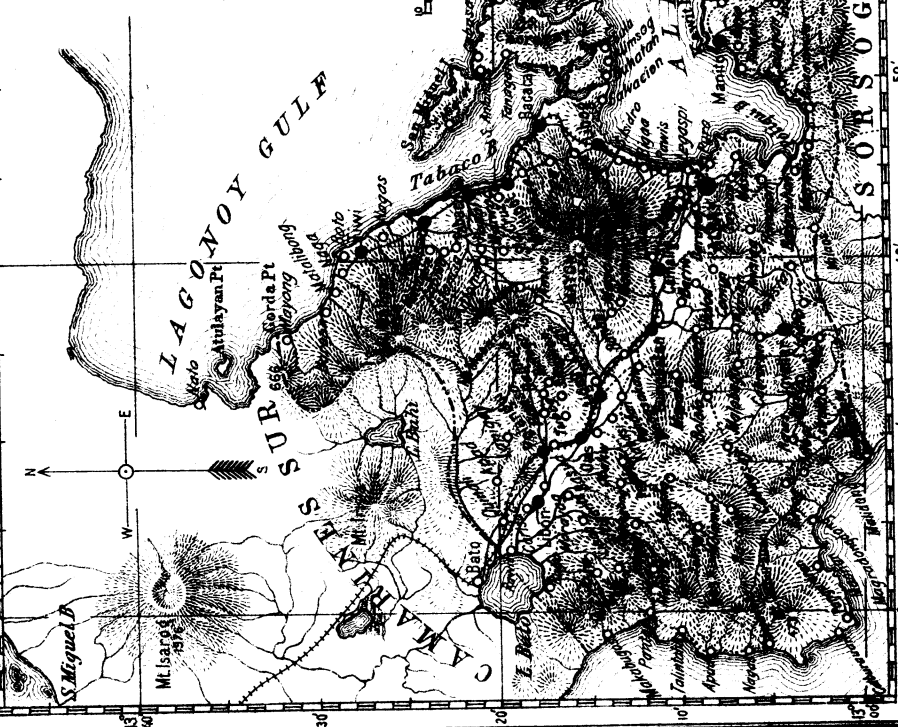
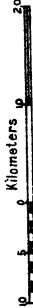
Approximate area	square kilometers...	1,471
Area of farms.....	hectares.....	26,163
Cultivated lands	do.....	21,841
Production in 1918:		
Rice	<i>cavans</i> ¹	113,288
Corn	do.....	6,192
Sugar cane	tons.....	911
Abacá	kilos.....	3,066,815
Population		62,975
Number of schools.....		51
Primary	49	
Intermediate	1	
Vocational	1	
Enrollment for 1918.....		5,187
Males	3,152	
Females	2,035	
Rate of mortality per 1,000 inhabitants.....		28.0
Number of establishments of household industries.....		274
Production in 1918.....		₱72,475.71
Number of manufacturing establishments.....		10
Production in 1918.....		₱1,212,360.33

¹ One *cavan* equals 75 liters.

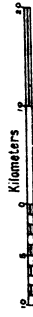


ALBAY

Area (Sq. Km.) 3,956
 Population 321,745
 Capital ALBAY
 Municipalities 22
 Barrios 486
 Elevations in meters



CATANDUANES I. SUB-PROVINCE





ANTIQUÉ.

GEOGRAPHICAL SKETCH.

THE PROVINCE OF ANTIQUÉ embraces the narrow mountain slopes, valleys, and coastal plain of western Panay. The mountain range which curves from northwest to southwest has for its highest peaks, Mts. Congcong, Tiguran, Madaas (at the apex of the curve), Baloy, Nangtud, Sipang and Balabac. These mountains cut off the rains from the northeast monsoon and cause a long dry season such as is found in the Ilocos provinces and Zambales. However, the sea on the west and the forests on the east have the effect of tempering the climate. From May to June atmospheric disturbances are frequent. Between April and July thunderstorms and lightning frequently work havoc among the coconut trees.

The coast levels are nowhere broad since spurs from the mountain range descend nearly to the coast. The latter is low and sandy with many outlying reefs. There are no good harbors. The port of San José de Buenavista, the capital, is very poor, although during the northeast monsoons it offers a fair shelter. Lipata and Pucio offer refuge to vessels during the southwest monsoons. The coastwise trade, however, is active, and many small steamers and sailboats ply between Antique and Iloilo. Salt making and fishing are favored by the climate and coast conditions.

Batbatan, Maralison, and Nagus are islands near the coast. About 27 miles off shore are the Sombrero rocks, about the size of a launch, generally white and visible for a distance of 9 miles. The passage lying between these and the Antique coast is clear and free from all reefs. The Semirara Islands formerly belonged to Mindoro. They are low but mountainous.

On the mountain called Cresta de Gallo is a deposit of white and colored marble of various grades. On Mount Sinocuestac, 557 kilometers from Batnongon is a spring whose reddish water seems to indicate the presence of copper in the vicinity. There has also been discovered in promising quantities chromic iron or chromite in this province. Mineral springs are found in Aniniy, Barbasa, and Antique, all of which are hot and salty. There are a number of caves, in two of which are found birds' nests which the natives use in stopping hemorrhage.

The soil is composed principally of clay and gypsum. Though mountainous in places, there are low fertile plains and well-watered valleys in the province still awaiting development. Sugar cane and copra are raised for export, and rice, corn, and beans for local use. Forest products, such as timber for build-

ing construction and cabinet work, pitch, gum, resin, wax, and honey can be found in abundance. There are plenty of grasslands for pasturing cattle.

Soil and industrial conditions in Antique are very similar to those of Ilocos. The people are industrious and hard workers. The manufacture of delicate fabrics from pineapple fiber gives employment to hundreds of women and the distillation of alcohol from coconut sap provides work for many men.

This province has 13 municipalities and 321 barrios. Its capital is San José de Buenavista with 20,750 inhabitants. It is located in the southwestern part of the province.

HISTORICAL ACCOUNT.

Tradition has it that in early times ten datos from Borneo with their followers and slaves landed in Panay Island at a place called Sinogbuhan, near the site of the present town of Miagao, Iloilo. The Bornean immigrants found the place inhabited by Negritos living under the rule of the brave and swift Maricudo, from whom they finally purchased the island for one gold "sadok" and a gold necklace. Subsequently the island was called by the Bornean settlers Madiaas, after a lofty mountain bearing that name, and was divided into three "sakops," namely Hantik, Aklan, and Irong-irong. In latter times, Hantik became Antique, Aklan became Capiz, and Irong-irong, Iloilo. Hantik or Antique was placed under the rule of a dato named Soma-kuel, who became the founder of Malandog, the first Malay settlement in Antique.

It is believed that the Spaniards found their way to Antique immediately after they had established themselves in Oton, Iloilo. Spanish influence, however, was not greatly felt until about the end of the sixteenth century. The one town of importance in those early days was Antique.

Like the neighboring Provinces of Iloilo and Cebu, Antique suffered greatly from the incursions of Moro pirates. Especially toward the end of the sixteenth century and in the beginning of the seventeenth were these depredations terribly felt. The pirates came so often that it became necessary to build a fort near the town of Antique and keep a small garrison there.

Antique was created into a politico-military province in 1790, out of portions of Iloilo and Capiz. The town of Antique was the first capital. Later, the provincial government was moved to Bugasong and for a while the province was often called by that name also. In 1802, the capital was moved to San José de Buenavista, where it has since remained.

The history of Antique in the nineteenth century shows a rapid increase of population. The following figures bear out this statement clearly: In 1810, the population was 39,325; in 1818, 50,597; in 1840, 57,495 and in 1870, 93,010.

In 1860, a general reorganization of the provincial government of the Visayas was decreed. The government of Antique, however, remained politico-military in character as in previous periods. It retained this status to the end of the Spanish rule.

The Revolution did not make great headway in Antique until the year 1898. That year saw the evacuation of the whole Island of Panay by the Spaniards. Antique then came under the control of the Philippine Revolutionary Government. For some time Leandro Fullón served as military and civil commander of Antique.

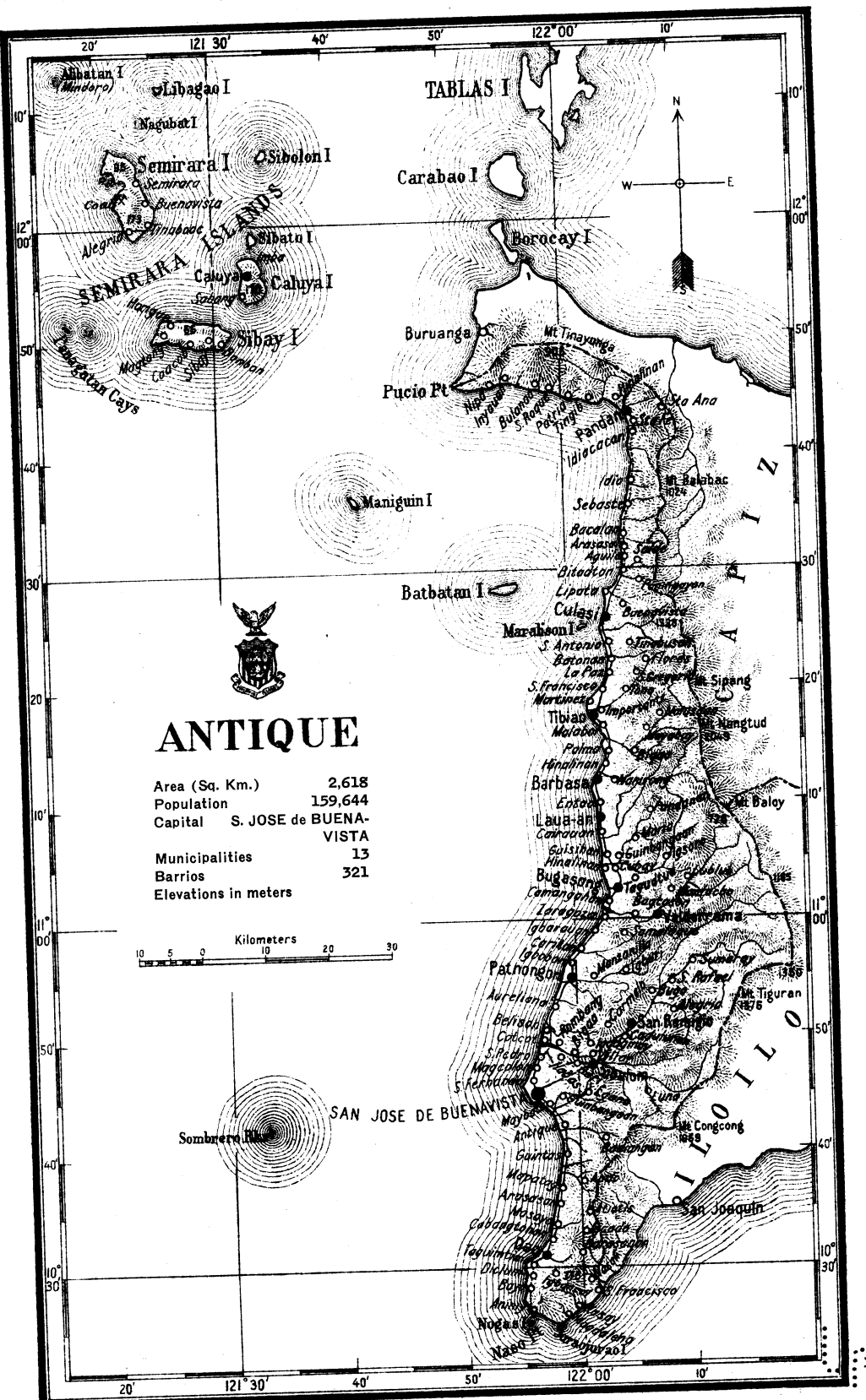
Civil government was established in Antique on April 13, 1901.

STATISTICAL DATA.

Approximate area	square kilometers....	2,618
Area of farms.....	hectares.....	47,418
Cultivated lands	do.....	32,137
Production in 1918:		
Rice	<i>cavans</i> ¹	595,349
Sugar cane	tons.....	19,368
Corn	<i>cavans</i>	91,413
Copra	kilos.....	174,001
Abacá	do.....	528,390
Tobacco	do.....	51,450
Population		² 154,343
Number of schools.....		91
Primary	81	
Intermediate	8	
High school	1	
Vocational	1	
Enrollment for 1918.....	10,592	
Males	6,291	
Females	4,301	
Rate of mortality per 1,000 inhabitants.....		37.9
Number of establishments of household industries.....		795
Production in 1918.....		₱190,177.12
Number of manufacturing establishments.....		10
Production in 1918.....		₱28,219.67

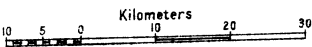
¹ One *cavan* equals 75 liters.

² Non-Christian population, 5,301, not included.



ANTIQUE

Area (Sq. Km.) 2,618
Population 159,644
Capital S. JOSE de BUENA-
VISTA
Municipalities 13
Barrios 321
Elevations in meters





BATAAN.

GEOGRAPHICAL SKETCH.

BATAAN occupies the whole of the peninsula lying between the China Sea and Manila Bay. It forms the southern end of the Zambales Range, which terminates in Mount Mariveles, a supposed extinct volcano situated just in front of Corregidor Island at the mouth of Manila Bay. Another important mountain range is that of Samal and Orani. Between these two groups of mountains is a low pass dividing the province into northern and southern sections and allowing communication by trail between the east and west coasts. Balanga, the capital, lies north of this pass and the latter forms part of the track of the typhoons which sweep through from the China Sea. Mariveles possesses an important harbor. Here the ships are detained and fumigated when necessary before entering or leaving Manila Bay.

West of Mariveles is a quarry of white stone called by the Spaniards "mármol de Mariveles." This stone has served as material for the pedestal and column of the statue of Charles IV in Manila. A well near the quarry produces siliceous water. At San Miguel Point is another quarry.

There are various peculiar phenomena to be found in Bataan. Northwest of Dinalupihan is a small conical mountain, 250 meters high, which has a fresh water lake at the top. In the neighborhood of Malasimbo are a few shallow marshes, the shores and waters of which are tinted red by dust said to be formed from the remains of microscopic animalculæ (*Galionella ferruginea*). Near Orani is a bed of iron hydride which the people of the region used to make into paints for walls and carriages. There are also deposits of clay of which "pilonés" are made. There is also a large deposit of shells which are burned for lime used in the indigo and sugar industries. On the shores of Orani is a fresh water spring that rises from a spot covered daily by the tides. Near the town of Orion is a quaking bog, impassable by either man or beast. Another, smaller one, is found in Ogon, Balanga.

The province lacks streams of magnitude or importance for navigation, although the Talisay River serves during the rainy season to float rafts that bring down timber and sugar cane.

The eastern coastal plain, ranging from a width of 1 to 15 kilometers, is the center of population. Along Manila Bay are many fish ponds where young fish caught along the western coast are reared.

Rice, corn, sugar, and vegetables are the principal agricultural products. The nipa swamps in the neighborhood of Pampanga furnish thatch and tuba for alcohol. People of the eastern

coast are extensively engaged in coastwise trade and in bringing vegetables, fruits, and fish to Manila across the bay. The forests are a source of supply for local and Manila lumber requirements. Much bamboo and rattan is also exported to neighboring provinces. The open hills of Bataan are thick with the grasses called "lambo" and "lasa." When these are dry their seeds are removed and they are made into soft brooms for the Manila market.

Most of the people that live along Manila Bay are Tagalogs and Pampangos, while those along the western coast are chiefly Ilocanos and Zambals.

This province has 12 municipalities and 43 barrios. Its capital is Balanga, with 8,141 inhabitants.¹ Balanga is in the east central part of the province.

HISTORICAL ACCOUNT.

Before Bataan was created into a province, this region was divided between the Province of Pampanga and the "corregimiento" of Mariveles. Pampanga then included the northern portion and many of the towns along the coast of Manila Bay. The southern portion belonged to the "corregimiento" of Mariveles which included the islands at the entrance of Manila Bay and a portion of the Cavite coast. This arrangement was changed in 1754 by Governor-General Arandia, who decreed the establishment of the province of Bataan. The new province as created in 1754, included the following towns: Balanga, Abucay, Samal, Orani, Llana-Hermosa, San Juan de Dinalupijan, Pilar, and Orion (from Pampanga); and Mariveles, Cabcaben, Bagac, and Morong (from the "corregimiento" of Mariveles.)

Among the early Spaniards who entered this region were the Dominican friars who devoted their time to the conversion of the natives. In that early period there were already in existence native villages which were subsequently created into towns. Among these early villages were Kamaya, Samal, and Abucay, Kamaya later on became the town of Mariveles.

There is a beautiful legend connected with the town of Mariveles. A Spanish girl by the name of Maria Velez, who was a nun in Santa Clara convent, fell in love with a friar, with whom she later eloped to Kamaya, there to await a galleon on which they intended to secure passage for Acapulco. The elopement caused excitement in Manila, and the corregidor with a few men was sent to Kamaya in search of the refugees. It is said that in memory of the persons involved in this story Kamaya was given the name of Mariveles, the big island to the south was named Corregidor, the little island to the west was called Monja (nun) and another small island, off the Cavite coast, was called Fraile.

During the first two decades of the seventeenth century, the coast of Bataan was more than once the scene of battles against the Dutch. The first of these encounters took place in 1600 off

¹ Non-Christian population, 133, not included.

the coast of Mariveles. The Dutch were commanded by Admiral Van Noort, while the Spanish-Filipino army was led by the historian, Antonio de Morga, then an "oidor" (justice) of the Manila Real Audiencia. The Spanish-Filipino squadron suffered heavy losses, but the Dutch were nevertheless forced to retreat. Nine years later, the Dutch again appeared off the Mariveles coast. This time they were led by Admiral Wittert, against whom Governor Silva sent a hastily fitted out squadron of six small vessels manned by Spaniards and Filipinos. The Dutch were defeated. In spite of these reverses, the Dutch continued their hostile visits to the Philippines. In 1646, they bombarded Zamboanga, unsuccessfully attacked Cavite and finally effected a landing in Abucay, Bataan. Here they committed depredations and massacred more than four hundred Filipino soldiers who had laid down their arms. They were not driven away until after a long siege.

The history of Bataan during the first part of the nineteenth century records a steady growth of population. In 1799, the population was 16,654, while in 1818, it was 23,393. The figures rose to 39,008 in 1850.

Bataan was one of the first provinces to rise in revolt. Later, when the Revolutionary Congress was called at Malolos, two of its staunchest supporters were sons of Bataan. These were Pablo Tecson, one of the Secretaries of the Congress, and Tomas G. del Rosario. Pedro de León acted as provincial governor for some time in the name of the Revolutionary Government.

Civil government was established in Bataan on March 2, 1901.

STATISTICAL DATA.

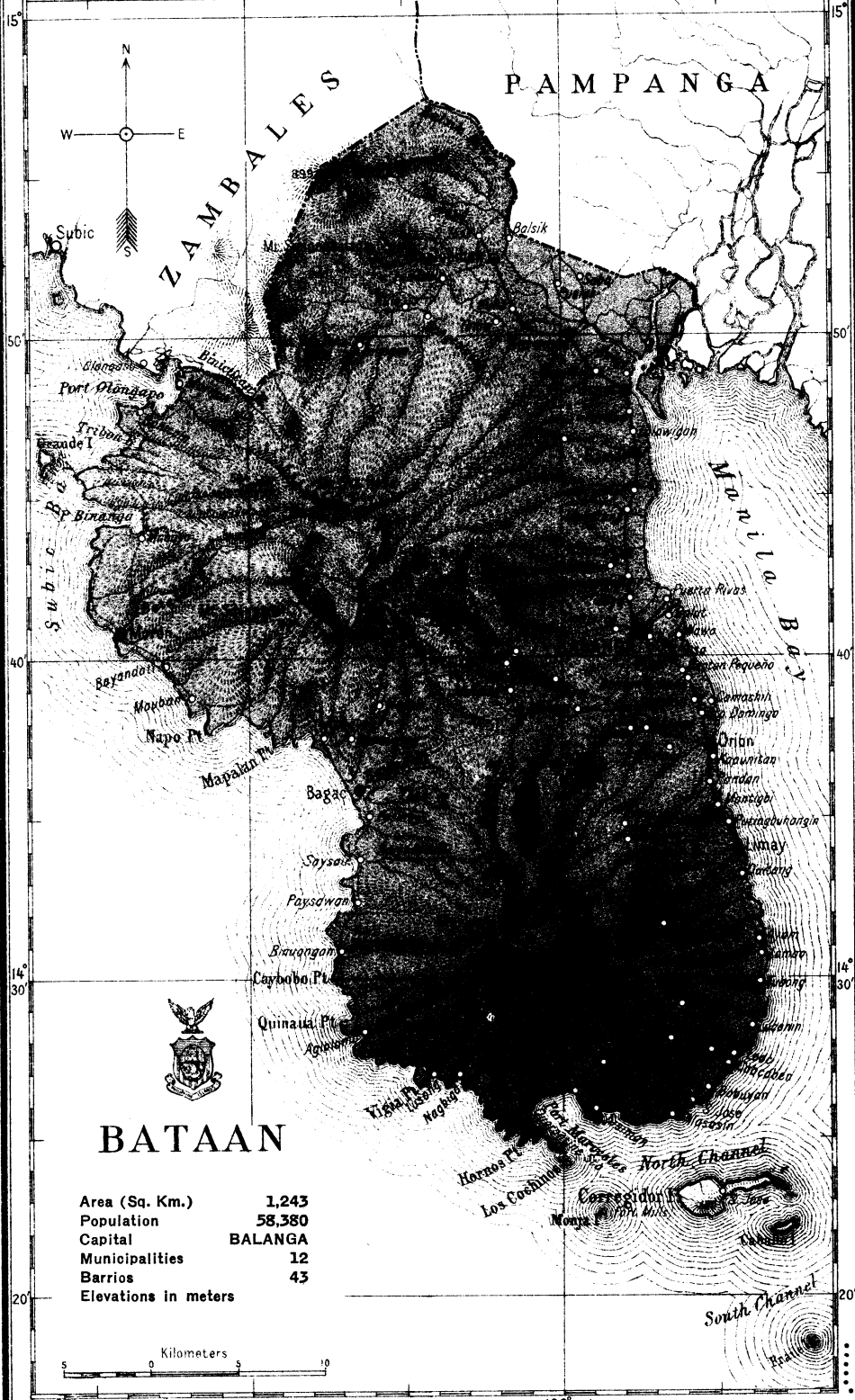
Approximate area	square kilometers....	1,243
Area of farms	hectares.....	24,785
Cultivated lands	do.....	14,389
Production in 1918:		
Rice	<i>cavans</i> ¹	366,257
Sugar cane	tons.....	21,990
Corn	<i>cavans</i>	7,291
Abacá	kilos.....	2,900
Population		² 56,897
Number of schools.....		31
Primary	28	
Intermediate	1	
High school	1	
Vocational	1	
Enrollment for 1918.....	4,413	
Males	2,616	
Females	1,797	
Rate of mortality per 1,000 inhabitants.....		63.1
Number of establishments of household industries.....		422
Production in 1918.....		₱179,105.73
Number of manufacturing establishments.....		58
Production in 1918.....		₱2,021,809.72

¹ One *cavan* equals 75 liters.

² Non-Christian population, 1,483, not included.

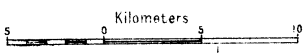
20'

120°30'



BATAAN

Area (Sq. Km.)	1,243
Population	58,380
Capital	BALANGA
Municipalities	12
Barrios	43
Elevations in meters	



20'

120°30'

BATANES ISLANDS.

GEOGRAPHICAL SKETCH.

THE BATANES ISLANDS form the northern portion of the Philippine Archipelago, and consist of the Islands of Y'Ami, North (Inapanga) Nabudis, Siayan, Itbayat, Diego, Dequez, Batan, Sabtang, and Ibugos, the last four being inhabited. The northernmost island is 270 kilometers from Cape Engaño, the nearest point of Luzon, 107 kilometers from the Japanese island of Little Botel Lobago and 160 kilometers from the southern point of Formosa. From Mount Iraya of Batan the Formosan mountains can be seen on a very clear day. The Batanes are separated from Formosa by the Bashi Channel, which has a minimum depth of 1,009 fathoms, and from the Babuyanes by the Balintang Channel, which has a minimum depth of 95 fathoms. The Balintang Islands, lonely rocks rising perpendicularly from the sea, lie in the center of the Balintang Channel and form the connecting link between the Batanes and the Babuyanes groups. It is believed that in the pre-Miocene times this group of islands emerged from the sea as a land mass of considerable extent as a result of enormous explosive eruptions. This land was gradually worn down by streams to an extremely mature topography resulting in the formation of the islands. From the Miocene to recent times another great uplift took place which renewed the activity of the streams and the cutting of step cañons. Volcanic activity is still going on as indicated by earthquakes, but the land appears to be stationary. The growth of coral reefs is the only force that opposes the erosive action of the waves, streams, and tides. There are several harbors, however, which afford refuge for vessels crossing the Pacific.

Sabantang, the southernmost island of the group, is extremely rugged, but to the northwest there is a strip of arable land. The western coast is covered with sand dunes that reach a height of about 100 feet. These have dammed back the waters of the interior and formed a line of small ponds. The southern coast is extremely broken. The principal ridge, Ceskid mountain, shows a remarkably serrated sky-line.

The western part of Sabtang was affected by a gravity fault running in a southerly direction through Balintang to Cagayan. Later elevation and coral growth built up a limestone mass of which Itbayat, Dequez, and Ibugos are remnants.

The topography of Batan falls into two distinct parts: the extreme northern end from Santo Domingo, which is dependent on the extinct Iraya Volcano, and the southern end which has a topography similar to that of Sabtang. Several hot springs are found near Mount Iriga. The island is traversed by several ridges.

The Batanes have a short dry season from February to May and a long rainy one during the rest of the year. They lie in the track of typhoons which often destroy the crops and reduce the inhabitants to the verge of starvation. Because of the frequent typhoons, the people have built most of their houses with thick walls of soft stones. Except in a few regions the climate is healthful.

The inhabitants of Batanes are different in race and language from those of Itbayat.

The Batan and Sabtang people are considered to be of Malay stock, and those of Itbayat mixed Malayan and Papuan. Batan and Sabtang are overpopulated and the arable land is largely taken up, so that people emigrate to Balintang Island and to Luzon in considerable numbers. Deforestation of the ridges for purposes of agriculture has brought about great erosion and therefore the carrying of the soil to the sea. The principal products are root crops and cattle. The islands are free from rinderpest so that they are a great source of supply of cattle for Philippine field work and Manila slaughterhouses.

The people in general are seafarers and the best pilots are the most important men of the community. Between Itbayat and the southern islands the currents are so strong that the natives of Itbayat are completely isolated. They retain their own language and peculiar art of basket-making which has attracted the Bureau of Education and supplied the American market. The island is reputed as unhealthful so that it holds out no inducements to immigrants and is largely given over to pasture land.

Basco, the capital and port of Batanes Province, has a population of 2,338.

This province has 6 townships and 19 barrios.

HISTORICAL ACCOUNT.

BATANES appears to have been well populated since the early years. In 1687, Dampier, an English freebooter who visited the place, found the people living in organized communities and in possession of a civilization of their own. He remained in Batanes for about three months.

The Spanish government did not undertake to establish its authority in Batanes until about the close of the eighteenth century. There were various early attempts, however, to carry on missionary work among the natives by the friars. The first efforts to christianize the natives were made in 1686, when some

Dominican friars were sent to Batanes. But the work proved abortive because of the apparent unhealthfulness of the place, two of the friars having died. The work, as a result, had to be abandoned.

Nothing further was done in the way of converting the natives until 1718. In that year Fray Juan Bel, newly appointed vicar of the Babuyanes, paid a visit to Batanes. The outcome of his visit was the establishment of a new mission and the assignment there of 25 Dominican friars. The new mission was established on the Island of Calayan, one of the Babuyanes group, Batanes being unhealthful to Europeans. To this island natives of Batanes were removed for religious instruction, the king being petitioned to bear part of the expenses of transportation. The mission remained in existence for some time.

But the credit of conquering the Batanes Islands and of bringing them under Spanish authority as a colony of Spain belongs to Governor Don José Basco, who in 1791 sent an expedition for the purpose of establishing civil government in those distant islands. Previous to that time Batanes had been abandoned as a possible field of colonization, the poverty of its soil and the frequency of typhoons making the place fit only for the cultivation of camotes. The expedition consisted of an alcalde mayor, two Dominican missionaries, mechanics, and artificers. As a result five municipalities were established and made into a district of the Province of Cagayan. For this achievement, Governor Basco received the title of "Count of the Conquest of Batanes." Moreover, one of the municipalities established was named after him.

For a long time after the conquest of Batanes, information regarding those islands was very meager. In 1830, Governor Pascual Enrile commissioned Peñaranda to explore and survey the islands. This resulted in the securing of definite information regarding them.

At the end of Spanish rule, Batanes was a politico-military province with Santo Domingo de Basco as capital. As constituted then the province included the following towns: Santo Domingo de Basco, San Carlos de Magatao, San José de Ibana, Visita de San Antonio, San Vicente de Saptang, Santa María de Mayan, and San Bartolomé.

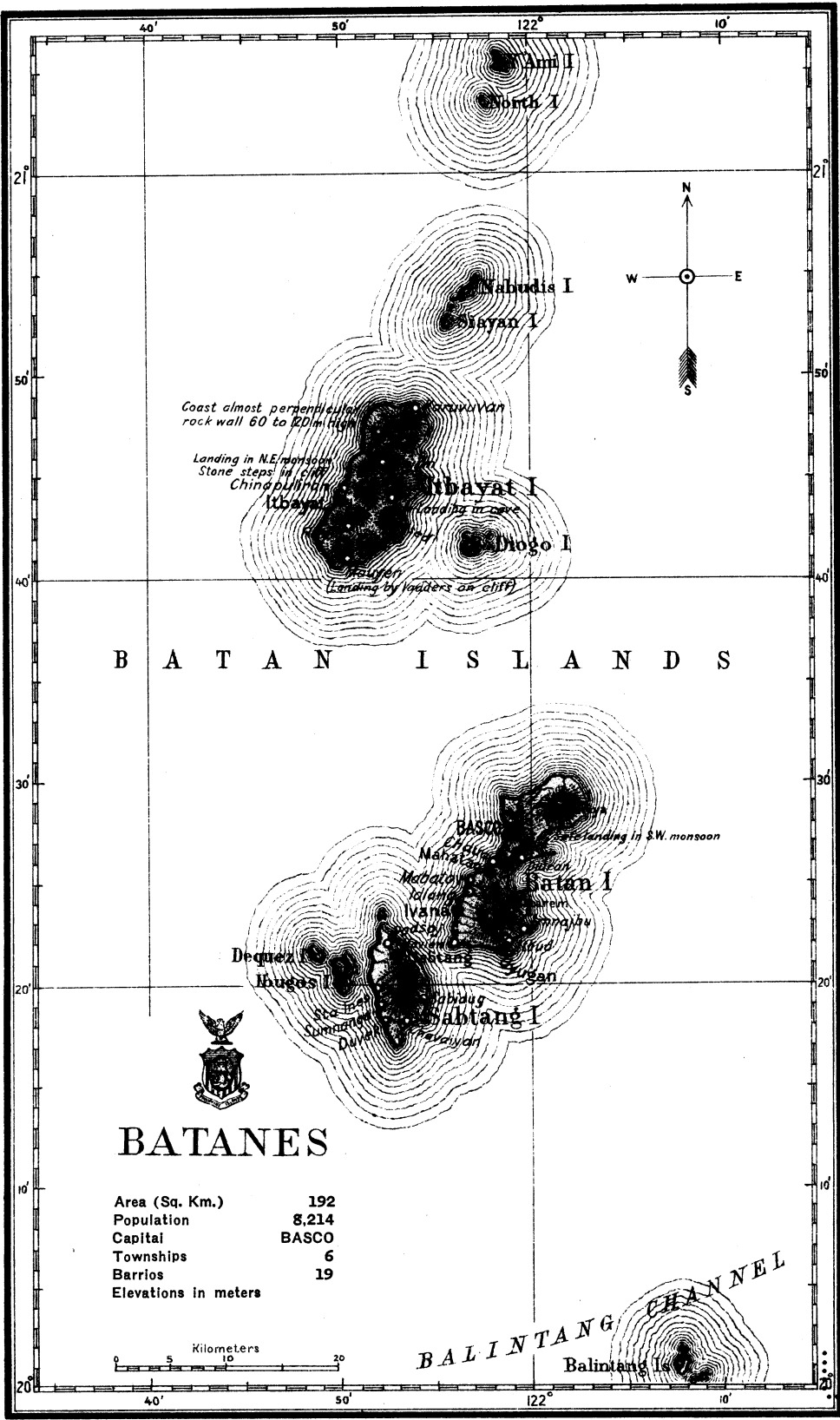
In September, 1897, Batanes came under the control of the Revolutionary Government. This government remained in power until 1899, when the Americans took possession.

With the establishment of civil government, Batanes was made a part of Cagayan. It remained as such until 1909, when it was separated from Cagayan and organized as a special province with Santo Domingo de Basco as capital.

STATISTICAL DATA.

Approximate area	square kilometers...	192
Area of farms.....	hectares.....	8,529
Cultivated lands	do.....	691
Production in 1918:		
Rice	<i>cavans</i> ¹	3,347
Corn	do.....	16,515
Copra	kilos.....	1,701
Tobacco	do.....	9,450
Population		8,214
Number of schools.....		21
Primary		18
Intermediate		2
High school		1
Enrollment for 1918.....		1,963
Males	1,165	
Females	798	
Rate of mortality per 1,000 inhabitants.....		35.9
Number of establishments of household industries.....		42
Production in 1918.....		₱10,652.66

¹ One *cavan* equals 75 liters.



Am I
North I
Mahudis I
Mlayan I
Abayat I
Diogo I
Basco I
Mabatan I
Dequez I
Hugas I
Sabtang I
Balintang I

*Coast almost perpendicular
rock wall 60 to 200m high*

*Landing in N.E. monsoon
Stone steps in cliff
Chingpulung*

Landing in cave

Landing by ladders on cliff

Landing in S.W. monsoon

BATANGAS.

GEOGRAPHICAL SKETCH.

BATANGAS, situated on the southwestern coast of Luzon, borders on the China Sea, with Cavite and Laguna on the north and Laguna and Tayabas on the east. The coast is very irregular, Balayan and Batangas Bays being the largest indentations, while Nasugbu, Talin, Santiago, Janao, and Coloconte Bays also offer good anchorage. Off the western coast of the province there are several reefs, but these present no difficulty to the navigator entering the harbors. The most important ports are Nasugbu, Calatagan, Balayan, Calaca, Lemery, Taal, San Luis, Bauan, Batangas, Lobo, and San Juan. Maricaban and Verde are islands on the southwest coast. The former is mountainous and forested. At Laiya off the coast between San Juan and Lobo are the famous Lobo submarine gardens. During fair weather the water is as clear as crystal and the submarine growth may be seen in all its varied colors and interesting splendor.

The province is considered the most picturesque in the Archipelago, particularly on account of its wide perspectives and of Lake Bombon, in the center of which is an island formed by the crater of Taal Volcano. Inside this crater there is also a lake where formerly there were three. Taal Volcano has experienced several destructive eruptions during historic times, the last one being in January, 1911. Lake Taal (Bombon) is about 10 meters deep and 2.5 meters above sea level. It is said that formerly sea water from Balayan Bay flowed through the Pansipit River into Lake Taal, and boats could therefore pass into the interior of the province. Other mountains are the Batulao range to the west of Lake Taal, Malocot, and Malarayat on the east, and Lobo, Bartolino, and Banoy on the south. The mountains on the west are covered with vegetation in contrast with those of the east which are almost bare.

The climate is warm and humid though it varies locally according to topography. It may be divided into three seasons: first, between the end of October and the beginning of March when the north winds bring very little rain; second, between March and the beginning of July when the dry and warm south and east winds blow; third, between July and October when the winds of the second quadrant bring hurricanes and typhoons.

The valleys and slopes of this rugged country are extremely fertile because of the disintegrated volcanic rock that is carried down from the mountains by the rivers. Rice, sugar, hemp,

citrus fruits, coconuts, corn, mangoes, and other fruits and vegetables are grown in abundance for local use and (rice excepted) for export use. Formerly, coffee was one of the principal sources of wealth, but the blight has ruined the industry. Efforts are now being made to reestablish it.

The forests cover an area of about 97,965 hectares. They are thickest in the regions of Santo Tomas, San Juan, and Rosario. Lumbang seed for oil, paints, varnishes, and illumination purposes and lumber are exported. Great herds of horses, famous throughout the Archipelago, carabao and cattle are raised on the mountain slopes.

The shores and lakes abound in fish. Lake Bombon furnishes a great supply although it is said that much of the fish caught therein has to be well seasoned to rid it of its disagreeable sulphur taste.

The land is well drained by rivers and streams, the most important being Calumpang, Pansipit, Palico, Obispo, Malaquing Ilog, and Bancoro. Outside of its mineral springs and sulphur, Batangas has no mineral wealth except some copper ore. The San Juan sulphur springs, the Bauan hot springs, and the Rosario fresh water spring are the most famous. Aside from the above, Batangas may well be proud of her caves and grottos. The two largest are found in the slopes of the Mount Pulan Suya and Camatingue of San Juan, one of which has an opening 40 meters in circumference. Issuing therefrom is an underground river which connects with Lake Taal and flows through the Batulao range. Along its course are extensive galleries and chambers lined with fantastically shaped stalactites and stalagmites; and at the approach of an eruption of Taal Volcano, it emits a weird sound, audible at great distances.

The inhabitants of the province are Tagalogs. Bauan and Lipa are famous for the fine jusi and piña cloths manufactured there and for the knotted abacá that is sent to Japan for the manufacture of Tagal hats. Embroidery is a growing industry. Trading is extensively carried on and in each of the towns is a market for the sale of its particular products.

This province has 25 municipalities and 552 barrios. Its capital is Batangas with a population of 41,182. It is located in the south central part of the province.

HISTORICAL ACCOUNT.

At the time of the arrival of the Spaniards there were already, in what is now Batangas Province, large centers of population like Nasugbu, Balayan, and Batangas. Native settlements also existed along the Pansipit River. These settlements are believed to have been in existence long before the Spaniards discovered the Philippines. In fact, according to tradition, the region now known as Batangas was settled by Dato Balensusa and Dato Dumangsil, two of the ten datos who purchased Panay Island from the Negritos. (See ANTIQUE.) It is believed that these two datos founded the first Malay villages at the mouth of Taal River.

Batangas was explored by Martín de Goiti and Juan de Salcedo on their way to Manila in 1570. From Mindoro, these two brave explorers crossed over to the coast of Batangas. Goiti went directly to and explored the neighborhood of Balayan, while Salcedo sailed up the Pansipit River into the interior. Rejoining each other at Balayan, Goiti and Salcedo then proceeded to Manila, sailing along the western coast of Batangas, then known as the region of Tuley.

The Province of Batangas was created in 1581, its jurisdiction extending over a vast territory including what is now Batangas, Mindoro, Marinduque, and all the land southeast of Laguna as far as Camarines. The name of the province was then Bombon, or Balayan, with the capital at the town of Balayan. At a later date, the outlying regions were separated and Batangas proper became the only constituent part of the province.

The name of the province was changed twice during the 18th century. In 1732, the capital was moved from Balayan to Taal and the whole province was called, from that time on, after its new capital. But in 1754, when Batangas became the provincial capital, the present name was adopted.

Throughout the seventeenth century the coast towns of Batangas suffered greatly from Moro attacks. During Acuña's rule, for example, the Moro pirates committed depredations on the coast villages. Stone forts were erected at various points along the coast—in Lemery, Taal, Bauan, and Batangas—but still the Moros came. In 1675, they captured the town of Balayan, and in 1754 thirty-eight of their vessels appeared off the coast of Batangas.

Another periodical source of danger to the people of Batangas was the Taal Volcano. This volcano, which from time immemorial the natives had looked upon with superstitious interest, erupted several times during the eighteenth century. As a result of its eruption in 1716 and 1754, several towns in the neighborhood were ruined. Its eruption in the nineteenth century did not result in so much destruction, but the most recent one was accompanied by heavy loss in human lives and property.

In 1763, the northern part of Batangas was visited by the British. It will be remembered that an expedition under the command of Backhouse was sent by the British authorities then occupying Manila in search of the treasure of the galleon "Philippine." The expedition which failed to find the coveted treasure went as far as Lipa and plundered the town.

The history of Batangas during the nineteenth century was that of a period of economic growth. Coffee, which was introduced in 1814, became the most important crop of the province. From the time of its introduction into Lipa, that town became very prosperous. Lipa alone, in 1887, produced 70,000 piculs of coffee. This crop, however, subsequently began to diminish until it was practically destroyed in 1892.

Batangas was one of the first provinces to start the Revolution. Two of the few great leaders of this period were sons of Ba-

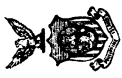
tangas, namely, the great lawyer and statesman Apolinario Mabini and Miguel Malvar, the famous general. When the Revolutionary Government was established, Manuel Genato served for some time as provincial governor of Batangas.

Civil government was established on May 2, 1901.

STATISTICAL DATA.

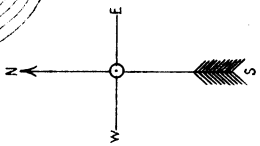
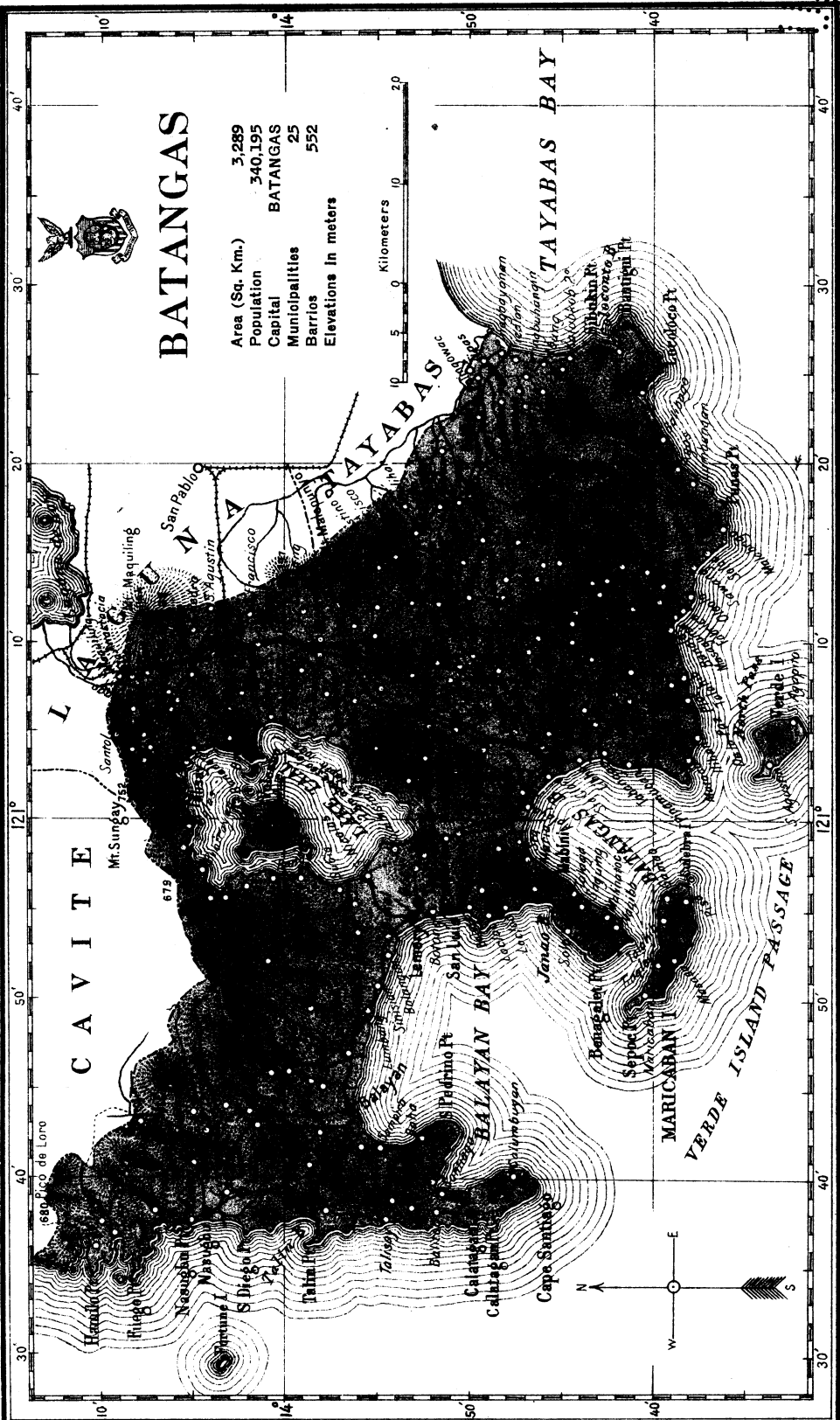
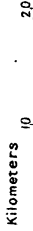
Approximate area	square kilometers.....	3,289
Area of farms.....	hectares.....	178,083
Cultivated lands	do.....	82,639
Production in 1918:		
Rice	<i>cavans</i> ¹	669,805
Sugar cane	tons.....	253,936
Corn	<i>cavans</i>	83,329
Copra	kilos.....	840,100
Abacá	do.....	1,131,748
Tobacco	do.....	35,945
Population		340,195
Number of schools.....		175
Primary	156	
Intermediate	13	
High school	3	
Vocational	3	
Enrollment for 1918.....	18,866	
Males	11,848	
Females	7,018	
Rate of mortality per 1,000 inhabitants.....		42.2
Number of establishments of household industries.....		13,411
Production in 1918.....		₱2,596,728.15
Number of manufacturing establishments.....		119
Production in 1918.....		₱872,247.03

¹ One *cavan* equals 75 liters.



BATANGAS

Area (Sq. Km.) 3,289
 Population 340,195
 Capital BATANGAS
 Municipalities 25
 Barrios 552
 Elevations in meters





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BOHOL.

GEOGRAPHICAL SKETCH.

BOHOL PROVINCE—the name was derived from the barrio of Bohol where the Spaniards first landed on the coast—includes the Island of Bohol and a number of smaller ones around the coast. It has an area of about 3,978 square kilometers and is traversed by mountains and rivers. The coast line, 161 miles in extent, is for the most part regular in form and where there are indentations, especially along the north and west coasts, the reefs make navigation dangerous. Between the shore and the island reefs, however, fine places for anchorage are to be found. At Tagbilaran, the capital, a safe harbor was provided by cutting a channel through the reef. On the south, the shores are so precipitous and the water too deep that anchorage is dangerous. The water on the coast is shallower. It is only by cutting passageways through the reefs that the great possibilities in the interior may be developed.

Without counting the cordilleras of Bohol, Valencia, and García-Hernández, Bohol has as many as 167 mountains, the highest of which are Alimerio and Bunucan in Tubigon, Majañgin and Lusday in Guindulman, Carohabol, Canhumangad, and Caloyhuan in Jagna, Canloboj and Campusa in Catigbian. From these lofty peaks can be obtained a wonderful view of extensive valleys and fields whose boundaries disappear on the horizon.

There are few rivers and these are so insignificant that the fertile interior valleys lack the water necessary for luxuriant production. With the aid of irrigation ditches, however, agricultural products in the interior may be greatly increased. The scenery along the banks of the two important rivers, Loboc and Inabanga, is delightful. The former river is navigable from Loay to Loboc, and the latter for small launches and native craft only. Cataracts and waterfalls may often be seen in the interior.

The climate is not uniform throughout Bohol because of topographic conditions. It is usually warm and dry along the coast and cold and humid in the interior. Rainfall, however, is evenly distributed. Baguios, though not frequent, occur during the change of the monsoons. Dimiao suffers the most from their visitations. Dimiao and its neighborhood furnish the greater part of the emigrants to Leyte and to Mindanao.

In the interior is a fertile plateau, cogonales and grasslands where once roamed large numbers of cattle and carabaos, now almost exterminated by the rinderpest. Rice, coconuts, hemp, and corn are the most important agricultural products. The

soil is especially adapted to the last named, and coconuts and hemp are raised principally for export. Forests are also extensive except in the regions near the coast where the land has been denuded of them in a shameful manner. Resin, pitch, gum, wax and honey are the minor forest products found.

In Lison is a coal mine, but due to the poor quality of the product and the inaccessibility of the location it has not been developed. The mineral springs in Guindulman as well as those in San Juan, Candon, Napo, Lubod, and Cambalaguin, are reputed to be efficacious in curing skin diseases. Edible birds' nests are gathered in the Canaoan Cave. Other caves are found in Baclayon, Guindulman, Jagna, and Sierra Bullones. "Buri," "ticog," and "salacot" hats are made in almost every town. The weaving of "piña" and sinamay cloth is a specialty in Baclayon, Loboc, Jagna, and Duero, and "saguran" weaving in Talibon, Inabanga, Baclayon, and Jetafe. Mat making is an important industry. The commercial exploitation of the pearl and shell banks in the Bohol seas has only recently been begun. The catching of the flying lemur and the tanning and preparation of its hide is a new occupation. Most of the towns are found along the coast so that a great proportion of the inhabitants are engaged in coastwise and interisland trade.

This province has 36 municipalities and 460 barrios. The capital, Tagbilaran, has 12,590 inhabitants. It is situated in the southwestern part of the province.

HISTORICAL ACCOUNT.

It is believed that the Magellan expedition visited the little Island of Panglao southwest of Bohol and the vicinity of the town of Bool, which gave the larger island its present name. It was not until 1565, however, that the Spaniards became well acquainted with Bohol. In that year, Legaspi visited the island and performed with Chief Sicatuna the ancient Filipino ceremony of the blood compact. He succeeded in making friends with the natives and in securing provisions from them.

During the early days of Spanish rule, Bohol was under the jurisdiction of Cebu. This island, therefore, did not figure conspicuously in the early Spanish records.

In 1622, a great rebellion broke out in Bohol. The leader of this revolt, which was really an armed protest against Jesuitical influence, was a Babaylan by the name of Tamblot. The uprising rapidly spread throughout the entire island; only the towns of Loboc and Baklayon remained peaceful. The rebels retreated "to the summit of a rugged and lofty hill, difficult of access," and there fortified themselves. It took the government six months to suppress this rebellion.

Another rebellion, no less formidable than the Tamblot uprising, broke out in Bohol in 1744. It gained strength in 1750 under the leadership of Dagohoy, who for a long time was the whole soul of the movement. The rebellion affected almost the entire island and lasted for over eighty years. The government sent several expeditions to put down the revolt, but without

success. The rebels established a native government and lived as an independent people. This was, perhaps, the most successful revolt the Filipinos ever conducted from the viewpoint of duration of resistance.

In 1854, Bohol was separated from Cebu and, with the Island of Siquijor, was made a politico-military province. In 1860, when the provincial governments of the Visayas were reorganized, Bohol retained this status. She remained a politico-military province till the end of the Spanish rule.

The suppression of the Dagohoy revolt in 1828 and the subsequent return to peaceful life of some 20,000 rebels who laid down their arms, resulted in the establishment and enlargement of several towns. According to Governor Ricafort, the "reduced insurgents were formed into the following new villages: Catigbian with 1,967 souls, Batuanan with 6,266, Cabulao with 790, Balilijan with 2,100, and Vilar with 930." The rest were distributed in other towns.

The Revolution did not readily spread to Bohol. Later, however, Bohol was greatly influenced by the Cebu movement. The natives rose and established a local Revolutionary Government. For sometime Pedro Samson was the conspicuous military leader.

Civil government was organized in Bohol on April 20, 1901.

STATISTICAL DATA.

Approximate area	square kilometers.....	3,978
Area of farms.....	hectares.....	131,874
Cultivated lands	do.....	55,220
Production in 1918:		
Rice	<i>cavans</i> ¹	437,973
Sugar cane	tons.....	1,966
Corn	<i>cavans</i>	468,945
Copra	kilos.....	8,243,693
Abacá	do.....	646,334
Tobacco	do.....	136,500
Population		359,600
Number of schools.....		265
Primary	243	
Intermediate	16	
High school	2	
Vocational	4	
Enrollment for 1918.....	27,495	
Males	15,300	
Females	12,195	
Rate of mortality per 1,000 inhabitants.....		31.5
Number of establishments of household industries.....		8,818
Production in 1918.....		₱2,063,681.56
Number of manufacturing establishments.....		11
Production in 1918.....		₱55,976.00

¹ One *cavan* equals 75 liters.



BUKIDNON.

GEOGRAPHICAL SKETCH.

BUKIDNON PROVINCE occupies the great fertile plateau of Mindanao that is bounded on the north and west by Misamis, on the east by Agusan, on the south and southeast by Davao, and on the southwest and west by Lanao and Cotabato. Separating Bukidnon from Davao and Agusan is a long range of mountains running northward from Mount Pinamalican to Butuan Bay at Diuata Point. A few extinct volcanic peaks, like Mount Tangkulang and Mount Katanglad, rise here and there, but for the most part the land is rolling and cut into deep and wide canyons by the Cagayan, the Pulangi, and the Tagoloan Rivers and their branches and other rivers.

Though the province is nearer the equator than the Island of Luzon, the climate is pleasant by reason of the altitude and the usual extreme of heat of a tropical region is lacking. The rainfall is abundant and the province lies outside the path of typhoons.

It contains immense areas of fertile soil unsurpassed for grazing and general farming. There are at least 300,000 hectares of open grass-covered land which would yield rich returns under the plow. The Bukidnons themselves, learning to use modern agricultural implements, are taking advantage of their opportunities, this being clearly evidenced by the beautiful fields of corn surrounding their settlements, by the increased plantings of rice and camotes, and by the great increase in the exportation of hemp and coffee. The lower levels of Bukidnon produce the best grade of hemp in northern Mindanao. Corn grows to a height of 13 feet on the Bukidnon plateaus, the stalks supporting two ears. Two crops may be grown annually.

Transportation, especially in the interior, is difficult. Along the lower reaches of the rivers trade is carried on with the neighboring provinces. Articles that are imported or exported pass through the port of Cagayan. Abacá and coffee are shipped out of the province. The people of Bohol go to Bukidnon via the Cagayan River, Misamis or Agusan for the "sud-sud" or tikug hats which the natives make. At present there is a road being constructed through the main section of the province. The greater portion of the Bukidnon territory is nearly level prairie land, but as a rule the roads are built along the canyons, varying in depth to 500 feet.

There are some Manobos and a few Moros in the province, but the greater part of the inhabitants are Bukidnons who are timid, peaceable farmers.

The land offers indeed great possibilities, and homesteading and immigration into the fertile prairies should be encouraged by all means. The Government is now teaching the Bukidnons to come down from their hillside homes and live in settlements in the valleys.

There are no large towns. Malaybalay is the capital.

This province has 4 municipalities, 9 municipal districts, and 144 barrios. Its capital has a population of 9,868 inhabitants. It is located in the southeastern part of the province.

HISTORICAL ACCOUNT.

THE PROVINCE OF BUKIDNON, as the name implies, is the home of the Bukidnons. This people, it is believed, formerly inhabited that territory of northern Mindanao which at present belongs to the Province of Misamis, but that they retired into the interior as Visayan immigrants settled the country.

Very little, if anything, was known of Bukidnon in the early years. As a matter of fact, a considerable portion of this province remained unexplored up to as late as 1908. The towns of Malitbog and Clavería were among the first, if not the first, to be founded. And they were founded in 1849. In 1850, Malitbog was described as having "24 houses," while Clavería was known to have "27 houses." The inhabitants of these towns were then exempted from the tribute.

About the middle of the nineteenth century a considerable portion of what is now the Province of Bukidnon was under the jurisdiction of Misamis, for this latter province then was described as extending between "six and eight leagues into the interior."

In 1860, a politico-military government was established for Mindanao, and Bukidnon, together with what is now Misamis, was organized into one of the six districts into which the Island of Mindanao was divided. This district was known as the northern district. Its capital was the town of Misamis. This district subsequently became the Province of Misamis.

At the end of Spanish rule, Bukidnon formed part of the District of Misamis, one of the seven districts of Mindanao. This district was ruled by an army officer of the rank of lieutenant-colonel. It had a population of 126,313 and had its capital at the town of Cagayan.

Bukidnon as a part of Misamis came under the control of the Revolutionary Government in December, 1899. In that year, the Revolutionists assumed control of the Province of Misamis. They remained in power for three months.

With the establishment of civil government, Bukidnon became a subprovince of Misamis. It remained as such until 1907 when it was made a subprovince of the Province of Agusan which was created that year. When the Department of Mindanao and Sulu was created in September, 1914, Bukidnon became a province of the department with its capital at Malaybalay.

STATISTICAL DATA.

Approximate area	square kilometers...	10,026
Area of farms.....	hectares.....	15,656
Cultivated lands	do.....	7,679
Production in 1918:		
Rice	<i>cavans</i> ¹	25,376
Corn	do.....	16,881
Copra	kilos.....	3,938
Abacá	do.....	360,297
Tobacco	do.....	22,250
Population		² 25,299
Number of schools.....		11
Primary	1	
Vocational	10	
Enrollment for 1918.....	1,281	
Males	800	
Females	481	

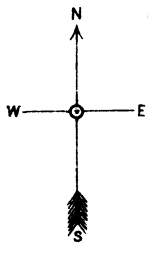
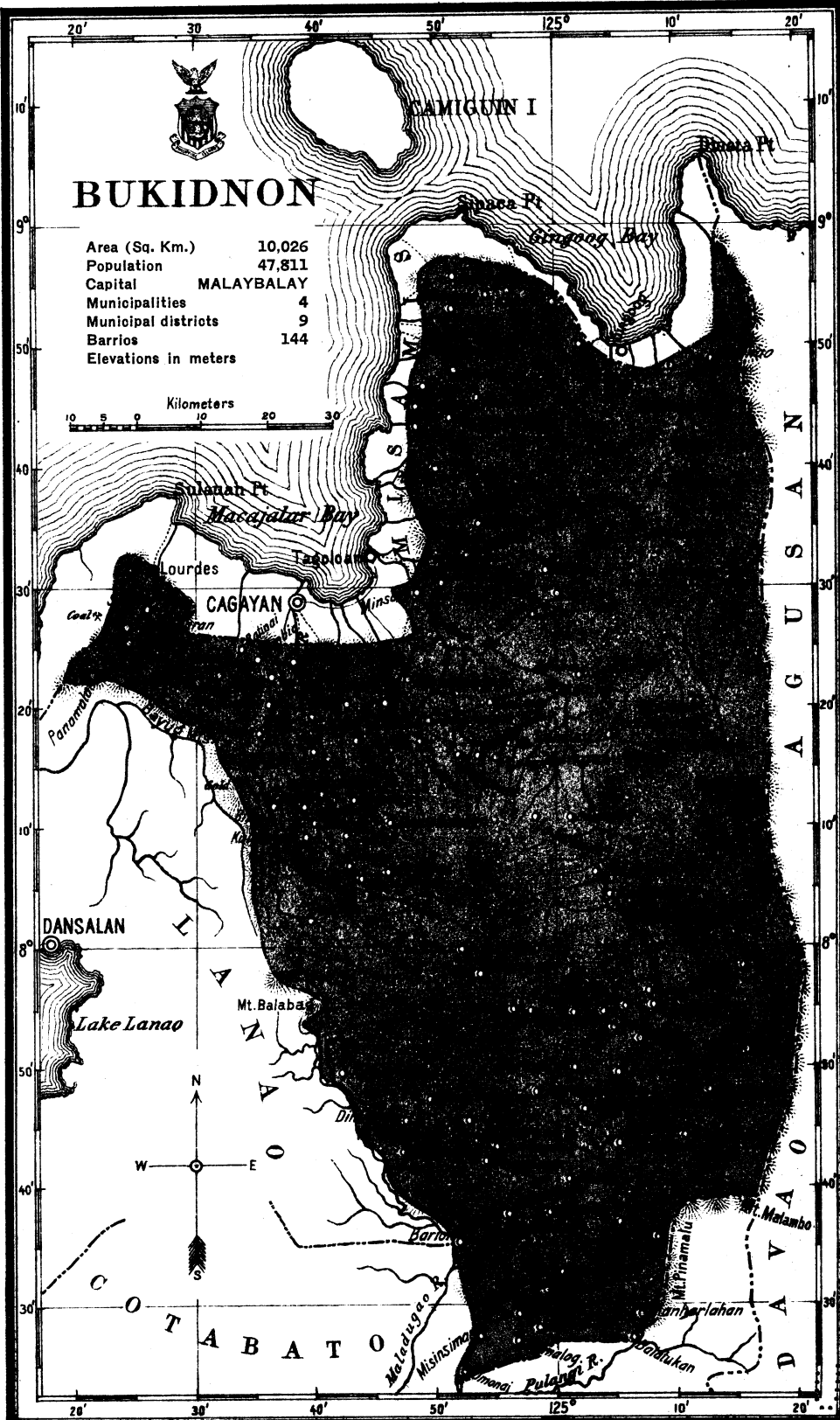
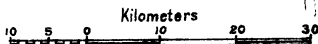
¹ One *cavan* equals 75 liters.

² Non-Christian population, 22,512, not included.



BUKIDNON

Area (Sq. Km.) 10,026
 Population 47,811
 Capital MALAYBALAY
 Municipalities 4
 Municipal districts 9
 Barrios 144
 Elevations in meters



BULACAN.

GEOGRAPHICAL SKETCH.

THE PROVINCE OF BULACAN, named from the Tagalog word "bulac," meaning cotton, which was once a principal product of the region, lies in the central part of Luzon, its boundaries touching those of Nueva Ecija on the north and north-east, Tayabas on the east, Rizal on the south, Manila Bay on the south and southwest, and Pampanga on the west. Except where the province touches Manila Bay, there is no coast line. This portion of the province is low, swampy land intersected by the numerous *esteros* of the delta, or by the distributaries of the Rio Grande de Pampanga.

The eastern mountainous portion with Mount Oryod as its highest peak at an elevation of 1,170 meters is part of the crest of the great Cordillera of Luzon, and part of the western boundary is the extensive Candaba swamp which marks a pronounced depression in the low plain between the Cordillera and the Zambales Range. In general, therefore, this province lies tilted toward the east and the rainfall caught in the mountains and foothills makes its way west. The eastern portion, though less developed, is where lie the iron, coal, gold and limestone deposits, the mineral springs, of which Sibul and Marilao are the most important, the valuable forests and the beautiful little mountain valleys and basins that must sooner or later prove very attractive to Filipino adventurers, homeseekers and farmers of the younger generation.

The climate is distinctly tropical. Except in the region of the Candaba swamp where malarial diseases prevail, it is very favorable both to human life and to agriculture. The province is not very much exposed to typhoons.

The soil, which is of alluvial and volcanic origin, is rich. Rice, corn, sugar, pineapples, bananas, betel nut, mangoes, and all sorts of vegetables are raised in the well irrigated and low-lying lands. The nipa swamps which supply most of the nipa thatches, vinegar and alcohol are the principal resources of a great many people. The forests cover over 89,980 hectares and yield good commercial timber and many minor forest products.

The land is well drained by the Pampanga and the Angat River systems. The field regions bordering the coast are irrigated by the fresh water that is backed up by the tide.

Aside from agriculture and mining, the industries of the province are making hats (Baliuag) and silk textiles, weaving,

tanning, fish breeding, distilling alcohol, and furniture-making. Baliuag, Meycauayan, Obando, Polo, Hagonoy, and San Miguel are the centers of these industries. Some of the people are also engaged in domestic commerce and in trade between the province and Manila which has to be supplied by the fruit, vegetable and other farm products of the province.

This province has 23 municipalities and 371 barrios. Its capital is Malolos, with 26,444 inhabitants. It is located in the southwestern part of the province.

HISTORICAL ACCOUNT.

BULACAN was one of the earliest provinces founded by the Spanish government, its creation dating as far back as 1578. It appears that even before the arrival of the Spaniards there were already in existence, in what is now Bulacan, thriving native settlements. On these settlements were founded the towns which the first missionaries erected in the early years of the conquest. Among these were Calumpit (founded in 1572), Meycauayan (in 1576), Bulacan (in 1578), Malolos (in 1580), Hagonoy (in 1581), and Bocaue (in 1582).

The early history of Bulacan records no serious uprising such as those which at various times took place in other provinces. The disorders which occurred in Malolos in 1643, resulting from the activities of a certain Don Pedro Ladía, appear to be the only ones of importance which occurred in the early years of the history of this province. Ladía, who was a native of Borneo, claiming that he was a descendant of Raja Matanda, went about exhorting the people to overthrow Spanish rule and to place him in power as their king. His efforts failed, however; he was quickly apprehended and his rebellious activities put to an end.

In the events which followed the arrival of the British in 1762, Bulacan figured rather conspicuously, serving as a center of resistance during the British occupation of Manila. Anda, just before the capitulation of the city, escaped to this province where he organized a government of his own to carry on hostilities against the British and to hold the country in its loyalty to Spain. The province was also the scene of armed conflict during this period. Captain Slay of the British army in the course of his expedition to Bulacan in January, 1763, undertaken to destroy Anda's forces there, came to blows with the Spaniards and their Filipino allies on more than one occasion. In one of those encounters, at Marisanto, the Spaniards and their native allies put up a determined fight against a superior force under Slay, but in the end their resistance was overcome and most of them were put to the sword.

The period intervening between the British occupation and about the middle of the nineteenth century was a period of material growth and prosperity in the history of Bulacan. Agriculture was furthered, new plants were introduced, and industries developed. Among the industries which flourished during this

time that of weaving may be mentioned. It is estimated that in 1850 there were in operation throughout the province 1,500 looms for the weaving of silk, cotton and sinamay fabrics, and prosperity reigned.

The same period also saw the provincial boundaries extended. The region which includes the important town of San Miguel de Mayumo and the neighboring places was formerly a part of Pampanga. In 1848, when changes were made in the boundaries of Pampanga, this region was adjudicated to Bulacan.

Even before the outbreak of the Revolution, Bulacan was already prepared for an uprising. Some of the best known figures like M. H. del Pilar and Mariano Ponce, whose names are connected with the period of propaganda, are sons of this province, which was one of the first to raise the standard of revolt. Later, when the Revolutionary government was established, Bulacan came under its control and Isidoro Torres was appointed to act as governor.

Some of the most notable events of the Revolution took place here and their scenes have become places of historic interest. It was at Biac-na-bato, in the mountains of Bulacan, where in December of 1897 the famous Pact of Biac-na-bato was concluded, and the town of Malolos was for some time the capital of the Archipelago. It was in Malolos that in 1897 Philippine independence was proclaimed. Here also, in the historic church of Barasoain, the Congress which drafted the Constitution of the Republic held its sessions.

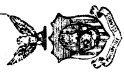
Civil government was established in Bulacan on February 27, 1901.

STATISTICAL DATA.

Approximate area	square kilometers.....	2,608
Area of farms.....	hectares.....	92,103
Cultivated lands	do.....	70,837
Production in 1918:		
Rice	cavans ¹	1,522,315
Sugar cane	tons.....	61,812
Corn	cavans.....	74,697
Tobacco	kilos.....	40,000
Population		² 248,180
Number of schools.....		205
Primary	185	
Intermediate	17	
High school.....	1	
Vocational	2	
Enrollment for 1918.....	24,815	
Males	14,740	
Females	10,075	
Rate of mortality per 1,000 inhabitants.....		53.6
Number of establishments of household industries.....		5,529
Production in 1918.....		₱1,380,281.32
Number of manufacturing establishments.....		207
Production in 1918.....		₱2,748,412.28

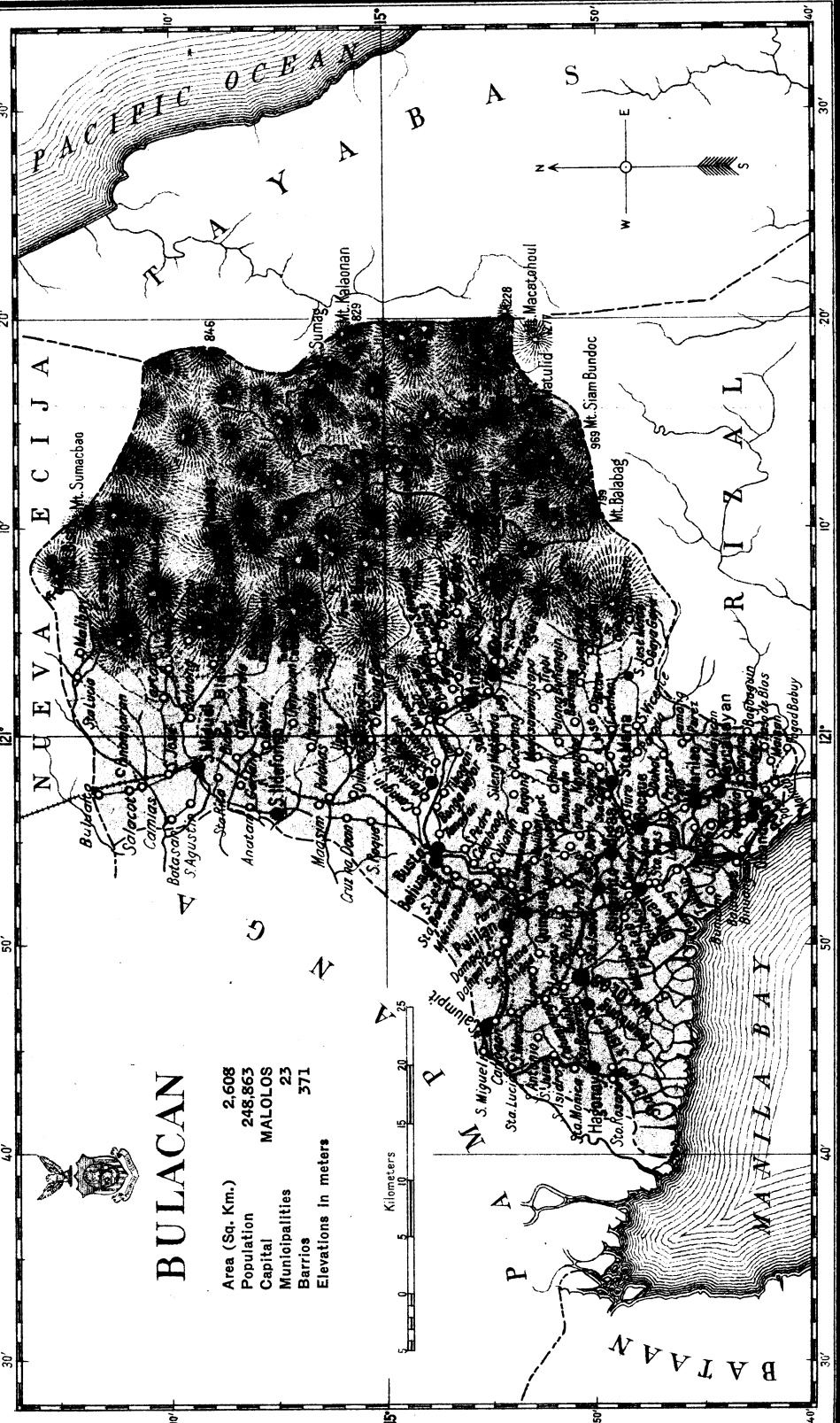
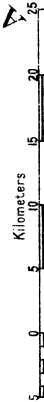
¹ One *cavan* equals 75 liters.

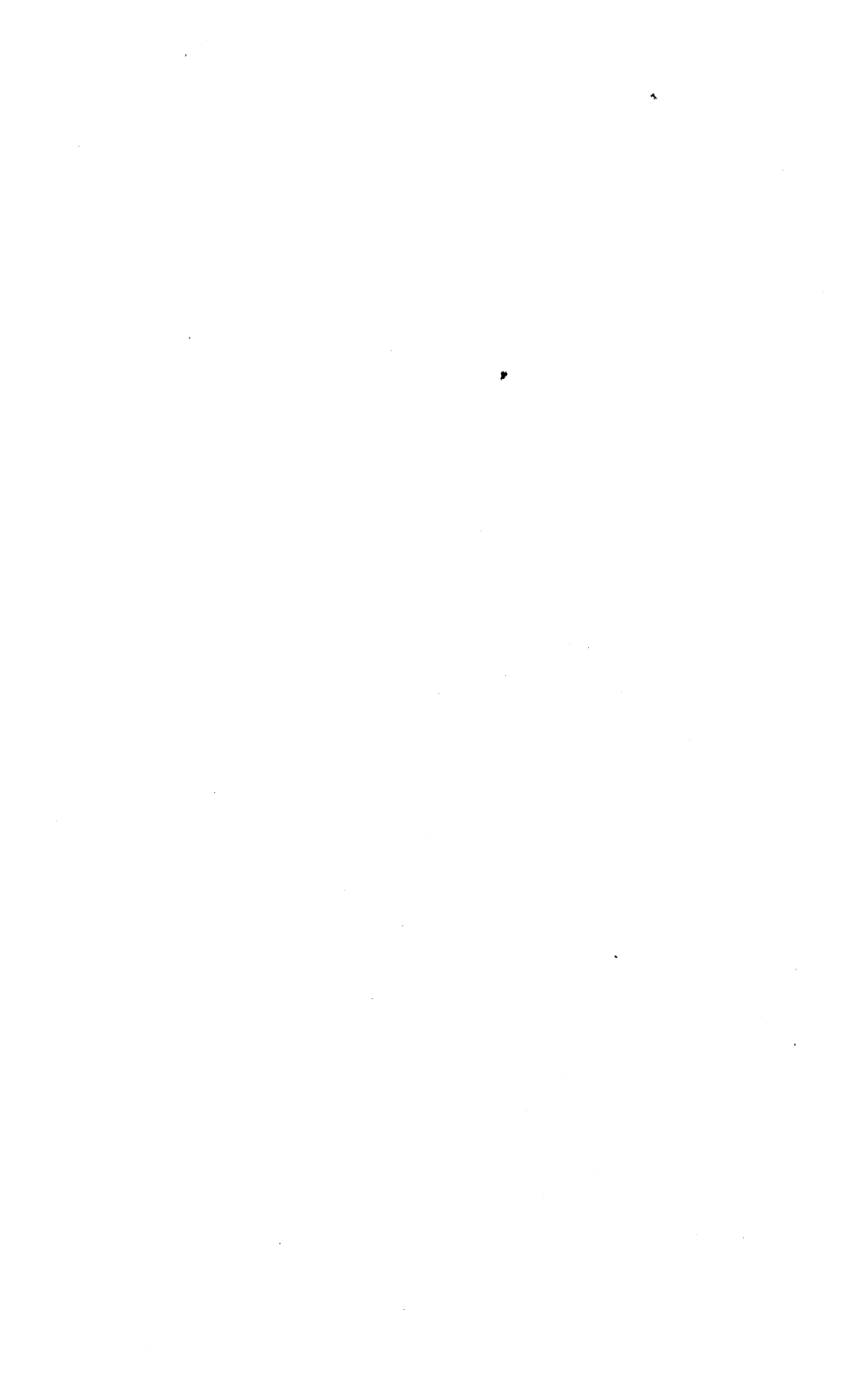
² Non-Christian population, 683, not included.



BULACAN

Area (Sq. Km.) 2,608
 Population 248,863
 Capital MALOLOS
 Municipalities 23
 Barrios 371
 Elevations in meters





CAGAYAN.

GEOGRAPHICAL SKETCH.

THE PROVINCE OF CAGAYAN occupies the lower basin of the Cagayan River. Its eastern coast is high and mountainous. The north coast bordering on the North China Sea is low; that on the south touching Kalinga is high, while the one adjoining Apayao is low and swampy. The northern coast has been largely built up by the deltas of the Cagayan and Abulug Rivers. Between the low mountains are large valleys fertilized by alluvial soil that is deposited by the rivers every year. Northern Cagayan is adapted to rice but not to tobacco as in the south, as it is low and exposed to the sea breezes. Rainfall is abundant with the coming of the northeast monsoons. The forests that crown the mountains invite electrical disturbances during the rainy season.

The tobacco-producing region occupies the whole of the Chico-Cagayan Valley. Coconuts are also grown here. Besides tobacco and rice, corn is also cultivated. There is much sugar land but little sugar is grown on account of lack of transportation. East of the Cagayan Valley is the extensive Cagayan Lake. The nipa swamps do not constitute an important source of revenue as in Bulacan and Pampanga. Formerly there were distilleries in Abulug and Pamplona, but with the imposition of internal-revenue taxes the industry was destroyed. The forests are extensive and contain much hard wood, but the lack of transportation facilities prevent their exploitation. Near the ends of the mountain chains in the east and west are wide grassy plains suitable for cattle. Formerly, large herds grazed there but the rinderpest has thinned them out.

No minerals of value are found in Cagayan. In the vicinity of Mount Maguipit is a bed of copper while near Mount Cagua there are a few veins of coal. There are several caves or grottoes, the largest of which, famous for the edible birds' nests that are found in it, is at Mount Quira.

Except in the tobacco and rice regions, the occupation of the people is chiefly that of trading. The Cagayan River is the one commercial outlet. Rafts and bancas are sent up the river for tobacco that is gathered and stored in the warehouses of Aparri where boats from Manila call once a week. This latter port is so exposed that vessels have to proceed for some distance up the river to find shelter. The Abulug River is deep, but very swift and infested by crocodiles. Along the coast the fishing industry attains considerable importance. The people salt or dry the fish and export great quantities to Isabela and to the Ilocano provinces.

The people are Ibanags and Ilocanos. There are also many Negritos on the low hills of the marshes, Aetas on the Sierra Madre and Kalingas and Apayaos on the cordillera. Cagayan is fairly well populated, but it needs more people to develop

it. The Clavería-Bangui Road when finished will tend to increase the influx of Ilocano settlers.

Two kilometers from the northwestern corner of the Cagayan Peninsula is the Island of Palani where a light-house is established on Cape Engaño. About forty kilometers north of Cagayan is the Babuyan group. In these islands are two active volcanoes, one in the Didicas Rocks and another now in the solfataric stage in Camiguin. They are said to have first appeared in 1857.

Rice, tobacco, and sugar are the principal agricultural products of these islands, while fishing and cattle raising are important industries. The climate is salubrious, though the region lies in the path of typhoons.

This province has 23 municipalities and 493 barrios. Its capital is Tuguegarao, with 19,284 inhabitants. It is located in the south central part of the province.

HISTORICAL ACCOUNT.

The narrow strip of territory along the northern coast of Cagayan, and the northern part of the Cagayan Valley, were among the regions of Luzon early visited by the Spaniards. These places served as bases for the conquest of and the implantation of the cross in northeastern Luzon. What later became the Province of Cagayan or Nueva Segovia had its origin in these regions. As early as 1583, the political division of Cagayan was already recognized.

The exploration of Cagayan began during the administration of Guido de Lavezares (1572-1575). The first explorer was Juan de Salcedo, who in 1572 visited some of the northern coast towns like Pamplona, Abulug, and Aparri. Another well known adventurer in this region was Captain Juan P. Carreon, who led an expedition in 1581 for the purpose of driving away the Japanese corsair Tayfusa who was then threatening the coast towns of Cagayan. Carreon, after driving away Tayfusa, founded the town of Nueva Segovia (now Lal-loc) on the banks of the Cagayan River and explored the neighboring regions. A decade later, Luis Pérez Dasmariñas also explored the territory. He sailed up the eastern coast of Luzon from Binañunan de Lampon and visited the towns of Aparri, Abulug, and Pamplona.

In spite of its isolation from the western provinces of Luzon, Cagayan was often influenced by events from that quarter. The rebellion which Malong started in 1660 in Pangasinan had its echo in the region along the northern coast of Cagayan, especially in Pata and Bangan. The Silang Rebellion of 1763 also had its effect in Cagayan. It was the occasion for an uprising in Tuguegarao, Cabagan, and Ilagan.

The injustices of the tobacco monopoly were felt in all the tobacco-producing regions throughout the Islands, but more so in Cagayan than elsewhere, especially during the time of Alcalde Mayor José Martínez Canas. In fact, the enforcement of the tobacco monopoly resulted on more than one occasion in the

reduction of the population of Cagayan by the emigration of numbers who sought to escape it.

As constituted in the early days, the Province of Cagayan included roughly all the territory east of the Cordillera central mountains and north of the Caraballos del Sur. In the course of time there were formed out of this extensive region new provinces and comandancias. In 1839, Nueva Vizcaya was created into a separate politico-military province. Isabela was created a province and separated from Cagayan in 1856. In 1889, by order of General Weyler, the territory roughly coextensive with the present Subprovince of Kalinga was organized into the "Partido de Itaves," while the following year the region north of the newly created "Partido" was organized into the comandancia of Apayao.

The effect of the Revolution was not at once felt in Cagayan. But about the middle of August, 1898, the revolutionists under the command of Colonel Daniel Tirona landed at Aparri from Steamer *Luzon*, formerly the *Compañía de Filipinas*. His forces took Aparri and then proceeded to Lal-loc. On the 31st of August, the revolutionary army entered Tuguegarao.

Civil government was established in Cagayan in September, 1901.

In 1908, the Philippine Commission passed an Act establishing the Mountain Province, whereupon Kalinga and Apayao, which had hitherto been a part of Cagayan, were created as subprovinces of the Mountain Province.

STATISTICAL DATA.

Approximate area	square kilometers....	7,788
Area of farms.....	hectares.....	117,625
Cultivated lands	do.....	50,599
Production in 1918:		
Rice	<i>cavans</i> ¹	894,671
Sugar cane	tons.....	905
Corn	<i>cavans</i>	423,825
Copra	kilos.....	227,212
Tobacco	do.....	15,127,350
Population		² 184,337
Number of schools.....		199
Primary	179	
Intermediate	15	
High school	1	
Vocational	4	
Enrollment for 1918.....	17,408	
Males	10,190	
Females	7,218	
Rate of mortality per 1,000 inhabitants.....		46.1
Number of establishments of household industries.....		1,025
Production in 1918.....		₱288,813.29
Number of manufacturing establishments.....		63
Production in 1918.....		₱438,481.69

¹ One *cavan* equals 75 liters.

² Non-Christian population, 15,601, not included.



CAMARINES NORTE.

GEOGRAPHICAL SKETCH.

CAMARINES NORTE occupies the northernmost part of the southeastern cordillera which runs throughout the length of the Bicol Peninsula. This portion of Ambos Camarines is distinct from southern Camarines particularly in physiography and natural resources.

The coast is exposed to the northeast monsoons, but it is so well indented that there are places which afford safe anchorage. Capalonga, Mambulao, Paracale, and Gubat are well protected by promontories. Along the northeast coast there are several islands known as the Calagua group. Tinaga, the largest of the group, is mountainous and bordered by reefs on the north and west.

The mountains, the most important of which are Bagacay and Colase, are covered with timber suitable for construction purposes. The most important rivers are the Basigon and the Labo.

The climate is agreeable because of the mountains and vegetation. The cold and the heat are felt intensely during the north and the south monsoons, respectively.

The land is, in general, sandy and stony, but fertile in many places. The valleys near the coast are tilled for rice, corn, and other products. Rice, however, is imported. Abaca is cultivated extensively on the hillsides. There are vast areas of grassland.

The place is rich in mineral resources. Gold is found in many places and its commercial exploitation is being carried on in Mambulao and Paracale. Iron, silver, lead, and copper are also found. The exploitation of these mines will surely develop the country which is not so far advanced as the southern portion. There are also several mineral springs.

Daet is the most important commercial town. The mines of Mambulao and Paracale are, however, making these two towns the centers of industry and, naturally, of commerce. The region is sparsely settled. Most of the people are Tagalogs, immigrants from Tayabas.

HISTORICAL ACCOUNT.

Camarines Norte and Camarines Sur for over two centuries and a half formed only one political unit, namely, the Province of Camarines or Bicol, later better known as Ambos Camarines. These two regions from 1573 to 1829 made up the Province of Camarines; in 1829, they were separated, only to be reunited in 1854 as Ambos Camarines. In 1857, they were again sepa-

rated but joined once more in 1893. From that year till the present March, 1919, they continue to form one province. In fact, these two regions existed as separate provinces only for about sixty years.¹

The region generally known as Camarines Norte was explored by Juan de Salcedo in 1571. It will be remembered that Salcedo in that year, after subduing the towns of Taytay and Cainta, marched across Laguna and Tayabas and visited the gold mines at Mambulao and Paracale. It appeared that Salcedo was attracted to this region by the news obtained from the natives regarding the abundance of gold. Spanish influence, however, did not make itself felt until the permanent establishment of a Spanish garrison in Naga by Captain Pedro de Chaves. This was accomplished during De Sande's administration.

At the time of the arrival of the Spaniards, there were already several native settlements in what is now Camarines Norte. Besides the mining towns of Mambulao and Paracale, there also existed the settlements of Indan and Daet. Paracale is described by early Spanish chroniclers as having about 2,000 inhabitants and possessing gold in abundance. The mines Salcedo found to be "excellent, very rich, and more than thirty or forty estados in depth."

The towns of Capalonga, Mambulao, Paracale, Indan, and Labo are inhabited chiefly by Tagalogs, the remaining towns of Camarines Norte, although predominantly Visayan, show strong Tagalog influence. This is because Camarines Norte, especially its northern section, was settled from the neighboring Province of Tayabas. The immigrants are believed to have come mostly from the town of Mauban.

The state of affairs in Camarines Norte about the middle of the seventeenth century may be seen from the following data, taken from an account of the Franciscan missions in this region in 1649, to wit: (a) Capalonga had a population of 400 souls and possessed a bamboo church and convent, (b) Paracale had a population of 800 and a bamboo church and convent, (c) Indan had a population of 1,800 and a wooden church and convent and (d) Daet had a population of 1,200 with a wooden church and convent.

In 1829, when the Province of Camarines was divided, Camarines Norte was assigned the following towns: Daet, Talisay, Indan, Labo, Paracale, Mambulao, Capalonga, Ragay, Lupi, and Sipocot. However, in 1846 Camarines Norte lost to Camarines Sur the towns of Sipocot, Lupi, and Ragay in exchange for Siroma.

As already indicated, Camarines Norte and Camarines Sur were again united in 1854, only to be separated once more three years later. But in 1893, they were again united so that there was but one Province of Camarines during the Revolutionary period and the subsequent years.

¹ An Act has been passed by the Philippine Legislature, March, 1919, authorizing the Governor-General to separate these two regions into the provinces of Camarines Norte and Camarines Sur.

Civil government was established in Ambos Camarines on April 27, 1901.

The Act passed March, 1919, authorizing the Governor-General to divide Ambos Camarines into two provinces, assigns to Camarines Norte the following towns: Capalonga, Mambulao, Paracale, Indan, Labo, San Vicente, Talisay, Daet, Basud, and the islands along her coast. Daet will be made the capital.

STATISTICAL DATA.¹

Approximate area.....	square kilometers.....	2,018
Area of farms.....	hectares.....	190,215
Cultivated lands.....	do.....	107,782
Production in 1918:		
Rice	cavans ²	705,572
Sugar cane	tons.....	5,472
Corn	cavans.....	9,049
Copra	kilos.....	5,699,682
Abacá	do.....	24,285,481
Tobacco	do.....	8,400
Population		³ 50,822
Number of schools.....		
Primary	223	
Intermediate	8	
High school	3	
Vocational	4	
Enrollment for 1918.....	16,777	
Males	9,992	
Females	6,785	
Rate of mortality per 1,000 inhabitants.....		35.1
Number of establishments of household industries.....		
Production in 1918.....		890,572,68
Number of manufacturing establishments.....		
Production in 1918.....		82
		1,897,643.94

¹ All data hereon are for Camarines Norte and Camarines Sur unless otherwise indicated.

² One *cavan* equals 75 liters.

³ Refers to Camarines Norte only. Non-Christian population, 795, not included.



CAMARINES SUR.

GEOGRAPHICAL SKETCH.

CAMARINES SUR embraces the valleys of the Bicol River and its branches, the volcanic regions of Mounts Isarog and Iriga, and the Caramoan Peninsula.

The climate is distinctly tropical. The typhoons which occur during the change of the monsoon pass through the country, but do not cause very much damage.

The land bordering on Ragay Gulf is traversed by low mountains from which rise many but short rivers. This region is not very fertile, and with the exception of Ragay and Pasacao its population is sparse. Caves and grottos are found in Lupi, Ragay, Bula, Libmanan, and Pasacao.

The valley of the Bicol River is very fertile. It is here where most of the towns are located. Below the headwaters of the southern branch of the Bicol, there are lakes, the Buhi, Bato, and Baao nipa swamps and mangroves. These lakes and the coasts are sources of fish for export. In Lake Buhi are found the smallest fish in the world. It takes hundreds of them to make a handful.

Mounts Isarog and Iriga, extinct volcanoes, are conical and, although low in altitude, they seem to appear high when compared with the low flats up the Bicol. These volcanic cones supply the valleys with fertile soil carried down during the rainy season.

Caramoan Peninsula, jutting toward the northeast, forms a distinct physiographic province. The region is mountainous and of extreme relief. Geologists say that Caramoan Peninsula was formerly an island and had been joined to the mainland by deposits built up through eruptions of Isarog Volcano. The higher elevations culminating in Saddle Peak (elevation, 1,031 meters) in the Calinigan group of mountains, lie in the southern part of the peninsula, but extend west through the central portion. Mount Putianay, one of the prominent western peaks, displays a white scar near its summit, which makes it conspicuous from the direction of the town of San José. The eastern end of the peninsula is rugged, but the hills attain only moderate elevations. The northern coast and the outlying islands are low and are fringed at places with swamps. The principal drainage systems discharge on the northern coast; no large river has developed so as to control the topography, but a series of short streams with tidal lower courses serve to carry away the run-off from an exceedingly heavy rainfall.

The peninsula is very sparsely inhabited and a splendid forest covers its western half. The forest yields a great deal of rattan,

the rattan industry together with hemp planting and fishing being the principal industries. Some of the small islands to the north of Caramoan abound with coconut groves.

The southern coast of the peninsula is bounded by straight lines; within a short distance from the shore the sea attains depths of 900 meters. The southern coast, in contrast, is sinuous with numerous indentations and the adjacent sea is shallow.

The forest resources make the peninsula important. Gold, copper, mercury, coal, clay, stone, and gravel are the minerals already discovered, but which are so far unexploited with the exception of stone and gravel which are now used locally.

The exports of Camarines Sur are abacá, copra, forest products, fish and manufactured articles. Pili nuts and the resin obtained from the tree, sinamay made from abacá, and chairs made of bamboo and rattan are the most important exports. There are a number of distilleries in which alcohol is manufactured from the sap of the nipa and coconut palms.

A considerable amount of the products of Camarines is transported on its rivers and roads. Small steamers from Manila ascend the Bicol River to Naga, the capital, and flat-bottomed boats go as far as Nabua. The road from Naga extends through the Bicol Valley to Albay. Iriga is an important town on this road.

The people are Bicolans and are among the most industrious and progressive of the Archipelago.

This province and Camarines Norte form what is known as the Province of Ambos Camarines and both have 40 municipalities and 558 barrios. Its capital is Naga, with 9,468 inhabitants. It is located in the central part of the province.

HISTORICAL ACCOUNT.

Juan de Salcedo, the explorer of Camarines Norte and many other regions of the Islands, was also responsible for the opening up of what is generally known as Camarines Sur to the Spaniards. In 1573, during the administration of Guido de Lavezares, he led an exploring expedition into this region and founded the "villa" of Santiago de Libon, a town now belonging to Albay. He left at this place a small garrison of eighty Spanish soldiers under the command of Captain Pedro de Chaves. It was this small garrison that became the nucleus of Spanish power in the Bicol regions, for a little later, in order to continue the work so well begun by Salcedo, Governor De Sande ordered Captain Chaves to found the Spanish City of Nueva Caceres on the site of the then already prosperous native settlement of Naga. The city was accordingly built and immediately became the capital of the old Province of Camarines.

Besides Naga, there were already at the time of the arrival of the Spaniards, several other centers of population in what is generally called Camarines Sur and especially along the banks and in the immediate neighborhood of the Bicol River. Among these early native towns were Libmanan, Canaman, Minalabac and Bula.

Peaceful as the people of Camarines appear to have been, yet the history of the province shows that she has not been altogether free from rebellious tendencies. About the middle of the seventeenth century, when the great Sumoroy revolt was in progress in the neighboring island of Samar, the people of Camarines declared themselves against Spain. Disturbances of a rebellious character also occurred in this region during the British occupation of Manila when Spanish power seemed to be on the decline.

Up to the year 1829, there was but one Province of Camarines. This comprised the regions generally known as Camarines Norte and Camarines Sur and parts of the present Province of Albay. But, in 1829, the province was divided into Camarines Norte and Camarines Sur. The latter province as constituted that year had four main sections, namely: (a) The district of Nueva Caceres consisting of the towns of Tabaco, Naga, Camaligan, Canaman, Magarao, Bonbon, Quipayo, Calabanga, Libmanan, Milaor, San Fernando, and Minalabac; (b) the district of Rinconada consisting of the towns of Bula, Baao, Nabua, Iriga, Buhi, and Bato; (c) the district of Iriga consisting of the towns of Libon, Polangui, Oas, Ligao, Camalig, and Capsava; and (d) the district of Isarog consisting of Goa, Tigaon, Tinambag, and the mission of Manguirin.

The delineation of Camarines Sur was greatly changed in October, 1846, when she lost Siruma to Camarines Norte and the towns of Camalig, Guinobatan, Ligao, Oas, Polangui, Libon, Mauraro, Quipia and Donzol to Albay. At the same time, however, she acquired from Camarines Norte a few towns in the territory between the Bicol River and Tayabas and the Ragay Gulf, and from Albay the Caramoan Peninsula.

In 1854, the Camarines provinces were united to be again separated three years later. During this brief period of union, the province lost the Island of Burias which in 1856 was created into a separate comandancia politico-militar. Camarines Norte and Camarines Sur remained as separate provinces from 1857 to 1893 when they again were reunited.

At the outbreak of the Revolution, anti-friar propaganda was already on foot in Camarines Sur. In 1897, several prominent residents of this province among whom were Manuel and Domingo Abella were executed at Manila for alleged conspiracy against Spain. When the Revolutionary Government was established, Camarines Sur, then a part of the Province of Ambos Camarines, came under its control.

Civil government was established in Ambos Camarines on April 27, 1901.

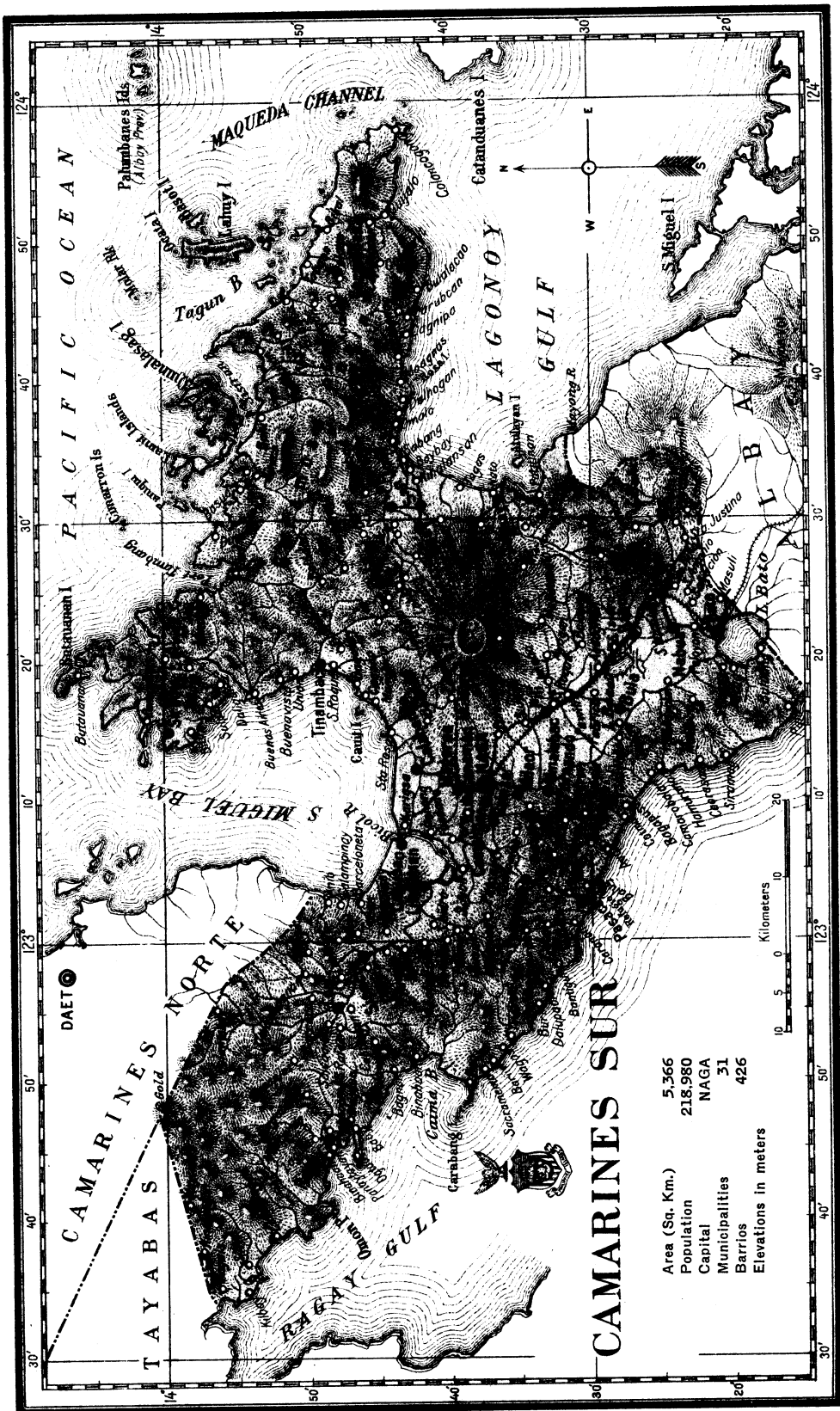
An Act was passed by the Philippine Legislature, March, 1919, authorizing the Governor-General to divide Ambos Camarines into two provinces. This Act gives Camarines Sur the following towns: Cabusao, Canaman, Cabalonga, Camaligan, Gainza, Libmanan, Lupi, Magarao, Milaor, Minalabag, Naga, Pamplona, Pasacao, Ragay, San Fernando, Sipocot, Baao, Buhi, Bula, Bato, Caramoan, Goa, Iriga, Lagonoy, Nabua, Pili, Sagnay, San José, Siruma, Tigaon, and Tinambac. Naga was made the capital.

STATISTICAL DATA.¹

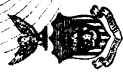
Approximate area ¹.....square kilometers....	5,366
Population	² 218,980

¹ Data for production, schools, rate of mortality, number of establishments of household industries, and manufacturing establishments are included in Camarines Norte.

² Non-Christian population, 750, not included.



Area (Sq. Km.)	5,366
Population	218,980
Capital	NAGA
Municipalities	31
Barrios	426
Elevations in meters	



CAMARINES SUR

CAMARINES SUR

TAYABAS

CAMARINES NORTE

PACIFIC OCEAN

S MIGUEL BAY

LAGOY GULF

LAGOY GULF

MAQUEDA CHANNEL

Tagaytay B.

S MIGUEL I.

Palumbanes Ids. (Abby Reef)

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CAPIZ.

GEOGRAPHICAL SKETCH.

The name of this province is said to have been derived from the Visayan word "Kapis," the name of a pearl shell that is found in abundance on the coast. From the western range that separates it from Antique, the land slopes northeastward to the Visayan sea, while the eastern and southern boundaries are formed by the Province of Iloilo. The coast is somewhat irregular in places. The capital, Capiz, has a harbor that is well-sheltered from the northeast and southwest winds and so has Pontevedra, where the arms of the land surrounding it reach far out into Pilar Bay. All along the coast of Capiz there are small islands which seem to be of coral reef or of sandbar origin.

The southwestern part of Capiz is very mountainous. Between this and Antique are found peaks of considerable size like Baloy, Nantud, Magosolan, Toctocan, Balabac, and Tinayunga. The western portion is drained by the Aclan River and its tributaries and the eastern side by the Panay River and its affluents.

The climate is tropical. There is only one short dry season. The rains are heaviest during the northeast monsoons. At the time of the change in the direction of the winds the typhoons that cross Samar also pass through Capiz and frequently cause much damage in Dumalag, Ibajay, Jamindan, Mambusao, and Sapan.

The land may be considered as divided into two regions, the Aklan Valley, and the Panay plain called Ilaya. The Aklan Valley produces and exports abacá and copra in greater quantities than Ilaya. Coconut plantations are found along the coasts and hemp is grown along the river banks and mountain slopes. Rice and corn are also raised though not in sufficient quantities for even local consumption.

In Ilaya, rice and sugar are the principal products. The eastern part is especially adapted to sugar cane and the central portion is the rice granary of Panay and Negros. The land under cultivation for sugar, while extensive, is very small compared with that now lying idle for lack of capital to develop it.

Around Capiz and at the mouths of the Panay River and its tributaries are extensive swamps overgrown with nipa palms and mangroves. The nipa sap was formerly distilled for alcohol, but with the increase in the internal-revenue tax this industry was ruined. However, with capital, sugar could be extracted from the sap. At present nipa thatching is exported from Capiz,

Panay, and Pontevedra; and lumber and firewood, from Sibuyan and New Washington, respectively.

The forests are rich in trees that yield timber suitable for construction purposes as well as gum, pitch, and resin. Dao, Dumalag, Dumarao, Libacao, Madalag, Balete, and Jamindan are the most favored localities in forest wealth.

Deposits of coal, gold, gypsum, and granite are hidden in the mountains of Capiz, but the hand of man has not yet unearthed them for commercial purposes. Mineral springs are found in Buruanga, Jamindan, Libucan, and Mamburao.

A few of the natural attractions in Capiz are the numerous waterfalls, the natural bridge of "Suhut" in Dumalag and the famous caves of the same town. Near the natural bridge a spring of sulfurous and salty water bubbles forth. The cave of Dumalag is a charming manifestation of the work of nature. An hour's walk from the entrance leads one to a place where the roof has collapsed and trees have grown to gigantic heights, the cave continuing to an unknown distance. Everywhere within are to be found fantastically shaped stalactites and stalagmites.

The weaving of textiles is an industry well developed in Capiz. Almost every house in Aklan contains several looms for the women of the house. The towns of Calivo, Makato and Ibahay supply the markets of Manila with fiber fabric known by the names of the towns from which they come. Bags for sugar are woven from buri leaves. A fabric known as Daet or saguran, made of buri fiber for hats, slippers, mats, household adornments and sail, is also woven.

Commerce, local as well as interisland, is extensive. The roads are good and each river outlet has a good port. This province has 25 municipalities and 510 barrios. Its capital is Capiz with 21,996 inhabitants. It is located in the north-eastern part of the province.

HISTORICAL ACCOUNT.

It is believed that the term Capiz comes from the Bisayan word "Kapid" meaning twins. This name, which the whole province has come to bear, was first given to the town of Capiz, it is said, in commemoration of the twins that were born there in the early days of its history.

The ancient name of Capiz was Aklan. The ten datos who once purchased Panay from the Negritos (*see* ANTIQUE) divided the island into three "sakops." One of these "sakops" was Aklan, which was placed under the rule of a dato called Bangkaya who became, according to this tradition, the founder of the first Malay settlements in what is now Capiz.

The Spaniards entered Capiz as early as 1569. It was Legaspi himself who built the first Spanish settlement on Panay Island, on the site of the present town of Panay. This settlement was the second Spanish settlement in the Philippines, the first being San Miguel (Cebú) which the Spaniards partially abandoned in 1569 on account of repeated Portuguese attacks of the previous years.

When the Spaniards entered Capiz, they found a few native settlements already established in this region. Among these early centers of population which were later organized into towns were, besides Panay, Bulacale, Aclan, Dumarao, Ibahay, and Dumalag. Batan and Mamburao were organized during the first decade of the seventeenth century.

Capiz was organized into a politico-military province in 1716. Before this time, this region was included within the jurisdiction of Oton, Iloilo. As organized in 1716, Capiz embraced not only its present territory but also the neighboring islands of Romblon, Maestre de Campo, Tablas, and Sibuyan.

Like the rest of the Visayan provinces, Capiz at the end of Spanish rule was still a politico-military province.

The revolutionists entered Capiz in 1898. Immediately thereafter, Panay island was abandoned by the Spaniards. Capiz, like Antique and Iloilo, came under the Revolutionary government. For some time, Ananias Diokno was the civil and military commander of Capiz.

Civil government was established in Capiz on April 15, 1901.

STATISTICAL DATA.

Approximate area	square kilometers.....	4,429
Area of farms.....	hectares.....	99,784
Cultivated lands	do.....	56,555
Production in 1918:		
Rice	<i>cavans</i> ¹	840,880
Sugar cane	tons.....	16,818
Corn	<i>cavans</i>	30,892
Copra	kilos.....	3,032,289
Abacá	do.....	843,522
Tobacco	do.....	99,750
Population		² 283,907
Number of schools.....		176
Primary	159	
Intermediate	14	
High school	2	
Vocational	1	
Enrollment for 1918.....	21,574	
Males	12,629	
Females	8,945	
Rate of mortality per 1,000 inhabitants.....		32.8
Number of establishments of household industries.....		4,257
Production in 1918.....		18,131
Number of manufacturing establishments.....		51
Production in 1918.....		₱237,414.61

¹ One *cavan* equals 75 liters.

² Non-Christian population, 8,589, not included.



CAVITE.

GEOGRAPHICAL SKETCH.

CAVITE, in the southwestern part of Luzon, lies along the shore of Manila Bay. It has an area of about 1,202 sq. km. Except at the extremities, the coast, which extends from Sangley Point in the northeastern part to Limit Point in the southwest, is very regular and free from barrier reefs that would obstruct navigation. It boasts of a fine harbor, so situated as to make it an excellent location for a naval station. Cavite is the capital of the province and is noted for its dockyards.

The province may be divided geographically into two parts, which present striking contrasts. The northern portion is a level plain, dotted here and there by low swelling mounds, while the southern half is traversed by mountain ranges. But those mountains are not high enough to serve as a barrier to invasion. The only high peak is Mount Sungay, which rises about 752 meters above sea level.

The climate changes with the seasons. The highlands receive much rainfall during the northeast monsoon, but little or none from February to April. But when the southwest monsoon comes, it brings abundant rains in the southern and southwestern parts of the province causing the rivers to overflow and destroy crops and other property.

The plain of Cavite is very fertile because it is of volcanic origin. The most important agricultural products are rice, hemp, sugar, copra, cacao, coffee, and corn. Rice is produced in nearly all the towns of the province. It is raised both on irrigated and unirrigated land. Hemp is grown principally in the towns of Alfonso, Indang, Mendez and Amadeo and largely exported to Japan. Sugar cane is cultivated in the towns of Naic, Silang, Malabon, and Carmona, while coconuts are grown mostly in the towns of Alfonso, Indang, and Silang. Most of the products grown in this province are sent to the markets of Manila by boats and by rail. Large numbers of cows, carabaos, horses, and sheep are raised on the wide grazing grounds of the province.

The swamps, which are few in number and of little significance, are usually found near the seacoast. Some of the plants found in them are utilized for their fiber, while dwarf trees are used for fuel purposes. The mountains are clear of forests so that the highlands are practically all under abacá cultivation. The lumber found in the province is not hard and durable enough for heavy construction purposes.

Cavite furnishes but few minerals, the most important of which is a soft stone which is used for building purposes.

The rivers are short, but navigable for small boats. Most of them rise in the mountains of Indang and Silang and discharge

their waters in Laguna de Bay, while the rest find their outlets in Manila Bay. Although the rivers are short and of recent origin, the geological formation of the country is such as to make it favorable for drilling artesian wells for irrigation purposes. These rivers teem with fish although most of the fish supply is obtained along the seacoast.

The inhabitants are mostly Tagalogs. About fifty per cent of them can speak the Spanish language, thus showing the influence of the Spaniards who lived there for hundreds of years. Farming is the chief occupation of the inhabitants of the interior, salt-making and fishing of the dwellers along the coast, while on the hills and higher levels of the province the people largely devote themselves to cattle raising and lumbering.

This province has 20 municipalities and 171 barrios. Its capital is Cavite, with 22,163 inhabitants. It is located in the northern part of the province.

HISTORICAL ACCOUNT.

At the time of the arrival of the Spaniards in Manila, the region which was later organized into the politico-military Province of Cavite was but sparsely populated. The centers of population in those early days were Kawit, Bacoor, Maragondon. As late as 1735, the population of the province was only about 5,904 souls.

Cavite was created a politico-military province in 1614. It then occupied approximately its present territory except Maragondon and the neighboring region bordering on the south channel. Maragondon and neighboring territory were annexed to Cavite in 1754, when they were separated from the *corregimiento* of Mariveles to which they had previously belonged.

The town of Cavite, once a barrio of Kawit but now the capital of the province, owes its growth to the navy yard which the government there early established. Here the ships used in the Manila-Acapulco trade and in southern expeditions against the Mohammedan pirates were fitted out.

The history of Cavite in the seventeenth century records two events of historical importance, namely, the Dutch attack of 1647 and the foundation of the settlement of Ternate.

In 1647 a Dutch squadron suddenly made its appearance off the coast of Cavite and bombarded the fort. It is said that the Dutch fired more than 2,000 cannon balls at the fort and almost succeeded in capturing the place, but in the end, however, they were forced to withdraw.

The settlement of Ternate was founded in 1660, as a result of the abandonment of the Moluccas by the Spanish government about this time. It appears that when the Spaniards withdrew their forces from the Island of Ternate, the Jesuit missionaries took their converts with them back to Manila. To provide homes for these exiles the Jesuits later founded the town of Ternate near the old town of Maragondon.

From very early times, the fertile soil of Cavite attracted the attention of enterprising religious orders and later on the rich coastal plain was gradually converted into flourishing

haciendas. The administration of their vast estates, however, resulted in numerous conflicts between the orders and the tenants. Agrarian disputes arose, especially in the towns of Imus, Malabon, Kawit, and Silang and drove such men as Luis Parang and Juan Upay to the mountains where they preferred to live as outlaws. Later, about 1869, similar troubles broke out, the refractory element being headed by Eduardo Camerino.

In 1872, a military mutiny led by Lamadrid took place in Cavite. This mutiny though insignificant in itself had important political results. The government made it an excuse for the execution of three leading native priests, Dr. José Burgos and Fathers Gomez and Zamora, and for the exile of many innocent Filipino leaders of the liberal movement of 1869-1871. This was the first uprising in which the educated class was involved.

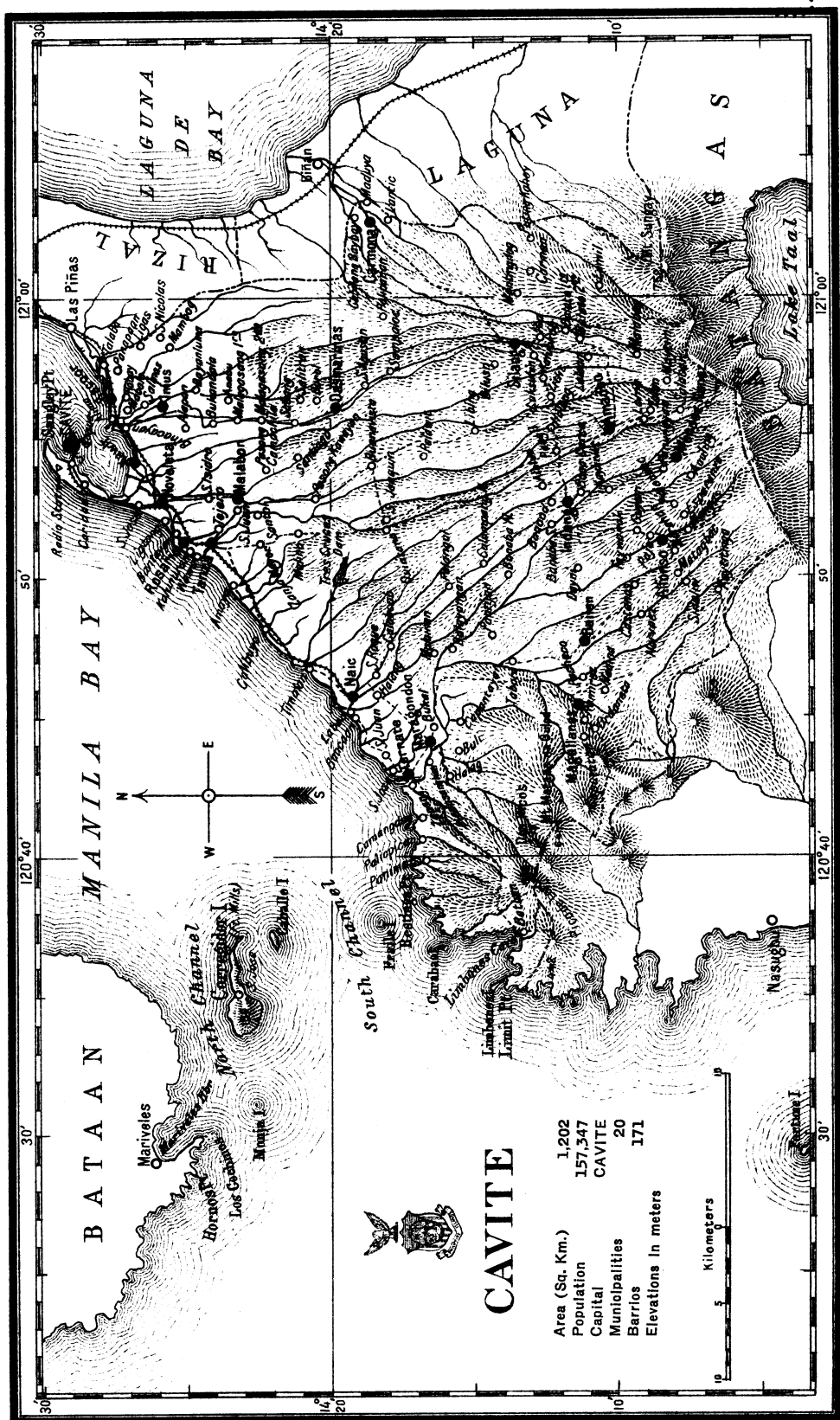
From the beginning to the very end of the Revolution, Cavite was the center of military operations. Zapote bridge, for example, was more than once the scene of hard fighting. Practically every town in the province was at one time or another fought over. Many of the leaders of the Revolution, like Emilio Aguinaldo, who was President of the Philippine Republic, his cousin Baldomero, Noriel, Trias, and others are sons of Cavite. Moreover, when the Revolutionary Government was established, Bacoor was really the first capital. For a time, the province was governed by Ladislao Diwa in the name of the Revolutionary Government.

Civil government was established in Cavite on June 11, 1901.

STATISTICAL DATA.

Approximate area	square kilometers.....	1,202
Area of farms.....	hectares.....	66,582
Cultivated lands	do.....	31,572
Production in 1918:		
Rice	cavans ¹	416,872
Sugar cane	tons.....	13,556
Corn	cavans.....	7,215
Copra	kilos.....	300,731
Abacá	do.....	6,049,736
Tobacco	do.....	3,500
Population		157,347
Number of schools.....		
Primary		83
Intermediate		11
High school		1
Vocational		1
Enrollment for 1918.....		15,728
Males	8,878	
Females	6,850	
Rate of mortality per 1,000 inhabitants.....		64.7
Number of establishments of household industries.....		2,401
Production in 1918.....		₱577,442.92
Number of manufacturing establishments.....		209
Production in 1918.....		₱811,081.17

¹ One *cavan* equals 75 liters.

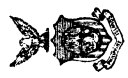
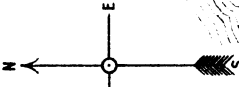


BATAAN
 MANILA BAY
 LAGUNA

LAGUNA DE BAY

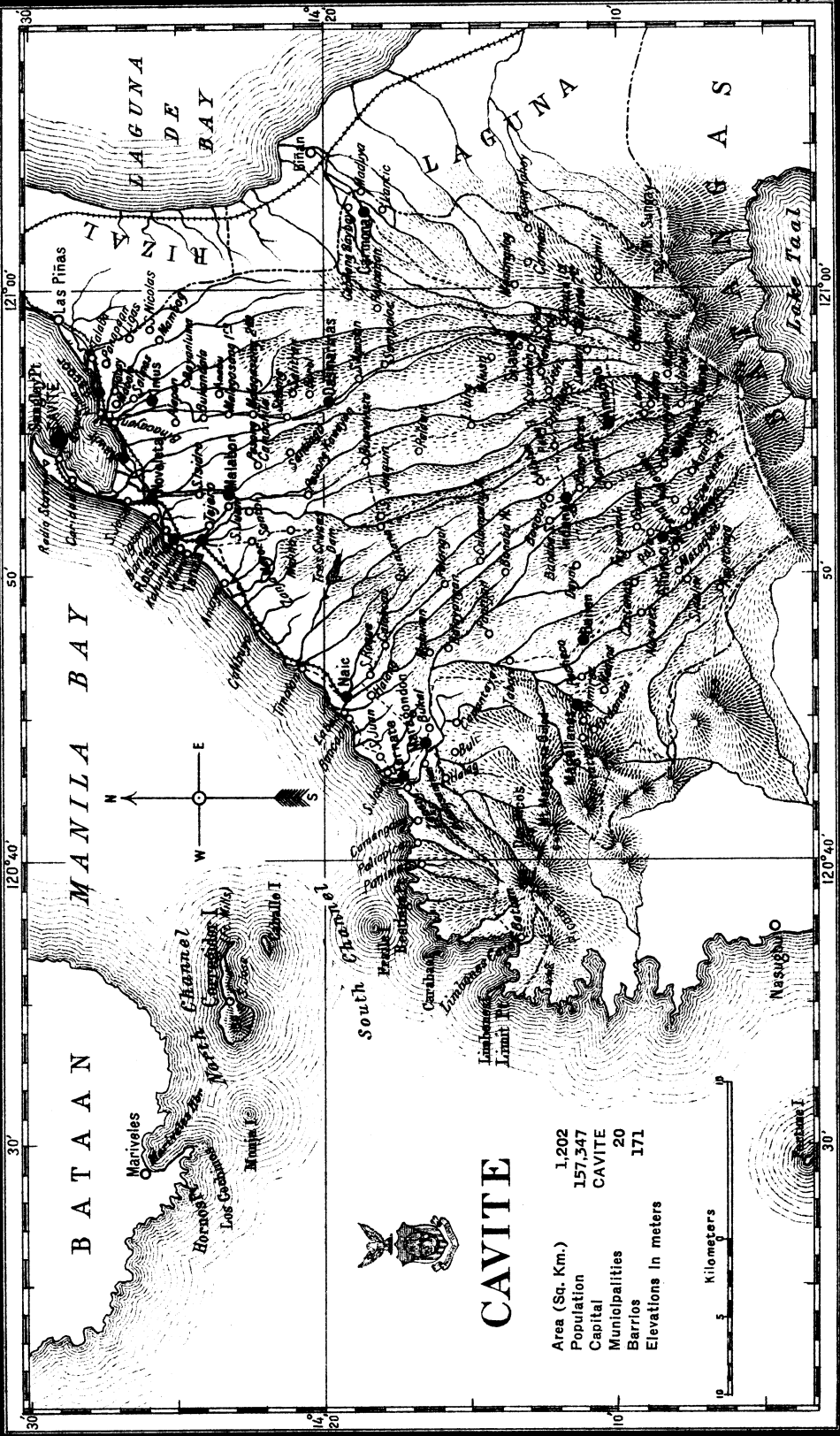
LAGUNA

Lake Taal



CAVITE

Area (Sq. Km.)	1,202
Population	157,347
Capital	CAVITE
Municipalities	20
Barrios	171
Elevations in meters	





CEBU.

GEOGRAPHICAL SKETCH.

THE ISLAND is bounded on the north by the Visayan Sea, on the west and northwest by the Tañon Strait, on the south by the Mindanao Sea, on the southwest by the Bohol Strait and on the east by the Camotes Sea. Although the mountains extend through almost the entire length of Cebu, the island is the lowest of the Visayas. The highest peak, found at the central portion, is Mount Uling (1,013 meters), so called for the black color of the coal that is found in the region. From this peak the land falls away on all sides to form the central plateau, which is one of the most densely peopled regions of the island. In the north and south are several other plateaus, but these are not well populated because of less fertile soils and the absence of streams that afford good drainage. The coast is irregular and though reefy has fine places for anchorage. In fact, it is the reefs that give the island many a sheltered harbor with a deep approach.

Because of the proximity of the mountains of Samar, Leyte, and Negros that cut off the moist winds from the northeast and southwest, respectively, the island does not receive enough rain for the cultivation of rice. The conditions of rainfall and of the soil make corn the staple food of the people. They also make the region of the capital and other nearby towns more salubrious, although the climate is warmer. Cebu is visited by terrible hurricanes at the approach of the equinox.

The plains yield as many as three crops of corn a year. Coconuts, sugar cane, abacá, peanuts, bananas, pineapples, camotes, and tobacco are other products.

The island is rich in minerals, of which gold and coal are the most important. Industries are well developed in Cebu. Good fishing banks found along the shores furnish the people with food for local use and for export. Hogs and goats are raised for local use. Poultry raising enables the people to export chickens and eggs to neighboring islands and even to Manila. Cotton cloth, woven for local use and *sinamay*, made from the fiber extracted from banana and pineapple leaves, are exported. Much *tuba* is collected in the coconut regions.

This province has 50 municipalities and 880 barrios. Its capital is Cebu, with 65,300 inhabitants. It is located in the east central part of the province.

HISTORICAL ACCOUNT.

The town of Cebu or Sugbu existed as a prosperous native settlement before the discovery of the Philippines by Magellan. Its king, who appeared to be the recognized leader of a great

part of the Island of Cebu, was well known to the people of some of the settlements along the coasts of the neighboring islands. Judged from the Chinese plates, bells and gongs found in Cebu by the Spaniards in 1521, this town must have had trade connections with China in pre-Spanish times. In fact, several days before Magellan arrived in Cebu a boat from Siam had anchored in the port to trade with the Cebuanos.

The Island of Cebu, was discovered by Magellan on April 7, 1521. The town was then under the rule of Raja Humabon, a powerful chief who had eight subordinate chieftains and a force of some two thousand warriors under him. Magellan made friends with Humabon and succeeded in baptizing him, his wife, and as many as eight hundred of his men. Magellan also endeavored to bring the people of Mactan under Spanish influence. In this attempt, he met his death while engaged in battle with the people of Opon who were then under Chief Lapulapu.

Forty-four years after Magellan's time, Legaspi occupied the town of Cebu which was then under the rule of Tupas. Here Legaspi founded the first Spanish settlement in the Philippines which he called San Miguel. The town, which was planned in the shape of a triangle, was defended on the land side by a palisade and on the two sides facing the sea by artillery. The name of the town was later changed to the City of the Most Holy Name of Jesus "in honor of an image of the Child Jesus which a soldier had found in one of the houses."

The establishment of the Spanish settlement in Cebu brought to this island the Portuguese who then disputed the ownership of the Archipelago. In 1566, 1568, and 1570, Portuguese expeditionary forces were sent to Cebu to drive away the Spaniards. First in 1568 and again in 1570, the Portuguese blockaded Cebu, but in both cases the blockade resulted in a failure.

The people of Cebu did not suffer as much from the blockades as they did from the frequent attacks of the Moro pirates. The coast towns especially suffered terribly from these incursions which became quite a constant menace to life and property toward the end of the sixteenth century. These raids continued well into the seventeenth century.

About the middle of seventeenth century, on the occasion of the Sumoroy revolt in Samar, the people of Cebu showed great restlessness. Only the presence of substantial government force prevented a general revolt. Similar rebellious tendencies were manifested by the people of this island during the British occupation of Manila.

The population of Cebu showed marvelous increase during the nineteenth century. Buzeta and Bravo gave the following figures: 100,000 souls in 1799; 334,790 in 1846, and 389,073 in 1850. Many towns were also founded during this time, among which are Naga (1829), Talisay (1834), San Fernando and Cordoba (1844-1866), and Alcoy and Santander (1866-1880).

In 1863, Cebu was thrown open to foreign trade. This event was important, for it resulted in the general economic growth of the province. From that time on, Cebu prospered as a trading port until it became a worthy rival of Iloilo.

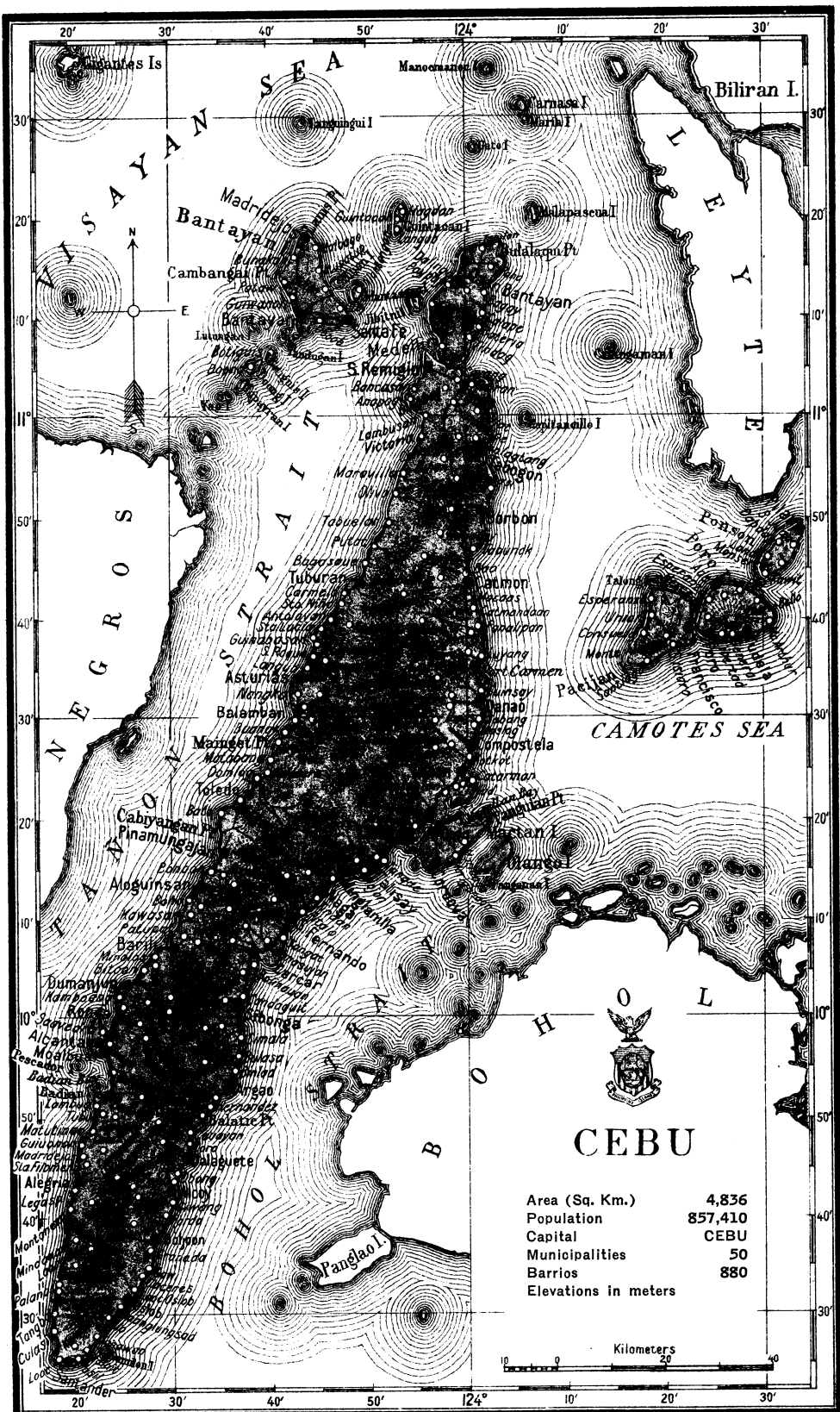
Like many of the other Visayan islands, Cebu did not immediately join the Revolution. Later, however, the standard of revolt was raised and the Spaniards had to evacuate the island in December, 1898.

STATISTICAL DATA.

Approximate area	square kilometers.....	4,836
Area of farms.....	hectares.....	252,316
Cultivated lands	do.....	123,819
Production in 1918:		
Rice	<i>cavans</i> ¹	223,907
Sugar cane	tons.....	47,755
Corn	<i>cavans</i>	5,377,527
Copra	kilos.....	26,423,014
Abacá	do.....	3,959,215
Tobacco	do.....	3,639,658
Population		857,410
Number of schools.....		366
Primary	335	
Intermediate	25	
High school	3	
Collegiate	1	
Vocational	2	
Enrollment for 1918.....	43,361	
Males	26,992	
Females	16,369	
Rate of mortality per 1,000 inhabitants.....		28.0
Number of establishments of household industries.....		5,666
Production in 1918.....		₱1,411,771.88
Number of manufacturing establishments.....		264
Production in 1918.....		₱14,099,885.67

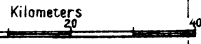
¹ One *cavan* equals 75 liters.





CEBU

Area (Sq. Km.)	4,836
Population	857,410
Capital	CEBU
Municipalities	50
Barrios	880
Elevations in meters	



CITY OF BAGUIO.

GEOGRAPHICAL SKETCH.

About 160 miles to the north of Manila, situated high up among the Benguet mountains, is Baguio, the capital of Benguet, and one time the summer capital of the Philippines. Baguio ranges in elevation from 4,500 to over 5,500 feet and is surrounded practically on all sides by high mountains and connecting ridges almost 8,000 feet above sea level.

The city of Baguio covers an area of 49 square kilometers. First class roads wind along its pine-covered hills and afford beautiful glimpses of the luxuriant vegetation. The scenery is everywhere beautiful and in many sections truly magnificent. Rolling hills enclose valleys which are steep in some places and gently sloping in other parts.

There are two first class roads leading to Baguio, one of which is the Benguet Road well known for its "Zig-zag." The other route is the Naguillian Road running from Bauang town and along the Bauang and Ribsuan River through the Naguillian Valley. Government automobiles are operated to carry freight and passengers from the lowlands to Baguio.

The resident people of the city are now 5,462, and the annual number of visitors is rapidly encreasing. The population of Baguio is composed mostly of Filipinos and Americans. There are also many foreigners engaged in various kinds of business enterprises. The Igorots in the neighboring *rancherías* go to the city for the purpose of selling their goods or to work in the construction of roads.

The most famous places of interest are the open-air amphitheater, Camp John Hay, Burnham Park, Teachers' Camp, Government Center, Mirador, the Athletic Grounds, and several others.

This city is located in the south central part of the Subprovince of Benguet.

HISTORICAL ACCOUNT.

The first Spaniard to visit Baguio is believed to be Guillermo Galvey, who in 1829 led an expedition into the mountain country and succeeded in reaching the Trinidad Valley and the neighboring territory. Galvey's diary kept during this expedition reveals his astonishment and delight upon his discovery of this region, where "the Spaniards saw with enthusiasm the carefully separated and walled fields growing camotes, taro, and sugar cane."

Baguio proper, to the end of Spanish rule, was nothing but a small Igorot *ranchería* with a few dispersed Igorot dwellings. The only Government officials of any importance residing there were a Spanish *vacunador* and an Ilocano *directorcillo*. It should be remembered that the important town of Benguet then was Trinidad, not Baguio.

However, during the last decade of the nineteenth century, the place where now Baguio stands had already begun to attract the attention of a few men. The Spaniards made attempts to establish a health resort in Baguio and to study the best possible way of connecting Baguio with either Pangasinan or La Union. An agent was sent by the Jesuits during the time of Antonio Bajar, the last Spanish commander of Benguet, to Mirador Hill to survey the place and make recommendations for the erection of an observatory.

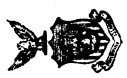
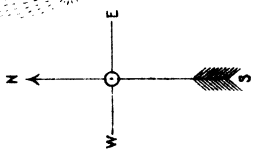
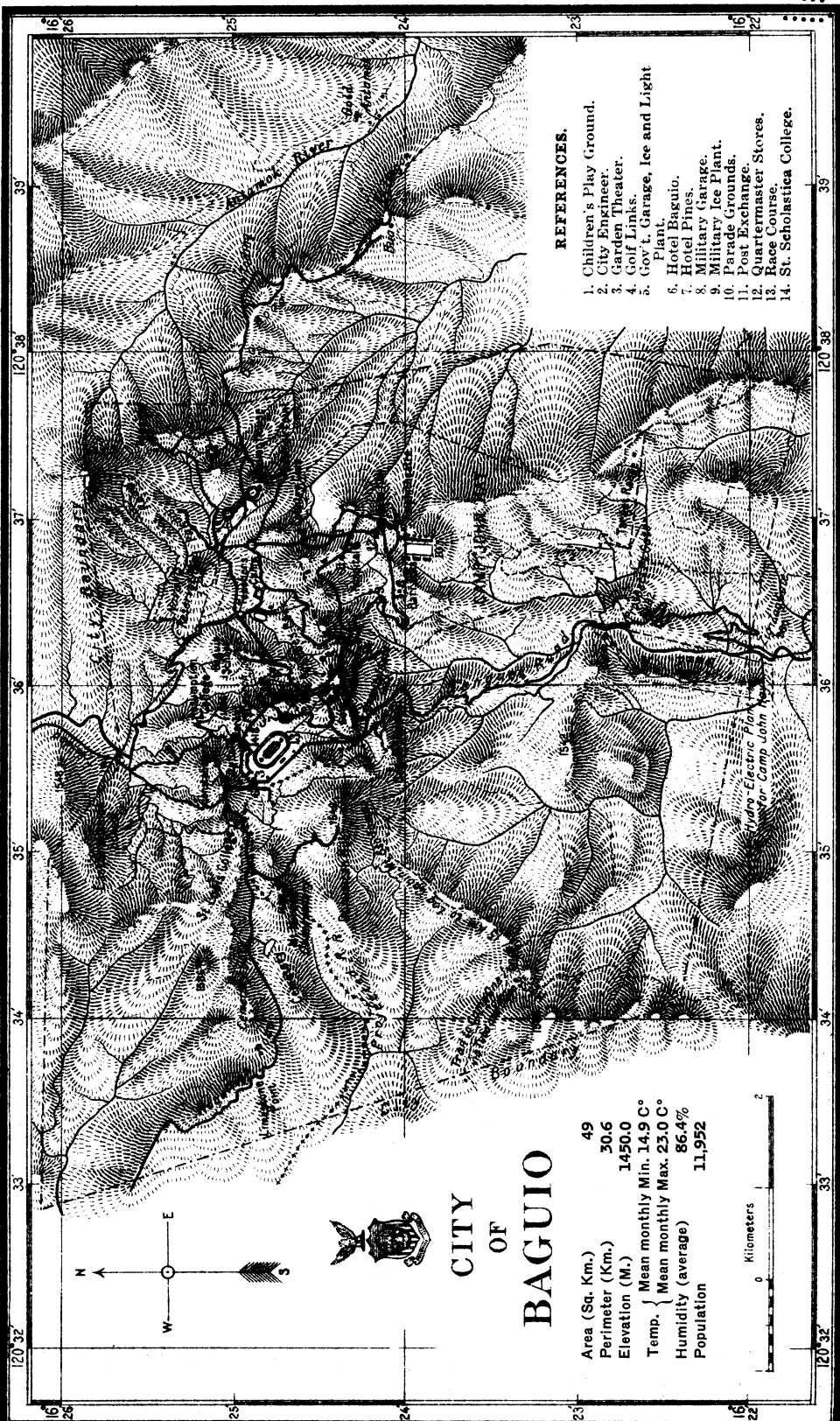
The favorable location of Baguio and its beautiful environment early attracted the attention of the Americans. When civil government was established in Benguet in November, 1900, the capital of the new province was located in Baguio. In 1904, the famous American landscape architect, D. H. Burnham, visited the place and made plans for its improvement and beautification. In 1908, the Bureau of Education started the Teachers' Camp, now one of the attractions of Baguio. Finally, in 1909, the township of Baguio was incorporated under the name of "City of Baguio."

From the time of its incorporation to the present, Baguio steadily grew in prosperity and popularity. Modern conveniences were introduced one after another such as telephones, electric lights, water works, and sewerage system. To-day, Baguio is not only one of the most beautiful spots in the Philippines, but also one of the cleanest and coolest.

STATISTICAL DATA.

Approximate area	square kilometers....	49
Population		¹ 5,462
Number of schools.....		7
Primary		2
Intermediate		3
High school		2
Enrollment for 1918.....		852
Males	536	
Females	316	

¹ Non-Christian population, 6,490, not included.



CITY OF BAGUIO

Area (Sq. Km.)	49
Perimeter (Km.)	30.6
Elevation (M.)	1450.0
Temp. {	Mean monthly Min. 14.9 C°
	Mean monthly Max. 23.0 C°
Humidity (average)	86.4%
Population	11,952



REFERENCES.

1. Children's Play Ground.
2. City Engineer.
3. Garden Theater.
4. Golf Links.
5. Gov't. Garage, Ice and Light Plant.
6. Hotel Baguio.
7. Hotel Pines.
8. Military Garage.
9. Military Ice Plant.
10. Parade Grounds.
11. Post Exchange.
12. Quartermaster Stores.
13. Race Course.
14. St. Scholastica College.



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CITY OF MANILA.

GEOGRAPHICAL SKETCH.

MANILA is the most beautiful and interesting city on the shores of the China Sea. It is situated at the mouth of the Pasig River, on the west coast of the Island of Luzon. Besides being the metropolis and capital, it is now one of the most important ports of call and entry in the Far East. Because of its beauty and importance, it has also been named the "Pearl of the Orient."

The city is practically divided into two parts by the Pasig River which runs through it. To the north of the river, near its mouth, lie the districts of San Nicolas, Binondo, and Tondo, the last being the oldest part of the city. These form the business center of the city. The Escolta, traversing the district of Binondo and close to the Pasig River, is the most important business thoroughfare. The Rosario, another busy street in the same district, is chiefly occupied by Chinese stores. The other principal districts north of the river are Santa Cruz, Quiapo, Sampaloc, and San Miguel. To the south of the Pasig River are the Old City, surrounded by a thick and high stone-wall, Ermita, Malate, Paco, Singalong, Pandacan, and Santa Ana.

Tondo is the most thickly populated and on that account it is not an attractive district. The greatest portion of the residents here are native Tagalogs. Ermita, San Miguel, Malate, and Paco are the seat of the best residences in the city.

Manila covers a large area, and an extensive system of transportation is required to carry the people to different parts of the city. Electric cars furnish transportation to the majority of the traveling public. Automobiles, calesas, and carretelas are other means of public conveyance. Manila is provided with a modern water-system, a sewerage, and electric light system. Gas is also used for lighting houses and for fuel. Recently an automatic telephone system has been installed in addition to the old system.

The city has a population of 283,613, the greater portion of which are Tagalogs. The other native elements are Ilocanos, Pampangos, Visayans, and Bicolos. Of all the foreigners, the Americans are the greatest in number. There are thousands of Chinese who are either merchants or laborers. The rest of the residents are Spaniards, Englishmen, Japanese, and citizens of various foreign countries.

The hot season commences in March and continues until July. The rainy days begin in August and last till December. The climate is generally warm except in the months of November,

December, and January when the temperature is rather mild. Frequently, storms from the Pacific bring heavy rains causing destructive floods in the suburbs.

The places of recreation and amusement can compare favorably with those of any American city of its size. There are fine cinematographs and theaters. Other places of interest are the Luneta, where the Constabulary Band plays on most evenings, the athletic grounds around the Walled City, the Mehan Gardens, the churches, and the Cementerio del Norte. Being the capital of the Philippines, Manila has many fine buildings, monuments, and parks. The seat of Government is the Ayuntamiento in the Walled City. A number of fine school buildings have been constructed, such as the Philippine Normal School, the Philippine School of Arts and Trades, the Philippine General Hospital, and the buildings of the University of the Philippines. Among the imposing monuments are those to Rizal, Legaspi and Urdaneta, and Magellan.

As the chief commercial center in the Philippines, Manila has an excellent harbor. The port is protected from the waves by a breakwater. Behind this wall, where the water is calm, large steamers from foreign countries load and unload beside modern piers. Along the shore south of the Pasig River is the water front. There are warehouses in which goods are stored. The mouth of the river is used by small steamers and sailing vessels, especially those engaged in coastwise and inter-island trade. Launches, casco, and barges ply up and down the river transporting cargo to or from the ships.

The Pasig River, flowing through Manila, is crossed by several high bridges. Big vessels can not go under these bridges, but launches pass beneath them. Several roads and railroad lines enter the city. These are the ways on which products of the provinces are brought for the local factories or to be exported. Cheap transportation for freight is made possible by the *esteros*, or estuaries, which enter the land all around Manila Bay and are often connected with one another. Along these arms of the sea are built the cigar factories, distilleries, cold-storage plants, saw mills, vegetable oil factories, rice mills, and cotton mills.

As a distributing center, Manila receives the greatest portion of the imported products for the various parts of the Philippines. From the different provinces inter-island boats bring tobacco, sugar, copra, and hemp for export. Rice, firewood, vegetables, fruits, poultry products, mats, and zacate are brought in from the neighboring provinces for local use.

HISTORICAL ACCOUNT.

The name "Manila" is derived from the Tagalog word *Maynila*, meaning "there are nilas." *Nila* was a kind of plant which used to abound on the Pasig River. In the beginning what subsequently became Intramuros was known as *Maynila*.

At the time of the arrival of the Spaniards, Maynila (now Intramuros) was ruled by Rajah Soliman. It was then a strongly protected town being surrounded by a heavy palisade

and defended by many well-armed warriors. Opposite to it, on the northern bank of the Pasig, stood another thriving town. It was ruled by Rajah Lakandola, the King of Tondo.

Manila was first visited by the Spaniards in 1570. Legaspi, hearing of the existence of a prosperous Mohammedan community in Luzon, sent an expedition to it under the command of Martin de Goiti. De Goiti anchored at Cavite and sent a message of friendship to Rajah Soliman. Soliman was willing to befriend the Spaniards but would not submit to Spanish authority. This attitude of Soliman led to friction and trouble. In June, 1570, De Goiti attacked Soliman's city, captured it after a stout resistance and having taken possession of it in the name of the King of Spain, returned to Panay. The next year, the Spaniards returned. This time Legaspi himself led the expedition. The inhabitants of *May-nila* seeing the coming of the Spaniards set fire to the place and fled to the neighboring town of Tondo. Rajah Lakandola accepted the offer of friendship with Legaspi. Soliman, however, remained irreconcilable. He gathered a strong force and prepared to expel the Spaniards. The decisive battle was fought at Bangcusay. Here the Filipinos were defeated, Soliman himself perishing in the struggle.

Legaspi then began to rebuild the city of Soliman. He ordered the construction of 150 wooden houses for the Spaniards and a palace for himself. Besides, he established a new government for the city, appointing two judges, twelve aldermen and several other officers. He called it, the "distinguished and ever loyal city" and in it he established the seat of government of the Philippines. In the meantime, the surrounding communities came under religious influence. Towards the end of 1578, missions were established in Santa Ana, San Miguel, Dilao (now Paco), Sampaloc, and Pandacan.

Since the early years, Manila was threatened with danger from various sources. What proved to be a constant source of danger for a long while were the Chinese. Even as early as 1574, Manila was threatened from this danger. In that year, Limahong with a fleet of sixty-two Chinese warships bearing a force of 3,000 men, besides a large number of women, tried to take the city. His attempt, however, failed. At various times during the following century, the Chinese rose in revolt. In the revolt of 1602, the Chinese did considerable damage. They set on fire buildings in Tondo and Quiapo and for a time threatened to capture Intramuros. In 1662, the Chinese in Manila again revolted, while, in 1686, a number of them under the leadership of Tingco conspired to kill the Spaniards. It was to minimize the danger of a Chinese uprising that during the early years, Chinese were confined to a particular place in the city, known as the Parian or Alcaicería.

A notable event in the history of Manila during the eighteenth century was the occupation of the city by the British in 1762.

The British occupation was an echo of the Seven Year's War in which England and Spain had taken opposite sides. The British arrived in September, 1762. They were under the com-

mand of Admiral Cornish and General Draper. They remained in the city until June, 1764.

In 1830, with the adoption of a more liberal commercial policy, the port of Manila which had up to that time been a closed port was thrown open to foreign commerce. Manila grew in importance as a result of this policy. The number of commercial houses in Manila increased rapidly. By 1842, there were 12 foreign firms in the city and in 1859 three more were established. Before 1850, consulates were maintained in Manila by France, the United States, Denmark, Sweden, and Belgium.

Manila up to about the middle of the nineteenth century formed part of the ancient Province of Tondo. This province included almost the whole of what is now the Province of Rizal. In 1859, a decree was issued establishing a civil government for the Province of Manila. With this decree what formally was the Province of Tondo became the Province of Manila. According to this decree the civil governor of the province was also *corregidor* of the city of Manila.

In 1863, Manila was visited by a severe earthquake which resulted in great loss of life and property. Among the buildings destroyed by the shock was the Cathedral of Manila. Almost all the people who happened to be inside the church at the time of the occurrence of the earthquake perished among its ruins. Among the victims was Father Pedro Pelaez, one of the early champions of the cause of the Filipino clergy. Another public calamity occurred in the city in 1867. In September of that year, Manila was visited by a severe typhoon which resulted in the inundation of the suburbs of the city. For a time bancas were the only means of transportation in several places of the city.

In 1880, Manila was visited by a severe earthquake which reduced to ruins many of the public buildings of the city and almost all the churches.

The city of Manila may be said to be the birthplace of the *Katipunan*, for it was here in a house on Calle Azcarraga where on the 6th of July, 1892, Andres Bonifacio with Deodato Arellano, Valentin Diaz, Ladislao Diwa, and some others, founded the association. The *Katipunan* was discovered by Father Gil, the curate of Tondo, on the 19th of August, 1896.

With the outbreak of the *Katipunan* in August, 1896, Manila, as a port of the Province of Manila, was declared to be in a state of war. Hostilities took place at various places on the outskirts of the city, such as Caloocan, Balintawak, and San Juan del Monte.

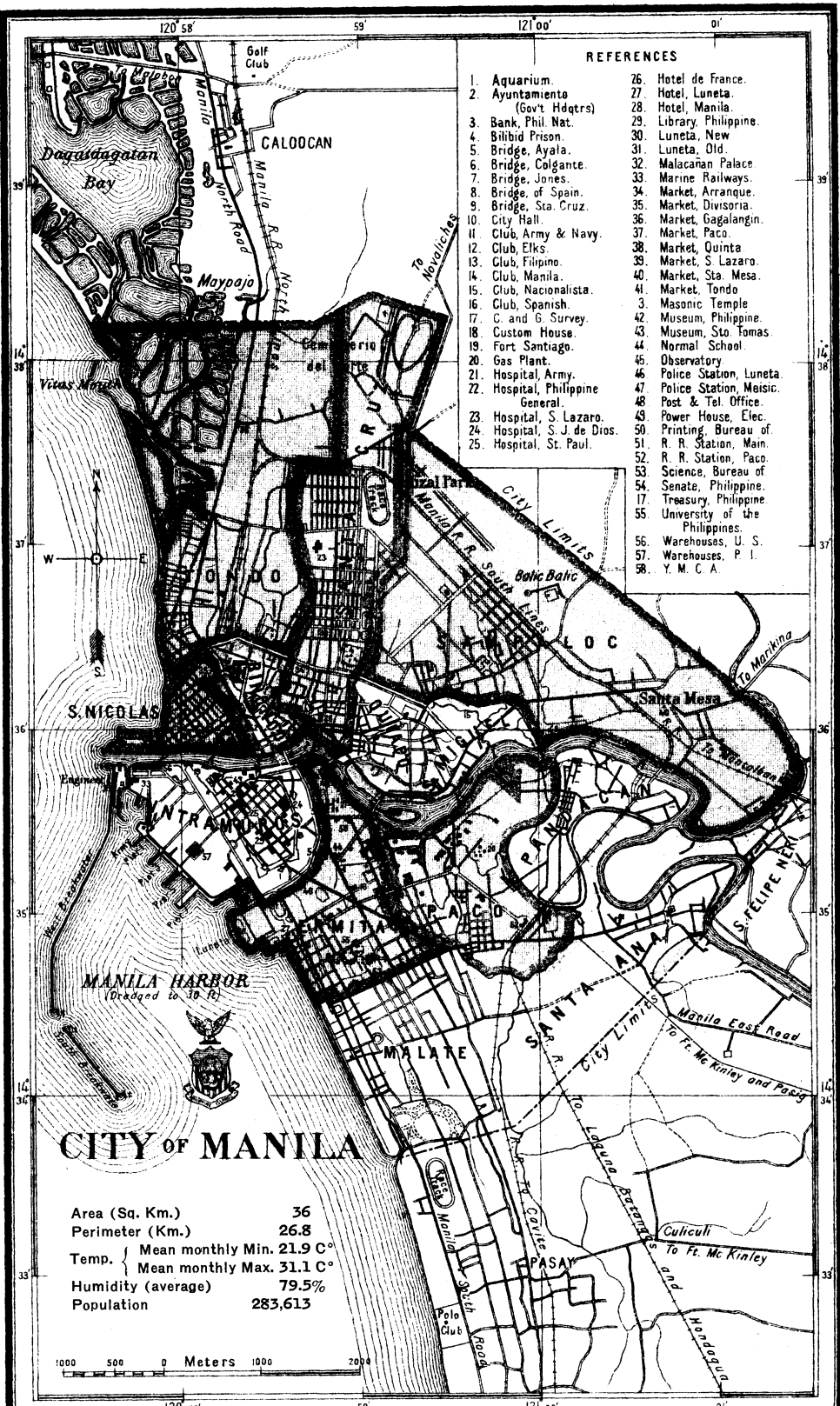
Manila fell into the hands of the Americans on August 13th, 1898. A military government was in control of the city for some time.

With the establishment of civil government, the old Province of Manila was abolished, and some of the towns which belonged to it were given to the newly created Province of Rizal. To the city of Manila with its present limits was granted on August 7, 1901, a charter which vested the government of the city in a

municipal board composed of five members, three of whom were directly appointed by the Governor-General, two, the president of an advisory board and the city engineer, being ex-officio members. In June, 1908, the charter was amended so as to give to the people of the city some participation in the government. According to the amended charter, the government was vested in a municipal board of six members, three appointive members, the city engineer, and two elective members. Recently, a further amendment was introduced in the charter of the city giving to the people much greater participation in the affairs of municipal government. With the new amendment, the government of the city is vested in a mayor appointed by the Governor-General and ten councillors elected by the qualified voters of the city.

STATISTICAL DATA.

Approximate area	square kilometers.....	36
Area of farms.....	hectares.....	769
Cultivated lands	do.....	607
Production in 1918:		
Rice	<i>cavans</i> ¹	24,200
Corn	do.....	509
Population		283,613
Number of schools.....		111
Primary	34	
Intermediate	25	
High school	22	
Collegiate	10	
Vocational	18	
University	2	
Enrollment for 1918.....	59,085	
Males	38,974	
Females	20,111	
Rate of mortality per 1,000 inhabitants.....		51.4
Number of establishments of household industries.....		528
Production in 1918.....		₱308,627.90
Number of manufacturing establishments		1,586
Production in 1918....		₱147,564,454.87



REFERENCES

- | | |
|-----------------------------------|------------------------------------|
| 1. Aquarium. | 26. Hotel de France. |
| 2. Ayuntamiento (Gov't Hdqtrs) | 27. Hotel, Luneta. |
| 3. Bank, Phil Nat. | 28. Hotel, Manila. |
| 4. Bilibid Prison. | 29. Library, Philippine. |
| 5. Bridge, Ayala. | 30. Luneta, New. |
| 6. Bridge, Colgante. | 31. Luneta, Old. |
| 7. Bridge, Jones. | 32. Malacañan Palace. |
| 8. Bridge, of Spain. | 33. Marine Railways. |
| 9. Bridge, Sta. Cruz. | 34. Market, Arranque. |
| 10. City Hall. | 35. Market, Divisoria. |
| 11. Club, Army & Navy. | 36. Market, Gagalangin. |
| 12. Club, Elks. | 37. Market, Paco. |
| 13. Club, Filipino. | 38. Market, Quinta. |
| 14. Club, Manila. | 39. Market, S. Lazaro. |
| 15. Club, Nacionalista. | 40. Market, Sta. Mesa. |
| 16. Club, Spanish. | 41. Market, Tondo. |
| 17. C. and G. Survey. | 42. Masonic Temple. |
| 18. Custom House. | 43. Museum, Philippine. |
| 19. Fort Santiago. | 44. Museum, Sto. Tomas. |
| 20. Gas Plant. | 45. Normal School. |
| 21. Hospital, Army. | 46. Observatory. |
| 22. Hospital, Philippine General. | 47. Police Station, Luneta. |
| 23. Hospital, S. Lazaro. | 48. Police Station, Meisic. |
| 24. Hospital, S. J. de Dios. | 49. Post & Tel. Office. |
| 25. Hospital, St. Paul. | 50. Power House, Elec. |
| | 51. Printing, Bureau of |
| | 52. R. R. Station, Main. |
| | 53. R. R. Station, Paco. |
| | 54. Science, Bureau of |
| | 55. Senate, Philippine. |
| | 56. Treasury, Philippine. |
| | 57. University of the Philippines. |
| | 58. Warehouses, U. S. |
| | 59. Warehouses, P. I. |
| | 60. Y. M. C. A. |

CITY OF MANILA

Area (Sq. Km.) 36
 Perimeter (Km.) 26.8
 Temp. { Mean monthly Min. 21.9 C°
 Mean monthly Max. 31.1 C°
 Humidity (average) 79.5%
 Population 283,613



COTABATO.

GEOGRAPHICAL SKETCH.

COTABATO, a term which signifies a "stone fort," is the name of the province occupying the entire southwestern portion of Mindanao. Together with the small island of Bongo, it has an area of about 24,916 square kilometers. The coast is regular with few important indentations; namely, the Polloc Harbor on the northwest, the Linao and Tuna bays on the west, and the Sarangani Bay on the southwest. These indentures are deep, landlocked harbors, and are therefore good for anchorage.

There are big towns near the coasts. Most of them are found along the rivers, especially along the Cotabato River and its tributaries. Cotabato, the capital, is at the mouth of the river, and forms an important shipping center. The Cotabato River system, though not as swift as the Rhine River of Germany, serves the same purpose to Cotabato as the Rhine to Germany, in the sense that it forms the chief means of communication, and transportation for conveying finished products and raw materials from the different towns to the coast.

In general, Cotabato is mountainous, excepting the broad valleys which are drained by the great but sluggish river system. The mountain ranges on the north are low in comparison with those of the west, south, and east. The highest peaks on the western range are Mount Blik (1,226 meters) and Mount Binaca, (1,021 meters); those of the south are Mount Matutum, a recently formed volcano, (2,292 meters), and Mount Latian (1,612 meters). On the eastern border, Mount Magolo (1,450 meters), and Mount Apo (2,929 meters), the highest peak in the Archipelago, are the most important. These mountains are densely wooded with the finest and hardest timber to be found in the Archipelago. With the exception of that small portion around Sarangani Bay, where logging is being carried on, most of the forested area is not yet exploited. The most important forest products, which are at present exported in great quantity, are the candlenut, almaciga, and gutta-percha.

The climate is agreeable. The province receives little rainfall during the northeast monsoons, because the mountains along the eastern border are lofty, thus preventing the rain clouds to pass over them; consequently, only a little shower falls on the Cotabato Valley. But when winds come, the land receives much rainfall, causing the rivers to overflow their banks and renew the fertility of the soil by depositing the sediment which they carry from the mountains to the plains.

The soil recently put under cultivation, is very fertile and productive. It is well fitted to rice cultivation. But because of the scarcity of laborers to cause the soil to produce the greatest yield, only a small area of this great and resourceful plain of Mindanao is under the experimental stage of development.

On the eastern side of the valley are many extensive but shallow swamps, such as the Liguasan and Libungan. Large lakes, as Buluan and Cebu, and many small ones abound. These natural basins yield an immense wealth for the country. On the marshes, mangroves and nipa grow in abundance, while the lakes teem with the rarest and choicest fish.

Sulphur is abundant near and around Mount Apo, an extinct volcano. The difficult ascent and the lack of transportation facilities make exploitation impossible at present. Mineral springs can be found near the town of Cotabato.

The population of the province is very sparse. The Christian people, who emigrated from the different parts of the Philippine Archipelago to exploit this rich valley, built their homes along the river basins and near the bays accessible to commerce. Lumbering and agriculture are the most important industries of these people. The Moros, who inhabit the interior valleys and inaccessible coastal plains, manufacture trays, crises and other implements of warfare from brass imported from Singapore. The Moros possess valuable jewels and ornamental gongs and dishes imported from China during the early days.

This province has 2 municipalities and 218 barrios. Its capital is Cotabato, with 4,105 inhabitants.¹ It is located in the north-western part of the province.

HISTORICAL ACCOUNT.

The term "Mindanao" or "Maguindanao" was originally given to the town now known as Cotabato and its immediate vicinity. The word is derived from the root "danao," which means inundation by a river, lake, or sea. The derivative "Mindanao" means "inundated" or "that which is inundated." "Maguindanao" means "that which has inundated" The "Cotabato" is in Moro, Kuta watu, which means "fort." As the sultan of Maguindanao became more powerful, however, he extended his dominion over the neighboring territory until it included the whole valley of the Rio Grande and the seacoast.

Islam was successfully introduced and firmly established in Mindanao by one man. This same man founded the Sultanate in Maguindanao and reformed the whole system of government among his converts. His full name was Sharif Mohammed Kabungsuwan, and he is believed to have established himself in this region toward the end of the fifteenth century.

García Jofre de Loaisa, who in 1525 led an expedition from Coruña, Spain, reached the coasts of Mindanao, which Urdaneta called Bendanao, in October, 1526. Loaisa entered one of the ports, which, judged from the description, must have been Pollok or some place in Illana Bay, remaining there about ten days.

¹ Non-Christian population, 1,772, not included.

If this is so, Loaisa and Urdaneta were the first Spaniards to visit Cotabato.

The first attempts to conquer the Maguindanao Moros were made by Rodriguez de Figueroa and Pedro de Almonte. Rodriguez de Figueroa in 1596 occupied the town of Tampacan and tried to restrain the Moros from their piratical activities. The people of the region, however, under the leadership of their brave chieftains Malaria, Silongan and Buhisan, attacked the little band of Spaniards. Figueroa was killed and the Spaniards, on the death of their commander, abandoned the place. Forty-three years later, General Almonte, who was then operating in Lanao, penetrated into Cotabato and established a small *presidio* at Buhayen.

These early attempts to bring Cotabato under control were soon abandoned. For a period of over two hundred years, or from 1640 to the middle of the nineteenth century, the Maguindanao Moros, Maranao, were really an independent people recognizing no authority except that of their *datos* or sultan, and obeying no laws but their own.

In June, 1851, Cotabato was again visited by the Government forces. An expeditionary force attacked and occupied Pollok. The Spaniards were not blind to its strategic position and immediately converted it into a naval base. Three years later, Pollok was made a politico-military district dependent on Zamboanga.

The subjugation of Cotabato now started on a more determined policy. The year 1861 saw three campaigns in this region. The first one, which was led by General Salcedo and the then Comandante politico-militar of Mindanao, sailed up the Cotabato River and reached as far as the site of the present town of Cotabato. After some difficulty, the Sultan and his father, Dato Arniról, recognized Spanish authority, the irreconcilables retiring to Pagaluñgan. The second was conducted by Enrique Garcia Carrillo, politico-military governor of Davao, and had for its objective the acquisition of Lake Buluan region. The expedition reached as far as a place called Mailad, where a fort capable of accommodating two hundred soldiers, was built. The third was led by Captain Casto Mendez-Nuñez and Lieutenant Malcampo. This expeditionary force sailed up the Cotabato River and finally succeeded in taking Pagulungan.

In 1862, the military base at Tamantaka was established. Immediately, thereafter, Cotabato was founded. Then other interior towns were occupied and military establishments set up. By 1872, Cotabato was so far more advanced than any other region and was made the temporary capital of the whole Island of Mindanao for a period of three years. At the end of Spanish rule, Cotabato, then the fifth district of Mindanao, was composed of the politico-military comandancia of Pollok and the military districts of Malabang, Reina Regente, Taceran, Babia, Illana, Baras, and Lebac.

Early in 1899, Cotabato was evacuated by the Spaniards. A

native government under Roman Vilo was set up. A rival Moro government, however, was also organized under Dato Piang.

In 1903, when the Moro Province was created, Cotabato became one of its districts. In 1914, civil government was established in the Department of Mindanao and Sulu and Cotabato was organized as one of the provinces of the department.

STATISTICAL DATA.

Approximate area	square kilometers.....	24,916
Area of farms.....	hectares.....	12,563
Cultivated lands	do.....	4,301
Production in 1918:		
Rice	<i>cavans</i> ¹	36,645
Corn	do.....	22,013
Copra	kilos.....	33,610
Abacá	do.....	162,121
Tobacco	do.....	25,000
Population		² 21,391
Number of schools.....		
Primary		4
Intermediate		1
Vocational		3
Enrollment for 1918.....		545
Males	366	
Females	179	
Rate of mortality per 1,000 inhabitants.....		27.6
Number of establishments of household industries.....		
Production in 1918.....		₱11,104.00
Number of manufacturing establishments.....		
Production in 1918.....		₱338,150.08

¹ One *cavan* equals 75 liters.

² Non-Christian population, 147,800, not included.

DAVAO.

GEOGRAPHICAL SKETCH.

DAVAO PROVINCE occupies the southern part of the Agusan Valley, the southern part of the eastern coastal plain, and the coastal plains around Davao Gulf.

The coasts of Davao are much indented and if it were not for the big waves caused by the south and southwest monsoons, there would be many good harbors. The principal anchoring ground is found in the passage between the mainland of Davao and the west coast of the Island of Samal. It is an open roadstead with a depth ranging from 8 to 15 fathoms. Baganga, Garaga, Pujada, Cateel, and Malalag bays also offer safe places for anchorage during certain seasons.

In the Davao Gulf are found the Islands of Samal and Talicud. Sarangani and Balut are other islands south of Point Tinasa.

The land is exceedingly mountainous. The ranges of mountains run in almost all directions, the one along its western boundary being the highest and longest. The most important peaks are Mounts Latian, Magolo, Sinako, Malambo, Apo, Matutum, and Saddle, the last three of which are semi-active volcanoes. Apo is the highest mountain in the Philippines.

Between the mountain ranges are wide fertile valleys through which flow wide, navigable rivers that overflow their banks annually. The most important rivers are Agusan, Davao, Lasang, Libuganon, Cateel, and Mohanook.

The climate along the coasts is wholesome and agreeable. The rainfall is evenly distributed throughout the year. The typhoon belt does not cross this region.

Because of the fertile soil and fine climate, agriculture is much encouraged. Almost all of the arable land of Davao is in the hands of Japanese corporations. A few Christian Filipinos from the Visayan islands and Luzon and a few Moros also own farms. Large abacá plantations have been set out on the plains around Davao Gulf, and, along the shores, thousands of coconut trees have been planted. Abacá fiber and copra are exported. Coffee, cacao, and rice are also raised successfully.

The mountains are covered with forests yielding hard woods which are excellent for building purposes. The slopes are covered with grass that could support thousands of cattle. Coal is found in the mountain near the Mayo River, and sulphur, almost in a pure state, covers the top of Mount Apo. These, together with the agricultural lands and the pearl and fish wealth of the coasts, will undoubtedly make Davao one of the richest provinces in the future.

More than a half of the population are pagans, among whom

are the Mandayas and Bagobos who form the largest tribes. The Bagobos, taken as a group, have many customs in common with the Christian Filipinos. The Mandayas are the most numerous and the most powerful pagan people of Mindanao. Of all the non-Christian tribes in the island, they have the best developed primitive civilization. Their women weave excellent cloth, which is dyed in curious and ornamental patterns, and the men make daggers, spears, and other articles of metal. They also grow corn, mountain rice, and an excellent quality of hemp.

The Bagobos, being fond of horses, raise very good ones. They trade by barter with the Moro and Chinese merchants.

Davao is the capital and principal port of this province.

The province has 7 municipalities and 236 barrios. Its capital, Davao with 13,046 inhabitants,¹ is located in the west central part of the province.

HISTORICAL ACCOUNT.

In 1847, D. José Oyanguren, a native of Vergara, of the Province of Nueva Guipuzcoa, Spain, led a successful expedition to what is now the town of Davao. Two years later, he organized the neighboring regions, together with a strip of territory from the province of Caraga (now Surigao) into a new province. He called this province Nueva Guipuzcoa, in honor of his home province; the capital, which was established in what is now the town of Davao, he called Vergara in honor of his native town. In this province of Nueva Guipuzcoa, the present Province of Davao had its origin.

Parts of Davao were visited by the early Spanish explorers. For example, the Island of Sarangani was visited by Alvaro de Saavedra during the latter part of 1528. Saavedra stopped here for about three days on his way to the Moluccas. The towns of Baganga and Manay on the eastern coast of the province were visited by Villalobos in 1543, and found to be uninhabited. Villalobos also paid a visit to the Island of Sarangani whither he went in search of provisions. The Spanish soldiers under his command planted corn on the island from which they obtained a good harvest.

Up to about the middle of the nineteenth century, Davao was under the jurisdiction of the sultanate of Mindanao. In 1844, however, Governor Figueroa of Zamboanga and Agustin Bocallan, a brigadier in the Spanish army, obtained from the sultan of Mindanao the cession of this vast region to the Spanish government.

The cession of Davao was followed by its conquest by José Oyanguren. Immediately after the cession of Davao, Oyanguren went to visit it. He was so impressed by the possibilities of the region that when he returned to Manila, he proposed to lead an expedition thither for the purpose of bringing the region under Spanish sovereignty, expelling or pacifying the Moros, establishing Christian settlements, and opening up communication with the inhabitants in the interior. Permission was duly granted by Governor Narciso Clavería. Oyanguren became the first

¹ Non-Christian population, 2,144, not included.

governor of the province newly created by him. As then constituted, Nueva Guipuzcoa included the territory bordering on the Gulf of Davao, together with a strip of territory from the old province of Caraga including the towns of Tandag, Tago, Lianga, Mision de San Juan, Bislig, Jinatuan, Cateel, Quinablangan, Dapa, and Baganga.

In 1858, the Province of Nueva Guipuzcoa was abolished as such and in its stead there were created two politico-military *comandancias*: Bislig and Davao. In 1860, these *comandancias* were included in the District of Davao, one of the six districts into which Mindanao was divided. The District of Davao comprised the southeastern territory of Mindanao.

At the end of the Spanish rule, Davao was one of the seven districts of the politico-military government of Mindanao. It was governed by an army officer of the rank of major. Davao then included two politico-military *comandancias*: Mati and Glan. Each was under a captain of the Spanish army.

In 1903, the Moro Province was established. This included the Sulu Archipelago and the whole Island of Mindanao with the exception of Misamis and Surigao. Davao became a district of this province.

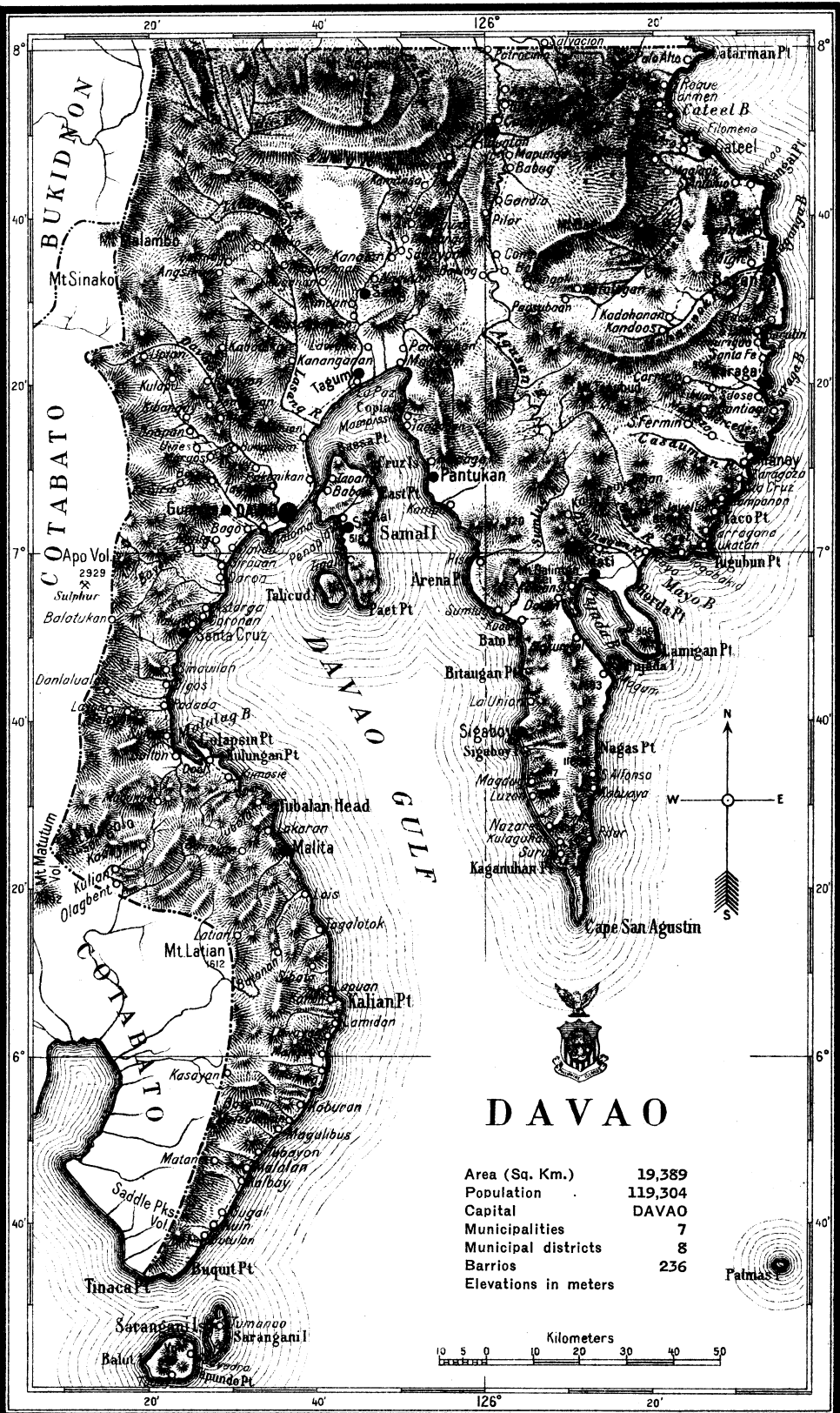
In September, 1914, the Moro Province was abolished and in its stead there was created the Department of Mindanao and Sulu, comprising seven provinces. Davao became one of the provinces of this department, with the capital at Davao.

STATISTICAL DATA.

Approximate area	square kilometers....	19,389
Area of farms.....	hectares....	110,628
Cultivated lands	do.....	34,092
Production in 1918:		
Rice	<i>cavans</i> ¹	80,228
Corn	do.....	7,191
Copra	kilos....	354,074
Abacá	do.....	12,911,323
Tobacco	do.....	28,049
Population		² 66,293
Number of schools.....		
Primary	47	68
Intermediate	2	
Vocational	19	
Enrollment for 1918.....	5,913	
Males	3,880	
Females	2,033	
Rate of mortality per 1,000 inhabitants.....		51.3
Number of establishments of household industries.....		152
Production in 1918.....		77,396.60
Number of manufacturing establishments.....		44
Production in 1918.....		₱385,918.69

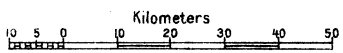
¹ One *cavan* equals 75 liters.

² Non-Christian population, 53,011, not included.



DAVAO

Area (Sq. Km.)	19,389
Population	119,304
Capital	DAVAO
Municipalities	7
Municipal districts	8
Barrios	236
Elevations in meters	



ILOCOS NORTE.

GEOGRAPHICAL SKETCH.

THIS PROVINCE occupies the whole of the coastal plain in the northwestern corner of Luzon. The Cordillera del Norte, which separates it from Abra and Cagayan, extends along the eastern border to the China Sea in the north. Along this range, the highest peaks are Simminublan, Burnay, Sicapco, Licud, Dinawanang, and Quilang.

The coastline is so regular that although there are several ports, such as Gabut, Laoag, Bangui, Diriqui, and Currimao, the last named is the only one which offers any protection from the north winds.

The climate is humid but generally favorable except during the rainy season from May to September when the hurricanes which form in the Pacific sweep across this region to the China Sea. The hottest months are from April to July. The land being open towards the north and west, the people suffer from the effects of the change of the direction of the monsoons.

The land, especially towards the west, is level, sandy along the shore and stony along the rivers. Much soil is washed down from the mountains and as most of that of the plains is clayey, it is, therefore, adapted to the growth of rice. There are no swamp lands. A few lakes are to be found, among which the Nagpartian and the Dacquel á Danum (Paoay Lake) are the largest. The latter has a depth of about 10 meters and is located only about 3 kilometers from the sea. A canal from this lake to the seashore would permit vessels to penetrate inland and would assuredly develop the region commercially.

The mountains are covered with fine timber trees, and resin, honey, and wax are found on their slopes. Between the Cordillera and the coastal plain are low hills which make fine grazing lands. Cattle raising, however, has declined as an important occupation of the people, although it is being revived because of the increasing prices of carabaos and cattle in the neighboring provinces.

A few grottos or caves are found near the mountains of the interior. There are a number of stone quarries. Limestone is found on Mount Calvario, San Nicolas and in Burgos. The beach supplies a great amount of coral for road building. East of Cape Bojeador are manganese and asbestos deposits which are being exploited.

Farming is the most important occupation and rice is the principal product. Corn, beans, peas, tobacco, and cotton are



planted after the rice harvest season. Sugar cane is widely produced, but most of the juice is made into an alcoholic beverage called "basi." The amount of fertile and well drained land is somewhat limited so that the land holdings are small. Fishing is carried on extensively, both in the sea and fresh water.

Commerce in foodstuffs is not great, as the people produce almost everything they need on their small farms, but rice, peas, and beans are exported to Ilocos Sur and Cagayan and tobacco and maguey to Manila. The weaving of textiles is the principal industry among women throughout the province. Paoay specializes in the weaving of towels and figured blankets, Batac in cloth for wearing apparel and plain blankets, and San Nicolas in silk handkerchiefs. Along the coast, salt is produced from the sea water by heating. Mat making and the pottery industry are also well developed.

Laoag, which means "clear" in the dialect of the people, is the name of the capital and the center of commerce. It is situated on the bank of the Laoag River, and through it passes the first-class road which connects all of the coastal towns from San Fernando, La Union, to Pangasinan.

The people residing along the coast and in the plains are Ilocanos. Up in the mountains are a few Tinguianes, Igorots, and Apayaos who venture to come down only to trade their wax, rattan, and honey with the Christians. The Ilocanos are noted for their industry. Not having sufficient land for their activities in Ilocos Norte, they emigrate in large numbers to Nueva Ecija, Tarlac, Pangasinan, Cagayan, and Isabela. Many of them have travelled as far as Mindanao in search of farm lands.

This province has 16 municipalities, 3 rancherias and 361 barrios. Its capital, Laoag, has 38,294 inhabitants. It is located in the west central part of the province.

HISTORICAL ACCOUNT.

At the time of the arrival of the Spaniards there was already a region known as Ilocos, which included the greater part of north-western Luzon. The centers of population seem to have been Laoag and Vigan.

The Spaniards created this region into the Province of Ilocos, with Vigan as the capital, but by a royal decree of 1818, the northern part was separated and erected into a province called Ilocos Norte. To the new province were assigned the following towns: Banguí, Nagpartian, Pasuquin, Bacarra, Vintar, Sarrat, Piddig, Dingras, Laoag, San Nicolas, Batac, Paoay, and Badoc. At the time Ilocos Norte was made a separate province, the towns above mentioned had a population of 135,748.

It is believed that even before the arrival of the Spaniards, the Chinese and Japanese traders were already familiar with the coast towns of Ilocos. Spanish exploration of Ilocos began as early as 1572, when Juan de Salcedo made his famous trip along the Ilocano coast. During this trip, he visited what is now Ilocos

Norte, occupying Laoag, which even then seems to have been the chief center of population of that region. He explored the mouth of the Laoag River and had several encounters with the hostile natives. He also sent a punitive expedition to a town called Bacal, probably the present town of Batac.

The history of Ilocos Norte from the beginning of the Spanish rule to the first decades of the nineteenth century records many important revolts, which may be classified as those that were caused by the "tributes" and forced labor and those that were caused by the monopolies.

The first important revolt caused by the injustices arising out of the collection of tributes by the encomenderos occurred in Dingras in 1589. The next, arising out of the same causes, took place in 1660. This uprising was led by Don Pedro Almasan of San Nicolas, who, influenced by the action of Andres Malong in Pangasinan, proclaimed himself king and his daughter and son-in-law as heirs apparent.

Two revolts of consequence were caused by the monopolies. In 1788, an uprising occurred in Laoag caused by a general discontent over the tobacco monopoly, when, it is said, about 1,000 persons rose up in arms. In 1807, another revolt resulted from the injustices of the wine monopoly. The leaders of this uprising were one Ambaristo and Pedro Mateo. The centers of the movement were Sarrat, Laoag, Batac, and Paoay.

The nineteenth century records no important revolts in the history of Ilocos Norte. On the other hand, the economic progress of the province during this period was well marked. As a result of the operations of the *Real Compañía de Filipinas*, the textile industry was developed on a large scale. The manufacture of indigo was also encouraged in Ilocos Norte as well as in the other Ilocos provinces. Toward the close of the nineteenth century, economic progress was furthered by the abolition of the tobacco monopoly.

Like many other provinces, Ilocos Norte espoused the cause of the Revolution. Gregorio Aglipay of Batac, now the head of the Philippine Independent Church, was among the first to join the ranks of the Revolutionists. The Revolutionary Army under the command of General Manuel Tinio occupied Ilocos Norte as well as the other Ilocano provinces in the name of the Revolutionary Government.

Civil government was established in Ilocos Norte on September 1, 1901.

STATISTICAL DATA.

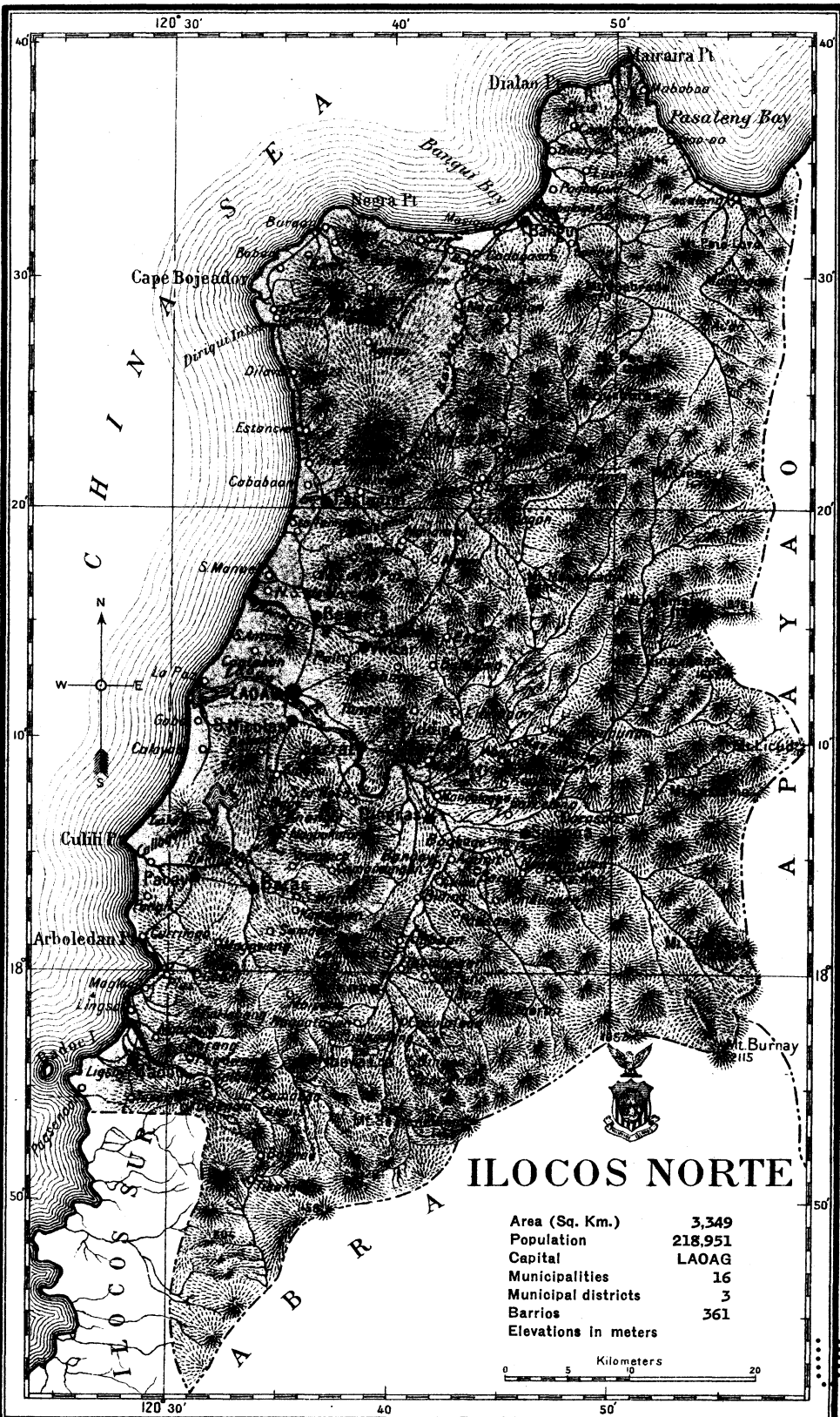
Approximate area	square kilometers....	3,349
Area of farms.....	hectares.....	62,547
Cultivated lands	do.....	44,856
Production in 1918:		
Rice	<i>cavans</i> ¹	1,435,599
Sugar cane	tons.....	82,525
Corn	<i>cavans</i>	127,693
Copra	kilos.....	2,352
Tobacco	do.....	1,623,944

¹ One *cavan* equals 75 liters.

STATISTICAL DATA—continued.

Population		¹ 217,436
Number of schools.....		157
Primary	138	
Intermediate	14	
High school	1	
Vocational	4	
Enrollment for 1918.....	18,584	
Males	11,029	
Females	7,555	
Rate of mortality per 1,000 inhabitants.....		36.5
Number of establishments of household industries.....		1,584
Production in 1918.....		332,975.82
Number of manufacturing establishments.....		27
Production in 1918.....		₱248,055.73

¹ Non-Christian population, 1,515, not included.



ILOCOS NORTE

Area (Sq. Km.)	3,349
Population	218,951
Capital	LAOAG
Municipalities	16
Municipal districts	3
Barrios	361
Elevations in meters	



ILOCOS SUR.

GEOGRAPHICAL SKETCH.

ILOCOS SUR, another typhoon-swept region, is the narrower of the Ilocos provinces. In some parts, the branch of the Cordillera range, that separates it from Abra, runs clear to the coast, which is so reefy that there are very few places that offer safe shelter for vessels. Pandan is the principal port. Although it is sheltered from the north winds, the harbor at Salomague is sought only during a typhoon. A mile to the northwest of Salomague harbor is an island surrounded by a reef which runs southwest and forms with the coast the side of a passage through which boats pass into the harbor. Another island on the coast is Pingit, low, covered by forest, and surrounded by a reef that makes the coast unapproachable.

The mountains are almost bare of timber so that rainfall is scanty and the land sandy in character. The rice produced is not enough for the provincial needs, quantities being imported from Ilocos Norte and Pangasinan. The land is especially adapted to the growth of maguey, a fiber which constitutes the principal export. Sugar is also another article that is exported in quantities. Indigo was once a great source of wealth, but production has greatly declined as a result of the manufacture of cheap aniline dyes in Germany.

There are no metal mines in Ilocos Sur. Narvacan has great deposits of lime carbonate. Formerly, jasper was found in abundance. In Bantay there are quarries of a poor quality of stone, and in the neighborhood there are indications of the existence of copper. There are very few mineral springs. The only one of importance lies two kilometers from Santa María at the foot of Mount Lubung.

The rivers that drain the province, with the exception of the Abra River, are short and swift. Usually the lakes are found along the shore, but those in Santo Domingo and Candon are located far enough inland to add to the fertility of the region.

Because the soil will not support the population, a great many persons have turned to manufacture and trade. These gave rise to industrial specialization in different towns. Those along the coast extract salt from the sea water and export it in great quantities to inland provinces. In San Esteban, there is a quarry of stone from which mortars and grindstones are made. San Vicente, Vigan, and San Ildefonso specialize in woodworking, the first in carved wooden boxes and images and the others in



household furniture. Most of the wood used in these handicrafts is imported from Abra and Cagayan. Bantay is the home of skilled silversmiths. In the other towns saddles, harness, slippers, mats, pottery, and hats are made and exported to some extent. Candon on the coast exports great quantities of coconuts to Ilocos Norte. Sisal and hemp fiber extraction and weaving of cotton cloth are common household industries throughout the province.

Most of the people are Ilocanos but there are also some Tinguianes, Igorots, and Negritos living on the slopes of the Cordillera.

This province has 21 municipalities and 441 barrios. Its capital is Vigan, with 17,764 inhabitants. It is located in the northwestern part of the province.

HISTORICAL ACCOUNT.

Due to the rapid increase of population of the old Province of Ilocos which included all of the Ilocos and part of the mountain country, it was deemed necessary to divide this extensive region into two provinces; namely, Ilocos Norte and Ilocos Sur. The division was made in 1818, pursuant to a real cedula dated February 2 of that year. The capital of the new province was Vigan. As created in 1818, Ilocos Sur included the northern part of what is now La Union as far as the town of Namacpacan, now Luna, and approximately what is now Abra Province. But later these southern and eastern extremities were separated.

The exploration of Ilocos Sur began in 1572, when Juan de Salcedo made his famous expedition into the Ilocano country. It was to this illustrious Spaniard that Ilocos Sur as well as Ilocos Norte owe a good deal of their early prosperity. It should be remembered that Salcedo was the *encomendero* of Vigan and Lieutenant-Governor of Ilocos. He was the founder of the Spanish city of Fernandina which he erected in the heart of the ancient and prosperous Ilocano settlement of Vigan. He was also the moving spirit for the evangelization of the neighboring territory.

In direct contrast to Salcedo's beneficent influence was the terror felt by the natives on the occasion of Limahong's landing in Sinait in 1574. This Chinese pirate, it should be remembered, effected a landing in the above mentioned town for the purpose of plunder while on his way to Manila.

Ilocos Sur embraces within its confines some of the oldest towns of the Philippines. Besides Vigan, several other towns already existed in this region before the close of the sixteenth century; namely, Santa, Narvacan, Bantay, Candon, and Sinait.

Among the several disorders and revolts recorded in the history of Ilocos Sur, two stand out prominently. These uprisings were the Malong rebellion of 1660 and the Silang rebellion of 1763. Malong, who was trying to carve out a kingdom for himself in Pangasinan and the neighboring territory, sent his two able generals, "Count" Gumapos and Jacinto Macasiag to the north to effect the conquest of this region. Gumapos and Ma-

siag, however, proceeded only as far as Vigan, from which place they were recalled by Malong. Diego Silang who led the great rebellion of 1762 dominated the greater part of Ilocos Sur. He fought pitched battles with the Spanish forces at Vigan and abugao and practically succeeded in establishing a government of his own in Ilocos Sur.

The greater portion of the first half of the nineteenth century was a period of economic development in Ilocos Sur as well as in Ilocos Norte. During this time the exploitation of the cotton, tobacco, and indigo industries was greatly encouraged.

The effects of the Revolution were not readily felt in Ilocos Sur. But toward the beginning of the year 1898, anti-government propaganda already existed in Candon, where a sort of revolutionary government had been established shortly before the arrival of the Americans in Manila. Moreover, Don Mariano Acosta later took possession of the government of Ilocos Sur in the name of the Philippine Revolutionary Government.

Civil government was established in Ilocos Sur on September 1, 1901.

STATISTICAL DATA.

Approximate area	square kilometers.....	1,145
Area of farms.....	hectares.....	62,091
Cultivated lands	do.....	53,045
Production in 1918:		
Rice	<i>cavans</i> ¹	711,053
Sugar cane	tons.....	179,202
Corn	<i>cavans</i>	180,597
Copra	kilos.....	394,541
Tobacco	do.....	883,349
Population		² 216,274
Number of schools.....		
Primary	127	
Intermediate	13	
High school	2	
Vocational	4	
Enrollment for 1918.....	18,534	
Males	11,795	
Females	6,739	
Rate of mortality per 1,000 inhabitants.....		31.7
Number of establishments of household industries.....		5,349
Productions in 1918.....		₱1,363,338.15
Number of manufacturing establishments.....		128
Production in 1918.....		₱464,480.57

¹ One *cavan* equals 75 liters.

² Non-Christian population, 1,136, not included.

ILOILO.

GEOGRAPHICAL SKETCH.

ILOILO, one of the three provinces which form the Island of Panay, occupies the entire southern portion of the island. The coast is very irregular, especially in the southeastern part, and is dotted with many small islands, the most important of which is Guimaras, which is separated from the mainland by the Iloilo Strait. The province has an area of 5,284 square kilometers. Iloilo, the capital, is about 258 miles away from Manila. It is located on a narrow arm of the sea, and by its favorable location has become the most important port of western Visayas. Large vessels from China, Japan, Europe, and the United States, put into Iloilo for sugar. The most important market towns are Iloilo, Jaro, Oton, and Pototan.

In general, the land is mountainous, the highest peaks being Mount Baloy, Mount Inaman and Mount Igadalig which form a chain running along the borders of Antique and Iloilo. The climate is milder and cooler than that of the other provinces of western Visayas. The southwest monsoons that bring moisture are usually accompanied by winds of such violence that they paralyze traffic and industry and ruin the crops. On the mountains grow hard woods suitable for shipbuilding and furniture-making, while on the hillsides cacao, hemp and sibucao for dyeing purposes are grown.

The amount of arable land for the growing of sugar cane, rice, corn, tobacco, hemp and other tropical products is about 131,269 hectares, while 148,877 hectares still remain idle. The province ranks third in the production of rice, and although the sugar industry is coming to the fore, the output is still small in comparison with that of Negros because of the lack of centrals. But the future holds better prospects there than in Negros, on account of the well-situated port of Iloilo, the navigable rivers, transportation facilities and the industrious inhabitants of the province. Pasture lands are scarce and cattle raising does not flourish. While the wide level lands produce abundant crops, the mountains, besides furnishing hard wood for heavy construction purposes, are rich in resins and building stone. Gold and natural gas have already been located and exploited, but they are poor in quality and limited in quantity so that there is little possibility of development. Mineral springs are said to exist in Maasin, Tubungan, Janiuay and Nagaba. Not only is the land productive, but also the rivers and adjacent seas.



They teem with fish, and afford the inhabitants an easy means of communication. At present, irrigation projects are intended to bring the arid and idle lands under cultivation, and to make Iloilo the wealthiest province in the Visayan group.

With the exception of a few Americans, Europeans, and Chinese, the people are mostly Visayans, active and industrious. The principal pursuits of the people are farming, weaving jusi, piña, maguey, hemp fiber and silk, lumbering and fishing. In the weaving industry, they resemble the Ilocanos except that here they weave the fine *piña* for *camisas* while in Ilocos they make heavy, durable cotton blankets and towels.

This province has 31 municipalities and 1,310 barrios. Its capital is Iloilo, with 49,808 inhabitants. It is situated in the southwestern part of the province.

HISTORICAL ACCOUNT.

According to tradition, the first ten datos from Borneo (*see* ANTIQUE) to settle Panay Island landed in the neighborhood of the present town of Miagao. These datos, who finally purchased the island from the Negritos, then inhabiting that region, divided Panay into three districts called "sakops." One of the three "sakops" was called Irong-irong, which presumably is the present Province of Iloilo. Irong-irong was placed under the rule of a dato called Paiburong, who became the founder of the first Malay settlements in Iloilo.

The Spaniards began to enter Iloilo as early as the time of Legazpi. In the settlements here they found a people who were in the habit of painting (tattooing) their bodies. Among the largest of these early settlements was Ogton, more generally called Oton at a later time. Janiuay, Dumangas, and Tigbantuan were also old centers of population.

Immediately following their entrance into this region, the Spaniards established themselves at Oton; but it was not till the time of Governor Ronquillo (1580-1583) who founded the *villa* of Arevalo that Spanish power really made itself felt. This *villa* appeared to have immediately superseded Oton in importance and became the capital of the *alcaldia*, the jurisdiction of which included practically all of the Island of Panay and a great part of the Island of Negros. Iloilo, now the provincial capital, did not gain its present position till the year 1688.

Iloilo, like Antique and Cebu, suffered greatly from the raids of the Moros and the Dutch toward the end of the sixteenth century and in the beginning of the seventeenth. Forts were established at Oton, Arevalo and Iloilo, but the pirates of the high seas continued their periodic visits, and even extended their activities further north.

During the eighteenth century, the Province of Iloilo lost a good deal of her territory, as a result of the creation of Capiz in 1716 and of Antique in 1798. Her jurisdiction over a part of the Island of Negros also ceased in 1798.

The nineteenth century was a period of prosperity in the history of Iloilo. The population of the province reveals a steady



increase. The province in 1818 had only a population of 176,901 souls; these figures rose to 277,571 in 1845 and to 348,371 in 1870. This prosperity of the province was greatly enhanced as a result of the opening of the port of Iloilo to foreign trade in 1855.

At the end of Spanish rule, Iloilo was a politico-military province like the rest of the Visayan provinces.

Iloilo was evacuated by the Spaniards late in 1898. But several months before this event, the revolutionists were already active in this province. Subsequent to the evacuation of Iloilo by the Spaniards, the province came under the control of the Revolutionary Government. The prominent revolutionary leaders were Martin Delgado and Pablo Araneta, the former serving for a while as military and civil commander.

Civil government was established in Iloilo on April 11, 1901.

STATISTICAL DATA.

Approximate area.....	square kilometers....	5,284
Area of farms	hectares.....	280,146
Cultivated lands.....	do.....	131,269
Production in 1918:		
Rice	cavans ¹	2,248,264
Sugar cane.....	tons.....	31,453
Corn	cavans.....	76,087
Copra	kilos.....	2,053,720
Abacá	do.....	3,648,892
Tobacco	do.....	1,394,146
Population		² 501,862
Number of schools.....		346
Primary	299	
Intermediate	35	
High school.....	6	
Collegiate	2	
Vocational	4	
Enrollment for 1918.....	44,910	
Males	25,830	
Females	19,080	
Rate of mortality per 1,000 inhabitants.....		40.1
Number of establishments of household industries.....		14,144
Production in 1918.....		₱4,221,893.81
Number of manufacturing establishments		150
Production in 1918.....		₱3,021,578.18

¹ One *cavan* equals 75 liters.

² Non-Christian population, 6,410, not included.



ISABELA.

GEOGRAPHICAL SKETCH.

This chief tobacco province of the Philippines occupies the upper part of the Cagayan Valley. Along the eastern coast runs the Sierra Madre which ends at Escaparda Point in Cagayan. The southern part is traversed by the branches of the Caraballo Mountains while to the west lie the foot hills of the range that traverse Ifugao, Bontoc, and Kalinga. The land is well-drained by the Cagayan River and its two most important tributaries, the Magat and the Abuluan. The rivers are the principal means of communication and transportation. All articles of commerce are transported on the Cagayan River from and to Aparri at its mouth. Trade with the people of Ifugao, Bontoc, and Kalinga is carried on through the rivers.

The climate is healthful and is very favorable to the growth of tobacco. The northeast monsoons bring heavy rains which wash down the fertile mountain soil and find their way into the rivers that deposit the silt all along the plains. Every year, the tobacco fields are fertilized in this manner. Corn is another important crop, much of it being used as a staple food, although much rice is important from northern Cagayan.

The province possesses vast resources. The forests of the Caraballo and Sierra Madre are scarcely touched because of the lack of transportation. There are extensive tobacco lands available for homesteading or which can be leased very cheaply from the Government. The grasslands of the slopes offer great possibilities for cattle industry. Much fish is caught in the rivers and game abounds on the grassy plains and in the forests.

There are very few towns and, save Palanan, they are all located along the Cagayan, Magat and Abuluan Rivers. Palanan Bay on the east is exposed to the weather and the anchorage is reefy. The town is separated from the rest of the province by great mountains which make communication and travel difficult and dangerous. Ilagan, the capital, lies at the junction of the Cagayan and the Abuluan Rivers. The people are principally Ibanags, but on the plains there are also to be found many Ilocano settlers and traders. The Sierra Madre Mountains are peopled by Catalanganes, Ilongotes, Bunganases, and Mayoyaos. Isabela is much larger than Cagayan but it has only one-half as many people. Better transportation facilities and government encouragement would assuredly result in increased immigration, settlers and laborers being the chief need of Isabela.

This province has 13 municipalities and 249 barrios. Its capital is Ilagan, with 23,259 inhabitants.¹ It is located in the north central part of the province.

HISTORICAL ACCOUNT.

The Province of Isabela was created, with Ilagan as its capital, in May, 1856, out of territories belonging to Cagayan and Nueva Vizcaya. To form the new province, the towns of Cabagan and Tumauni, together with a few *rancherías*, were taken from Cagayan; and the towns of Ilagan, Gamu, Angadanan, Camarag (now Echague), Carig, and Palanan were detached from Nueva Vizcaya for the purpose. From this newly created province, the military *comandancia* of Saltan, which had hitherto belonged to Nueva Vizcaya, was made dependent.

Prior to this reorganization, there already existed, in what is now Isabela, centers of population. Some of these settlements like Camarag, Angadanan, and Nagali, have disappeared and new towns have taken their places. When the missionaries arrived, they chose some of these old settlements as centers of missionary activity. For example, the old town of Cabagan, which later was called San Pablo, was for a long time the headquarters of missionary propaganda. Moreover, P. Pedro Jimenez, as early as 1677, carried his religious movement in the regions of Gamu, Ilagan and Itugud.

Like many other provinces, Isabela was the scene of important uprisings. In 1763, for example, stirred by the influence of the Silang Rebellion in Ilocos, the people of Isabela revolted, led on by Dabo and Juan Morayac. The centers of rebellion were Ilagan and Cabagan. Again in 1785, another revolt broke out. This time the rebellion was led by Labutao and Baladon. The rebellion was caused by the grievances of the people against the collection of tribute and the enforcement of the tobacco monopoly.

Unlike many other provinces, Isabela was not readily affected by the revolution on account of its isolation. It was not until late in 1898 that the province came under the control of the revolutionists, when Colonel Daniel Tirona occupied the north-eastern provinces of Luzon.

A historical spot of Isabela is the little town of Palanan near the Pacific Coast. It was here that General Emilio Aguinaldo maintained his headquarters until his capture in March, 1901.

Civil government was established in Isabela on August 23, 1901.

STATISTICAL DATA.

Approximate area.....	square kilometers....	10,495
Area of farms.....	hectares.....	48,360
Cultivated lands	do.....	22,523
Production in 1918:		
Rice	<i>cavans</i> ²	20,395
Sugar cane.....	tons.....	1,014
Corn	<i>cavans</i>	667,143
Copra	kilos.....	778
Tobacco	do.....	11,373,917

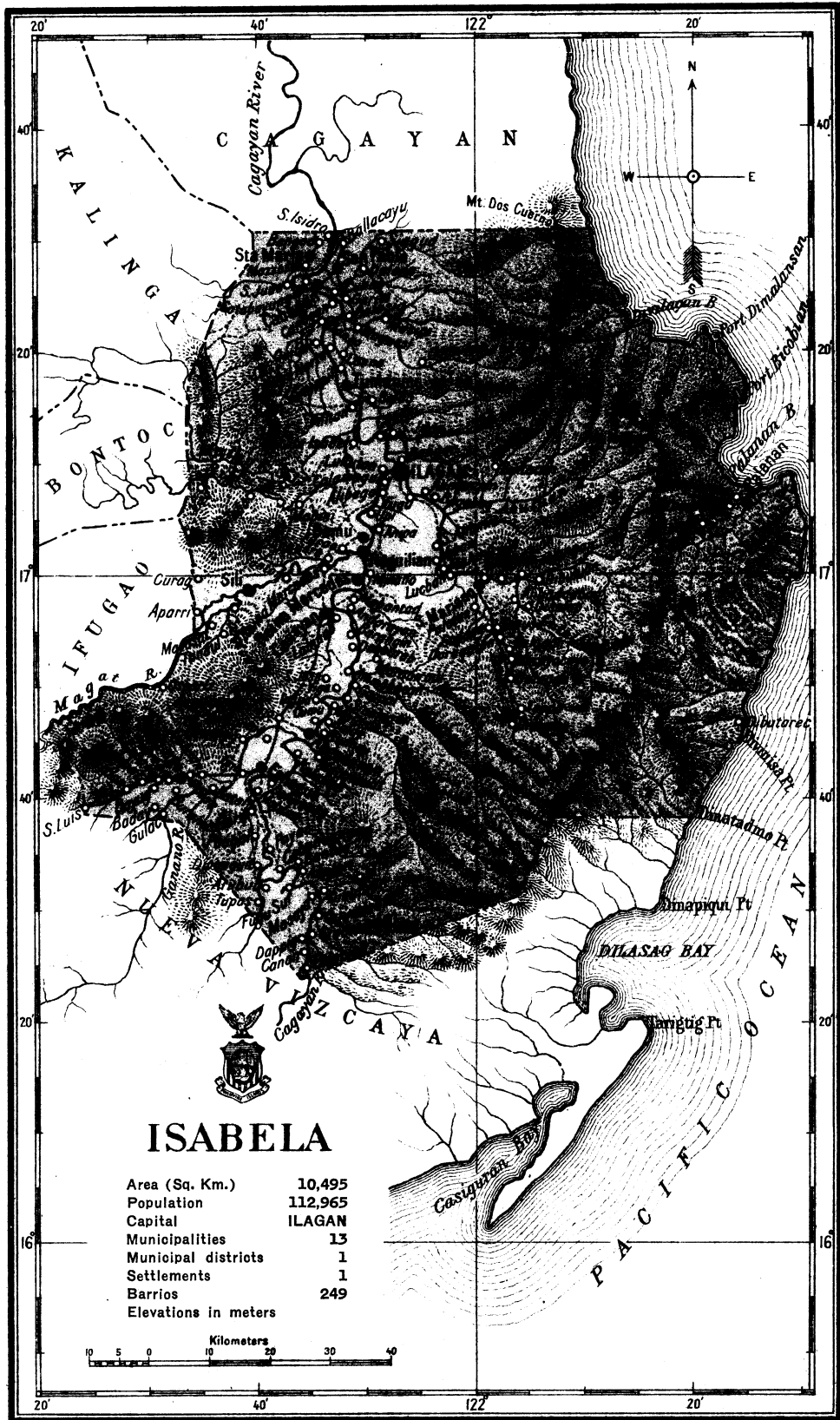
¹ Non-Christian population, 171, not included.

² One *cavan* equals 75 liters.

STATISTICAL DATA—continued.

Population		¹ 109,082
Number of schools.....		84
Primary	79	
Intermediate	3	
High school.....	1	
Vocational	1	
Enrollment for 1918.....		9,932
Males	5,945	
Females	3,987	
Rate of mortality per 1,000 inhabitants.....		41.1
Number of establishments of household industries.....		438
Production in 1918.....		₱98,154.96
Number of manufacturing establishments.....		20
Production in 1918.....		₱78,621.00

¹ Non-Christian population, 3,883, not included.



ISABELA

Area (Sq. Km.)	10,495
Population	112,965
Capital	ILAGAN
Municipalities	13
Municipal districts	1
Settlements	1
Barrios	249
Elevations in meters	



LAGUNA.

GEOGRAPHICAL SKETCH.

THE PROVINCE OF LAGUNA is situated on a narrow plain which lies to the east, south, and southwest of Laguna de Bay. It is separated by ranges of mountains from the Provinces of Tayabas, Batangas, and Cavite. The fertile mountain slopes varying in width from 2 to 20 miles and in altitude from 100 to 7,000 feet, furnish ideal conditions for the cultivation of coconuts, rice, sugar cane, abacá, corn, and a great variety of fruits and vegetables, all of which find a ready market in Manila.

The climate is very pleasant, the usual temperature being several degrees cooler than that of Manila. The rainy season lasts for a longer time than in other provinces because of the dense vegetation. Being protected by mountain ranges, of which the most important peaks are Maquiling, Malepunyor, San Cristobal, and Banahao, typhoons are less violent than in the more exposed provinces.

Concentration of industries is well marked in Laguna. Some of the largest kind of hempen cables are made in the rope factory at Santa Cruz. Buntal hats and pandan mats are made in Majayjay and Luisiana, pandan hats in Cavinti, Sabutan hats in Mavitac, rattan chairs in Paquil and Los Baños, wooden slippers in Biñan and Calamba and abacá slippers in Lilio. Furniture is also made in Paete, soap in Santa Cruz, crude pottery in Lumban, better grade of glazed pottery in San Pedro Tunasan, coconut wine in the upper towns, and embroidery in Lumban. Mineral waters are bottled in Los Baños, Pagsanjan, and Magdalena. A steam saw mill is located in Santa María. In Los Baños is a stone quarry that supplies crushed stone for the Provinces of Bulacan, Rizal, Cavite, Batangas, and Tayabas.

The province, besides having a rich soil, has an abundance of water supply. The Laguna de Bay, the largest lake in the Philippines, permits of easy and cheap transportation. Fifteen of the 28 municipalities are reached by water and a line of steam launches provides a daily service between the lake and port of Manila. The lake abounds in fish. The swamps along its eastern shores are overgrown with pandan groves. The bay is covered during the rainy season with the pink-flowered lotus plant. Along the low shores are veritable hunting grounds which abound in snipe and wild ducks.

In picturesque scenery, Laguna is unequalled. The Pagsanjan gorge is considered one of the beauty spots of the world. Between Majayjay and Luisiana, the turbulent Botocan River

takes a 200-foot plunge over a precipice, forming the largest waterfall in the Islands. In the San Pablo Valley, there are nine beautifully set crater lakes. Banahao, a mountain having an elevation of 7,382 feet is covered with vegetation of all kinds. In the crater of San Cristobal at an elevation of about 5,000 feet is a beautiful fresh water lake. Though rather difficult of access at present, it promises to become the summer resort of south central Luzon. The mineral springs in Pansol and Los Baños well repay a visit. Los Baños is the seat of the College of Agriculture of the University of the Philippines.

The people are mostly Tagalogs, there being a considerable admixture of Chinese blood in certain localities.

Santa Cruz is the capital, and has 14,151 inhabitants. It is located in the northeastern part of the province.

This province has 28 municipalities and 581 barrios.

HISTORICAL ACCOUNT.

The region around the Laguna de Bay was one of the earliest to be visited by the Spaniards in Luzon. In 1571, Juan de Salcedo, in answer to a challenge made by the natives of Cainta (now belonging to Rizal), led an expedition against that town, attacked its forts and forced the people to surrender. The submission of Cainta having been received, Salcedo next took the neighboring town of Taytay. Thence he led his victorious army along the southern coast of the bay, exploring the neighborhood as he went and finally struck out for the gold mines of Paracale. Among the interior towns he visited in Laguna were Nagcarlan, Lilio and Majayjay, at which points he encountered determined resistance from the natives.

Laguna at this early date was already fairly well populated. Among the early towns, besides Nagcarlan, Lilio, and Majayjay, were Bay, Pila, and Pañgil. The great center of population at that time seems to have been the town of Bay, which was the capital of the province till 1688 when the seat of government was moved to Pagsanjan. Santa Cruz, the present capital, did not achieve its present position until 1858.

In 1639, some of the towns along the southwestern coast of the bay became involved in a large Chinese rebellion which spread as far as Manila. The uprising began in Calamba and quickly spread to the neighboring towns. The revolt was not suppressed until after about 20,000 Chinese lost their lives and property amounting to seven million pesos was destroyed.

Serious disturbances again occurred in the western part of the province in 1763 when a British army under the command of Backhouse invaded this region in search of the treasure of the galleon "Philippino." Backhouse plundered the towns but made no attempts to hold them.

Two events of importance in the history of Laguna took place in the nineteenth century.

The first of this was the revolt of the Cofradía in 1840. This movement, which was led by Apolinario de la Cruz, had its center in Tayabas, but it quickly spread to certain towns in Laguna

like Majayjay, Bay and Biñan. In fact, Bay was for a while the center of the disturbance.

The second event was the agrarian dispute in Calamba, the native town of Dr. José Rizal, in which the family of the hero became involved. This particular disturbance is worthy of note because of the extreme cruelty exercised by the Government in the ejection of the tenants.

A number of changes took place in the boundaries of the province between 1853 and 1883. Laguna, or Bay, as it was sometimes called, from the time of its creation till 1853 was bounded as follows: on the north, Manila and Nueva Ecija; on the east, the Pacific Ocean; on the south, Tayabas and Batangas; and on the west, Cavite. But in 1853, when the district of Morong was created, Laguna lost to the newly created district the greater part of its territory north of the bay including the towns of Agono, Binangonan, Morong, Baras, Tanay, Pililla, and Jalajala. To make up for this loss, however, she acquired from Nueva Ecija the district of Infanta in 1858, and from Batangas the town of San Pablo in 1883.

Laguna was one of the first provinces to raise the standard of revolt. During the early months of the Revolution the military leaders used to meet secretly in the underground cemetery at Nagcarlan. When the Revolutionary Government was established, Escolastico Salandanan became the governor of the province.

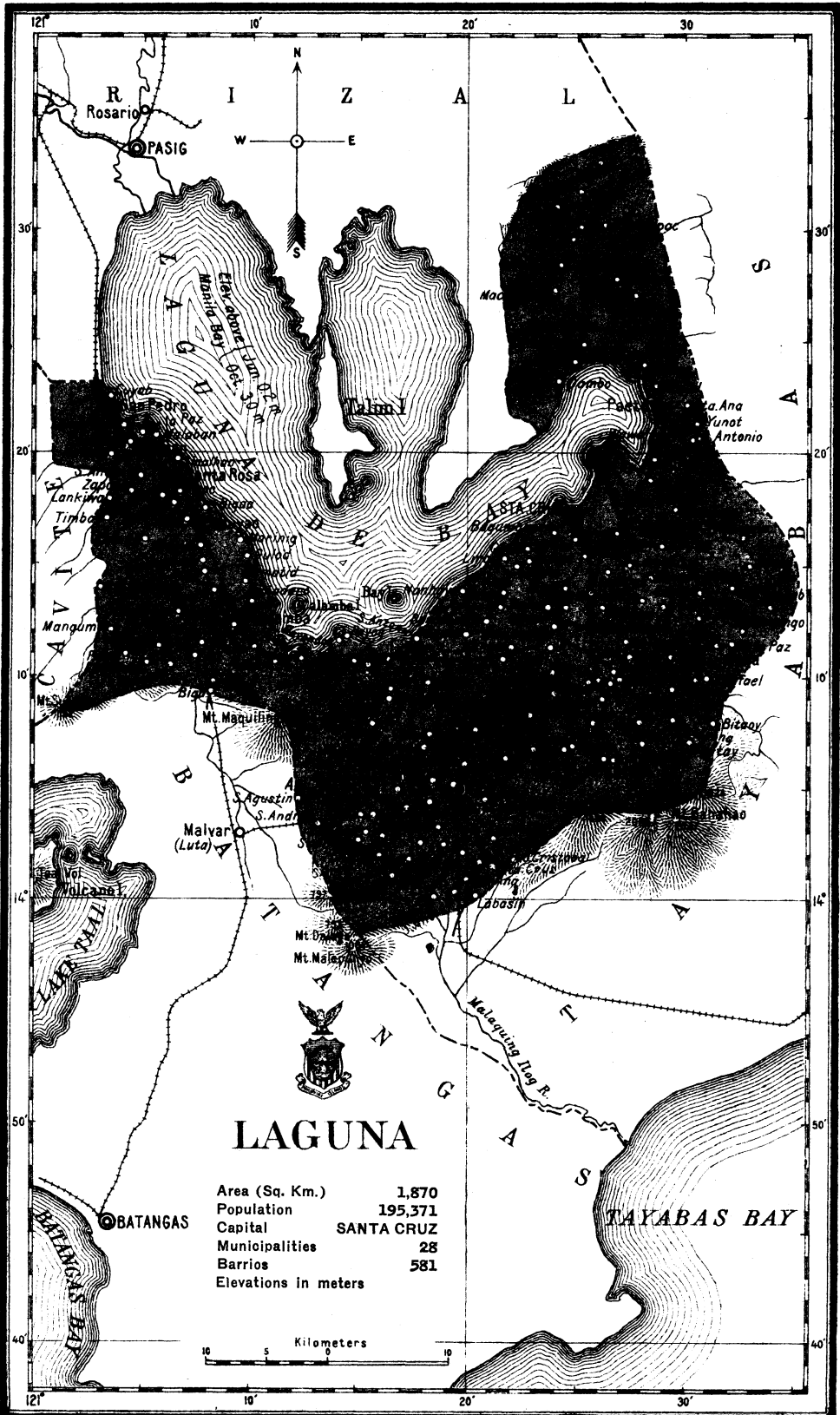
Civil government was organized in Laguna on July 1, 1902.

STATISTICAL DATA.

Approximate area.....	square kilometers.....	1,870	×
Area of farms	hectares.....	97,178	×
Cultivated lands	do.....	65,695	✓
Production in 1918:			
Rice	<i>cavans</i> ¹	832,164	
Sugar cane.....	tons.....	295,426	
Corn	<i>cavans</i>	24,229	
Copra	kilos.....	31,809,313	
Tobacco	do.....	4,550	
Population		² 195,213	✓
Number of schools.....			
Primary		178	
Intermediate		19	
High school.....		1	
Vocational		12	
Enrollment for 1918.....		22,419	
Males	12,996		
Females	9,423		
Rate of mortality per 1,000 inhabitants.....		59.7	
Number of establishments of household industries.....		3,029	
Production in 1918.....		₱833,718.67	
Number of manufacturing establishments.....		459	
Production in 1918.....		₱2,940,848.68	

¹ One *cavan* equals 75 liters.

² Non-Christian population, 158, not included.



Rosario
PASIG

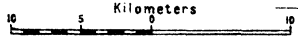
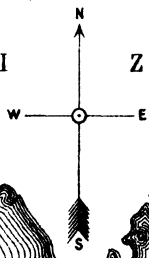
LAGUNA

Area (Sq. Km.) 1,870
 Population 195,371
 Capital SANTA CRUZ
 Municipalities 28
 Barrios 581
 Elevations in meters

Kilometers

TAYABAS BAY

BATANGAS



LANAO.

GEOGRAPHICAL SKETCH.

LANAO PROVINCE occupies the plateau region around Lake Lanao and extends to Iligan Bay on the north and to Illana Bay on the south. Iligan Bay, which is separated from Illana Bay by an isthmus about 13 miles wide, is well protected against the winds, hence, the presence of the two good ports of Kalambugan and Iligan.

A line drawn across Lake Lanao in a southwesterly direction divides the province into two geographical areas: First, the exceedingly mountainous northwestern region that slopes from the ranges along the lake to the Pangil and Iligan Bays, and, second, the southeastern portion, having an older topography, which gradually slopes from the highlands on the northern border of Cotabato to the lake. The most important rivers of the former region are the Liangan, Agus and Bayug. All of these empty into Iligan Bay. Along the shores of Pangil Bay are extensive mangrove and nipa swamps. The road from Dansalan, the capital, to Iligan runs along the Agus River. The rivers of the southeastern region, of which Malaig and Putian are the most important, empty into Lake Lanao. There are many waterfalls in this province which could be utilized as sources of power.

Lake Lanao is believed to have been formed as a result of the subsidence of the land accompanying the eruption of volcanoes in the surrounding country. The smaller lakes in the same region are crater lakes. Mounts Makaturing, Lulukan, and Ragang are active volcanoes.

The climate, especially around Lake Lanao, is very cool. Many of the people living on the lowlands of Mindanao go to Dansalan and spend the hot season there. This place can be converted into a fine summer resort like Baguio.

Rice and corn are raised only for local consumption. Coffee and abacá are planted to some extent. In some parts of the province, the soil is well adapted to sweet potatoes and peanuts. The climate is favorable to the cultivation of many crops of the temperate zone.

Fishing is an important industry both in the lake region and along the coasts. The Moros of Lanao make mats of *tikug* and send them to Iligan for sale. At some places of the lake shore, articles of brass are made. This brass work is different from that of the Moros in the Cotabato Valley. Lumbering is also an industry, and an excellent grade of lumber is exported from the northern coast.

The population is composed of Moros who occupy the eastern shore of Lake Lanao, and of Visayans who live in the coast towns. In this province there are no primitive pagans.

Dansalan is its capital, with 5,988 inhabitants. It is located in the northeastern part of the province.

This province has 3 municipalities, 35 municipal districts, and 283 barrios.

HISTORICAL ACCOUNT.

The first attempt made by the Spanish Government to bring the territory now known as Lanao under its control took place during the administration of Governor-General Hurtado de Corcuera. In 1637, Corcuera himself led an expedition against Sultan Corralat. He arrived in Zamboanga in February, 1637, and from there proceeded to Corralat's stronghold at Lancitan, which appeared to have been located on the coast of Lanao, though there is no town of this name at present in this region. The Moro stronghold was defended by some 2,000 warriors, but it was finally taken, the Spaniards capturing "about thirty-five cannons and *lantakas* and more than one hundred muskets and *arquebuses*." Two years later this attempt was followed by a decisive campaign into the interior led by General Pedro de Almonte, with the coöperation of Alcalde Mayor Francisco de Atienza of Caraga.

Spanish power, however, was really never established in Lanao. After Corcuera's rule, the Maranaos were left much to themselves. They remained practically an independent people, constituting several Mohammedan states, almost to the end of Spanish rule.

Beginning from the administration of Governor-General Weyler, a series of campaigns was started to bring the Lanao region under Government control. In 1891, Government forces occupied Malabang and other towns along the south coast. Despujols continued the campaigns, but it was left for Governor-General Blanco to establish Spanish power in this region. The governor landed in 1894 in Iligan with a force of 3,000 men under the immediate command of General Parrado and succeeded in taking, among other Moro cottas, the stronghold at Marahui, reputed to be the strongest of the kind in Lanao.

In 1895, in pursuance to a gubernatorial decree dated at Marahui on October 8 of that year, Lanao was organized into a district with a politico-military government. It became the seventh district of Mindanao and Sulu.

In 1896, a few members of a batallion of *disciplinarios* rebelled in Iligan, then a part of Misamis. This uprising was really a phase of the Philippine Revolution. Aside from the killing of some Spanish officers, this event had no serious results.

In 1903, the Moro Province was established with Lanao as one of its districts. In 1914, civil government was established in the Department of Mindanao and Sulu, and Lanao became one of the seven provinces of the department.

STATISTICAL DATA.

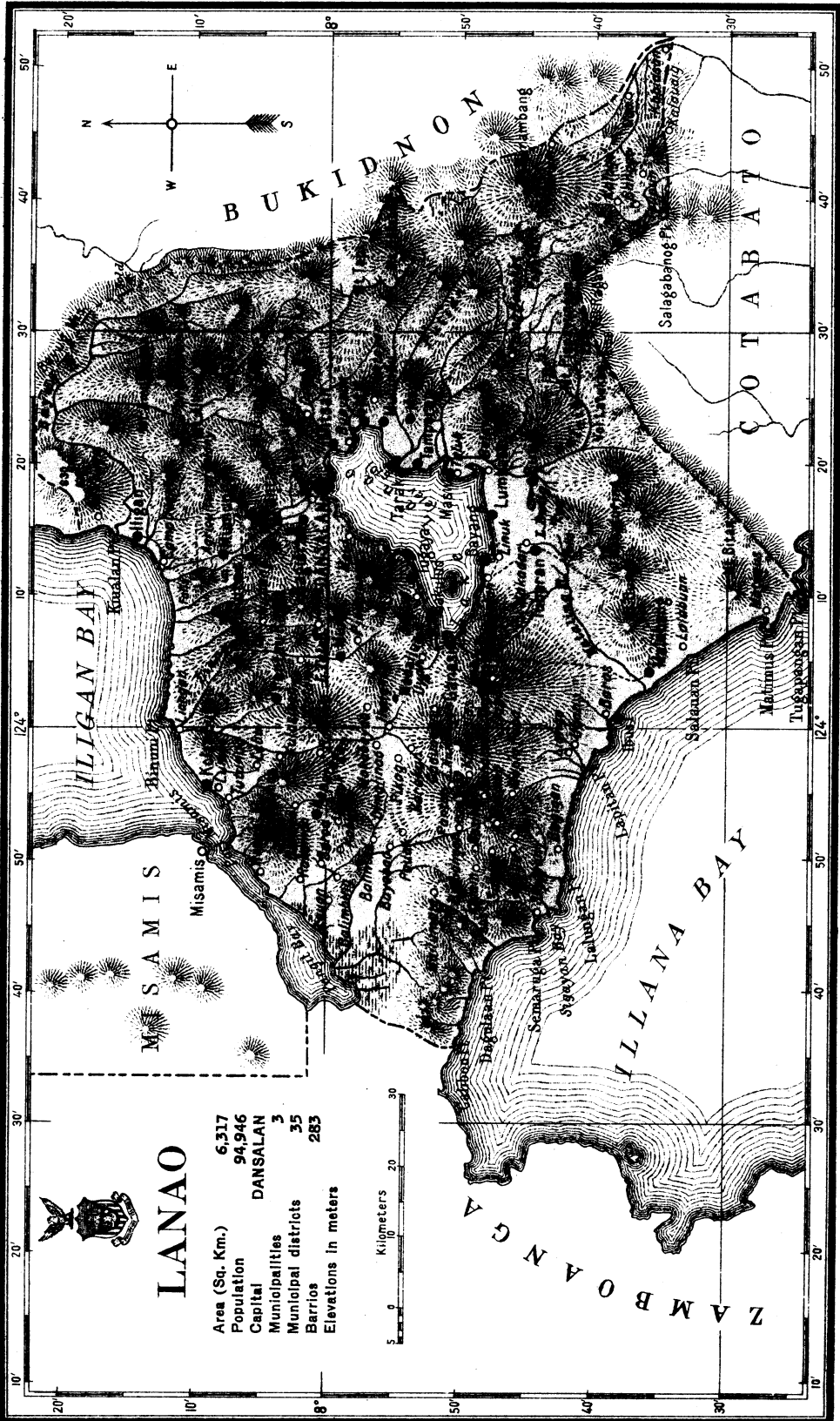
Approximate area.....	square kilometers.....	6,317
Area of farms.....	hectares.....	3,980
Cultivated lands.....	do.....	1,628
Production in 1918:		
Rice	<i>cavans</i> ¹	12,817
Sugar cane.....	tons.....	3,217
Corn	<i>cavans</i>	8,159
Copra	kilos.....	217,959
Abacá	do.....	100,524
Tobacco	do.....	500
Population		² 12,230
Number of schools.....		12
Primary	10	
Intermediate	1	
Vocational	1	
Enrollment for 1918.....	1,253	
Males	757	
Females	496	
Rate of mortality per 1,000 inhabitants.....		33.3
Number of establishments of household industries.....		49
Production in 1918.....		₱16,363.81
Number of manufacturing establishments.....		10
Production in 1918.....		₱493,957.27

¹ One *cavan* equals 75 liters.² Non-Christian population, 82,716, not included.



LANAO

Area (Sq. Km.) 6,317
 Population 94,946
 Capital DAVALLAN
 Municipalities 3
 Municipal districts 35
 Barrios 283
 Elevations in meters



LA UNION.

GEOGRAPHICAL SKETCH.

With the exception of Abra, La Union is the most mountainous of the Ilocano provinces. It is only near the coast and where wide plains are found. Whatever arable lowland there is elsewhere is found along the river valleys. The rivers are numerous, short, and swift, and lakes are found near the coast.

The mountains cover an area of about 168,414 hectares. They are not thickly forested and wood for construction is now scarce because of the excessive cutting of timber. Aside from salt, lime, and pottery clay, La Union has no mineral wealth. At the foot of Mount Bayabas is a hot salt spring.

The people and agricultural products of this province are similar to those of the provinces to the north. La Union is not, however, so much affected by the typhoons. Tobacco, rice, sisal hemp, sugar, coconuts, corn, and cotton form the most important products. Although the land is near the coast, the rivers fertilize the plains with silt, so that La Union ranks third in tobacco production. Sisal, sugar, and coconuts are important exports. Rice is imported.

Very little cotton is produced, yet weaving is an important industry. Cotton cloth is exported to Manila, and to the mountain people. Vegetables, chickens, and eggs are exported to Baguio. Much fish is caught along the shores and salted and dried. It is shipped to the inland towns. The making of baskets, mats, ropes, native hats, lace, and embroidery are as yet only household industries. The raising of bananas for their sheaths which, when dried, are used for wrapping purposes, is also an industry that might be profitably developed. Caba, one of the smallest towns, receives annually about ₱20,000 for its "alupasi," the local name for the dried banana sheaths. The making of articles of adornment out of shells is another household industry still in its infancy which had its origin in the little town of Santo Tomas. Pottery clay is found practically in every municipality. Salt and lime are made in all the towns of the coast.

Darigayos, San Fernando, Pandan, Taboc, and Santo Tomas are ports that offer fine anchorage; of these San Fernando, the capital, has the best harbor. Steamers that ply between Aparri and Manila usually stop here for tobacco. The Manila-North Road that passes through almost all of the coastal towns meets the Manila-North Railroad at Bauang. These two afford easy means of transportation and help to foster commerce along the lines of route.

The population is industrious and is composed mostly of Ilocanos, but there are a few Pangasinanes in the southern part. In the eastern mountains, there is to be found a number of Igorots.

San Fernando is the capital, with 19,885 inhabitants. It is located on the northwestern part of the province.

This province has 14 municipalities and 354 barrios.

HISTORICAL ACCOUNT.

THE PROVINCE OF LA UNION was created in 1854 out of towns which had heretofore belonged to the Provinces of Ilocos Sur and Pangasinan. Ilocos Sur, previous to this time, extended as far as Namacpacan (Luna). All the territory south of Namacpacan belonged to Pangasinan. It was the union of portions of Ilocos Sur and Pangasinan that gave the new province its name. As constituted, the new province included the following towns: Bangar, Namacpacan (now Luna), Purao (now Balaoan), Balatao, which then included the present towns of Bacnotan and San Juan, San Fernando, Bauang, Naguilian, Aringay, Agoo, and Santo Tomas.

The region now belonging to La Union was explored by Juan de Salcedo in 1572. P. San Agustin records that the first town touched by Salcedo was "Atuley." No such town exists at present, but undoubtedly it must have been in what is now La Union. Another town visited by Salcedo was that of Purao, now Balaoan. In these towns Salcedo met with vigorous opposition on the part of the natives, especially in the inland town of Purao.

Although La Union was not created until after the middle of the nineteenth century, nevertheless it includes within its boundaries some of the oldest towns in the Archipelago. Among these are the former town of Purao (now Balaoan), Bauang, and Agoo.

An important event in the early history of La Union was the attempt of Malong in 1661 to make this region a part of his kingdom. It should be remembered that Malong sent an army of 3,000 men under the command of Gumapos and Makasiag to subjugate the Ilocano country. This army encountered the Government forces sent to oppose it at the town of Agoo and sent them down to an overwhelming defeat. Then it triumphantly made its way through La Union up to Vigan.

According to the *Guia Oficial* (1898), the population of La Union at the end of the Spanish rule was about 116,000. According to Cavada, the population of the same province about 1876 was in the neighborhood of 8,500. This marvelous increase of population in about a generation was due to the influx of Ilocano immigrants from the north.

The effects of the Revolution were felt in La Union from the beginning. The Government arrested a few individuals who were looked upon as "dangerous." Later, General Manuel Tinio entered La Union. The province came under the control of the Revolutionary Government and Lucino Almeida acted as governor.

Civil government was established in La Union on August 15, 1901. Since that time nothing of importance has taken place in the history of La Union, except the adjudication to the Sub-province of Amburayan of a narrow strip of territory inhabited by Igorots, along the eastern boundary of the province.

STATISTICAL DATA.

Approximate area.....	square kilometers.....	907
Area of farms.....	hectares.....	65,933
Cultivated lands.....	do.....	45,708
Production in 1918:		
Rice.....	<i>cavans</i> ¹	850,728
Sugar cane.....	tons.....	41,022
Corn.....	<i>cavans</i>	43,759
Copra.....	kilos.....	223,889
Tobacco.....	do.....	9,406,768
Population.....		160,575
Number of schools.....		97
Primary.....	78	
Intermediate.....	17	
High school.....	1	
Vocational.....	1	
Enrollment for 1918.....	16,726	
Males.....	10,848	
Females.....	5,878	
Rate of mortality per 1,000 inhabitants.....		35.9
Number of establishments of household industries.....		820
Production in 1918.....		₱182,253.82
Number of manufacturing establishments.....		4
Production in 1918.....		₱10,995.00

¹ One *cavan* equals 75 liters.

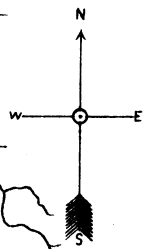
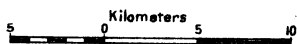
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LA UNION

Area (Sq. Km.) 907
 Population 160,575
 Capital SAN FERNANDO
 Municipalities 14
 Barrios 354
 Elevations in meters



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C H I N A

LINGAYEN GULF

PANGASINAN

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Tagudin

Mindanao
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Paradise
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Darigayos

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LEYTE.

GEOGRAPHICAL SKETCH.

LEYTE is one of the largest and most fertile islands in the eastern Visayan group. The province of that name embraces the Islands of Leyte, Maripipi, Biliran. Guiguintangan, Panaon, Limasawa (five wives), and several other small adjacent ones. The Island of Leyte is situated southwest of Samar and is separated from it by the San Juanico Strait, which is said to be one of the most beautiful waterways in the world, but dangerous because of its swift current. The province covers an area of 7,783 square kilometers, but only a small portion of the land available for cultivation is as yet under tillage, because of the unfavorable topography of the country, the scarcity of labor, and the lack of capital necessary for the development of idle lands and for the opening of roads through the forests and remote valleys. The coast is much indented, especially at Carigara Bay on the north, Sogod Bay on the south, Leyte Gulf on the east, and Ormoc Bay on the west.

Tacloban, the capital, is the most important seaport on the eastern coast, while Ormoc is the outlet on the western part.

Like Samar and other Visayan islands, Leyte is traversed by many low mountain ranges. The ridge which extends from the northwestern part of the province to its southeastern extremity is very rugged and almost impassable. There are also many extinct volcanoes of which Mahagrao is the most important.

The climate is agreeable and healthful. Due to its geographical position the island is favored with rainfall continuously throughout the year. The northern part of the province is often visited by typhoons during the period of the northeast monsoon, whereas the southern and central parts are seldom affected by them. Oftentimes the high winds which pass over the northern part of Leyte are so violent as to blow down large buildings, uproot big trees, and damage the entire crops planted on this portion of the island.

The coastal plains and the interior valleys are fertile and productive. Hemp and copra are the most important products exported. Although rice is grown in all the towns of Leyte, corn is the principal food of the people. Other products raised in the plains are tobacco, bananas, papayas, and pineapples. The swamps are wooded with nipa and mangroves, while the mountains yield rattan and timber for various purposes. At present there are thousands of hectares of virgin forests which await the enterprising Filipino capitalist to convert them into actual source of wealth.

Among the domestic animals are cattle, carabaos, hogs, horses, and goats. There was abundance of cattle and carabaos in Leyte before the Insurrection, but the ravages of war and animal diseases have greatly reduced their number.

While the rivers, lakes and seacoasts abound in fish, the mountains are well timbered. Coal is found in the towns of Leyte, Ormoc and Jaro. Petroleum and asphalt are also found in the town of Leyte, the latter being mined for street paving purposes. Gold is found in Pintuyan and San Isidro; sulphur around Mahagnao; mineral springs in the crater of Mahagnao, Ormoc, San Isidro, Caibirán, Mainit, Burawen, and Carigara.

The healthful climate and productive soil of Leyte attract many immigrants from Bohol, Cebu, Masbate, and Samar. The people are industrious and friendly, their most important pursuits being farming and fishing. Lumbering is neglected because of the lack of good roads, and because nearly all the inhabitants live near the coast away from the sources of supply.

This province has 46 municipalities and 969 barrios. The capital is Tacloban, with 15,478 inhabitants. It is located in the northeastern part of the province.

HISTORICAL ACCOUNT.

LIMASAWA, an islet south of Leyte, has the unique distinction of being the place where mass was first celebrated in the Philippines. Toward the end of March, 1521, Magellan discovered this little island, which then appeared to be a prosperous community. It was here that Magellan met Rajas Calambu and Ciagu, who feasted the Spaniards and exchanged presents with them.

Leyte, which was generally called Tandaya in the early days, was the first island of the Philippine Archipelago to receive the name of "Felipina." On the occasion of Villalobos' expedition in 1543, a party visited this island in search of food, and gave the place the name that, in a modified form, the whole Philippines now bears. Legazpi also touched here, visiting the neighborhood of Abuyog and the Island of Limasawa.

During the early days of Spanish rule, Leyte like Samar, was under the jurisdiction of Cebu. Later, Leyte was erected into a separate political division. By 1735, Leyte was already reported as a politico-military province having jurisdiction over Samar.

In 1622, a religious revolt broke out in Leyte, the leaders of which were Bancao, chief of Limasawa, and his high priest, Pagali. The center of the uprising was the town of Carigara, on the northern coast, where Bancao had erected a temple sacred to the *diwatas*. The rebellion spread to several neighboring towns. Bancao, the leader, was an old friend of the Spaniards, having received Legazpi in a friendly fashion in 1565. It appears, however, that the old chief gave up Catholicism in his last days and went back to the practices of his former religion.

Twenty-seven years after the revolt of Bancao, another up-

rising took place in Leyte. This was merely an echo of the Sumoroy rebellion then in progress in Samar. The center of disturbances in Leyte was a village called Bacor, where the church and the convent were burned by the rebels.

In 1768, Leyte and Samar were separated, each constituting a politico-military province by itself. From time to time the capital of the province of Leyte was changed from one town to another. The first capital was Carigara; it was transferred to Palo, then to Tanawan, and finally, to Tacloban.

In pursuance with the royal decree of July 31, 1860, which ordered the reorganization of the provincial governments of the Visayas, a politico-military government was confirmed for Leyte. To the end of Spanish rule, the form of government in Leyte remained politico-military.

In 1874, Tacloban was opened to foreign trade. This event is important inasmuch as it resulted in the quickening of the economic life of Leyte.

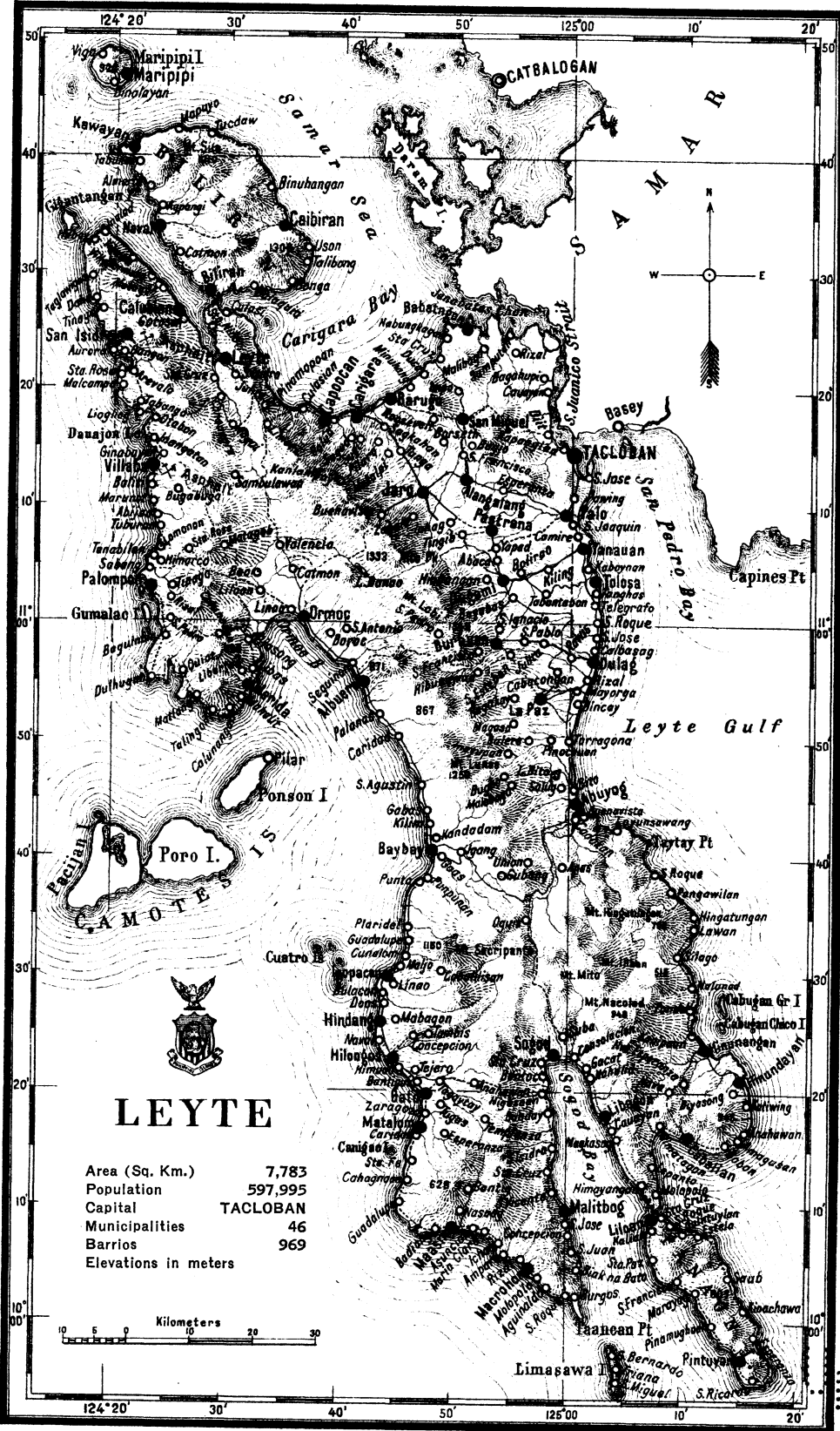
The Revolution did not spread to Leyte readily. Later, however, General Vicente Lukban took possession of that province as well as of Samar in the name of the Revolutionary Government. The people of Leyte, like those of Samar, then joined hands with the expeditionary troops from Luzon, in order to expel the Spaniards from the island.

Civil government was organized in Leyte on April 22, 1901.

STATISTICAL DATA.

Approximate area.....	square kilometers.....	7,783
Area of farms.....	hectares.....	212,043
Cultivated lands	do.....	105,715
Production in 1918:		
Rice	<i>cavans</i> ¹	536,641
Sugar cane.....	tons.....	18,816
Corn	<i>cavans</i>	453,511
Copra	kilos.....	8,458,637
Abacá	do.....	58,857,827
Tobacco	do.....	559,300
Population		597,995
Number of schools.....		314
Primary	279	
Intermediate	31	
High school.....	1	
Vocational	3	
Enrollment for 1918.....	40,813	
Males	22,549	
Females	18,264	
Rate of mortality per 1,000 inhabitants.....		38.2
Number of establishments of household industries.....		5,638
Production in 1918.....		₱1,605,117.29
Number of manufacturing establishments.....		84
Production in 1918.....		₱31,670,213.10

¹ One *cavan* equals 75 liters.



LEYTE

Area (Sq. Km.) 7,783
 Population 597,995
 Capital TACLOBAN
 Municipalities 46
 Barrios 969
 Elevations in meters



MINDORO.

GEOGRAPHICAL SKETCH.

The island formerly called Mait is named Mindoro (from the Spanish phrase *Mina de Oro* or gold mine), as mining is said to have once been its great source of wealth. Mindoro is divided into two distinct parts, the western and the eastern, by a range of mountains of which Mount Halcon is the highest peak. Other important peaks in the province are Mounts Calavite, Bucu, and Hagdanan. The eastern part of Mindoro gets its rain from the northeast monsoon. The western part which has a long dry season receives the southwest winds. Atmospheric disturbances are most frequent during the change of the monsoons. The climate is healthful.

The coast is very irregular and has very many harbors. Calapan, Puerto Galera, Santa Cruz de Mindoro, San Andres, Sablayan, Palanan, Mangarin, Bulacao, and Pola on the mainland, and Lilic and Looc on Lubang Island, are the best places for safe anchorage. All along the coast, especially on the south and north, there are many islands. Off the coast of Mindoro, in Verde Island Passage, is a beautiful submarine garden like the one on the Batangas coast.

The island is traversed by numerous rivers the most important of which are Baco, Baruyan, Calapan, Abra de Ilog, and Subaan on the north, Silonay, Sinabu, Navotas, Caoayan, Pola, Pinamallayan, and Aglubang in the east; Caguray, and Bulalacao in the south, and Sinambolan, Bagbuajan, Mangpong, and Arunay in the west. These rivers have many falls and rapids and could be well harnessed for power. Lake Naujan has a circumference of about 25 kilometers. Crocodiles, wild ducks, and much fish inhabit the lake.

Although in general the land is rugged in character, the coastal and river valley plains offer extensive fertile irrigation lands to the agriculturist. Rice, copra, abacá, sugar, and corn are the principal products. Fruits and vegetables grow in abundance. Along the coasts are extensive nipa swamps which could be used as a source of thatch and sap for alcohol, vinegar, or sugar. The mountains on the southwest are forested, and the slopes are suitable for pasturage. The northeastern part, especially on the mountains southwest of Lake Naujan, is heavily wooded. Transportation facilities which could be easily built towards the sea coast will open up this region as a great lumbering center.

Gold is found in the rivers Binabay, Baco, Bongabong, and Magasawan Tubig. Coal of good quality is found north and west of Bulalacao, white marble northwest of Mount Halcon, slate deposits near the headwaters of Pagbaban and other rivers of the western coast, sulphur and gypsum on Lake Naujan and south of Calapan, hot springs between the sea and the northwestern part of Lake Naujan, and salt springs in Dumagan, Bulalacao. Guano deposits are found in the caves.



Mindoro is sparsely populated; it needs immigrants to take advantage of the free public lands, to raise rice, coconuts, sugar, and abacá, and to exploit the forests and mines. The inhabitants, few as they are, are engaged in very many of these industries. The sugar industry is well developed, as shown by the existence of a sugar central. Cattle and poultry are raised in considerable quantities. Lumbering, too, is quite extensively practiced. The rubber tree grows well in Mindoro and the rubber industry is quite well developed. The fishing industry is lucrative. Off the west coast of Mindoro is one of the most important fishing banks of the Philippines.

The people are mostly Tagalogs. There are, however, a number of Visayan and Ilocano immigrants. Calapan, the largest town, is the capital, and has 12,684 inhabitants.¹ It is located in the northeastern part of the province.

This province has 12 townships and 108 barrios.

HISTORICAL ACCOUNT.

MINDORO was known to the Chinese even before the coming of the Spaniards to these shores. It is believed that Chinese traders made frequent visits to this island as well as to other places in the Philippines for purposes of trade. When the Spaniards arrived, they found evidences of the existence of commercial relations between the natives and the Chinese. Salcedo, while exploring Mindoro in 1570, found two Chinese junks anchored at the mouth of Baco River. These junks were found to be laden with Chinese merchandise.

The Spaniards first visited Mindoro in 1570. It was in this year that De Goiti and Salcedo, while on their way to Manila, had occasion to explore the coasts of Mindoro. They sailed along the western shore of the island touching at the Island of Ilin, the mouth of Baco River, Mamburao, and Lubang. The next year Legaspi, while on his way to the conquest of Manila, also visited the island and brought its inhabitants under Spanish authority, imposing upon them the royal tribute.

In the early years, Mindoro was administered as a part of the province of Bonbon, now Batangas. About the beginning of the seventeenth century, however, the island was separated from Bonbon and organized into a *corregimiento*, with Puerto Galera as capital. Of this newly organized *corregimiento* the Island of Marinduque became a part.

Mindoro, like many other provinces, was for several years a victim of Moro piracy. In fact, its history throughout the seventeenth and eighteenth centuries is practically a story of the constant struggle between the islanders and the Moro pirates. The Moros established two strongholds on the island: Mamburao and Balete. From these places, they sallied forth to attack defenseless communities, destroying property and carrying people away into slavery. As a result of these depredations, whole communities were destroyed or abandoned by their inhabitants. Pinamalayan and Masanlay (Bulalacao) were once deserted by their former inhabitants for fear of Moro attacks. Ilin, once

a prosperous community on the southwest coast of the island, was totally destroyed by the buccaneers.

For a long time the Spanish authorities were unable to put a stop to Moro depredations upon communities on the Island of Mindoro. The successful expedition sent against Mamburao, the Moro stronghold in Mindoro, during the governorship of Simon de Anda served to put an end momentarily to the activities of the Moros. But no sooner had the Spanish force withdrawn than piracy was resumed.

It was not until the close of the eighteenth century that the Spanish government began to deal effectively with such activities. The inhabitants gradually lost fear of the Moros and began to come down to live in their former homes. As a result, communities developed and population grew. The population of Mindoro which in 1800 numbered only 15,845 had increased by 1845 to 28,795, and five years later this number increased to 35,136. In the year 1837, the capital of the province was transferred to Calapan, where it has remained to the present.

Mindoro, like many other provinces, came under the Revolutionary Government soon after the latter was established. Mindoro continued to be under it until 1901, the year when the Americans occupied the island.

Mindoro was made a part of Marinduque in June, 1902, when it was organized into a regular province. Five months later, however, Mindoro, with the island of Lubang, was separated and organized into a special province.

STATISTICAL DATA.

Approximate area.....	square kilometers.....	10,173
Area of farms.....	hectares.....	131,331
Cultivated lands	do.....	33,036
Production in 1918:		
Rice	cavans ¹	112,951
Sugar cane.....	tons.....	68,226
Corn	cavans.....	10,175
Copra	kilos.....	1,199,241
Abacá	do.....	1,141,597
Tobacco	do.....	4,800
Population		² 60,778
Number of schools.....		62
Primary	53	
Intermediate	6	
High school.....	1	
Vocational	2	
Enrollment for 1918.....	5,536	
Males	3,307	
Females	2,229	
Rate of mortality per 1,000 inhabitants.....		46.7
Number of establishments of household industries.....		1,049
Production in 1918.....		₱186,022.93
Number of manufacturing establishments.....		13
Production in 1918.....		₱45,475.56

¹ One *cavan* equals 75 liters.

² Non-Christian population, 13,044, not included.



MINDORO

Area (Sq. Km.) 10,173
 Population 73,822
 Capital CALAPAN
 Townships 12
 Barrios 108
 Elevations in meters

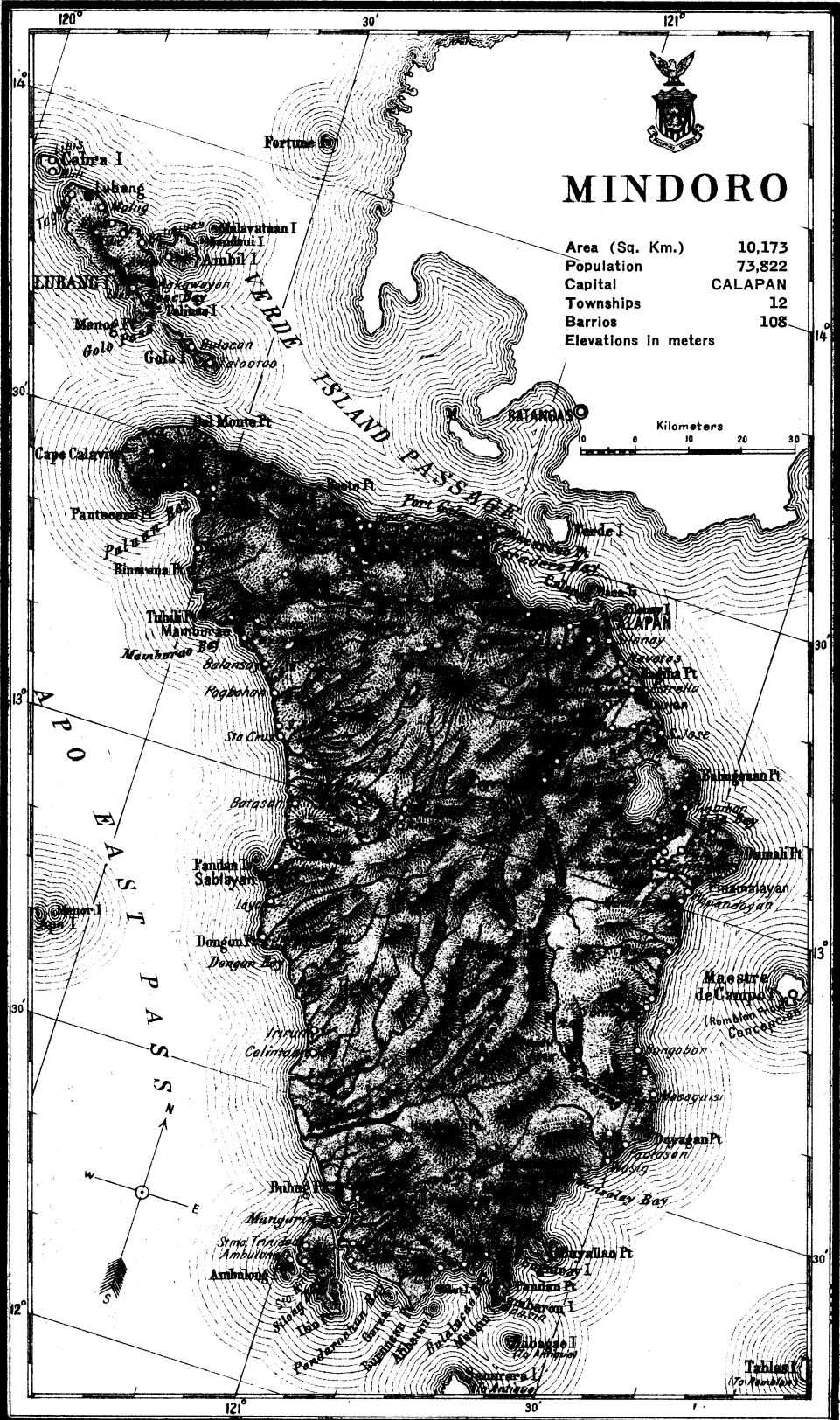
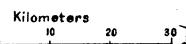


Table K
 (70) Manila

MISAMIS.

GEOGRAPHICAL SKETCH.

THE PROVINCE OF MISAMIS may be roughly divided into three parts; namely, the narrow coastal plain bordering the Bukidnon district and extending from Diuata Point to the town of Lugait, on the east side of Iligan Bay; the coastal plain on the west side of the Bay; and Camiguin Island.

The coast is very irregular, indented with large open bays, like those of Gingoog, Macajalar, and Iligan. Although Misamis is a coastal province, there are but few large towns, the most important of which are Catarman and Mambajao on the Island of Camiguin, Oroquieta, and Cagayan, the capital of Misamis Province. The town of Cagayan, situated at the mouth of the river of the same name, is the center of trade. Most of the products of the Bukidnon people are sent here by rafts for export.

The province has a very rugged surface, but the mountains are low, excepting Mount Malindang, with 2,427 meters elevation, and a volcanic cone at Camiguin, 1,333 meters high.

The climate is healthful. During the northeast monsoons, the land receives abundant rainfall, though less than the amount of precipitation that falls on the eastern side of Mindanao. Strong winds are not common, so that abacá and coconuts thrive well.

The soil along the coast is favorable for the growth of coconuts, while the leeward sides of the hills are excellent regions for abacá cultivation. These two chief crops form the source of wealth of the province. Rice is imported on a large scale.

Coal, gold, and sulphur, found around the volcano of Camiguin, are the minerals of Misamis. These mineral deposits have not been mined yet, because of the lack of capital and labor.

Most of the people are Visayans, chiefly from the Islands of Bohol, Negros, and Cebu. The inhabitants are engaged in agriculture, fishing, and salt-making. The non-Christian people who form a part of the population do some cultivation in the interior valleys.

Cagayan, the capital, has 28,164 inhabitants. It is located in the northwestern part of the province. This province has 15 municipalities and 186 barrios.

HISTORICAL ACCOUNT.

The first Spaniards to arrive in the regions which now constitute the Province of Misamis were missionaries, whose leaders were the Recollects. They landed in 1622 at a place not far from where Cagayan at present stands. Shortly after,

the Jesuits arrived and began to carry on missionary work in what is now western Misamis.

At the time of the arrival of the missionaries, Mohammedan influence prevailed in what is now Misamis. Its regions were included in the vast Kingdom of Corralat, Mohammedan King of Mindanao. The lord of this region was Salanpang, a vassal to King Corralat. Upon hearing of the presence of the Recollects within his territory, Corralat prepared to expel them. But Salanpang, who had become a convert to Christianity, gave the missionaries protection. He removed to Cagayan which he fortified strongly against Corralat. The Recollects found safety in this place. They built their convent here and made it the center of their missionary activity.

The original inhabitants of Misamis were the Bukidnons, but these retired into the interior as immigrants from the Visayan Islands arrived. These immigrants came mainly from Bohol and Cebu. They founded settlements along the coast and on the Island of Camiguin. The first settlement to be established on the Island of Camiguin was Guinsiliban. The growth of population as a result of this immigration was rapid.

As first constituted, Misamis formed part of the Province of Cebu. Later it was made a *corregimiento*. In 1818, Misamis had the status of a province, with four distinct divisions called "partidos." These divisions were as follows: (1) Partido de Misamis, which included the forts of Misamis and Iligan, besides Loculan and Initao; (2) Partido de Dapitan, including Dapitan, Lobungan, and a number of villages; (3) Partido de Cagayan, which included Cagayan and a number of villages like Iponan, Molugan, Hasaan, and Salay; and (4) the Partido of Catarman, on the Island of Camiguin, which included the town of Catarman, and the villages of Mambajao, Guinsiliban, and Sagay. In 1850 Misamis constituted one of the four political divisions into which Mindanao was divided, including within its jurisdiction a great portion of what is now Lanao, all of Bukidnon, and the northern portion of what is now Cotabato.

Except during the first decades of the nineteenth century when the population of Misamis suffered considerable reduction as a result of Moro attacks, the history of Misamis showed a continuous growth of population. About the beginning of the nineteenth century it was 56,390. By 1818, this had been reduced to 26,226. But from that time on the number of inhabitants steadily grew. In 1870, the population was 78,104. In 1887, this had grown to 116,024, and ten years later it had increased to 169,356.

At the end of Spanish rule, Misamis constituted one of the seven districts of Mindanao. It was governed by an army officer of the rank of lieutenant-colonel. The capital was Cagayan de Misamis. The comandancia of Dapitan with the towns of Dapitan, Dipolog and Lobungan was a dependency of this province.

Misamis came under the Revolutionary Government in December 1899. It remained so for about three months, at the end of which time it fell into the hands of the Americans.

Civil government was established in Misamis May 15, 1901. As constituted, Misamis included what is now the Subprovince of Bukidnon. In 1907, Bukidnon was given to Agusan, which was created into a province that year.

STATISTICAL DATA.

Approximate area.....	square kilometers.....	2,668
Area of farms.....	hectares.....	75,082
Cultivated lands.....	do.....	46,348
Production in 1918:		
Rice.....	<i>cavans</i> ¹	166,533
Sugar cane.....	tons.....	960
Corn.....	<i>cavans</i>	375,240
Copra.....	kilos.....	23,748,487
Abacá.....	do.....	8,561,922
Tobacco.....	do.....	13,500
Population.....		198,981
Number of schools.....		128
Primary.....	124	
Intermediate.....	3	
High school.....	1	
Enrollment for 1918.....	14,539	
Males.....	7,418	
Females.....	7,121	
Rate of mortality per 1,000 inhabitants.....		47.4
Number of establishments of household industries.....		910
Production in 1918.....		₱241,579.52
Number of manufacturing establishments.....		26
Production in 1918.....		₱142,015.08

¹ One *cavan* equals 75 liters.





MOUNTAIN PROVINCE.

HISTORICAL ACCOUNT.

THE MOUNTAIN PROVINCE, the third largest province in the Philippines, comprises that wide mountainous territory lying between Cagayan, Isabela, and Nueva Vizcaya and the Ilocos provinces. It is made up of several subprovinces, namely, Apayao, Kalinga, Lepanto, Bontoc, Ifugao, Benguet, and Amburayan.

The exploration of the regions now included in the Mountain Province started as early as 1663. It was in this year that Governor-General Diego de Salcedo sent an expedition under the command of Pedro Duran de Monforte which succeeded in penetrating as far as Kayan, in Lepanto. In 1756, the Alcalde Mayor of Pangasinan, Manuel Arza, made an attempt to lead an expedition into these regions. Nothing, however, came of this attempt.

In 1785, on the occasion of an uprising among the Kalingas, an expedition was sent from Cagayan by order of Governor-General Basco for the purpose of restoring order. During the first half of the nineteenth century, several important expeditions were made into the mountain country, largely by the famous Spanish explorer, Guillermo Galvey. This brave military officer led no less than forty-five expeditions into the mountain regions, the most famous of which were made in 1829, 1832, 1833, and 1837. On these occasions, he visited the greater part of the southern portion of what is now the Mountain Province. He touched Trinidad, Lutab, and Kalayan (Benguet), Kiangan and Mayoyao (Ifugao), Kayan (Lepanto), and Suyoc (Amburayan). Galvey, however, shared the honors of the exploration of Lepanto with Antonio Hernandez, a Spanish military engineer. It was Hernandez, who, about the year 1850, visited the greater part of Lepanto for the purpose of gathering general information with a view to making maps and mining plans.

At the end of the Spanish rule, the region which now forms the Mountain Province was divided into several politico-military *comandancias* as follows: Cabugaoan, situated just east of Ilocos Norte; Apayao, adjoining Cabugaoan to the east; Itaves, now the Subprovince of Kalinga; Bontoc; Lepanto, with its dependency, Tiagan; Amburayan; Kiangan, now approximately Ifugao; and Benguet and Cayapa, now eastern Benguet. These *comandancias* were formed at various times. The earliest of these politico-military *comandancias* to be formed were Benguet (1846), Lepanto (1852), and Bontoc (1859). The latest ones created were Amburayan (1889), Cabugaoan (1891), and Cayapa (1891).



In the early years of the Revolution this territory was practically unaffected by the war. But later, the revolutionists penetrated into some of these districts. For example, Amburayan was for a while governed by Pio Ancheta in the name of the Revolutionary Government. Benguet was likewise for a while governed by Juan Cariño. General Luna is believed to have visited Cervantes for the purpose of establishing in that place an impregnable stronghold that could be used in case of necessity. Aguinaldo, in his memorable retreat that ended at Palanan, passed through Benguet, Lepanto-Bontoc, Ifugao, and Kalinga. The famous battle of Tila Pass in Lepanto, where General Gregorio del Pilar made his gallant stand, may also be mentioned in this connection.

Of all the regions included in what is now the Mountain Province, Benguet was the first to be organized as a province under American Rule. Civil government was established in Benguet as early as 1900, when Baguio was made capital. The next region to receive provincial organization was Lepanto-Bontoc. Lepanto-Bontoc was organized as a province in 1902, with Cervantes as capital. It had three subprovinces, namely, Amburayan, Lepanto, and Bontoc, which included part of the territory now approximately known as the Subprovince of Kalinga. Kalinga, however, was created as a separate subprovince of Lepanto-Bontoc in 1907. Apayao, from 1901, formed part of Cagayan Province, but it was created a subprovince in 1907. Ifugao from 1902 formed part of Nueva Vizcaya.

Such was the governmental system which obtained in the mountain country until 1908. Then the Mountain Province was organized as a special province of the Archipelago, with Bontoc as capital. The newly created province includes as subprovinces the following units: Benguet, Amburayan, Lepanto, Bontoc, Ifugao (separated from Nueva Vizcaya), Kalinga, and Apayao (separated from Cagayan).



MOUNTAIN

Area (Sq. Km.)	16.649
Population	238.071
Capital	BONTOC
Municipalities	1
Townships	51
Barrios	563
Elevations in meters	

See maps of Sub-Provinces and City of Baguio for details



AMBURAYAN.

GEOGRAPHICAL SKETCH.

AMBURAYAN, the only mountain subprovince possessing a coastline, is separated from Benguet and Lepanto by a high range of mountains of which Guirayan and Malaya are the highest peaks. The other mountain ranges run east and west between the rivers. The main road to the interior of this region is through a pass at an elevation of from 4,000 to 5,000 feet above sea level.

The whole subprovince is drained by the Amburayan River and a few small streams that flow into the sea across La Union. The valley of the Bakun and that of the main branch of the Amburayan comprise the southern two-thirds of Amburayan. The northern third is occupied by the valley of the Chico branch. The southern part is very inaccessible. The rivers are too swift and precipitous even for rafts. There are no roads of any importance except one horse trail from Tagudin to Alilem, the former capital.

The climate is the same as that of Ilocos Sur and La Union. The rainfall comes from the west coast.

Amburayan is very poor in natural resources. The only lowland under cultivation is the narrow coastal plain around Tagudin. The rest of the cultivated areas is confined to the valleys of the three branches of the Amburayan River. Here the Igorot villages are surrounded by rice terraces irrigated in the same manner as those of Lepanto and Benguet. The Bakun district has the most striking rice terraces. This region is a great plateau surrounded by high precipices difficult of access. Parts of the trails to Bakun consist of ladders hundreds of feet high on the side of cliffs. On this plateau are found the great amphitheatres of rice terraces. Sweet potatoes, vegetables, and tobacco are raised and exported. Coconut trees and mangoes are also found in large numbers.

There are pine forests on the Malaya range. On the mountains deforested by Igorots, there are grass lands, but cattle raising is limited.

There are but few metallic minerals. Some deposits of asbestos and a low quality of copper ores are reported to exist in the range between the Amburayan and Malaya. The southern part of the subprovince which may contain minerals, has not yet been explored. Clay for common pottery is the only mineral used.

The great water power available from the Amburayan river is not being utilized. There is at present a project to establish

an irrigation system from this river to water the fields of Bangar, Balaoan and Luna.

Fishing is extensive along the coasts. In the interior, little fish is found, for the rivers are too swift.

Baskets are made for export. Excellent weaving is done in the valleys where cotton is grown.

Tagudin is the only town inhabited by an entirely Christian population. On the valley of the Chico are many villages of Christian and non-Christian Igorots who have the same industries as the people of Tagudin and Lepanto.

This subprovince and Lepanto have 1 municipality, 19 townships, and 191 barrios. Its capital is Tagudin, with 11,237 inhabitants. It is located in the northwestern part of the province.

NOTE.—For statistical data, see Lepanto.

4

APAYAO.

GEOGRAPHICAL SKETCH.

From the Cordillera range on the western border, the Sub-province of Apayao slopes eastward down to the valley of the Cagayan River. The eastern portion from the Taut and Abulug Rivers is covered by an extensive nipa swamps, dotted here and there by low hills.

The most important river, the Abulug, makes a remarkable curve, starting from the headwaters of the Apayao River in the northwest, then going southeastward to Kabugao whence it makes a northeasterly bend to the sea. Other rivers are the Talifugo, the Matalak, and the Sinundungan.

Maize, camotes or sweet potatoes, and a great number of coconuts and bananas are grown. Upland rice is planted in *kain̄gins*, or fire clearings in the forests. Tobacco planted in these clearings is sold to the lowlanders and marketed as Cagayan tobacco.

Apayao contains one of the richest virgin forests of the Philippines, but because of the difficulty of transportation lumber is not cut on a commercial scale. Beeswax and rattan, however, are gathered and exchanged for pots, cloth and metals with the lowlanders.

Mineral resources are as yet little explored. There are a few undeveloped copper and ore deposits on the Apayao and Talifugo Rivers. Limestone is also found. Fine clay for pottery is sold to the Ibanags of Isabela from whom the Apayaos buy the finished products.

Apayaos hunt a great deal and fish by means of traps in the rivers. Crocodiles are plentiful in the Abulug and Taut Rivers. The Negritos hunt deer and wild carabaos on the swamp hills.

The Apayao villages are found along the rivers and the inhabitants become expert in managing their rafts or boats in the rapids. They are essentially a river people and are reluctant to settle in the valleys. The population is thickest in Kabugao where many rivers flow together. This town is the capital and is located in the south central part of the subprovince.

Health conditions in the western half of the province are excellent, but in the swamps pernicious malaria and skin diseases of all kinds are prevalent.

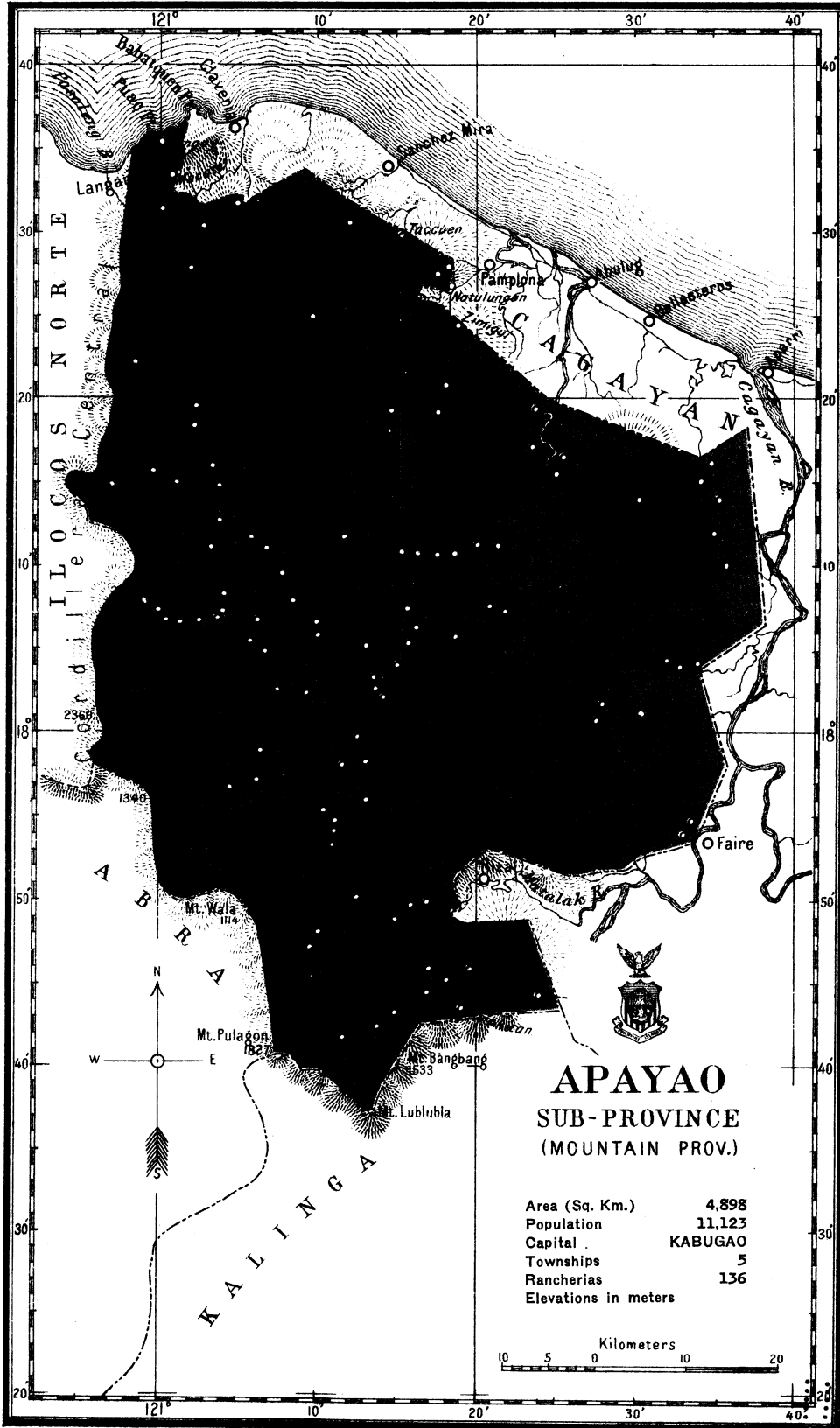
This subprovince has 5 townships, 60 settlements, and 136 rancherías.



STATISTICAL DATA.¹

Approximate area.....	square kilometers....	4,898
Population		² 427
Number of schools.....		2
Primary		2
Enrollment for 1918.....		80
Males	45	
Females	35	

¹ See production of non-Christians, Mountain Province.² Non-Christian population, 10,696, not included.

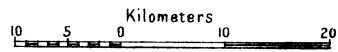


APAYAO

SUB-PROVINCE

(MOUNTAIN PROV.)

Area (Sq. Km.)	4,898
Population	11,123
Capital	KABUGAO
Townships	5
Rancherias	136
Elevations in meters	





BENGUET.

GEOGRAPHICAL SKETCH.

The subprovince may be divided into three geographical areas: the valley of the Bued River which rises from the Baguio plateau; the Agno River of Benguet Valley occupying the northern and northeastern parts of Benguet; and the Kapangan district, which embraces the headwaters of the Amburayan and Bauang Rivers. These different divisions are separated from one another by ranges of mountains, the one separating the Agno Valley from the Kapangan district being the higher. This range is second to the Cordillera Central in height. It is on the eastern border of Benguet that the highest peaks of Luzon are found.

The land is well drained, but the rivers are all precipitous with large rapids and falls. In several places the slopes are so steep that landslides are common occurrences. There are also several lakes, most of them small in size, on the tops of mountains, Lake Trinidad is the largest, having a perimeter of about 4 kilometers. The Baguio Lake, although large in area, is a combination of several pools.

The climate is, in general, humid, cool, and healthful. Although it is cool and refreshing in Baguio, it is colder in La Trinidad and Haight's Place, which is about 3,000 feet higher than Baguio itself. La Trinidad is the garden of Benguet. Strawberries, celery, cabbages, and other temperate fruits and vegetables are exported to Manila. In Haight's Place, the high-land moss and lichen show how low the temperature gets during the year.

Although the land is mountainous and hilly, the different industries have great possibilities. Agriculture is well developed, and although rice is imported, the people raise millet, beans, corn, and sweet potatoes in considerable quantities. Coffee is raised and exported in the Kayan district.

There are vast tracts of land where cattle could be raised on a large scale, and if it were not for the fear of cattle disease, the Mountain Province would rank as the chief cattle-raising region in the Philippines.

Benguet is at present the most important gold-mining district. The Igorots exploited the mines long before the coming of the Spaniards, and it is said that because of much experience, the Igorots are more skillful gold miners than those who use their knowledge of chemistry and mining engineering. Hot springs are found at Klondikes, Daklan, and Bunguias. Coal deposits exist in Mount Kapangan.

The women weave cotton cloth for their skirts and jackets and for the men's G-strings. Local commerce is generally carried on by barter. The Igorots exchange gold nuggets for some of their necessaries. Cotton cloth in plaids or checks, hogs, chickens, dogs, and salt are also imported from the low-land regions.

The people, with the exception of those in La Trinidad and Baguio, are Igorots. A few of them have been christianized and taught the industries of the Ilocanos. The Igorots are peaceful and industrious people.

This subprovince has 14 townships and 95 barrios. Its capital is La Trinidad, with 503 inhabitants.¹ It is located in the west central part of the subprovince.

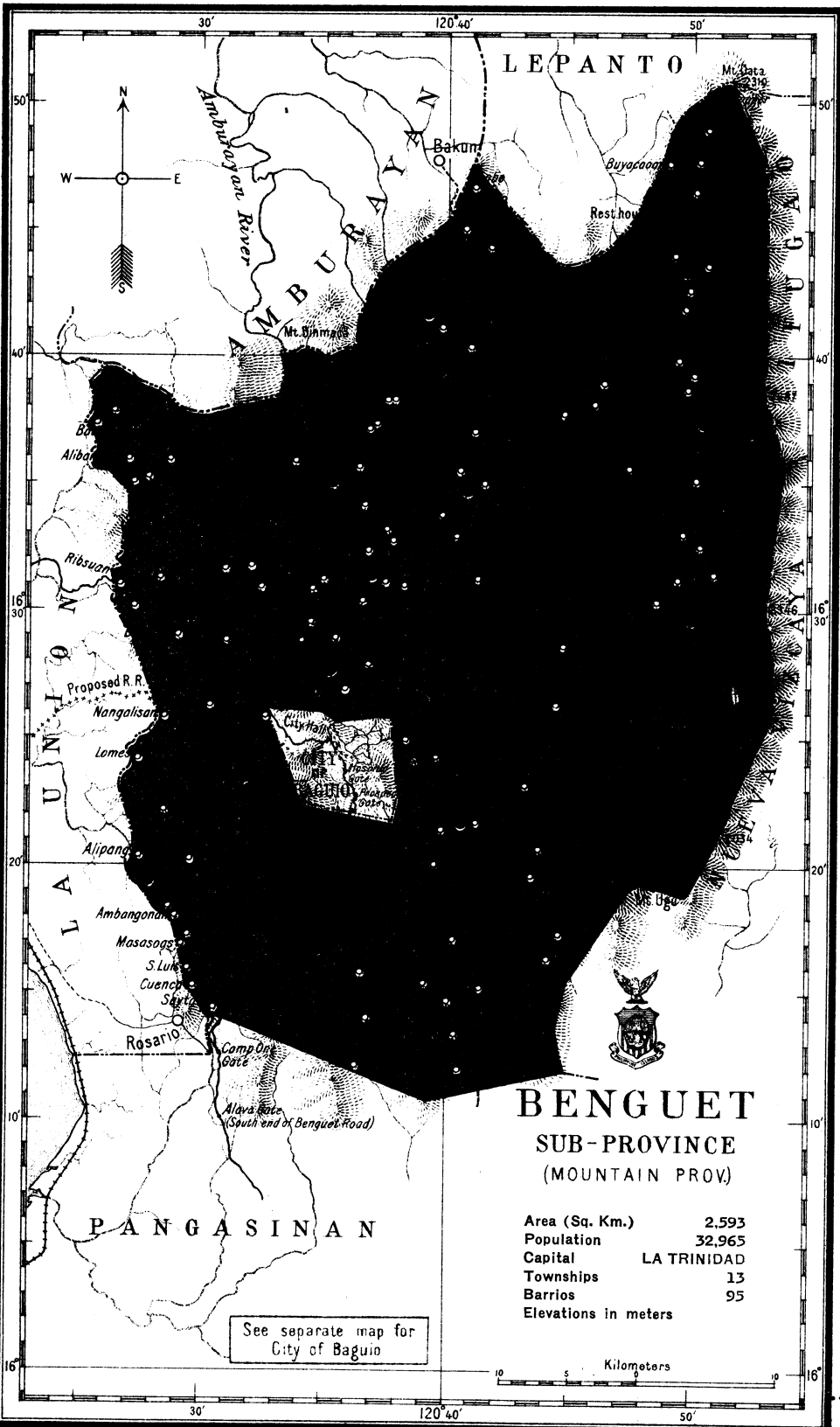
STATISTICAL DATA.²

Approximate area.....	square kilometers.....	2,593
Area of farms.....	hectares.....	389
Cultivated lands.....	do.....	87
Population		³ 4,126
Number of schools.....		42
Primary	34	
Intermediate	4	
High school.....	2	
Vocational	2	
Enrollment for 1918.....	3,475	
Males	2,616	
Females	859	
Rate of mortality per 1,000 inhabitants.....		134.1
Number of establishments of household industries.....		27
Production in 1918.....		₱13,659.00
Number of manufacturing establishments.....		20
Production in 1918.....		₱634,518.82

¹ Non-Christian population, 2,572, not included.

² See production of non-Christians, Mountain Province.

³ Non-Christian population, 35,329, and Christian population of Baguio, 5,462, not included.



LEPANTO

BENGUET
 SUB-PROVINCE
 (MOUNTAIN PROV.)

Area (Sq. Km.)	2,593
Population	32,965
Capital	LA TRINIDAD
Townships	13
Barrios	95
Elevations in meters	

See separate map for
 City of Baguio



PANGASINAN

AMBURAYAN

Ambagonan River

ILOCOS

Ambagonan

Masasogon

S. Luk

Cuenca

S. Luk

Rosario

Alava Gate

(South end of Benguet Road)

Alipang

Lomes

Nangalisang

Proposed R.R.

Ribuan

Albani

Bakun

Buyacaan

Rest house

Mt. Dana

Mt. Binmaley

City of Baguio

Alava Gate

Alava Gate

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BONTOC.

GEOGRAPHICAL SKETCH.

THE SUBPROVINCE OF BONTOC is exceedingly mountainous. There are no level spaces or plains except in the extreme eastern part where the rolling foothills descend into the Cagayan Valley. Separating Bontoc from Lepanto and Ifugao is the Cordillera central on the west and the Polis Range on the south. The highest peaks along the border are Mounts Mengmeng, Sipitan, and Amuyao.

The land may be divided into three well-marked geographical areas: 1. The valley of the upper Chico and its tributaries. 2. The Siffu (Cadaclan) valley and its branches occupying the eastern portion that slopes eastward to the Cagayan valley. 3. The valley of the Tanodan River between the Chico and the Siffu Valleys. These valleys are separated from one another by high mountains that average 2,000 meters in height.

The climate of the western half is similar to that of the southwestern half of Kalinga. The eastern half receives its rainfall from the east after the winds have passed through the Cagayan valley so that it is much drier than the western portion.

The mineral resources of the region have not yet been explored, consequently very little is known of them. Deposits of iron of considerable size have been developed and in places, as Tanolo for instance, small veins of lead and silver are found. Mainit is noted for a hot salt spring from which the natives extract large quantities of salt for local use and for export to Kalinga and Lepanto. There are two other hot springs in Sadaŋga. Other non-metallic minerals are clay from which the natives make pottery and stone used by the Bontocs to build the walls of their rice terraces.

The most important crops raised are rice, sweet potatoes, millet, and tobacco of a poor quality. There are very few fruits and vegetables. Rice terraces are usually found at the bottoms of river valleys and are carried only a short distance up the mountain sides. Probably more camotes are raised in Bontoc than in any other part of the Archipelago. Sweet potatoes are grown in terraces among the rice fields and also between the houses. The patches are so planted that the wayfarer is struck by the appearance of the curious geometric figures in which the sweet potatoes are planted. Millet is raised as a dry crop on the hillsides above the rice terraces.

Fish is caught to some extent along the Chico river. Except chickens and dogs there are no domestic animals. Carabaos

are allowed to run loose in fenced-in areas, and killed when wanted for food. There are only a few wild animals, the only important ones being the wild pigs, carabaos, and deer in the extreme eastern portion.

Besides agriculture and pottery-making, the principal industries consist of basket-making, lumbering, weaving, and metal-working. Bamboo and rattan baskets are exported to the lowlands. In Fidelisan a large sawmill has been erected which is operated by water-power for the pine lumber in the forests. The women, by means of their hand looms, weave a great deal of highly colored cloth out of yarn which they get by barter from the people of Isabela and Abra. The men manufacture head-axes and knives from steel which they obtain in the same way from the Igorots in the west.

Most of the towns are much larger than those of the other subprovinces and are located along the rivers flowing through the valley bottoms. The people are being gradually christianized and take to education readily.

This subprovince has 7 townships and 47 barrios. Its capital is Bontoc, with 609 inhabitants.¹ It is located in the southwestern part of the subprovince.

STATISTICAL DATA.²

Approximate area.....	square kilometers....	1,528
Population		³ 811
Number of schools.....		14
Primary	10	
Vocational	4	
Enrollment for 1918.....	888	
Males	611	
Females	277	

¹ Non-Christian population, 10,107, not included.

² See production of non-Christians, Mountain Province.

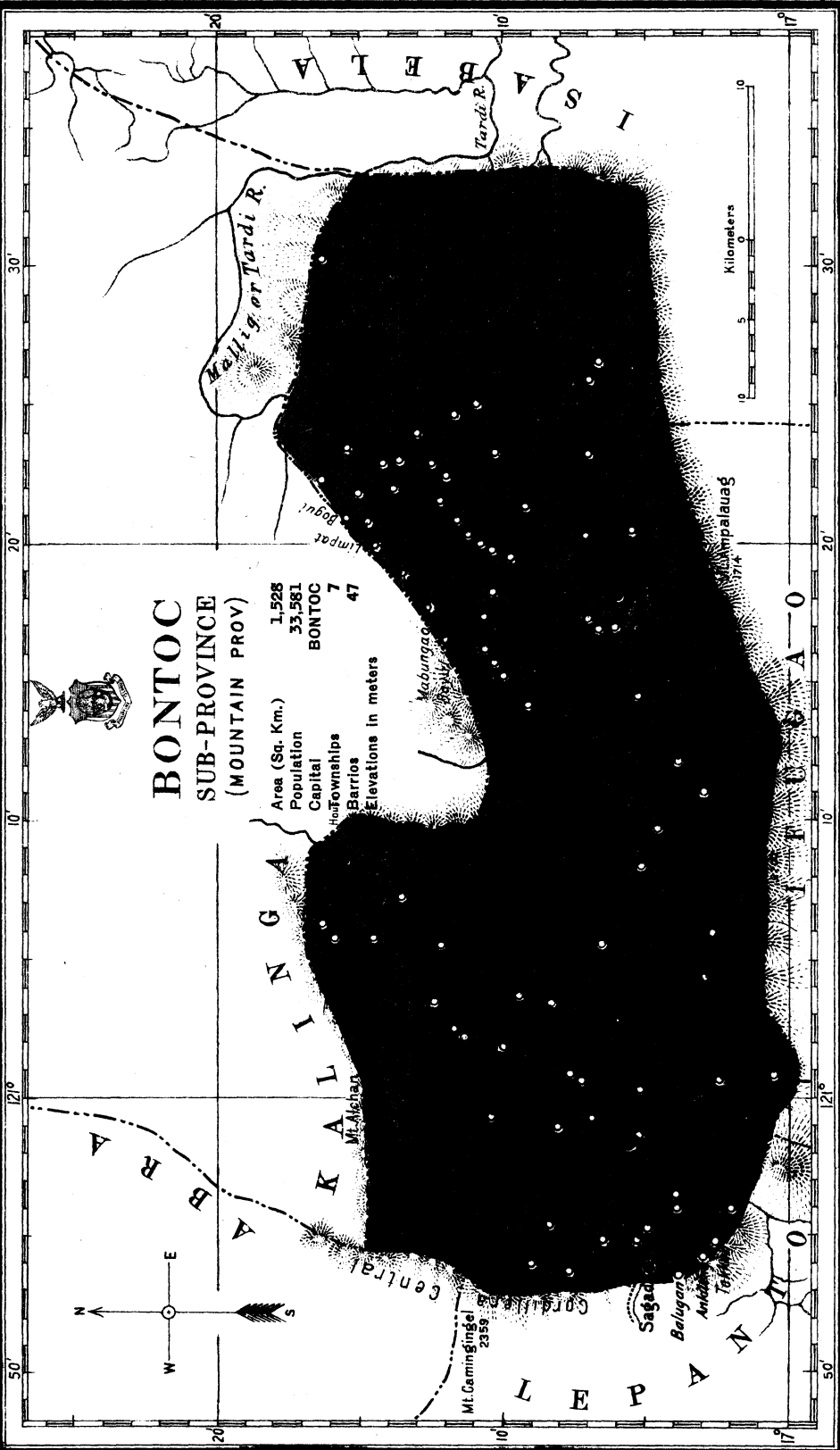
³ Non-Christian population, 32,770, not included.



BONTOC
SUB-PROVINCE
(MOUNTAIN PROV)

Area (Sq. Km.) 1,528
 Population 33,581
 Capital BONTOC
 Townships 7
 Barrios 47

Elevations in meters



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Balyan

Ankay

Talayan

Central

Mt. Alinan

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IFUGAO.

GEOGRAPHICAL SKETCH.

The Polis Mountain range on the north and west forms the border of the Subprovince of Ifugao and cuts it off from Benguet and Lepanto in the west and from Bontoc in the north. Mount Pulog (2,924 meters) in the southwestern corner is the highest peak in Luzon and second only to Mount Apo of Mindanao in the Philippines. The Polis pass through this range and is 1,940 meters above sea level. Mountains cover the western two-thirds of the province. The eastern third, practically uninhabited, slopes gradually away into the valley of the Magat River. This region is one of the most fertile spots in the Philippines and is a part of the best tobacco-producing region of Isabela. It has always been a neutral ground between the Christians and the Apayaos.

The southeast winds bring so much moisture that in the northern part of the province it rains all the year round. The land is well drained and the locality healthful.

The north central part of Ifugao, included within a radius of 20 kilometers on either side of the Kiangnan-Banaue road, is sparsely populated.

"The soils are of basalt rock origin, very fertile and extensively cultivated. The chief agricultural product is rice, which is grown on terraces along the mountain sides. Nowhere in the Philippines is irrigation developed to the point reached in Ifugao. There are approximately 100 square miles of irrigated rice terraces that are watered by great ditches that run for miles. The terraces are all buttressed with stone walls which measure a total length of about 12,000 miles. It is believed that the construction of the present terraces and irrigation systems has taken from twelve to fifteen hundred years of time."—BEYER.

The Ifugaos have so utilized every drop of available water supply that in most places it is useless to construct any more ditches for lack of water, a deficiency mostly due to deforestation. Several areas have been abandoned awaiting reforestation.

Potatoes, taro, tobacco, cotton, and a great variety of vegetables, such as peas, beans, and unions, are grown by the Ifugaos.

Except non-metals, no valuable minerals have as yet been discovered. There is a small seam of coal along the border of Ifugao and Nueva Vizcaya near Cawayan, but it is not mined because of the difficulty of transportation. Around Kiangnan, and especially to the south of it, there are deposits of lime suitable for mortar. There are extensive areas of good building

stone such as terrace walls are made of, hard basic rocks of diorites and conglomerates. There is also good pottery clay. Salt springs and deposits of rock salt are found in the lower Cadaclan and in the valleys of the Asin and Andangan Rivers. The salt finds a large local market.

No animals are used for field work, for everything is done by hand. When the rice fields become dry, fish for food is raised in ponds. Deer and wild carabaos are plentiful in the uninhabited regions.

Two dialects are spoken in Ifugao, a circumstance evidently due to the separation of the inhabitants into two divisions by the range of mountains between the Alimit and the Ibulao Rivers.

The Ifugaos are a very industrious people as shown in their terrace construction of rice fields. They only need education and Christianity to make them one of the great factors in the progress of these Islands.

This subprovince has 3 townships and 191 barrios. Its capital is Kiangan, with 276 inhabitants.¹ It is located in the southwestern part of the province.

STATISTICAL DATA.²

Approximate area	square kilometers....	2,012
Population		³ 294
Number of schools.....		13
Primary		13
Enrollment for 1918.....		1,150
Males	989	
Females	161	

¹ Non-Christian population, 37,897, not included.

² See production of non-Christians, Mountain Province.

³ Non-Christian population, 66,280, not included.



KALINGA.

GEOGRAPHICAL SKETCH.

Except where this subprovince touches Cagayan and Isabela, it is entirely surrounded by a high range of mountains whose peaks range from 1,514 to 2,576 meters in height. Geographically, it may be divided into three regions: first, the more or less mountainous western third west of the Chico River drainage basin; second, the valley of the Chico and its branches; third, the level plains region between the Chico River and Cagayan Province. The tops of the mountains are covered with pine forests and the slopes which are exceedingly rugged and precipitous are either bare or covered with grass. The land is barren because of continuous forest fires and landslides. The central valley region is the most densely populated. The principal products are irrigated upland rice, camotes and maize. Rice is planted in terraces along the bottoms of river valleys, not on the slopes of the mountains as in Ifugao, and three crops are commonly raised. This cereal is cheaper and more plentiful in Kalinga than in any other subprovince. The eastern third is covered with grass and thinly inhabited.

The rivers are young and therefore rapid. Although there are many rapids and falls for power the water is utilized only in the southern part for irrigating the few terraces on the mountain sides. There are no lakes so that the rivers are the only source of the meager fish supply.

The climate of the subprovince differs according to the region. The northeastern half which gets its rain from the Cagayan Valley has a well marked wet and long dry season. The southwestern half depends upon the west winds so that it receives much greater rainfall.

Very little is known about the minerals of the region. There are no mining claims and the only industry that is based on the produce of the soil is pot-making which is confined to the lower part of the Chico River Valley.

On the whole, the land is unfertile and unprepossessing. Agriculture is difficult without the aid of irrigation and fertilization of the soils. Cattle raising holds out hope for the prosperity of the subprovince.

Besides rough pottery, the people also engage in bamboo and rattan basket-making, weaving and metal-working. Rattan is gathered in the forest along the western border, the only part where there is a true virgin forest. Weaving is carried on in the southern portion and metal-working by the Tinguianes on the

western border, especially in Balbalasang. Their chief products are head-axes, bolos, and spears. Steel is obtained by barter with the Ilocanos.

There is very little outside trade. The people in the west trade with Abra, those in the east with the Ibanags of Cagayan and those in the south with Bontoc. Rice and baskets are the only exports.

The inhabitants of Kalinga are the most mixed of any province of northern Luzon. Lubuagan is the capital and largest town, and has 226 Christian inhabitants.¹ It is located in the southwestern part of the subprovince. This subprovince has 4 townships and 39 barrios.

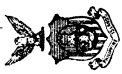
STATISTICAL DATA.²

Approximate area.....	square kilometers....	2,940
Area of farms.....	hectares.....	22
Cultivated lands	do.....	17
Population		³ 272
Number of schools.....		10
Primary		10
Enrollment for 1918.....		1,230
Males	918	
Females	312	

¹ Non-Christian population, 8,952.

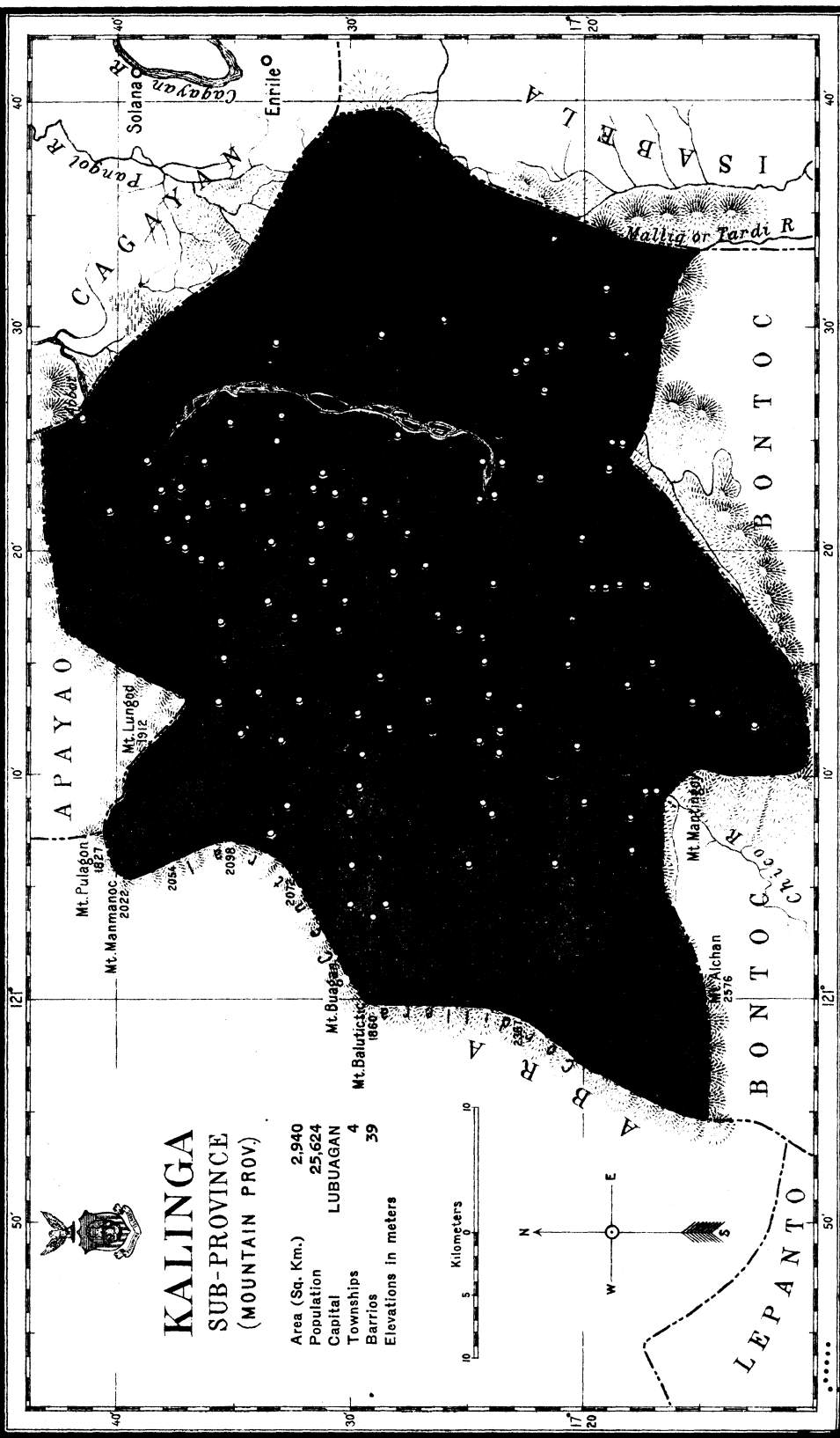
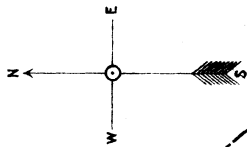
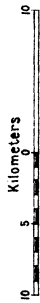
² See production of non-Christians, Mountain Province.

³ Non-Christian population, 25,352, not included.



KALINGA SUB-PROVINCE (MOUNTAIN PROV.)

Area (Sq. Km.) 2,940
Population 25,624
Capital LUBUAGAN
Townships 4
Barrios 39
Elevations in meters





LEPANTO.

GEOGRAPHICAL SKETCH.

LEPANTO consists of the upper Abra River Valley, except a small area bordering on Ifugao and Bontoc which is drained by the headquarters of the Chico River. Running along the boundary of this subprovince are lofty mountains, the highest being the Polis Range. There are as many as 200 mountain peaks, the best known, not necessarily the highest, being Mount Data. Because of these high mountains, intercourse in former times throughout the region was done up and down the river valleys.

The climate is similar to that of the west coast, the rainfall coming mainly from the west winds.

The land, although exceedingly mountainous, has very little virgin forest, this being found only on the border range. Pines are the only trees found and are scattered on the mountain sides. The greater part of the country is covered with grass and the river valleys are cultivated. There are as many as 15 to 20 crater lakes found in various places. One lake is found at the top of Mount Data and another one at Mount Cagubata, to which the Igorots go for pilgrimage.

The cultivated area is found chiefly on the headwaters of the Chico and Abra River Valleys. Lepanto is next to Ifugao in the number of rice terraces. Camotes for local use, pineapples for export, and sugar cane for *basi* are also raised. Cotton is cultivated in large quantities in the region from Sabangan to Insuda in the Chico Valley, and from Angaki to the Abra border.

Lepanto and Benguet are the regions having the most minerals in Luzon. All the mountain ranges in the southern part have millions of pesos worth of copper ore deposits. Mankayan is the center of the copper mining industry. Here, the Spaniards found the Igorots using the Chinese method of mining and smelting. At present, there are about 50 or 60 American miners in the region, but not much actual work is done for lack of capital.

Suyoc is the gold mining center. Here is found one of the most striking features of the world. A whole side of a range of mountains, about 15 kilometers across, slides down to the valley. On this slide, known as the Palidan Slide, are found parts of gold veins which must have their connection somewhere else. Gold mining has great possibilities in the region, but the work would prove profitable only to large companies. The rough topography of the land and the lack of transportation facilities are the only difficulties encountered. Some Filipinos, especially the Igorots, are interested in gold mining.

The household industries are well developed. Clay products, such as pots, jars, and pipes made for export, are the best in the Mountain Province. The men are experts in metal-work-

ing. They make weapons, pots, and spoons out of copper which they mine and smelt by native process. They also manufacture iron or steel spears, bolos, knives, and tools of all sorts, which they sell to or barter with the natives of the lowlands. Gold is used by them in making ear-rings and other ornaments. They also carve wood into images, bowls, ornaments and other utensils.

The women make sufficient cloth for their own use and for sale. They spin, dye, and weave the cotton raised there. The Tinguians who live in the region north of Concepcion-Angaki and in San Emilio weave cloth for export to western Abra.

Cattle-raising is more extensive in Lepanto than in any other subprovince. Thousands of horses are allowed to run wild. These are exported to Bontoc, Ifugao, and Ilocos. There is but little fishing done in the rivers. Eels in large numbers are raised for religious purposes in Lepanto.

Lepanto is accessible by two roads, one passing from west to east, the Tagudin-Bontoc road, and the other from south to north, from Benguet passing through Mankayan, Cervantes, and Angaki to Candon.

Most of the people, except along the borders of Ifugao and Abra, are Igorots.

Its capital is Cervantes, with 2,513 inhabitants.¹ It is located in the southwestern part of the subprovince.

Lepanto has no municipality. It has 19 townships and 191 barrios, with Amburayan.

STATISTICAL DATA.²

Approximate area.....	square kilometers.....	2,678
Area of farms.....	hectares.....	9,568
Cultivated lands.....	do.....	7,251
Production in 1918:		
Rice.....	cavans ³	138,751
Sugar cane.....	tons.....	2,581
Corn.....	cavans.....	9,056
Copra.....	kilos.....	6,247
Tobacco.....	do.....	128,000
Population.....		⁴ 36,432
Number of schools.....		61
Primary.....	56	
Intermediate.....	4	
High school.....	1	
Enrollment for 1918.....	5,400	
Males.....	3,333	
Females.....	2,067	
Rate of mortality per 1,000 inhabitants.....		92.5
Number of establishments of household industries.....		453
Production in 1918.....		₱79,528.63
Number of manufacturing establishments.....		5
Production in 1918.....		₱10,660.00

¹ Non-Christian population, 3,259, not included.

² Including data for Amburayan.

³ One *cavan* equals 75 liters.

⁴ Non-Christian population, 31,772, not included.

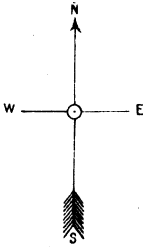
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LEPANTO SUB-PROVINCE (MOUNTAIN PROV.)

Area (Sq. Km.)	1,761
Population	36,108
Capital	CERVANTES
Townships	11
Barrios	81
Elevations in meters	

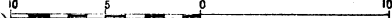


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NUEVA ECIJA.

GEOGRAPHICAL SKETCH.

NUEVA ECIJA is the easternmost of the provinces in the fertile central plain of Luzon. Tilting westward from the Caraballo mountains, it is bounded on the north by Pangasinan and Nueva Vizcaya, on the east by Nueva Vizcaya and Tayabas, on the south by Pampanga and Bulacan, and on the west by Tarlac and Pangasinan.

The province is new and sparsely settled. Most of the inhabitants are immigrants from the Tagalog, Ilocano, and Pangasinan regions.

At present, Nueva Ecija is second in rice production and a large part of its crop is exported. Vegetables and fruits are abundant. Corn, sweet potatoes and sugar cane are important products.

The rolling hills towards the mountains are suitable for pasture lands. The mountains are thick with untouched forests that yield fine wood and minor forest products.

In the mountains and rivers gold is found. Placer mining is the method used to recover it. There are many mineral and hot springs, the ones at Bongabon and Pantabangan being the most important.

The land is well drained by the Pampanga River and its tributaries. Though the rivers are too small to be navigable for *cascos* except in the rainy season, the basin affords easy road making. There are a few lakes, the San Francisco, the Talavera, and the Paitan being the most important. They teem with fish.

Cabanatuan, the capital, San Isidro and Gapan are the chief commercial towns. There is a Government Agricultural School at Muñoz which is attended by students from different provinces.

This province has 26 municipalities and 223 barrios. The capital is located in the southwestern part of the province, and has 15,282 inhabitants.

HISTORICAL ACCOUNT.

In 1705, Governor Fausto Cruzat created a portion of Pampanga into a military *comandancia* of that province, naming the district Nueva Ecija, in honor of his native city. In that newly created *comandancia*, what is now the Province of Nueva Ecija had its humble origin.

From a military *comandancia*, Nueva Ecija grew into a province of important dimensions. In 1818 her limits extended to the Pacific and included regions which now form part of other provinces. The town of Palanan, now belonging to Isabela, was once a part of Nueva Ecija. The northern portion of what is now Tayabas, including the towns of Baler, Casiguran, Infanta, and Polillo, was also included within the limits of Nueva Ecija.

Extensive as was the territory of Nueva Ecija, her population up to the middle of the nineteenth century remained compar-



atively small, being only 9,165 in 1845. In 1848, however, Gapan, San Isidro, Cabiao, San Antonio, and Aliaga were separated from Pampanga and added to Nueva Ecija. The adjudication of these towns to Nueva Ecija raised the population to 69,135, besides enlarging her already extensive territory.

It was not long, however, before great portions of this territory were taken away and Nueva Ecija was reduced to practically her present limits. In 1853, the district of Principe, now a part of Tayabas, was formed out of Baler, Casiguran and two other towns of Nueva Ecija. In 1856, Isabela was created into a province and Palanan and the neighboring regions were given to the newly created province. Two years afterwards, Binañonan and Polillo were also separated from Nueva Ecija to form part of Infanta which was created a military district that year.

Nueva Ecija was one of the first eight provinces to raise the standard of revolt in 1896. Later, when the Revolutionary Government was formed in 1898, Nueva Ecija came under its control. Felino Cajucom for some time acted as governor.

Civil government was organized in Nueva Ecija on June 11, 1901.

The seat of government of Nueva Ecija was transferred from one place to another at various times. Baler was the first capital, Bongabong the second, and Cabanatuan the third. In 1852, the capital was moved to San Isidro where it remained until 1912, at which time it was restored to Cabanatuan.

STATISTICAL DATA.

Approximate area.....	square kilometers.....	5,359
Area of farms.....	hectares.....	205,410
Cultivated lands.....	do.....	97,159
Production in 1918:		
Rice.....	<i>cavans</i> ¹	4,150,937
Sugar cane.....	tons.....	6,598
Corn.....	<i>cavans</i>	39,908
Tobacco.....	kilos.....	769,955
Population.....		² 226,052
Number of schools.....		155
Primary.....	144	
Intermediate.....	9	
High school.....	1	
Vocational.....	1	
Enrollment for 1918.....	18,771	
Males.....	11,585	
Females.....	7,186	
Rate of mortality per 1,000 inhabitants.....		40.1
Number of establishments of household industries.....		376
Production in 1918.....		₱142,248.59
Number of manufacturing establishments.....		39
Production in 1918.....		₱161,610.16

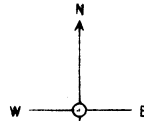
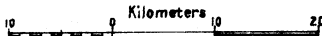
¹ One *cavan* equals 75 liters.

² Non-Christian population, 1,584, not included.



NUEVA ECIJA

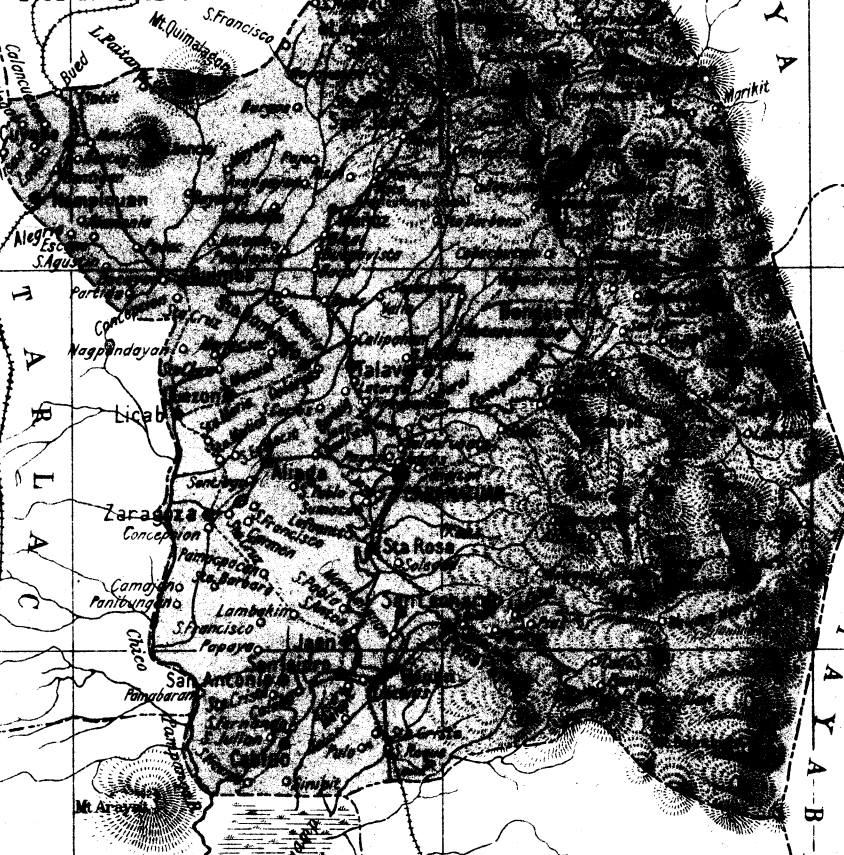
Area (Sq. Km.) 5,359
 Population 277,636
 Capital CABANATUAN
 Municipalities 26
 Barrios 223
 Elevations in meters



NUEVA

ECIJA

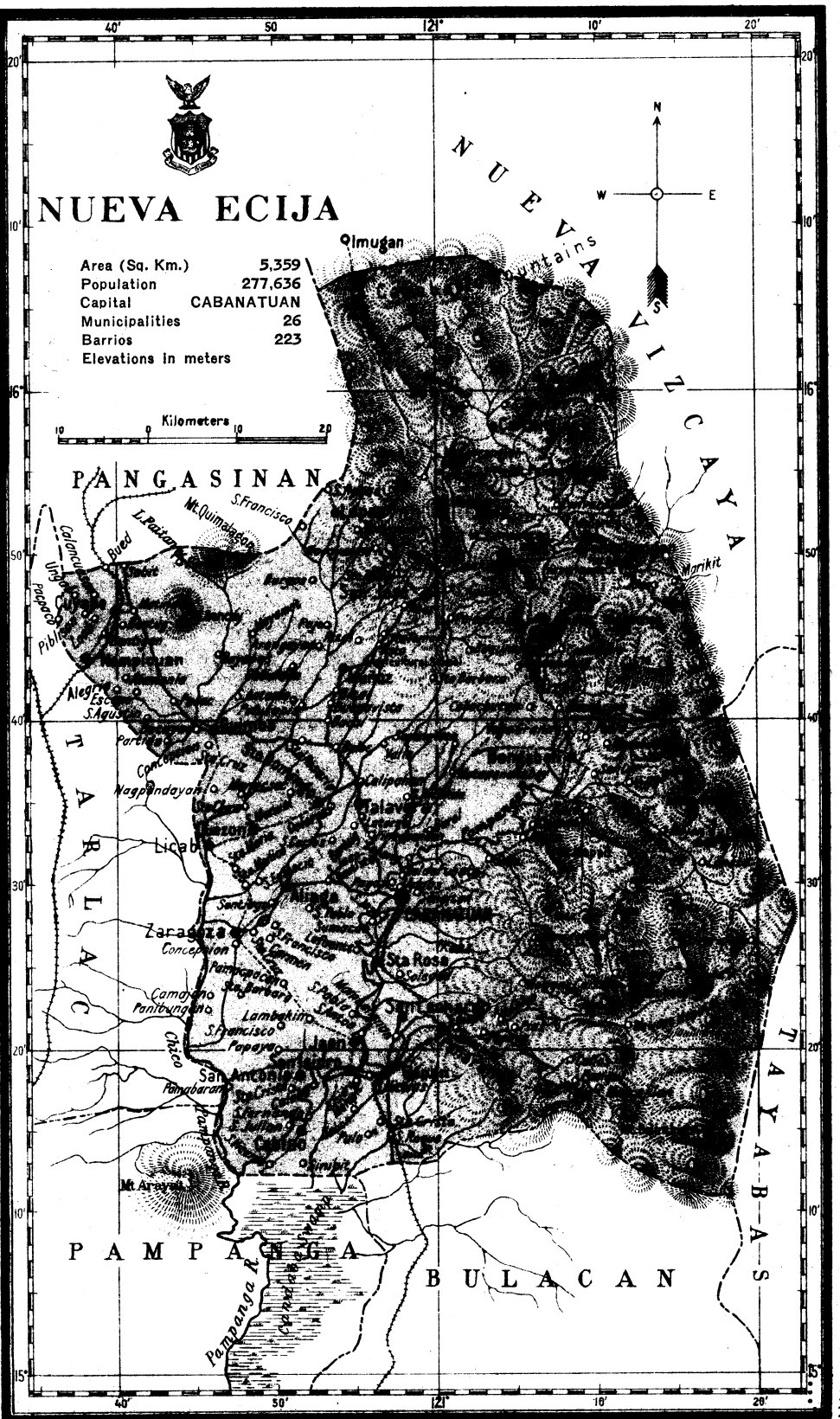
PANGASINAN



PAMPANGA

BULACAN

TAYBASAN



NUEVA VIZCAYA.

GEOGRAPHICAL SKETCH.

THE PROVINCE OF NUEVA VIZCAYA is in the north central part of Luzon and is bounded by Isabela and the Mountain Province on the north, Nueva Ecija and Tayabas on the south, the Pacific Ocean on the east, and Pangasinan and the Mountain Province on the west. From the south and west, Nueva Vizcaya may be reached via Nueva Ecija or Pangasinan from where there are trails, passable for horses, which connect the said provinces with the Bayombong-Santa Fe Road, a distance of 49 kilometers from the capital of the province.

The present number of Christian inhabitants of the province is 28,432.

There are vast areas of fertile public land, suitable for rice, tobacco, sugar, beans, potatoes, coffee, cacao, coconuts, and abacá, practically untouched, as well as virgin forests filled with all classes of valuable timber.

Nueva Vizcaya forms part of the so-called Cagayan Valley and is the gateway to and granary of the tobacco-producing provinces of Isabela and Cagayan, whose valleys are each year fertilized by the waters of the Cagayan and Magat Rivers, arising in the forest clad hills and valleys on Nueva Vizcaya.

The climatic conditions of Nueva Vizcaya are unsurpassed. There are places the climate of which is similar to that of Baguio. There are also places of scenic beauty, such as Salinas, which are not inferior to world-famous objectives of tourist travel. The salt springs at Salinas have been from time immemorial the source of this essential food element to the peoples of even distant regions. The application of modern methods of salt production is one of the activities of the provincial government in the development of our marvelous natural resources.

The province has 8 townships and 153 barrios. Its capital is Bayombong, with 5,585 inhabitants.¹ It is located in the northwestern part of the province.

HISTORICAL ACCOUNT.

As early as 1839, Governor Luis Lardizabal, upon the advice of the Alcalde Mayor of Cagayan, issued an order creating Nueva Vizcaya into a politico-military province. The order was approved by a Royal Decree dated April 10, 1841. The new province included the regions comprising the old missions of Ituy and Paniqui, in addition to the towns of Gamu, Furao, and

¹ Non-Christian population, 34, not included.

Ilagan. At the time of its creation, the new province had a population of about 19,754 souls.

As created in 1839, Nueva Vizcaya comprised a rather extensive territory including not only what is now Nueva Vizcaya, but also the present Subprovince of Ifugao and a good deal of the present Province of Isabela. But when Isabela was created in 1856, Nueva Vizcaya ceded to the newly created province a good deal of her northeastern territory, including Camarag, her capital. The capital of Nueva Vizcaya was moved to Bayombong.

The history of Nueva Vizcaya, like that of many other provinces of the Philippines, antedates its creation as such. The early history of what is now Nueva Vizcaya is, to a great extent, really the history of the missions of Ituy and Paniqui. As far back as 1609, the mission of Ituy was already organized. Among the early missionary centers established in this region were the now defunct town of San Miguel, founded in 1632, and the town of Aritao, founded in 1665. Bayombong was in the beginning a missionary center of Ituy. So was Bagabag.

The work of the missionaries proceeded under great difficulties, inasmuch as the natives disputed with them every inch of territory and resisted their advance. Military expeditions were therefore dispatched to these regions from time to time. Gaspar de la Torre, for example, sent in 1745 such an expedition under the leadership of a native soldier by the name of Lorenzo Dipagang. Three years later, another expedition was again dispatched under the command of Vicente de Ibarra, a Spanish military officer, ably seconded by a native soldier by the name of Cuarto Maddela. In 1832, Guillermo Galvey led another expedition through these regions which traversed the towns of Bayombong, Lumabang (now Solano), and Bagabag. But perhaps the most famous of all the expeditions through this territory was the one led by D. Mariano Oscarriz in 1847 and 1848. He explored the Ifugao country and visited Palanan.

The influence of the Revolution was not felt at once in Nueva Vizcaya. It was not until the latter part of 1898 that the Revolutionists, after having taken Cagayan and Isabela, occupied Nueva Vizcaya. Bayombong, whither José V. Perez Martinez, the last Spanish governor of Isabela had fled, capitulated in September, 1898.

Civil government was established in Nueva Vizcaya in January, 1902. But in September, 1905, Nueva Vizcaya was made a special province. Three years later, when the Mountain Province was created, the Ifugao territory of Nueva Vizcaya was detached and given to the newly created province. To compensate it for this loss, Nueva Vizcaya was given the region formerly known as the *comandancia* of Binatangan, which had hitherto been a part of Isabela.

STATISTICAL DATA.

Approximate area.....	square kilometers.....	9,143
Area of farms.....	hectares.....	8,327
Cultivated lands.....	do.....	5,674
Production in 1918:		
Rice.....	<i>cavans</i> ¹	318,696
Sugar cane.....	tons.....	2,895
Corn.....	<i>cavans</i>	8,811
Tobacco.....	kilos.....	391,000
Population.....		² 28,432
Number of schools.....		34
Primary.....	25	
Intermediate.....	2	
High school.....	1	
Vocational.....	6	
Enrollment for 1918.....	3,434	
Males.....	2,051	
Females.....	1,383	
Rate of mortality per 1,000 inhabitants.....		102.1
Number of establishments of household industries.....		55
Production in 1918.....		₱10,206.50

¹ One *cavan* equals 75 liters.² Non-Christian population, 7,387, not included.



OCcidental NEGROS.

GEOGRAPHICAL SKETCH.

THE PROVINCE OF OCCIDENTAL NEGROS occupies the northern and western parts of the Island of Negros. It has an area of 8,097 square kilometers about 110,256 hectares of which are actually under cultivation. The coast is very much more irregular than that of Oriental Negros. By reason of the coral reefs which abound near the coast, particularly to the west, navigation is very dangerous and difficult. Large vessels cannot enter the port of Bacolod, the capital, because of shallow water in the harbor. Sugar from the province is carried by "lorchas" to the port of Iloilo, the greatest terminal port of call in western Visayas, for export. Escalante, sheltered by coral reefs, is an important harbor in the northeastern part, while San Carlos, which is also protected by Refugio or Sipauay Island, is an important port of call on the west.

The northern and western parts of Occidental Negros are a vast level plain, while the remaining portion is practically a land of sierras of varying elevations. Mount Silay and Mount Mandalagan are the highest peaks in the province. The western part of the province, though covered with mountains which are overgrown with valuable timber and rattan, is much more accessible than the eastern side of the island. Coal deposits have been discovered but their extent is not yet known. A medicinal spring is found in the town of Murcia.

The province enjoys a very cool and invigorating climate. Rainfall is abundant, except in the south where a long dry season is experienced. This is because the high mountains on the north cut off the rain brought by the northeast monsoons.

The coastal plain is broken up here and there by many large rivers, the most navigable of which are the Silay River, the Ilog, the Binalbagan and the Bago.

The soil is of limestone origin, well adapted to the growth of sugar-cane. About 75 per cent of all the exported sugar from the entire Archipelago comes from Occidental Negros. Bacolod, Bago, Talisay, San Carlos, Ilog, the Binalbagan are the centers of sugar industry. Occidental Negros has as many as 518 haciendas, and six sugar centrals in actual operation. Rice, hemp, and tobacco are chiefly raised in the town of Escalante, while corn is produced in San Carlos. Copra is exported from the southern towns.

The province is but thinly populated and the necessary hands are lacking to develop the limitless resources of the mountains and plains. Most of the laborers come from the Island of Panay, principally from Iloilo and Capiz.

While the majority of the population is engaged in agriculture, a goodly percentage is employed in lumbering, an industry which is being rapidly developed by the establishment of sawmills.

This province has 25 municipalities and 442 barrios. Its capital is Bacolod, with 19,350 inhabitants.¹ It is located in the northwestern part of the province.

HISTORICAL ACCOUNT.

OCCIDENTAL NEGROS may be said to be one of the latest provinces to be created under Spanish rule, for it was only in 1890 that it came into existence as a province. Previous to that time it formed an integral part of the Island and Province of Negros. The old name of this island was Buglas, but the Spaniards who first visited the island, seeing the place inhabited by Negritos, gave to it the name which it has ever since borne. Fray Andres de Urdaneta visited the island in 1569, landing at the mouth of Danao River, within the territory which now belongs to Occidental Negros.

It appears that Occidental Negros, and in fact the whole Island of Negros, unlike many regions in the Philippines, was very sparsely populated in the early years. In what is now Occidental Negros, Ilog and Binalbagan appear to be the only native settlements at the time of the arrival of the Spaniards. These settlements were later erected into towns, Binalbagan in 1575, and Ilog in 1584.

It was perhaps due to this scarcity of population that the Island of Negros was organized as it was at first. Negros being divided, for purposes of administration, between Iloilo and Cebu. According to this arrangement, practically what is now Occidental Negros formed part of the Province of Iloilo. In 1734, however, the island was made into a military district by itself. Of this district, Negros Occidental became a part. The new district had Ilog as capital for a time. Later the seat of government was transferred to Himamaylan from which in 1849, it was removed to Bacolod, at present the capital of Occidental Negros.

Such was the status of Negros, a military district (up to about the middle of the 19th century. Then in 1856 Negros was raised to the category of a politico-military province, Don Emilio Saravia being the first politico-military governor. It was during the governorship of Saravia that several towns of Occidental Negros, like San Isidro, San Carlos and Calatrava were established.

The last half of the nineteenth century was a period of rapid material growth and development in the history of Occidental Negros. One evidence of this development was the growth of population. In 1856, there began a great influx of immigrants into the island from neighboring provinces like Antique, Capiz, and Cebu. A considerable number of the immigrants found their way to what is now Occidental Negros, settling in districts which had hitherto been sparsely, if at all, inhabited. As a consequence of such an influx of immigrants, the population of Occidental Negros increased from about 18,000 in 1850 to 148,137 in 1887. Another result was the establishment of new

¹ Non-Christian population, 64, not included.

towns. In 1860, there were founded the important towns of Saravia, Valladolid and Escalante.

The economic prosperity which set in during the same period was shown by the marked increase in the production of sugar. This result was due to the stimulus given to the cultivation of cane sugar by the opening of ports like Iloilo and Cebu to foreign commerce. The Island of Negros soon led the other provinces in the production of sugar. In 1856, Negros produced only about 4,000 piculs. This amount was increased to 100,000 in 1864, and 2,000,000 in 1893. In Occidental Negros, the cultivation of cane sugar soon began to be made on a large scale. The years 1860-61 saw the beginning of the creation of large *haciendas* like San Ildefonso de Minuluan, Silay, and Vista-Alegre. Modern machinery also began to be used, and by 1864 seven machines, operated by steam, were being used in the towns of Bacolod, Minuluan, and Bago.

During the last decade of the nineteenth century two important events occurred in the history of Occidental Negros. One was the division in 1890 of the Island and province of Negros which had theretofore existed as a politico-military province since 1856. The other took place in 1898. In November of that year the Spanish authorities capitulated at Bacolod to the Revolutionists under Juan Araneta. Immediately thereafter a Revolutionary Government was established, Juan Araneta acting as governor. Under this government Occidental and Oriental Negros were once more united and so remained until the establishment of civil government when the former divisions were reestablished.

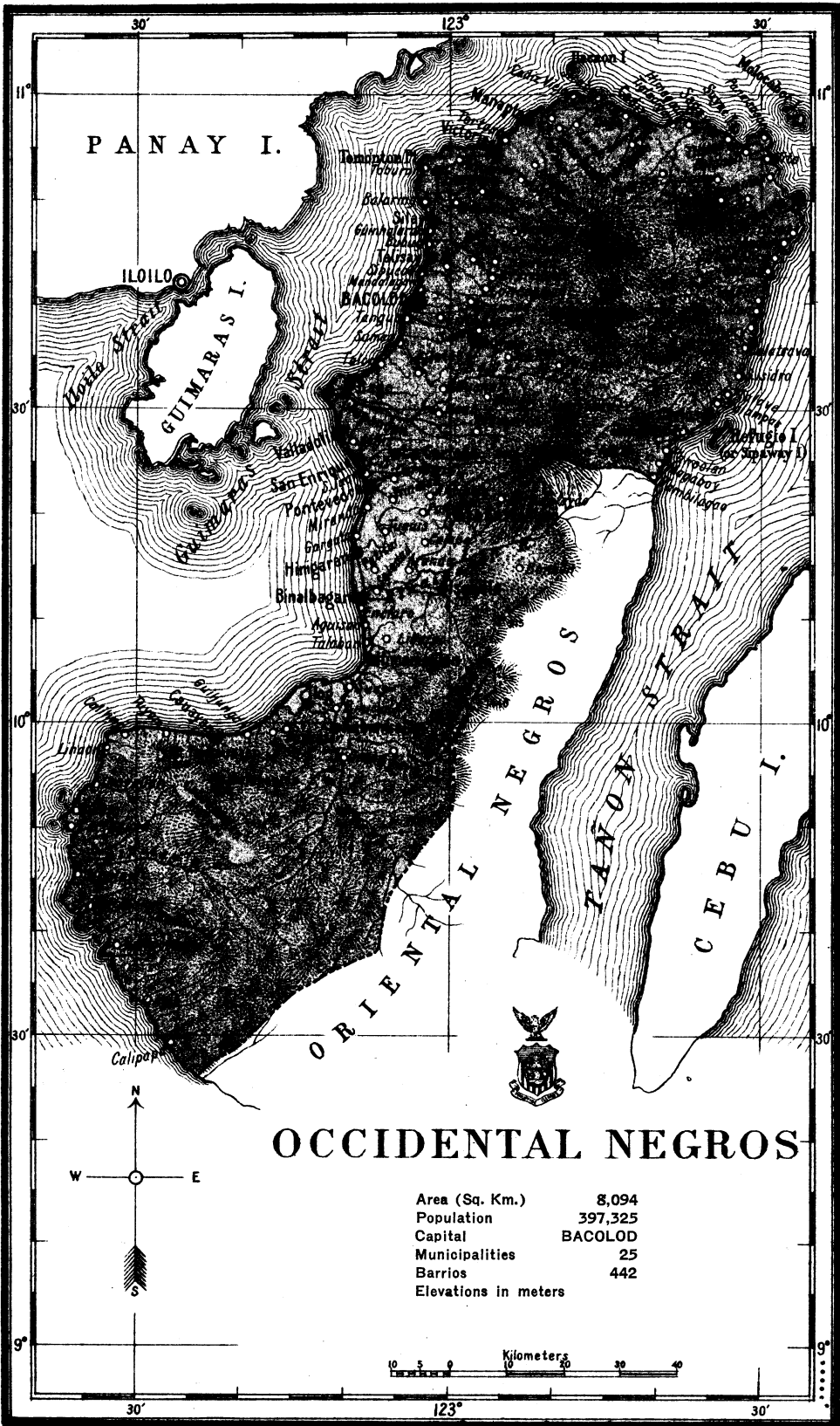
Civil government was established in Occidental Negros, April 20, 1901.

STATISTICAL DATA.

Approximate area.....	square kilometers.....	8,094
Area of farms.....	hectares.....	253,997
Cultivated lands.....	do.....	110,256
Production in 1918:		
Rice.....	<i>cavans</i> ¹	904,337
Sugar cane.....	tons.....	898,508
Corn.....	<i>cavans</i>	304,468
Copra.....	do.....	2,240,228
Abacá.....	do.....	6,080,539
Tobacco.....	do.....	1,080,508
Population.....		² 392,665
Number of schools.....		176
Primary.....	145	
Intermediate.....	26	
High school.....	3	
Vocational.....	2	
Enrollment for 1918.....	24,756	
Males.....	14,140	
Females.....	10,616	
Rate of mortality per 1,000 inhabitants.....		38.8
Number of establishments of household industries.....		2,258
Production in 1918.....		₱812,544.20
Number of manufacturing establishments.....		78
Production in 1918.....		₱2,034,697.26

¹ One *cavan* equals 75 liters.

² Non-Christian population, 4,660, not included.



PANAY I.

ILOILO

GUIMARAS I.

BACOLOD

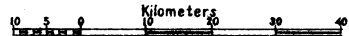
ORIENTAL NEGROS

TANON STRAIT

CEBU I.

OCCIDENTAL NEGROS

Area (Sq. Km.)	8,094
Population	397,325
Capital	BACOLOD
Municipalities	25
Barrios	442
Elevations in meters	



ORIENTAL NEGROS.

GEOGRAPHICAL SKETCH.

THIS PROVINCE, belonging to the eastern Visayan group, forms a part of the Island of Negros. It comprises the region east of the central range of the Island of Negros, Siquijor Island, and a number of smaller ones lying adjacent. It is separated from Occidental Negros by a chain of rugged mountains and from the Island of Cebu by the Tañon Strait. The province, covering an area of 4,926 square kilometers, is sparsely populated, because the surface of the land, with the exception of a narrow seaboard, is hilly.

The coast is very irregular. The most important indentations are the North Bais Bay and the South Bais Bay. The latter, besides having a deeper entrance, is a safer place for anchorage than the former, which is obstructed by coral reefs.

The climate is like that of Cebu. The province has but little rainfall, because it is shut off from the east by the mountains of Cebu and from the west by those of Occidental Negros; consequently, the rivers are short, but are navigable for small boats carrying on local trade.

The soil is sterile, being of limestone origin. The chief food of the people is corn. Kapok and coconuts are exported. Abacá and sugar cane are also grown but to a limited extent. The animals raised are similar to those of Cebu. There are two large lakes in Oriental Negros, namely, Lake Balinsasayao, and Lake Lanao which is the crater of an extinct volcano. There are two active volcanoes, one of which, called Canlaon, is in the extreme north, and the other one, which emits smoke and gases, is near Dumaguete.

The mountains are covered with forests of fine timber, but the difficulty of transporting logs to the coast is so great that lumbering is not much of an industry among the people. Sulphur has been discovered at Tayasan and Mount Tanglad. The town of Dauin is well known for its medicinal spring.

Most of the people live near coasts, where they have better facilities to engage in interisland commerce. Their chief occupations are farming, *sinamay* weaving, embroidering, and the making of mats and hats from the leaves of buri palms and of chairs and other furniture from rattan.

The capital is Dumaguete, a town so situated on the mouth of a river as to make it an important commercial center. It has 16,227 inhabitants. Some of the other important towns are Tolong, Bais, Vallehermoso, La Libertad, Tayasan, Tanjay,

Dauin, Siaton, and Siquijor in the Island of Siquijor. The interior of the province has only a few towns and the means of communication between them is poor.

This province has 17 municipalities and 217 barrios.

HISTORICAL ACCOUNT.

ORIENTAL NEGROS, like its sister province to the west, was not created into a separate province until 1890. On this account it has the distinction of being one of the last few provinces to be created by the Spanish government. Previous to 1890 Oriental Negros was an integral part of the Island and Province of Negros. This island was formerly known as Buglas, but the name was changed to "Negros" by the early Spaniards because of the fact that at the time Negritos abounded on the Island.

Like Occidental Negros, Oriental Negros was at the time of the arrival of the Spaniards far from being a well-populated region. There were not to be found here thriving native settlements such as existed in other regions of the Philippines, even before the arrival of the Spaniards. Dumaguete, formerly known as Managuit, a name which was given to it by Moro pirates, seems to be the only settlement in Oriental Negros when the Spaniards arrived. Some of the towns of early creation were founded at the close of the 18th century and the beginning of the 19th. Dauin, for example, was founded in 1787; Tayasan, in 1790; Jimalalud, in 1797; Guijulan, in 1800; and Bacong, in 1801.

As first constituted, what is now Oriental Negros was placed under the jurisdiction of the Province of Cebu. As such, it remained until 1734, when the whole Island of Negros was made into a separate military district. Of this district, Oriental Negros became an integral part.

Like many other provinces, Oriental Negros suffered long and greatly from the ravages of Moro pirates. As a matter of fact the Moros continued to make incursions upon the coast towns of the province down to as late as 1873. As a defensive measure, watch-towers were erected along the coast. In these towers men were stationed to watch for the approach of the Moros. One of such towers, built in 1811, is still standing in Dumaguete.

In 1856, the military district of Negros was raised to the category of a politico-military province. In the same year began the immigration into Negros of people from neighboring provinces like Antique, Capiz, and Cebu. As a result of such immigration, the population of Oriental Negros increased considerably. In 1850, it was estimated to be a little over 20,000. In 1887, however, this number had increased to 122,754.

The second half of the 19th century was a period of economic prosperity for the Island of Negros and incidentally for the Province of Oriental Negros as well as for Occidental Negros. This period saw the opening of the ports of Iloilo and Cebu to foreign commerce. The opening of the ports gave incentive to

the production of sugar in Negros. In 1856, only about 4,000 piculs of sugar were produced. However, in 1864, this amount had increased to 100,000 piculs, while in 1893 the amount reached the 2,000,000 mark.

In 1890, the Island and Province of Negros was divided into two politico-military provinces: Occidental and Oriental Negros. Oriental Negros remained as such till the close of Spanish rule. As constituted in 1898, it included the following towns: Amblan, Ayungon, Ayuqitan, Bacong, Bais, Bayanan, Canaan, Dauin, Dumaguete (capital), Guijulan, Manjuyod, Nueva Valencia, Siaton, Tanjay, Tayasan, Tolon, and Zamboanguita. Moreover, it included in its jurisdiction the Island of Siquijor, which formerly was a dependency of the Province of Bohol.

The Revolution had its effects also in Oriental Negros, where the people, shortly after the outbreak of the Revolution, rose in revolt. The uprising led to the capitulation of the Spaniards in November, 1898. A Filipino Revolutionary Government was immediately thereafter established, Juan Araneta acting as governor. Under this government Negros was constituted as a single province, known as the "Politico-Military Government of Negros."

With the establishment of civil government, the island was again divided into Occidental and Oriental Negros. In Oriental Negros, civil government was established May 1, 1901.

STATISTICAL DATA.

Approximate area.....	square kilometers.....	4,926
Area of farms.....	hectares.....	83,434
Cultivated lands	do.....	37,839
Production in 1918:		
Rice	cavans ¹	69,315
Sugar cane.....	tons.....	31,092
Corn	cavans.....	494,509
Copra	kilos.....	3,938,223
Abacá	do.....	2,713,228
Tobacco	do.....	578,520
Population		² 215,515
Number of schools.....		
Primary	104	
Intermediate	11	
High school	1	
Collegiate	1	
Enrollment for 1918.....	14,336	
Males	8,527	
Females	5,809	
Rate of mortality per 1,000 inhabitants.....		36.0
Number of establishments of household industries.....		1,092
Production in 1918.....		₱208,517.00
Number of manufacturing establishments.....		12
Production in 1918.....		₱143,545.43

¹ One *cavan* equals 75 liters.

² Non-Christian population, 26, not included.

STATISTICAL DATA (SIQUIJOR).

Approximate area.....	square kilometers.....	123
Area of farms.....	hectares.....	12,190
Cultivated lands	do.....	7,369
Production in 1918:		
Rice	<i>cavans</i> ¹	7,180
Sugar cane	tons.....	216
Corn	<i>cavans</i>	29,831
Copra	kilos.....	765,263
Abacá	do.....	65,130
Tobacco	do.....	109,063
Population		56,695
Number of schools.....		33
Primary	32	
Intermediate	1	
High school		
Vocational		
Enrollment for 1918.....		3,535
Males	1,985	
Females	1,550	
Rate of mortality per 1,000 inhabitants.....		30.0
Number of establishments of household industries.....		910
Production in 1918.....		₱155,259.36
Number of manufacturing establishments.....		
Production in 1918.....		

¹ One *cavan* equals 75 liters.



PALAWAN.

GEOGRAPHICAL SKETCH.

The long and narrow Island of Palawan lies across the Sulu Sea between the Islands of Mindoro on the north and Borneo on the south. This province, with an enormous area of 14,553 square kilometers, includes the island of Palawan and about 209 other small islets, of which the Calamian Group, Cuyo, Dumarang, Cagayanes, and Balabac, are the most important.

The eastern coast contains many deep, landlocked bays and excellent harbors, with a depth ranging from 2 to 20 fathoms. These arms of the sea are well-protected from terrific storms, and from the influence of strong currents and big waves of the Sulu sea. The western coast is bordered with dangerous coral reefs, so that there is practically no trade carried on here. The bays of Bacuit, Imuruan Ulugan, and the Malampaya Sound, afford good places for anchorage on the west coast.

The climate is rather warm, because of its long dry season. The rainclouds during the northeast monsoons practically lose all their moisture before reaching the southwestern parts of the Archipelago, so that Palawan receives no rainfall at this time. When the southwest winds come, the land receives torrential rains, which are not so evenly distributed as to support the growth of abaca.

A chain of mountain ranges of considerable height runs throughout the entire length of the island, dividing it into two distinct parts. The highest peak on the south is Mount Mantalingahan, with 2,086 meters elevation, Mount Gantung on the center, with 1,788 meters, and the Cleopatra Needle Peak on the north, which is 1,585 meters high above sea level. The proximity of these mountains to the coasts gives rise to short rivers of little importance. The forests are rich in valuable woods, rattan, beeswax, resins and barks for tanning leather, which are exported in great quantities.

The narrow plain along the coasts, and the valleys in the interior are fertile and productive. Rice, corn, and sweet potatoes are raised for local use, though rice is imported to a considerable amount. Coconuts thrive best along the seashores, and form the chief item for export. Oranges are also exported from the Island of Cuyo.

There are plenty of grazing grounds on some of the small islands where cattle and carabaos are raised and exported.

The island is rich in mineral resources. Iron, sulphur, gold, lead, antimony, and quartz, are believed to exist because of the geological conditions. So far, copper is the only mineral discovered, but not yet exploited.

The chief industry of the people is fishing, gathering trepangs, seashells, and edible birds' nests on the limestone cliffs near the shores. Trepangs and edible birds' nests are excellent food for the Chinese, and are therefore exported to China. The seashells are exported to Manila for making buttons.

The capital is Puerto Princesa, having 5,827 inhabitants.¹ It

¹ Non-Christian population, 645, not included.



is the largest town and chief seaport of Palawan on the east coast. Taytay is the chief seaport on the north. Cuyo and Balabac are other towns of commercial importance. The latter trades with the Spice Islands, particularly Borneo, while Puerto Princesa and Cuyo deal with the ports of Manila and Iloilo.

The proximity of the island to the Dutch East Indies and to Borneo puts Palawan in a very advantageous position commercially. Besides the favorable location, Palawan is favored by the valleys of great fertility, the well protected ports, the easily exploited virgin forests and the rich fishing banks.

The Palawan group has a very few people. The Tagalogs and the Visayans occupy the northern part of Palawan and some of the best islands on the north; the Moros live in the south, while the Bataks, the Tagbanuas, and the primitive Palawans inhabit the impregnable interior.

This province has 8 townships, 3 settlements, and 132 barrios.

HISTORICAL ACCOUNT.

The settlements of the province of Palawan were undoubtedly among the earliest to come under Mohammedan influence. It is believed that the Mohammedan movement which overran all of Oceania between the thirteenth and fifteenth centuries took two distinct courses on reaching the Philippines. One of these led to Mindanao, while the other lay through the string of islands which constitute the present province of Palawan.

The Spaniards established their authority first in the northern portion of the province, over the islands of the Calamianes group. They organized these into a province, known as Calamianes. The southern portion of the province, that which includes the big Island of Paragua, was then a part of the sultanate of Borneo and as such was beyond Spanish authority. However, in the early part of the eighteenth century, the Spaniards established a garrison at Taytay in the northern portion of the island. Later they built a fort there capable of accommodating a garrison of 700 men. From that time on, Taytay became the bulwark of Spanish authority in that portion of Paragua, as well as an advanced post of Catholicism. The Moros tried to capture it in 1730 and again in 1735, but their attempts failed each time.

About the middle of the same century, the Spanish government obtained from the Sultanate of Borneo the cession of the southern part of Paragua. The attempt was soon after made to extend Spanish authority to the newly acquired territory by establishing there a colony similar to the one at Taytay. The enterprise, however, had to be abandoned because of the outbreak of fever from which a considerable number of the expeditionary force perished.

During the nineteenth century several changes were made in the organization of the province. In 1818, practically all the territories which now belong to Palawan was known as the province of Calamianes. This province had its capital at Taytay. In 1858, Calamianes was divided into two provinces: Castilla and Asturias. The first comprised the Calamianes group and adjacent islands, and the northern portion of Paragua. Its



capital was Taytay. Asturias included the rest of Paragua together with the Island of Balabac, which early that year was made into a politico-military province under the name of Principe Alfonso. This province had its capital at Puerto Princesa. Later, during the time of Governor Izquierdo, a further change was made. The Island of Paragua was organized into a separate politico-military province with Puerto Princesa as capital. At the end of Spanish rule, the Province of Palawan was divided into three district politico-military provinces: Calamianes, Paragua, and Balabac.

Among the places of special interest in Palawan may be mentioned Balabac, on the island of the same name. It will be remembered that a great number of the men who were exiled in 1896 because of alleged complicity in the *Katipunan*, which in August of that year raised the standard of revolt, were sent to Balabac.

Civil government was established June 23, 1902. The province as organized was known as Paragua. It included practically what belonged to the former province of Castilla, namely, the Calamianes group and adjacent islands and that part of the Island of Paragua north of the 10° north latitude. The capital was first established at Cuyo. Later, however, it was moved to Puerto Princesa.

In 1903, the boundary of the province was extended to include its present territory.

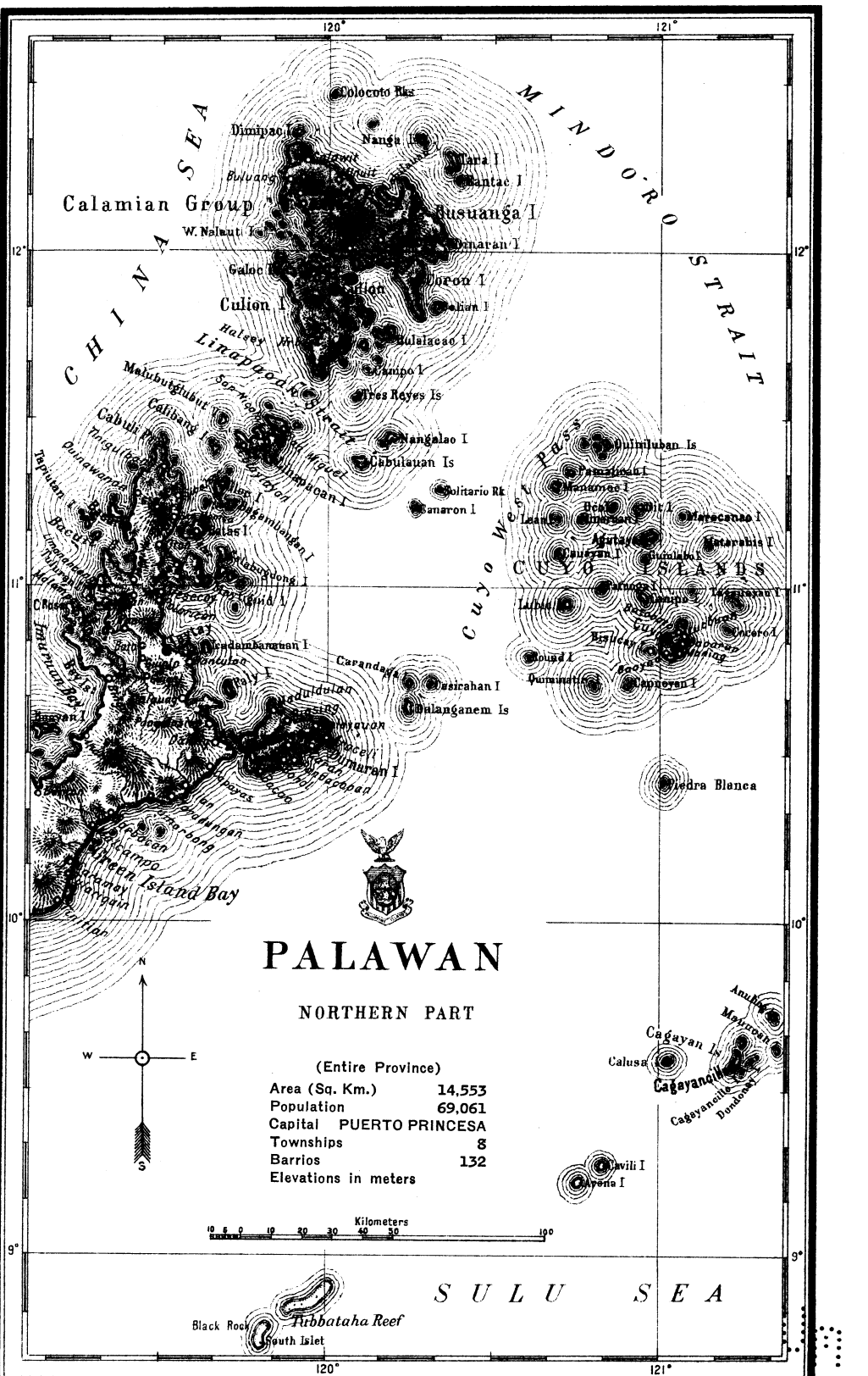
In 1905, the name Paragua was changed to Palawan, the present name of the province.

STATISTICAL DATA.

Approximate area.....	square kilometers.....	14,553
Area of farms.....	hectares.....	41,566
Cultivated lands.....	do.....	11,628
Production in 1918:		
Rice.....	cavans ¹	86,531
Sugar cane.....	tons.....	1,092
Corn.....	cavans.....	6,337
Copra.....	kilos.....	768,662
Abacá.....	do.....	1,075,684
Tobacco.....	do.....	45,200
Population.....		² 45,989
Number of schools.....		36
Primary.....	32	
Intermediate.....	2	
High school.....	1	
Vocational.....	1	
Enrollment for 1918.....	4,493	
Males.....	3,151	
Females.....	1,342	
Rate of mortality per 1,000 inhabitants.....		59.3
Number of establishments of household industries.....		24
Production in 1918.....		₱8,579.00
Number of manufacturing establishments.....		3
Production in 1918.....		₱24,709.35

¹ One *cavan* equals 75 liters.

² Non-Christian population, 23,072, not included.

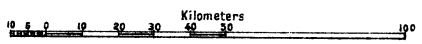


PALAWAN

NORTHERN PART

(Entire Province)

Area (Sq. Km.)	14,553
Population	69,061
Capital	PUERTO PRINCESA
Townships	8
Barrios	132
Elevations in meters	



Black Rock
 Rubbataha Reef
 South Islet

SULU SEA



PAMPANGA.

GEOGRAPHICAL SKETCH.

With the exception of the western portion which embraces the low hills of the Zambales range, and of Mount Arayat, Pampanga is the lowest and most level of all the provinces of the Philippines.

As the province is destitute of mineral wealth, the people depend mostly upon agriculture, lumbering, fishing, and other industries. The areas of fertile heavy soil in the northern part make Pampanga the chief sugar-raising province of Luzon and the second in the Philippines. The central and southern portions and the areas bordering the Candaba swamp export much rice. Other parts of the plain produce corn, peanuts, bananas, mangoes, and other fruits and some vegetables. The mountains of the west and Mount Arayat supply much timber. The Negritos of the Zambales side trade rattan and beeswax with the lowland people. The low hills contain fine grasslands for cattle and horses. The eastern portion, embracing almost one-fifth of the area of the province, is covered by the Candaba swamp, which is a principal resource of the people for alcohol and nipa thatch. The delta of the Pampanga River in the south bordering Manila Bay is also covered with mangrove swamps which supply firewood and tan bark. It is also the home of the fishermen.

Besides farming, sugar making, lumbering, and fishing, the people are engaged in several other industries, such as the distillation of alcohol, buri hat making, and pottery. Thousands of *pilonos* for the sugar industry and quantities of clay jars for the surrounding provinces are manufactured.

The sedimentary character of the soil and the topography of the province favor the drilling of artesian wells, over 300 of which are at present in use.

Pampanga is an exceptionally fertile plain and, with initiative and effort, the inhabitant has every opportunity to become prosperous by taking advantage of the great possibilities around him.

Commerce is fostered by cheap transportation. The tributaries and estuaries of the river afford easy means of travel. Small boats ply in the rivers from one town to another, carrying goods to or from Manila. The railroad has greatly assisted the development of the province. Many of the inhabitants are traders and those from Macabebe are given to traveling in other provinces.

This province has 21 municipalities and 410 barrios. Its capital is San Fernando, with 21,092 inhabitants. It is located in the southeastern part of the province.

HISTORICAL ACCOUNT.

Soon after the Spaniards occupied Manila in 1571, they learned that north of Manila Bay along the bank of a great river, there lived brave people called Pampangans. This people had several prosperous settlements, among the most important of which at that early time were Lubao, Betis, Macabebe, Bacolor, Candaba, and Arayat.

A story is told anent the refusal of the people of what is now southern Pampanga to receive the Spaniards as friends. It appears that soon after Legazpi had occupied Manila, a delegation of prominent natives from Macabebe and Hagonoy went to Tondo to persuade Rajah Lacandola to expel the newcomers. Legazpi learned of the arrival of the delegation and sent two Spaniards to receive them and to conduct them to his palace in the belief that they had come to declare their allegiance to Spain. But the native delegates, true to their intentions, refused the friendly overtures of Legazpi's envoys. The king of Macabebe, who led the delegation, is reported to have told the Spaniards: "May the sun split my body into halves, and may my women folks heap their hatred on me, if I should ever become a friend of the Castilians."

To overcome the resistance of the Pampangans, Legazpi sent Martin de Goiti with an army to effect the submission of the region north of Manila Bay. At Lubao and Betis, the Spaniards met great opposition. The Pampangans entrenched themselves in strong forts and at first successfully resisted the Spanish attacks. However, after great difficulties, Goiti succeeded in advancing and early in 1572 had the greater part of what is now Pampanga under control. In the course of his exploration, he penetrated as far north as the shores of the Lingayen Gulf.

Hardly had the conquest of Pampanga been completed, when this region was formally created into a province with Bacolor as capital. As created, the new province occupied a vast region, including parts of the present Provinces of Bataan, Tarlac, and Nueva Ecija.

About the middle of the seventeenth century, two great rebellions broke out in the province. The first of these took place in 1645 as a result of the injustices connected with the collection of tributes. It spread quickly and extended to Zambales. The second revolt took place fifteen years later as a result of the forcible employment of natives in the work of cutting timber and of the failure of the Government to pay for large amounts of rice collected in Pampanga for the use of the royal officials. The leader of the rebellion was Francisco Maniago. It spread rapidly among the inhabitants of the towns along the banks of the Pampanga River, and was only suppressed after drastic measures were taken by Governor-General Manrique de Lara.

It may also be mentioned that the attempt of Andres Malong to annex Pampanga to his projected kingdom of northern and western Luzon occurred at this time. Malong sent an army of 6,000 men under Melchor de Vera to effect the conquest of

Pampanga. This army reached as far as Magalan, but here it met the Spanish forces which forced it to retreat.

The province of Pampanga as created in 1571 comprised a vast region which, however, was reduced from time to time. In 1754, when the Province of Bataan was created, it was given a narrow strip of Pampangan territory comprising the towns of Dinalupihan, Hermosa, Orani, Samal, Abucay, Balanga, Pilar, and Orion. In 1848, by adjudication to Nueva Ecija, Pampanga lost the towns of Gapan, San Isidro, Cabiao, San Antonio and Aliaga, as well as the town of San Miguel and its neighborhood which was given to Bulacan. For the third time in 1860, Pampanga lost a portion of her territory. It was in this year that its northwestern district including the towns of Bamban, Capas, Concepción, Victoria, Tarlac, Mabalacat, Magalan, Porac, and Florida Blanca was detached and erected into a *comandancia politico-militar*. The last four towns, however, were returned to Pampanga in 1873.

Pampanga was one of the first provinces to start the Revolution. During the early part of the war, Mariano Llanera commanded the Revolutionary forces. Later, Tiburcio Hilario took possession of the province as governor in the name of the Revolutionary Government.

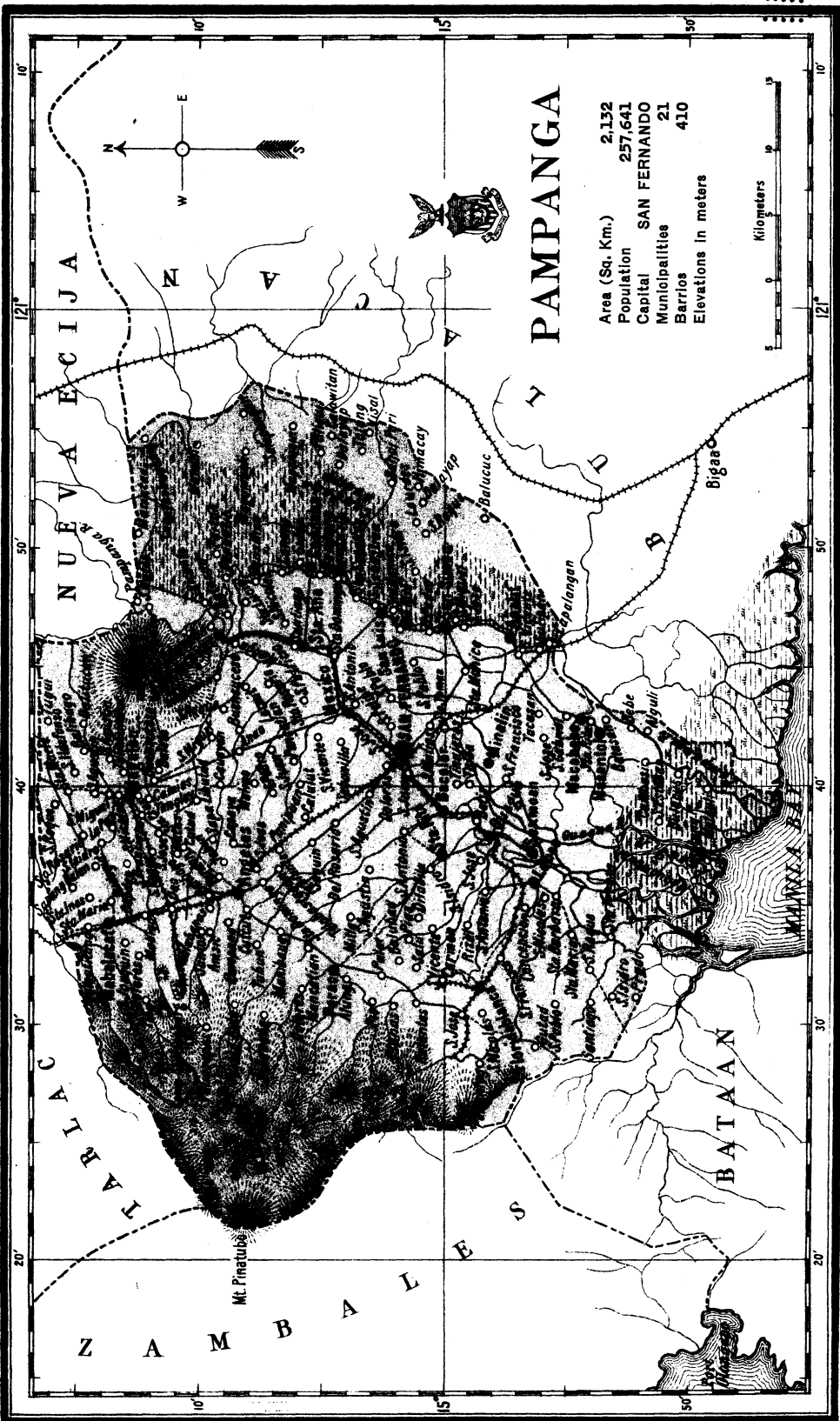
Civil government was established in Pampanga on February 13, 1901.

STATISTICAL DATA.

Approximate area.....	square kilometers.....	2,132
Area of farms.....	hectares.....	149,472
Cultivated lands.....	do.....	100,400
Production in 1918:		
Rice.....	<i>cavans</i> ¹	1,773,401
Sugar cane.....	tons.....	1,019,779
Corn.....	<i>cavans</i>	81,031
Tobacco.....	kilos.....	3,036
Population.....		² 256,022
Number of schools.....		132
Primary.....	115	
Intermediate.....	15	
High school.....	1	
Vocational.....	1	
Enrollment for 1918.....	17,563	
Males.....	11,118	
Females.....	6,445	
Rate of mortality per 1,000 inhabitants.....		52.1
Number of establishments of household industries.....		3,688
Production in 1918.....		₱1,124,701.95
Number of manufacturing establishments.....		136
Production in 1918.....		₱1,178,018.50

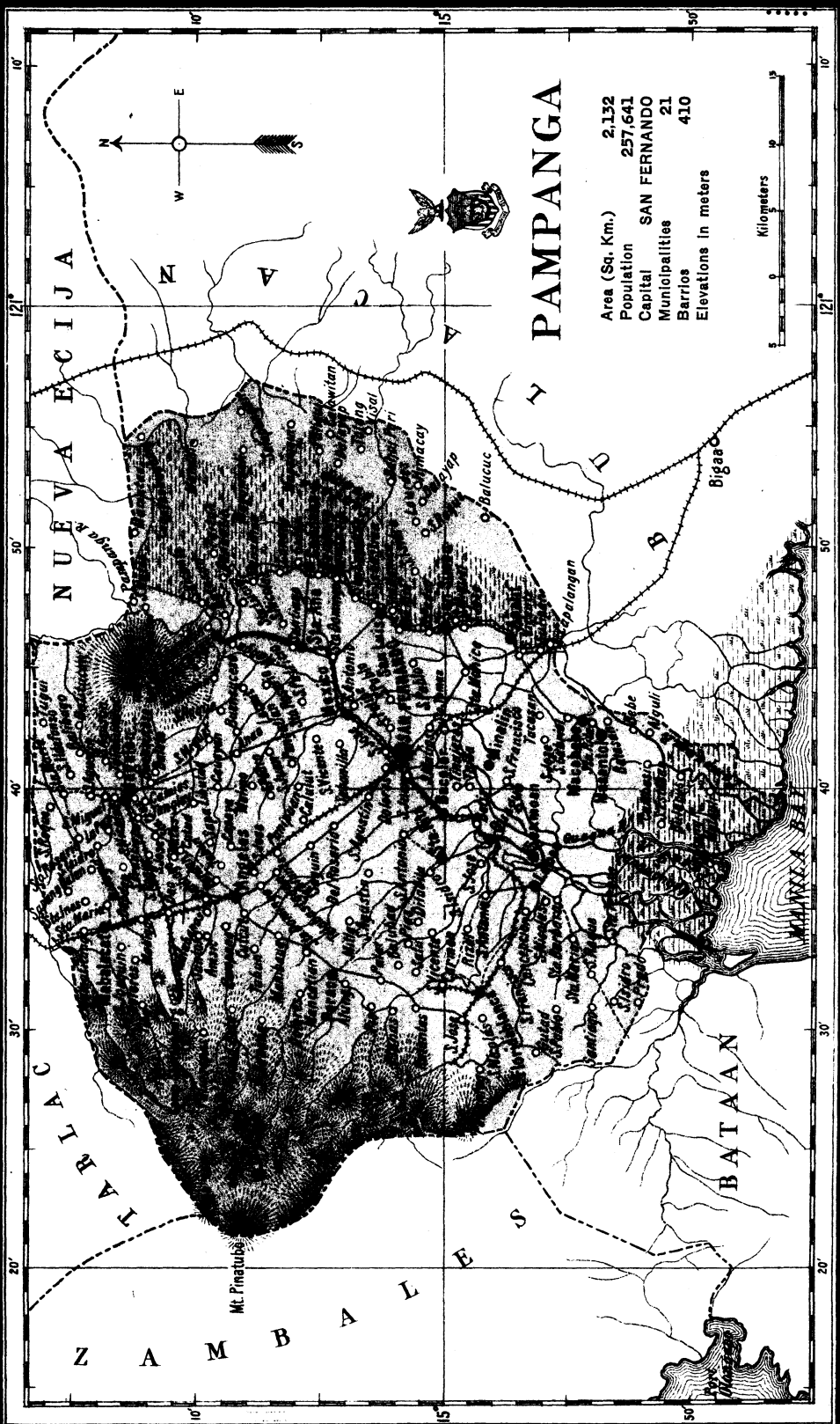
¹ One *cavan* equals 75 liters.

² Non-Christian population, 1,619, not included.



PAMPANGA

Area (Sq. Km.) 2,132
 Population 257,641
 Capital SAN FERNANDO
 Municipalities 21
 Barrios 410
 Elevations in meters

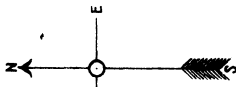


NUEVA ECIJA

ZAMBALES

BATAAN

Mt. Pinatubo





PANGASINAN.

GEOGRAPHICAL SKETCH.

Geographically, the province may be divided into two parts, the northwestern which occupies the peninsula bordering Lingayen Gulf on the east and the China Sea on the north and west, and the central and eastern regions which include the main portion of the Agno River delta and the drainage basin.

The relief of northwestern Pangasinan, is quite moderate, seldom reaching a height over 130 meters. This region, within comparatively recent times, has been gently uplifted above sea-level and erosion has subsequently cut out the various topographical forms of the extensive plateau. The erosion generally is immature and the majority of the rivers are incised in narrow sharp valleys which broaden into a flood plain just before entering the sea. Mount San Isidro forms a prominent feature of the landscape. It has a conical shape with two conical points which apparently represent stocks of volcanic events. The major part of the mountainous region is unforested. Sufficient mangrove firewood is cut near the sea-coast. Cogon and talahib are found everywhere except in the cultivated valleys where rice, coconuts, and tobacco are raised. On the southern end, the hills embrace the headwaters of the Alaminos and Balincaguin Rivers and are characterized by narrow valleys and precipitous slopes. The rivers are rapidly cutting canyons. Cliffs and buttes are frequently seen. The Alaminos flood plain is the largest valley in area (75 square kilometers).

Coral reefs, recent and living, fringe the shore lines. Harbors are found at several places along the coast, particularly, at Sual where there is deep, well-protected water. Except for coastwise trade, Sual is not now utilized, although during the Spanish régime it was one of the centers of foreign commerce. Now all imports and exports are handled by the Manila Railroad Company. Dasol Bay has also a fine anchorage, the depth ranging from 14 to 20 fathoms. Bolinao harbor is well-sheltered, and the narrow southern entrance is 20 feet deep.

The occurrence of copper, gold, silver, iron, manganese, and antimony has been confirmed, but the known deposits appear to be of no value. Mineral springs are found in Mangatarem, Balungao, and Pozorrubio.

The eastern portion is part of the central Luzon plain built of the flats and delta of the Agno, and makes Pangasinan one of the richest provinces of the Archipelago.

Rice, tobacco, and coconuts are the principal products. The rice lands are so extensive and so fertile that during hard times

thousands of people throughout the Archipelago, especially from the Ilocos provinces, flock to Pangasinan either as settlers or as workers during the harvest. The province has been rightly called the granary of the Philippines. Tobacco and coconuts are raised for export. The swamp lands and tide flats are sources of nipa thatch and alcohol. Mongo, cogon, sugar cane, and mangoes are also raised extensively.

The existing industries entirely depend upon the natural resources. Along the tidal flats, saltmaking is so universal that the province has been named "Pangasinan," meaning "the place where there is salt." Large parts of these same tidal lands are converted into artificial fish ponds with suitable gates that admit water during high tide. Even as far south as Bayambang, the overflowed lands of the Agno River have been converted into similar ponds where quantities of fresh water fish are obtained and shipped to Manila in large *baskets* containing water.

The famous Calasiao hat is made from the leaf of the buri palm. Matmaking is an industry in Bani and Bolinao. Lingayen uses the palm fiber for making sugar sacks and San Carlos for the *salacot* or native helmet. Calasiao, Mañgaldan, and San Carlos prepare the *tabo* or native cup from the coconut shell. Binmaley and Dagupan manufacture the *zueco* (wooden shoe), from the woods cut in the Zambales mountains. San Carlos, Binmaley, Santa Barbara, Malasiqui, and Bayambang have brickyards and manufactories of pottery. Mañgaldan is famous for its indigo blue and blue-black dyes.

Commerce, local as well as inter-provincial, is extensive. Lingayen is the capital, with 22,730 inhabitants. It is situated in the north central part of the province.

This province has 46 municipalities and 809 barrios.

HISTORICAL ACCOUNT.

It is believed that a native kingdom existed in pre-Spanish times in the region which now belongs to Pangasinan. This native kingdom was called by the early chroniclers "Layug na Caboloan." At the time of the arrival of the first missionaries in this region, the king was Kasikis. His capital was Sapan Palapar in the neighborhood of the present town of San Carlos.

The coast towns of Pangasinan, like those of Ilocos, were known to Chinese and Japanese traders long before the arrival of the Spaniards. It is believed that commercial relations then existed between these foreign traders and the natives. As a matter of fact, Chao-Ju-Kua, a Chinese geographer of the thirteenth century, recorded the existence of a region called Li-King-Tung, with which the Chinese traded. This region is believed to be Lingayen.

The exploration of Pangasinan began immediately after the occupation of Manila by Legaspi. Field Marshall Martin de Goiti headed the expedition that was sent to effect the subjugation of the region north of Manila. De Goiti explored not only what is now Pampanga, but also Tarlac and Pangasinan, reaching as far as the shores of Lingayen Gulf. Salcedo in 1572 led another expedition that sailed up the western coast of Luzon,

visiting several coast towns. He landed at the mouth of the Agno River and explored the neighboring regions where he invariably encountered hostile natives.

The missionaries followed in the footsteps of these two daring explorers. As early as 1585, Franciscan missionaries succeeded in penetrating into the kingdom of *Layug na Caboloan*. Their attempt to convert the natives to Christianity greatly antagonized King Kasikis, who ordered the execution of the friars. But for the timely intervention of King Lakandola of Tondo, who advised Kasikis to receive the Spaniards favorably, the missionaries would have been executed. In spite of great difficulties, the missionaries persisted in their efforts at conversion and as early as 1609 they had established five mission houses in Pangasinan, located as follows: one in Agoo (now in La Union), one in Binalatongan (now San Carlos), one at Calasiao, one at Mañaldan, and one at Manaoag.

Pangasinan was created into a province in 1611. As created that year, it included a considerable portion of the northern part of what is now Tarlac. Its western boundary extended only as far as the Zambales mountains. Pangasinan also included the northern part of what is now La Union as far as Santo Tomas. Later (1785), the northern boundaries was moved to Bacnotan where it remained until the creation of La Union into a province.

Hardly had the Spanish exploring expedition under Salcedo left Pangasinan, when another disturbing factor appeared in 1574. It was in that year that Limahong after his repulse at Manila, appeared with his vast army at the mouth of the Agno River and tried to found a settlement on its banks. This attempt of Limahong was a failure.

During the period from 1660 to about 1765, two important revolts occurred in Pangasinan. The first of these was the rebellion led by Andres Malong, who in 1660 attempted to establish a great kingdom with Binalatongan as capital and comprising all of northern and western Luzon as far south as Zambales and Pampanga. It was Andres Malong, it should be remembered, who sent his able generals Pedro Gumapos and Jacinto Makasiag with a large army to effect the conquest of northern Luzon. The second revolt was led by the famous Pangasinan leader, Juan de la Cruz Palaris, often known as "Palaripar." This rebellion which took place in 1762 was caused by the injustices of the tribute. Its center was also at Binalatongan. The rebellion lasted over two years during which time it spread practically throughout the whole province. It ended with the capture and execution of Palaris in 1765.

The latter part of the nineteenth century was a period of economic growth in the history of Pangasinan. In 1855, the port of Sual was thrown open to foreign commerce. This single event alone stimulated commerce and industry not only in Pangasinan, but also in the neighboring provinces. Later, in 1891, the Manila-Dagupan railway was opened. This improved the system of transportation and resulted in economic prosperity.

The Revolution did not gain headway in Pangasinan until the latter part of the year 1897. A few towns then became the scene of rebellious activities, especially San Quintin. In the beginning of 1898, in spite of the Pact of Biac-na-bato, disturbances were going on in various towns like Balincaguin, Agno, Alaminos, and San Nicolas. When the Revolutionary Government was proclaimed, Pangasinan, like many other provinces, came under the control of the new government.

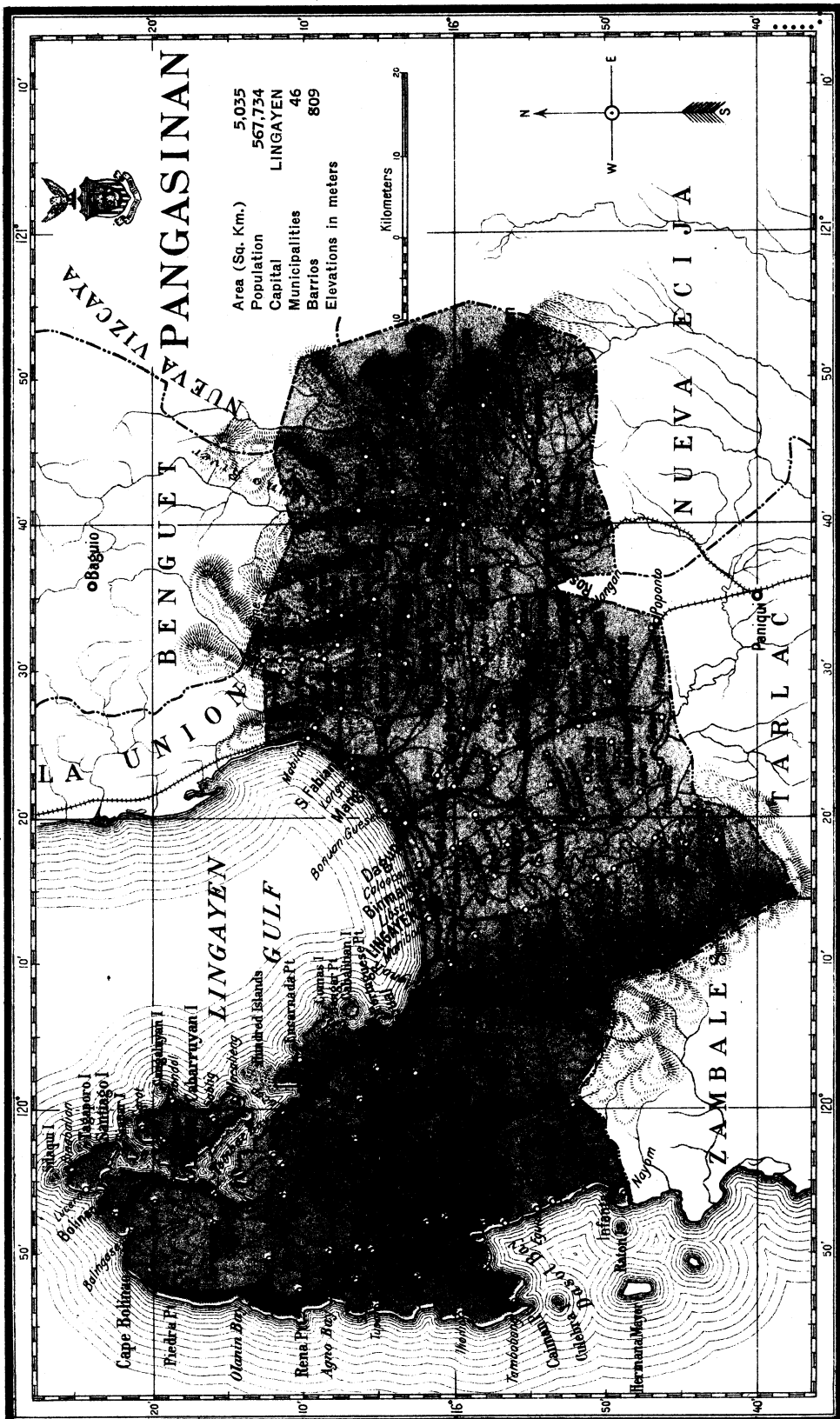
Civil government was established in Pangasinan on February 18, 1901.

In 1903, Pangasinan saw a slight alteration in her boundary. In that year, the province acquired the northern portion of Zambales comprising the towns of Alaminos, Bolinao, San Isidro, Infanta, Anda, Bani, and Agno.

STATISTICAL DATA.

Approximate area.....	square kilometers.....	5,035
Area of farms.....	hectares.....	203,050
Cultivated lands.....	do.....	138,812
Production in 1918:		
Rice.....	<i>cavans</i> ¹	13,504,931
Sugar cane.....	tons.....	143,890
Corn.....	<i>cavans</i>	183,641
Copra.....	kilos.....	2,789,926
Tobacco.....	do.....	8,337,625
Population.....		567,734
Number of schools.....		391
Primary.....	348	
Intermediate.....	32	
High school.....	3	
Collegiate.....	1	
Vocational.....	7	
Enrollment for 1918.....	44,157	
Males.....	26,229	
Females.....	17,930	
Rate of mortality per 1,000 inhabitants.....		46.6
Number of establishments of household industries.....		3,702
Production in 1918.....		₱931,603.51
Number of manufacturing establishments.....		119
Production in 1918.....		₱1,386,050.67

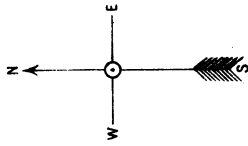
¹ One *cavan* equals 75 liters.



PANGASINAN

Area (Sq. Km.) 5,035
 Population 567,734
 Capital LINGAYEN
 Municipalities 46
 Barrios 809
 Elevations in meters

0 20
 Kilometers



NUEVA VIZCAYA

BENGUET

NUEVA ECICIA

TARLAC

ZAMBALES

LINGAYEN GULF

LA UNION

Baguio

Urdampayan

Dagupan

San Carlos

Alcala

San Fernando

San Juan

San Vicente

San Antonio

San Isidro

San Mateo

San Pablo

San Pedro

San Rafael

San Román

San Sebastián

San Vicente

San Juan

Cape Bolinao

Fierra Pt.

Olanin Bay

Rena Pt.

Agno Bay

San Carlos

San Juan

San Vicente

San Antonio

San Isidro

San Mateo

San Pablo

San Pedro

San Rafael

San Román

San Sebastián

San Vicente

San Juan

Bohayan

San Carlos

San Juan

San Vicente

San Antonio

San Isidro

San Mateo

San Pablo

San Pedro

San Rafael

San Román

San Sebastián

San Vicente

San Juan

San Carlos

San Juan

San Vicente

San Juan

San Carlos

San Juan

San Vicente

San Antonio

San Isidro

San Mateo

San Pablo

San Pedro

San Rafael

San Román

San Sebastián

San Vicente

San Juan

San Carlos

San Juan

San Vicente

San Juan

San Carlos





RIZAL.

GEOGRAPHICAL SKETCH.

RIZAL PROVINCE lies to the north of Laguna de Bay, and extends from Manila Bay on the west to the Sierra Madre mountains on the east. It has an area of 2,328 square kilometers, about 13,237 hectares are devoted to the cultivation of rice. Between Manila Bay and the mountain ranges the country is dotted with hills. The land near Manila Bay and that separating the lake and the bay are low and flat.

Pasig, the capital, is an important commercial town. It is located on the Pasig River, which connects the Laguna de Bay and the Manila Bay. It has 16,174 inhabitants. The Pasig River is navigable throughout the year. Numerous steam launches and bancas ply between the city of Manila and lake towns. Malabon, noted for her bay fisheries and fish ponds, furnishes Manila with choice fish to the value of thousands of pesos every year. Ducks are raised on the Pasig River and poultry and eggs are sent daily by the lake towns to Manila. Pateros is the center of the poultry industry.

The climate in general is healthful. The province is seldom visited by typhoons, being protected from violent winds by the Sierra Madre on the east and by the Batangas and Laguna mountains on the southwest. Novaliches and Antipolo, situated on high plateaus, are much frequented during the hot season of the year.

The soil is well adapted to the cultivation of rice of which the town of Mariquina is the chief producing region. Sugar cane ranks next in importance, but the industry is not well developed because of the lack of capital. Coconuts are raised in the lake region and cacao and coffee on the leeward sides of the mountains and hills. Other minor products are maguey, abacá, maiz, and various kinds of fruits. The business of raising livestock flourishes because of the encouragement the people receive from the Agricultural Station at Alabang. Rattan and firewood are taken from the forests and timber is found on the high mountains.

The most important mineral resources of the province are clay, stone, lime, iron, and coal. Neither iron nor coal occurs in great quantities, and they are respectively of lower quality than the iron of Bulacan and the coal of Batan Island, so that there is very little likelihood of their exploitation. There are several waterfalls in the province, but whether they could be used to advantage as a source of power remains to be seen. The headwaters of the Montalban River furnish the water supply for the city of Manila.

Embroidery work has assumed considerable proportions in the town of Parañaque, while in that of Mariquina the chief industry is the making of shoes and slippers. Along the borders of the Pasig River much grass (*zacate*) is cultivated to furnish the Manila market with green fodder for horses and carabaos.

This province has 26 municipalities and 203 barrios. Its capital is Pasig, with 16,174 inhabitants. It is located in the southwestern part of the province.

HISTORICAL ACCOUNT.

THE PROVINCE OF RIZAL was created in 1901 out of the Spanish military district of Morong and several towns which up to that time belonged to the province of Manila. It was named after José Rizal, the most beloved of Filipino heroes.

Late as was the creation of Rizal Province, the region nevertheless includes some of the oldest towns in the Philippines. Some of these, like Parañaque, Pasig, Taytay, and Cainta, were already thriving native settlements even before the arrival of the Spaniards. In fact, it is believed that some of the earliest Tagalog settlements in Luzon were established in this region, particularly in that part of it which is traversed by the Pasig River.

The first Spaniard to visit the region which now belongs to Rizal was Juan de Salcedo. In 1571, he travelled up the Pasig for the purpose of bringing the people of Taytay and Cainta under Spanish authority. These two places were at that time large centers of population, surrounded by well-cultivated fields and trading with the neighboring settlements and with the Chinese. Salcedo, after bringing them under Spanish authority, explored the neighboring regions, traversing what is now Laguna and going as far as Paracale.

The Chinese uprising in 1639 was the occasion of more or less serious disturbances in various places of the province, during which considerable damage to property was done. The Chinese burned the churches at Pasig, San Mateo and Taytay. The uprising was of brief duration, however, and order was soon restored.

About a hundred years after the Chinese uprising of 1639, the province again became the scene of serious disturbances. About the middle of the year 1762, a British force arrived in the Islands and occupied Manila. Anda, in his attempt to starve the British and force their withdrawal, detailed a Spanish force at Pasig to prevent the transportation of provisions from Laguna to Manila, whereupon the British commander, Backhouse, sent troops to dislodge them. At the battle of Maybonga, the Spaniards were defeated and forced to retire to Mariquina. The British then turned to Pasig, which they occupied after a slight resistance, and remained there until their departure from the Islands in 1764.

An important event in the history of Rizal was the creation in 1853, from portions of Manila and Laguna, of the military district of Morong. This district was made to include the region

belonging to the towns of Taytay, Cainta, Antipolo, and Boso-boso, of the Province of Manila, and the region belonging to the towns of Morong, Baras, Tanay, Pililla, Binangonan, Jalajala, and Angono, of the Province of Laguna. The capital was established at Morong and the district became the nucleus of the present Province of Rizal.

What is now Rizal includes the places like San Juan del Monte, Caloocan, and Pasig where first blood was shed in the Revolution. In this province also is to be found the historic spot of Balintawak, where Andres Bonifacio and his little band of loyal followers sounded the "cry of Balintawak," the call for the outbreak of the Revolution.

When the Revolutionary Government was established, it brought under its control that part of the province of Manila which was later given to Rizal, Ambrosio Flores acting as governor. To the new province were added towns like Caloocan, Las Piñas, Mariquina, Novaliches, Pateros, etc., which formerly belonged to Manila.

Civil government was established in Rizal at the time of its creation, June, 1901, Pasig being made its capital.

STATISTICAL DATA.

Approximate area.....	square kilometers.....	2,328
Area of farms.....	hectares.....	43,283
Cultivated lands	do.....	18,187
Production in 1918:		
Rice	cavans ¹	408,373
Sugar cane.....	tons.....	35,760
Corn	cavans.....	10,027
Abacá	do.....	2,530
Tobacco	do.....	34,000
Population		² 227,135
Number of schools.....		148
Primary	128	
Intermediate	13	
High school	3	
Vocational	4	
Enrollment for 1918.....	18,774	
Males	11,251	
Females	7,523	
Rate of mortality per 1,000 inhabitants.....		65.2
Number of establishments of household industries.....		2,091
Production in 1918.....		₱765,566.92
Number of manufacturing establishments.....		343
Production in 1918.....		₱3,886,914.91

¹ One *cavan* equals 75 liters.

² Non-Christian population, 3,070, not included.



ROMBLON.

GEOGRAPHICAL SKETCH.

THE PROVINCE OF ROMBLON, lying north of the Island of Panay, is composed of three large islands, Tablas, Sibuyan, and Romblon, and several small islets. Its estimated area is 1,308 square kilometers. The first two islands are thinly populated.

The capital of the province is Romblon, located on the island of the same name, about 187 miles from Manila, has 10,457, inhabitants. This town has a deep, well-sheltered harbor which makes it one of the most excellent seaports south of Luzon. Port Concepción, Maestre de Campo, and Looc, on Looc Bay, Tablas Island, are also important ports and trade centers.

The numerous mountains of the islands are low, with the exception of the peaks of Sibuyan, some of which range from 1,219 to 2,057 meters above sea level. The mountain tops are covered with forests of local importance, while the slopes and table lands are covered with grass on which animals without number could graze.

The climate of the islands is conducive to the productivity of the hills and valleys. The winds from the southwest, which are usually accompanied by destructive *baguios*, bring copious rainfall into the land. But these high winds which pass over the islands do more harm than good, because lives and property are often destroyed and crops damaged.

The valleys in the interior and the plains along the coasts would yield immense crops if they were cultivated intensively. Abacá and copra, the chief products, are exported to Manila and Iloilo, from which they are shipped to foreign countries. Corn and rice, which form the chief staple food of the people, are not grown to a considerable extent, so that rice is imported. Hundreds of cattle raised on the vast grazing lands are exported to Manila and Tayabas on the hoof.

The most important mineral resources are gold, in Sibuyan, and marble, in Romblon. The gold deposit has not yet been worked, but the marble deposit has been quarried and in use for years, and is now disappearing. Gypsum is mined on the little Island of Banton.

The people, consisting largely of Visayans, are peaceful agriculturists. Stock-raising, logging, and the making of mats from the leaves of the buri palm, also form the chief occupations of the Christian people. The women of Romblon are famous throughout the islands for crochet laces and bedspreads which they

make for home use and for export. There are a few bands of pagans who make clearings (*kaingins*) in the forest. These people, the Mangyans and Negritos, have no permanent settlements and wander from place to place in the interior in quest of food.

This province has 8 municipalities and 138 barrios.

HISTORICAL ACCOUNT.

THE ISLANDS of the Province of Romblon were known to the Spaniards from the early years. Loarca, who visited the Philippines about 1582, wrote of the Islands of Simara, Banton, Romblon (then called Donblon), and Tablas (then known as Osigan). He estimated that the population of Simara was 150; that of Banton, 200; of Romblon, 250; and of Tablas, 250. The islands in the Romblon group were then included within the jurisdiction of the town of Arevalo.

The Recollects arrived at Romblon in 1635. Previous to this time, the islands were administered by the secular clergy. Some of the inhabitants of Romblon, therefore, were already Christians at the time of the arrival of the Recollects. In 1637, there were in what is now Romblon Province seven missionary centers, namely: Romblon which had a population of 5,858; Badajoz, with a population of 3,356; Banton, with a population of 4,717; Cajidiocan, with a population of 7,132; Odiongan with a population of 5,705; Looc, with a population of 5,449; and Magallanes, which had a population of only 859.

Romblon did not wholly escape the raids which were made at various times upon many a province of the Philippines. In 1646, considerable damage was inflicted by the Dutch in an attack on Romblon. But the greatest injury was that received at the hands of the Moros. During the period of Moro piracy scarcely a year passed in which they did not attack Romblon, burning villages and churches and carrying away the inhabitants to captivity. In 1753, the year when the Moro fleets practically covered the Visayas seas, the town of Romblon was attacked by a strong force of Moros. The enemy, however, was repulsed, thanks to the fort which protected the town.

In 1818, the following islands in the Romblon group formed part of the Province of Capiz: Romblon, with the town of Romblon; Sibuyan, with the towns of Cautit, Pagalar, and Cajidiocan; Banton, with the town of Banton; Tablas, with the towns of Guintinguan, Agbagacay, Odiongan, Lanang, and Looc; Simara, with San José and Coloncolon; and the island of Maestre de Campo, with the town of Sibali. In 1853, these islands were organized into a politico-military *comandancia* dependent upon Capiz. They remained in this status up to the end of the Spanish rule.

In 1898, the islands of Romblon were governed by an army officer with the rank of captain. The capital was the town of Romblon. Besides the capital, the following towns were at the time in existence: Azagra, Badajoz, Banton, Cajidiocan, Corcuera, Looc, Magallanes, Odiongan, Despujol, and Santa Fé.

Romblon came under the Revolutionary Government in 1898. Coronel Riego de Dios, commander of the Revolutionary forces, for a time ruled the province.

Civil government was first established in Romblon on March 16, 1901. In 1907, it was annexed to Capiz as a subprovince, its revenues being insufficient for its support. Recently, however, Romblon was separated from Capiz and made once more a separate province.

Of late, many of the towns of Romblon have been depopulated because of the emigration of their inhabitants to such places as the mines of Masbate and Mindoro and the sugar plantations of Hawaii. Some of the towns thus depopulated are Magallanes and Azagra, on the Island of Sibuyan, and Santa Fé, Despujol, and Concepción on the Island of Tablas.

STATISTICAL DATA.

Approximate area.....	square kilometers...	1,308
Area of farms.....	hectares...	34,513
Cultivated lands	do.....	17,161
Production in 1918:		
Rice	<i>cavans</i> ¹	111,893
Corn	do.....	6,143
Copra	kilos.....	3,653,634
Abacá	do.....	587,561
Tobacco	do.....	83,000
Population		64,576
Number of schools.....		42
Primary	39	
Intermediate	2	
High school	1	
Vocational	1	
Enrollment for 1918.....	5,373	
Males	3,277	
Females	2,096	
Rate of mortality per 1,000 inhabitants.....		31.3
Number of establishments of household industries.....		857
Production in 1918.....		₱140,963.38
Number of manufacturing establishments.....		12
Production in 1918.....		₱45,147.20

¹ One *cavan* equals 75 liters.

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SAMAR.

GEOGRAPHICAL SKETCH.

SAMAR is the fourth largest island of the Philippines. It lies southeast of Luzon, and is separated from the Province of Sorsogon by the San Bernardino Strait. The province, covering an area of 13,576 square kilometers, comprises the Island of Samar and 146 other small adjacent islands, which are mountainous. Some of these, important because of their ports, are Laoang, Capul, and Homonhon. Daran Island protects Maqueda Bay from the strong currents and violent waves of the sea, and thus makes it a safe harbor.

Catbalogan, the capital, is located on Maqueda Bay and is an important seaport. It has 13,863 inhabitants. This town has the advantage of being a commercial center in the eastern Visayas, because it lies about half-way between the ports of Manila and Zamboanga. Because of the irregularity of its coastline, the island has many important seaports, among which are Caltarman, Borongan, and Calbayog.

There is not an island in the Archipelago which has so rugged a surface as the Island of Samar, hence its sparsity of population. But all of her mountain ranges are low, so that there is no part of the island which does not receive rainfall during the northeast monsoon. It has many short, navigable rivers on both the east and west coasts and traveling across the island may be accomplished almost entirely by means of bancas. Due to the rugged nature of the interior of the country, nearly all of the towns are located near the coast. Another characteristic feature of the mountain regions is the presence of caves, of which the most noted is the Sohotan Cave near Basey. River transportation is the chief means of communication. The most important rivers are the Catubig, Ulot, Dolores, Suribao, Llorente, and Gandara.

The climate is cool and healthful. But the geographical position of the island is such that it often suffers from violent and destructive typhoons, usually during the months of September and October. The frequent damage to crops is injurious to the progress of agriculture.

The land devoted to agriculture is very small. Only the fertile coastal plains and some of the accessible interior valleys are at present under tillage. Rice is the chief food of the people, while coconuts are raised for export. Cacao and abacá are planted on the hillsides, and tobacco, camotes, and corn are grown in the valleys for local use. The swampy parts of the island yield material for making mats.

The forests, which cover about two-thirds of the entire province, yield valuable timber for various purposes. But the largest part of the forest area is still unexplored and undeveloped because of the lack of capital and labor.

The scanty population is made up of Bicolos, Tagalogs, Boholanos, and Cebuanos, who live near the coast. They are engaged in agriculture, weaving abacá fiber and silk, and fishing along the coast.

Samar has 37 municipalities, 522 barrios and 6 *rancherías*.

HISTORICAL ACCOUNT.

To SAMAR belongs the distinction of being the first island of the Philippine Archipelago to be discovered by the Spaniards. On March 16, 1521, Ferdinand Magellan sighted an island then called Zamal by the natives. The island, which is now called Samar, was described as having lofty mountains. The day following, the Spaniards effected a landing on the little Island of Homonhon, where two huts were built for the sick sailors. Homonhon was then uninhabited, but a few natives from the neighboring Islet of Suluan came in a *parao* to see the newcomers.

During the early days of Spanish rule, Samar, then often called Ibabao, was under the jurisdiction of Cebu. Later, it was declared a separate province, but in 1735, Samar and Leyte were united and created into a province, with Carigara in Leyte as capital. This arrangement, however, did not prove very satisfactory, and in 1768 Samar was again separated from Leyte. From that time on to the present, Samar has always constituted a political unit by itself, with Catbalogan as capital.

In 1649, the greater part of the Island of Samar became involved in a great rebellion which became the signal for a general uprising in the Visayas and in parts of Mindanao. This rebellion had its center in Palapag and was headed by Sumoroy. The cause was enforced labor in connection with shipbuilding. The uprising began in June, 1649, and was not suppressed till the middle of the year following. The rebels fortified themselves in the mountains and there established an independent settlement. "From here they went forth from time to time and harassed the Spanish forces sent against them. In these little skirmishes, they were usually victorious. Indeed, they became contemptuous of the Spaniards. On one occasion, when the Spanish captain asked them for the head of Sumoroy in atonement for what he had done, they sent him the head of a swine."

Till the beginning of the nineteenth century, the coast towns of Samar were a constant prey to the attacks of the pirates from the south. Moro *vintas* were frequently seen in the waters of Samar. The natives of the island suffered greatly from the depredations accompanying these visits and in consequence, until about the middle of the nineteenth century, the population of Samar remained small.

In 1860, in pursuance to the royal decree of July 31 of that year, which ordered the reorganization of the provincial gov-

ernments of the Visayas, Samar was created into a politico-military province, and maintained that status until the end of the Spanish régime.

The Revolution did not immediately spread to Samar. Later, however, General Vicente Lukban took possession of the island in the name of the Revolutionary Government. The people of Samar then raised the standard of revolt and with the expeditionary force from Luzon expelled the Spaniards from the island.

Civil government was established in Samar on June 17, 1902.

STATISTICAL DATA.

Approximate area.....	square kilometers.....	13,556
Area of farms.....	hectares.....	177,357
Cultivated lands	do.....	93,671
Production in 1918:		
Rice	cavans ¹	468,080
Sugar cane.....	tons.....	514
Corn	cavans.....	118,715
Copra	kilos.....	13,777,315
Abacá	do.....	12,849,729
Tobacco	do.....	263,872
Population		² 362,399.
Number of schools.....		
Primary	174	
Intermediate	8	
High school	1	
Vocational	3	
Enrollment for 1918.....	24,491	
Males	14,061	
Females	10,430	
Rate of mortality per 1,000 inhabitants.....		31.3
Number of establishments of household industries.....		9,780
Production in 1918.....		₱2,345,993.88
Number of manufacturing establishments.....		149
Production in 1918.....		₱584,656.13

¹ One *cavan* equals 75 liters.

² Non-Christian population, 17,812, not included.

SORSOGON.

GEOGRAPHICAL SKETCH.

SORSOGON occupies the southernmost tip of the Bicol Peninsula. The province, covering an area of 5,890 square kilometers, consists of Sorsogon, the Islands of Masbate, Burias, and Ticao, and about 145 islets. The coast is very irregular, the largest indentation being the Gulf of Sorsogon. This deep, landlocked body of water is one of the finest harbors in the Philippines.

Sorsogon, the capital, located on the gulf, is an important commercial town. It has 17,049 inhabitants. The town of Pilar is noted for her shipyards. Ships, lorchas, and boats are built here from fine timber grown nearby. Bacon, Gubat, Bulan, Matnog, and Bulusan are the largest towns on the coast.

The land is mountainous and covered with excellent lumber suitable for shipbuilding and furniture-making. Rattan grows in abundance in the forests, and a great quantity is exported to Manila and the neighboring provinces. Mount Bulusan, with an elevation of 1,560 meters, is an active volcano.

The mineral resources are coal and sulphur, but they are as yet unexploited. Sulphur is abundant in Mount Bulusan region.

The climate is noted for its coolness. There are two rainy seasons, one during the northeast and the other during the southwest monsoon; as a result, vegetation grows luxuriantly.

The fertile soil of Sorsogon leads the people to engage chiefly in agriculture. About 78,452 hectares are under tillage. The chief products are abacá, the best in Luzon, and coconuts, which grow along the seashore. The less important crops are corn, sugar, and pili nuts. The cultivation of abacá is far more remunerative than that of rice, so that much of the cereal used for consumption is imported.

The Province of Sorsogon is noted for its beautiful scenery. The Ginulajon waterfalls, near the capital, the wild vegetation and the cataracts along the Irosin River, the medicinal hot springs at Mombon, Bujan, and Mapaso, together with the beautiful panorama from the Bulusan Volcano are especially striking. Like Mount Vesuvius, Mount Bulusan has an old crater, and a new cone that has appeared on the slopes. Inside the crater, about 500 feet deep, are two pools of hot water which form the basin from which the Irosin River rises.

The people are all Bicolos, industrious and thrifty. Fishing, next to agriculture in importance, is carried on along the coasts. Weaving cloth from abacá, and the making of slippers from the same fiber, are the chief household industries.

The Province of Sorsogon has 16 municipalities and 279 barrios.

HISTORICAL ACCOUNT.

THE PROVINCE OF SORSOGON as constituted at present is made up of Sorsogon proper, formerly a part of Albay, and the

Islands of Masbate, Ticao, and Burias. This province is one of the youngest in the Island of Luzon, having been created toward the end of Spanish rule.

The Islands of Masbate, Ticao, and Burias were explored in 1569 by Captain Luis Enriquez de Guzman. Captain Andres de Ibarra subsequently continued the exploration of these islands and furthered Spanish influence. It is believed that Enriquez de Guzman also landed on the mainland and travelled over the region of Ibalon, which according to Morga, was then a port of Sorsogon.

The earliest step taken by the Spaniards to secure a permanent hold on Sorsogon was the establishment of a mission in Casiguran, a port in the Bay of Sorsogon. In the years following, Spanish activities spread to Bacon and Sorsogon. It appears that Sorsogon, the present provincial capital, was in the beginning only an outgrowth of Bacon.

The first serious disturbance that occurred in Sorsogon took place in 1649 on the occasion of the Sumoroy uprising in Samar. Influenced by this uprising, the people of Sorsogon rose in rebellion and drove away the Spanish friar of the town of Sorsogon. The people of Masbate also revolted and killed a Spanish *alférez* stationed there.

A great event in the history of Sorsogon was the invention of a hemp-stripping machine by a priest named Espellargas, about 1669. The invention was made in Bacon, where it seems hemp then abounded. The contrivance was ingeniously constructed and was quite well adapted to local conditions.

Many of the galleons that the Spanish Government used in the Manila-Acapulco trade were built in Sorsogon, especially on the Island of Bagatao, at the entrance of Sorsogon Bay. Many of these ships were wrecked while navigating the waters of Sorsogon. It should be remembered that these vessels laid their course for Mexico via the San Bernardino Strait, a passage which abounds in dangerous currents, shoals, and rocks. For example, the galleon San Cristobal was wrecked in 1733 near the Calantas Rock. In 1793, the galleon Magallanes also ran aground at this place. Other vessels went down in this neighborhood from time to time, as the Santo Cristo de Burgos, in 1726, near Ticao, and the San Andres, in 1798, near Naranja Island.

The Island of Masbate, like Sorsogon proper, was at first a part of Albay. In 1846, however, it was separated from Albay and with Ticao was made a separate *comandancia político-militar*, with Gium, on the Asid Gulf, as capital. The prosperity of Masbate dates as far back as 1837. In that year, many settlers were attracted to this island by the news of the abundance of gold in the neighborhood of the present town of Aroroy. The story is told that even the Chinese flocked in considerable numbers to the harbor of Aroroy, telling the people that they were going "*al oro.*" It is believed that this town was named Aroroy or Aloroy from this incident.

Like Albay, at the outbreak of the Revolution, Sorsogon remained peaceful. Later, however, it came under the Revolutionary Government. For sometime, the prominent military leader here, as in Albay, was Vito Belarmino.

Civil government was established in Masbate on March 18, 1901, and in Sorsogon on April 30 of the same year. Recently, however, Masbate lost its status as a province and was annexed to Sorsogon.

STATISTICAL DATA (SORSOGON).

Approximate area.....	square kilometers.....	4,345
Area of farms.....	hectares.....	117,686
Cultivated lands	do.....	78,452
Production in 1918:		
Rice	<i>cavans</i> ¹	169,591
Sugar cane.....	tons.....	688
Corn	<i>cavans</i>	5,871
Copra	kilos.....	5,144,285
Abacá	do.....	22,215,344
Tobacco	do.....	12,652
Population		178,362
Number of schools.....		
Primary		85
Intermediate		5
High school		1
Vocational		1
Enrollment for 1918.....		11,832
Males	7,096	
Females	4,736	
Rate of mortality per 1,000 inhabitants.....		36.6
Number of establishments of household industries.....		781
Production in 1918.....		₱245,810.16
Number of manufacturing establishments.....		68
Production in 1918.....		₱4,848,223.79

STATISTICAL DATA (MASBATE).

Approximate area.....	square kilometers.....	1,545
Area of farms.....	hectares.....	50,610
Cultivated lands	do.....	22,220
Production in 1918:		
Rice	<i>cavans</i> ¹	84,036
Sugar cane.....	tons.....	797
Corn	<i>cavans</i>	68,732
Copra	kilos.....	5,082,697
Abacá	do.....	1,629,044
Tobacco	do.....	189,590
Population		67,334

¹ One *cavan* equals 75 liters.

STATISTICAL DATA (MASBATE)—Continued.

Number of schools.....		47
Primary.....	45	
Intermediate.....	1	
High school.....	1	
Enrollment for 1918.....	5,179	
Males.....	3,084	
Females.....	2,095	
Rate of mortality per 1,000 inhabitants.....		17.8
Number of establishments of household industries.....		326
Production in 1918.....		₱100,110.09
Number of manufacturing establishments.....		21
Production in 1918.....		₱298,271.00



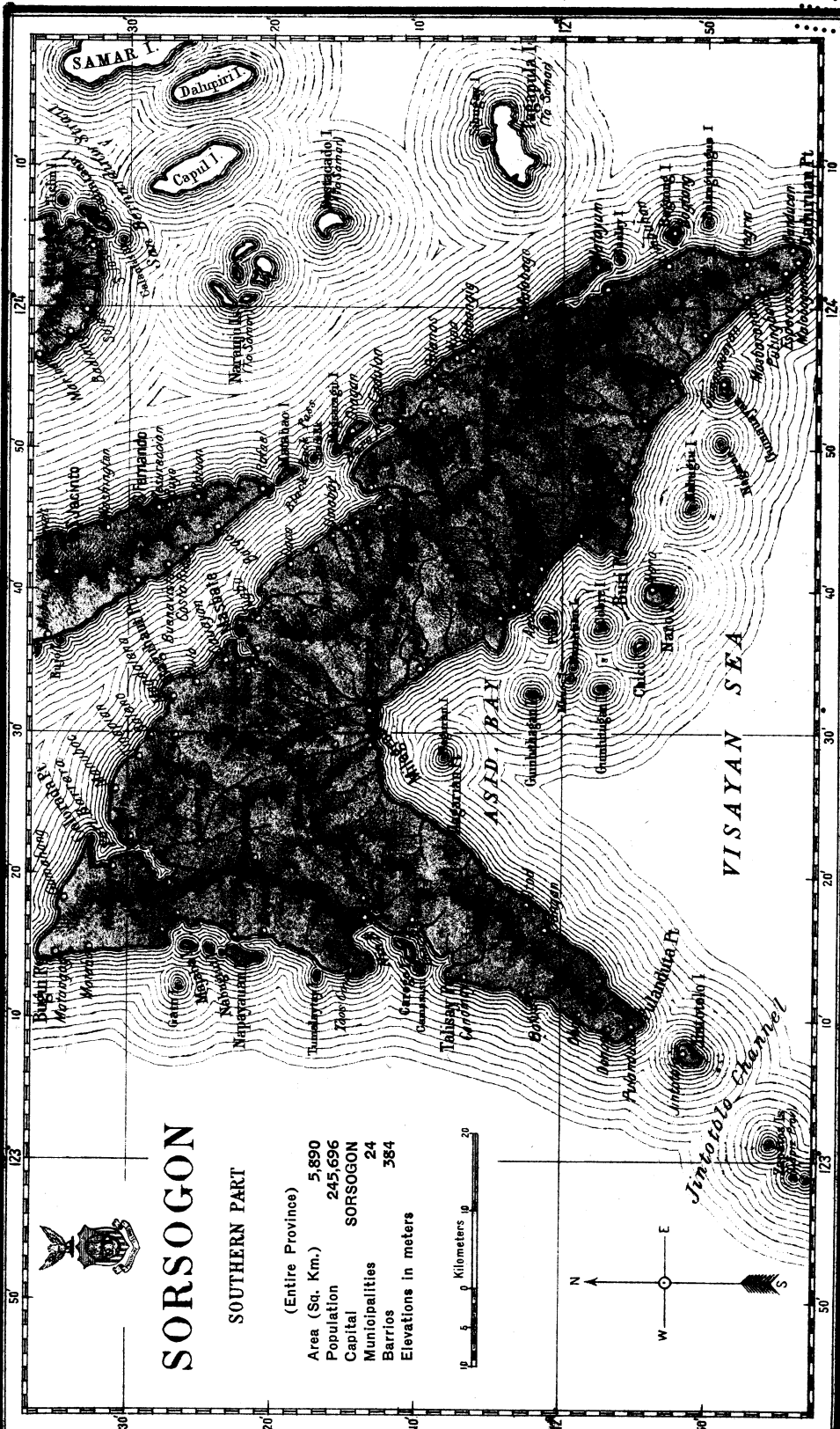
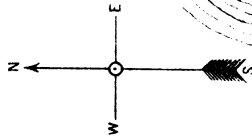


SORSOGON

SOUTHERN PART

(Entire Province)

Area (Sq. Km.) 5,890
 Population 245,696
 Capital SORSOGON
 Municipalities 24
 Barrios 364
 Elevations in meters

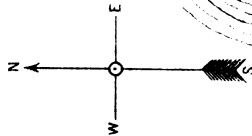


SORSOGON

SOUTHERN PART

(Entire Province)

Area (Sq. Km.) 5,890
 Population 245,696
 Capital SORSOGON
 Municipalities 24
 Barrios 364
 Elevations in meters







SULU.

GEOGRAPHICAL SKETCH.

SULU PROVINCE includes all of the islands of the Sulu Archipelago, which form one of the three connections of the Philippines with the Island of Borneo and prove the geologic theory that the Philippines belong to the same geographic region as Borneo, Sumatra, and Java, and, therefore, to Asia and not to Oceania. They bear the same relation to Asia as the Antilles to America.

Geologists have theorized that the islands are made of a multitude of madreporic isles growing in circular form on and around submarine mountain tops. With the help of the waters saturated with carbonic acid gas, the calcareous substances were dissolved and, therefore, left the interlaced branches of the coral reefs to be crystalized into hard rock which formed docks against the soil, debris and other sediments. With the uplifts, ancient and recent, caused by volcanoes, the deposits emerged from the sea as islands. Further deposition was caused by the lava which was ejected from some of the volcanic cones. Brydon found as many as 7 layers of lava on some of the islands. The Sulu Archipelago is very often affected by earthquakes, the Sulu Sea, a seismic center, constituting one of the most irregular and consequently most unstable regions of the Philippine group.

Even where there are no islands, the Sulu Sea is dotted with coral reefs which make navigation dangerous. The environment has, however, taught the people to avoid the perils of the sea, their principal resource. The waters of the Sulu Sea are warmer than those of the adjacent oceans, for, being nearly inclosed, and its connections with the China Sea and the Pacific everywhere shallow, only the warm surface water can flow through the passages connecting them. The topography is young, Bahu and Butpula being mere hills and Sumatanguis alone (2,940 feet) rising to the dignity of a mountain. Whatever valleys there are, most of them are cut up by swift streams. Nature, however, has spared neither beauty nor verdure, nor luxuriance which are found throughout the islands. On some of the coral reef islands, no fresh water is found.

The climate is warm and moist, for Sulu is near the equator. The rainfall is well distributed throughout the year and typhoons pass far north of the Archipelago.

Because of the formation of the land, the character of the soil and the climate, Sulu Province has a greater variety of products than any other part of the Philippines. Besides all the

crops of other parts of the Islands, and fruits such as oranges, lanzones, mangoes, and jacks, several fruits not known in the islands to the north are grown; for instance, the mangosteen and durian. Carabao, cattle, and horses are raised in Jolo for export.

Fishing is the most important industry. Jolo is the center for most of the pearling fleet. Sitanki, Omapui, Tumindao, Balimbing, Landubas, Laja, and Siasi are other important fishing centers. The sea turtle, fish of all kinds, and the trepang are caught. Beautiful trays and combs and other articles are made from the back of the sea turtle, and fish and trepang are cured and exported. Most of the fishing industry is in the hands of Chinese and Japanese, so that it is high time for Filipinos to go out also and exploit their sea wealth.

The Sulu Archipelago, especially Jolo, the capital and principal port, trades with Zamboanga, Borneo, and Singapore. This town has 5,796 Christian inhabitants¹ and is located in the north-western part of the Island of Jolo. Chinese merchants traded with Sulu long before the arrival of Legaspi in the Philippines. When Manila and Cebu were yet small settlements, Jolo was already a city, the most important in the Philippines.

Sulu has almost as many people as Zamboanga. As the land area is small, this shows that the islands are well populated. Both Samals, the latest Malayan group to arrive in the Philippines, and Sulus live along the coasts, but the population living in the interior and cultivating the soil is largely Sulu. These are the most powerful and most highly cultured of the Mohammedan groups.

This province has 1 municipality, 26 municipal districts, and 99 barrios.

HISTORICAL ACCOUNT.

Inhabiting the shores and coasts of the numerous islands which constitute the Sulu Archipelago, the people of this region naturally take to a seafaring life. Long before Legaspi colonized Cebu, foreign traders were already familiar with Sulu waters. On the other hand, native boats brought silk, amber, silver, scented woods and porcelain from China and Japan; gold dust, wax, dyes, salt-peter, slaves and food stuffs from Luzon, the Bisayas and Mindanao; gunpowder, cannon, brass, copper, iron, rubies, and diamonds from Malacca and Brunei; and pepper and spices from Java, the Moluccas and Celebes.

Mohammedanism was introduced and firmly established in the Archipelago by three men; namely, Makdum, Raja Baginda, and Abu Bakr. Makdum was a noted Arabian scholar who, after introducing Mohammedanism into Malacca, visited almost every island of the Sulu Archipelago toward the end of the fourteenth century and made numerous converts especially in Bevansa and Tapul. Raja Baginda, soon after the arrival of Makdum, came by way of Zamboanga and Basilan. He was of princely rank and is believed to have come accompanied by ministers of state. He settled in Bevansa and became the supreme ruler of Sulu.

¹ Non-Christian population, 14,423.

Abu Bakr, who seemed to have been quite a learned man, arrived in Bevansa about the middle of the fifteenth century. Here, he lived with Raja Baginda, teaching the people the Mohammedan religion. He later married Parasimuli, the daughter of Raja Baginda, and succeeded his father-in-law as sultan.

The reign of Abu Bakr (1450-1480) was noteworthy not only because of the firm establishment of Mohammedanism, but also because of the governmental reforms then effected. Abu Bakr reorganized the government of Sulu, dividing it into five main administrative districts, each under a Panglima. He promulgated a new code of laws which became the guide for all officials of the state. During his reign, Sulu's power was felt not only in Mindanao and the Visayas, but even in Luzon.

The administration of Governor-General Sande (1575-80) was the beginning of a continuous state of warfare between Spain and Sulu which lasted to within two decades before the end of the Spanish rule. Sande wanted to reduce Sulu to a subject state, impose tribute on its people, secure for the Spaniards the trade of the Archipelago, and convert the inhabitants to Catholicism. To attain these ends, he sent Captain Rodriguez de Figueroa to Sulu with a large army. This expedition, however, accomplished nothing beyond the arousing of the Sulus to hostility and the inception of numerous Moro raids on the Visayas and Luzon.

During the first half of the seventeenth century, the Spanish Government sent at least five expeditions of importance to Jolo for punitive purposes. The first of these expeditions was led by Gallinato in 1602; the second, by Cristobal de Lugo in 1628; the third, by Olaso Ochotegui in 1630; the fourth, by Governor-General Corcuera in 1638, and the fifth, by General Pedro de Almonte in 1639. Perhaps the one conducted by Governor Corcuera in 1638 deserves attention, as it resulted in the first Spanish occupation of the town of Jolo. Corcuera made several gallant attacks on the forts of Jolo, which were repulsed with equal bravery by the Sultan's men. The fighting converted itself into a long siege of three and a half months, the Sulus finally abandoning their capital. Corcuera occupied the town, reconstructed its forts and left there a garrison of two hundred Spaniards and two hundred Pampangans under General Pedro de Almonte. In 1646, however, this garrison was recalled to Manila and Sulu was abandoned.

The reign of Sultan Alimud Din I (1737-1773) forms an interesting chapter in Sulu history. This extraordinary man generally referred to by Spanish writers as Don Fernando de Alimudin, suffered as a result of the disloyalty and ambitions of the usurper Bantelan a long period of exile in Manila where he was "converted" to Catholicism by the then archbishop-governor of the Philippines and later thrown into prison with his household and immediate followers, due to the suspicions of the Spanish governor of Zamboanga as to the sincerity of his professed friendship for Spain. As a ruler, Alimud Din appeared to have been both able and progressive. Soon after his accession to the throne in 1737, he revised the Sulu code of

laws, reorganized the juridical system, had parts of the Koran and some Arabic texts on law and religion translated into Sulu, prepared an Arabic-Sulu vocabulary so that the people could learn Arabic, and tried to suppress piracy.

Aside from the repeated attempts of the British to gain a permanent foothold in Sulu, the other important event in Sulu history during the nineteenth century was the second occupation of the Archipelago by the Spaniards. This event, which was facilitated by the use of steam war vessels on the part of the Spanish government, occurred in 1850. Governor-General Urbiztondo sent an expedition to Tongkil and Jolo which resulted in the "incorporation of the Sultanate of Sulu into the Spanish Monarchy." Sulu really became a Spanish protectorate and the Sultan, among other things, agreed to allow the Spanish government to erect a trading post at Jolo and to establish a small garrison there, ostensibly to protect the trading post. Not content with this, Spain in 1876 sent another expedition to Sulu. Malcampo, who led this expedition, repeated the feats of Urbiztondo in 1850 and left a large garrison in Jolo under Captain Pascual Cervera, who was given the title of "politico-military governor" of Sulu. In 1878, Sulu was constituted into a regular district of the general politico-military government of Mindanao.

The period between 1884 and 1894 was a period of civil war in Sulu. The cause of this internecine war was the succession to the sultanate. There were two strong candidates; namely, Datu Alimuyud Din and Raja Muda Amirul Kiram. Each proclaimed himself Sultan. For sometime, the Spanish governor of Sulu hesitated as to which party to support. Finally, a third man, Datu Harun, whose signal services to the Spanish government in the establishment of order in Palawan strongly recommended him for the sultanate, was proclaimed sultan by Governor-General Terrero at Manila. The situation became worse, as the people refused to accept the Spanish nominee. Finally, Harun withdrew from the sultanate and Amirul Kiram was allowed to ascend the throne in 1894.

Spain evacuated Sulu in May, 1899, turning the local government over to the Americans.

In 1903, the Moro Province was organized and Sulu was made one of its districts. In 1914, civil government was established in the Department of Mindanao and Sulu and Sulu became one of its regularly constituted provinces.

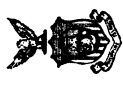
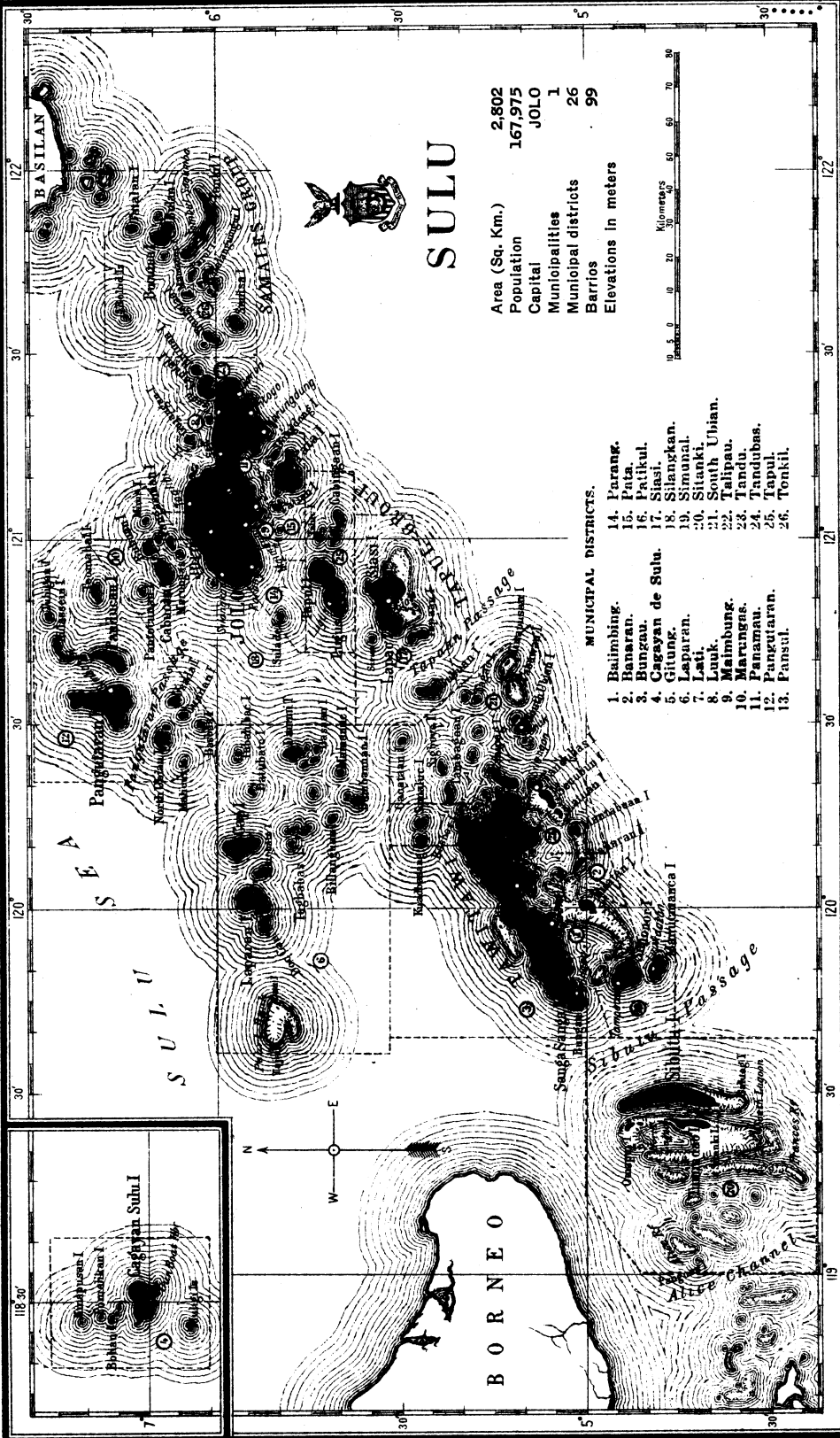
STATISTICAL DATA.

Approximate area.....	square kilometers....	2,802
Area of farms.....	hectares....	4,571
Cultivated lands	do.....	3,823
Production in 1918:		
Rice	<i>cavans</i> ¹	17,843
Sugar cane	tons.....	107
Corn	<i>cavans</i>	1,260
Copra	kilos.....	177,631
Abacá	do.....	696
Tobacco	do.....	7,507

¹ One *cavan* equals 75 liters.

STATISTICAL DATA—continued.

Population		¹ 6,582
Number of schools.....		25
Primary	23	
Intermediate	1	
Vocational	1	
Enrollment for 1918.....	2,169	
Males	1,796	
Females	373	
Rate of mortality per 1,000 inhabitants.....		73.2
Number of establishments of household industries.....		242
Production in 1918.....		₱57,604.35
Number of manufacturing establishments.....		18
Production in 1918.....		₱204,562.42

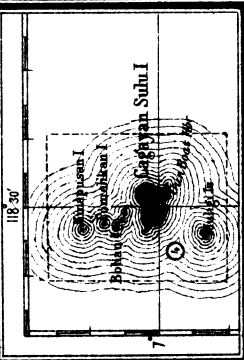


SULU

Area (Sq. Km.) 2,802
 Population 167,975
 Capital JOLO
 Municipalities 1
 Municipal districts 26
 Barrios 99

MUNICIPAL DISTRICTS.

1. Baimbing.
2. Banaran.
3. Bungau.
4. Cagayan de Sulu.
5. Gitung.
6. Laparan.
7. Lati.
8. Luuk.
9. Maimbung.
10. Marangas.
11. Panamau.
12. Pancutaran.
13. Pansul.
14. Parang.
15. Pata.
16. Patikul.
17. Siasi.
18. Silanngan.
19. Simanal.
20. Sitanki.
21. South Ubian.
22. Talipau.
23. Tandu.
24. Tandubas.
25. Tapul.
26. Tonkil.



BORNEO

S U L U

BASILAN

Pangasinan

Sulu

BORNEO

Sulu Passage

Alile Channel



SURIGAO.

GEOGRAPHICAL SKETCH.

THE PROVINCE OF SURIGAO is located in the northeastern part of the Island of Mindanao. It comprises the northern half of the eastern coastal plain and mountain slopes of Mindanao, and several islands, the largest of which are Dinagat and Surigao. It has an area of about 7,483 square kilometers. It is separated from Agusan Province, except at Lake Mainit, by the Diuata range, the highest peak of which rises to a height of 1,838 meters.

The coast is very irregular, and although it offers many places for anchorage, it is much exposed to the northeast monsoon and the southeast winds. The tides of the Pacific cause high waves to break along the shore, but during the southwest monsoon season the coast is safe.

The climate is healthful. The northeast monsoon brings considerable rainfall. Typhoons and earthquakes are very seldom felt and do not cause the immense damage inflicted elsewhere.

The rivers, though short, are navigable for boats that go down to the ports for abacá fiber and copra. Lake Mainit, the crater of an extinct volcano, is a great source of fish. There are hot springs nearby.

Abacá, copra and maize are the most important agricultural products. The area of arable land is extensive, but very little is under cultivation. The forests have fine hard wood suitable for building material. There is much fine timber in the forests of Mindanao, though little lumber is now obtained. The best of the timber obtainable equals iron and concrete in durability.

Coal, iron, copper and gold deposits form another source of wealth. Gold is at present mined. Hydraulic mining is employed in the northeastern part, where waterfalls furnish the motive power.

With the exception of agriculture and mining, Surigao can not boast of highly developed industries. Weaving of baskets and hats and embroidery are taught in the schools. The people of Dinagat export "tikug" hats. Those living along the coast of the mainland are engaged in fishing and catching tortoises, the shells of which are sold in the market.

Trade along the seacoast is quite considerable. The province has also regular steamship communication with Manila, Cebu, Tacloban, Catbalogan, Calbayog, and other points in the Archipelago. Transportation throughout the province itself or from the capital to other coast towns is generally effected by means of steamboats and launches. Roads to connect some of the municipalities with each other are now being constructed.

There are but few towns in this province, and the population is largely made up of Visayans, who originally immigrated from Cebu and Bohol; those coming from the latter island constitute about one-half of the total population. Immigration from Leyte, Iloilo, and other distant provinces is also increasing yearly. There is a very insignificant number of non-Christians, Manobos and Aetas, who, through frequent contact with the civilized inhabitants, are gradually adopting the customs and habits of the latter. The people who live around Lake Mainit are Negritos.

This province has 14 municipalities and 146 barrios. Its capital is Surigao, with 15,792 inhabitants.¹ It is located in the northwestern part of the province.

HISTORICAL ACCOUNT.

What is now Surigao was once a part of the old province of Caraga which in former years existed in northeastern Mindanao. The term "Caraga" was derived from the "Caragas," the name applied to the people who at the time of the arrival of the Spaniards inhabited Surigao. It is believed that the Caragas were of Visayan stock, mixed probably with Manobos and other peoples of Mindanao. They were a warlike people, noted for their bravery and ferocity.

The eastern coast of Surigao was explored by Villalobos in 1543. Bernardo de la Torre, a member of the expedition of Villalobos, named the land which they sighted *Cesarea Caroli*, in honor of the reigning sovereign of Spain, Charles V. This name was later applied to the whole Island of Mindanao. Villalobos, however, was not the first to visit Surigao. That honor belongs to a Portuguese, Francisco de Castro, who visited the towns of Butuan and Surigao five years before the arrival of Villalobos. He baptized the natives of those places, including the regulo of Butuan and that of Surigao, to whom he gave the name Antonio Galvan in honor of the governor of Ternate.

The Recollects endeavored to establish missions in what is now Surigao Province as early as 1597, but their efforts were a failure due to the hostility and resistance offered by the Caragas to the Spaniards. The government was forced to launch an expedition against the natives in 1609 before Spanish authority could be established under the command of Juan de Vega. This expedition consisted of 400 Spaniards and a number of native allies. It proved a success, the Caragas being defeated, and more than 1,500 Christian prisoners being liberated. The Spaniards thereupon erected a fort at Tandag as an outpost of Spanish authority.

Like many other provinces, Surigao suffered severely from Moro raids. Probably the most destructive of these was the one that took place in 1752. In that year, the Moros practically covered the seas of Visayas with their fleets, frequently bringing desolation and ruin to the places they visited. In what is now Surigao, the town of Surigao and the Island of Siargao were attacked. Surigao was devastated and ruined. Nearly all her population of 2,000 souls were either killed or carried away to the Island of Siargao, where about 1,600 persons were also either slain or carried away to slavery.

¹ Non-Christian population, 459, not included.

Up to 1849, Surigao included that part of southeastern Mindanao which now belongs to Davao. This territory, however, was ceded to Nueva Guipuzcoa, which was made a province in 1849. To this newly created province were ceded the following towns: Tandag, Tago, Lianga, Mission de San Juan, Bislig, Jinatuan, Catel, Quinablengan, Dapa, and Baganga.

By the decree of 1860 establishing a politico-military government for Mindanao, what is now Surigao Province together with the present Province of Agusan, became one of the six districts into which Mindanao was divided. It was known as the East District and was supposed to include the territory lying between the Butuan and Caraga Bays. This territory was known in 1870 as the district of Surigao.

At the close of the Spanish rule, Surigao constituted one of the seven districts of Mindanao. Its boundaries then were practically the same as those of the province at the time of the establishment of civil government. It was ruled by an army officer with the rank of major. The capital was Surigao. There were, besides the capital, 27 other towns. The district had a population of 93,000 Christian Filipinos. This district included the politico-military *comandancia* of Butuan.

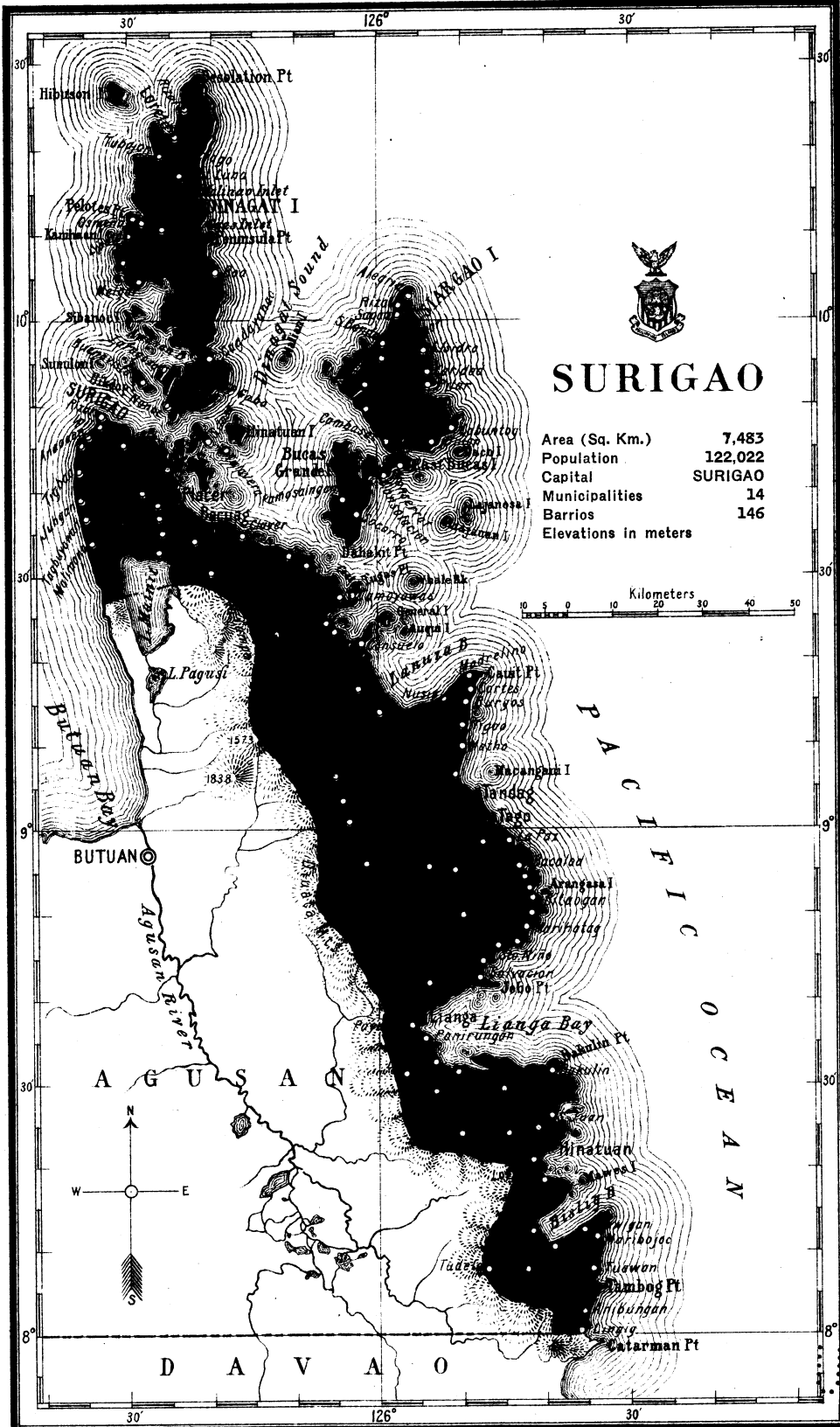
Civil government was established in Surigao May 15, 1901. As constituted at the time, Surigao included as a subprovince, the former politico-military *comandancia* of Butuan. Upon the creation in 1911 of the Province of Agusan, Butuan was separated from Surigao.

STATISTICAL DATA.

Approximate area.....	square kilometers.....	7,483
Area of farms.....	hectares.....	67,420
Cultivated lands.....	do.....	44,651
Production in 1918:		
Rice	<i>cavans</i> ¹	507,671
Sugar cane.....	tons.....	1,250
Corn	<i>cavans</i>	58,655
Copra	kilos.....	4,608,527
Abacá	do.....	7,230,899
Tobacco	do.....	18,292
Population		² 119,357
Number of schools.....		110
Primary	101	
Intermediate	5	
High school	1	
Vocational	3	
Enrollment for 1918.....	11,662	
Males	6,122	
Females	5,540	
Rate of mortality per 1,000 inhabitants.....		26.4
Number of establishments of household industries.....		841
Production in 1918.....		₱269,109.61
Number of manufacturing establishments.....		8
Production in 1918.....		₱60,200.25

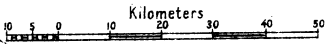
¹ One *cavan* equals 75 liters.

² Non-Christian population, 2,665, not included.



SURIGAO

Area (Sq. Km.)	7,483
Population	122,022
Capital	SURIGAO
Municipalities	14
Barrios	146
Elevations in meters	



TARLAC.

GEOGRAPHICAL SKETCH.

TARLAC is situated in the central plain of Luzon, surrounded by the Provinces of Pangasinan, Nueva Ecija, Pampanga, and Zambales. It has an area of 3,051 square kilometers, about 57,477 hectares of which are under cultivation. The capital of the province is Tarlac, an important commercial town. It is located in the east central part of the province and has 23,886 inhabitants.¹ Camiling, Moncada, Gerona, Victoria, and Capas, are also important trade centers, connected by good roads. Some of the rivers flow into the Agno River and the Chico Pampanga River. Lake Pinac and Lake Victoria furnish good sport for wild duck hunters.

The land forms two distinct geographical areas. The northern and eastern parts of the province consist of an extensive level plain, while the rest is covered with mountains which abound with timber suitable for building material and furniture making. The minor forest products are anahaw, palasan, rattan, honey, and bojo for sawali. Buri and anahaw are found in the swamps. Deposits of chalk and limestone have been discovered, but so far nothing has been done toward their exploitation. Medicinal springs are also found in the province, the two most notable of which are the spring of O'Donnell, in the municipality of Capas, and that of Sinait.

The fertility of the soil makes agriculture the most important industry of the people. Like the western provinces of Luzon, Tarlac receives its copious rainfall during the southwest monsoon, but unlike them it raises two crops of rice a year, by means of irrigation, particularly in the town of San Miguel. The people are industrious, but a large part of the arable lands still lie untouched for lack of work animals and capital. While rice constitutes the chief crop, sugar and tobacco are also raised in large quantities. Corn, beans, potatoes, coconuts, and pineapples are also grown. Goats, sheep, and cattle are raised on the grassy hillsides and uncultivated plains.

The population is composed of Tagalogs, Ilocanos, Pangasinanes, and Pampangos, emigrants from their respective regions where the struggle for existence is keen. Besides agriculture, they also engage in the making of furniture of various kinds and of wooden clogs. Little attention is paid to lumbering, the chief interest of the people being centered on agriculture.

This province has 16 municipalities and 262 barrios.

¹ Non-Christian population, 653, not included.

HISTORICAL ACCOUNT.

THE PROVINCE OF TARLAC was one of the latest to be created during Spanish rule. Formerly the region which now belongs to Tarlac was shared by the Provinces of Pampanga and Pangasinan. The first step towards the creation of this region into a province was taken in 1860, with the erection of a portion of western Pampanga into a military *comandancia*, which included the following towns: Bamban, Capas, Concepción, Mabalacat, Magalang, Porac, Florida Blanca, Victoria, and Tarlac, which latter was made the capital. This *comandancia* was the nucleus of what later became the Province of Tarlac.

Considered from the viewpoint of the foundation of its towns, Tarlac appears to be a province of late development. With the possible exception of Tarlac, which was founded in 1686, not one of the towns which belong to the province of Tarlac was founded earlier than the beginning of the eighteenth century. The oldest towns in this province, except that of Tarlac, were founded in comparatively late years. For example, Bamban was not created until 1710; Capas, not until 1712; and Paniqui, not until 1754.

The early history of Tarlac records another important event besides the foundation of its early towns, and that is the uprising of 1762, headed by Juan de la Cruz Palaris. This revolt had its effects upon Tarlac, especially the northern section of the province. The town of Paniqui, responding to the appeal of Palaris for action against the Spaniards, joined other towns in raising the standard of revolt.

The population of the region of Tarlac remained practically stationary for quite a number of years. But with the influx of immigrants from the north, especially the Ilocanos, the population steadily grew. The immigrants found their way through Pangasinan to the northern part of Tarlac, settling in such towns as Camiling, Gerona, and Paniqui. The extent of this immigration may be seen by a glance at the growth of population in the towns just mentioned within a period of about two decades. According to reliable records, the population of Camiling, Gerona, and Paniqui about the year 1850 was 14,266. In 1870, it had increased to 33,941.

This marvelous growth of that section probably led to the erection of the military *comandancia* of Tarlac into a regularly organized province. In 1873, the prosperous portion of Pangasinan which included the towns of Camiling, Gerona, and Paniqui was segregated from that province and made part of the new Province of Tarlac, which was created in that year. The newly created province included all the towns which formed part of the military *comandancia* of Tarlac, with the exception of Mabalacat, Magalang, Porac, and Florida Blanca, which were returned to Pampanga.

Tarlac apparently showed unmistakable signs of unrest on the eve of the outbreak of the Revolution, for Governor Blanco included in his decree of August, 1896, the Province of Tarlac among the eight provinces where a state of war was declared

to be in existence. Indeed Tarlac, like most provinces, was ripe for revolt. Later, when Malolos was evacuated, the town of Tarlac became for a time the headquarters of the Philippine Revolutionary Government.

Civil government was established in Tarlac on the 18th of February, 1901.

STATISTICAL DATA.

Approximate area.....	square kilometers.....	3,051
Area of farms.....	hectares.....	107,955
Cultivated lands	do.....	64,477
Production in 1918:		
Rice	<i>cavans</i> ¹	1,931,233
Sugar cane.....	tons.....	69,093
Corn	<i>cavans</i>	9,528
Copra	kilos.....	365,194
Tobacco	do.....	1,112,159
Population		² 168,265
Number of schools.....		180
Primary	170	
Intermediate	9	
High school	1	
Enrollment for 1918.....		16,268
Males	9,901	
Females	6,367	
Rate of mortality per 1,000 inhabitants.....		36.2
Number of establishments of household industries.....		764
Production in 1918.....		₱201,049.06
Number of manufacturing establishments.....		32
Production in 1918.....		₱119,114.50

¹ One *cavan* equals 75 liters.

² Non-Christian population, 3,757, not included.

TAYABAS.

GEOGRAPHICAL SKETCH.

TAYABAS is the second largest province of Luzon. It occupies the eastern coastal plain south of Nueva Vizcaya. Covering an area of 10,865 square kilometers, it embraces the Islands of Marinduque, Polillo, Patnanongan, Alabat, and many smaller ones. The coast is indented by many open bays, such as Dinalagan, Lamon, Tayabas, and Ragay Gulf. Short but navigable streams traverse the whole country, the most important of which are Umaray, Kanan and Agos.

The Sierra Madre runs along the whole length of the province, so that only a narrow strip of land along the coast and the river valleys is available for growing crops. Copra, abacá, and corn are raised for export, rice and vegetables for local use. The mountains are densely wooded, but these resources have not been developed, except on the outskirts of the forests. There are unlimited areas of rolling hills, covered with succulent grasses where grazing could be profitably carried on.

Mineral resources are abundant, especially in the Bondoc Peninsula where gold, coal, and petroleum are found. These have been worked to some extent, but without much success, because of the lack of capital and labor and the difficulty of transportation.

There are other industries. Aside from agriculture and mining, hat-making in Lucban, Mauban, and Tayabas is an important source of wealth. Lumbering is in its first stages. There is a lumber camp at Guinayangan and a modern saw and planing mill in Lucena. The Botocan Falls, where a stream 40 feet wide makes a leap of 190 feet, could supply the entire province with light and power for all its needs.

With the exception of the towns of Baler and Infanta, there are but a few settlements in the east. Most of the important towns are located along the shores of Tayabas and Lamon Bays. Lucena, the capital, is an important commercial town on the Manila-Hondagua railway line. It is located in the southwestern part of the province. It has 11,939 inhabitants. The towns of Gumaca, Mauban, and Atimonan, protected from high winds by the Islands of Polillo and Alabat, are important coastal trade centers.

The population of Tayabas is very sparse. All the Christian inhabitants are found along the shores, chiefly on Lamon Bay. Among them are found Ilocanos, Tagalogs, Bicolanos, and Visayans. The primitive tribes occupy the mountainous regions of the interior.

MARINDUQUE.

MARINDUQUE, separated from Tayabas by the Mompog Pass, is a hilly island covered with evergreen grass and shrubs. The climate is agreeable. Cattle, firewood, and sinamay, are exported to Tayabas. Abacá and coconuts are the leading products, while sugar cane, rice, and corn, are raised for local use. Gold, zinc, lead, and copper, are found in the island. The chief markets are Boac, the capital, and Santa Cruz, on the Santa Cruz harbor, which has an average depth of from 7 to 15 fathoms. Another important harbor is Port Balanacan in the northwest, with an average depth of from 6 to 12 fathoms.

POLILLO.

THE ISLAND OF POLILLO is separated from Tayabas by the Polillo Strait. Like Marinduque, Polillo has a rugged surface. It is sparsely populated. The mineral resources of the island are gold, coal, oil, and lead. Trepanng is found on the coasts and exported to China. The town of Polillo, located on a fine harbor of the same name, is the largest on the island and is the center of trade.

This province, Tayabas, has 28 municipalities and 630 barrios.

HISTORICAL ACCOUNT.

The region now known as Tayabas was explored by the Spaniards in 1571 and 1572. In 1572, Juan de Salcedo visited what is now the central portion of Tayabas on the occasion of his march across Laguna to Paracale. The following year, Salcedo led his famous expedition around the northern coast of Luzon. He visited the *contracosta* towns of Casiguran, Baler, and Infanta.

The territory which now constitutes the Province of Tayabas was at one time under the jurisdiction of various provinces. The southern and central portions, for example, were in 1585 under the jurisdiction of the province of Bonbon, sometimes called Balayan. The northern portion was divided between Laguna and Nueva Ecija.

In 1591, Tayabas was created into a province under the name of Kalilaya. Its capital was the town of Kalilaya, now Unisan. However, by about the middle of the eighteenth century, the capital was moved to the town of Tayabas. The new capital in the course of time gave the province its present name.

Another important event in the annals of Tayabas is the revolt of the Cofradia in 1841. This revolt was led by Apolinario de la Cruz, once a lay brother in the San Juan de Dios Hospital. The rebellion spread to a few towns in the neighboring Provinces of Laguna and Batangas. Apolinario was called by his followers "the king of the Tagalogs."

Like many other provinces, Tayabas suffered from Moro depredations. In 1798, a fleet of some twenty-five Moro boats harassed the towns of Casiguran, Palanan, and Baler and took

450 captives. The towns along the southern coast of Bondoc Peninsula were also at their mercy. These depredations continued almost to the end of the Spanish rule.

Tayabas was among the first provinces to join the Revolution. On August 15, 1898, General Miguel Malvar took possession of Tayabas in the name of the Revolutionary Government.

Civil government was established in Tayabas on March 12, 1901, with Lucena as the capital. On June 12, 1902, the district of Principe, formerly a dependency of Nueva Ecija, and the district of Infanta, including Polillo, formerly a dependency of Laguna, were annexed to Tayabas. Six months later, Marinduque, which up to that time had been a separate province, was also annexed to Tayabas.

STATISTICAL DATA.

Approximate area.....	square kilometers....	9,943
Area of farms.....	hectares....	191,678
Cultivated lands	do.....	102,122
Production in 1918:		
Rice	<i>cavans</i> ¹	373,071
Sugar cane	tons.....	1,408
Corn	<i>cavans</i>	6,709
Copra	kilos.....	43,694,676
Abacá	do.....	2,451,163
Tobacco	do.....	4,500
Population		² 209,851
Number of schools.....		
Primary	141	163
Intermediate	25	
High schools	2	
Enrollment for 1918.....	22,131	
Males	13,228	
Females	8,903	
Rate of mortality per 1,000 inhabitants.....		41.2
Number of establishments of household industries.....		9,241
Production in 1918.....		₱2,422,295.17
Number of manufacturing establishments.....		413
Production in 1918.....		₱1,695,726.49

STATISTICAL DATA (MARINDUQUE).

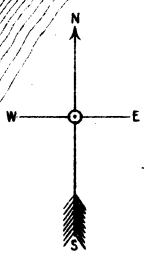
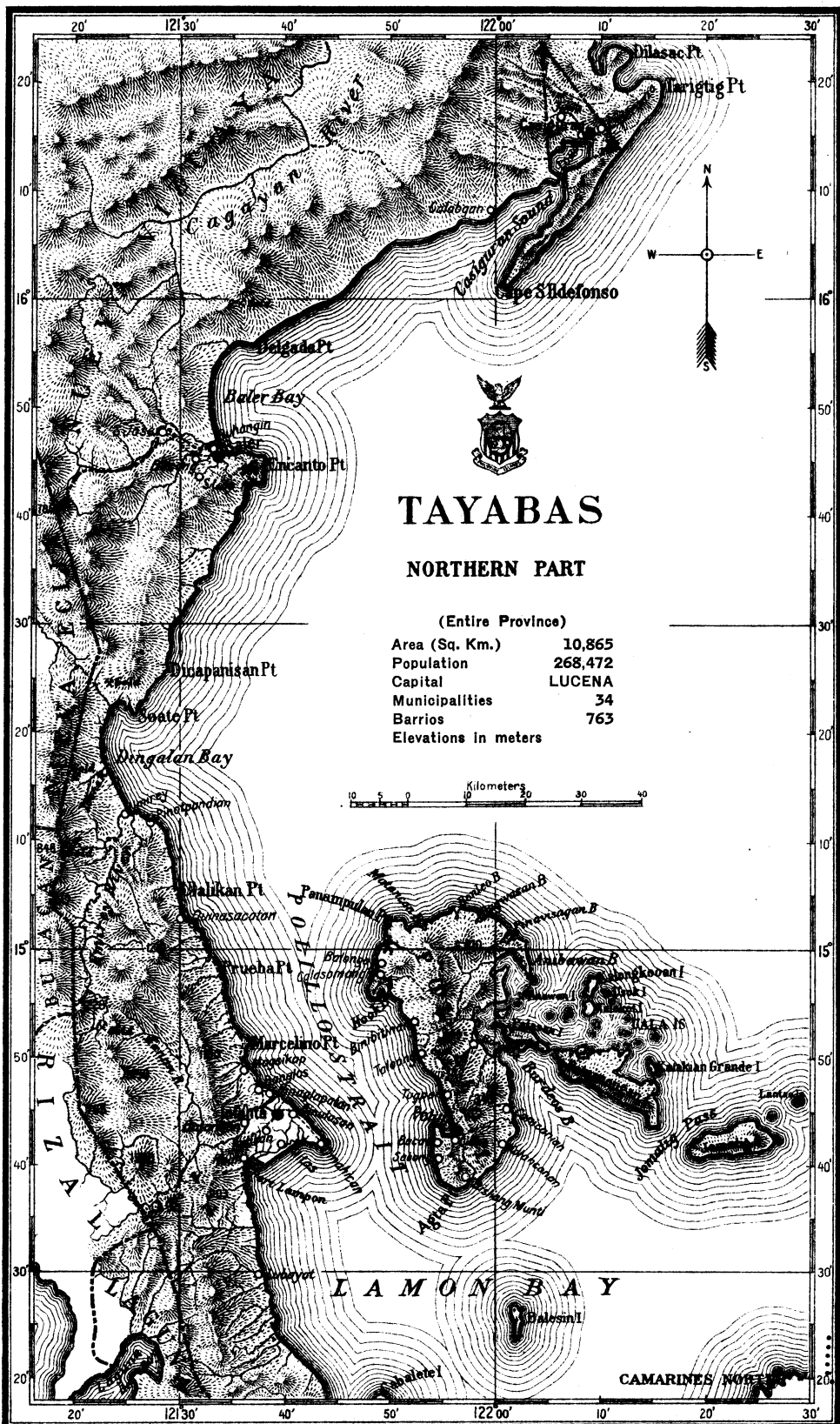
Approximate area.....	square kilometers....	922
Area of farms.....	hectares....	33,303
Cultivated lands	do.....	14,669
Production in 1918:		
Rice	<i>cavans</i> ¹	82,317
Sugar cane	tons.....	646
Corn	<i>cavans</i>	493
Copra	kilos.....	3,421,436
Abacá	do.....	2,709,946
Tobacco	do.....	1,059

¹ One *cavan* equals 75 liters.

² Non-Christian population, 1,745, not included.

STATISTICAL DATA (MARINDUQUE)—Continued.

Population		56,876
Number of schools.....		40
Primary	36	
Intermediate	3	
High school	1	
Enrollment for 1918.....	6,247	
Males	3,806	
Females	2,441	
Rate of mortality per 1,000 inhabitants.....		50.8
Number of establishments of household industries.....		491
Production in 1918.....		₱137,670.54
Number of manufacturing establishments.....		15
Production in 1918.....		₱89,389.04

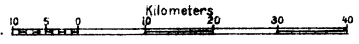


TAYABAS

NORTHERN PART

(Entire Province)

Area (Sq. Km.)	10,865
Population	268,472
Capital	LUCENA
Municipalities	34
Barrios	763
Elevations in meters	



L A M O N B A Y

CAMARINES NORTE



ZAMBALES.

GEOGRAPHICAL SKETCH.

THE PROVINCE OF ZAMBALES, with an area of 3,680 square kilometers, lies in the western part of Luzon, between the Provinces of Pangasinan on the north, and Bataan on the south. It includes the Islands of Hermana Mayor, Hermana Menor, Salvador, Capones, Los Frailes, and several other minor ones. The coast is very irregular, notably so on the southern and northwestern parts of the province. Along the west coast, there are no good harbors to protect shipping from the turbulent waters of the China Sea. On the south, however, there are two well sheltered ones, Olongapo and Subic, wherein the water ranges in depth from 6 to 20 fathoms. Transportation in the province is exceedingly difficult. There are few good roads, and although there are many rivers, they are short and sluggish. The most important of these latter are the Cabaluan, Bucao, and the Grulio. The swamps at the mouths of these rivers are overgrown with nipa and mangroves.

Iba is the capital of the province. It is located in the western part and has 5,451 inhabitants.¹ Subic, on the Bay of the same name, is an important port. Olongapo is a naval station that boasts of one of the largest floating dry docks in the world. Almost all the large towns are located near the coast.

The land on the north is not so rugged as that of the south. The mountains are covered with extensive forests of fine timber, of which few have been exploited as yet because of the difficulty of transportation, and the impassable nature of the mountains. Rattan, tan bark and a small amount of timber are exported to the nearby provinces.

The climate is similar to that of the other western provinces of northern Luzon. Heavy storms are frequently experienced inland during the southwest monsoon. Conditions in the coastal plain are favorable to the cultivation of rice, of which a large amount is exported to Cebu and Batangas. The land along the coast and foothills in the north are adapted to the growth of coconuts. Sugar, tobacco, and mangoes are raised for local use. The fertile valleys in the interior and the hillsides are covered with grass on which thousands of cattle, carabaos, and horses feed.

Deposits of copper, zinc, and coal, await hands to exploit them, and mineral waters are found in the vicinity of Iba, Subic, and Palanig.

¹ Non-Christian population, 239, not included.

The scanty population is composed principally of Ilocanos. A number of Tagalogs inhabit the southern part of the province, and in the mountain fastnesses a few Negritos dwell in their accustomed seclusion.

The province has 13 municipalities and 113 barrios.

HISTORICAL ACCOUNT.

The exploration of Zambales began in 1572. In that year, Juan de Salcedo sailed along the coast of this region, visiting some of the native settlements on the way. The little band of explorers on the third day of their voyage reached Cape Bolinao (now belonging to Pangasinan), where they met a Chinese sampan in which a native chieftain and a number of his followers were being held captive. Salcedo liberated the prisoners, by which act of generosity he gained the good will and loyalty of the natives.

Zambales was organized into a province immediately after Salcedo's exploration of this region. The capital was first established in Masinloc, but was moved later to Iba. As created in 1572, the new province included all of the coastal plain from the Gulf of Lingayen to Subic Bay. Though a very small province, Zambales was nevertheless, one of the earliest to be organized.

The name of the new province was taken from that of the people (Zambals) who inhabited this locality. This people, it appears, had already, before the arrival of the Spaniards, established several villages which became the nucleus of new towns. Among the earliest organized in Zambales were Masinloc (1607), Iba (1611), and Santa Cruz (1612).

Like Bataan and several other provinces of the Philippines, Zambales was visited by the Dutch during the early part of the seventeenth century. It was in 1617 that Admiral Spielbergen, with a powerful fleet appeared off the coast of Playa Honda. The Government forces, under the command of Juan Ronquillo, sallied out and engaged the Dutch squadron. Spielbergen displayed much bravery, but was defeated.

The Zambals were known to be one of the bravest and most warlike people of the Philippines, ever ready to join uprisings in the neighboring provinces. The Pampangos, for example, who revolted in 1645, found numerous sympathizers and comrades at arms among the Zambals. In fact, the uprising readily spread to Zambales. And in 1660, this same people became the voluntary allies of Andres Malong of Pangasinan.

About the middle of the nineteenth century and after, the population of Zambales showed marvelous increase. In 1818, it was 18,841; but this figure rose to 95,260 in 1847. During this period, moreover, new towns were founded like San Antonio (1836), San Marcelino (1843), San Narciso (1849), and San Felipe (1860). This great increase in population was due to Ilocano immigration.

The Revolution did not readily spread to Zambales, but in the early part of 1898, in spite of the Pact of Biac-na-bato, dis-

turbances occurred in this province. The Revolutionists seized the telegraph lines between Manila and Bolinao and besieged the cable station.

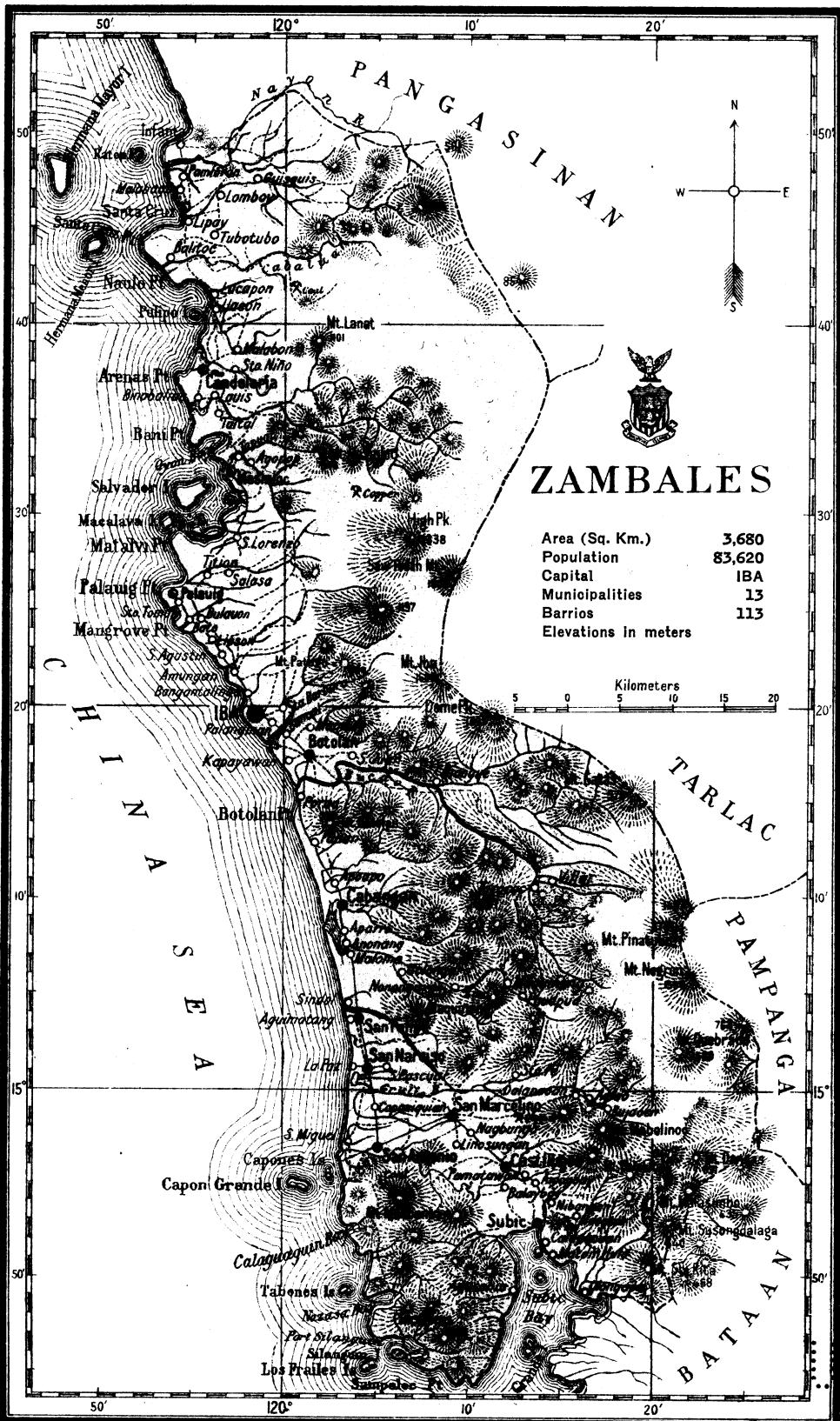
Civil government was established in Zambales on August 28, 1901. Then as formerly, Zambales extended to the Lingayen Gulf; but in 1903 the northern portion of the province, comprising the towns of Alaminos, Bolinao, San Isidro, Infanta, Anda, Bani, and Agno, was detached and given to Pangasinan.

STATISTICAL DATA.

Approximate area.....	square kilometers....	3,680
Area of farms.....	hectares....	36,674
Cultivated lands	do.....	27,257
Production in 1918:		
Rice	cavans ¹	635,295
Sugar cane.....	tons....	2,589
Corn	cavans....	2,297
Copra	kilos....	172,152
Tobacco	do.....	15,750
Population		² 80,088
Number of schools.....		70
Primary	62	
Intermediate	5	
High school	1	
Vocational	2	
Enrollment for 1918.....	10,631	
Males	6,257	
Females	4,374	
Rate of mortality per 1,000 inhabitants.....		46.7
Number of establishments of household industries.....		293
Production in 1918.....		₱81,978.82
Number of manufacturing establishments.....		9
Production in 1918.....		₱48,846.26

¹ One *cavan* equals 75 liters.

² Non-Christian population, 3,532, not included.



PANGASINAN



ZAMBALES

Area (Sq. Km.)	3,680
Population	83,620
Capital	IBA
Municipalities	13
Barrios	113
Elevations in meters	

Kilometers
5 0 5 10 15 20

CHINA SEA

TARLAC

PAMPANGA

BATAAN

Capones Is.

Calaguaguin Bay

Tabonca Is.

Nozaca

Port Silangan

Silangan

Los Prales Is.

Sampaloc

ZAMBOANGA.

GEOGRAPHICAL SKETCH.

THE ZAMBOANGA PENINSULA lies on the northwestern part of Mindanao. The province, with an area of 16,532 square kilometers, comprises the peninsula, Olutanga Island and the Basilan group. The coast is very rough and full of many deep indentures, the most important of which are the Bays of Sibuguey, Dumanpulas, Pagadian, Dapitan, Sindangan, Sibuko, and Port Sibulan. The bays are deep, ranging from 3 to 27 fathoms, but are open roadstead, while Port Sibulan, with a depth of from 2 to 15 fathoms, is well sheltered by the Island of Olutanga near its entrance.

Zamboanga, located on the southern extremity of the peninsula, is the capital of the province and the Department of Mindanao and Sulu, and has 30,872 inhabitants.¹ This port is about 512 miles distant from Manila via the west coast of Mindoro, and about 519 miles from the Capital City via Verde Island Passage. All the largest towns are situated near the coast, the most important of these are Sibucan, Sindangan, Kumalarang, and Dapitan.

The province is exceedingly mountainous. These mountains are well wooded and contain the best timbers for shipbuilding and furniture-making. The mountains in the north central part are not yet explored because of the absence of good roads and long rivers as natural highways. But the forest resources around the bays of Sibuguey and Dumanquinlas, where sawmills are established, are under exploitation. Guttapercha for insulating cable wires and almaciga for varnish are the most important forest products for exports.

The province has a delightful climate, except during the months of November to January, when it is exceptionally cold. The rainy season lasts from May to October. The rivers flow over their banks and destroy the crops. The land is seldom visited by strong winds, so that famine is rarely felt there.

The broad coastal plains can support thousands of people, if extensively cultivated. The soil is very fertile, and very well suited for abacá and coconut growing. Abacá and copra are the chief export crops, while rice is cultivated largely for home use. On the plateaus and hillsides, cattle, horses, carabaos, and sheep are raised.

Coal and gold are found on the peninsula. The situation of these mineral deposits is very favorable, but because of the lack of capital and labor, they still remain intact.

¹ Non-Christian population, 4,143, not included.

The population can be divided into three groups, namely, the Christian people, the Moros, and the Pagans. The Christians live mostly along the coasts and do the tilling of the arable coastal plains. They are the most progressive people of Mindanao. The Moros inhabit the regions along the rivers and coasts, while the primitive people occupy the interior.

Basilan Island is hilly, three-fourths of its area being covered with forests. Lumbering is being carried on in this island, a lumber mill having already been established in Isabela, its largest town.

There are plantations for the growing of rubber here. Copra and abacá are exported.

This province has 5 municipalities, 14 municipal districts, and 43 barrios.

HISTORICAL ACCOUNT.

It is believed that Dapitan is the first point within the confines of the present Province of Zamboanga to have been visited by the Spaniards. Legaspi in 1565 touched at the town of Dapitan, one of the oldest towns in the Philippines. This town, which was founded by immigrants from Bohol, became noted later as the place where Dr. José Rizal lived as an exile. By 1631, the Spanish missionaries were already at work in this region and in other parts of northern Mindanao.

During the early decades of the seventeenth century, several armed encounters between the Christian Filipinos and the Spaniards on the one hand, and the Moros on the other, took place in Zamboangan territory. In 1628 and again in 1630, the Island of Basilan was the objective of primitive expeditions against the Moros. In 1636, the governor of Zamboanga defeated the famous Tagal, brother of the Sultan of Magindanao, off the coast of Punta de Flecha. It is said that about three hundred Moros together with their famous "admiral" perished in this battle.

Due to these frequent encounters with the Moros, it was thought wise to establish a fort in Zamboanga. Consequently, as early as 1636, Don Juan de Chaves founded Zamboanga and began the construction of Fort Pilar. In 1662, however, the fort was abandoned due to the withdrawal of the garrison, which was recalled to Manila to defend the capital against the threatening attack of the Chinese pirate Kotsen or Koxinga. Half a century later, the king ordered the refortification of Zamboanga, but this was not done till the rule of Bustamante, who rebuilt the fort in 1719.

In order to strengthen the Spanish position in Zamboanga and in the neighboring region, three companies of Zamboanga volunteers were organized in 1832. In 1847, this volunteer organization was made into two companies of two hundred and fifty men each.

The Province of Zamboanga had its beginnings in the old "corregimiento militar" of Zamboanga. In 1837, the government of this "corregimiento" was changed to a "gobierno militar." In

1860, Zamboanga was one of the six districts into which Mindanao and Sulu were divided. At the end of the Spanish rule, Mindanao and Sulu were divided into seven districts, Zamboanga being the most important of the seven. From the beginning of the Spanish rule to the end, Zamboanga town was the capital of Mindanao, excepting the brief period between 1872 and 1875 when the general government was located at Cotabato.

Dapitan, now a part of Zamboanga, was created a politico-military *comandancia* in 1863. At the end of the Spanish rule, it was still a politico-military *comandancia* dependent on Misamis.

In 1897, as a part of the Philippine Revolution, a rebellion broke out in Zamboanga under the leadership of Isidoro Midel and Melanio Ramos. This uprising did not secure important results. In 1898, the Philippine Revolutionary Government appointed Vicente Alvarez general of the revolutionary forces in this region. General Alvarez attacked the Spanish forces, which were then being concentrated in Zamboanga, and finally took possession of the province.

In 1903, the Moro Province was organized with Zamboanga as one of the districts. In 1914, civil government was established in the Department of Mindanao and Sulu, Zamboanga becoming one of the regularly constituted provinces of the department. The town of Zamboanga was made the capital.

STATISTICAL DATA.

Approximate area.....	square kilometers.....	16,532
Area of farms	hectares.....	35,717
Cultivated lands	do.....	21,959
Production in 1918:		
Rice	<i>cavans</i> ¹	124,823
Sugar cane.....	tons.....	1,935
Corn	<i>cavans</i>	43,455
Copra	kilos.....	1,407,460
Abacá	do.....	3,437,324
Tobacco	do.....	29,299
Population		² 77,001
Number of schools.....		60
Primary	51	
Intermediate	5	
High school	1	
Vocational	3	
Enrollment for 1918.....	7,565	
Males	4,392	
Females	3,173	
Rate of mortality per 1,000 inhabitants.....		38.3
Number of establishments of household industries.....		170
Production in 1918.....		³ ₱59,811.08
Number of manufacturing establishments.....		³ 6
Production in 1918.....		₱588,562.82

¹ One *cavan* equals 75 liters.

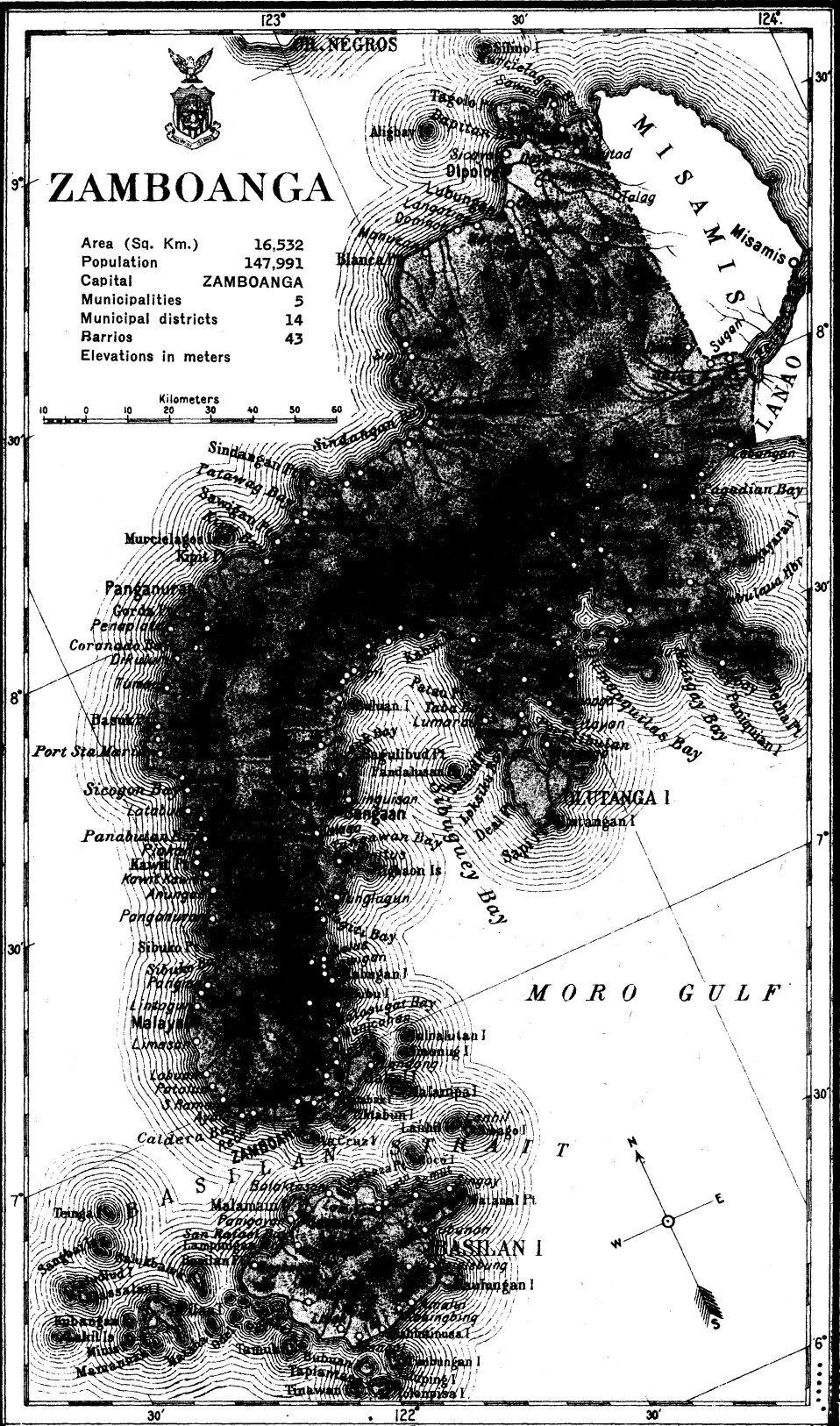
² Non-Christian population, 70,990, not included.

³ Including two establishments of Nueva Vizcaya.



ZAMBOANGA

Area (Sq. Km.) 16,532
 Population 147,991
 Capital ZAMBOANGA
 Municipalities 5
 Municipal districts 14
 Barrios 43
 Elevations in meters



ISLANDS OF THE PHILIPPINE ARCHIPELAGO.

[In groups adjacent to principal islands and with reference to naming.]

Principal island.	Number of named islands.	Number of unnamed islands.	Total.	Area of one square mile or over.
Luzon	406	1,050	1,456	80
Mindanao.....	420	634	1,054	72
Samar.....	266	437	703	46
Negros.....	21	147	168	5
Palawan.....	619	1,149	1,768	82
Panay.....	132	500	632	26
Mindoro.....	42	109	151	9
Leyte.....	52	80	132	8
Cebu.....	56	195	251	14
Bohol.....	80	50	130	11
Masbate.....	50	59	109	9
Sulu group.....	272	176	448	99
Romblon group.....	25	56	81	2
Total	2,441	4,642	7,083	463

NOTE.—The unnamed islands are small unimportant mangrove or rocky islets.

The above values were obtained from the topographic sheets of the Coast and Geodetic Survey received to December 31, 1919. In the unsurveyed regions north of Luzon, Sulu Archipelago, and west coast of Palawan, the counting was done on the best charts available.

Approximate areas of principal islands.¹

Island.	Square miles.
Luzon.....	40,814
Mindanao.....	36,906
Samar.....	5,124
Negros.....	4,903
Palawan.....	4,500
Panay.....	4,448
Mindoro.....	3,794
Leyte.....	2,799
Cebu.....	1,695
Bohol.....	1,534
Masbate.....	1,255
All other islands.....	6,628
Total land area of Archipelago.....	114,400

NOTE.—Islands over 1 square mile, 463.

¹ For areas of other islands see table in Volume II under paragraph: "Population and Density of Islands."

NAMES OF ISLANDS OF AREA ONE SQUARE MILE OR OVER.

ISLANDS BELONGING TO LUZON.

[Total number of Islands, 80.]

Alabat I.	Canton I.	Lamit I.	Quinalasag I.
Alibijaban I.	Caringo I.	Lucsuhin I.	Rapurapu I.
Babuyan I.	Corregidor I.	Luzon I.	Sablayan I.
Bagatao I.	Catanduanes I.	Mabudis I.	Sabtang I.
Balesin I.	Dalupiri I.	Maculabo I.	Salomague I.
Basot I.	Diogo I.	Malabungut I.	Salvador I.
Batan I.	Fuga I.	Maniwayan, I.	San Miguel I.
Batan I.	Guintinua I.	Maricaban I.	Santa Cruz I.
Burias I.	Haponan I.	Marinduque I.	Santiago I.
Busin I.	Hermana Mayor	Matalvi I.	Siapar I.
Butauanan I.	I.	Mompog I.	Sibauan I.
Cabalete I.	Hermana Menor	Pagbilao I.	Silanguin I.
Cabalitian I.	I.	Palasan I.	Talim I.
Cabaloa I.	Ibugos I.	Palau I.	Templo I.
Cabarruyan I.	Itbodyat I.	Panay I.	Tinaga I.
Cacraray I.	Jomalig I.	Panuitan I.	Tubutubu I.
Cagbulauan I.	Juac I.	Patnanongan I.	Verde I.
Calayan I.	Kalongkooan I.	Pinget I.	Volcano I.
Calintaan I.	Kalokot I.	Polillo I.	Y'Ami I.
Camiguin I.	Karlagan I.	Porongpong I.	
Canimo I.	Lahuy I.	Quinabugan I.	

ISLANDS BELONGING TO MINDANAO.

[Total number of islands, 72.]

Awasan I.	General I.	Maanoc I.	Samal I.
Balukbaluk I.	Great Santa Cruz	Mahaba I.	Sangboy I.
Balut I.	I.	Malamaui I.	Sarangani I.
Basilan I.	Hanigad I.	Malanipa I.	Siargao I.
Bayagnan I.	Hibuson I.	Manangal I.	Sibago I.
Bilabid I.	Hikdop I.	Mataja I.	Sibale I.
Bobuan I.	Hinatuan I.	Maves I.	Sibanoc I.
Bongo I.	Igat I.	Middle Bukas I.	Takela I.
Bucas Grande I.	Kabo I.	Mindanao I.	Talabera I.
Byby I.	Kaludlud I.	Mosapelid I.	Talicut I.
Capaquian I.	Kangbangyo I.	Nonoc I.	Tamuk I.
Cepaya I.	Kauluan I.	Olutanga I.	Tapiantana I.
Cobeton I.	Lajanosa I.	Palmas I.	Teinga I.
Condon I.	Lamagon I.	Pilas I.	Tictauan I.
Daco I.	Lanahuan I.	Pisan I.	Tona I.
Dassalan I.	Lanhil I.	Poneas I.	Unib I.
Dinagat I.	Lead I.	Pujada I.	
Doot I.	Ludguron I.	Sakul I.	
East Bucas I.	Lutangan I.	Saluping I.	

ISLANDS BELONGING TO SAMAR.

[Total number of islands, 46.]

Aguada I.	Camandag I.	Goyam I.	San Juan I.
Almagro I.	Canahauan I.	Hilaban I.	Santo Niño I.
Bani I.	Caperangasan I.	Homonhon I.	Suluan I.
Batag I.	Capul I.	Karikiki I.	Sundara I.
Biri I.	Catalaban I.	Laoang I.	Tagapula I.
Botic I.	Dalupiri I.	Libucan I.	Talisay I.
Buad I.	Daram I.	Manicani I.	Timpasan I.
Buri I.	Dernasan I.	Maravilla I.	Tinau I.
Cabaun I.	Destacado I.	Nabugtusan I.	Tubabao I.
Cagnipa I.	Escarpada I.	Parasan I.	Tubabao I.
Cahayagan I.	Gilbert I.	Samar I.	
Calicoan I.	Gintarcan I.	San Andres I.	

ISLANDS BELONGING TO NEGROS.

[Total number of Islands, 5.]

Daco I.	Refugio I.	Siquijor I.
Molocaboc I.	Negros I.	

ISLANDS BELONGING TO PALAWAN.

[Total number of islands, 82.]

Agutaya I.	Calabadian I.	Dondonay I.	Palawan I.
Alava I.	Calabugdong I.	Galoc I.	Paly I.
Albagueñ I.	Calibang I.	Ibobor I.	Pandanan I.
Bagambangan I.	Canabungan I.	Icadambanauan I.	Passage I.
Balabañ I.	Candaraman I.	Iloc I.	Patoyo I.
Bancalan I.	Canipo I.	Lagen I.	Popototan I.
Bantac I.	Canipo I.	Lajo I.	Quiniluban I.
Baquit I.	Capare I.	Lamud I.	Ramos I.
Batas I.	Capnoyan I.	Linapacan I.	Rasa I.
Binatican I.	Casian I.	Lubic I.	Tagauayan I.
Binulbulan I.	Catalat I.	Malanao I.	Tambon I.
Bisucay I.	Chindonan I.	Malubutglubut I.	Tampel I.
Boayan I.	Coron I.	Manamoc I.	Tangat I.
Bugsuk I.	Culion I.	Mantangule I.	Tapiutan I.
Bulalacao I.	Cuyo I.	Maobanen I.	Tara I.
Cabilauan I.	Debangan I.	Marily I.	Tuluran I.
Cabulauan I.	Delian I.	Matinloc I.	Uson I.
Cabuli I.	Depagal I.	Maytiguid I.	Verde N. I.
Cacnipa I.	Dibanca I.	Miniloc I.	Verde S. I.
Cadlao I.	Dicabaito I.	Nangalao I.	
Cagayan I.	Dit I.	Pachiri I.	

ISLANDS BELONGING TO PANAY.

[Total number of islands, 26.]

Binanan I.	Gigante South I.	Pandan I.	Semirara I.
Binuluangan I.	Guimaras I.	Pan de Azucar I.	Tago I.
Batbatan I.	Guiuanon I.	Panubulon I.	Tagubanhon I.
Borocay I.	Igbon I.	Pinamucan I.	Tandog I.
Calagnaan I.	Inampulugan I.	Sicogon I.	Tabon I.
Caluya I.	Malangaban I.	Sibay I.	
Gigante North I.	Panay I.	Sibato I.	

ISLANDS BELONGING TO MINDORO.

[Total number of islands, 9.]

Ambulong I.	Cabra I.	Ilin I.	Mindoro I.
Ambil I.	Golo I.	Lubang I.	Tambaron I.
Buyallao I.			

ISLANDS BELONGING TO LEYTE.

[Total number of islands, 8.]

Bacol I.	Gigantangan I.	Leyte I.	Maripipi I.
Biliran I.	Gumalac I.	Limasawa I.	Panaon I.

ISLANDS BELONGING TO CEBU.

[Total number of islands, 14.]

Bantayan I.	Guintacan I.	Mactan I.	Pacijan I.
Carnasa I.	Jibitnil I.	Malapascua I.	Ponson I.
Cebu I.	Jilantangan I.	Olango I.	Poros I.
Doong I.	Lipayran I.		

ISLANDS BELONGING TO BOHOL.

[Total number of islands, 11.]

Banacon I.	Jandayan I.	Mahanay I.	Panglao I.
Bohol I.	Jau I.	Pamilican I.	Sandingan I.
Cabilao I.	Lapinin I.	Pangangan I.	

ISLANDS BELONGING TO MASBATE.

[Total number of islands, 9.]

Bugtong I.	Jintotolo I.	Matabao I.	Naro I.
Carogo I.	Masbate I.	Napayauan I.	Ticao I.
Deagan I.			

ISLANDS BELONGING TO SULU.

[Total number of islands, 92.]

Balanguingui I.	Capual I.	Maniacolat I.	Simonor I.
Bambannan I.	Daluman I.	Mantabuan I.	Sipac I.
Banaran I.	Dammi I.	Manucmanca I.	South Ubian I.
Bangalao I.	Dasaan I.	Marungas I.	Sulade I.
Basbas I.	Datu-Bato I.	Minis I.	Tabawan I.
Basbas I.	Deato-Bato I.	North Ubian I.	Tabulunga I.
Bilatan I.	Doc Can I.	Omapui I.	Taluc I.
Bintoulan I.	Dongdong I.	Panducan I.	Tambagaan I.
Bitinan I.	Gujangan I.	Pangasinan I.	Tandubas I.
Bolipongpong I.	Hegad I.	Pangutarang I.	Tandubato I.
Bongao I.	Island (no name)	Pantocunan I.	Tapaan I.
Buan I.	Island (no name)	Papahag I.	Tapul I.
Bubuan I.	Jolo I.	Paquia I.	Taruc I.
Bubuan I.	Kinapusan I.	Parol I.	Tatalan I.
Bucutua I.	Kuad Basang I.	Pata I.	Tawitawi I.
Bulan I.	Kulassein I.	Patian I.	Teomabal I.
Bulicutin I.	Lapac I.	Sangasanga I.	Tigungun I.
Cabingaan I.	Laparan I.	Secubun I.	Tonkil I.
Cabucan I.	Latuan I.	Siasi I.	Tubalubac I.
Cacataan I.	Lintian I.	Sibutu I.	Tubigan I.
Cagayan Sulu I.	Little Calupag I.	Sigboye I.	Tumindao I.
Calupag I.	Loran I.	Simaluc I.	Tulayan I.
Cap I.	Lupa I.	Simisa I.	Usada I.

ISLANDS BELONGING TO ROMBLON.

[Total number of islands, 9.]

Alad I.
Banton I.
Carabao I.

Cobrador I.
Maestre de Cam-
po I.

Romblon I.
Sibuyan I.

Simara I.
Tablas I.

LIST OF PORTS IN THE PHILIPPINE ISLANDS.

Name.	Class.	Province.
Aborlan.....	3	Palawan.
Alabat.....	3	Tayabas.
Allen.....	3	Samar.
Aparri.....	2	Cagayan.
Aroroy.....	3	Sorsogon.
Atimonan.....	2	Tayabas.
Baclayon.....	3	Bohol.
Bacnotan.....	3	La Union.
Bacolod.....	3	Occidental Negros.
Bacon.....	3	Sorsogon.
Baganga.....	3	Davao.
Bais.....	2	Oriental Negros.
Balabac.....	2	Palawan.
Balamban.....	3	Cebu.
Balangiga.....	3	Samar.
Balayan.....	3	Batangas.
Baler.....	3	Tayabas.
Balingasag.....	3	Misamis.
Banga.....	2	Zamboanga.
Bangui.....	3	Ilocos Norte.
Barili.....	3	Cebu.
Barugo.....	3	Leyte.
Basco.....	3	Batanes.
Batan.....	3	Albay.
Batan.....	3	Capiz.
Batangas.....	2	Batangas.
Bato.....	3	Albay.
Bauan.....	3	Batangas.
Baybay.....	3	Leyte.
Binalbagan.....	3	Occidental Negros.
Boac.....	3	Tayabas.
Bogo.....	3	Cebu.
Bolbok.....	3	Batangas.
Bolinao.....	2	Pangasinan.
Bolton.....	3	Davao.
Borongon.....	2	Samar.
Boston.....	3	Davao.
Bugasong.....	3	Antique.
Bulalacao.....	3	Mindoro.
Bulan.....	3	Sorsogon.
Bulusan.....	3	Sorsogon.
Bungau.....	2	Sulu.
Buruanga.....	3	Capiz.
Butuan.....	3	Agusan.
Cabadbaran.....	3	Agusan.
Cabalian.....	3	Leyte.
Cabangan.....	3	Zambales.
Cadiz.....	3	Occidental Negros.
Cagayan.....	1	Misamis.
Cagayan.....	2	Sulu.
Calapan.....	3	Mindoro.
Calauag.....	3	Tayabas.

Name.	Class.	Province.
Calbayog.....	3	Samar.
Calivo.....	3	Capiz.
Caluya.....	3	Antique.
Camp Overton.....	3	Lanao.
Candelaria.....	3	Zambales.
Candon.....	3	Ilocos Sur.
Cantilan.....	3	Surigao.
Capalonga.....	3	Camarines Norte.
Capiz.....	3	Capiz.
Carangian.....	3	Samar.
Carcar.....	3	Cebu.
Carigara.....	3	Leyte.
Casiguran.....	2	Sorsogon.
Casiguran.....	3	Tayabas.
Cataingan.....	3	Sorsogon.
Catanauan.....	3	Tayabas.
Catarman.....	3	Samar.
Catbalogan.....	2	Samar.
Cateel.....	3	Davao.
Catmon.....	3	Cebu.
Cavite.....	3	Cavite.
Cebu.....	1	Cebu.
Coron.....	3	Palawan.
Cotabato.....	3	Cotabato.
Culion.....	2	Palawan.
Currimaos.....	3	Ilocos Norte.
Cuyo.....	2	Palawan.
Daet.....	3	Camarines Norte.
Dagupan.....	3	Pangasinan.
Danao.....	3	Cebu.
Dapa.....	3	Surigao.
Dapitan.....	2	Zamboanga.
Davao.....	2	Davao.
Dimiao.....	3	Bohol.
Dipolog.....	3	Zamboanga.
Diriqui.....	3	Ilocos Norte.
Dolores.....	3	Samar.
Donsol.....	3	Sorsogon.
Dulag.....	3	Leyte.
Dumaguete.....	2	Oriental Negros.
Dumanjug.....	3	Cebu.
Escalante.....	2	Occidental Negros.
Gasan.....	3	Tayabas.
Gingoog.....	3	Misamis.
Gubat.....	3	Sorsogon.
Guinayangan.....	3	Tayabas.
Guiuan.....	2	Samar.
Gumaca.....	3	Tayabas.
Halsey.....	3	Palawan.
Himamaylan.....	3	Occidental Negros.
Hinatuan.....	3	Surigao.
Hindang.....	3	Leyte.
Hondagua.....	2	Tayabas.
Iba.....	2	Zambales.
Ibajay.....	3	Capiz.
Iligan.....	3	Lanao.
Iloilo.....	1	Iloilo.
Infanta.....	3	Tayabas.

Name.	Class.	Province.
Isabela	2	Zamboanga.
Jagna	3	Bohol.
Jimenez	3	Misamis.
Jolo	1	Sulu.
Kawayan	3	Leyte.
Kolambugan	3	Lanao.
Lagonoy	2	Camarines Sur.
Laguimanoc	3	Tayabas.
Laoag	3	Ilocos Norte.
Laoang	3	Samar.
Larena	3	Oriental Negros.
Lavezares	3	Samar.
Lebak	2	Cotabato.
Legaspi	2	Albay.
Lemery	3	Batangas.
Lianga	3	Surigao.
Liloan	3	Leyte.
Llorrente	3	Samar.
Loay	3	Bohol.
Looc	3	Romblon.
Lubang	3	Mindoro.
Lucena	3	Tayabas.
Luna	3	La Union.
Maasin	3	Leyte.
Macalelon	3	Tayabas.
Magallanes	3	Sorsogon.
Malabang	3	Lanao.
Malangas	1	Zamboanga.
Malita	3	Davao.
Malitbog	2	Leyte.
Mambajao	3	Misamis.
Manapla	3	Occidental Negros.
Manila	1	Manila.
Margosatubig	3	Zamboanga.
Maribojoc	3	Bohol.
Mariveles	2	Bataan.
Masbate	1	Sorsogon.
Masinloc	3	Zambales.
Mati	2	Davao.
Matnog	3	Sorsogon.
Mauban	3	Tayabas.
Mercedes	3	Camarines Norte.
Merida	3	Leyte.
Misamis	3	Misamis.
Naga	3	Camarines Sur.
Narvacan	3	Ilocos Sur.
Nasipit	3	Agusan.
Nasugbu	3	Batangas.
Nato	3	Camarines Sur.
Naujan	3	Mindoro.
New Washington	3	Capiz.
Odiangan	3	Romblon.
Olongapo	2	Bataan.
Oras	3	Samar.
Ormoc	2	Leyte.
Oroquieta	3	Misamis.
Oslob	3	Cebu.

Name.	Class.	Province.
Palauig	3	Zambales.
Palompon	2	Leyte.
Paluan	3	Mindoro.
Pambuhan	3	Samar.
Pambuhan Sur.	3	Samar.
Panacan	3	Palawan.
Pandan	3	Albay.
Pandan	3	Ilocos Sur.
Paracale	3	Camarines Norte.
Parang	3	Cotabato.
Pasacao	3	Camarines Sur.
Pilar	3	Sorsogon.
Pinamalayan	3	Mindoro.
Pitogo	3	Tayabas.
Placer	3	Surigao.
Polillo	2	Tayabas.
Puerto Galera	3	Mindoro.
Puerto Princesa	1	Palawan.
Quezon	3	Tayabas.
Ragay	3	Camarines Sur.
Romblon	1	Romblon.
Sabang	3	Camarines Sur.
Sablayan	3	Mindoro.
Sagay	3	Occidental Negros.
Salcedo	3	Samar.
Salomagui	3	Ilocos Sur.
San Carlos	1	Occidental Negros.
San Esteban	3	Ilocos Sur.
San Fernando	2	La Union.
San Fernando	3	Sorsogon.
San Isidro	3	Leyte.
San Jose	1	Mindoro.
San Jose de Buenavista	2	Antique.
San Julian	3	Samar.
San Pascual	3	Sorsogon.
San Vicente	3	Cagayan.
Santa Cruz	3	Davao.
Santa Cruz	3	Tayabas.
Santa Cruz	3	Zambales.
Siasi	2	Sulu.
Sir J. Brooke	3	Palawan.
Sitanki	2	Sulu.
Sogod	3	Leyte.
Sorsogon	2	Sorsogon.
Sual	2	Pangasinan
Subic	2	Zambales.
Sulat	3	Samar.
Surigao	1	Surigao.
Taal	3	Batangas.
Tabaco	2	Albay.
Tacloban	2	Leyte.
Taft	3	Samar.
Tagbilaran	3	Bohol.
Tagudin	3	Mt. Province.
Talisayan	3	Misamis.
Taytay	3	Palawan.
Torrijos	3	Tayabas.

Name.	Class.	Province.
Unisan	3	Tayabas.
Villaba	3	Leyte.
Virac	2	Albay.
Zamboanga	1	Zamboanga.
Zumarraga	3	Samar.

**THE CLIMATE AND WEATHER OF THE
PHILIPPINES, 1903 TO 1918.**

THE CLIMATE AND WEATHER OF THE PHILIPPINES, 1903 TO 1918.

By REV. JOSÉ CORONAS, S. J.,
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I. INTRODUCTORY REMARKS.

Climate and weather.—The difference between climate and weather is thus expressed by Hann in his *Handbook of Climatology*:¹

“By *climate* we mean the sum total of the meteorological phenomena that characterize the average condition of the atmosphere at any one place on the earth’s surface. That which we call *weather* is only one phase in the succession of phenomena whose complete cycle, recurring with greater or less uniformity every year, constitutes the climate of any locality. Climate is the sum total of the weather as usually experienced during a longer or shorter period of time at any given season. An account of a climate, therefore, means a description of the average state of the atmosphere.”

In other words, what we mean by *weather* is the meteorological conditions of a particular hour, day, month, year or season of the year, while *climate* means the average of the weather experienced for a longer or shorter period of years.

Object and general plan of this report.—It is our intention in this report not only to consider the average of the atmospheric conditions of the Philippines as deduced from the period of observations 1903 to 1918, but also to call the attention of our readers to some extraordinary conditions of the weather for a particular day, month, year or season of the year. Hence, the reason of our title *Climate and Weather of the Philippines*. This method of considering climate and weather together seems to be more satisfactory: first because it is very difficult at times to draw exactly the dividing line between weather and climate; and secondly because very frequently, if not always, the same tables of observations may be properly used to study both the climate and the weather.²

¹ English translation by Ward, page 1.

² See *The Weather and Climate of Chicago* by Cox and Armington, page XXIV.

A word of explanation may be necessary as to the period of observations chosen, 1903 to 1918. This report is being prepared at the request of the Director of the Census, Hon. Ignacio Villamor, to be included in the *Census of the Philippine Islands of 1918*. Now, in the preceding Census of the Philippines of 1903, the climatological conditions of the Philippines were also studied with observations of previous years up to 1902, inclusive. Hence it is but proper, in order to avoid repetitions, that we consider the new period beginning with 1903 and ending on December 31, 1918, the date of the present Census. Besides, a good number of our official climatological stations now in operation, and established since the time of the reorganization of the Philippine Meteorological Service in 1901, had not been yet opened at the beginning of 1902; and, therefore, even for the sake of uniformity, it was considered far better not to include in our period the year of 1902, although several of our stations had been already established in the preceding year 1901. We did not consider it wise either to include in this work a more previous period of observations under the Spanish Government, because the Official Climatological Service was then limited only to the Island of Luzon, and, therefore, there could be no uniformity in the results that we might obtain for Luzon as compared with those for the Visayas and Mindanao. If further on, time and occupations allow us to take up a more detailed study of the meteorological conditions in a particular place, use may be made of all records available for such a place.

Yet, whenever necessary or convenient, especially when we lacked reliable observations for the last period 1903 to 1918, use has been made also in this report of the observations taken in former years, particularly in the preparation of our temperature and rainfall maps.

That the period of 16 years here chosen is sufficient to get an accurate knowledge of our climate may be shown from the fact that the annual average rainfall of Manila as deduced from this period differs from the average deduced from 54 years of observation (1865 to 1918) by only +17.2 mm.; and the average annual temperature and humidity, also for Manila, deduced from the same period of 16 years differ from those deduced from 34 years of observation (1885 to 1918) by -0.2° C. and -0.1 per cent, respectively.

This report has been prepared in a rather short time, if compared with the amount of work in calculations which it involves. It is true that the Director of the Census requested it to be prepared on a letter to the Director of this Bureau dated as early

as July 6, 1919, and that the latter directed the author of these lines to prepare it, immediately after that letter was received. But an extraordinary period of typhoons in the Far East, with an unprecedented series of heavy rains and floods, that occurred in Luzon from the end of July to the beginning of September, did not only cause our routinary work in the Meteorological Division to be two or three months behind time, but also rendered several of our employees unable to attend to their duties for a good number of days owing to overwork. Hence it was found almost impossible to undertake the preparation of this report until November, 1919. Furthermore, even from November until the time the report was finished, it was necessary to do this work only at such times as the ordinary routinary office duties would allow. These circumstances have made it impossible to prepare an exhaustive report on the matter, as it was our desire to do. It has been our endeavor, however, to present in a most comprehensive manner some of the most interesting data concerning the weather and the climate of the Philippines for the period chosen.

Climatological elements.—The most important elements of climate are temperature, rainfall, humidity, wind direction and force, cloudiness, and storms, some of these elements being at times quite independent one from the other, while in other cases they are intimately connected. Thus rainfall and winds are in many cases, particularly in summer and autumn, intimately connected here in the Philippines with the frequency, position and intensity of the storms which are called typhoons in the Far East or *baguios* in the Philippines. Atmospheric pressure and its variations, as Hann says,¹ are of secondary importance as climatic factors. Hence they have been disregarded in this report, except in so far as they are connected with typhoons.

Temperature and rainfall may be considered for any region, but most particularly for the Philippines, as the climatic elements of greatest importance, temperature making of our climate a tropical climate, while the distribution of rainfall gives way to a definite subdivision of climates within a characteristic tropical climate. Accordingly, it is our intention in this report to give more space to these two elements, although we will give also some information on the other elements, at least for a few selected stations.

Climatological and weather service of the Philippines.—It may not be out of place to add here a few words on the Climatological and Weather Service in the Philippines. There

¹ *Handbook of Climatology*, English translation, page 70.

were in all 60 official climatological stations maintained by the Weather Bureau at the end of 1918: One branch station at Baguio; 6 first class stations, four of them in Luzon and two in the Visayas; 12 second class stations, six in Luzon, four in the Visayas, and two in Mindanao; 30 third class stations, including the two stations of Guam and Yap; and 11 rain stations. Besides, Manila Observatory had 53 voluntary or coöperative rain stations, where rain observations were made daily and sent monthly to the Central Office. All these stations are shown in the accompanying map.

Hourly observations of all climatological elements are made regularly during the day at Manila and Baguio; six daily observations (2, 6, and 10 a. m., 2, 6, and 10 p. m.) in all the first and second class stations; and two daily observations (6 a. m. and 2 p. m.) in all the other stations, both official and volunteer. The time used for these observations throughout the Philippines is that of the meridian 120° east of Greenwich.

Weather telegrams are received twice daily from all the first, second and third class stations of the Philippines; also from one station in Guam, ten stations in Japan, including the Bonin and the Loochoo Islands, 5 stations in Formosa, 5 stations on the China Coast, and 3 stations in Indochina. Based on these telegraphic reports a weather map of the Far East is being prepared daily at the Central Office since 1907 and exhibited in several public places of Manila. Together with the weather map a table is also given with the most important climatological observations made throughout the Far East, but especially in the Philippines, and the daily weather forecast for the next twenty-four hours, covering the whole Archipelago. A model of our daily weather map of the Far East may be seen in Plate I of *The Quantico Typhoon, December 25, 1918*, by Rev. José Coronas, S. J., 1919; also in *Historia del Observatorio de Manila por el P. M. Saderra Masó*, 1915, page 161.

Previous reports on the climate of the Philippines.—The first attempt to publish some notes on the climate of the Philippines was made by Manila Observatory in 1899. They were prepared by us and distributed in monthly sheets under the title *Characteristic conditions of the Weather in Manila during the month of* Then during the second half of the same year 1899 we prepared a voluminous work on the *Climatología de Filipinas*, with many tables and illustrations, which was published as a part of *El Archipiélago Filipino*, printed in Washington at the expense of the United States Government. An English translation of same appeared in Vol. IV of the Report of the

First Philippine Commission to the President, 1901, pages 113 to 357. A brief résumé of these two works, as far as they referred to the climate of Manila, was published by the author in a small pamphlet *Interesting Climatological Data concerning the Weather of Manila, 1900*.

When the Census of the Philippines of 1903 was being prepared, Rev. José Algué, the Director of the Weather Bureau, contributed to it another report on the Climate of the Philippines. But as the time allowed to prepare it was very limited, he had to avail himself of many illustrations and tables published, as stated above, in *El Archipiélago Filipino*, by bringing them up to date (1902 inclusive) as far as practicable; two new maps, however, and several new tables were introduced in this report. He also published two pamphlets on the climate of Baguio in 1902 and 1909, respectively.

As the distribution of rainfall is one of the most important elements of the climate of the Philippines, mention should be made here of two pamphlets published by Rev. Miguel Saderra Masó in 1907 and 1914, respectively, *The Rainfall in the Philippines* and *Annual Amount and Distribution of Rainfall in the Philippines*, where the climate of the Philippines was divided into three types according to the different monthly distribution of rainfall.

Rev. José Algué, in another pamphlet issued in 1915 as a contribution to the Panama Pacific International Exposition, represented in a map three types of climate as based on the monthly distribution of rainfall in the Philippines, and studied carefully the characteristics of the most important climatological elements for each of the three types.

All the above mentioned reports, except those on Rainfall, are either exhausted or not intended for free distribution; hence it is earnestly hoped that the present one will help to satisfy the natural desire of many who so often apply to the Weather Bureau for data and information regarding the climate of the Philippines.

II. TEMPERATURE.

Monthly and annual mean temperature.—Table I gives the monthly and annual mean temperature for 52 stations well distributed throughout the Philippines. An extra column is added showing the annual range of the mean monthly temperature for each station, or in other words, the difference between the means of the warmest and the coldest months.

It will be noticed in Table I, and the same may be said of other similar tables throughout this report, that in several cases a period shorter than 16 years has been used, even in cases of stations which have been in existence during the whole period. To give an explanation of this, we repeat here what Rev. Miguel Saderra Masó says referring to the rainfall records published in his pamphlet *Annual Amount and Distribution of Rainfall in the Philippines*:

It is to be regretted that our records are not as complete as could be expected: there are many local causes which can hardly be controlled. The principal ones are sudden sickness of the observers, frequent unexpected resignations, and destruction of instruments by typhoons. These causes, due to the special conditions of the Islands, and chiefly to the poor transportation facilities, are responsible for long delays in sending both apparatus and substitutes or successors to the sick or retiring observers.

At times the records have been found so incomplete that several full years of observations had to be disregarded in the preparation of our tables. Months with less than 25 days of observation have not been included in our calculations.

We wish to say a word on the method followed in this report in obtaining the mean daily and hence the mean monthly and annual temperatures for each of our stations. In our desire not to change the mean values published in our monthly bulletins and annual reports, different methods have been followed for different stations according to the number of observations which have been taken in them. The mean temperatures given for Manila are the average of 24 daily observations, and those for our first and second class stations have been deduced from six daily observations (2, 6, 10 a. m.; 2, 6, 10 p. m.). Those for all the

other stations have been obtained by the common formula $\frac{1}{2}$ (minimum + maximum). After a careful comparison of these three methods made with the Manila observations, we can safely say that the means deduced from 24 daily observations and those obtained from six daily observations, as stated above, are practically the same, while the means deduced from the daily extremes are somewhat too high, the differences being, as an average, about 0.5° C. As we could not prescind from several other sources of error in our observations, like differences in the installation of the thermometer shelter, small defects of the instruments, etc., not to say anything on personal errors, we did not think it convenient to apply any correction to our temperature means as published in our previous publications, even when derived from the extreme daily values.

Concerning the monthly and annual mean temperature for the Philippines, as they appear in Table I, the following remarks may be of interest to our readers:

1. The mean annual temperature for the whole Archipelago, as deduced from the means of all the stations situated near the sea level is 26.9° C. Baguio and Silang being high stations, their corresponding temperatures have not been included in the calculation, and will not be considered in these remarks.

2. The difference between the annual average temperature of the southernmost stations, like Jolo and Zamboanga, and that of the northernmost stations, like Aparri and Basco, is less than 1° C., the annual average of the former being 26.6° C. and that of the latter, 25.8° C.

3. Yet, the annual range of the mean monthly temperature is very small in Jolo and Zamboanga, 1° C. and 0.6° C., respectively, while in Aparri and Basco it reaches 5.1° C. and 6.1° C., respectively. The increase of this annual range, however, is not entirely proportionate in many cases with the increase in latitude of the stations, a fact which would tend to show that the difference in the annual range of temperature does not depend only on the difference of latitude, but may often depend also on the local conditions of a particular place, particularly as regards the prevailing winds, the position of the islands or of the stations, and the relative position of high or low pressure centers.

4. While in the great majority of the stations the maximum monthly mean temperatures are those of April to May, yet in a few stations the highest of the monthly means is that of August.

5. Following are the monthly mean temperatures for the whole

TABLE I.—Normal monthly

TABLA I.—Temperaturas nor

STATION. Estación.	PROVINCE OR SUBPROV- INCE. Provincia o subpro- vincia.	LENGTH OF RE- CORD. Período de obser- vaciones.	JANUA- RY. Enero.	FEBRUA- RY. Febrero.	MARCH. Marzo.	APRIL. Abril.
		YEARS. Años.	°C.	°C.	°C.	°C.
Jolo.....	Sulu.....	16	26.2	26	26.2	26.8
Zamboanga.....	Zamboanga.....	16	26.4	26.3	26.5	26.8
Davao.....	Davao.....	16	26.2	26.4	26.9	27.6
Cotabato.....	Cotabato.....	10	27.2	27.6	28.2	28.5
Cagayan.....	Misamis.....	11	25.6	25.8	26.5	27.5
Butuan.....	Agusan.....	12	25.1	25.4	26	27
Dumaguete.....	Oriental Negros.....	9	26.1	26.1	26.8	27.5
Tagbilaran.....	Bohol.....	16	25.7	25.7	26.3	27
Iwahig.....	Palawan.....	5	25.9	25.4	26.7	27.6
Surigao.....	Surigao.....	16	25.6	25.5	25.9	26.5
Maasin.....	Leyte.....	16	25.8	26	26.5	27.3
Cebu.....	Cebu.....	16	26	26	26.8	27.7
Bacolod.....	Occidental Negros.....	6	25.9	26	26.8	27.9
Iloilo.....	Iloilo.....	16	25.6	25.8	26.8	27.8
San Jose de Buenavista.....	Antique.....	16	26.2	26.4	27.3	28.2
Tuburan.....	Cebu.....	7	25.5	25.5	26.1	27.5
Cuyo.....	Palawan.....	14	26.9	26.9	28	29
Ormoc.....	Leyte.....	16	25.2	25.2	25.8	26.4
Guiuan.....	Samar.....	7	26.3	26.5	27.1	27.7
Tacloban.....	Leyte.....	15	25.5	25.5	26.3	27.1
Capiz.....	Capiz.....	16	25.6	25.6	26.6	27.6
Borongan.....	Samar.....	11	25.6	25.6	26.2	26.8
Calbayog.....	Samar.....	16	24.9	24.9	25.7	26.5
Masbate.....	Masbate.....	11	26.2	26.6	27.5	28.6
Romblon.....	Romblon.....	15	26.5	26.5	27.8	29
Batag.....	Samar.....	6	24.9	25.3	26	26.9
Gubat.....	Sorsogon.....	11	25.8	25.9	26.6	27.7
Legaspi.....	Albay.....	16	25.6	25.6	26.5	27.5
Calapan.....	Mindoro.....	10	25.7	25.6	26.8	27.7
Virac.....	Catanduanes.....	11	25.6	25.6	26.1	26.9
Naga.....	Ambos Camarines.....	10	25.1	25	25.9	27
Batangas.....	Batangas.....	12	25.8	26.2	27.8	29
Atimonan.....	Tayabas.....	16	25.2	25.3	26.4	27.7
Silang.....	Cavite.....	8	24.2	24.4	25.3	26.3
Paracale.....	Ambos Camarines.....	8	25	24.9	25.9	27.1
Santa Cruz.....	Laguna.....	9	24.9	25.2	26.5	27.7
Manila.....	Manila.....	16	24.5	25	26.3	27.8
Antipolo.....	Rizal.....	9	25	25.5	27	28.4
Iba.....	Zambales.....	9	25.2	25.2	26.3	27.6
San Isidro.....	Nueva Ecija.....	16	24.7	25.2	26.7	28.3
Tarlac.....	Tarlac.....	16	25.7	26.3	27.9	29.3
Baler.....	Tayabas.....	12	24.4	24.5	25.4	26.6
Dagupan.....	Pangasinan.....	16	25.5	25.8	27.1	28.4
Bolinao.....	Pangasinan.....	11	25.9	26	27.2	28.6
Baguio.....	Benguet.....	16	16.5	16.6	17.7	18.7
San Fernando.....	La Unión.....	16	25	25.1	26.8	28.6
Echague.....	Isabela.....	11	23.7	24.2	26.1	28.1
Vigan.....	Ilocos Sur.....	13	25.4	25.6	26.9	28.1
Tuguegarao.....	Cagayan.....	14	23.3	24	26.2	27.9
Laog.....	Ilocos Norte.....	11	25	25.6	27.2	28.5
Aparri.....	Cagayan.....	16	22.9	23.2	24.8	26.5
Basco.....	Batanes.....	16	22.4	22.5	24.1	26.2

and annual temperatures.

males mensuales y anuales.

MAY. Mayo.	JUNE. Junio.	JULY. Julio.	AUGUST. Agosto.	SEPTEMBER. Septiembre.	OCTOBER. Octubre.	NOVEMBER. Noviembre.	DECEMBER. Diciembre.	ANNUAL. Anual.	MEAN ANNUAL RANGE. Oscilación media anual.
°C.	°C.	°C.	°C.	°C.	°C.	°C.	°C.	°C.	°C.
27	26.7	27	26.8	26.8	26.6	26.4	26.4	26.6	1
26.9	26.6	26.5	26.5	26.5	26.5	26.6	26.6	26.6	.6
27.5	26.9	26.7	26.9	27	27	26.9	26.4	26.9	1.4
28.3	27.7	27.1	27.1	27.3	27.6	27.6	27.4	27.6	1.4
28	27.4	27.3	27.3	27.2	26.8	26.6	26	26.8	2.4
28.1	27.7	27.6	27.6	27.4	26.9	26.1	25.6	26.7	3
27.6	27.4	27.4	27.7	27.5	27.1	27	26.8	27.1	1.6
27.6	27.3	27.4	27.4	27.3	26.9	26.5	26.1	26.8	1.9
27.5	27	27	26.9	27	26.6	26.4	26	26.7	2.2
27.2	27.3	27.4	27.6	27.4	27	26.3	25.9	26.6	2.1
28	28	27.5	27.4	27.1	27.2	26.8	26.4	27	2.2
28.1	27.8	27.4	27.5	27.3	27.1	26.8	26.5	27.1	2.1
28.3	27.5	26.6	26.6	26.7	26.8	26.4	26.3	26.8	2.4
27.9	27.3	26.8	26.8	26.6	26.6	26.4	26	26.7	2.3
28.3	27.5	26.8	26.9	26.8	27.1	27	26.8	27.1	2.1
28.4	28	27.8	27.7	27.4	27.2	26.7	26	27	2.9
28.7	27.9	27.4	27.4	27.2	27.5	27.6	27.4	27.7	2.1
26.8	26.7	26.7	26.8	26.6	26.1	25.8	25.7	26.2	1.6
28	28	28.3	28.5	28.3	27.8	27.4	27	27.6	2.2
27.7	27.4	27.3	27.6	27.4	26.9	26.4	26	26.8	2.2
28	27.5	27	26.7	26.7	26.7	26.6	26.3	26.8	2.4
27.3	27.4	27.4	27.6	27.6	26.9	26.5	26.3	26.8	2
27	27	27.1	27.5	27.1	26.5	25.7	25.4	26.3	2.6
29.3	29.1	28.4	28.4	28.2	28.1	27.5	26.9	27.9	3.1
29.4	29	28.3	28.4	28.2	28	27.6	26.9	28	2.9
27.6	27.2	27.4	27.4	27.2	26.8	26.4	26	26.6	2.7
28.4	28.4	28	28.4	28.1	27.4	26.9	26.3	27.3	2.6
28.1	27.9	27.3	27.3	27	27.1	26.6	26.2	26.9	2.5
28	27.9	27.5	27.6	27.2	27.2	26.9	26.2	27	2.4
27.6	27.7	27.6	27.9	27.5	27	26.7	26.3	26.9	2.3
28.2	28.2	27.9	28.1	27.7	27	26.3	25.6	26.8	3.2
29	28.6	27.6	27.7	27.2	27	26.6	26.1	27.4	3.2
28.2	27.9	27.4	27.5	27	26.9	26.5	25.8	26.8	3
25.9	25.2	24.4	24.7	24.8	24.9	24.7	24.1	24.9	2.2
27.7	27.8	27.6	27.6	27.2	26.7	26.5	25.9	26.7	2.9
28.4	28.1	27.5	27.5	27	26.8	26.2	25.6	26.8	3.5
28.2	27.7	26.8	26.9	26.6	26.3	25.6	24.9	26.4	3.7
28.8	28	26.4	26.2	26.1	26.2	26	25.5	26.6	3.8
28.1	27.6	26.8	26.6	26.6	26.8	26.4	25.8	26.6	2.9
28.3	27.7	26.5	26.5	26.4	26.4	25.6	25.2	26.5	3.6
29.3	28.7	27.5	27.5	27.4	27.4	26.6	26.1	27.5	3.6
27.7	28.1	27.9	28.2	27.5	26.7	26.1	25.2	26.5	3.8
28.5	28.1	27	27	27	27.2	26.6	25.9	27	3
28.8	27.9	26.9	26.8	26.8	27.3	27	26.5	27.2	2.9
18.9	18.9	18.1	17.9	18	18	17.7	17.4	17.9	2.4
29.1	28.4	27.6	27.5	27.3	27.2	26.3	25.8	27.1	4.1
29.1	29.2	28.3	28.2	27.8	26.6	25.2	24.3	26.7	5.5
28.6	28.1	27.2	26.8	27	27.2	26.9	26.1	27	3.2
28.6	28.8	27.8	27.6	27.2	26.2	24.8	23.8	26.4	5.5
28.9	28.5	27.7	27.2	27.6	27.4	26.7	26	27.2	3.9
27.4	28	27.7	27.4	27.1	26.3	25.1	23.7	25.8	5.1
27.5	28.5	28.2	27.9	27.5	26.6	24.8	23	25.8	6.1

Archipelago as deduced from the averages of all our stations given in Table I, disregarding those of Baguio and Silang:

	° C.
January	25.4
February	25.6
March	26.5
April	27.6
May.....	28.1
June	27.8
July	27.4
August	27.4
September	27.2
October	26.9
November	26.5
December	25.9
Annual average.....	26.9

Accordingly, the year might be divided into seven warmer months (April to October) with a mean monthly temperature of 26.9° C. to 28.1° C., and five colder months (November to March) with a mean monthly temperature of 25.4° C. to 26.5° C. May is the warmest month, and January the coldest.

6. As for Manila and other places with similar monthly distribution of temperature, the year might be divided into three warmer months (April to June), four colder months (November to February) and five months of intermediate temperature (March and July to October).

Variability of the monthly and annual means of temperature.—It is often said that a tropical climate is characterized by an extraordinary regularity in the sequence of its diurnal monthly and annual changes of temperature. To show this clearly we have decided to give in Plate I a graphical representation of the monthly and annual departures from the normal temperature at Manila for each of the months and years of the period 1903 to 1918.

The regularity shown in this plate is indeed very remarkable. The greatest annual departure in excess of the normal is +0.8° C., and the greatest in defect is -0.5° C. As to the monthly departures, the greatest in excess is +1.6° C., whilst the greatest in defect is -1.4° C. Taking the hottest months of the years, April to May, it appears that the highest temperatures were recorded in the years 1903, 1912 and 1915, three years which are considered the driest of the whole period for the Philippines, not precisely as to the annual rainfall but as to the winter and spring rainfall, as we shall see later. The coldest months, January and February, show the lowest temperatures in the year

MONTHLY AND ANNUAL DEPARTURES FROM THE
NORMAL TEMPERATURE AT MANILA
1903 - 1918

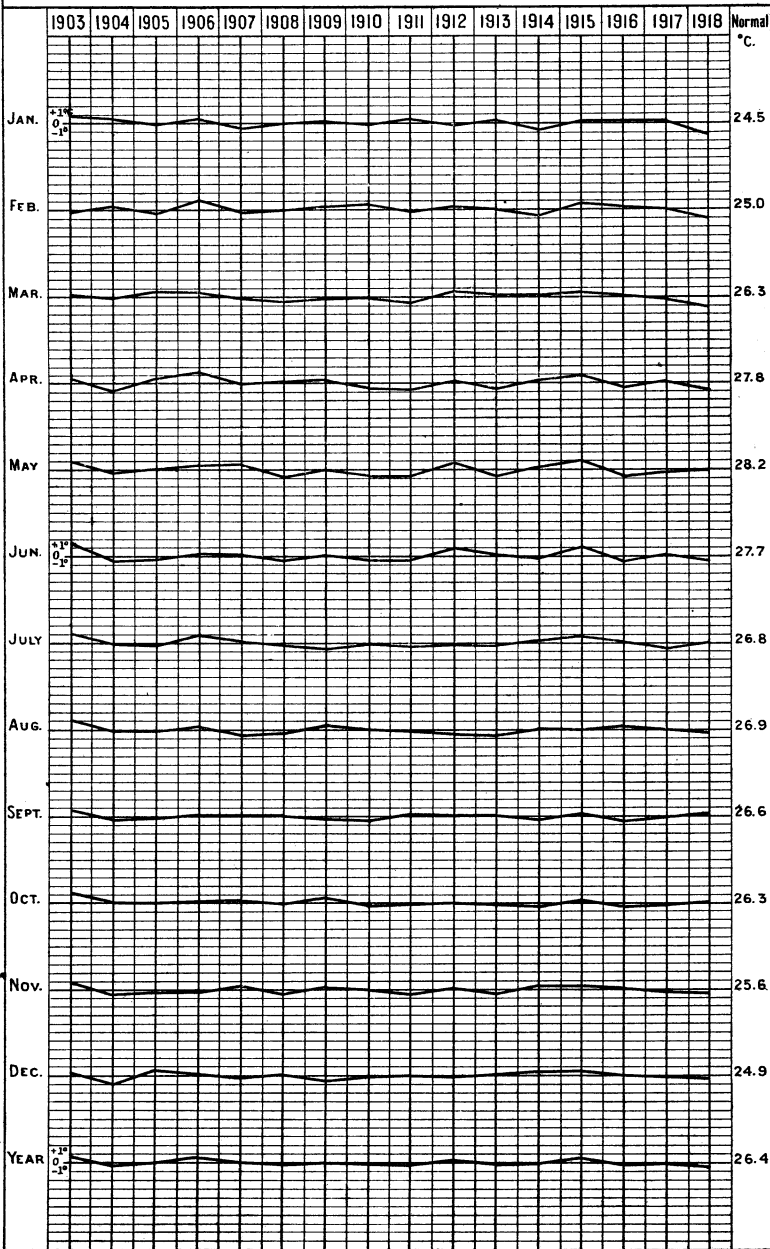


PLATE I.

1918 with a departure from the normal of -1.4° C. and -1.1° C., respectively.

What has just been said on the variability of the monthly and annual means of temperature at Manila can surely be applied with no great differences to all the other stations of the Philippines.

It follows from the foregoing how exact Hann and other meteorologists are when they state that in the tropics only five years of observation are needed to give accurate monthly and annual means or normals of temperature,¹ while for other countries like those of Europe or the United States of America at least twenty years of observations are usually required for a normal value. Hence it is that, although we use indifferently in this report the words mean and average for the mean temperature deduced from 16 years of observation, they can rightly be taken as real normals in the strict sense of this word, and this is true even in cases of mean values deduced from less than 16 years, but more than 5 years of observation.

Mean monthly and annual temperatures of the Philippines compared with those of other selected cities of the world.—It may be of interest to our readers to have the mean monthly and annual temperatures of the Philippines compared with some of the most important cities of the world. For this purpose we give in Table II the mean monthly and annual temperatures for six cities of Europe, four cities of the Far East, besides Manila and Baguio, two cities of India, six of the United States of North America, one of Mexico and one of Cuba. We add at the end five stations of the southern hemisphere showing an inverse monthly distribution of temperature.

In Plate II the monthly distribution of temperature is graphically shown for six stations of the Philippines, three other cities of the Far East (Hongkong, Shanghai, and Tokio), three selected cities of North America (New York, Chicago, and San Francisco, California) and three of Europe (London, Madrid, and Paris). The mean annual temperatures are given in figures for each place.

The differences more or less pronounced in the monthly as well as in the annual temperatures are so clearly distinguished, both in the table and the plate, that we do not think it necessary to make any remark on them. Attention should be called, however, to the great similarity of the mean monthly distribution and

¹ See Hann's *Handbook of Climatology*, English Translation by Ward, page 10.

NORMAL MONTHLY AND ANNUAL TEMPERATURE OF THE PHILIPPINES COMPARED WITH THAT OF A FEW SELECTED CITIES OF EUROPE, UNITED STATES OF AMERICA, AND THE FAR EAST.

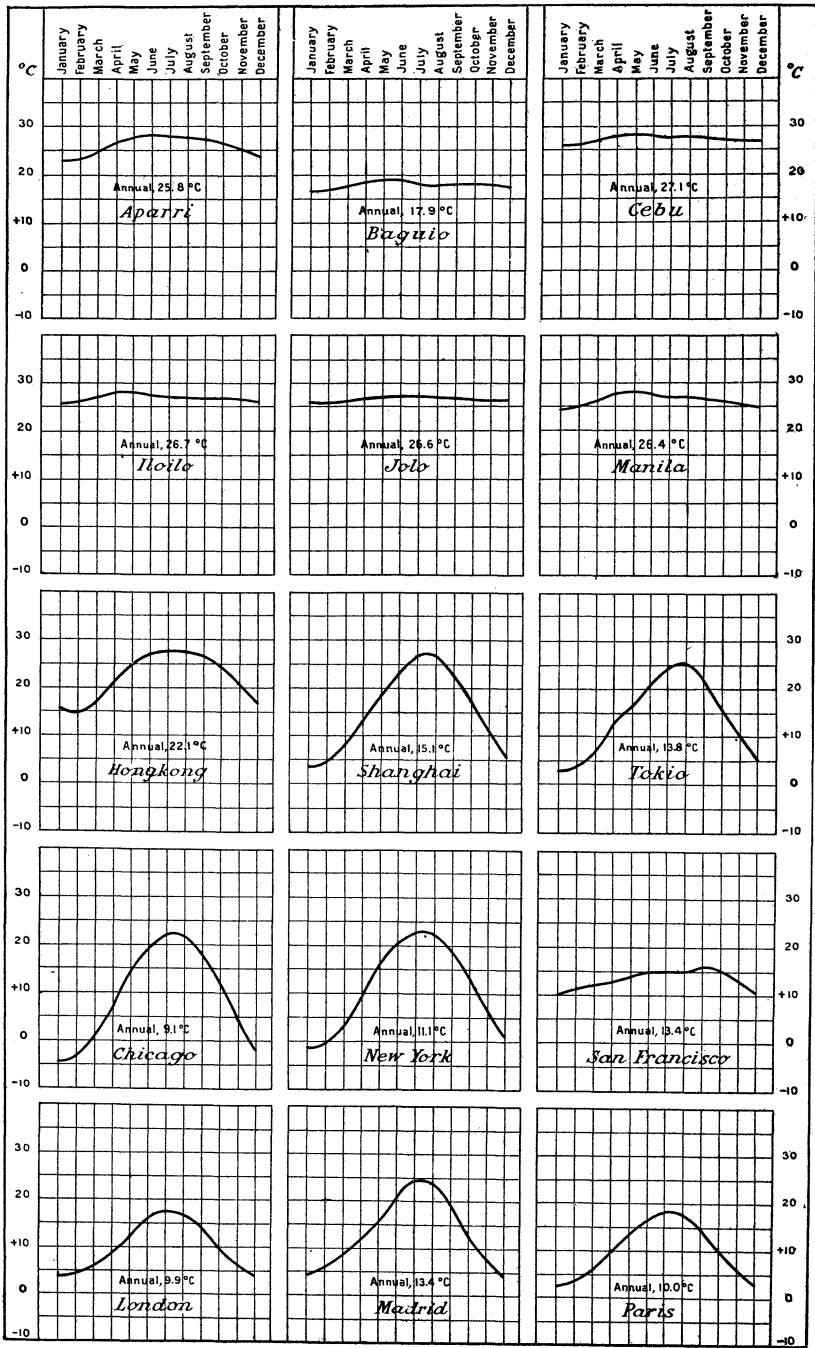


PLATE II.

TABLE II.—Normal monthly and annual temperatures

TABLA II.—Temperaturas normales, mensuales y anuales,

CITY. Ciudad.	LATITUDE. Latitud.		LONGITUDE OF GREENWICH. Longitud de Greenwich.		JANUA- RY. Enero.	FEBRU- RY. Febrero.	MARCH. Marzo.	APRIL. Abril.		
	°	'	°	'	°C.	°C.	°C.	°C.		
Manila.....	14	35	N	120	59	E	24.5	25	26.3	27.8
Baguio.....	16	25	N	120	36	E	16.5	16.6	17.7	18.6
London.....	51	34	N	0	8	W	3.4	4.3	5.6	8.9
Paris.....	48	50	N	2	20	E	2.3	3.6	5.9	9.9
Madrid.....	40	24	N	3	42	W	4.5	6.3	8.5	11.7
Berlin.....	52	33	N	13	21	E	— .7	.3	2.9	7.7
Vienna.....	48	15	N	16	21	E	— 1.7	.2	3.9	9.4
Rome.....	41	54	N	12	28	E	— 6.8	8.3	10.4	13.7
Peking.....	39	57	N	116	28	E	— 4.7	— 1.7	5	13.7
Shanghai.....	31	12	N	121	11	E	3.6	4.1	7.8	13.2
Hongkong.....	22	15	N	114	12	E	15.6	14.7	17.1	21.2
Tokio.....	35	41	N	139	45	E	2.8	3.6	6.8	12.4
Calcutta.....	22	32	N	88	26	E	18.4	21.3	26.3	29.4
Bombay.....	18	54	N	72	54	E	23.6	23.8	25.6	27.8
Chicago.....	41	53	N	87	37	W	— 4.4	— 3.3	1.1	7.8
New York.....	40	43	N	74	0	W	— 1.1	— .6	3.3	8.9
Washington.....	38	54	N	77	3	W	.6	1.7	5.6	11.7
San Francisco.....	37	48	N	122	26	W	10	11.1	12.2	12.8
New Orleans.....	29	58	N	90	4	W	12.2	13.9	17.2	20.6
Los Angeles.....	34	3	N	118	15	W	12.2	12.8	13.9	15.6
Mexico.....	19	26	N	99	8	W	12.2	13.8	15.8	17.8
Habana.....	23	9	N	82	21	W	21.3	22.2	22.9	24.5
Buenos Aires.....	34	37	SS	58	21	W	24.1	23.5	21	17.3
Lima.....	12	4	SS	77	1	W	22	23.2	22.9	21.3
Valparaiso.....	33	1	SS	71	40	W	17.2	17.3	15.9	14.6
Rio de Janeiro.....	22	54	SS	43	10	W	25.2	25.4	25	23.6
Sydney.....	33	51	S	151	11	W	21.8	21.4	20.6	18.1

NOTE.—The observations for the cities of the United States are taken from the Climatology of the United States by Alfred Judson Henry; those for Shanghai from La Température en Chine by Rev. H. Gauthier, S. J.; those for Tokio from the "Results of the Meteorological Observations made in Japan," published by the Central Meteorological Observatory of Tokio; those for Hongkong from "The Climate of Hongkong," by T. F. Claxton; and the rest from "Lehrbuch der Meteorologie" by Dr. Julius von Hann. (NOTA.—Las observaciones

for several selected cities of the world.

de varias ciudades escogidas del mundo.

MAY. Mayo.	JUNE. Junio.	JULY. Julio.	AUGUST. Agosto.	SEPTEMBER. Septiembre.	OCTOBER. Octubre.	NOVEMBER. Noviembre.	DECEMBER. Diciembre.	ANNUAL. Anual.	MEAN ANNUAL RANGE. Oscilación media anual.
°C.	°C.	°C.	°C.	°C.	°C.	°C.	°C.	°C.	°C.
28.2	27.7	26.8	26.9	26.6	26.3	25.6	24.9	26.4	3.7
18.9	18.9	18.1	17.9	18	18	17.7	17.4	17.9	2.4
12.1	15.7	17.3	16.7	14.2	9.9	6.1	4	9.9	13.9
13	16.5	18.3	17.7	14.7	10.1	5.8	2.7	10	16
15.9	20.4	24.7	24.2	19.1	13.2	8.2	4.3	13.4	20.4
12.7	16.7	18.1	17.4	13.9	9	3.6	.5	8.5	18.8
14	17.7	19.6	18.8	15.2	9.8	3.5	— .6	9.2	21.3
17.8	21.6	24.6	24.2	21.1	16.4	11.2	7.6	15.3	17.8
19.9	24.5	26	24.7	19.8	12.5	3.6	— 2.6	11.7	30.7
18.5	23	26.8	26.9	22.8	17.5	11.1	5.6	15.1	23.3
24.9	27.2	27.7	27.4	26.9	24.6	20.7	17	22.1	13
16.5	20.5	24.1	25.4	22	15.8	10.1	5.2	13.8	22.6
29.8	29.2	28.3	28	23.1	26.7	22.4	18.5	25.5	11.4
29.2	28	26.4	26.3	26.3	27.1	26.3	24.7	26.3	5.6
13.9	18.9	22.2	21.7	17.8	11.7	3.9	— 1.7	9.1	26.6
15.6	20.6	23.3	22.8	18.9	13.3	6.7	1.1	11.1	24.4
17.8	22.8	25	23.9	20	13.9	7.2	2.2	12.7	24.4
13.9	15	15	15	16.1	15.6	13.3	10.6	13.4	6.1
23.9	27.2	28.3	27.8	26.1	21.1	16.1	12.8	20.6	16.1
17.2	19.4	21.7	22.2	21.1	17.8	15.6	13.3	16.9	10
18.1	17.6	16.9	16.7	16.2	14.8	13.5	12	15.4	6.1
26.2	27.4	27.7	27.7	26.9	25.5	23.7	22	24.8	6.4
13.4	10.8	10.3	11.6	13.9	16.6	19.9	22.8	17.1	13.8
19.2	17	16.1	16.2	16.6	16.9	19.1	21.3	19.3	7.1
13.1	12	11.7	11.4	12.2	13.7	15	17.2	14.3	5.9
21.8	20.3	19.9	20.4	20.8	21.7	22.9	24.7	22.6	5.5
14.7	12.6	11.2	12.5	14.7	17.5	19.1	20.9	17.1	10.6

de las ciudades de Estados Unidos se han tomado de "Climatology of the United States," por Alfred Judson Henry; las de Shanghai, de "La Temperature en Chine," por el R. P. H. Gauthier, S. J.; las de Tokio, de "Results of the Meteorological Observations made in Japan" publicado por el Observatorio Meteorológico Central de Tokio; las de Hongkong, de "The Climate of Hongkong" por T. F. Claxton; y las restantes de "Lehrbuch der Meteorologie" por el Dr. Julius von Hann.)

mean annual range of temperature of San Francisco, California, with that of a tropical station. San Francisco has a latitude somewhat higher than Tokio and considerably higher than Shanghai. Yet while Tokio and Shanghai have a very pronounced annual range of temperature similar to that of other cities situated in the temperate zone, San Francisco (and almost the same could be said of other cities on the west coast of North America) has a very small annual range, almost identical with that of Aparri in the Philippines.

It may be worth mentioning also that the mean annual temperature of San Francisco is only 4.5° C. lower than that of Baguio. Hence, we may say that on the west coast of North America there are places in which, in spite of a high latitude, owing to the combined action of ocean currents and winds, the mean monthly and annual temperatures do not differ much from those of Baguio, and the annual range of temperature is quite similar to that of our stations in the Philippines, particularly of those in northern Luzon.

Means of the monthly and annual extreme temperatures. Temperature Map.—It was our first intention to include in our Temperature Map, besides the mean annual temperature, the absolute maximum and minimum temperatures for all our stations and for the whole period 1903 to 1918. But as such absolute extreme values may only occur once in fifteen, twenty, thirty or more years, we have thought it would help to acquire a better knowledge of our climate if instead of the absolute extreme values of temperature, we would include in our map the means of the extreme annual temperatures recorded during the period mentioned. This will give quite an accurate idea of the highest and lowest temperatures which we may expect in the Philippines during the year.

In Table III our readers will find the mean values not only of the annual extremes of temperature, but also of the monthly extremes. The mean values of the annual maximum temperatures vary in the Philippines from 33.2° C. to 39.9° C. It is to be remarked, however, that means as high as 38° C. or more are only shown in the stations situated in the plains of Pangasinan, in the great valley of the Cagayan River, and in the provinces of Tarlac and Nueva Ecija. Practically all our stations of the Visayas and Mindanao give mean values lower than 36° C., while a great majority of the stations in Luzon, particularly in the central and western part of the island, appear with mean values higher than 36° C. What we say of the means of

Oversized Foldout

the annual extreme temperatures may be applied also, with slight changes, to the means of the monthly extremes of temperature.

As to the mean values of the absolute annual and monthly minimum temperatures the following remarks may be of interest:

(1) The highest values are those of the Visayas and Mindanao, while the lowest are those of Luzon, just the opposite of what has been said on the mean absolute maximum temperatures. Those of the Visayas and Mindanao range between 16.7° C. and 20.9° C.; and those of Luzon, between 15.0° C. and 18.9° C. (2) Hence it follows that the mean absolute monthly and annual ranges of temperature are considerably greater in Luzon than in the Visayas and Mindanao. (3) The highest mean absolute annual range is that shown by Tuguegarao records, 24.9° C.; while the lowest is that of Cuyo, 13.3° C. (4) As a rule, it seems that the annual minimum temperatures of the stations in which cloudy and rainy weather prevails in winter, are not so low as those of the stations situated in the central and western parts of the Islands. This is particularly apparent in the Visayas and southeastern Luzon.

Our readers should remember that in these remarks we prescind from the mountain temperature of Baguio.

Absolute maximum and minimum temperatures, monthly and annual.—Table IV contains very interesting data concerning the absolute highest and lowest temperatures recorded in each of our stations. First we give the highest and lowest temperatures per month with the corresponding monthly extreme range, and then the absolute highest and lowest temperatures of the whole period 1903 to 1918 with the corresponding annual extreme range. What has been said above in the remarks made about Table III can, with due proportion, be said also about the present table. We will only say here that the extreme range of the period varies from 16.1° C. in Cuyo to 30.0° C. in Tuguegarao. The absolute highest temperature for Luzon is 42.2° C., and the lowest 12.1° C., whilst the highest and lowest for the Visayas and Mindanao were 38.2° C. and 13.3° C., respectively.¹

¹ We wish to remark here that a few of the extreme temperatures given in Table IV seem to differ too much from those of other not distant stations. Although we have been very careful in having all the observations well checked and revised, it has been impossible in some cases to decide with certainty whether the difference was to be attributed to local conditions or to any defect of the instrument or mistake on the part of the observer. Yet, as we could find no evidence of such a mistake or defect, we did not feel justified to prescind from these observations.

TABLE III.—Means of the monthly and annual extreme temperatures.

Tabla III.—Promedio de las temperaturas extremas mensuales y anuales.

STATION. Estación.	JANUARY. Enero.		FEBRUARY. Febrero.		MARCH. Marzo.		APRIL. Abril.		MAY. Mayo.		JUNE. Junio.		JULY. Julio.	
	MAXI- MUM. Máxi- ma.	MINI- MUM. Míni- ma.	MAXI- MUM. Máxi- ma.	MINI- MUM. Míni- ma.	MAXI- MUM. Máxi- ma.	MINI- MUM. Míni- ma.	MAXI- MUM. Máxi- ma.	MINI- MUM. Míni- ma.	MAXI- MUM. Máxi- ma.	MINI- MUM. Míni- ma.	MAXI- MUM. Máxi- ma.	MINI- MUM. Míni- ma.	MAXI- MUM. Máxi- ma.	MINI- MUM. Míni- ma.
Jolo.....	31.6	20.6	32.0	20.3	32.7	21.1	32.7	21.1	33.2	21.5	32.9	21.1	32.8	21.5
Zamboanga.....	32.4	20.6	32.5	19.9	32.6	21.4	32.6	21.4	32.4	22.2	31.9	21.7	31.5	21.5
Davao.....	32.9	19.5	34.6	19.3	34.8	20.6	34.8	20.6	34.5	21.2	33.2	21.4	32.8	21.4
Cotabato.....	34.6	19.4	35.4	19.9	35.8	20.2	35.5	21.4	35.4	21.6	34.8	21.9	33.9	21.4
Cagayan.....	31.6	18.7	32.4	18.5	34.2	20.4	34.2	21.4	34.2	21.5	33.9	21.4	34.7	21.1
Bulacan.....	30.8	19.7	31.4	19.5	32.4	19.6	33.3	21.9	34.9	22.7	34.7	21.9	34.5	21.4
Duraguete.....	30.9	21.1	30.7	20.3	31.3	21.2	32.3	22.9	32.9	22.7	33.7	22.9	33.9	21.4
Tagbilaran.....	32.5	20.1	32.2	19.7	33.3	20.2	33.9	22.1	34.3	22.3	33.7	22.3	33.6	22.3
Iwang.....	32.1	18.3	32.1	17.5	34.5	19.3	34.5	20.4	34.3	22.3	33.7	22.3	34.1	20.7
Surigao.....	31.2	20.5	31.4	20.0	32.4	20.5	32.3	21.4	33.2	22.3	33.7	22.7	33.6	22.8
Maasin.....	31.3	20.1	31.6	20.9	32.4	21.5	32.5	22.6	33.7	22.9	33.8	22.6	32.4	22.6
Cebu.....	31.8	20.9	31.5	20.9	33.7	21.3	34.5	20.3	34.7	22.7	33.8	22.4	32.9	22.3
Panodol.....	31.6	18.9	32.5	19.4	33.7	18.7	34.5	20.6	34.7	22.1	33.9	22.4	32.9	22.3
Iloilo.....	31.6	20.6	32.5	20.4	33.7	21.3	34.5	20.6	34.7	22.1	33.9	22.4	32.9	22.3
San Jose de Buenavista.....	33.9	17.8	33.9	18.9	33.9	18.8	33.9	18.8	33.9	18.8	33.9	18.8	33.9	18.8
Tuburan.....	31.8	18.9	31.5	22.1	32.7	22.9	34.1	23.2	33.8	26.4	32.8	23.2	32.5	22.1
Cuyo.....	30.9	22.7	32.4	17.2	33.4	18.1	33.7	16.7	33.8	26.2	33.2	21.2	32.6	22.6
Osmoc.....	32.2	18.2	32.4	19.6	33.2	20.8	33.1	21.6	33.8	26.2	33.7	21.2	32.6	22.6
Gulan.....	31.7	20.2	31.8	20.4	32.2	20.8	33.1	21.6	34.5	22.9	33.7	21.2	32.6	22.6
Tacloban.....	32.2	20.8	32.5	19.6	33.4	20.8	34.1	21.8	34.5	22.9	33.7	21.2	32.6	22.6
Capiz.....	30.7	20.6	31.2	20.3	32.6	21.2	34.1	22.2	34.8	22.6	33.6	21.6	34.2	22.3
Borongan.....	30.6	19.5	31.1	19.8	31.4	19.8	32.1	20.4	33.3	21.6	33.6	21.6	34.2	21.5
Calbayog.....	32.5	18.5	33.3	17.8	34.3	18.6	35.3	19.9	34.8	23.7	34.5	23.3	33.9	21.9
Masbate.....	31.1	21.8	32.4	20.9	33.4	22.2	34.6	22.8	35.3	23.7	35.1	23.3	34.8	22.4
Kombon.....	31.7	20.7	32.2	20.2	33.6	21.4	34.9	22.1	35.5	23.4	35.1	23.3	34.8	22.4
Batang.....	29.8	20.4	30.5	20.4	30.9	21.3	31.9	21.9	33.3	22.4	32.7	22.4	34.5	22.2
Gubat.....	31.1	20.4	31.4	20.7	33.3	20.6	33.8	21.6	34.8	21.8	34.7	22.3	34.7	22.1
Legaspi.....	31.2	19.7	31.8	19.6	31.4	20.7	33.4	21.1	34.6	21.6	34.8	22.4	34.8	22.2
Calapan.....	31.2	19.5	31.5	18.8	32.2	19.5	33.4	20.9	34.6	21.8	34.2	21.9	34.1	21.6
Virac.....	32.2	18.8	32.4	18.2	32.7	19.6	33.5	21.8	34.6	21.8	34.2	21.8	34.4	22.1
Naga.....	32.2	17.7	32.7	17.7	33.9	17.2	35.9	18.9	35.9	22.5	35.5	22.5	34.8	22.2
Batangas.....	33.3	16.8	34.5	17.8	36.1	17.2	38.9	18.9	36.9	22.5	36.3	22.3	34.6	21.9
Atimonan.....	30.8	20.5	31.4	19.4	32.9	20.1	34.3	20.4	36.9	22.5	35.5	22.3	34.6	21.9
Silang.....	31.1	17.1	31.4	17.7	32.5	18.2	32.7	19.5	32.7	19.1	32.8	18.8	31.4	17.6
Paracale.....	30.1	20.2	30.4	19.4	31.7	20.2	33.3	21.7	34.4	23.8	34.8	22.8	34.8	23.8
Santa Cruz, Laguna.....	31.1	18.4	31.9	17.7	34.4	19.2	35.1	19.9	35.5	21.7	35.5	21.7	34.5	21.8

Manila.....	32.5	17.1	33.5	17.1	35.1	18	36.4	19.6	36.3	21.3	35.8	22.4	33.8	22.2
Atupoto.....	32.6	17.2	33.8	17.3	35.7	18.4	36.9	19.6	37.1	21.3	36.2	21.5	33.5	21.1
Iba.....	32.8	16.2	33.5	15.3	34.8	17.6	35.9	19.3	37.6	20.9	34.7	21.7	32.8	21.5
San Isidro, Nueva Ecija.....	33.4	15.8	34.7	16.1	36.9	17.2	37.8	19.3	38.5	20.9	36.5	21.4	35	21.4
Tarlac.....	34.3	15.8	35.8	16.1	37.9	17.7	39.1	19.3	39.1	20.9	37.2	21.6	35.8	21.2
Baler.....	30.1	17.5	31.6	17.8	32.3	18.7	33.6	19.7	35.5	21.1	33.3	21.4	35	22.1
Dagupan.....	34.4	17.2	35.5	18	37.2	19.6	38	21.7	37.9	22.3	37.4	22.3	36	22.1
Bohnan.....	32.8	18.4	33.4	18.3	34.9	20.3	36.1	22.7	36.6	22.7	34.9	22.9	33.8	22.5
Baguio (First period).....	24	8.5	24.3	8.3	24.7	10.4	27	11.7	24.9	12.3	24.9	13.9	24	13.2
Baguio (Second period).....	24.8	10.2	26	10.7	26.5	12.4	27	13.8	26.2	14.9	26.1	14.5	25	14.3
San Fernando, La Union.....	31.8	17.1	32.5	17.1	34.3	19.1	35.8	21.4	36.2	22.4	35.2	21.6	33.8	21.8
Echague.....	31.7	16.3	33.6	15.9	35.6	16.8	37.4	18.1	38.3	20.2	38.2	20.9	37.3	21.3
Vigan.....	32.7	18.5	32.9	18.6	34.2	19.8	34.9	22.4	35.2	22.5	34.3	22.2	33.3	22.1
Tuguegarao.....	33	15.8	35.2	15.8	37.6	17.4	38.3	18.4	39	20.8	39.2	21.7	38.1	21.6
Laosg.....	34.3	15	35	15.6	36.6	18	37.4	20.2	36.4	21.8	35.5	22.5	35.4	22
Aparri.....	29.9	17.4	31.4	17.5	32.9	18.5	34.1	20.2	34.8	21.4	34.7	22.4	34.7	22.5
Basco.....	27.9	16.6	29	16.5	30.4	17.3	31.8	19.4	32.8	21.7	33.4	23	33.1	22.8

¹ Only during the second period, 1909 to 1918 the observations were taken at Mount Mirador, 1,512.5 meters above the sea level. From 1903 to 1908 the observations were made in one or two places below, about 1,455 meters above the sea level. (Solo durante el segundo periodo, 1909 a 1918 se hicieron las observaciones en la cumbre del Mirador, a 1,512.5 metros sobre el nivel del mar. De 1903 a 1908 se hicieron en uno o dos sitios más abajo, a unos 1,455 metros sobre el nivel del mar.)

TABLE III.—Means of the monthly and annual extreme temperatures—Continued.
 TABLA III.—Promedio de las temperaturas extremas mensuales y anuales—Continuación.

STATION. Estación.	AUGUST. Agosto.		SEPTEMBER. Septiembre.		OCTOBER. Octubre.		NOVEMBER. Noviembre.		DECEMBER. Diciembre.		ANNUAL. Anual.		MEAN ABSOLUTE ANNUAL RANGE. Promedio de la oscilación máxima anual. °C.
	MAXIMUM. Máxima.	MINIMUM. Mínima.	MAXIMUM. Máxima.	MINIMUM. Mínima.	MAXIMUM. Máxima.	MINIMUM. Mínima.	MAXIMUM. Máxima.	MINIMUM. Mínima.	MAXIMUM. Máxima.	MINIMUM. Mínima.	MAXIMUM. Máxima.	MINIMUM. Mínima.	
Iolo	32.9	20.9	33.1	20.8	32.9	20.7	32.4	21.1	31.7	21.2	33.8	19.7	14.1
Zamboanga	31.4	21.6	31.5	21.7	31.8	21.6	32.4	21	32.5	21	33.2	19.3	13.9
Davao	33.2	20.9	33.5	21.5	33.7	20.7	33.7	20.8	33.1	20.8	35.4	18.4	16.7
Cotabato	34	21.1	33.5	21.5	34.8	21.5	34.5	21.2	33.9	20.7	35.8	19.4	16.4
Cagayan	34.4	21.1	34.5	21.1	33.8	21.3	32.9	20.5	32.2	19.4	35.2	18.4	16.8
Buruan	34.4	21.9	34.1	22.1	32.9	21.7	31.9	21	31.4	20.3	35.7	18.9	16.8
Dumaguete	34.8	21.9	34.6	21.7	32.8	22	31.9	22.1	31.4	21.4	35.1	20.3	14.8
Tagbilaran	33.7	22.3	33.9	22.1	33.7	22.2	33.4	21.4	32.6	21.1	34.9	19.2	15.7
Iwahig	34	20.3	34.1	20.2	33.4	20.4	33.4	20.2	32.5	19	35	16.7	18.3
Surigao	34.5	22.4	34.5	22.3	33.6	22.3	32.9	21.5	32	21.2	35	19.5	15.5
Maasin	32.8	22.2	32.6	22.1	32.7	22.2	32.2	21.8	31.8	21.1	34.6	19.7	14.9
Cebu	32.9	22.5	32.7	22.4	32.8	22.4	32.2	22	31.5	21.9	33.8	20.4	13.4
Bacolod	32	21.5	32.7	21.5	32.6	21.4	32.2	20.3	31.6	20.5	35.4	17.6	17.8
Iloilo	32.1	21.8	32.5	21.7	32.7	22.1	32.2	21.6	31.7	21.1	35	19.9	15.1
San Jose de Buenavista	32.6	21.8	32.5	21.9	33.2	21.7	33.3	19.9	33.8	19.4	36	17.8	18.7
Tuburan	34.2	22	33.5	22	33.2	21.8	33.3	21.1	32.2	20	35.6	18.1	17.5
Cuyo	32.4	22.6	32.1	22.6	32.9	22.7	31.7	22.6	31.3	22.4	34.3	20.9	13.3
Ormoc	32.3	21.2	32.6	21.2	32.9	20.5	32.9	19.3	32.4	19.4	34.2	16.8	17.5
Guiuan	33.3	22.4	33.6	22.3	33.7	21.9	32.8	21.5	32.4	21.3	34.5	20.1	15.4
Tacloban	34.9	22.4	35	22.4	34.4	22.4	33.4	21.7	32.4	21.4	35.5	20.1	15.4
Capiz	34.2	22.2	33.6	22.2	33.3	22.3	32.2	21.9	31.2	21.8	35.1	19.5	15.6
Ornogan	34.6	21.5	35	21.5	33.2	21.1	32.1	21	31.3	20.7	34.9	18.6	16.3
Calbayog	34	21.8	33.9	21.7	33.9	21	33.5	20.1	32.6	19.7	35.4	17.3	18.1
Masbate	33.5	23	33.6	22.9	33.5	23	32.5	22.3	31.7	22.4	35.6	20.6	15.7
Romblon	34.4	22.7	34.6	22.7	34	22.1	33	21.6	32	21.4	35.7	20.3	15.7
Fatag	33.6	21.5	33	22	32	22	31.2	22	30.3	21.5	34.2	20.3	13.9
Gubat	34.8	22.4	34.6	21.9	34.1	20.9	32.6	20.6	31.6	20.8	35.7	18.8	16.9
Legaspi	34.3	22.1	34.4	21.9	33.9	21.2	33	20.9	31.7	20.9	35.7	18.1	17.6
Calapan	34.6	21.5	33.9	21.5	33.2	20.7	32.5	20.3	31.6	19.8	35.4	18.3	17.1
Virac	34.9	21.9	34.5	21.6	34	20.9	33.1	20.8	32.3	20.1	35.5	17.7	17.8
Naga	34.8	22	34.4	21.8	34	20	33.2	19.3	32.5	18.4	36.1	16.4	19.7
Batangas	34	21.7	34	21.3	33.6	20	33.8	19.5	33.2	18.3	37.3	16.4	21.3
Atimonan	34.8	22.3	34.2	22.3	33.5	21.9	32.1	18.2	31	21.3	35.7	18.9	16.8
Silarg	31.9	18.1	31.8	18.1	31.7	18.4	32.1	18.2	30.5	18.1	33.2	16.5	16.7
Paracale	35.1	22.9	34.4	22.9	32.8	22.2	31.4	21.9	31	21.4	35.7	18.8	16.9
Santa Cruz, Laguna	33.9	21.8	33.1	21.7	33.1	21.2	32.3	20.4	31.5	19	36	17.2	18.3

Manila	33.3	22	33.3	22.2	33.5	21.1	33.1	19.4	32.7	18.2	36.8	16.4
Antipolo	32.9	20.9	32.9	20.9	33.3	19.7	33.4	18.8	32.7	17.8	36.9	16.9
Iba	32.2	21.6	32.6	21.3	33.4	19.9	33.6	18.6	32.5	17.4	36.6	15.2
San Isidro, Nueva Ecija	34.4	21.7	34.1	21.7	33.9	20.6	33.8	18.8	33.5	17.4	38.4	15.4
Tarlac	35.4	21.5	35	21.3	34.7	20.4	34.2	18.5	34.2	16.8	39.3	15.3
Baler	35.5	22	34.7	21.5	33.5	20.9	32.9	19.6	34.2	18.5	36.2	17.2
Dagupan	35.2	22.4	34.9	22.3	35.5	21.9	34.7	19.9	31.5	18.5	38.3	17.2
Bolinao	33.2	22.6	33.4	22.6	33.9	22.1	33.4	20.8	33.5	19	36.3	17.8
Baguio (First period) ¹	24.2	13.2	24.3	13.6	24.7	12	24.8	9.6	23.5	9.8	25.3	18.5
Baguio (Second period) ¹	24.5	14.2	25.1	14.5	25.2	13.9	25.5	12.7	25.2	13.8	27.1	18.4
San Fernando, La Union	33.7	21.8	33.3	21.8	33	21.3	32.5	19.8	32.1	17.9	36.4	17.2
Echague	36	21.1	36	21	34.5	20.1	33.2	18.5	32.6	17.9	35.9	19.9
Vigan	32.7	22.1	32.8	22.6	34.5	20.1	34.4	20.6	32.9	19.1	35.8	18.2
Iuguegarao	37.3	21.6	36.5	21.3	35.7	20.1	34.4	18	33.1	17.2	39.3	18.2
Laog	33.8	22.3	35	22.3	35.5	20.1	35.4	17.7	34.7	16.2	37.9	15
Aparrí	34.1	22.4	33.4	22.3	32.6	21.5	31.8	20.4	30.1	18.4	31.6	15.6
Basco	32.9	22.9	32.4	22.1	31.3	21.7	30.5	19.4	28.7	17.5	33.7	17.8

¹ Only during the second period, 1909 to 1918 the observations were taken at Mount Mirador, 1,512.5 meters above the sea level. From 1903 to 1908 the observations were made in one or two places below, about 1,455 meters above the sea level. (Sólo durante el segundo periodo, 1909, a 1918 se hicieron las observaciones en la cumbre del Mirador, a 1,512.5 metros sobre el nivel del mar. De 1903 a 1908 se hicieron en uno o dos sitios más abajo, a unos 1,455 metros sobre el nivel del mar.)

^a Mean of the two periods; maximum 26.5 °C, minimum 8.8 °C. (Media de los dos periodos; máxima 26.5 °C, mínima 8.8 °C.)

TABLE IV.—*Extreme monthly and annual temperatures.*
 TABLA IV.—Temperaturas extremas mensuales y anuales.

STATION. Estación.	JAN ARY. Enero.				FEBRUARY. Febrero.			
	MAXIMUM. Máxima.	YEAR. Año.	MINIMUM. Mínima.	EXTREME RANGE. Máxima oscilación.	MAXIMUM. Máxima.	YEAR. Año.	MINIMUM. Mínima.	EXTREME RANGE. Máxima oscilación.
Jolo.....	33.1	1913	18.4	14.7	33.1	1915	18.5	14.6
Zamboanga.....	34.3	1917	19.4	14.9	33.9	1917	15.6	18.3
Davao.....	34.7	1910	17	17.7	36.7	1915	18	18.7
Cotabato.....	35.5	1908	17.4	18.1	37.5	1906	18.7	18.8
Cagayan.....	32.5	1909	17.5	15	34	1912	17.2	16.8
Butuan.....	33.6	1917	17.8	15.8	34.1	1917	17.4	16.7
Dumaguete.....	31.6	1915	19.6	12	31.8	1916	19.8	12
Tagbilaran.....	34.1	1911	17.5	16.6	34.4	1915	17.5	16.8
Iwahig.....	32.4	1915	17.5	14.9	33.1	1915	15.9	17.2
Surigao.....	33.7	1916	18.7	15	33.3	1906	18.2	15.1
Maasin.....	34	1916	18.4	15.6	35	1916	18	17
Cebu.....	32.9	1912	18.9	14	32.5	1916	18.3	14.2
Bacolod.....	35.4	1905	15.5	19.9	35.9	1905	15.1	20.8
Iloilo.....	33.1	1905	18.5	14.6	33.6	1914	18	15.6
San Jose de Buenavista.....	35.9	1906	15	20.9	35.8	1912	13	20.5
Tuburan.....	32.6	1909	16.5	16.1	33.9	1909	17.6	16.3
Cuyo.....	31.9	1915	20.9	11	33.2	1913	19	14.2
Ormoc.....	33.1	1913	13.3	19.8	33.8	1915	14.5	19.3
Guiluan.....	34.3	1916	18	16.3	33.1	1916	18.1	15
Taclaran.....	33.3	1911	18.8	14.5	34.4	1906	17.5	16.8
Capiz.....	32	1911	16.4	15.6	33.3	1915	17.4	15.9
Borongan.....	31.8	1915	17.4	14.4	32.6	1915	17	15.6
Calbayog.....	34.6	1905	15.5	19.1	34.8	1915	15.5	19.3
Masbate.....	32.8	1915	21.2	11.6	34.4	1915	18.5	15.9
Romblon.....	33.5	1913	18.4	15.1	35.1	1913	17	18.1
Batag.....	31.4	1916	19.9	11.5	31.7	1916	19.7	12
Gubat.....	33.3	1910	18.9	14.4	32.2	1916	18	14.2

Legaspi.....	32.7	1912	17.2	1912	15.5	33.7	1912	16.7	1914	17
Calapan.....	34	1917	18	1914	16	33.1	1912	16.2	1916	16.9
Virac.....	33.7	1916	17.4	1914	16.3	34	1916	15.6	1916	18.4
Naga.....	33.5	1915	15.5	1914	18	34	1915	15.1	1916	18.9
Batangas.....	33.8	1912	14.3	1908	19.5	36.3	1912	14.3	1918	22
Atimonan.....	33.5	1909	19	1907	14.5	34.5	1906	16.1	1916	18.4
Silang.....	31.7	1911	15.2	1907	16.5	32.3	1908	15.7	1914	16.6
Paracale.....	31.1	1911	13.8	1912	19.3	31.5	1911	17.2	1916	14.3
Santa Cruz, Laguna.....	32.5	1915	15	1914	17.5	32.5	1912	16.4	1916	17.1
Manila.....	33.6	1905	14.5	1914	19.1	35.6	1906	15.7	1918	19.1
Antipolo.....	33.8	1912	15.7	1918	18.1	35.3	1915	15.4	1918	19.9
Iba.....	33.9	1916	13.9	1912	20	34.5	1915	13.2	1916	21.3
San Isidro, Nueva Ecija.....	35.5	1905	13	1905	22.5	37.8	1906	12.8	1905	25
Tarlac.....	36	1917	12.4	1907	23.6	37.8	1910	12.8	1905	25
Baler.....	31.5	1915	15.2	1914	16.3	34.5	1916	15.9	1918	18.6
Dagupan.....	35.7	1915	14.3	1907	21.4	36.7	1906	16.5	1903	20.2
Bolinao.....	33.7	1911	17.5	1911	16.2	36	1915	16.4	1916	19.6
Baguio (first period) ¹	25.1	1906	3	1907	22	27.2	1906	6	1906	21
Baguio (second period) ¹	26.1	1916	8.3	1918	17.8	27.2	1915	8.4	1918	18.8
San Fernando, La Union.....	33.5	1905	14.8	1907	18.7	34.2	1913	15.2	1908	19
Echague.....	34.5	1912	13.4	1914	21.1	35.2	1912	14.2	1913	21
Vigan.....	34.6	1910	16	1916	18.6	35.3	1912	15.5	1917	19.8
Tuguegarao.....	37.1	1903	12.5	1914	24.6	37.1	1915	14	1905	23.1
Laosg.....	35.8	1915	13	1918	22.8	36.8	1915	12.3	1917	24.5
Aparri.....	31.8	1905	15.6	1914	16.2	33.9	1906	14.8	1918	19.1
Basco.....	29.6	1916	13	1918	16.6	30.5	1906	15.2	1904	15.3

¹ See note at the bottom of Table III. (Véase la nota al pie de la Tabla III.)

TABLE IV.—*Extreme monthly and annual temperatures—Continued.*
 TABLA IV.—Temperaturas extremas mensuales y anuales—Continuación.

STATION. Estación.	MARCH. Marzo.				APRIL. Abril.			
	MAXIMUM. Máxima.	YEAR. Año.	MINIMUM. Mínima.	EXTREME RANGE. Máxima oscilación.	MAXIMUM. Máxima.	YEAR. Año.	MINIMUM. Mínima.	EXTREME RANGE. Máxima oscilación.
Jolo.....	33.7	1909	19.6	14.1	34.1	1911	20.1	14
Zamboanga.....	34.2	1917	17.5	16.7	33	1912	19.9	13.1
Davao.....	36.7	1915	17.4	19.3	36.6	1915	19.1	17.5
Cotabato.....	37.7	1914	19.2	18.5	38.2	1906	20.6	17.6
Cagayan.....	34.7	1910	18.2	16.5	34.9	1910	19.8	15.1
Butuan.....	34.4	1917	17.6	16.8	36.1	1917	19	17.1
Dumaguete.....	32	1917	20.3	11.7	33.7	1911	20	13.7
Tagbilaran.....	34.9	1913	18.9	16.7	35.2	1903	20.5	14.7
Iwahig.....	34.9	1915	17.8	17.1	35.7	1914	18	17.7
Surigao.....	33.5	1907	19.1	14.4	34.4	1905	21	13.4
Maasin.....	34.8	1918	18	16.8	35	1911	20	15
Cebu.....	32.6	1912	19.1	13.5	33.5	1905	21	12.5
Bacolod.....	37.8	1905	16.7	21.1	38.2	1905	19	19.2
Iloilo.....	35.3	1914	19.3	16	36	1905	21.2	14.8
San Jose de Buenavista.....	37.3	1912	16.3	21	37.6	1914	18.6	19
Tuburan.....	34.4	1903	18	16.4	36	1905	19.3	16.7
Cuyo.....	34.5	1915	21.1	13.4	35.1	1915	22.4	12.7
Ormoc.....	35.2	1915	15.8	19.4	34.8	1915	17.1	17.7
Guiuan.....	33.4	1916	19.3	14.1	34.8	1917	20.8	14
Tacloban.....	34.7	1904	18	16.7	36	1907	20.2	15.8
Capiz.....	34.5	1915	18.6	15.9	36	1903	21.6	14.4
Borongan.....	32.6	1918	18.3	14.3	33.1	1918	19.5	13.6
Calbayog.....	38.2	1905	15	23.2	38.2	1905	18	20.3
Masbate.....	35.5	1915	20.6	14.9	37.5	1915	21.2	16.3
Romblón.....	35.8	1912	19.7	16.1	37.5	1912	20.1	17.4
Batag.....	32	1915	20.6	11.4	32.9	1915	21.2	11.7

Gubat.....	1910	1914	18.5	34.9	1906	16.4	1907	18.5
Legaspi.....	33.9	1912	16.9	35.5	1911	18.9	1912	16.6
Cakapan.....	34.2	1912	15.8	36	1915	19.6	1913	16.4
Virac.....	34.6	1909	17.7	35	1915	19	1918	16.4
Naga.....	35.5	1912	20.4	36.1	1915	16.5	1913	19.6
Batangas.....	37.3	1912	21	38.6	1912	18.8	1911	19.8
Binonan.....	35.8	1905	17.4	36.6	1907	19.6	1913	17.8
Siang.....	35.3	1912	18.7	33.8	1907	18.4	1912	15.4
Paracale.....	32.9	1915	14.4	34.8	1911	20.1	1913	14.7
Santa Cruz, Laguna.....	35	1918	17.8	36.5	1910	18.5	1913	18
Mamla.....	36.4	1915	20.2	38	1915	17.2	1913	20.8
Antipolo.....	36.5	1918	19.5	38.4	1912	18.4	1913	20
Iba.....	37.2	1912	21.3	38.8	1915	18.1	1910	20.7
San Isidro, Nueva Ecija.....	39.3	1906	26	39.6	1912	16	1903	23.6
Tarlac.....	39.9	1906	27.8	41.2	1907	17	1904	24.2
Baier.....	34.6	1914	17.6	35.4	1907	18	1914	17.4
Dagupan.....	38.5	1906	20.2	39.9	1915	20.5	1913	19.4
Bolinao.....	36.8	1905	16.9	37.9	1915	21.1	1904	16.8
Baguio (first period) ¹	27.2	1906	19	26.1	1906	9.6	1907	16.5
Baguio (second period) ¹	27.5	1912	16.4	28.8	1912	12.8	1911	16
San Fernando, La Union.....	35.7	1915	19.7	36.8	1918	19.8	1912	17
Echague.....	37.5	1918	22.4	40.1	1912	16.5	1913	23.6
Vigan.....	36.4	1909	20.4	38.1	1911	21.1	1912	16.9
Tuguegarao.....	40	1914	25.5	42.2	1912	17.2	1902	25
Laog.....	39.5	1918	23.8	39.6	1912	18.9	1918	20.7
Aparrí.....	35	1905	19.2	35.6	1914	18	1904	17.6
Basco.....	31.5	1912	15.5	33	1916	16.2	1909	16.8

¹ See note at the bottom of Table III. (Véase la nota al pie de la Tabla III.)

TABLE IV.—*Extreme monthly and annual temperatures—Continued.*
 TABLA IV.—*Temperaturas extremas mensuales y anuales—Continuación.*

STATION. Estación.	MAYO. Mayo.			JUNIO. Junio.			
	MAXIMUM. Máxima.	YEAR. Año.	MINIMUM. Mínima.	EXTREME RANGE. Máxima oscilación.	YEAR. Año.	MINIMUM. Mínima.	EXTREME RANGE. Máxima oscilación.
Jolo.....	35.7	1913	20.3	15.4	1911	18.9	16.7
Zamboanga.....	33	1907	21.5	11.5	1903	20.4	12.4
Davao.....	37.3	1905	20.2	17.1	1905	20.7	14.5
Colabato.....	37.8	1906	20.5	17.3	1906	21.3	15.5
Cagayan.....	35.5	1909	20.9	14.6	1909	20.7	14.9
Butuan.....	37.7	1912	21.4	16.3	1912	19.8	17.8
Dumaguete.....	34.2	1915	21.7	12.5	1912	20.7	13.4
Tagbilaran.....	36.2	1906	21.2	15	1912	21.4	14.2
Iwabig.....	35.6	1914	19.7	15.9	1914	19.8	14.5
Surigao.....	34.4	1905	21.5	12.9	1905	21	14.5
Maasin.....	35.7	1907	20.5	15.2	1912	21	14.1
Cebu.....	35	1915	21.4	13.6	1912	22	12.9
Bacolod.....	37.8	1905	21.5	16.3	1906	21.3	13.1
Iloilo.....	36.8	1903	21.7	15.1	1906	21.4	14.1
San Jose de Buenavista.....	36.8	1914	19.9	16.9	1915	21	14.5
Tuburan.....	36.2	1909	21.4	14.8	1905	21.7	14.7
Cuyo.....	35	1912	22.6	12.4	1912	22.5	11.3
Ormoc.....	35.9	1903	18.5	17.4	1913	20	14.9
Guinan.....	35.1	1917	20.4	14.7	1916	21.9	12.8
Tacloban.....	36.1	1905	22	14.1	1904	22	14
Capiz.....	36.7	1915	21.1	15.6	1904	22.2	13.9
Borongan.....	34.6	1915	21	13.6	1914	19.13	13.1
Calbayog.....	36.6	1915	19	17.6	1905	20.5	15.7
Masbate.....	37.4	1914	22.6	14.8	1915	21.8	15
Romblon.....	38.2	1915	20.8	17.4	1915	21.3	16.9
Ratag.....	34.7	1915	21.5	13.2	1915	21.5	12.5

Gubat.....	1907	20	1910	16.5	36.6	1912	20.5	1906	16.1
Legaspi.....	1912	20.2	1918	17	37	1912	21.4	1913	15.6
Calapan.....	1912	21.5	1917	15.7	37.1	1912	20.9	1912	16.2
Virac.....	1915	20.1	1918	15.9	35.9	1915	20.8	1916	15.1
Naga.....	1912	17.9	1910	19.3	37.1	1912	20.4	1918	16.7
Batangas.....	1912	20.2	1908	18.6	37.8	1912	21.4	1908	16.4
Atimonan.....	1907	21.4	1911	15.5	36.7	1908	22	1904	14.7
Silang.....	1907	17.2	1908	16.8	34.1	1912	17	1914	17.1
Paracale.....	1915	22.1	1912	19.9	37.4	1912	22.1	1913	14.9
Santa Cruz, Laguna.....	1912	20	1911	17.2	36.4	1912	21.1	1911	15.3
Manila.....	1915	20	1913	18.6	37.6	1912	21.9	1910	15.7
Antipolo.....	1915	19.7	1913	18.9	37.7	1912	21.9	1913	16.7
Iba.....	1916	19.4	1918	18.6	35.7	1915	21	1910	14.7
San Isidro, Nueva Ecija.....	1908	18.1	1904	22.8	39.2	1908	19.4	1903	19.8
Tarlac.....	41.2	18.6	1903	22.6	39	1915	19	1905	20
Baler.....	1907	19.6	1906	17.5	36.7	1912	19.5	1906	17.2
Dagupan.....	1914	21.1	1909	18.4	38.7	1914	21.5	1904	17.2
Bolinao.....	1906	21.9	1916	16.1	36.5	1908	21.1	1913	15.4
Baguio (first period) ¹	1915	11	1907	15.4	25.7	1915	18.5	1907	12.2
Baguio (second period) ¹	27.2	13.9	1912	18.3	26.8	1915	11.8	1905	15
San Fernando, La Union.....	1915	20	1918	18.2	37.1	1915	20	1904	15
Echagüe.....	1918	17	1906	18.2	37.1	1912	20	1907	17.1
Vigan.....	40.5	17	1918	23.5	40.3	1914	20.3	1913	20
Tuguegarao.....	36.7	21.3	1915	15.4	35.8	1912	20.3	1917	15.5
Laog.....	41.3	17.5	1908	23.8	41.1	1912	18.2	1905	22.9
Aparri.....	38.8	20.2	1918	18.6	37.3	1917	21.4	1905	15.9
Basco.....	36.4	20	1904	16.4	37.8	1903	21.4	1918	16.4
	34.8	19.7	1905	15.1	35.4	1918	21.5	1907	13.9

¹ See note at the bottom of Table III. (Véase la nota al pie de la Tabla III.)

TABLE IV.—*Extreme monthly and annual temperatures—Continued.*
 TABLA IV.—Temperaturas extremas mensuales y anuales—Continuación.

STATION. Estación.	JULY. Julio.				AUGUST. Agosto.				
	MÁXIMUM. Máxima.	YEAR. Año.	MÍNIMUM. Mínima.	YEAR. Año.	MÁXIMUM. Máxima.	YEAR. Año.	MÍNIMUM. Mínima.	YEAR. Año.	EXTREME RANGE. Máxima oscilación.
Jolo.....	°C. 34.9	1913	°C. 19.2	1904 1904 1907 1908 1917	°C. 34.9	1914	°C. 19.8	1911	°C. 15.1
Zamboanga.....	32.3	1915	21		32	1916	19	1911	13
Davao.....	35.2	1905	20	1917	36	1905	18.5	1918	17.5
Cotabato.....	35.3	1906	20.7	1914	35.6	1906	19	1914	16.6
Cagayan.....	35.8	1909	20.3	1918	35.4	1909	20.5	1909	14.9
Bütuan.....	36.7	1918	20.9	1907	36.5	1915	21.4	1911	15.1
Dumaguete.....	35.1	1914	19.8	1910	36.4	1914	21.2	1913	15.2
Tagbilaran.....	35.2	1910	21.3	1905	34.9	1912	21.5	1905	13.4
Iwahig.....	36.5	1914	18.8	1918	35.1	1914	18.8	1918	16.3
Surigao.....	36.2	1916	21.7	1903	37	1916	21.5	1909	15.5
Maasin.....	35	1911	21	1909	35.8	1918	21.2	1903	14.6
Cebu.....	34.2	1915	21.5	1906	33.9	1917	21	1915	12.9
Bacolod.....	33.6	1905	20.7	1906	32.6	1906	20.3	1907	12.3
Iloilo.....	34.1	1910	20.1	1904	34.4	1909	20.1	1904	14.3
San Jose de Buenavista.....	33.7	1915	21.1	1905	33.2	1911	20.9	1911	12.3
Tuburan.....	35.3	1909	21.6	1907	34.9	1916	21.4	1907	13.5
Cuyo.....	34	1912	21	1908	33.4	1917	21.5	1911	11.9
Ormoc.....	33.9	1915	20	1903	34	1916	19.2	1910	14.8
Guinan.....	35	1915	22.1	1912	34.9	1917	22	1918	12.9
Tacloban.....	35.4	1917	21.5	1918	35.7	1907	20.9	1904	14.8
Capiz.....	35.7	1911	20.9	1912	35.4	1917	21	1907	14.4
Borongan.....	36.3	1918	20.7	1908	35.5	1917	20.9	1917	14.6

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Calbayog.....	1906	20.5	1907	15.1	35.8	1915	20.6	1904	15.2
Masbate.....	1915	22.2	1911	14	35.6	1909	21	1915	14.6
Romblon.....	1912	21.1	1907	16.6	35.7	1917	21.3	1918	14.4
Batang.....	1918	21.5	1913	13.1	34.3	1916	21	1918	13.8
Gubat.....	1906	20	1910	16.4	36	1908	20.9	1906	13.1
Legaspi.....	1915	20.8	1907	15.8	35.8	1903	21.1	1911	14.7
Calapan.....	1914	21.4	1913	13.8	37.6	1914	19.6	1909	18
Virac.....	1915	20.9	1915	14.6	36.7	1915	20.4	1915	16.3
Naga.....	1915	20.9	1910	15.5	36.5	1916	20.9	1918	15.6
Batangas.....	1912	20.9	1909	16.5	35.7	1916	21	1908	14.7
Atimonan.....	1908	20.5	1904	15.1	36	1909	20.9	1911	15.1
Silang.....	1913	15.7	1911	16.5	32.5	1914	16.3	1907	16.2
Paracale.....	1915	22.4	1911	13.4	36.2	1916	22	1911	14.2
Santa Cruz, Laguna.....	1915	21.2	1912	14.9	36.6	1910	21.3	1912	15.3
Manila.....	1915	21.4	1911	14.9	34.6	1910	21.2	1906	13.4
Antipolo.....	1915	20.5	1911	16.1	34	1916	20.3	1918	13.7
Iba.....	1915	20.2	1916	13.9	33.3	1917	21	1916	12.3
San Isidro, Nueva Ecija.....	1913	19	1905	18.6	36.5	1903	18.6	1905	17.9
Tarlac.....	1903	18.3	1904	19.5	36.6	1910	18.6	1905	18
Baler.....	1906	21.5	1917	14.5	37	1914	20.5	1906	16.5
Dagupan.....	1915	20.4	1911	17.8	36.4	1906	21.6	1904	14.8
Bolinao.....	1915	20.9	1911	14.1	33.9	1910	22.1	1913	11.8
Baguio (first period) 1.....	1908	12.1	1906	12.9	25.4	1906	11.5	1906	13.9
Baguio (second period) 1.....	1913	13	1912	13.4	25	1917	12.8	1913	12.2
San Fernando, La Union.....	1915	20	1908	15.2	34.9	1915	19.4	1907	15.5
Echagüe.....	1910	20.1	1908	19.5	38.5	1910	19.9	1909	18.6
Vigan.....	1909	21.3	1911	13.6	34.2	1916	20.9	1911	13.3
Tuguegarao.....	1915	19	1904	22	39	1906	19.3	1905	19.7
Laoag.....	1915	19.5	1913	18.3	35.4	1917	21.7	1916	13.7
Aparri.....	1906	21.2	1906	14.8	35.9	1903	20	1907	15.9
Basco.....	1906	20.4	1904	13.9	33.8	1910	21.2	1907	12.6

1 See note at the bottom of Table III. (Véase la nota al pie de la Tabla III.)

TABLE IV.—*Extreme monthly and annual temperatures—Continued.*
 TABLA IV.—Temperaturas extremas mensuales y anuales—Continuación.

STATION. Estación.	SEPTEMBER. Septiembre.				OCTOBER. Octubre.				
	MAXIMUM. Máxima.	YEAR Año.	MINIMUM. Mínima.	YEAR. Año.	MAXIMUM. Máxima.	YEAR. Año.	MINIMUM. Mínima.	YEAR. Año.	EXTREME RANGE. Máxima oscilación.
Jolo.....	34.5	1909	19.5	1917	35.1	1912	19.5	1910	15.6
Zamboanga.....	32.3	1917	19.9	1911	32.9	1916	20.1	1909	12.8
Davao.....	34.5	1907	20	1916	35.4	1904	19.2	1918	16.2
Cotabato.....	35.7	1906	20.5	1907	36.4	1914	21	1907	15.4
Cagayan.....	36.2	1914	20	1915	35.9	1909	21	1909	14.9
Butuan.....	37.7	1918	21.5	1917	36.5	1918	20.3	1913	16.2
Dumaguete.....	36.2	1914	20.9	1914	34	1918	21.7	1916	12.3
Tagbilaran.....	35.5	1907	20.9	1917	35.5	1905	21.4	1914	14.1
Iwahig.....	36.1	1914	18.9	1918	34.5	1914	18.9	1918	15.6
Surigao.....	37	1905	21	1907	35.6	1905	20.5	1908	15.1
Maasin.....	35	1916	21.2	1911	35.8	1915	20.7	1908	14.8
Cebu.....	34	1912	20.9	1905	34.2	1912	20.7	1907	13.5
Bacolod.....	33.9	1904	21.2	1903	34.2	1904	21.1	1904	13.2
Iloilo.....	33.9	1909	20.1	1904	33.3	1907	20.8	1904	12.8
San Jose de Buenavista.....	34.1	1914	21.5	1918	34.6	1914	20	1913	14.6
Tuburan.....	34.3	1908	21.5	1903	35	1907	20	1908	15
Cuyo.....	33.5	1915	21.6	1908	33.7	1915	21.8	1908	11.9
Ormoc.....	34	1918	20	1903	33.9	1916	19	1907	14.9
Guilan.....	34.3	1915	21.6	1917	34.4	1918	21.1	1911	13.3
Tagloban.....	36	1918	21.8	1917	35.4	1918	21.4	1913	12.9
Capiz.....	34.9	1916	20.5	1908	34.4	1911	21.5	1905	12.9
Borongan.....	36	1911	21	1917	34.6	1918	19	1913	13.6
Calbayog.....	35.2	1905	20.5	1904	35.4	1915	18.9	1907	16.5
Masbate.....	36	1916	21	1912	35.8	1914	22	1918	13.8
Romblon.....	35.8	1916	22.2	1913	35.3	1915	20.4	1913	14.9
Batang.....	33.4	1915	21.5	1913	32.8	1918	20.7	1913	12.1
Gubat.....	35.9	1913	19.5	1909	35.2	1908	19.2	1913	16
Legaspi.....	36	1908	21	1912	35.2	1911	13.4	1913	16.8

Calapan.....	36.5	1916	21	1913	15.5	34.5	1916	18.4	1918	16.1
Virac.....	36	1918	20.7	1918	15.3	35.7	1912	19.4	1913	16.3
Naga.....	35	1913	20.8	1909	14.2	35	1918	17.6	1913	17.4
Batangas.....	35.6	1911	19.8	1912	15.8	34.4	1910	17.6	1912	16.8
Atimanan.....	35.9	1908	21.6	1914	14.3	34.9	1903	19.6	1907	15
Silang.....	32.3	1912	16.5	1912	15.8	32.9	1913	17	1912	15.9
Paracale.....	36	1914	22.1	1913	13.9	33.6	1911	19.5	1913	14.1
Paracale.....	36	1911	22.1	1910	13.9	33.6	1911	19.5	1913	14.1
Santa Cruz, Laguna.....	34	1913	21.2	1912	12.8	33.9	1913	20	1912	13.9
Manila.....	35.3	1903	21.2	1913	14.1	35.1	1903	19.5	1913	15.6
Antipolo.....	34.3	1911	20.4	1913	13.9	34.4	1915	17.7	1913	16.7
Iba.....	33.1	1915	20.3	1913	12.8	34.7	1915	18	1913	16.7
San Isidro, Nueva Ecija.....	35.7	1906	18.3	1905	17.4	35.8	1905	17.2	1904	13.6
Tarlac.....	36.7	1912	19.2	1905	17.5	35.4	1910	17.7	1904	17.7
Baler.....	35.5	1912	19.2	1905	17.5	35.4	1910	17.7	1904	17.7
Baler.....	35.5	1916	20.6	1906	14.9	35.2	1916	13.3	1913	16.9
Dagupan.....	35.9	1908	21.2	1904	14.7	36.2	1904	20.2	1913	16
Bolinao.....	34.5	1915	22.1	1916	12.4	35.2	1905	20.6	1913	14.6
Dagupan (first period) ¹	25.5	1903	12.1	1906	13.4	26	1906	10.2	1906	15.8
Dagupan (second period) ¹	26.2	1915	13.9	1914	12.3	27	1914	11.3	1913	15.7
San Fernando, La Union.....	35.2	1908	19.4	1907	15.8	35.3	1915	19.9	1913	15.4
Zhague.....	40.8	1910	18.9	1908	21.9	36.2	1908	18.2	1908	18
Vigan.....	34.4	1918	21.4	1911	13	37.1	1915	19.8	1913	17.3
Tuguegarao.....	38	1915	18.6	1905	19.4	38.2	1915	18.1	1904	20.1
Laong.....	37.7	1915	20.5	1913	17.2	37.1	1915	18.4	1913	18.7
Aparri.....	35.5	1918	21.7	1909	13.8	33.9	1911	20.5	1906	13.4
Basco.....	33	1912	19	1907	14	32.8	1915	19.4	1910	13.4

¹ See note at the bottom of Table III. (Véase la nota al pie de la Tabla III.)

TABLE IV.—*Extreme monthly and annual temperatures—Continued.*
 TABLA IV.—Temperaturas extremas mensuales y anuales—Continuación.

STATION. Estación.	NOVEMBER. Noviembre.				DECEMBER. Diciembre.				ANNUAL. Anual.			
	MAXI- MUM. Máxi- ma.	YEAR. Año.	MINI- MUM. Míni- ma.	EX- TREM. RANGE. Máxima oscila- ción.	MAXI- MUM. Máxi- ma.	YEAR. Año.	MINI- MUM. Míni- ma.	EX- TREM. RANGE. Máxima oscila- ción.	MAXI- MUM. Máxi- ma.	YEAR. Año.	MINI- MUM. Míni- ma.	EX- TREM. RANGE. Máxima oscila- ción.
Jolo.....	33.6	1912	20	13.6	33	1914	19.8	1912	35.7	1913	18.4	17.8
Zamboanga.....	33.5	1911	18.5	15	33.7	1905	20	{ 1910 1918	34.3	1917	15.6	18.7
Davao.....	36.2	1908	19.1	17.1	34.7	1906	16.9	1918	37.3	1905	16.9	1918
Cotabato.....	36	1913	20.2	15.8	35.7	1913	18.9	1914	38.2	1906	17.4	20.4
Cagayan.....	34	1915	19.7	14.3	33	{ 1908 1914	17.4	1912	36.2	1914	17.2	19
Butuan.....	35	1915	19.6	15.4	34.2	1915	17.9	1914	37.7	{ 1912 1918	17.4	20.3
Dumaguete.....	32.7	1915	21	11.7	33.3	1918	20.1	1918	36.4	1914	19.6	16.8
Tagbilaran.....	34.8	{ 1912 1918	19.3	15.5	34.3	1911	19	1912	36.2	1906	17.5	18.7
Iwahig.....	33.1	{ 1915 1905	18.2	14.9	32.9	1917	15.3	1918	36.5	1914	15.3	21.2
Surigao.....	34.5	{ 1915 1915	19.7	14.8	34.6	1905	19.4	1904	37	{ 1905 1916	18.2	18.8
Maasin.....	35.2	1915	19.5	15.7	35	1915	19	1918	35.8	1918	18	17.8
Cebu.....	33.8	1915	20.2	13.6	32.6	1911	19.9	1904	35	1915	18.3	16.7
Bacolod.....	33.9	1904	19.2	14.7	32.6	1904	16.5	1904	38.2	1905	15.1	23.1
Iloilo.....	33.4	1915	20.3	13.1	32.4	{ 1903 1905 1908 1914	18.3	1904	36.8	1903	18	18.8
San Jose de Buenavista.....	36.4	1914	18.3	18.1	35.7	{ 1911 1913	18.3	1918	37.6	1915	15	22.6
Tuburan.....	35.1	1907	20.5	14.6	33.6	1907	17.1	1904	36.4	1905	16.5	19.9
Cuyo.....	33.4	1908	20.4	13	33.2	1908	19	1917	35.1	1915	19	16.1
Ormoc.....	33.8	1916	17.7	16.1	33.2	1906	15.8	1904	35.9	1903	18.3	22.6
Guiuan.....	34.8	1915	18.3	16.5	34.4	1915	19.6	1918	37.4	1917	18	17.1
Tacolban.....	34.5	1905	20	14.5	33.2	1917	17.5	1904	36.1	1905	17.5	18.6
Capiz.....	34.7	1915	19.5	15.2	33.3	1915	17.5	1904	36.7	1915	16.4	20.3
Borongan.....	33	1917	18.5	14.5	32.7	1912	19.4	1912	36.3	1918	17	19.3
Calbayog.....	34.6	1914	17.5	17.1	33.6	1914	15	1904	38.2	1905	15	23.2

TEMPERATURE.

Masbate.....	35.5	1914	1908	14.5	33.6	1914	21.2	1909	12.4	37.5	1915	18.5	1916	19
Romblon.....	35.2	1915	1912	14.9	34.1	1915	18.5	1904	15.6	38.2	1915	17	1916	15
Batag.....	31.9	1915	1913	11	31.5	1915	20.9	1915	10.6	38.2	1915	19.7	1914	21
Gubat.....	34.9	1908	1906	16.9	32	1908	17.2	1906	14.8	36.6	1912	16.4	1907	20.2
Legaspi.....	34.4	1913	1912	15.4	33.1	1911	17.9	1904	15.2	37.2	1912	16.7	1914	20.5
Calapan.....	35	1916	1911	15.5	33.5	1916	18	1918	15.5	37.6	1914	16.2	1916	21.4
Virac.....	35	1908	1911	17	33.4	1915	18.8	1912	14.6	36.7	1915	15.6	1916	21.1
Naga.....	34.3	1918	1911	18.3	33.5	1918	19.1	1914	17.6	37.2	1912	15.1	1916	22.1
Batangas.....	35.3	1914	1911	19.3	34.3	1914	16.7	1918	17.6	38.8	1912	14.3	1908	24.5
Atimonan.....	33.9	1906	1906	14.8	32.5	1908	18.5	1904	14	36.9	1907	16.1	1916	20.8
Silang.....	32.8	1912	1911	15.8	31.7	1913	17	1911	14.7	35.3	1912	15.2	1907	20.1
Paracale.....	32.4	1915	1913	11.6	32.7	1911	19.9	1914	12.8	37	1912	17.2	1916	19.8
Santa Cruz, Laguna.....	33.1	1915	1911	15.8	32.9	1912	16.5	1918	16.4	37.2	1912	15	1914	22.2
Manila.....	33.9	1907	1911	17.1	33.5	1911	15.9	1904	17.6	38.6	1915	14.5	1914	24.1
Antipolo.....	35.8	1914	1911	18.1	34	1911	15.9	1916	18.1	38.8	1915	15.4	1918	23.4
Iba.....	34.7	1914	1911	21	34.2	1918	15.6	1918	18.6	38.8	1915	13.2	1916	25.6
San Isidro, Nueva Ecija.....	34.5	1907	1905	18	36.4	1905	12.5	1904	23.9	40.9	1906	12.5	1904	28.4
Tarlac.....	36	1916	1905	22.9	36.2	1918	12.6	1904	23.6	41.2	1907	12.1	1904	29.1
Baler.....	35.6	1916	1911	17.7	33.5	1917	17.7	1918	15.8	37.1	1914	15.2	1914	21.9
Dagupan.....	36.1	1913	1905	18.9	36.1	1914	16.5	1904	19.6	39.9	1915	14.3	1907	25.6
Bolinao.....	34.5	1914	1904	16.5	34.6	1905	16.4	1904	18.2	38	1915	16.4	1904	21.6
Baguio (first period) ¹	26	1907	1905	19.5	25.2	1905	8.6	1904	16.6	27.2	1906	3	1907	24.2
Baguio (second period) ¹	26.4	1912	1911	15.5	26.4	1914	10.4	1917	16	28.8	1912	8.3	1918	20.5
San Fernando, La Union.....	34.3	1913	1905	18.1	34.7	1915	17.6	1918	17.1	38.2	1918	14.8	1907	23.4
Echagüe.....	34.8	1908	1911	18.2	34.9	1910	15.3	1918	19.6	40.8	1910	13.4	1914	27.4
Vigan.....	36.5	1910	1916	18.5	34.5	1912	16.8	1916	17.7	38	1911	15.5	1917	22.5
Tuguegarao.....	36.4	1905	1905	23.6	38.5	1905	12.2	1904	26.3	42.2	1912	12.2	1904	30
Laong.....	37.2	1914	1911	22.3	37.1	1911	14	1918	23.1	37.8	1915	12.3	1917	27.3
Aparri.....	33.4	1911	1905	16.4	31.8	1918	16.4	1904	15.4	37.8	1903	14.8	1918	23
Basco.....	31.8	1915	1916	13.9	30.2	1905	14.8	1917	15.4	35.4	1918	13	1918	22.4

¹ See note at the bottom of Table III. (Véase la nota al pie de la Tabla III.)

The extreme temperatures of the whole period for Manila are 38.6° C. and 14.5° C.: they were registered in May, 1915, and January, 1914, respectively. In the year 1915, Manila was greatly affected by one of the most extraordinary periods of drought experienced in the Philippines, as we shall see later on. The month of April had also the highest monthly temperature of the period, 38.0° C., in 1915. In another most extraordinary period of drought of 1912, the highest temperatures for April and May (37.5° C. and 38.3° C.) were not much below those for April and May, 1915. The maximum, 38.3° C., is identical with the one observed in May, 1889, the only occasion during the previous 32 years, 1880 to 1911, on which the thermometers had reached such a height. The hot period of 1889 coincided likewise with a scarcity of rain, since not a drop of rain fell during May and only 3.5 mm. during April. From 1865 to 1880 we find in our records only one year with maximum temperatures higher than that of 1915. It was 1878, which was considered as an extraordinarily hot year: the absolute maximum was then 39.7° C. on May 17, while on May 2 and April 29 temperatures as high as 38.7° C. and 39.2° C., respectively, were observed. As to the absolute minimum, 14.5° C., we can safely state that it is the lowest recorded in Manila since 1865. It is true that in our bulletins there appear two minimum temperatures as low as 12.1° C. and 12.2° C., observed in December, 1870, and December, 1871; but a careful comparison of the minimum temperatures for these months with the temperature readings for 6 a. m. leaves hardly any doubt as to the unreliability of those minimum temperatures.

Longest periods of consecutive days with maximum temperature of 36° C. or more at Manila.—The number of consecutive days with very high maximum temperature is one of the data most interesting in the description of any climate. The short time at our disposal for the preparation of this report, prevents us from giving at present such information for other stations but Manila. And even as regards Manila we shall only make here a few remarks, hoping that on another occasion we may be able to take up this matter again and more in detail. As the periods of drought in the Philippines generally occur during the hottest months of the year, the highest temperatures and the longest periods of very high temperatures are to be looked for in the periods of the most extraordinary droughts. During the

severe drought of 1912, no less than 27 times the daily maximum temperature was 36° C. or more, the hot spell of 16 consecutive days (April 20 to May 5) being especially noteworthy. During the drought of 1915, there were 22 maximum daily temperatures above 36° C. in April, and 12 in May, a total in two months of 34. A careful study of the records of the Manila Observatory for previous years shows that since 1865 only the years 1878 and 1889 can compare with the two just mentioned in the number of days of so high maximum temperatures. In the year 1878 there were 8 cases in April, 20 in May, and 9 in June, in which the maximum daily temperature was higher than 36° C., and two periods of 9 consecutive days with such a high temperature. Our records for that year show also that there was an extraordinary period of 37 consecutive days without rain (April 12 to May 18). In the year 1889 maxima as high as 36° C. or more were recorded on 7 days in April and 16 days in May: a total of 23 days. Eleven of these maxima occurred on consecutive days (May 7 to 17). This hot period of 1889 coincided likewise with a scarcity of rain as stated above.

Mean daily extremes of temperature, monthly and annual; mean diurnal range of temperature.—Hann has the following to say on this climatic element in his *Handbook of Climatology*:¹

The amount of the diurnal range of temperature, or the diurnal amplitude of temperature, is a very noteworthy climatic element, and should be included in every account of a climate which aims to be at all complete. This element is expressed by the difference between the mean temperatures of the warmest and the coldest hours of the day, and is then called the *periodic amplitude*; or, it is expressed by the difference between the mean minima and the mean maxima of the month, obtained from the readings of a maximum and minimum thermometer. The latter is known as the *non-periodic amplitude*.

Table V contains the mean daily maximum and mean daily minimum temperatures, monthly and annual, for a few selected stations of the Philippines: two from Mindanao, two from the Visayas, and six from Luzon. The mean diurnal range or *non-periodic amplitude* is also included for each station. Table VI gives the mean hourly temperature observations for Manila, with the corresponding mean diurnal range or *periodic amplitude*. Lack of time prevents us at present from giving similar obser-

¹ English translation by Ward, page 12.

TABLE V.—*Mean daily extremes of temperature, monthly and annual.*

TABLA V.—Medias mensuales y anuales de las temperaturas extremas diarias.

STATION. Estación.	JANUA- RY. Enero.	FEBRU- RY. Febrero.	MARCH. Marzo.	APRIL. Abril.	MAY. Mayo.	JUNE. Junio.	JULY. Julio.	AUGUST. Agosto.	SEPTEM- BER. Septiem- bre.	OCTO- BER. Octubre.	NOVEM- BER. Noviem- bre.	DECEM- BER. Diciem- bre.	ANNUAL. Anual.
ZAMBOANGA.													
Daily mean maximum.....	30.5	30.5	30.6	30.3	30.3	29.8	29.7	29.8	29.7	29.9	30.3	30.5	30.2
Daily mean minimum.....	22.3	22.1	22.5	23.2	23.2	23.4	23.2	23.2	23.2	23	22.8	22.7	22.9
Diurnal range.....	8.2	8.4	8.1	7.3	6.8	6.4	6.5	6.6	6.5	6.9	7.5	7.8	7.3
SURIGAO.													
Daily mean maximum.....	29	29.1	29.9	30.4	31.3	31.6	31.8	32.3	32.1	31.1	30.2	29.3	30.7
Daily mean minimum.....	22.5	22.3	22.4	23	23.3	23.6	23.8	23.9	23.9	23.7	23.2	23	23.2
Diurnal range.....	6.5	6.8	7.5	7.4	7.8	8	8.4	8.4	8.2	7.4	7	6.3	7.5
CEBU.													
Daily mean maximum.....	29.3	29.5	30.2	31.1	31.8	31.4	30.7	30.9	30.8	30.8	30.4	29.8	30.6
Daily mean minimum.....	22.9	22.8	23.4	24.4	24.9	24.6	24.5	24.4	24.2	24	23.7	23.6	24
Diurnal range.....	6.4	6.7	6.8	6.7	6.9	6.8	6.2	6.5	6.6	6.8	6.7	6.2	6.6
ILOILO.													
Daily mean maximum.....	29.8	30.3	31.6	32.7	32.5	31.3	30.2	30.1	30.1	30.7	30.4	30	30.8
Daily mean minimum.....	22.6	22.5	23.1	24.1	24.4	24.1	23.9	23.9	23.7	23.7	23.4	23.2	23.6
Diurnal range.....	7.2	7.8	8.5	8.6	8.1	7.2	6.3	6.2	6.4	7	7	6.8	7.2
LEGASPI.													
Daily mean maximum.....	29.1	29.5	30.5	31.8	32.8	32.6	32	32	31.7	31.6	30.5	29.6	31.1
Daily mean minimum.....	22.6	22.3	23.1	23.9	24.1	23.9	23.8	23.9	23.5	23.4	23.5	23.3	23.4
Diurnal range.....	6.5	7.2	7.4	7.9	8.7	8.7	8.2	8.1	8.2	8.2	7	6.3	7.7
MANILA.													
Daily mean maximum.....	30.3	31.1	32.9	34.3	34	33	31.2	31.1	30.9	31.2	30.7	30.2	31.7
Daily mean minimum.....	20	19.9	20.6	22.2	23.5	23.7	23.5	23.6	23.4	22.8	21.7	20.9	22.2
Diurnal range.....	10.3	11.2	12.3	12.1	10.5	9.3	7.7	7.5	7.5	8.4	9	9.3	9.5
SAN ISIDRO, NUEVA ECJA.													
Daily mean maximum.....	31.2	32	34	35.5	35.2	33.7	31.7	31.5	31.5	31.7	31.3	31	32.5
Daily mean minimum.....	18.9	19.1	20.1	22	23	23	22.8	23	22.9	22.4	20.8	20.1	21.5
Diurnal range.....	12.3	12.9	13.9	13.5	12.2	10.7	8.9	8.5	8.6	9.3	10.5	10.9	11

DAGUPAN.

Daily mean maximum 31.6 32.4 34.2 35.5 35.1 34.6 32.3 32.8 32.6 32.3 31.8 33
 Daily mean minimum 20.8 20.7 22 23.5 23.9 23.9 23.7 23.8 23.5 22.3 21.4 22.8
 Diurnal range 10.8 11.7 12.2 12 11.2 10.7 8.6 8.2 9.1 10 10.4 10.2

TUGUEGARAO.

Daily mean maximum 29.1 30.8 33.9 36 36.4 36.4 34.7 34.2 31.9 30.1 28.8 33
 Daily mean minimum 19.2 19.1 20.3 22 23.2 23.5 23 22.9 22.2 20.9 20.2 21.6
 Diurnal range 9.9 11.7 13.6 14 13.2 12.9 11.7 11.2 9.7 9.2 8.6 11.4

AFARRI.

Daily mean maximum 26.4 27.2 29.2 31.4 32.4 33.2 32.2 31.9 30.1 28.6 27 30.1
 Daily mean minimum 20 20 21.2 22.5 23.5 24.1 24.1 24 23.2 22.2 21.1 22.5
 Diurnal range 6.4 7.2 8 8.9 8.9 9.1 8.1 7.9 6.9 6.4 5.9 7.6

TEMPERATURE.

MONTH. Mes.	1 p.	2 p.	3 p.	4 p.	5 p.	6 p.	7 p.	8 p.	9 p.	10 p.	11 p.	MIDNIGHT. Media- noche.	MEAN. Media.	MEAN DIURNAL RANGE. Oscilación media dia- ria.
January (Enero)	28.3	28.6	28.7	28.2	27.1	25.6	24.7	24.7	23.5	23.1	22.8	22.4	24.5	7.7
February (Febrero)	29.3	29.5	29.6	29.3	28.2	26.5	25.4	24.6	24.1	23.7	23.2	22.8	25.8	8.6
March (Marzo)	30.8	31.2	31.2	30.8	29.7	28.8	26.7	25.9	25.3	24.8	24.4	23.9	26.3	9.7
April (Abril)	32.3	32.6	32.6	32.1	30.9	29.3	28.1	27.3	26.7	26.2	25.8	25.3	27.3	9.6
May (Mayo)	32.2	32.1	31.8	31.2	30.2	29.3	28.1	27.6	27.1	26.6	26.3	25.9	28.2	7.8
June (Junio)	31.3	31.2	30.8	30.2	29.4	28.5	27.6	26.4	26.8	26.4	26.3	25.7	27.7	6.8
July (Julio)	29.5	29.4	29	28.6	28	27.2	26.7	26.4	26.1	25.8	25.5	25.3	26.8	5.8
August (Agosto)	29.5	29.4	29	28.5	28	27.2	26.7	26.4	26.1	25.9	25.6	25.4	26.9	4.8
September (Septiembre)	29.3	29.2	28.9	28.3	27.6	26.8	26.4	26.1	25.8	25.5	25.3	25.1	26.6	5.9
October (Octubre)	29.5	29.4	29.1	28.5	27.6	26.6	26.1	25.7	25.3	25	24.8	24.5	26.3	5.9
November (Noviembre)	29.1	29	28.9	28.3	27.6	25.8	24.7	24.7	24.4	24.4	23.8	23.6	23.6	6.5
December (Diciembre)	28.5	28.6	28.5	27.8	26.6	25.3	24.6	24.2	23.7	23.4	23.1	22.9	24.9	6.8
ANNUAL MEAN (Oscilación anual)	29.9	30	29.8	29.3	28.4	27.2	26.4	25.8	25.4	25	24.7	24.4	26.4	6.9
MEAN, NOVEMBER TO MAY (Media, noviembre a mayo)	30	30.2	30.2	29.7	28.5	27.1	26.1	25.5	25	24.5	24.2	23.8	26	8
MEAN, JUNE TO OCTOBER (Media, junio a octubre)	29.8	29.7	29.4	28.8	28.1	27.3	26.7	26.3	26	25.7	25.4	25.2	26.9	5.4

vations for any other station besides Manila. A few remarks will be made now on the information included in these two tables as far as they refer to the diurnal range of temperature.

1. Comparing Table V with Table I, it is evident that the difference between the mean highest temperature of the day throughout the year and the mean lowest temperature is considerably greater in the Philippines than the difference between the mean temperature of the warmest month of the year and that of the coldest month. In other words, the mean diurnal range of temperature is much greater here than the mean annual range. Although we give in Table V the mean diurnal range of temperature for only ten selected stations, yet it may be safely stated that the annual mean diurnal range varies in the Philippines from about 6° C. to 12° C., while according to Table I the mean annual range of temperature varies from 0.6° C. to 6.1° C.

2. As was to be expected, the greatest ranges are those of the stations in the western and central part of Luzon, including the Cagayan Valley.

3. The diurnal range of temperature as deduced from hourly observations of Manila is naturally smaller than that deduced from the daily absolute extremes of temperature.

4. The diurnal range for the rainy months, June to October, is much smaller than that of the dry months, November to May. This and the next remark may hold good for other stations having a monthly distribution of rainfall similar to that of Manila, but not for stations having a quite different monthly distribution of rainfall. We say this, because the rainy days have the greatest amount of cloudiness, and to the state of cloudiness or nebulosity more than to any other cause is to be attributed the decrease in the daily oscillation of temperature of which we now speak.

5. The months of the greatest daily oscillation in Manila are January to May, the highest ranges being those of March and April. July, August and September have the smallest oscillations, while June, October, November and December may be considered as the months of intermediate oscillation.

Mean hourly observations of temperature at Manila.—Table VI gives the mean temperature at Manila for each of the twenty-four hours of the day. The following conclusions may be derived from this table:

MEAN HOURLY TEMPERATURES FOR MANILA 1903 - 1918.

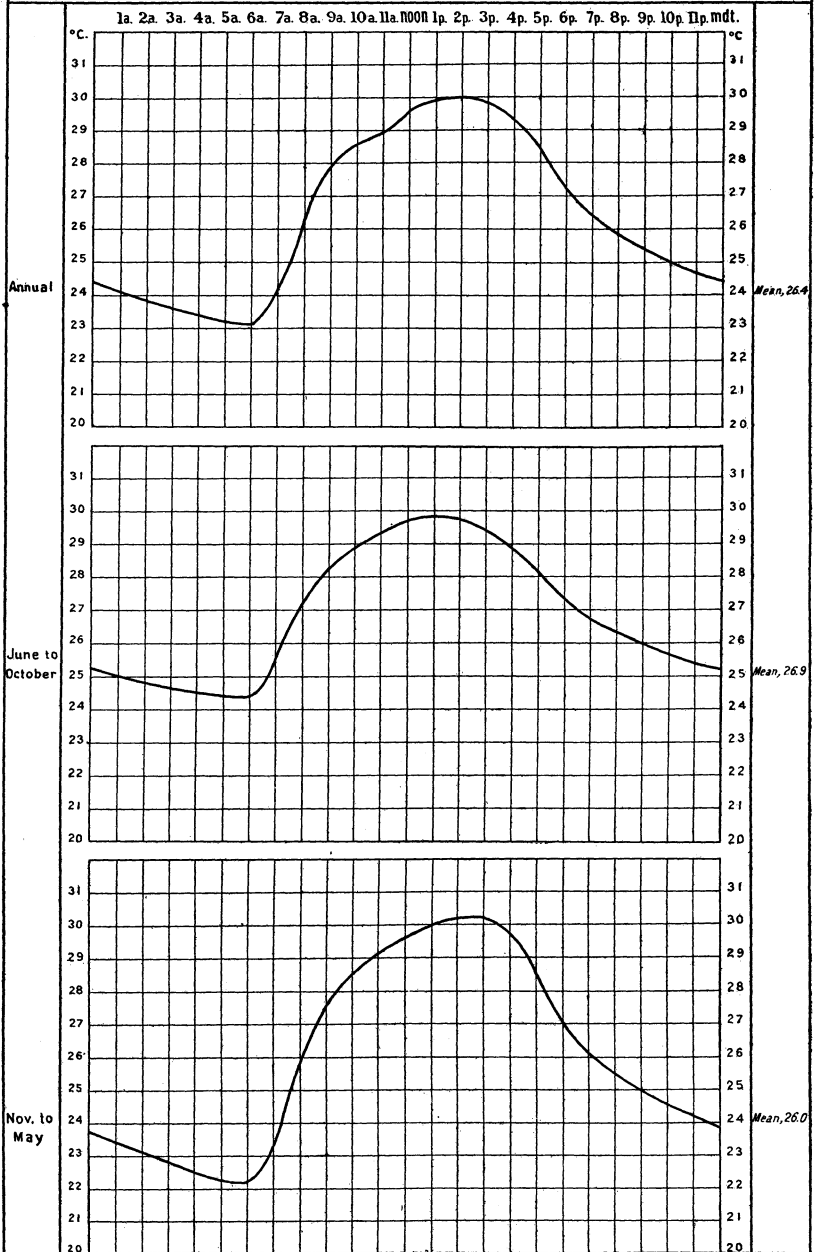


PLATE III.

1. There is only one daily oscillation of temperature with a minimum at about 6 a. m. and a maximum at about 2 p. m.

2. During the rainy months, June to October, the maximum is generally advanced to 1 p. m., while in the other months, November to May, it is at times somewhat retarded, to 3 p. m., the mean value being the same at 2 p. m. and 3 p. m.

3. The hours of the greatest increase and of the greatest decrease of temperature are from 6 to 9 a. m. and from 4 to 7 p. m., respectively.

Mountain temperature. Baguio health resort.—We can only say here a few words on the climate of Baguio, the most important health resort in the Philippines. For further details and information our readers are referred to the two pamphlets on the subject published by Rev. José Algué, S. J., *The Climate of Baguio*, 1902, and *Mirador Observatory, Baguio, Benguet*, 1909.

We read the following in *Descriptive Meteorology* by W. L. Moore, page 269:

The most equable temperature on the globe will be found on the high table lands and plateaus of the tropics. Bogotá, in the United States of Colombia, has an average temperature of about 59° F. (15° C.) for all months of the year, and the range for the entire year is less than is often experienced in a single day in some parts of the middle latitudes. But while the ideal temperature may be found on the higher elevations of the tropics, the rainfall is much greater and more continuous than in this country.

At sea level in the tropics extreme conditions of heat and moisture produce great physical discomfort. But even under the equator it is possible to escape the tropical heat of low levels by ascending from 4,000 to 6,000 feet.

Fortunately for the Philippines, the distribution of rainfall in Baguio is of the first type (see Chapter III of this report), with three dry months, January, February and March, and at least three others, April, November, and December, with a relatively small amount of rain. Hence it is that we have in Baguio for at least six months during the year an ideal temperature without the discomforts proper of a rainy season. If the heavy rains which are so characteristic of Baguio during July, August and September, would be continuous throughout

the year, the climate of that place would be the most unbearable, even in spite of its ideal temperature.¹

That the plateaus of Baguio, about 1,450 meters above the sea level and 175 miles from Manila, enjoy climatic conditions which are greatly beneficial to the health, not only of the Europeans and Americans, but also of the Filipinos, has been repeated over and over again in many medical reports. The following statements of Colonel William H. Arthur may be of interest:

Experience has shown that a large number of cases of disease or injury, or patients convalescing from surgical operations, recover much more rapidly in the cool mountain climate of Baguio than in the depressing heat and humidity of the plains. Before

¹ Such may be considered the climate on Mount Banahao in Tayabas Province, where, with a temperature even lower than on the plateaus of Baguio, the rainfall is heavy and well distributed throughout the entire year, as will be shown in the next chapter. Although observations have been made on Mount Banahao for only one year, yet it may please our readers that we reproduce here the temperature observations as they were published by William H. Brown in *The Philippine Journal of Science*, C XII, page 322.

Temperature for periods of four weeks in forest at the top of Mount Banahao, Luzon, P. I. Altitude, about 2,100 meters.

Four weeks ending—	Maxi- mum.	Mini- mum.	Mean.	Average daily.	
				Maxi- mum.	Mini- mum.
	°C.	°C.	°C.	°C.	°C.
Dec. 1, 1915.....	17.7	10.6	14.9	15.9	13.3
Dec. 29, 1915.....	17.1	10.0	13.8	14.7	13.1
Jan. 26, 1916.....	16.5	8.3	13.4	14.6	12.0
Feb. 23, 1916.....	15.8	7.7	13.2	14.2	12.0
Mar. 22, 1916.....	17.8	5.0	13.5	15.0	12.2
Apr. 19, 1916.....	17.1	10.3	13.5	14.5	12.4
May 17, 1916.....	19.2	11.1	15.0	16.2	13.8
June 14, 1916.....	18.9	14.3	15.1	17.6	15.2
July 12, 1916.....	22.7	12.5	15.7	17.4	14.8
Aug. 9, 1916.....	23.6	9.2	15.2	16.7	14.1
Sept. 6, 1916.....	19.2	12.2	14.9	16.1	14.6
Oct. 4, 1916.....	17.1	12.2	15.8	15.6	14.2
Nov. 1, 1916.....	17.1	14.5	15.6	15.9	14.7
Average.....			14.6	15.7	13.6

The annual mean temperature here given for Banahao is lower than that of Baguio by 3.3° C.

Mr. Brown says the following regarding the way these observations were made:

"Owing to the difficulty of making trips to the top of Mount Banahao to obtain regular records of climatic condition, the writer was compelled to have most of this work done by an assistant, Macario Ocampo, who had had no scientific training. For this reason the only instruments employed were a rain gauge, a recording thermometer, and a recording hygrometer. The results obtained from these are probably about as accurate as would be expected from the instruments as the reading of a rain gauge is very simple and the records from the hygrometer and thermometer were checked by the writer at various times. The hygrometer and thermometer were in a case with louver sides and a lattice bottom and were about 75 centimeters above the ground."

the establishment of this mountain refuge from the heat of the plains, many cases of this class were transferred to the United States that are now brought back to health at Camp John Hay and Camp Keithley. The beneficial effect of the change in climate is particularly noticeable in people who have become run down after one or more hot seasons spent at the lower levels.

The great value of a refuge in the mountains from the effect of prolonged heat is shown in medical reports, which indicate the classes of cases especially benefited, but there are a great many others not reported and not actually sick but whose vitality and resistance are more or less diminished and who find great benefit from an occasional sojourn in the mountains of Benguet or the highlands of Mindanao, especially during the hottest part of the year.

In Table VII we offer to our readers a most complete summary of the temperature observations taken at Baguio during the period 1903 to 1918. It will be noticed that the observations referring to the extreme temperatures are divided into two periods. This has been considered necessary on account of the considerable difference between the maximum and minimum temperatures recorded during the second period at Mount Mirador, from 1909 to 1918, and those recorded during the first period, from 1903 to 1908, in one or two different places from 55 to 60 meters below. Both maximum and minimum temperatures of the first period were lower than those of the second period. We did not think it necessary to introduce any division of period into the mean monthly and annual temperatures, as there was practically no difference between the mean values deduced from the first period and those deduced from the second period. That all differences disappeared in the mean values of the two periods, may be attributed to the different methods followed in finding these means. As the Baguio station was only a third class station from 1903 to 1908, no more than two observations were made daily, and hence the daily means had to be deduced from the daily extremes, while the daily mean values for the second period were deduced from six daily observations. Now, mean daily temperatures obtained by the first method give for Baguio a mean difference of $+1.2^{\circ}$ C. if compared with means obtained by the second method. Hence it is that the mean monthly and annual temperatures obtained from the first period are almost identical with the means obtained from the second period. In other words, the mean monthly and annual temperatures which we publish here can be practically considered as means deduced from 16 years of observation at Mount Mirador.

TABLE VII.—*Most important temperature data for Baguio, 1903-1918.*

TABLE VII.—Datos más importantes de la temperatura de Baguio, 1903-1918.

	JANUARY.	FEBRUARY.	MARCH.	APRIL.	MAY.	JUNE.	JULY.	AUGUST.	SEPTEMBER.	OCTOBER.	NOVEMBER.	DECEMBER.	ANNUAL.
Mean (Media)	16.5	16.6	17.7	18.6	18.9	18.9	18.1	17.9	18	18	17.7	17.4	17.9
Difference from Manila mean (Diferencia de la media de Manila)	-8	-8.4	-8.6	-9.2	-9.3	-8.8	-8.7	-9	-8.6	-8.3	-7.9	-7.5	-8.5
Highest mean (Media máxima)	17.4	17.5	18.4	19.9	19.4	20.1	19.8	19.1	19.6	18.9	18.6	18.2	20.1
Lowest mean (Media mínima)	14.7	14.9	16	16.8	18.1	18.2	17.1	17.1	17.4	17.3	16.4	16.6	14.7
Mean daily maximum (Media de las máximas diarias)	21.5	21.6	22.6	23.1	22.7	22.7	21.5	21.2	21.8	22.1	22.2	22.2	22.1
Mean daily minimum (Media de las mínimas diarias)	11.8	11.4	12.6	13.9	15.1	15.2	15.2	15.1	15.2	14.3	12.8	12.8	13.8
Mean diurnal range (Oscilación diurna media)	9.7	10.2	10	9.2	7.6	7.5	6.3	6.1	6.6	7.8	9.4	9.4	8.3
Highest mean daily maximum (Media mayor de las máximas diarias)	22.7	23.3	23.4	24	23.5	23.8	22.6	22.9	22.7	23.2	23.6	23.4	24
Lowest mean daily minimum (Media menor de las mínimas diarias)	19.7	20.6	21.1	21.9	21.9	20.8	19.4	19.9	20.9	21.5	21.3	21.1	19.4
Highest mean daily minimum (Media mayor de las mínimas diarias)	13	13.1	14.2	15.4	15.9	17	17	16.3	16.5	16.2	14.8	14.3	17
Lowest mean daily maximum (Media menor de las máximas diarias)	9.7	9.2	11	11.6	14.2	14.8	14.7	14	14.4	13.1	10.8	11.6	9.2
Mean of the absolute maximum (Media de las máximas absolutas)	24	24.3	24.7	25	24.9	24.9	24	24.2	24.3	24.7	24.8	24.5	25.8
Mean of the absolute minimum (Media de las mínimas absolutas)	8.5	8.2	10.4	11.7	12.3	13.9	13.2	13.2	13.6	12	9.6	9.8	7.4
Mean absolute range (Oscilación absoluta media)	15.5	16.1	14.3	13.3	12.6	11	10.8	11	10.7	12.7	16.2	14.7	13.1
Highest absolute maximum (Máxima absoluta)	25	27	27.2	26.1	26.4	25.7	25	25.4	25.5	26	26.2	25.2	27.2
Lowest absolute minimum (Mínima absoluta)	3	6	8.2	9.6	11	13.5	12.9	11.5	12.1	10.2	6.5	8.6	3
Extreme range (Oscilación absoluta)	22	21	19	16.5	15.4	12.2	12.9	13.9	13.4	15.8	19.5	16.6	24.2
Lowest absolute maximum (Menor de las máximas absolutas)	22.6	23	23.6	24	23.9	22.6	22	22.7	22.4	23.9	24.1	23.7	22.2
Highest absolute minimum (Mayor de las mínimas absolutas)	10.1	10	12.6	13.6	13.8	15	15.9	15.1	15.6	14.6	11.5	12.2	15.9

First Period, 1903-1908

TABLE VII.—*Most important temperature data for Baguio, 1903-1918—Continued.*

TABLE VII.—Datos más importantes de la temperatura de Baguio, 1903-1918—Continuación.

	JANUARY.	FEBRUARY.	MARCH.	APRIL.	MAY.	JUNE.	JULY.	AGUST.	SEPTIEMBRE.	OCTOBER.	NOVIEMBRE.	DECEMBER.	ANNUAL.
	°C.	°C.	°C.	°C.	°C.	°C.	°C.	°C.	°C.	°C.	°C.	°C.	°C.
Mean daily maximum (Media de las máximas diarias)	22.5	22.8	24.2	24.9	24.2	23.9	21.9	21.5	21.9	22.9	23.5	23.2	23.1
Mean daily minimum (Media de las mínimas diarias)	13	13.1	14.2	15.3	16	16.1	15.8	15.6	15.6	15.3	14.8	14.1	14.9
Mean diurnal range (Oscilación diurna media)	9.5	9.7	10	9.6	8.2	7.8	6.1	5.9	6.3	7.6	8.7	9.1	8.2
Highest mean daily maximum (Media mayor de las máximas diarias)	23.7	24.2	25.3	26.5	25.2	24.5	23.6	22.2	23.3	24.1	24.6	24.6	26.5
Lowest mean daily maximum (Media menor de las máximas diarias)	21.3	21.4	23.5	23.7	22.6	23.1	19.5	19.7	21.4	21.5	22.4	22.1	19.5
Highest mean daily minimum (Media mayor de las mínimas diarias)	13.8	14.2	14.7	15.7	16.5	16.6	16.5	16	16	15.9	15.5	14.7	16.6
Lowest mean daily minimum (Media menor de las mínimas diarias)	10.9	11.8	13	14.5	15.5	15.3	15.1	15.1	15.1	14.7	13.8	13.7	10.9
Mean of the absolute maximum (Media de las máximas absolutas)	24.8	26	26.5	27	26.2	26.1	25	24.5	25.1	25.2	25.5	25.2	27.1
Mean of the absolute minimum (Media de las mínimas absolutas)	10.2	10.7	12.4	13.8	14.9	14.5	14.3	14.2	14.5	13.9	12.7	11.8	9.9
Mean absolute range (Oscilación absoluta media)	14.0	15.3	14.1	13.2	11.3	11.6	10.7	10.3	10.5	11.3	12.8	13.4	12.4
Highest absolute maximum (Máxima absoluta)	26.8	27.2	27.5	28.8	27.2	26.8	26.4	25	26.2	27	26.4	26.4	28.8
Lowest absolute minimum (Mínima absoluta)	8.3	8.6	11.1	12.8	13.9	11.8	13	12.8	13.9	11.3	10.9	10.4	8.3
Extreme range (Oscilación absoluta)	17.8	18.3	16.4	16	13.3	15	13.4	12.2	12.3	15.7	15.5	16	20.5
Lowest absolute maximum (Menor de las máximas absolutas)	24.1	24.2	25.7	25.9	25.2	25.4	23.5	23.5	24.1	24.1	23.9	24.4	23.5
Highest absolute minimum (Mayor de las mínimas absolutas)	11.7	11.8	13.5	14.4	15.4	15.4	15.4	14.9	15	14.8	13.9	13.2	15.4

(Segundo período, 1909-1918.)

As to the information given in Table VII, we will only call the attention to the following:

1. The mean annual temperature of Baguio, 17.9° C., differs from that of Manila by -8.5° C. The differences of the monthly means vary from -7.5° C. in December to -9.3° C., in May.

2. The mean annual range of temperature, that is the difference between the mean temperature of the warmest month and the mean of the coldest month, is 2.4° C., somewhat smaller than that of other nearby stations on the sea level.

3. The lowest air temperature in 16 years has been 3° C. The mean of the annual minimum temperatures, however, is 7.4° C. for the first period of observations, and 9.9° C. for the second period. In our Temperature Map the mean of the two periods is given. The absolute minimum 3° C. was recorded in January, 1907, which was an extraordinarily cold year for Baguio.

4. Speaking in general, we may say of the temperature of Baguio that it is about 8 or 9 degrees lower than in the other stations of Luzon on the sea level, but otherwise it follows the laws of a characteristically tropical climate as to the diurnal, monthly and annual range, as to the warmest and coldest months of the year and the warmest and coldest hours of the day, etc., etc.

Before finishing this chapter the attention of our readers should be called to a fact which may help to have a better knowledge of the climate of Baguio and may be of special value to agriculture. We had heard at times that real frost was observed and even a thin crust of ice formed in little pools at the foot of Mount Mirador, even when the air temperature both on the top of Mirador and in another station on a plateau near the City Hall was several degrees above the freezing point. During the winter of 1918 to 1919, the observer at Mirador, Mr. Pastor P. Daroy, made a series of observations which leave no doubt on this matter. As observations of this kind are not very common, we think it will please our readers if we copy them here as they are recorded in the monthly bulletins of Mirador Observatory. We will only add in each particular case, in which the minimum temperature on the pools is given, the minimum air temperature as recorded on the same day within our thermometer shelters on the top of Mirador and on the plateau near the City Hall.

December 8, 1918.—Real frost observed in the pool or sink-hole commonly known as “San Jose spring” and in other similar places. The most delicate plants were killed to a height of one meter and a half above the ground.

December 12, 1918.—Frost again in “San Jose spring,” but less than on the 8th. A minimum thermometer on the grass read -0.9° C. The minimum air temperature for Mirador was 13.3° C., and the minimum on the plateau near the City Hall, 10.2° C.

December 23, 1918.—Frost again in “San Jose spring,” but much greater than before. A minimum thermometer on the grass read -2.7° C. Minimum air temperature on Mirador, 12.4° C., and on the plateau near the City Hall, 10.1° C.

December 24, 1918.—Frost in “San Jose spring.” Two minimum thermometers had been placed on the grass the preceding afternoon: they read this morning -4.2° C. and -3.5° C., respectively. Minimum air temperature on Mirador, 12.1° C., and on the plateau near the City Hall, 9.7° C.

January 12, 1919.—Frost in San Jose: one minimum thermometer on the grass read -1.1° C. Minimum air temperature on Mirador, 13.5° C.; on the plateau near the City Hall, 10.6° C.

January 13, 1919.—Frost in San Jose: two minimum thermometers on the grass read -2.8° C. and -3.0° C., respectively. Minimum air temperature on Mirador, 13.5° C.; on the plateau near the City Hall, 9.7° C.

January 14, 1919.—Frost in San Jose: two minimum thermometers on the grass read -2.0° C. and -2.8° C., respectively. Minimum air temperature on Mirador, 13.1° C.; on the plateau near the City Hall, 10.1° C.

January 23, 1919.—Frost in San Jose: one minimum thermometer on the grass read -3.9° C. Minimum air temperature on Mirador, 11.4° C.; on the plateau near the City Hall, 8.9° C.

January 24, 1919.—Frost was observed to-day not only in “San Jose spring,” but also in many other places in Baguio. One minimum thermometer on the grass at San Jose read -8.9° C. Minimum air temperature on Mirador, 13.0° C.; on the plateau near the City Hall, 7.9° C. A basin with water is placed in the evening on the grass in order to observe whether ice be formed the next morning.

January 25, 1919.—Frost in San Jose: the minimum thermometer on the grass read -5.8° C. Minimum air temperature

on Mirador, 11.8° C.; on the plateau near the City Hall, 9.4° C. A crust of ice from two to three centimeters thick was found in the basin placed on the grass the preceding evening.

January 26, 1919.—Frost in San Jose: minimum on the grass -3.5° C. Minimum air temperature on Mirador, 12.4° C.; on the plateau near the City Hall, 10.7° C. Ice was found on the basin, but not as thick as that of the preceding day.

January 27, 1919.—More frost than yesterday in San Jose: minimum on the grass, -4.5° C. Minimum air temperature on Mirador, 11.3° C.; on the plateau near the City Hall, 8.0° C.

January 28, 1919.—Frost in San Jose: minimum on the grass, -5.2° C. Minimum air temperature on Mirador, 11.2° C.; on the plateau near the City Hall, 8.4° C. A crust of ice was found in the basin as thick as on the 25th.

January 30, 1919.—Frost in San Jose: minimum on the grass, -2.0° C. Minimum air temperature on Mirador, 13.3° C.; on the plateau near the City Hall, 9.7° C.

January 31, 1919.—More frost than yesterday: minimum on the grass, -3.9° C. Minimum air temperature on Mirador, 13.9° C.; on the plateau near the City Hall, 11.4° C.

February 1, 1919.—Minimum on the grass at San Jose, -1.2° C., but no frost. Minimum air temperature on Mirador, 12.2° C.; on the plateau near the City Hall, 10.2° C.

It may be well to remark that the pool or spring of San Jose where these observations were made is about 80 meters below the thermometer shelter on the top of Mount Mirador and about 20 meters below the other shelter on the plateau near the City Hall.

It is evident from the foregoing that many times frost was observed in the pool of San Jose when the air temperature in Baguio was many degrees above the freezing point; and that the difference between the grass temperature in the pool and the minimum air temperature as registered in our two stations of Baguio was indeed very remarkable. This difference varied from 13.4° C. to 21.9° C. (minimum on the grass in the pool compared with minimum of air temperature on Mount Mirador), and from 11.1° C. to 16.8° C. (minimum on the grass in the pool compared with minimum of air temperature on the plateau near the City Hall), the maximum being that of the 24th of January, 1919, when the grass temperature in the spring of San Jose was -8.9° C., and the minimum air temperature recorded in our two stations of Baguio were 13.0° C. and 7.9° C., respectively. The difference between the minimum tempera-

tures on the top of the mountain and those on the plateau near the City Hall should also be noticed.

We believe that these facts are not so uncommon in Baguio, as many people may think, especially in nights of clear sky and of no wind. Our observer at Baguio, when asked whether these phenomena did not occur there before 1918, said that he did not doubt that it happened often before, but that no attention had been paid to it.

Our readers may like to have an easy explanation of these facts, and we think that no better one can be given than that offered by the famous meteorologist, Dr. Julius Hann, in his *Handbook of Climatology*.¹ He says as follows:

Terrestrial radiation: Nocturnal cooling.—There is another, and a contrasted effect of the loss of heat by radiation which is of great importance climatically, and may be directly observed with much greater ease. This is the nocturnal cooling of the free surfaces of bodies to a temperature below that of the air. On clear nights the temperature of the surface of the earth, or of plants, often falls considerably below that of the air at some distance above the earth's surface. The temperature of the air being that of which we wish to obtain a record, thermometers are protected from the effects of nocturnal radiation by means of shelters. This is necessary because thermometers, like almost all other bodies, are much better radiators than the air itself, which cools but slightly by radiation. Different bodies cool, as the result of nocturnal radiation, by different amounts, as is shown by the varying quantities of dew which form upon their surfaces. For climatological purposes the intensity of nocturnal radiation is best measured by means of a minimum thermometer laid directly upon a surface of short grass, and by means of a thermometer laid on the bare ground and lightly covered with earth.

The difference between the minimum temperature in the free air and that of the air close to the grass or the surface of the earth, is a measure of the loss of heat by nocturnal radiation. Observations of this sort, although easily made, are nevertheless not available for many climates. The English meteorological stations alone are generally provided with radiation thermometers.

In Vienna, the readings of a minimum thermometer which was freely exposed on the grass averaged lower than those of the minimum thermometer in the shelter, four or five feet above the surface, by the following amounts: in spring, 1.3°; in summer, 1.8°; in autumn, 1.3°; mean monthly extremes, in spring, 2.1°. We may therefore conclude that frost can occur in the

¹ English translation by Ward, pages 41 and 42. See also *Mirador Observatory*, by Father Algué, page 9.

neighborhood of Vienna even when the mean nocturnal minimum temperature is $+2^{\circ}$ to $+3^{\circ}$. These differences are still greater in drier climates, especially at greater altitudes above sea level; and frost can occur when the air temperature is 5° to 6° , if radiation is favored by a clear sky, and if the absence of wind makes it possible for considerable differences of temperature to be produced between bodies in the air and the air itself. On the dry plateau of Yemen, with a nocturnal minimum of only $+8^{\circ}$, Glaser saw the pools in the vicinity frozen over in the early morning.

III. RAINFALL.

Monthly distribution of rainfall: four types. Climate Map of the Philippines.—There cannot be any doubt that the most interesting feature of the climate of the Philippines is the monthly distribution of rainfall. If this element would be about the same throughout the Archipelago, there would hardly be any difference of climate in the Philippines. But as it is, the different position of the islands which makes them or part of them more or less exposed to the general winds prevailing in the Philippines, both in winter and in summer, is the principal cause of our different kinds of climate in spite of the relatively small extension of the Archipelago from east to west, especially in Luzon. In winter the rains of the Philippines are mainly due to the northeasterly air currents, which, coming directly from the Pacific, cause abundant rains to fall over the eastern part of the Archipelago. Hence they are sometimes called "NE monsoon rains." In summer and autumn our rains are mainly due to the influence of typhoons which either cross the Islands, generally from eastsoutheast to westnorthwest, or pass some distance to the north. These rains, though they are quite general throughout the Archipelago, are more abundant in Luzon and the Visayas, and exceptionally heavy at times in the western part of these Islands which is more exposed to the westerly and southwesterly winds. As the great majority of typhoons that occur from June to October pass to the NE or N of the Philippines or cross the northern part of Luzon, the winds from west and southwest are the most prevailing during that season. This summer and autumn rainfall may be rightly called "cyclonic rainfall" as distinguished from the "NE monsoon rainfall." These cyclonic rains are far from being continuous, their frequency depending entirely on the frequency of typhoons.

The following remarks on the winter rainfall in the Philippines made by Rev. Miguel Saderra Masó in his pamphlet *Annual Amount and Distribution of Rainfall in the Philippines*, may be of interest to our readers:

These winter rains cannot be called continuous, for they depend not only on the fluctuations of the continental center of high pressure, but also on the barometric oscillations of less

importance which occur in the southern part of the Philippines. Whenever the N winds are due to the formation and advance of the continental center of high pressure, the barometric gradient is very conspicuous as far as 13° lat. N, but not in lower latitudes, although the winds from the N and NE keep their strength all along the northern and eastern coasts of the Archipelago as far as 6° lat. N. It sometimes happens that when the barometers rise very much on the Continent and in the neighboring seas, the northers reach as far as the center and W of Luzon and the Visayas, with cloudy and wet weather, known in the country as the "dirty norther." In this case the N winds may be considered as normal, as they are also when the barometric gradient is specially pronounced, owing to some depression crossing the southern part of the Archipelago. But there is a special case which happens frequently and which must be reckoned as a peculiar circumstance of the Philippine norther, viz, that sometimes when the continental center of high pressure decreases and the barometers fall considerably on the China coast and in the neighborhood of Formosa, slight depressions are formed which remain almost stationary between the Visayas and Mindanao. When this occurs, the northers lose all their force above 20° lat. N, but continue in the Archipelago, sometimes with considerable strength and with rain for about a week. This is due entirely to the slow development and movement of the depression in the S.

The epoch or date on which the winter rains usually begin is very uncertain; isolated periods of the NE monsoon may occur at the beginning of November or even during October, while on the other hand there are years in which the first northers do not come till the second half of December. The same happens with regard to the end of the period; though during the months of January and February the center of high pressure advances toward the E and SE, and consequently the winds in the Archipelago veer quickly to the E, nevertheless it is not extraordinary to have a few gusts of N wind after the middle of February.

The other rains that occur mainly in spring, and may be called "thunderstorm rains," are of little importance as compared with the other two kinds of rainfall just mentioned, and they are generally observed only in the afternoon or in the evening.

Our Table VIII gives the average monthly distribution of rainfall for 70 stations of the Philippines. Based on these observations, and taking in consideration the greater or less prevalence of either of the two most important periods of rain, we have tried to divide this monthly distribution of rainfall into four types: two altogether opposite types and two other intermediate types. Graphs for a good number of stations

TABLE VIII.—Average

TABLA VIII.—Promedio
FIRST TYPE.

STATION. Estación.	PROVINCE OR SUBPROVINCE. Provincia o subprovincia.	LENGTH OF RECORD. Período de observación.	MONTHS. Meses.		
			JANUARY. Enero.	FEBRUARY. Febrero.	MARCH. Marzo.
		YEARS. Años.	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>
Bacolod	Occidental Negros	6	111.2	63.9	15.3
Iloilo	Iloilo	16	56.6	46.1	28.6
San Jose de Buenavista	Antique	16	35.7	22.5	15.4
Cuyo	Palawan	15	13.2	18.8	3.4
San Jose	Mindoro	5	13.2	13.1	12.7
Mamburao	do	2	3.2	2.3	9.4
Batangas	Batangas	11	25.6	19.8	7.3
Ambulong, Tanauan, Batangas	do	6	33.6	10.2	9.7
Silang	Cavite	11	37.9	20	20.3
Santa Cruz	Laguna	9	57.1	31	34.3
Corregidor	Cavite	14	11.8	6.5	3.3
Cavite	do	4	17.5	6.5	11.3
Marila	Manila	16	20.6	11.6	19.4
Antipolo	Rizal	7	29.3	17	13.3
Balanga	Bataan	6	18.2	7.3	7
Olongapo	Zambales	15	5.5	2.6	8.6
Marilao	Bulacan	3	11.3	6.3	8.1
Arayat	Pampanga	5	10.2	6.7	8
Iba	Zambales	10	6.9	5.3	31.5
San Isidro	Nueva Ecija	16	14.4	7.6	13.6
Tarlac	Tarlac	16	8.5	9.8	12.2
Dagupan	Pangasinan	16	10.4	20.7	29.2
Bolinao	do	15	17.1	16.9	21.3
Baguio	Benguet	16	30.5	18.2	47.3
San Fernando	La Union	16	6	8.2	9.1
Candon	Ilocos Sur	16	5.6	8.6	10.8
Vigan	do	16	1.2	6.9	11.7
Laoag	Ilocos Norte	11	4.6	7.6	6
Cape Bojeador	do	3	5.7	13.1	38

SECOND TYPE.

Caraga	Davao	5	294.8	402.4	270.3
Butuan	Agusan	15	246.4	204.1	166.9
Surigao	Surigao	16	484.6	342	296.8
Guiuan	S. mar	6	743.6	309.2	260.3
Tacloban	Leyte	15	355.9	220.7	155.7
Borongan	Samar	16	635.3	426.7	258.5
Catbalogan	do	3	639.1	233.1	175.5
Batag	do	6	554.4	332.2	180.4
Gubat	Sorsogon	13	313.3	234.8	171.9
Legaspi	Albay	16	376.3	273.2	171.5
Virac	Catanduanes	11	230	222.4	152.9
Atimonan	Tayabas	16	244.2	127.2	89.2
Paracale	Ambos Camarines	8	459.1	276.7	205.1

THIRD OR INTERMEDIATE A TYPE.

Zamboanga	Zamboanga	16	64.2	55.7	28.7
Cagayan, Misamis	Misamis	9	51.7	40.7	38.1
Balingasag	do	6	75.2	51.7	25.6
Dumaguete	Oriental Negros	8	90.6	112.4	33.5
Iwahig	Palawan	5	102.5	59.1	45.5
Cebu	Cebu	16	95	73.5	48.6
Tuburan	do	7	112.3	67.5	40.9
Capiz	Capiz	16	162.3	100.9	29.9
Masbate	Masbate	15	181.8	139.3	55.7
Romblon	Romblon	15	121.8	88.5	49.9
Lucena	Tayabas	3	257.8	61.4	43.3
Bayombong	Nueva Vizcaya	8	34.8	29.5	37.6
Echagüe	Isabela	11	56.1	38.3	51.6
Tuguegarao	Cagayan	16	32.9	22.3	34.3
Aparri	do	16	135.8	86.4	57.7

monthly and annual rainfall.

mensual y anual de lluvia.

PRIMER TIPO.

MONTHS—CONTINUED. Meses—Continuación.									ANNUAL. Anual.
APRIL. Abril.	MAY. Mayo.	JUNE. Junio.	JULY. Julio.	AUGUST. Agosto.	SEPTEMBER. Septiembre.	OCTOBER. Octubre.	NOVEMBER. Noviembre.	DECEMBER. Diciembre.	
mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.
24.5	138.6	236	413.5	305.2	302.1	256.8	119.2	186.5	2,172.8
36.7	146	262.3	350.6	347	317.8	272.2	188.6	127.6	2,210.1
57.5	185	347.5	504.5	511.9	513.2	371.8	169.2	61.2	2,845.4
23.5	167.1	284.3	385	391.4	374.2	263	129.1	56	2,109
59.4	160.5	356.8	505.5	434.5	415	476.5	105.1	88.2	2,640.5
29.9	271.8	595	327	997	485.4	323.2	48.2	23.6	3,116
28.8	100.4	146.7	259.6	150.2	312.5	215.3	164.8	111.1	1,542.1
73.1	132.8	237.3	270.6	198.1	433.9	212.8	99	92	1,803.1
53.8	177.9	253.9	474.7	386.4	384.8	179.3	147.4	120.4	2,262.3
43	136.8	195.3	246.8	231.7	310.9	238.9	187.4	158.7	1,871.9
42	112.7	341.7	631	538.1	485.4	190	73.4	41.9	2,478.3
47.7	20.9	281.1	329.7	231.7	291.8	197.3	78.2	69	1,557.3
39.9	112.6	202.1	456.7	368.6	308.2	186	107.8	71.3	1,638.6
51.6	119.4	301.5	559.3	531.2	580.8	268.8	136.6	114.3	2,695.4
47.5	248.6	292.4	596.1	484.2	404.5	233.4	65.9	33.2	2,442.4
48.6	205.9	362.8	779.2	832.4	614.7	238.6	71.8	35.4	3,205
27.6	154.3	360.6	545.1	372.5	280.1	183.2	59.5	73.9	2,103.1
51.5	131.2	240.9	373.5	212.8	307	223	59.5	38	1,638.4
50.7	235.4	448.2	1,009.2	919.3	773	194.1	38.8	30.3	3,743.5
66.7	179.2	204.6	383.2	293.8	293.3	198	79.8	42.1	1,755.3
91.2	179.7	217.8	419	304.7	340.8	175.1	79.6	38.9	1,909.3
33.1	266.4	293.1	566.7	471.6	471.6	209.3	60.7	20	2,500.9
123.9	232.2	390.1	727.4	621	531.4	186.1	50.1	14.3	2,846.5
17	402.5	399.3	1,074.7	1,080.3	845.2	432.9	85.8	56.3	4,597.6
14.6	191.6	304.7	621.8	664.4	451.8	172.5	42.5	8.6	2,498.2
29.4	202.4	317.7	716.8	694.7	459	208.3	42.1	11.2	2,691.8
10.3	197.3	339	757.2	819.8	476.8	191.6	19.4	10.3	2,860.6
38.7	203.1	300.1	690.5	834.1	717	272.1	36.3	22.7	3,104.4
	63.6	211.2	419.8	344.1	395.6	247.4	110.6	39.2	1,927

SEGUNDO TIPO.

148.5	203.7	103.6	142.7	75.7	67.4	128.4	171.9	422.6	2,432
132.8	156.4	166.1	123.3	106.3	142.9	161.6	250.3	294.7	2,151.8
220.3	137.8	131.8	133.6	93.3	151	239.2	401.1	552.2	3,183.7
159.8	250.8	238.4	169.3	105	181.4	282.4	359.2	454	3,513.4
132.9	155.4	199.9	173.7	136.8	150.3	202.2	275.1	350.7	2,509.3
232.1	224.3	255.2	191.6	135.8	187	308.8	488.4	605	3,948.7
145.5	114	269.7	148.8	187.4	256.9	230.4	238.3	393.1	3,081.8
120.5	153.4	250.9	124.7	165.3	164.1	327.8	395.8	416.2	3,185.7
88.6	103.9	133.7	172.6	101.3	192.7	272.9	394.8	506	2,686.5
126.4	133.6	207.3	230.7	172.5	251.7	328.8	348.8	488.5	3,109.3
128.4	148.9	238.5	242	128.5	163.7	319.2	368.8	440.4	2,788.7
88.7	158.4	186.6	204.4	139.1	286.4	357.3	435.1	401.1	2,717.7
102.9	178.7	216.1	290.2	171.8	243.2	522.7	494.8	507.8	3,669.1

TERCER TIPO O TIPO INTERMEDIO A.

42.4	73.3	95.4	107.7	94.9	99.8	117.4	102.6	107.7	989.8
34.1	98.2	198.2	152.8	185.1	192.5	162.5	77.8	122.6	1,354.3
21.3	47.8	177.8	241	179	274.4	225.9	253.6	86.2	1,659.5
27.4	110.2	163.2	135.7	86.8	126	208.6	127.3	149.5	1,371.2
33.8	186.4	231.3	215.3	166	196.4	241.8	289.9	417.8	2,215.8
38.6	95	180.6	157.1	142.5	189.8	224.9	138.2	146	1,529.8
9.9	59.9	130.7	148.5	99.6	178.1	170	153	114.5	1,284.9
53.1	180.8	291.2	333.1	249.6	291.8	440.2	285.1	257.7	2,675.7
36.9	79.1	135.5	189.3	162.8	185.7	143.3	133.5	220.5	1,713.4
60.7	127.8	216.1	272.3	155.1	218.8	299.5	286.2	233	2,129.7
59	126.9	190.2	124.8	93.3	192.5	273.9	167.4	256.1	1,846.6
70	164.1	77.2	153	124.5	178	132.9	107.3	77.3	1,186.2
69	155.4	99.8	202	208.6	205.5	215.9	223.2	157.6	1,683
79.3	134.5	140.3	225	208	292.4	296.8	292.1	158.8	1,916.7
42.6	120.7	153.7	172.8	231.8	248.3	337.4	300.3	242.2	2,129.7

TABLE VIII.—Average monthly
 TABLE VIII.—Promedio mensual
 FOURTH OR INTERMEDIATE B TYPE.

STATION. Estacion.	PROVINCE OR SUBPROVINCE. Provincia o Subprovincia.	LENGTH OF RECORD. Periodo de observación.	MONTHS. MESES.		
			JANUARY. Enero.	FEBRUARY. Febrero.	MARCH. Marzo.
		YEARS. Años.			
			<i>mm.</i>	<i>mm.</i>	<i>mm.</i>
Jolo.....	Sulu.....	15	128.2	106.1	85.6
Isabela.....	Zamboanga.....	16	94.6	84.6	53.6
Davao.....	Davao.....	16	118	134.9	161.3
Cotabato.....	Cotabato.....	12	91.2	84.2	75.2
Dapitan.....	Zamboanga.....	13	166.5	128.3	71.6
Tagbilaran.....	Bohol.....	16	86.6	81.6	71.6
Maasin.....	Leyte.....	16	222.3	158.1	133.6
Ormoc.....	do.....	16	175.4	111.8	85.8
Calbayog.....	Samar.....	16	210.2	177.2	134.2
Calapan.....	Mindoro.....	10	117.8	77.7	75.2
Naga.....	Ambos Camarines.....	14	131.4	82.9	59.1
Baler.....	Tayabas.....	15	244.5	139.1	201.3
Basco.....	Batanes.....	16	243.4	116.3	120.6

Mean annual rainfall for the Philippines, 2,366.1 mm.

Mean seasonal rainfall for the Philippines..... {June to October, 1,436.9 mm.
 {November to May, 929.2 mm.

and annual rainfall—Continued.

y anual de lluvia—Continuación.

CUARTO TIPO O TIPO INTERMEDIO B.

MONTHS—CONTINUED. Meses—Continuación.									ANNUAL. Annual.
APRIL. Abril.	MAY. Mayo.	JUNY. Junio.	JULY. Julio.	AUGUST. Agosto.	SEPTEMBER. Septiembre.	OCTOBER. Octubre.	NOVEMBER. Noviembre.	DECEMBER. Diciembre.	
<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>
133.4	187.6	219.3	169.6	190.9	177.8	230.3	197	157.3	1,983.1
83.1	139	208.4	197.4	204.3	197.9	258.6	153	152.7	1,817.2
162.8	256.6	258.6	190.1	193	198	255.8	166.5	194.7	2,290.3
163.2	243	261.4	282.4	250.9	232	264.2	204.2	120.2	2,272.1
136.2	110.2	178.2	169.3	110.7	130.1	238.9	362.2	297	2,099.2
59.7	78.4	145.4	168.9	129	154.6	198.6	164.1	152.4	1,490.9
66	134.9	158.4	255.7	220.4	280	227.3	314.6	333.4	2,504.7
74.3	87.4	202.9	270.6	270	272.8	234.6	207.9	201.2	2,194.7
116	160.4	208.3	216.1	185.1	272.7	257.8	256.3	278.8	2,473.1
110.2	170.1	242.7	227.1	101.2	235.4	252.2	310.5	205	2,125.1
84.2	127.1	202.6	254.6	156.9	278.5	271.6	266.9	338.5	2,254.3
283.6	276.9	285.1	293.3	150.5	318.1	388.3	346.9	363.7	3,291.3
112.3	236.5	160.8	291.1	375.9	346.8	354.9	355.5	378.8	3,092.9

Lluvia media anual para Filipinas, 2,366.1 mm.

Lluvia media en Filipinas para las diferentes estaciones
 del año..... { Junio a octubre, 1,436.9 mm.
 { Noviembre a mayo, 929.2 mm.

grouped into these four types are reproduced in Plates IV, V, and VI.

A few words will be said now on each of these four types, reference being made to our Climate Map which represents graphically their distribution throughout the Archipelago.

First type: Two pronounced seasons, dry in winter and spring, wet in summer and autumn. Only the cyclonic or summer rainfall prevails, the other being hardly noticeable; hence the dry season of winter lasting from three to six or seven months. As represented in our Map, this is the type shown by the monthly distribution of rainfall in all the stations on the western part of the Islands of Luzon, Mindoro, Negros and Palawan, and the western and southern part of Panay.

Strictly speaking, by a dry month in the Philippines should be understood a month with less than 50 millimeters of rain; yet sometimes a month with even more than 100 millimeters of rain is considered a dry month, especially if it comes after three or more very dry months. Thus Father Saderra Masó says:¹

It is noteworthy that the mean rainfall of May in the central plains and mountain regions of Luzon surpasses the monthly normal average; nevertheless, this month is considered as a dry one because the rain is not sufficient to prepare the fields for the next rice crop.

Second type: No dry season; with a very pronounced maximum rain period in winter. The regions enjoying this type of climate or of monthly distribution of rainfall are Catanduanes, Sorsogon, the eastern part of Albay, the eastern and northern part of Ambos Camarines, a great portion of the eastern part of Tayabas, practically the whole of Samar, the eastern part of Leyte, and a great portion of the eastern part of Mindanao. There is in the regions of this type much of cyclonic or summer and autumn rainfall; but the maximum monthly rainfall is generally that of December and January, while the monthly amounts of rain for the summer and autumn months are far from being so great. There is not a single month dry in regions of this type, the minimum monthly rainfall occurring in some places in spring, and in other places in summer.

Third or Intermediate A type: No very pronounced maximum rain period; with a short dry season lasting only from one to three months. This type is intermediate between the preceding

¹ *Annual Amount and Distribution of Rainfall in the Philippines*, page 8.

TYPES OF MONTHLY DISTRIBUTION OF RAINFALL IN THE PHILIPPINES

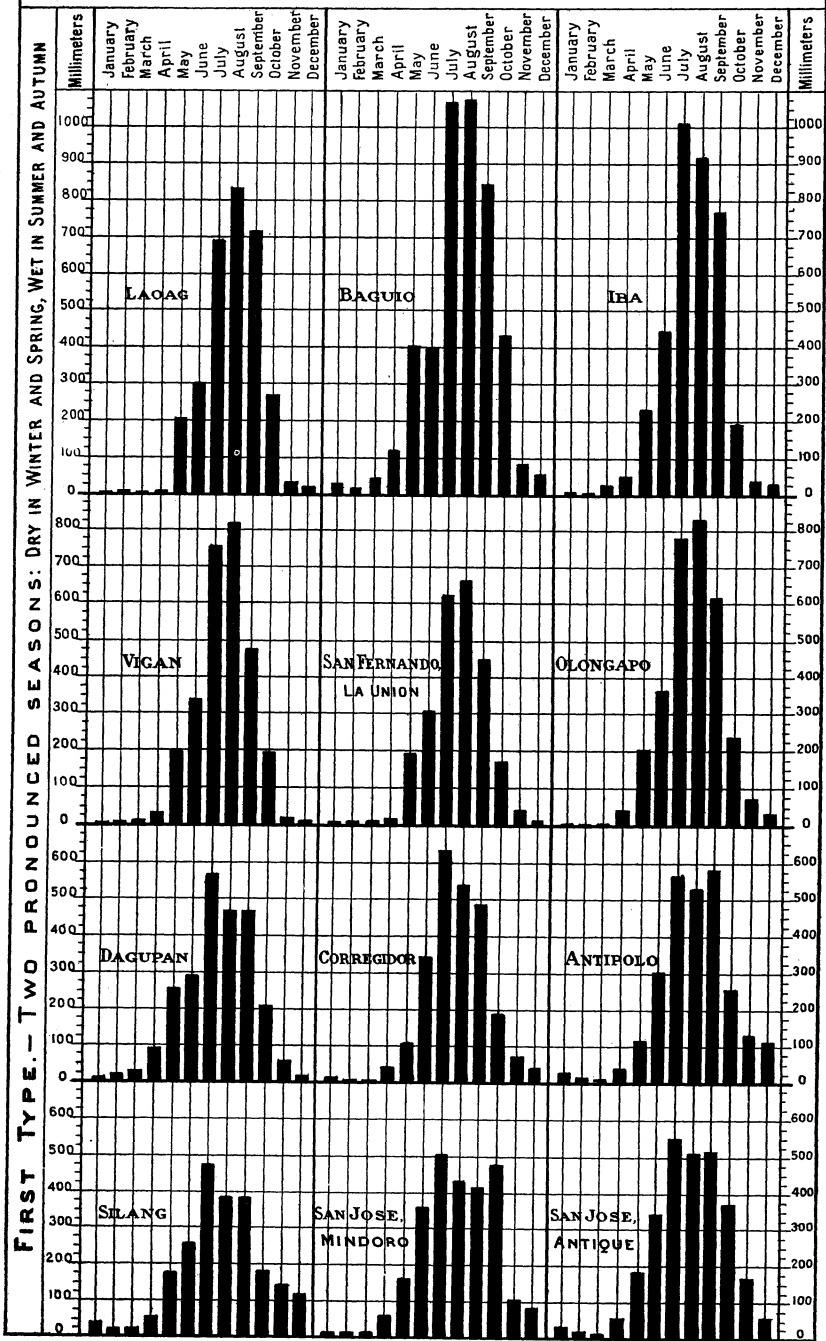


PLATE IV.

TYPES OF MONTHLY DISTRIBUTION OF RAINFALL IN THE PHILIPPINES

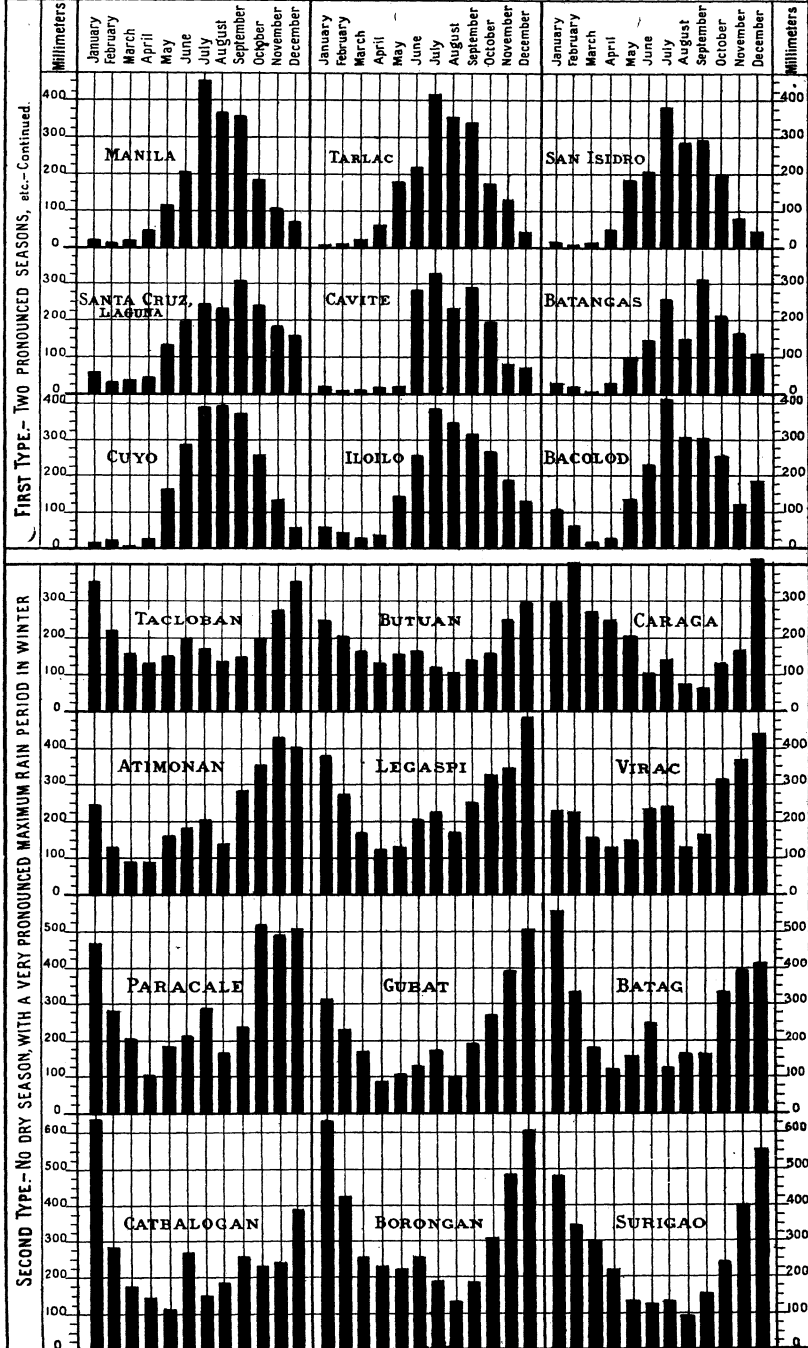


PLATE V.

TYPES OF MONTHLY DISTRIBUTION OF RAINFALL IN THE PHILIPPINES

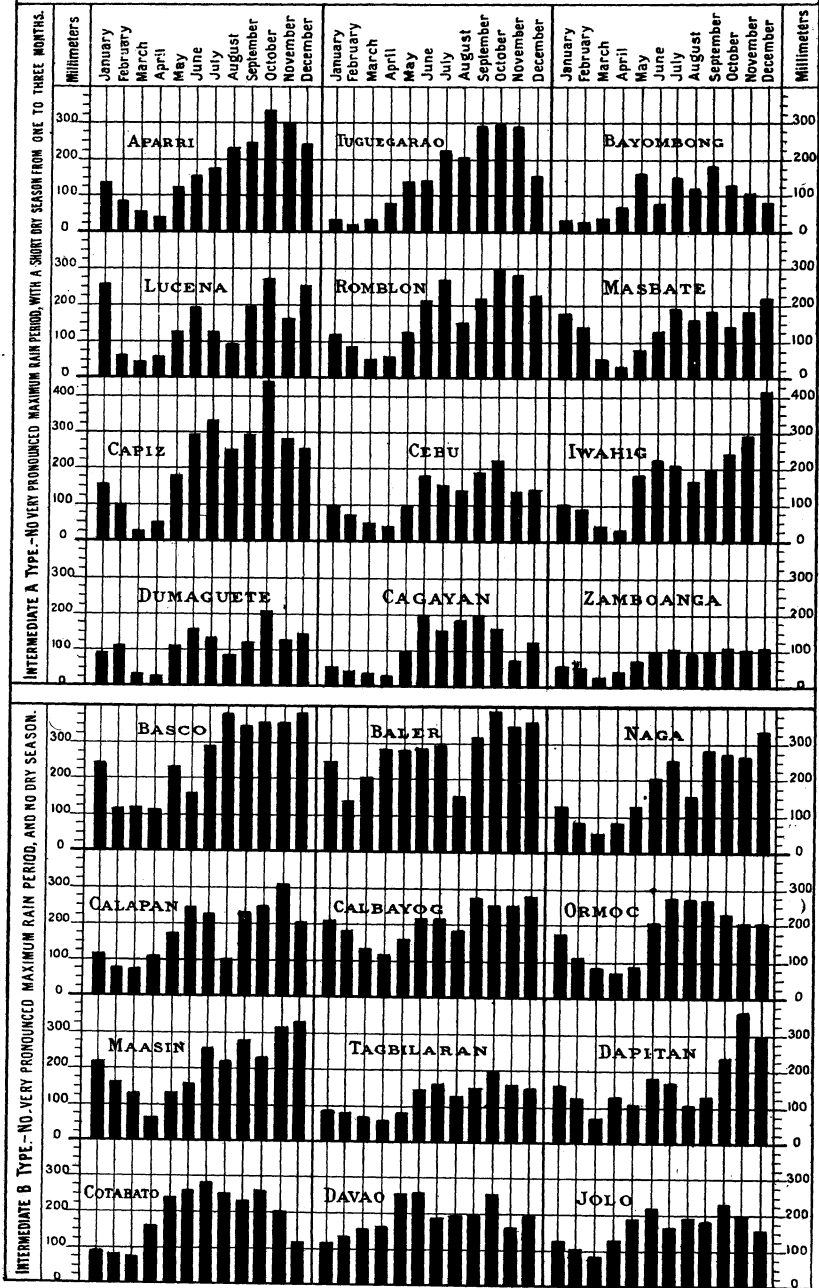


PLATE VI.

two, although it approaches more the first type inasmuch as there is in it a short dry season. Regions with this type of climate are the western part of Cagayan, Isabela and Nueva Vizcaya Provinces, the easternmost part of the Mountain Province, a small portion of the southern part of Tayabas, Masbate, and Romblon, the northeastern part of Panay, the eastern part of Negros, the central and southern part of Cebu, part of Misamis, Agusan and Bukidnon Provinces, the peninsula of Zamboanga, and a good portion of eastern Palawan. The short dry season experienced in regions of this type occurs in some places in winter, and in other places in spring.

Fourth or Intermediate B type: No very pronounced maximum rain period and no dry season. This is also an intermediate type between the first and the second, but approaching more the second inasmuch as there is no dry season in it. Regions with this type of climate are the Batanes Province, the easternmost part of northern Luzon from Cagayan Province to about one-third of the Tayabas east coast, the western part of Ambos Camarines and Albay Provinces, the Bondoc Peninsula, the eastern part of Mindoro, Marinduque, a small portion of Samar near Calbayog, the western part of Leyte, the northernmost part of Cebu, the Islands of Bohol, Jolo and Basilan, and a great portion of Mindanao, including the Provinces of Lanao and Cotabato, the western part of Davao and Misamis Provinces and the eastern part of Zamboanga Province.

Both cyclonic and NE monsoon rains as well as thunderstorm rains are experienced in these regions with not a single month dry during the year, the minimum monthly rainfall occurring generally in spring, although in Davao it takes place in January.

The reason why the Batanes and the easternmost part of northern Luzon have this fourth type of climate and not the second type like the regions of the eastern part of the rest of the Archipelago, may be this: typhoons crossing northern Luzon and the Batanes Islands are the most frequent in summer, hence the amount of cyclonic or summer rains over that region is so great, that no matter how much rain may fall there during the NE monsoon, the period of winter rain is no more pronounced than the period of summer and autumn rain. Our readers are referred to the graphs of Basco and Baler in Plate VI.

Annual average rainfall.—In the last column of Table VIII the annual average rainfall is given for 70 stations of the Philippines. The same information for a good number of stations

is graphically represented in our Climate Map. The length of record from which this average has been deduced could not be uniform, as it is shown in the same Table VIII. Yet, there are no less than 45 stations with a length of record of either 16 years or at least more than 10 years. For these the annual averages obtained may be considered as normals, it being almost certain that the variations which such an average may undergo with more years of observations, will be of little importance.

By averaging all the annual means of the 70 stations included in Table VIII, we may give as the annual average rainfall for the Philippines 2,366.1 mm. The annual means for a single station vary between 4,597.6 mm. and 989.8 mm. The greatest annual mean is that of Baguio, Benguet, and such a great amount of rainfall is undoubtedly due to the elevation of the place aided by local topographic features. The least annual rainfall is that of Zamboanga: but here we wish to remark that our attention has been often called to the fact that the present position of the rain gage is not well suited to the purpose, and that, if a better position could be obtained in the future, the average annual amount of rain for that place may possibly change. Yet, it is significant that two years of observations made there by a conscientious observer, in a position very different from the present, more than twenty years ago, gave also an annual rainfall below 1,000 mm.¹

Our Climate Map gives in figures the annual average of rainfall for 65 stations. It will be noticed that many of the stations shown in the map of our meteorological stations are not included either in this Climate Map or in the Temperature Map of the preceding chapter. The reason is that many of these stations have been established quite recently, and, therefore, the observations made in them are not enough to give any approximate monthly or annual average.

The stations showing an annual average of over 2,500 mm. are those on the east and west coast of Luzon, on the west coast of Mindoro, on the north and west coast of Panay, on the east and south coast of Leyte, and practically all the stations of Samar, Catanduanes, Batanes, and northeastern Mindanao. On the contrary, the stations showing an annual average of less than 2,000 mm. are those of the interior of Luzon, those of the south coast of Batangas and Tayabas Provinces, those of Masbate, Cebu, Bohol, southern Negros, the coast of Misamis Province, Zamboanga, Basilan, and Jolo. Attention should be called

¹ See *El Archipiélago Filipino*, Tomo II, pág. 111.

to the annual rainfalls of Antipolo and Silang, which appear to be greater than in the nearby stations, due probably to the height of those two stations above the sea level.

Annual and seasonal average rainfall by provinces.—To make the matter more interesting, we represent in Plates VII, VIII, and IX the annual and seasonal average rainfall by provinces and subprovinces, as far as the number of records available at present allows us to give this information. As to the annual average represented in Plate VII, Benguet subprovince occupies the first place with an annual amount of over 4,000 mm. Then follow with a mean amount of over 3,000 mm. the Provinces of Zambales, Samar, Surigao, Albay, Ilocos Norte and Batanes. The provinces with the least annual amount are those of Nueva Vizcaya, Misamis, Oriental Negros, Bohol and Cebu.

In order to show in a most striking way the difference between the distribution of rainfall in the Philippines in the different seasons of the year, we have taken only the four months in which the summer or cyclonic rains are more abundant, viz, June, July, August, and September, and compare the average amount of rainfall for these months with that of the other four months in which the NE monsoon rains occur, viz, November, December, January and February. This information is given in Table IX for our stations divided into four types as above, while it is graphically represented by provinces in Plates VIII and IX. These two plates show clearly (1) that the average rainfall of the period June to September for the whole Archipelago is much greater than that of the period November to February: (2) that the provinces of the western part of Luzon, which are more affected by the cyclonic rains, are the driest in the period of winter rains; and (3) that, on the contrary, several of the driest provinces during the summer period, like Surigao, Davao on the Pacific coast, etc., are the most benefited by the winter rains.

Monthly and annual rainfall of the Philippines compared with that of several selected cities of the world.—Plate X and Table X contain very interesting information referring to the monthly and annual average rainfall for several selected cities of the world as compared with that of the Philippines. We use in Plate X the same scale for all the stations in order that our readers may notice immediately the great difference between the annual rainfall of different countries, but most particularly between the small amount of annual rainfall for European countries and the great amount proper of tropical countries.

AVERAGE ANNUAL RAINFALL OF PROVINCES AND SUBPROVINCES.

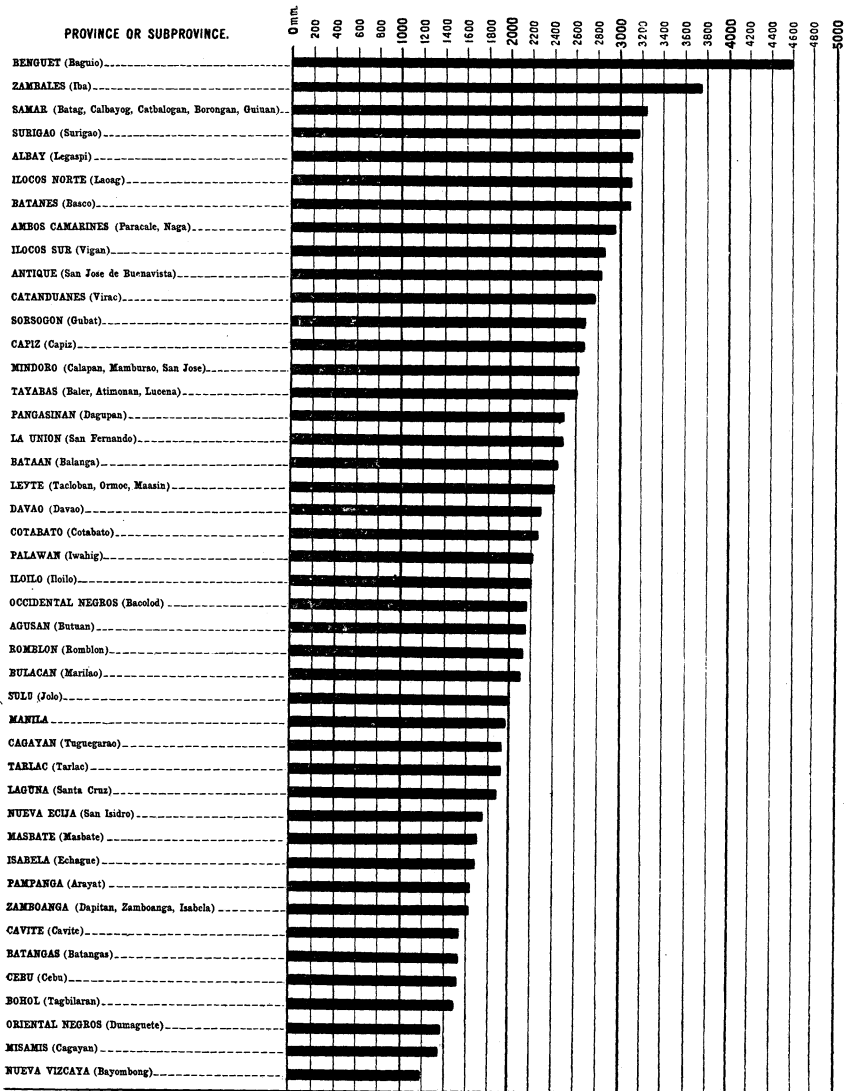


PLATE VII.

AVERAGE SUMMER RAINFALL OF PROVINCES AND SUBPROVINCES: JUNE TO SEPTEMBER.

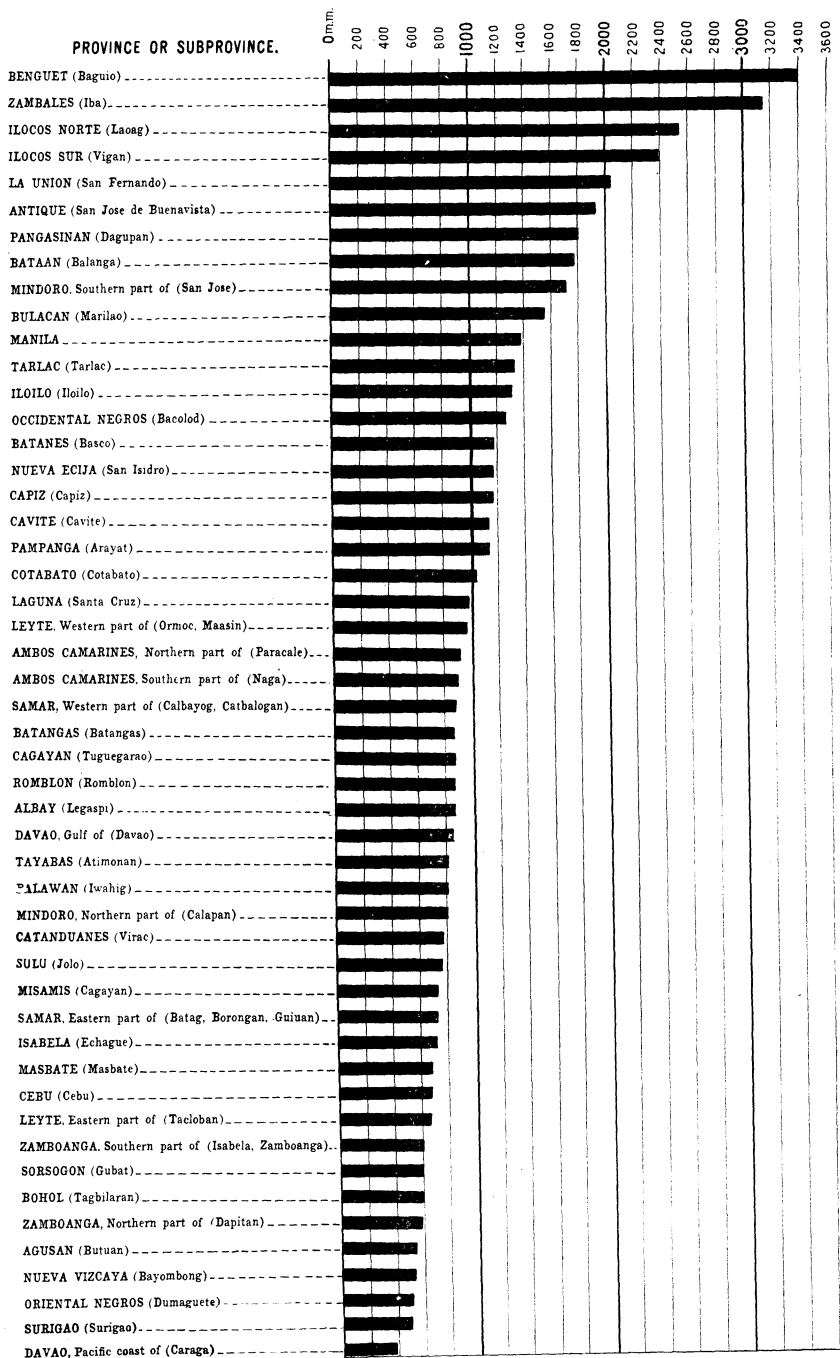


PLATE VIII.

**AVERAGE WINTER RAINFALL OF PROVINCES AND SUBPROVINCES: NOVEMBER
TO FEBRUARY.**

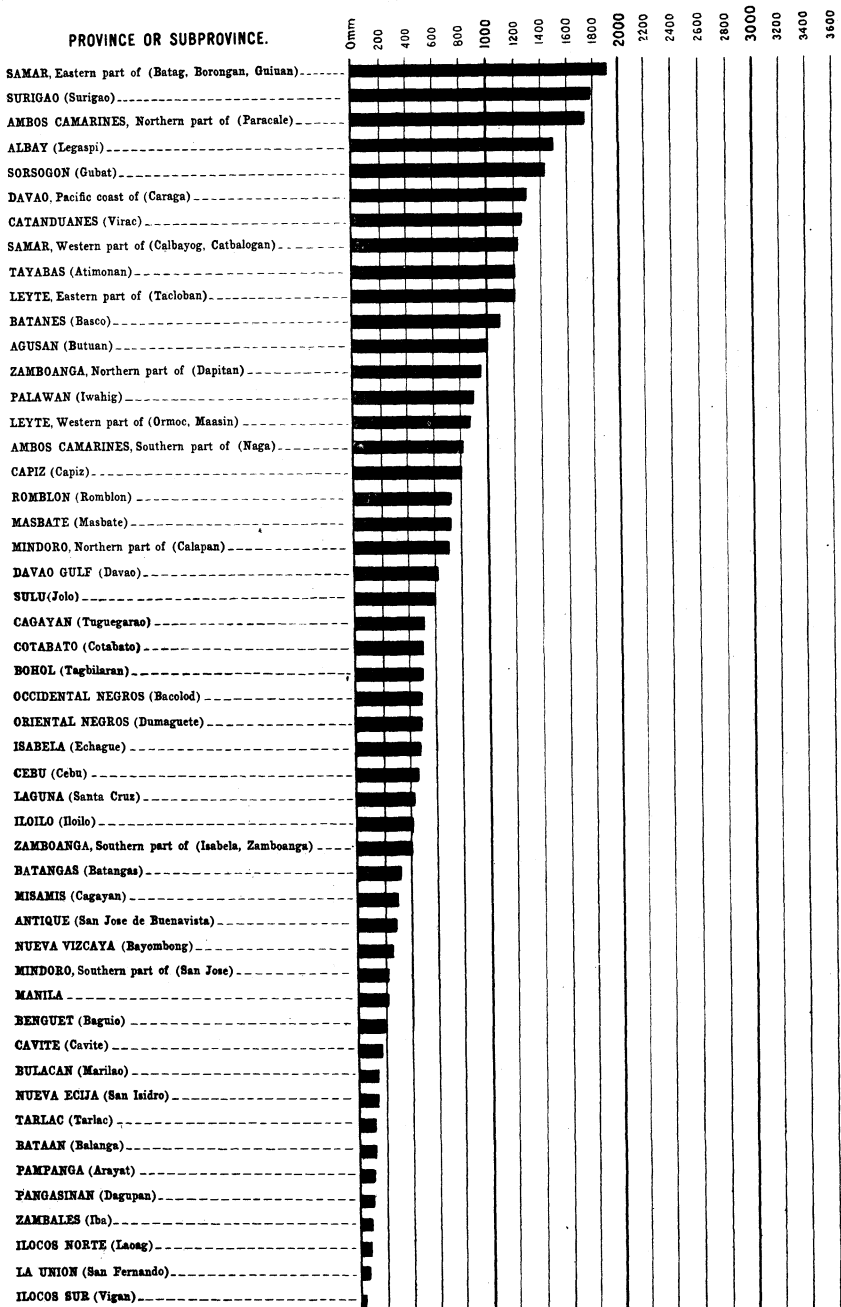


PLATE IX.

TABLE IX.—Seasonal average rainfall for many stations of the Philippines.

TABLA IX.—Lluvia media en las diferentes estaciones del año.

FIRST TYPE.—PRIMER TIPO.			SECOND TYPE.—SEGUNDO TIPO.		
STATION. Estación.	JUNE TO SEP- TEMBER. De Junio a Septiembre.	NOVEMBER TO FEB- RUARY. De Noviembre a Febrero.	STATION. Estación.	JUNE TO SEP- TEMBER. De Junio a Septiembre.	NOVEMBER TO FEB- RUARY. De Noviembre a Febrero.
	mm.	mm.		mm.	mm.
Bacolod	1,256.8	480.8	Gubat	600.3	1,448.9
Iloilo	1,307.7	418.9	Legaspi	862.2	1,486.8
San Jose de Buena- vista	1,927.1	288.6	Virac	772.7	1,261.6
Cuyo	1,434.9	217.1	Atimonan	816.5	1,207.6
San Jose, Mindoro	1,711.8	219.6	Paracale	921.3	1,738.4
Mamburao	2,404.4	77.3			
Batangas	869	321.3	THIRD TYPE.—TERCER TIPO.		
Ambulong, Tanauan, Batangas	1,139.9	234.8		mm.	mm.
Silang	1,504.8	325.7	Zamboanga	397.8	330.2
Santa Cruz, Laguna	1,984.7	434.2	Cagayan	728.6	292.8
Corregidor	1,996.2	193.6	Balingasag	872.2	466.7
Cavite	1,134.3	171.2	Dumaguete	511.7	479.8
Manila	1,385.6	211.3	Iwahig	809	899.3
Antipolo	1,972.8	297.2	Cebu	670	452.7
Balanga	1,777.2	124.6	Tuburan	556.9	447.3
Olongapo	2,589.1	115.3	Capiz	1,165.7	806
Marilao	1,558.3	150.6	Masbate	673.3	725.1
Arayat	1,134.2	114.4	Romblon	862.3	729.5
Iba	3,149.7	81.3	Lucena	600.8	742.7
San Isidro, Nueva Ecija	1,169.9	143.9	Bayombong	532.7	248.9
Tarlac	1,332.3	136.8	Echague	715.9	475.2
Dagupan	1,803	111.8	Tuguegarao	865.7	506.1
Bolinao	2,269.9	98.4	Aparri	806.6	764.7
Baguio	3,399.5	191			
San Fernando, La Union	2,042.7	65.3	FOURTH TYPE.—CUARTO TIPO.		
Candon	2,188.2	67.5		mm.	mm.
Vigan	2,392.8	37.8	Jolo	757.6	588.6
Laoag	2,541.7	71.2	Isabela, Basilan	808	474.9
Cape Bojeador	1,370.7	168.6	Davao	839.7	614.1
SECOND TYPE.—SEGUNDO TIPO.			Cotabato	1,026.7	499.8
	mm.	mm.	Dapitan	588.3	954
Caraga	389.4	1,291.7	Tagbilaran	597.9	484.7
Butuan	538.6	995.5	Maasin	914.5	1,028.4
Surigao	509.7	1,779.9	Ormoc	1,016.3	696.3
Guiuan	694.1	1,866	Calbayog	882.2	922.5
Tacloban	660.7	1,202.4	Calapan	806.4	711
Borongan	769.6	2,155.4	Naga	892.6	819.7
Catbalogan	862.8	1,553.6	Baler	1,047	1,094.2
Batag	705	1,698.6	Basco	1,174.6	1,094

NORMAL MONTHLY AND ANNUAL PRECIPITATION FOR SEVERAL SELECTED CITIES OF THE WORLD

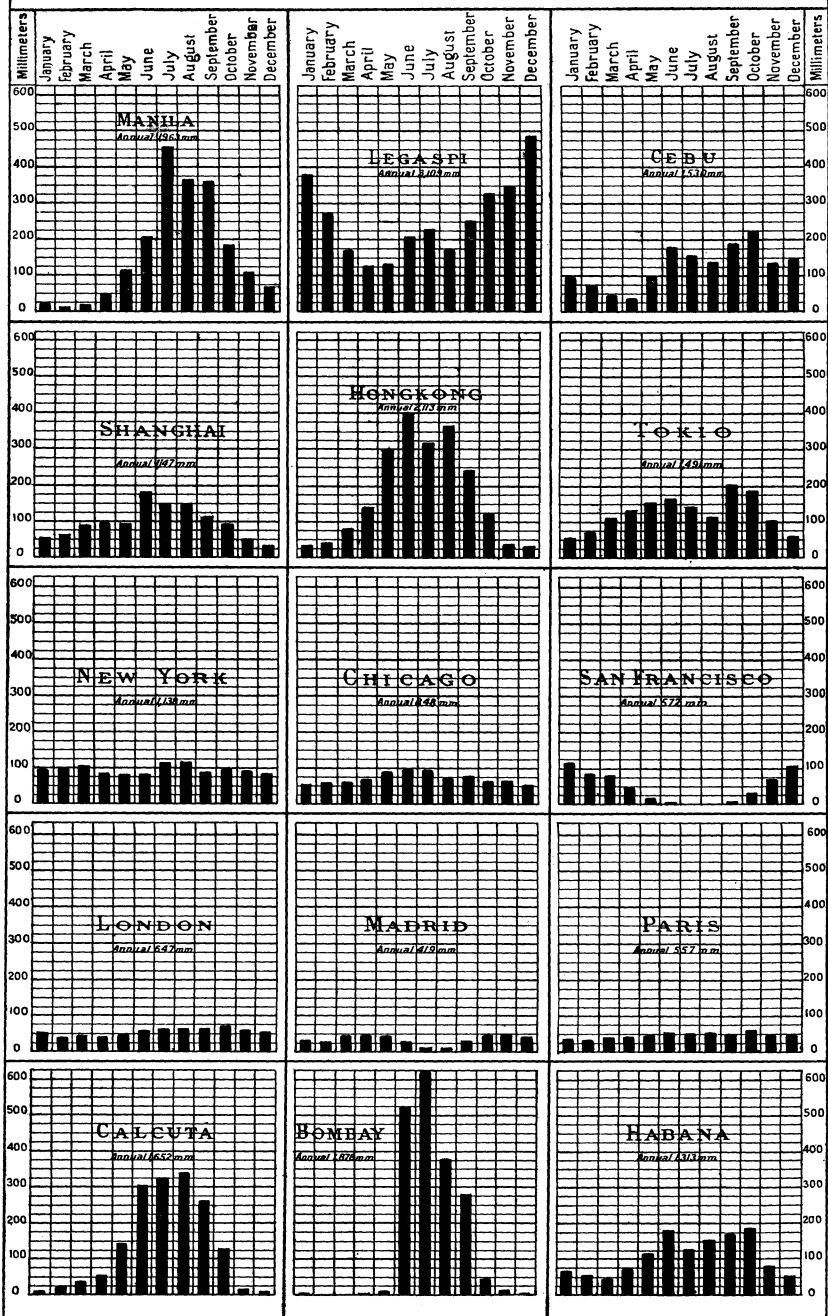


PLATE X.

TABLE X.—Normal monthly and annual precipi

TABLA X.—Lluvias normales, mensuales y

City. Ciudad.	LATITUDE. Latitud.		LONGITUDE OF GREENWICH. Longitud de Greenwich.		JAN- UARY. Enero.	FEBRU- ARY. Febrero.	MARCH. Marzo.
	°	'	°	'	mm.	mm.	mm.
Manila	14	35 N	120	59 E	20.6	11.6	19.4
Baguio	16	25 N	120	36 E	30.5	18.4	47.8
London	51	34 N	0	8 W	51	41	43
Paris	48	50 N	2	20 E	36	33	38
Madrid	40	24 N	3	42 W	34	28	45
Berlin	52	33 N	13	21 E	39	37	47
Vienna	48	15 N	16	21 E	34	37	51
Rome	41	54 N	12	28 E	73	59	63
Peking	39	57 N	116	28 E	3	5	6
Shanghai	31	12 N	121	11 E	53.2	57.9	87.8
Hongkong	22	15 N	114	12 E	36.6	42.9	75.9
Tokio	35	41 N	139	45 E	55.3	72.3	111.1
Calcutta	22	32 N	88	26 E	11	24	33
Bombay	18	54 N	72	54 E	3	0	0
Chicago	41	53 N	87	37 W	50.8	58.4	63.5
New York	40	43 N	74	0 W	96.5	99.1	104.1
Washington	38	54 N	77	3 W	86.4	91.4	104.1
San Francisco	37	48 N	122	26 W	114.3	86.4	81.3
New Orleans	29	58 N	90	4 W	116.8	119.4	132.1
Los Angeles	34	3 N	118	15 W	71.1	71.1	68.6
Mexico	19	26 N	99	8 W	4	5	15
Habana	23	9 N	82	21 W	69	58	46
Buenos Aires	34	37 S	58	21 W	74	66	117
Rio de Janeiro	22	54 S	43	10 W	119	110	137
Sydney	33	51 S	151	11 W	94	140	138

NOTE.—The above data are taken from the same publications mentioned in the foot-note of Table II, page 305 except those for Shanghai which are taken from the *Revue Mensuelle*, of Zikawei Observatory.

pitation for several selected cities of the world.

anuales de varias ciudades escogidas del mundo.

APRIL. Abril.	MAY. Mayo.	JUNE. Junio.	JULY. Julio.	AUGUST. Agosto.	SEPTEMBER. Septiembre.	OCTOBER. Octubre.	NOVEMBER. Noviembre.	DECEMBER. Diciembre.	ANNUAL. Anual.
<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>
47.7	112.6	202.1	456.7	368.6	358.2	186	107.8	71.3	1,962.6
123.9	402.5	399.3	1,074.7	1,080.3	845.2	432.9	85.8	56.3	4,597.6
42	49	57	61	61	61	69	58	54	647
43	45	54	52	54	50	61	45	46	557
47	45	30	12	12	33	45	47	41	419
35	44	63	69	57	42	51	47	49	580
50	72	71	67	68	42	51	46	48	637
59	55	38	16	28	69	104	113	83	760
16	36	77	240	161	65	16	7	2	634
95.7	90.4	181.8	149.6	144.6	114.4	90	50.7	30.9	1,147
140	297.5	398.3	319	364.8	245.6	124.7	36.1	31.2	2,112.6
129.2	151.8	166.3	139.7	114.7	203.3	184.1	104.7	58.7	1,491.2
55	144	302	325	342	262	130	17	7	1,652
1	14	522	624	378	278	45	12	1	1,878
68.6	88.9	94	91.4	71.1	76.2	66	66	53.3	848.2
33.8	81.3	83.8	114.3	114.3	88.9	94	91.4	86.4	1,137.9
81.3	96.5	101.6	114.3	101.6	88.9	78.7	71.1	78.7	1,094.6
45.7	17.8	5.1	.....	.....	7.6	33	71.1	109.2	571.5
129.5	101.6	157.5	160	144.8	119.4	76.2	96.5	109.2	1,463
27.9	12.7	2.5	.....	.....	.....	20.3	38.1	83.8	396.1
15	51	104	104	123	105	43	11	4	584
72	114	182	128	153	170	188	78	55	1,313
72	76	71	55	59	79	92	73	99	933
116	92	47	41	47	58	78	104	138	1,091
145	129	137	109	72	82	73	80	66	1,265

NOTA.—Los datos de esta tabla se han tomado de las mismas publicaciones mencionadas en la nota al pie de la Tabla II, página 305, exceptos los de Shanghai que se han tomado de *Revue Mensuelle* del Observatorio de Zikawei.

Monthly and annual rainfall of Baguio for the period 1903 to 1918.—As there is so much interest attached to the rainfall observations of Baguio, we thought it convenient to give here in Table XI all the monthly and annual amounts of rainfall for that place during the whole period of 1903 to 1918. Besides, in Plate XI we offer year by year a graphic representation of the annual amount of rainfall for the same place and for the same period of 16 years. The year 1911 surpasses all the others with the enormous annual amount of 9,038.3 mm.¹ Next to this are the years 1913 and 1914 with annual amounts of over 6,000 mm. The greatest monthly amounts are those of July and August, 1911, with 3,381.7 mm. and 2,521.7 mm., respectively. As an average, July and August are the rainiest months of the year, and February the driest month.

¹We call the annual amount of 9,038.3 mm. (355.84 inches) *enormous*, because it is really so if compared with the mean annual rainfall for Baguio, 4,597.6 mm. (181 inches). But Baguio is far from being the wettest place on earth, as shown from the fact that this enormous amount of rainfall is still below the *average* annual rainfall of Cherrapunji, in the Khasi Hills in India, 10,820 mm. (426 inches).

Recent observations show that in the Hawaiian group of islands there is another damp spot, at least as rainy as Cherrapunji. The following notes by G. K. Larrison (*Monthly Weather Review*, Vol. 47, No. 5, Washington, 1919), may be of interest to our readers:

“Cherrapunji, in the Khasi Hills in India, which is said to have the greatest known annual rainfall on the earth, has a rival for the world’s maximum wetness in Mount Waialeale, elevation 5,080 feet, on the Island of Kauai, Hawaiian Territory.

According to the Memoirs of the Indian Meteorological Department, volume 22, 1913, the mean annual rainfall at Cherrapunji is 426 inches. The maximum precipitation is supposed to have occurred in 1861, when 905 inches was recorded, but there are grave doubts concerning the accuracy of this record.

During the periods August 2, 1911, to March 26, 1914, and May 31, 1915, to August 13, 1917, a total of 1,782 days, there was recorded on Mount Waialeale a total precipitation of 2,325 inches, or an average of 1.3047 inches per day. In a 365-day year this would amount to an annual precipitation of about 476 inches. The years of 1918 and 1914, for which, unfortunately, no records were obtained, were the wettest since the local Weather Bureau office was established in the Hawaiian Islands. Though comparative estimates are always unsatisfactory, reliable records obtained at near-by stations indicate that in both 1914 and 1918 the rainfall at this station exceeded 600 inches. From May 21, 1915, to May 30, 1916, the recorded rainfall at Mount Waialeale was 561 inches.

Mount Waialeale is the peak of the Island of Kauai, and is inaccessible except to the most expert mountaineers. For this reason it has been very difficult to maintain the station and it was finally discontinued on account of inability to get mountaineers to make the necessary regular visits.”

Mr. H. Kondo, the Director of Taihoku Observatory, says (“*The Rain-*

ANNUAL RAINFALL AT BAGUIO 1903 - 1918

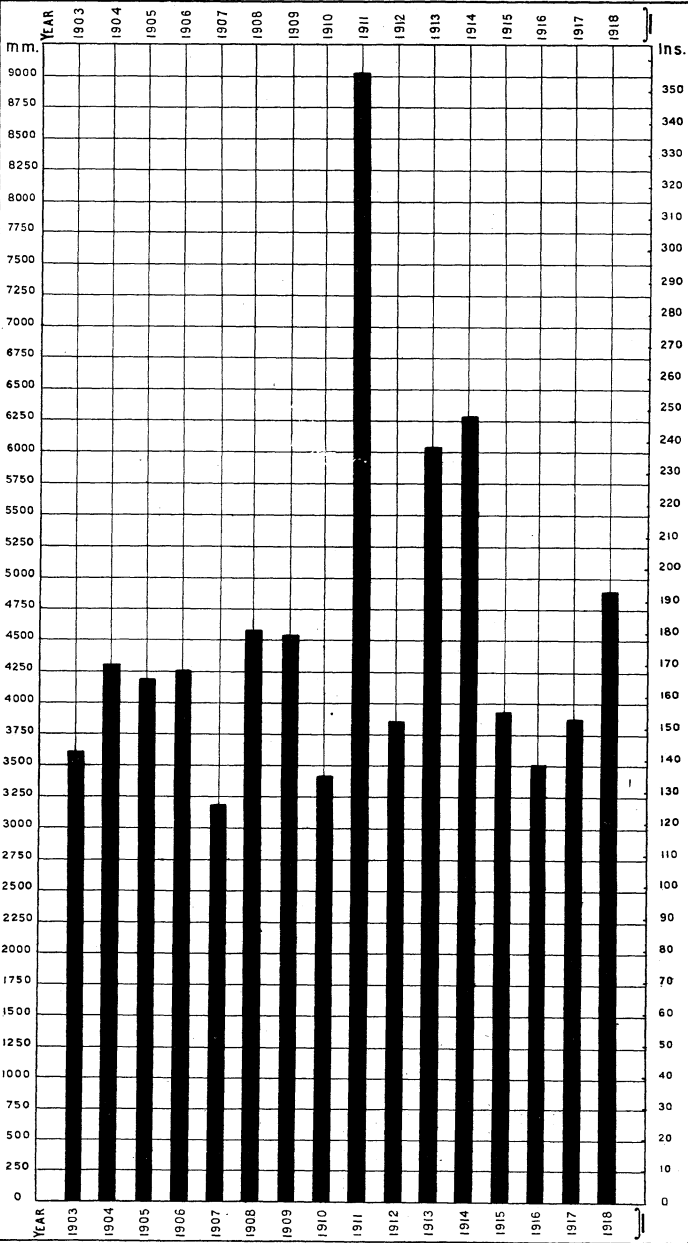


PLATE XI.

Variability of the monthly and annual average rainfall in Manila.—Plate XII represents the monthly and annual departures from the normal precipitation in Manila during the period 1903 to 1918. The departures for the driest months December, January, February, March, and April are very insignificant. The greatest departures and the greatest irregularities are characteristic of the months of July, August, and September. The greatest annual departure by defect is that of 1903, with a total annual rainfall that differs from the normal by -932.2 mm., while the greatest annual departure by excess is that of 1908, with an annual amount of rain that differs from the normal by $+518.4$ mm.

fall in the Island of Formosa," 1920, page 4) that the most rainy spot in the Far East is probably Kashoryo, a station in northern Formosa situated on a mountain slope at the head of a valley open to the northeast, a few miles south of Keelung. The average annual rainfall for that station is 7,176 mm.

Yet, on the light of the rainfall observations made recently on Mount Banahao in the Philippines (see a foot-note in the preceding chapter) there seems to be sufficient reason to believe that there is in our Archipelago at least one spot as wet as Kashoryo. The observations at Mount Banahao were made from November, 1915, to November, 1916, the rain-gauge being carefully observed once every week. We reproduce here a table containing the results of these observations as they were published by Mr. W. H. Brown in the "*Philippine Journal of Science,*" C. XII, page 320.

Rainfall in millimeters at the top of Mount Banahao, Luzon, Philippine Islands. Altitude, about 2,100 meters.

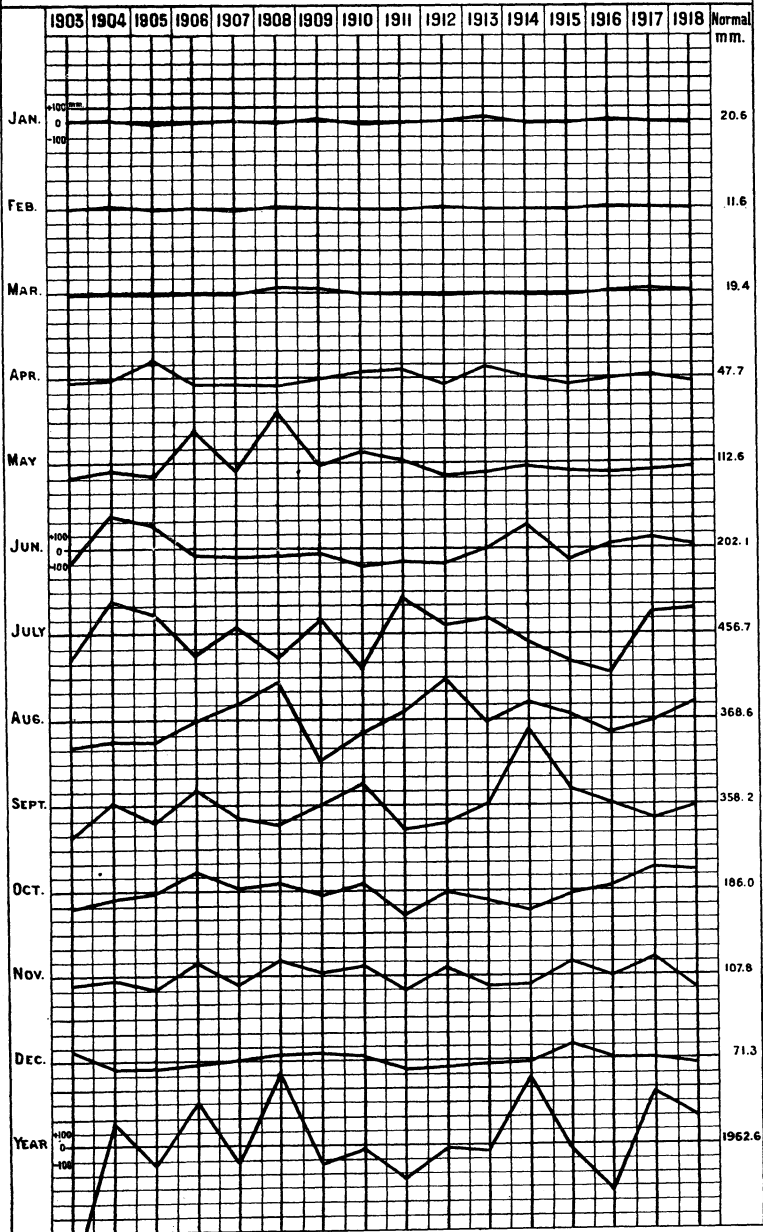
Week ending—	Rainfall.	Week ending—	Rainfall.	Week ending—	Rainfall.
	<i>mm.</i>		<i>mm.</i>		<i>mm.</i>
1915.		1916—Continued.		1916—Continued.	
Nov. 10	85.0	Mar. 15	31.5	July 26	70.1
17	271.0	22	26.5	Aug. 2	34.5
24	285.0	29	157.0	9	22.0
Dec. 1	221.0	Apr. 5	5.2	16	48.1
8	163.6	12	136.0	23	40.7
15	140.0	19	105.0	30	39.5
22	94.0	26	198.0	Sept. 6	42.0
29	301.0	May 3	101.0	13	51.1
1916.		10	71.5	20	184.0
Jan. 5	183.0	17	270.0	27	178.0
12	92.0	24	171.0	Oct. 4	215.0
19	145.0	31	50.1	11	78.0
26	476.0	June 7	143.0	18	205.0
Feb. 2	598.0	14	130.0	25	181.0
9	2.3	21	60.1	Nov. 3 ^a	412.0
16	105.0	28	96.0		
23	152.0	July. 5	98.0		
Mar. 1	65.0	12	264.0		
8	95.0	19	80.0		
					7,468.2

^a Nine days.

The following remarks are made by Mr. Brown on the monthly distribution of rainfall on Mount Banahao:

"The rainfall on the northern and northeastern slopes of Mount Banahao is distributed throughout all the months of the year, and there are no distinct wet and dry seasons.

**MONTHLY AND ANNUAL DEPARTURES FROM THE
NORMAL PRECIPITATION AT MANILA
1903-1918**



-532.2

TABLE XII.—Annual extremes of rainfall.

TABLA XII.—Valores extremos anuales de lluvia.

STATION. Estación.	MAXIMUM. Máxima.	YEAR. Año.	MINIMUM. Mínima.	YEAR. Año.
	<i>mm.</i>		<i>mm.</i>	
Jolo	3,003.7	1917	1,140.9	1914
Isabela, Basilan	2,515	1917	990.6	1914
Zamboanga	1,527.1	1916	707.4	1903
Davao	3,326.9	1910	1,612.2	1903
Cagayan	1,814.5	1909	1,302.7	1918
Butuan	2,853.5	1916	1,267.5	1914
Dumaguete ¹	2,117	1917	610.6	1914
Tagbilaran	1,975.1	1903	953	1905
Iwahig ²	3,266	1917	1,348.9	1914
Surigao	4,650.9	1918	1,895.8	1915
Maasin	3,627.6	1916	1,262.3	1905
Cebu	2,242.7	1910	780.2	1914
Bacolod ³	2,209.2	1907	1,958.2	1906
Iloilo	3,092.6	1904	1,781.4	1905
San Jose de Buenavista	3,388.4	1909	1,760.6	1903
Tuburan ⁴	1,692.1	1904	958.7	1903
Cuyo	2,476.4	1916	1,661.1	1906
Ormoc	3,016	1916	1,406.9	1911
Guiuan ²	5,269	1916	2,180.6	1914
Tacloban	3,806.9	1918	1,812.9	1905
Capiz	5,243	1903	1,186.5	1914
Borongan	5,385.6	1918	2,564.7	1914
Calbayog	3,545.2	1918	1,431.7	1914
Masbate	2,371.2	1918	927	1914
Romblon	2,655.3	1916	1,754	1914
Batag ²	4,257.3	1917	1,721.4	1914
Gubat	3,757.1	1908	1,960.6	1912
Legaspi	4,311.4	1917	1,888	1914
Calapan	2,786.5	1909	1,740.3	1918
Virac	3,688	1917	2,240.7	1912
Naga	2,817.3	1917	1,463.4	1914
Batangas	1,908.8	1915	1,193.3	1916
Atimonan	4,270.1	1908	1,767.3	1911
Silang	3,416.9	1908	1,703.6	1905
Paracale ¹	6,292	1917	2,075.5	1914
Santa Cruz, Laguna ⁴	2,014.8	1914	1,622.1	1918
Corregidor	3,172.6	1914	1,406.1	1903
Manila	2,481	1908	1,030.4	1903
Antipolo ⁴	3,676.2	1914	2,359.4	1916
Olongapo	^a 4,593	1914	1,368	1912
Iba	4,775.1	1914	3,021.4	1916
San Isidro, Nueva Ecija	2,505.2	1908	1,203.7	1910
Tarlac	2,665	1908	1,527.5	1903
Baler	4,784	1906	2,232	1913
Dagupan	3,352.7	1911	1,320.6	1910
Bolinao	3,457	1913	2,061.6	1903
Baguio	9,038.3	1911	3,194.8	1907
San Fernando, La Union	3,272.9	1914	1,301	1909
Echagüe	2,265.7	1917	1,205.6	1914
Candon	4,070.6	1913	1,681	1915
Vigan	4,696.8	1911	1,772	1907
Tuguegarao	3,411.4	1906	934.5	1914
Laoag	4,181.9	1918	1,938.6	1912
Aparri	3,004.6	1911	1,213.7	1914
Basco	4,053.5	1917	2,034.2	1905

¹ Only eight complete years of observation. (Solo ocho años completos de observación).

² Only five complete years of observation. (Solo cinco años completos de observación).

³ Only six complete years of observation. (Solo seis años completos de observación).

⁴ Only seven complete years of observation. (Solo siete años completos de observación).

^a Annual maximum, although it is the total of only seven months of observations, no records being available for the months of January to May, 1914. (Máxima anual, aunque es el total de solo siete meses de observaciones, pues no se hicieron observaciones de enero a mayo de 1914.)

TABLE XIII.—*Monthly extremes of rainfall.*

TABLA XIII.—Valores extremos mensuales de lluvia.

STATION. Estación.	JANUARY. Enero.				FEBRUARY. Febrero.			
	MAX- IMUM. Máxima.	YEAR. Año.	MIN- IMUM. Mínima.	YEAR. Año.	MAX- IMUM. Máxima.	YEAR. Año.	MIN- IMUM. Mínima.	YEAR. Año.
	<i>mm.</i>		<i>mm.</i>		<i>mm.</i>		<i>mm.</i>	
Jolo.....	466.3	1918	3	1903	452.8	1904	0	1905
Isabela, Basilan.....	298.2	1916	13.2	1905	272.5	1904	.8	1914
Zamboanga.....	302	1916	1.8	1915	183	1911	.5	1906
Davao.....	195.4	1917	22.1	1903	352.6	1910	0	1915
Caraga.....	366	1906	140.2	1907	707.4	1903	192.8	1906
Cotabato.....	209.1	1909	16.4	1906	160	1904	0	1915
Cagayan.....	209.8	1918	13.7	1913	124.1	1918	0	1915
Dapitan.....	609.4	1918	22.2	1908	368.8	1904	3.3	1915
Butuan.....	565.4	1918	90.3	1908	508.2	1911	3.7	1915
Dumaguete.....	200.3	1918	16.3	1911	261.2	1916	0	1915
Tagbilaran.....	201.8	1918	4.5	1912	160.8	1910	0	1915
Iwahig.....	188.4	1916	12.3	1915	159.5	1917	0	1914
Surigao.....	1,183.9	1918	105.3	1905	830.7	1908	58.5	1915
Maasin.....	774.4	1918	33.8	1905	372.9	1911	0	1915
Cebu.....	327.6	1904	7.9	1905	196.3	1910	0	1915
Bacolod.....	255.7	1907	31.4	1905	178.3	1904	.3	1906
Iloilo.....	197.8	1907	2.8	1905	209.4	1916	0	1914
San Jose de Buenavista.....	168.3	1916	0	1905	114.4	1916	0	(*)
Tuburan.....	240.2	1907	14	1905	263.9	1904	13.7	1905
Cuyo.....	83.6	1907	0	(*)	113.1	1904	0	(*)
Ormoc.....	549	1916	40.2	1912	286.9	1918	2.5	1914
Guiuan.....	1,788.8	1918	98	1912	751.3	1918	28.9	1915
Tacloban.....	1,385.1	1918	84.3	1911	453.4	1918	12.1	1914
Capiz.....	627	1916	17.3	1912	352.4	1904	1.9	1914
Borongan.....	2,191.4	1918	196.5	1912	914.3	1918	34.8	1915
Calbayog.....	690.8	1918	27.4	1905	381	1917	4.4	1914
Masbate.....	511.9	1916	22.2	1915	474	1907	0	1906
Romblon.....	270.2	1917	24.4	1905	258.3	1917	5.1	1903
Batag.....	844.1	1917	159.7	1914	894.5	1917	28.7	1914
Gubat.....	783.8	1904	95.5	1905	519.7	1904	13.7	1905
Legaspi.....	799.3	1904	77.8	1912	736.8	1917	41.4	1905
Calapan.....	227	1916	13.8	1912	97.4	1911	30.5	1915
Virac.....	573.1	1917	101.3	1912	482.4	1917	13.8	1914
Naga.....	341.3	1904	12.7	1915	316.6	1911	0	1905
Batangas.....	88.9	1916	3.6	1910	74.8	1911	0	1915
Atimonan.....	699.8	1917	73.5	1905	375.6	1908	.3	1915
Ambulong, Tanauan,								
Batangas.....	69.3	1917	2.8	1915	26.4	1916	0	1915
Silang.....	79.9	1906	2.5	1905	43.7	1911	0	1906
Paracale.....	1,099.2	1917	225.7	1912	772.5	1917	17	1915
Santa Cruz, Laguna...	118.8	1916	15.1	1914	82.3	1911	1.8	1915
Corregidor.....	34.5	1907	0	1905	26.1	1911	0	1905
Manila.....	65	1913	0	1905	29.6	1908	0	1913
Antipolo.....	107.8	1913	0	1914	58.1	1916	0	1915
Olongapo.....	24.4	1904	0	(*)	9.1	1916	0	(*)
Iba.....	23.2	1913	0	a 1903	27.8	1916	0	1903
San Isidro, Nueva Ecija.	43	1916	0	1914				1914
Arayat.....	21.1	1906	0	a 1905	38.9	1917	0	1903
Tarlac.....	23.8	1912	0	1907	16.5	1906	0	1905
Baler.....	528.3	1906	7.7	1914	30.2	1911	0	1905
Dagupan.....	45.5	1917	0	1918	325.2	1908	38.1	1906
Bolinao.....	90.9	1914	0	1918	108	1909	0	1907
Baguio.....	146.9	1913	0	a 1914	73.4	1904	0	1914
San Fernando, La				b 1903				a 1906
Union.....	25.4	1913	0	1904	52.3	1918	0	1912
Echagüe.....	150.9	1917	6.9	1905	34.5	1916	0	1903
Candon.....	38.7	1916	0	(*)	79.8	1911	4.3	1915
Vigan.....	14.2	1916	0	(*)	43.6	1916	0	(*)
Tuguegarao.....	121.2	1913	1.8	(*)	63.6	1916	0	(*)
Laog.....	37	1916	0	(*)	70.2	1916	0	1907
Aparrí.....	303.8	1911	4.8	1905	48.3	1908	0	1912
Basco.....	399.9	1915	125.2	1905	250.5	1916	3.8	1906
				1910	266.3	1907	12.5	1906

* Several years.

a Also 1918.

b Also 1905.

c Also 1915.

d Also 1907 and 1908.

e Also 1906 and 1907.

f Also 1913.

g Also 1914 and 1915.

h Also 1914.

TABLE XIII.—*Monthly extremes of rainfall*—Continued.

TABLA XIII.—Valores extremos mensuales de lluvia—Continuación.

STATION. Estación.	MARCH.—Marzo.				APRIL.—Abril.			
	MAX- IMUM. Máxima.	YEAR. Año.	MIN- IMUM. Mínima.	YEAR. Año.	MAX- IMUM. Máxima.	YEAR. Año.	MIN- IMUM. Mínima.	YEAR. Año.
Jolo.....	mm. 233.8	1906	mm. 17.7	1908	mm. 316.1	1917	mm. 0	1905
Isabela, Basilan.....	165.3	1908	0	{ a 1903 1905	206.2	1904	9.6	1905
Zamboanga.....	103	1913	0	{ b 1903 1905	110.5	1904	0	1908
Davao.....	481.6	1908	18.7	1903	306.8	1910	22.6	1914
Caraga.....	445.5	1904	83	1905	199.3	1906	112.5	1907
Cotabato.....	156.7	1904	10.8	1905	276.3	1918	38.6	1915
Cagayan.....	143.2	1909	0	1915	109.8	1910	4.8	1914
Dapitan.....	201.4	1916	0	1915	553.2	1918	12	1915
Butuan.....	301	1908	46	1905	246	1918	64	1911
Dumaguete.....	103.8	1918	2.1	1915	66.8	1917	.5	1912
Tagbilaran.....	197.3	1907	3.6	1915	203	1904	4.5	1906
Iwahig.....	92.4	1918	0	1914	78	1917	.8	1915
Surigao.....	680	1918	81.9	1905	451.6	1917	78.9	1917
Maasin.....	495.4	1918	1.3	1905	186.2	1916	6.6	1918
Cebu.....	106.9	1918	.5	1905	145.2	1904	1	1915
Bacolod.....	36.9	1908	1.6	1905	113.4	1904	1.1	1905
Iloilo.....	112.5	1908	0	1905	157.8	1904	1	1909
San Jose de Buenavista	46.3	1918	0	{ 1903 1904	146.7	1916	0	1915
Tuburan.....	67.2	1907	0	1905	40	1904	0	1903
Cuyo.....	24.7	1918	0	(*)	79.3	1918	0	1907
Ormoc.....	289.4	1918	8	1912	203.3	1916	14.7	1915
Guiuan.....	436.5	1918	55.1	1912	271.9	1916	57.1	1912
Tacloban.....	561.5	1918	43.7	1912	261.4	1910	57.6	1915
Capiz.....	77.3	1918	5.5	1911	178.5	1904	.5	1915
Borongan.....	521.2	1908	62.6	1912	485.1	1910	97.9	1909
Calbayog.....	429.3	1918	3.3	1905	218.9	1911	20.8	1909
Masbate.....	145.2	1910	7.1	1915	123.3	1904	0	1909
Romblon.....	194.3	1910	1.3	1903	125.5	1910	10.7	1907
Batag.....	317.9	1918	33.8	1915	206.3	1916	29.8	1917
Gubat.....	403.5	1909	27.9	1905	147.3	1904	8.9	1909
Legaspi.....	459.7	1917	23	1905	387.	1911	37.7	1909
Calapan.....	194.3	1910	28.7	1914	251.7	1911	25.6	1915
Virac.....	278.5	1917	59.4	1913	272.6	1913	26.7	1909
Naga.....	146.3	1910	0	1905	228.8	1914	9.8	1903
Batangas.....	15.5	1917	.3	1914	102.6	1914	0	{ f 1908 1912
Atimonan.....	230.9	1917	10.4	1905	283.5	1911	10	1912
Ambulong, Tanauan, Batangas.....	18	1917	2.1	1914	105	1914	39.1	1915
Silang.....	92.8	1909	0	{ d 1904 1905	185.7	1910	2.5	1906
Paracale.....	551.5	1911	79.7	1914	149.7?	1911	32.6	1912
Santa Cruz, Laguna.....	85.1	1917	3.3	1913	80.4	1911	9.1	1912
Corregidor.....	24.6	1916	0	(*)	145	1911	0	1903
Manila.....	64.7	1908	0	1903	173.8	1905	0	1906
Antipolo.....	29.1	1917	1	1914	84.9	1914	2	1908
Olongapo.....	41.9	1918	0	(*)	186.4	1905	0	1918
Iba.....	115.9	1910	0	{ 1903 1915	146.8	1911	8.4	1903
San Isidro, Nueva Ecija.	70.9	1918	0	{ 1903 1907	118.5	1916	0	1904
Arayat.....	33.8	1904	0	{ e 1903 1905	86.1	1905	11.2	1904
Tarlac.....	78.8	1910	0	1903	161.6	1905	2.1	1918
Baler.....	501.6	1906	6.4	1904	682	1904	96.3	1908
Dagupan.....	109.9	1910	1.3	1903	260.4	1918	10.5	1912
Bolinao.....	91	1917	0	{ 1904 1905	126.1	1905	0	1915
Baguio.....	149.6	1917	1	1912	246.4	1911	1.3	1907
San Fernando, La Union.....	38.7	1910	0	(*)	81.4	1911	0	1909
Echague.....	160.3	1918	2.9	1914	274.7	1911	8.7	1916
Candon.....	56.2	1908	0	(*)	64	1911	0	1913
Vigan.....	53.8	1918	0	(*)	105.3	1911	0	1909
Tuguegarao.....	83.7	1917	0	{ d 1903 1904	217.2	1910	7.4	1912
Laoag.....	20.4	1917	0	(*)	50.8	1917	0	(*)
Aparri.....	196.7	1917	0	1903	142.6	1906	.9	1916
Basco.....	370.5	1913	16	1911	252.1	1908	9.5	1918

* Several years.
a Also 1911.

b Also 1908.
c Also 1905 and 1907.

d Also 1914.
e Also 1907.

f Also 1915.
g Also 1918.

TABLE XIII.—*Monthly extremes of rainfall*—Continued.

TABLA XIII.—Valores extremos mensuales de lluvia—Continuación.

STATION. Estación.	MAY. Mayo.				JUNE. Junio.			
	MAX- IMUM. Máxima.	YEAR. Año.	MIN- IMUM. Mínima.	YEAR. Año.	MAX- IMUM. Máxima.	YEAR. Año.	MIN- IMUM. Mínima.	YEAR. Año.
	<i>mm.</i>		<i>mm.</i>		<i>mm.</i>		<i>mm.</i>	
Jolo	426.1	1916	65.7	1903	460.7	1910	19.6	1905
Isabela, Basilan	309.3	1915	41.1	1910	365	1906	54	1905
Zamboanga	162.6	1916	0	1908	180.9	1906	25.3	1905
Davao	546.3	1910	127.6	1903	414.5	1909	98.1	1912
Caraga	332.6	1905	102.7	1907	172.8	1907	35.8	1904
Cotabato	352.3	1905	149.7	1918	444.3	1918	136.5	1906
Cagayan	195.2	1917	17.8	1912	288.5	1915	132.2	1913
Dapitan	307.1	1905	0	1906	394	1918	21.3	1907
Butuan	302.5	1916	20.5	1912	245.8	1909	47.4	1905
Dumaguete	261.5	1917	11.7	1912	293.2	1917	90.8	1914
Tagbilaran	195.4	1916	1.5	1912	277.4	1906	46.7	1912
Iwahig	261	1917	127.7	1915	353.6	1915	89.3	1914
Surigao	374.7	1916	17.8	1912	230.4	1914	0	1905
Maasin	337.4	1914	0	1912	277.9	1908	45.4	1913
Cebu	245.2	1917	29.2	1905	303	1918	33	1909
Bacolod	206.2	1908	91.3	1903	399.2	1904	145.9	1905
Iloilo	271.9	1910	12.2	1912	456.4	1904	110.4	1910
San Jose de Buena- vista	411.2	1914	27.5	1912	640.8	1914	181.7	1913
Tuburan	121.2	1904	9.4	1905	281.2	1908	61.3	1909
Cuyo	348.5	1910	27.7	1905	526	1914	139.8	1903
Ormoc	260	1916	4.9	1912	398.6	1918	82.5	1913
Guiuan	546.6	1916	16.7	1912	398.5	1915	100.3	1912
Tacloban	343.5	1913	17.1	1912	317.6	1908	55.2	1912
Capiz	404.1	1904	34.6	1912	736.8	1906	159.5	1912
Bohongan	617.1	1913	32.9	1912	470.4	1908	111.3	1912
Calbayog	529.2	1906	23.3	1912	421.9	1918	60.7	1913
Masbate	173.8	1915	1	1912	382.3	1918	20.3	1915
Romblon	259.7	1908	4.1	1905	448.2	1916	52.3	1912
Batag	346	1913	11.7	1915	388.6	1918	83.5	1913
Gubat	245.9	1906	10.4	1912	287.1	1908	29.8	1912
Legaspi	477.9	1916	30.5	1918	509.8	1918	56	1913
Calapan	297.7	1909	73.9	1912	423.7	1910	86.2	1912
Virac	280.3	1911	16.6	1912	459.5	1918	73.3	1912
Naga	324.5	1916	0	1905	430.6	1918	76.5	1915
Batangas	227.9	1908	14.2	1912	357.7	1918	19	1913
Atimonan	505.7	1916	24.5	1907	424.4	1914	78	1903
Ambulong, Tanauan, Batangas	184.6	1913	67.3	1916	360.1	1914	134.2	1915
Silang	276.7	1908	43.2	1905	428.7	1904	139.5	1909
Paracale	357.6	1916	48	1912	415.8	1918	74.4	1912
Santa Cruz, Laguna	195.1	1916	45.5	1913	365.7	1914	108.5	1912
Corregidor	436.6	1906	6.9	1918	856.7	1914	46.8	1913
Manila	476.5	1908	15.1	1903	437.1	1904	79.3	1910
Antipolo	264.1	1914	39.2	1913	624	1914	40.7	1915
Olongapo	696.3	1906	13.5	1912	1,190.1	1904	82.8	1910
Iba	756.6	1910	69.8	1912	787.1	1914	205.3	1910
San Isidro, Nueva Ecija	518.5	1906	38.1	1903	505.3	1904	22.7	1915
Arayat	448.2	1906	8.1	1903	474.3	1904	30	1903
Tarlac	478.6	1906	39.4	1905	495.1	1904	78.1	1909
Baler	518.2	1906	132.4	1911	623.9	1915	108.9	1913
Dagupan	360.8	1910	51.9	1918	614.2	1904	162.8	1917
Bolináo	872.2	1910	18.6	1912	844	1904	122.4	1903
Baguio	1,397.8	1906	131.8	1903	983.5	1904	168.4	1903
San Fernando, La Union	512.6	1906	2.1	1912	706.6	1904	104.7	1909
Echagüe	284.9	1915	55	1918	311.6	1912	23.5	1910
Candon	691.6	1906	5.1	1912	818.4	1904	36.3	1915
Vigan	678.7	1906	5	1912	753	1904	59.2	1909
Tuguegarao	377	1910	21.9	1905	372.6	1904	38.9	1910
Laoag	852.7	1915	27.4	1912	708.2	1918	90.5	1915
Aparri	338.5	1908	10.6	1914	351	1918	11.7	1903
Basco	677	1906	21	1905	619.3	1907	18.3	1909

TABLE XIII.—*Monthly extremes of rainfall*—Continued.

TABLA XIII.—Valores extremos mensuales de lluvia—Continuación.

STATION. Estación.	JULY. Julio.				AUGUST. Agosto.			
	MAX- IMUM. Máxima.	YEAR. Año.	MIN- IMUM. Mínima.	YEAR. Año.	MAX- IMUM. Máxima.	YEAR. Año.	MIN- IMUM. Mínima.	YEAR. Año.
	<i>mm.</i>		<i>mm.</i>		<i>mm.</i>		<i>mm.</i>	
Jolo.....	292	1903	12.9	1918	433.4	1917	38.9	1905
Isabela, Basilan.....	369.4	1909	73.6	1918	396.5	1917	53.5	1914
Zamboanga.....	214.6	1905	27.5	1907	192.1	1907	25.2	1908
Davao.....	341.4	1905	38.4	1914	323.3	1905	104.3	1918
Caraga.....	227.1	1906	15.7	1904	121.6	1906	40.9	1904
Cotabato.....	350	1903	172.8	1907	313.2	1906	187.2	1903
Cagayan.....	248.3	1909	13.3	1910	317.9	1913	84.9	1909
Dapitan.....	374.7?	1912	25.9	1910	274.5	1918	11.2	1908
Butuan.....	204.7	1916	25.1	1914	193.7	1913	33.4	1903
Dumaguete.....	249	1912	60.3	1914	162.7	1916	37.7	1915
Tagbilaran.....	564.9	1912	27.2	1918	250.8	1912	8.1	1911
Iwahig.....	343.3	1917	69.6	1914	207.9	1916	111.1	1914
Surigao.....	217	1911	37.6	1918	161.5	1907	4.3	1903
Maasin.....	508.5	1909	69.9	1903	377.5	1907	64.4	1903
Cebu.....	279	1909	34.4	1914	223.8	1912	64.8	1914
Bacolod.....	415.1	1906	233.3	1907	438.8	1907	200.2	1903
Iloilo.....	758.5	1911	57	1910	762	1904	72.8	1909
San Jose de Buena- vista.....	837.1	1913	238.6	1910	920.6	1918	93.7	1903
Tuburan.....	202.5	1909	115.1	1904	230	1906	26.4	1908
Cuyo.....	789.6	1911	141	1906	711.1	1918	179.3	1903
Ormoc.....	596.4	1913	23.1	1904	530.2	1905	65.2	1911
Guiuan.....	311.5	1913	64.4	1918	181.2	1912	43.6	1917
Tacloban.....	355.9	1913	25.4	1904	282.9	1904	39.2	1911
Capiz.....	936.5	1903	82	1918	675.4	1906	53.1	1918
Borongan.....	371.1	1909	49.3	1918	254.4	1905	39.3	1911
Calbayog.....	395.9	1917	101.1	1916	348.3	1903	75.2	1915
Masbate.....	395.3	1913	46.2	1904	344.7	1918	30.9	1909
Romblon.....	521.4	1913	55.7	1918	290.5	1904	70.6	1911
Batag.....	248.2	1915	13.4	1918	254.4	1916	80.3	1915
Gubat.....	370.5	1909	57.1	1910	188.3	1913	9	1910
Legaspi.....	447.7	1909	67.6	1904	315.7	1912	40.3	1909
Calapan.....	371.7	1913	78.4	1914	197.9	1913	36.3	1910
Virac.....	435.1	1909	24.3	1918	195.8	1913	17.3	1909
Naga.....	476.9	1912	87	1914	267.3	1918	69.5	1903
Batangas.....	490.9	1913	62.5	1910	390.1	1912	32.4	1909
Atimonan.....	423.4	1913	54.8	1904	243.8	1907	36.1	1911
Ambulong, Tanauan, Batangas.....	417.4	1913	219.1	1914	296.3	1914	61.6	1917
Silang.....	732.4	1909	239.2	1910	629.4	1912	161.3	1909
Paracale.....	572.1	1911	85.9	1914	259	1913	79.5	1916
Santa Cruz, Laguna.....	484.7	1911	104.4	1910	378.7	1912	85.3	1917
Corregidor.....	1,100.1	1913	207.5	1916	1,077.9	1912	241.6	1903
Manila.....	698.5	1911	179.9	1916	656.6	1912	71.1	1909
Antipolo.....	778.8	1913	168	1916	832.8	1914	305.7	1917
Olongapo.....	1,401.1	1918	175.5	1912	1,634.5	1914	257.3	1912
Iba.....	1,832.2	1911	418.3	1910	1,360.2	1912	556	1917
San Isidro, Nueva Ecija.....	676.4	1911	154.1	1916	513.6	1912	125.2	1909
Arayat.....	643.5	1905	142.5	1903	290.5	1905	199.4	1903
Tarlac.....	924.9	1911	191.5	1915	748.6	1907	155.7	1903
Baler.....	788.1	1909	86.2	1910	366	1918	21.7	1916
Dagupan.....	1,300.4	1911	100.1	1916	914.4	1914	217.3	1909
Bolinao.....	1,891.4	1911	254.2	1910	1,081.1	1914	137.8	1909
Baguio.....	3,381.7	1911	276.9	1916	2,521.7	1911	366.9	1909
San Fernando, La Union.....	1,078.7	1911	178.9	1916	1,148.6	1914	91	1909
Echague.....	285.3	1917	88.8	1908	365.5	1918	114.1	1910
Candon.....	1,431.2	1918	144.3	1916	1,941	1916	157.1	1909
Vigan.....	1,641.5	1911	259.8	1915	1,864	1916	313.6	1918
Tuguegarao.....	552.6	1911	75.9	1916	631.5	1911	55	1909
Laoag.....	1,294	1918	235.1	1916	1,830.8	1914	130.6	1909
Aparri.....	506.6	1911	22	1910	500.9	1911	97.5	1906
Basco.....	645.6	1917	88.3	1916	910.7	1903	112	1915

TABLE XIII.—*Monthly extremes of rainfall*—Continued.

TABLA XIII.—Valores extremos mensuales de lluvia—Continuación.

STATION. Estación.	SEPTEMBER. Septiembre.				OCTOBER. Octubre.			
	MAXI- MUM. Máxima.	YEAR. Año.	MINI- MUM. Mínima.	YEAR. Año.	MAXI- MUM. Máxima.	YEAR. Año.	MINI- MUM. Mínima.	YEAR. Año.
	<i>mm.</i>		<i>mm.</i>		<i>mm.</i>		<i>mm.</i>	
Jolo	330.3	1908	43.6	1911	420.4	1905	117.5	1903
Isabela, Basilan	385.5	1908	104.6	1912	418.5	1916	72.2	1914
Zamboanga	168.9	1908	62.6	1905	298.8	1909	17.4	1911
Davao	478.1	1909	61.9	1914	462.9	1909	116.5	1917
Caraga	125.8	1906	28.4	1905	343.2	1904	52.6	1903
Cotabato	405.5	1908	132.2	1917	404.2	1917	112.7	1914
Cagayan	322.4	1911	57.3	1918	294.6	1913	29.1	1914
Dapitan	196.8	1904	40.7	1918	386.2	1905	63.6	1906
Butuan	238	1908	5.1	1918	300.7	1904	54.2	1914
Dumaguete	220.5	1917	34.8	1914	359.9	1917	92.1	1914
Tagbilaran	310.7	1908	31.4	1907	383.3	1913	109.7	1906
Iwahig	288.6	1917	91.9	1914	353.8	1914	169.6	1918
Surigao	290.6	1908	64.2	1917	402	1912	112.8	1905
Maasin	381.3	1908	151.7	1914	657.1	1912	84.5	1908
Cebu	391.5	1908	47.3	1913	588.3	1912	43.7	1918
Bacolod	417.1	1908	227.6	1905	362.5	1905	100.5	1908
Iloilo	616.4	1914	146.3	1903	559.5	1912	50	1914
San José de Buena- vista	866.4	1908	276.4	1918	1,064.4	1915	41.4	1914
Tuburan	342.8	1908	24.9	1907	304	1905	94.8	1908
Cuyo	644.8	1910	150.2	1918	551.1	1915	22.6	1914
Ormoc	601.3	1908	87.7	1914	483.5	1912	63.9	1908
Guiuan	284.9	1916	49	1918	350.2	1914	136.3	1918
Tacloban	254.5	1908	74	1907	320.7	1910	103.4	1918
Capiz	597.1	1903	115.8	1913	1,494.6	1905	95.2	1908
Borongan	352.5	1910	47.9	1918	629.9	1904	98.9	1918
Calbayog	666.2	1908	94.7	1907	487.1	1906	62	1918
Masbate	316	1916	84.5	1914	279.5	1917	18.5	1914
Romblon	402.4	1916	44.6	1903	489.9	1912	173.1	1918
Batag	252.8	1916	111.4	1914	526.8	1916	147.7	1914
Gubat	480.4	1906	73.7	1904	594.9	1904	57.3	1909
Legaspi	509	1906	92.2	1918	619.7	1904	94.4	1911
Calapan	491.2	1914	77.7	1913	375.8	1910	106	1918
Virac	283.4	1916	81.2	1914	694.5	1916	74.6	1911
Naga	479.5	1917	128	1918	639.3	1913	41.5	1914
Batangas	676.8	1914	130.7	1917	570.7	1915	5.5	1911
Atimonan	726.8	1908	81	1907	556.2	{ 1904 1915	169.9	1911
Ambulong, Tanauan, Batangas	1,022.8	1914	215	1917	325.6	1915	47.7	1914
Silang	681.1	1914	121.7	1911	423.8	1908	38.4	1907
Paracale	430.6	1917	115.5	1914	835.8	1917	193.7	1918
Santa Cruz, Laguna	632.6	1914	214.8	1913	325.6	1916	42.4	1914
Corregidor	963.6	1914	181.4	1911	403	1918	13.3	1911
Manila	887.7	1914	149.7	1903	340.6	1917	9.7	1911
Antipolo	1,100.9	1914	259	1917	421.6	1918	41.4	1914
Olongapo	1,647.7	1914	234.4	1912	475.7	1912	8.6	1914
Iba	1,407.2	1914	434.2	1915	425.3	1912	50.3	1914
San Isidro, Nueva Ecija	383.4	1906	165.2	1917	412.2	1909	13.6	1914
Arayat	482.6	1906	112.5	1903	388.4	1904	144.5	1905
Tarlac	490.1	1906	220.7	1903	365.3	1906	46.3	1911
Baler	715	1906	134.3	1913	648.4	1916	86.4	1905
Dagupan	934.4	1913	214.7	1915	603.8	1908	69.6	1907
Bolinao	907.8	1913	167.9	1903	506	1909	41.8	1914
Baguio	2,108.1	1913	172.5	1908	1,509.1	1908	63.2	1914
San Fernando, La Union	982.6	1913	82.1	1908	420.5	1915	22.4	1914
Echagüe	414.7	1918	84.9	1910	342.4	1912	60	1914
Candon	1,179.6	1913	122.5	1908	529.5	1915	0	1914
Vigan	1,491.1	1913	183.8	1915	543.5	1915	15.3	1907
Tuguegarao	1,749.6	1906	65.3	1909	681.2	1903	21.6	1911
Laoag	1,380.8	1913	182.3	1908	858.9	1909	11.5	1911
Aparri	510.2	1906	69	1904	663.4	1906	140	1907
Basco	777.3	1912	147.2	1915	734.1	1903	79.3	1907

TABLE XIII.—Monthly extremes of rainfall—Continued.

TABLA XIII.—Valores extremos mensuales de lluvia—Continuación.

STATION. Estación.	NOVEMBER. Noviembre.				DECEMBER. Diciembre.			
	MAXI- MUM. Máxima.	YEAR. Año.	MINI- MUM. Mínima.	YEAR. Año.	MAXI- MUM. Máxima.	YEAR. Año.	MINI- MUM. Mínima.	YEAR. Año.
	<i>mm.</i>		<i>mm.</i>		<i>mm.</i>		<i>mm.</i>	
Jolo	465.4	1910	59.4	1905	297.1	1916	62.6	1914
Isabela, Basilan	335.1	1910	13.3	1911	331.9	1907	31.5	1904
Zamboanga	238.7	1910	27.2	1911	279.6	1916	16	1904
Davao	290	1908	48.9	1914	494.3	1908	75.9	1914
Caraga	178.3	1906	31.5	1904	553.2	1904	195.6	1903
Cotabato	408.7	1908	70.5	1913	262.4	1908	55.9	1904
Cagayan	174.5	1909	.9	1911	438.7	1909	4.8	1914
Dapitan	624.4	1912	153.8	1907	591.6	1903	155.2	1904
Butuan	692	1904	69.5	1906	636.6	1909	73.5	1914
Dumaguete	253.3	1917	42.5	1911	370.2	1915	46.7	1918
Tagbilaran	281.6	1909	74.2	1915	382.5	1909	32.4	1911
Iwahig	1,095.9	1917	45.5	1918	809.1	1916	41.2	1918
Surigao	693.9	1910	175.9	1911	949.5	1909	272.4	1912
Maasin	748.5?	1912	103.6	1914	688.1	1909	140.7	1905
Cebu	239.3	1909	28.3	1913	425.7	1903	50.7	1904
Bacolod	189.8	1908	96.9	1907	429.2	1903	94	1906
Iloilo	460.5	1910	2.8	1914	528.3	1903	26.9	1904
San Jose de Buena- vista	507.1	1908	2.1	1911	194	1909	0	1911
Tuburan	256.4	1904	76	1906	223.6	1908	43.6	1903
Cuyo	452.4	1910	1.5	1913	164	1903	0	1906
Ormoc	424.6	1909	85.8	1918	391.6	1916	42.1	1911
Guiuan	664	1917	178	1914	733.4	1915	236.2	1914
Tacloban	392.8	1908	137	1914	574.6	1908	140.8	1911
Capiz	664.8	1904	33.3	1914	1,505.7	1903	25.6	1914
Borongan	835.3	1909	348	1918	912	1908	278.8	1911
Calbayog	411.7	1903	82.3	1911	716.7	1915	45.7	1914
Masbate	400.2	1908	58.7	1913	522.3	1915	43.2	1905
Romblon	637.2	1909	72.9	1914	494?	1908	43.3	1911
Batag	666	1917	174	1914	633.1	1917	169.8	1914
Gubat	833.6	1903	193.9	1913	1,324.6	1903	33.8	1911
Legaspi	566.1	1909	89	1905	1,130.6	1903	71.7	1911
Calapan	747.4	1917	58.2	1918	327.6	1909	108.9?	1912
Virac	553.9	1917	137.4	1911	829	1915	92.2	1911
Naga	557.1	1903	41.3	1914	990.7	1915	42.4	1911
Batangas	465.3	1908	2.4	1911	345	1915	16.3	1914
Atimonan	1,277.9	1908	52.3	1911	926.2	1915	57.6	1911
Ambulong, Tanauan,								
Batangas	195.6	1915	24.7	1913	264.8	1915	26.4	1914
Silang	359.6	1908	10.1	1905	346.3	1907	9.4	1906
Paracale	1,095.6	1917	112.2	1911	998.3	1915	49.2	1912
Santa Cruz, Laguna	384.3	1917	27.6	1911	377.3	1915	58.6	1911
Corregidor	200.9	1915	0	1911	189	1915	0	1906
Manila	229.2	1917	6.1	1911	182.3	1915	8	1911
Antipolo	282.4	1917	8.3	1913	318.6	1915	32.4	1913
Olongapo	263.7	1915	0	1914	146.8	1915	0	1914
Iba	126.4	1915	0	1911	92.1	1915	0	1918
San Isidro, Nueva Ecija	359.7	1908	0	1911	200.5	1903	1.1	1904
Arayat	207.8	1906	1.3	1903	156.6	1903	0	1904
Tarlac	288.5	1908	1.8	1914	150.9	1903	.6	1905
Baler	764.1	1917	43.5	1911	779.8	1908	114.6	1911
Dagupan	230.2	1908	0	1911	85.1	1917	.8	1910
Bolinao	210.5	1915	.3	1918	49.2	1909	0	1914
Baguio	236.2	1903	8.6	1918	276.6	1911	0	1918
San Fernando, La Union	159.5	1903	0	1911	42.8	1911	0	1914
Echagüe	446.2	1917	6	1911	276.6	1909	53.1	1918
Candon	166.1	1903	0	1911	52.6	1908	0	1912
Vigan	94.5	1903	0	1918	44.9	1915	0	1913
Tuguegarao	1,315.7	1906	21.1	1918	335.9	1916	44.8	1918
Laoag	104.5	1909	0	1911	54.6	1909	0	1914
Aparri	785.4	1906	36.6	1911	479.9	1916	42	1918
Basco	710.7	1909	121.2	1904	739.1	1916	187.8	1918

* Several years.

^a Also 1911.

^b Also 1918.

TABLE XIII.—*Monthly extremes of rainfall*—Continued.
 TABLA XIII.—Valores extremos mensuales de lluvia—Continuación.

STATION. Estación.	ANNUAL. Anual.			
	MAXIMUM. Máxima.	MONTH AND YEAR. Mes y Año.	MINIMUM. Mínima.	MONTH AND YEAR. Mes y Año.
	<i>mm.</i>		<i>mm.</i>	
Jolo	466.3	I, 1918	0	(II, IV, 1905. II, 1906.
Isabela, Basilan	418.5	X, 1916	0	III, 1903, 1905.
Zamboanga	302	I, 1916	0	(III, 1903, 1905. IV, V, 1908.
Davao	546.3	V, 1910	0	II, 1915.
Caraga	707.4	II, 1903	15.7	VII, 1904.
Cotabato	444.3	VI, 1918	0	II, 1915.
Cagayan	438.7	XII, 1909	0	II, III, 1915.
Dapitan	624.4	XI, 1912	0	(III, 1915. V, 1906.
Butuan	692	XI, 1904	3.7	II, 1915.
Dumaguete	370.2	XII, 1915	0	II, 1915.
Tagbilaran	564.9	VII, 1912	0	II, 1915.
Iwahig	1,035.9	XI, 1917	0	II, III, 1914.
Surigao	1,183.9	I, 1918	0	VI, 1905.
Maasin	774.4	I, 1918	0	(II, 1915. V, 1912.
Cebu	588.3	X, 1912	0	II, 1915.
Bacolod	438.8	VIII, 1907	.3	II, 1906.
Iloilo	762	VIII, 1904	0	(II, 1906, 1914. III, 1905.
San Jose de Buenavista	1,064.4	X, 1915	0	(*)
Tuburan	342.8	IX, 1908	0	(III, 1905. IV, 1903.
Cuyo	789.6	VII, 1911	0	(*)
Ormoc	601.3	IX, 1908	2.5	II, 1914.
Guianan	1,788.8	I, 1918	16.7	V, 1912.
Tacloban	1,385.1	I, 1918	12.1	II, 1914.
Capiz	1,505.7	XII, 1903	.5	IV, 1915.
Borongan	2,191.4	I, 1918	32.9	V, 1912.
Calbayog	716.7	XII, 1915	3.3	III, 1905.
Masbate	522.3	XII, 1915	0	(II, 1906. IV, 1909.
Romblon	637.2	XI, 1909	1.3	III, 1903.
Batag	894.5	II, 1917	11.7	V, 1915.
Gubat	1,324.6	XII, 1903	8.9	IV, 1909.
Legaspi	1,130.6	XII, 1903	23	III, 1905.
Calapan	747.4	XI, 1917	13.8	I, 1912.
Virac	829	XII, 1915	13.8	II, 1914.
Naga	990.7	XII, 1915	0	II, III, V, 1905.
Batangas	676.8	IX, 1914	0	(II, 1915. IV, 1908, 1912.
Atimonan	1,277.9	XI, 1908	.3	II, 1915.
Ambulong, Tanauan, Batangas	1,022.8	IX, 1914	0	II, 1915.
Silang	732.4	VII, 1909	0	(II, 1906. III, 1904, 1905.
Paracale	1,099.2	I, 1917	17	II, 1915.
Santa Cruz, Laguna	632.6	IX, 1914	1.8	II, 1915.
Corregidor	1,100.1	VII, 1913	0	(*)
Manila	887.7	IX, 1914	0	(*)
Antipolo	1,100.9	IX, 1914	0	(I, 1914. II, 1915.
Olongapo	1,463.5	VIII, 1907	0	(*)
Iba	1,832.2	VII, 1911	0	(*)
San Isidro, Nueva Ecija	676.4	VII, 1911	0	(*)
Arayat	643.5	VII, 1905	0	(*)
Tarlac	924.9	VII, 1911	0	(*)
Baler	788.1	VII, 1909	6.4	III, 1904
Dagupan	1,300.4	VII, 1911	0	(*)
Bolinao	1,891.4	VII, 1911	0	(*)
Baguio	3,381.7	VII, 1911	0	(*)
San Fernando, La Union	1,148.6	VIII, 1914	0	(*)
Echagüe	446.2	XI, 1917	2.9	III, 1914
Candon	1,941	VIII, 1916	0	(*)
Vigan	1,864	VIII, 1916	0	(*)
Tuguegarao	1,315.7	XI, 1906	0	(II, 1907, 1912. III, 1903, 1904.
Laoag	1,830.8	VIII, 1914	0	(*)
Aparri	785.4	XI, 1906	0	III, 1903.
Basco	910.7	VIII, 1903	9.5	IV, 1918.

* Several years.

Annual and monthly extremes of rainfall.—Table XII contains the annual extremes of rainfall of 55 stations for the period 1903 to 1918. Preceding from Baguio that appears with a maximum annual precipitation of 9,038.3 mm., the highest values are those of Paracale, on the north coast of Ambos Camarines, Borongan and Guiuan, in the eastern part of Samar, and Capiz, on the northern coast of Panay Island: they all appear with an annual maximum amount of rainfall above 5,000 mm. As for Manila, the year of maximum rainfall was 1908 with an annual amount of 2,481.0 mm., while 1903 was the year of minimum rainfall with an annual amount of only 1,030.4 mm. For the years 1865 to 1902, the maximum annual rainfall was

“The northeast monsoon strikes the Islands on the eastern coast. As there are no high mountain masses northeast of Mount Banahao, this monsoon brings heavy rains to the northern and northeastern slopes of the mountain. The moisture carried by the northeast monsoon is largely deposited on the eastern half of the Islands; and the monsoon continues over the western half of the Archipelago as a drying wind, which results in a marked dry season in the latter region. The southwest monsoon is not nearly so strong as the northeast monsoon, and although it brings rains on the western side of the Archipelago, much of the rain which comes at this season of the year is the result of the cyclonic disturbances (typhoons), which cause the deposition of rains on both sides of the Islands. Therefore, also during this season, heavy rains occur on the northern slopes of Mount Banahao.”

As shown in the table given above, the annual rainfall for Mount Banahao from November, 1915, to November, 1916, was 7,468.2 mm., an amount which differs very slightly from the annual average of Kashoryo. And although this is the annual rainfall of only one year, yet we consider it very probable that the average of many years of observation would not differ much from that amount, because, although the rainfall for November and December, 1915, as well as that for January, 1916, were considerably above the normal owing to the unusually frequent depressions and typhoons of those months, yet, on the other hand, the rains during the typhoon season in 1916 were much below the normal owing to an extraordinary lack of typhoons in the Philippines during that season, as stated in our Monthly Bulletins and Annual Report for 1916. Hence we believe that there was a kind of compensation between the winter and the summer rainfall, and therefore, that the annual rainfall obtained must not differ much from the normal.

Again, the monthly distribution, as shown in the table above, is proper of the second type with no dry season and a very pronounced maximum rain period in winter. But for the reasons just given we believe that with more years of observations the mean summer and autumn rainfall would increase, and, on the contrary, the mean winter rainfall would not be so pronounced, thus showing for Mount Banahao a monthly distribution of rainfall of the fourth type with no dry season and no very pronounced maximum rain period: in other words, with heavy rains well distributed throughout the entire year.

that of 1867 with an amount of 2,978.8 mm.¹, and the minimum was that of 1885 with an annual amount of only 906.5 mm. This was the only year drier than 1903.

In Table XIII the maximum and minimum monthly rainfalls are given for the same period of 1903 to 1918. Baguio has an absolute monthly maximum of 3,381.7 mm. (July, 1911). The highest monthly maximum for stations with a pronounced maximum rain period in winter is that of Borongan, on the eastern coast of Samar, with the amount of 2,191.4 mm. (January, 1918). The absolute monthly maximum for Manila is 887.7 mm. (September, 1914). This was exceeded only three times in the previous period of 1865 to 1902: September, 1867, 1,469.7 mm.; July, 1899, 1,190.9 mm.; and August, 1877, 1,095.6 mm., as can be seen in Table XIV in which only monthly amounts of rain over 500 mm. are included.

TABLE XIV.—*Monthly amounts of rain over 500 millimeters registered in Manila Observatory since the year 1865.*

Year.	Month.	Amount.	Year.	Month.	Amount.
		<i>mm.</i>			<i>mm.</i>
1865	September	687.9	1896	August	650.2
1867	do.	1,469.7	1899	July	1,190.9
1869	October	589.7	1900	August	770.9
1872	August	798.8	1902	September	523.3
1876	September	520.3	1904	July	682.2
1877	July	602	1905	do.	594.4
1877	August	1,095.6	1907	do.	504
1880	July	809.8	1908	August	645
1882	do.	573.6	1909	July	561.8
1883	do.	754.6	1911	do.	698.5
1884	do.	721	1912	do.	529
1887	September	738	1912	August	656.6
1888	July	680.6	1913	July	570.6
1890	September	536.7	1914	September	887.7
1891	June	655.5	1917	July	606
1891	July	642.7	1918	do.	621.9
1895	June	539.5			

Greatest rainfall in a single day.—Table XV gives for each station and for every month of the year the greatest amount of rain observed in a single day. Prescinding from Baguio, which is the only station showing an absolute maximum daily rainfall above 800 mm., Candon in Ilocos Sur and Laoag in Ilocos Norte, are the only stations with a maximum daily precipitation of more than 500 mm. The maximum daily rainfall for

¹ Although the year 1919 does not enter in the period chosen for this report, it may interest our readers to know that it broke all our records since 1865 both as to the monthly and to the annual rainfall. The total annual rainfall was 3,920.6 mm.: it is 941.8 mm. above the maximum of 1867. The monthly rainfall for August, 1919, was 1,983.0 mm., an amount which differs by +513.3 mm. from the monthly maximum ever observed before in Manila since 1865. This maximum was that of September, 1867, with a monthly rainfall of 1,469.7 mm.

TABLE XV.—*Greatest monthly and annual rainfall in a single day.*

TABLA XV.—Máxima lluvia en un solo día, mensual y anual.

FIRST TYPE.—PRIMER TIPO.

STATION. Estación.	JAN- UARY. Enero.	FEB- RUARY. Febrero.	MARCH. Marzo.	APRIL. Abril.	MAY. Mayo.	JUNE. Junio.	JULY. Julio.	AUGUST. Agosto.	SEPTEMBER. Septiembre.	OCTOBER. Octubre.	NOVEMBER. Noviembre.	DECEMBER. Diciembre.	ANNUAL. Anual.
	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.
Bacolod.....	102.9	60.9	14.7	43.2	73.4	133.1	110.7	106.7	110.7	101.1	134.7	88.7	184.7
Iloilo.....	63.2	55.9	79.3	136.7	136.7	131.1	201.2	131.1	104.4	182.9	165.6	78.7	201.7
San Jose de Buenavista.....	78.2	43.7	32.8	81.5	169.4	150.1	175.3	214.4	253.5	244.9	170.2	57.9	253.5
Batangas.....	43.2	44.5	11.9	85.9	74.8	160.5	128.5	68.6	244.9	167.9	165.4	233.6	244.9
Ambulong, Tanauan, Batangas.....	39.3	8.9	14.5	84.5	108	216.2	83.6	125.5	228.3	141.6	106	143.5	228.3
Santa Cruz, Laguna.....	54.3	23.4	26.9	33	63	135.9	126.5	95.5	157.2	143.6	101.9	96.7	157.2
Cavite.....	17.2	14.4	25.4	32.5	11.1	111	156.2	89.4	174.2	153.4	67.3	54.5	174.2
Manila.....	33.3	24.2	58	143.1	144.9	109.7	271.5	135.7	234.7	194.3	105.4	79.8	271.5
Arayat.....	21.1	16.5	33.8	50.8	101.3	89.6	161.3	63.5	95.8	97.9	83.8	54.6	161.3
Balanga.....	35.3	17	36.3	102.3	234.2	138.2	410.2	116.1	214.1	188.7	59.7	63.2	410.2
Iba.....	14.5	11.2	53.3	70.4	209.3	194.8	250.3	294.6	296.1	103.4	61	50.8	296.1
San Isidro, Nueva Ecija.....	23.1	30.7	37.8	66.9	121.4	106.6	100.4	88.5	123.2	228.6	119.4	72.7	228.6
Tarlac.....	20.8	25.4	55.9	86.9	99.3	167.1	128.3	139.2	116.6	113	124.7	116.8	167.1
Dagupan.....	23.9	64.8	63.5	85.6	200.5	190.5	213.6	166.9	316.7	180.6	121.7	66.3	316.7
Baguio.....	92	32.8	49.6	129	415.8	496.6	379.8	584.2	799.3	689.7	125.2	184	879.8
San Fernando, La Union.....	23.1	30.5	22.1	35.6	152.9	244	300.5	183.1	244.4	251.6	144.8	30.2	300.5
Candon.....	26.7	21.1	53.8	42.4	231.7	284.5	478.9	577.8	326.1	393.7	143.8	40.6	779.3
Vigan.....	9.7	20.3	53.8	78.7	237.7	245.3	478.9	427.7	393.3	243.3	80.3	40.9	478.9
Laoag.....	28.4	8.1	12.7	33.3	207	334.8	257.8	295.1	564.2	382.7	43.7	34.8	564.2

SECOND TYPE.—SEGUNDO TIPO.

Caraga.....	119.6	156.2	126	67.8	128.3	38.9	104.6	43.2	51	114.8	82.6	177.8	469.9
Butuan.....	162.8	147.5	92	68.3	81.3	44.9	64	64.3	120.4	117.9	469.9	316.7	469.9
Surigao.....	176.5	203.7	231	80.5	119.4	63.5	69.1	62.2	68.8	129.3	238.6	307.2	307.2
Tacloban.....	246.7	132.1	96.1	143.4	143.4	135.1	244.3	60.5	116	69.1	132.1	135.1	246.7
Borongan.....	229.3	167.6	102.4	132.8	240.5	87.1	99.6	74.2	163.9	153.1	311.9	231.9	311.9
Gubat.....	123.7	142.2	109.2	56.4	61.7	108.9	115.8	76	107.1	111.3	219.7	202.5	219.7
Legaspi.....	239.1	182.1	104.6	104.1	125.9	173.5	129.8	98.6	195.2	227.1	297.4	177.8	297.4
Virac.....	106.1	175.3	95	95.2	126.5	178.9	171	103.9	100.6	184.6	150.2	194	194
Atimonan.....	104.4	84.4	90.1	205.8	260.4	119.4	152.7	78.5	208.6	188.8	312	355	355
Paracale.....	169.6	202.7	94.2	61.9	108.6	138.1	308.9	-71.5	73.1	259	177.2	204.1	308.9

TABLE XV.—*Greatest monthly and annual rainfall in a single day—Continued.*

TABLE XV.—Máxima lluvia en un solo día, mensual y anual—Continuación.

THIRD OR INTERMEDIATE "A" TYPE.—TERCER TIPO O TIPO INTERMEDIO "A."

STATION. Estación.	JAN- UARY. Enero.	FEB- RUARY. Febrero.	MARCH. Marzo.	APRIL. Abril.	MAY. Mayo	JUNE. Junio.	JULY. Julio.	AUGUST. Agosto.	SEPTEMBER. Septiem- bre.	OCTO- BER. Octubre.	NOVEMBER. Noviem- bre.	DECEMBER. Diciem- bre.	ANNUAL. Anual.
	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.
Zamboanga	128	65.3	26.9	30.7	53.1	39.6	56.7	55.6	114	121.4	78.2	161	161
Cagayan	45	34.5	45.7	34.3	77	74.9	57.1	68.6	65.5	121.4	78.2	161	123.2
Dumaguete	41.7	105.9	35.6	44.4	63.2	83.5	97.3	69.6	80	72.4	80.3	86.4	105.9
Iwahig	180.8	86.6	35.6	52.4	44.7	103.4	127.5	49.8	63.5	82.6	294.2	279.4	294.2
Cebu	370.2	103.8	41.7	63.8	64.8	86.3	63	68.8	122.7	299.7	89.7	114.8	299.7
Capiz	163	176.8	25.1	70.6	149.9	191.3	302.3	153.5	139.7	231.4	166.4	276.4	370.2
Masbate	105.1	100.4	57.2	62.2	188.9	170.1	116.6	79.2	100.3	92.5	130.8	328.4	328.4
Romblon	14.6	25	25.2	72	81	79.5	74.2	104.4	98.3	230.4	144.8	236.3	236.3
Bayombong	49.5	37.8	86.9	70.6	119.1	28.8	37	52.4	110	129	94	45	129
Echague	67.9	24.2	65.3	77.7	111.2	95.8	124.2	66.6	101.6	81.3	126.5	77.7	126.5
Tuguegarao	67.4	72.3	34.7	100.1	131.4	167.8	103.7	223.8	274.6	259.1	318	185.1	318
Apurri								194.1	151.7	235.2	287.7	180.6	287.7

FOURTH OR INTERMEDIATE "B" TYPE.—CUARTO TIPO O TIPO INTERMEDIO "B."

STATION. Estación.	JAN- UARY. Enero.	FEB- RUARY. Febrero.	MARCH. Marzo.	APRIL. Abril.	MAY. Mayo	JUNE. Junio.	JULY. Julio.	AUGUST. Agosto.	SEPTEMBER. Septiem- bre.	OCTO- BER. Octubre.	NOVEMBER. Noviem- bre.	DECEMBER. Diciem- bre.	ANNUAL. Anual.
	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.
Jolo	150.6	222.6	50.5	84.6	232.4	80.8	131.8	98.6	126.7	97	121.2	86.6	232.4
Davao	74.2	64.8	118.1	88.6	99.6	93.1	88.1	94	123.7	133.4	74.2	86.6	153.6
Cotabato	56.1	67.3	41.9	55.6	102.4	131.1	95.9	67.1	81.3	101.6	95.2	72.4	153.6
Dapitan	93.2	122.2	96.4	210	97.5	116.3	76.7	78	60.7	149.6	122.9	124.7	210
Tagbilaran	52.9	72.4	96.4	72.6	71.1	108.7	97.8	93	127.5	166.2	105.2	99.1	166.2
Maasin	223.5	92	187.9	54.1	128.7	84.1	127.1	115.6	257	394.7	413.5	224.7	413.5
Ormoc	213.1	78.7	66.5	62.5	128.1	113.8	138.6	164.6	190.8	164.4	138.9	252.2	318.6
Calbayog	158.7	80.3	51.1	79.3	330.2	119.8	128.9	231.1	191.3	176.7	199.1	266.7	330.2
Calapan	91.6	51.1	55.1	60.2	354.9	134.3	84.6	74.4	148.1	154.9	106.1	167.9	302.2
Naga	125.2	130.9	63.4	174	83.1	164.3	138	48.8	101.6	302.2	222.6	168.2	302.2
Baler	177.8	75.9	119.4	104.4	152.9	162.8	175.3	134.6	123.2	229.3	246.1	249.1	249.1
Basco	98.5	109.2	72.1	134.4	178.5	144	159.3	300.5	288.3	228.1	131.1	155.1	300.5

^a October 15, 1912: Approximate estimate made by the observer as the rain gauge was blown down by a NW gale at about 7 p. m. (October 15, 1912: Cantidad aproximada calculada por el observador por haber sido derribado el pluviometro en un tifón a eso de las 7 p. m.)

Manila is 271.5 mm. Our readers may like to know that this absolute maximum daily rainfall was exceeded only three times in the years, 1865 to 1902, and that daily rainfalls of over 200 mm. are rather seldom registered in Manila. This is shown by Table XVI in which we give all the daily amounts of rain above 100 mm. recorded in Manila since the year 1865.

As to Baguio, the absolute maximum rainfall observed in a single day is as great as 879.8 mm., an amount which is above the annual average rainfall of many cities of Europe and of the United States. This heavy rain occurred during a typhoon which crossed the northern part of Luzon on July 14 to 15, 1911. No less than 2,238.7 mm. of water were collected by the rain-gauges of Baguio in four days, as follows: July 14, 879.8 mm.;

TABLE XVI.—Daily amounts of rain above 100 millimeters registered in Manila Observatory since the year 1865.

Year.	Date.	Amount.	Year.	Date.	Amount.
		<i>mm.</i>			<i>mm.</i>
1865	Sept. 7	114	1890	July 16	189.1
1867	July 12	145	1890	Nov. 11	153.8
1867	Sept. 23	135	1891	June 15	252.7
1867	Sept. 24	336	1891	July 25	136.8
1867	Sept. 25	306.8	1891	July 26	139.4
1867	Sept. 26	162.4	1891	Sept. 15	115.8
1867	Sept. 30	126	1891	Nov. 16	180.6
1867	Oct. 7	172	1895	June 24	143.4
1868	Nov. 22	139.1	1895	June 25	111.6
1869	June 23	102.8	1895	June 26	106.5
1869	July 19	101.8	1895	Sept. 2	115.6
1869	Aug. 2	107.6	1899	June 28	105.2
1869	Aug. 20	105.2	1899	July 9	209.8
1869	Sept. 26	128	1899	July 10	158.7
1870	May 12	101.8	1899	July 18	169.3
1872	Aug. 2	226.5	1899	July 19	253.5
1872	Aug. 3	129.2	1899	July 20	148.8
1872	Aug. 22	176.1	1899	Sept. 20	180.8
1874	Aug. 30	124.8	1900	June 27	107
1876	July 17	104.5	1901	Oct. 3	103.9
1876	Sept. 13	117.8	1901	Oct. 14	101.4
1877	June 21	111.4	1902	June 17	116.3
1877	Aug. 1	118	1902	Sept. 22	123.2
1877	Aug. 14	149.1	1904	June 25	107.4
1877	Aug. 15	192.7	1904	July 12	226.2
1878	July 30	123.8	1904	July 13	197.5
1879	Sept. 20	162.3	1905	April 29	143.1
1879	Nov. 20	102.6	1905	July 1	185.6
1880	July 29	166	1905	July 2	200.4
1880	July 30	290.1	1906	May 18	144.9
1880	Aug. 4	111.6	1907	July 29	141.9
1880	Sept. 15	213.1	1907	Oct. 26	124.7
1881	May 24	166.8	1908	May 29	121.6
1881	June 23	119.6	1908	Aug. 5	102.8
1881	June 29	139.3	1911	July 15	117
1881	Aug. 20	118.8	1911	Aug. 13	133.1
1882	July 23	176.8	1912	July 31	157.6
1882	Oct. 20	165.2	1913	Sept. 9	105.8
1883	Jan. 1	186.1	1913	Sept. 10	128.2
1883	July 23	154.6	1914	June 2	106.3
1883	July 29	156.9	1914	June 3	109.7
1883	July 30	114	1914	Sept. 1	169.5
1884	July 20	178.3	1914	Sept. 2	234.7
1884	July 21	179.5	1914	Sept. 3	114.5
1887	July 21	115.7	1915	Sept. 11	103.3
1887	Sept. 19	164.8	1915	Nov. 3	105.4
1887	Sept. 20	125.3	1917	July 11	107.6
1887	Oct. 5	118.6	1918	July 9	271.5
1888	July 23	109.2	1918	Aug. 11	135.7
1888	Aug. 16	107.4	1918	Oct. 15	194.3
1890	July 15	124.3			

July 15, 733.6 mm.; July 16, 424.9 mm.; and July 17, 200.4 mm. These daily amounts of rain are counted as it is customary in the Philippines from 6 a. m. of one day to 6 a. m. of the next day. But the most remarkable thing is that taking only the period of hours in which the rains fell with most heaviness, we have the incredible amount of 1,168.1 mm. recorded, as shown in a Friez Quadruple Register in only 24 hours, from noon of the 14th to noon of the 15th.¹

¹ The following note is reproduced here from a footnote of a pamphlet which we published in 1912 on "*The Extraordinary Drought in the Philippines—October, 1911, to May, 1912.*"

"As a curiosity we mention that, as far as we are aware, there are only two instances known in which the torrential rains of four consecutive days exceeded this rainfall at Baguio. Both occurred likewise at stations of great elevations, the one at Cherrapunji, in the Khasi Mountains, India; the other at a place called Silver Hill, in the mountains of eastern Jamaica.

The rains at Cherrapunji referred to, occurred from June 12 to 15, 1876, and the total amount of 2,586.7 millimeters (101.84 inches) was distributed over the four days as follows: June 12, 773.4 millimeters (30.45 inches); June 13, 196.8 millimeters (7.75 inches); June 14, 1,036.3 millimeters (40.80 inches); and June 15, 580.1 millimeters (22.84 inches). We are indebted for these particulars to the Director-general of observatories, India, who, replying to an inquiry, assured us that these figures represent the absolute maximum of rainfall for four consecutive days and for twenty-four hours, respectively, observed at Cherrapunji from 1871 to 1911. There are no records antedating 1871.

The second instance of most extraordinary rains occurred at Silver Hill in November 1909. According to the *Scientific American*, 2,451.1 millimeters (96.50 inches) fell in four days, and on two days 1,460.5 millimeters (57.50 inches). That these figures are at least approximately correct is indicated by the records of the nearest stations.

From the time at which this note was written, we have learned of a few other cases in which similar daily amounts of rain have been recorded. In Funkiko, Formosa, we find a three days' rainfall with 2,071 mm. (81.54 inches) on July 18–20, 1913 (July 18, 400 mm.; July 19, 638.0 mm.; July 20 1,033 mm.), and one day's rainfall with 1,034 mm. on August 31, 1911. In Honomu, Hawaii, there was a heavy daily downpour of 811.5 mm. (31.95 inches), the heaviest ever recorded in that territory, on February 20, 1918.

It would seem very probable that heavy daily rainfalls like those mentioned must have occurred also in Kashoryo, Formosa: but unfortunately we have no daily records from that place, as the gauge there is read only on the 1st, 10th and 20th of each month.

Although Baguio is not one of the wettest places of the world, yet the record of 1,168.1 mm. in 24 hours is considered, as far as known, a world's rainfall record for a period of 24 consecutive hours (See *Monthly Weather Review*, Vol. 47, No. 5, page 302).

Greatest rainfall for a single hour in Manila.—It being impossible at present to give this information for any considerable number of our stations, we have taken from the records of the Central Office all the cases in which an hourly amount of rainfall over 40 mm. has been registered in Manila from 1903 to 1918. This information is included in Table XVII. The greatest hourly rainfall for the whole period is 65 mm. from 9 to 10 p. m. on April 29, 1905, when a typhoon was traversing Luzon north of Manila between San Fernando, La Union, and Dagupan. This is also the greatest hourly rainfall recorded in Manila since 1885, as the maximum of the period 1885 to 1902 was 60 mm. on May 21, 1892, from 5 to 6 p. m.

It may be added here that the greatest hourly amount of rain

TABLE XVII.—*Greatest hourly amount of rain over 40 millimeters registered in Manila, 1903–1918.*

TABLA XVII.—*Cantidades máximas de lluvia en una hora mayores de 40 milímetros registradas en Manila, 1903–1918.*

AMOUNT. Cantidad.	DATE. Fecha.	HOOR. Hora.
<i>mm.</i>		
52.2	August 26, 1903	7:00– 8:00 p. m.
44.5	July 12, 1904	1:50– 2:30 p. m.
46.	July 13, 1904	2:35– 3:25 a. m.
41.2	Sept. 20, 1904	3:00– 4:00 p. m.
65.	April 29, 1905	8:00– 9:00 p. m.
57.4	June 8, 1905	11:00–12:00 mdt.
48.4	July 29, 1907	9:00–10:00 p. m.
47.	May 10, 1909	1:00– 2:00 p. m.
43.2	June 18, 1909	4:00– 5:00 a. m.
44.5	August 13, 1910	9:00–10:00 a. m.
46.5	April 14, 1913	5:00– 6:00 p. m.
40.9	June 12, 1913	7:00– 8:00 p. m.
42.9	June 26, 1915	10:00–11:00 p. m.
42.7	June 24, 1917	3:00– 4:00 p. m.
47.4	August 7, 1917	1:00– 2:00 p. m.
50.3	August 19, 1918	6:00– 7:00 p. m.

registered in Baguio during the typhoon of July, 1911, mentioned above, was 89.9 mm., from 4 to 5 p. m. of July 14th.

Average monthly and annual rainy days.—The study of a climate would not be complete if together with the amount of monthly and annual rainfall, the number of rainy days would not be given. By a rainy day is generally understood a day of rain in which 0.1 millimeter of water or more has fallen. Table XVIII gives the average monthly and annual rainy days for 53 stations of the Philippines divided into the four types of climate. The regions with the second type show the greatest number of rainy days, generally over 200. Borongan, on the eastern coast of Samar, appears with the maximum number, 242.

By averaging the mean annual number of rainy days of the

TABLE XVIII.—Average monthly and annual rainy days.

TABLA XVIII.—Promedio mensual y anual de los días de lluvia.

FIRST TYPE.—PRIMER TIPO.

STATION. Estación.	JANU- ARY. Enero.	FEBRU- ARY. Febrero.	MARCH. Marzo.	APRIL. Abril.	MAY. Mayo.	JUNE. Junio.	JULY. Julio.	AUGUST. Agosto.	SEPTEM- BER. Septiem- bre.	OCTO- BER. Octubre.	NOVEM- BER. Noviem- bre.	DECEM- BER. Diciem- bre.	ANNUAL. Annual.
Bacolod.....	11	9	5	4	11	18	21	19	19	18	17	16	170
Iloilo.....	9	7	5	6	12	18	20	19	20	18	14	14	162
San Jose de Buenavista.....	5	4	3	5	14	22	24	23	22	17	14	9	158
Batangas.....	7	4	3	4	9	12	14	14	20	17	14	11	133
Ambulong, Tanauan, Batangas.....	5	3	3	5	10	16	19	16	19	15	12	8	131
Santa Cruz, Laguna.....	13	8	9	8	12	18	22	21	23	21	19	18	192
Cavite.....	3	1	2	2	4	11	22	16	17	14	8	8	108
Manila.....	5	4	4	4	11	15	23	23	22	19	14	12	156
Arayat.....	1	1	0	2	7	10	13	12	9	8	2	5	67
Balanga.....	3	1	1	3	10	17	22	23	20	15	7	7	127
Iba.....	2	2	3	5	12	20	26	27	24	15	7	4	147
San Isidro, Nueva Ecija.....	3	3	3	4	13	16	23	22	22	15	8	8	140
Tarlac.....	2	3	3	6	13	15	23	23	21	14	8	4	134
Dagupan.....	3	2	3	7	14	17	22	23	21	14	6	4	136
Baguio.....	4	4	6	10	19	22	27	27	25	18	9	6	177
San Fernando, La Union.....	1	1	1	2	9	17	22	21	19	10	4	2	110
Candon.....	1	1	1	1	9	16	21	21	18	10	4	2	106
Vigan.....	0	1	1	2	9	18	23	22	20	10	3	2	111
Laosag.....	1	1	1	2	9	17	22	21	18	9	5	3	109

SECOND TYPE.—SEGUNDO TIPO.

Caraga.....	20	17	17	15	14	14	14	11	12	12	12	20	178
Butuan.....	21	17	18	15	15	19	14	13	14	17	20	21	204
Surigao.....	22	17	18	16	10	12	12	10	12	17	21	23	190
Tacloban.....	21	17	17	15	16	18	17	15	16	19	21	24	216
Borongan.....	26	20	22	19	18	19	17	14	16	21	23	27	242
Gubat.....	20	12	11	10	10	11	13	10	13	17	21	23	171
Legaspi.....	21	16	15	13	13	14	18	18	20	19	21	23	211
Virac.....	21	16	18	15	16	20	17	13	17	22	24	24	223
Atimonan.....	18	13	10	7	12	14	17	13	17	20	21	23	185
Paracale.....	22	17	16	13	15	16	18	14	17	23	26	26	223

THIRD OR INTERMEDIATE "A" TYPE.—TIPO TERCERO O TIPO INTERMEDIO A.

Zamboanga.....	7	6	5	6	9	12	11	12	10	111
Carayan.....	9	7	5	5	12	16	15	15	9	137
Dumaguete.....	13	9	5	6	10	13	13	12	12	137
Iwahig.....	11	8	6	6	13	14	13	17	13	174
Cebu.....	13	10	7	7	13	19	16	20	14	163
Capiz.....	16	11	9	7	16	16	16	17	15	184
Mashate.....	16	11	9	7	18	17	18	21	19	156
Romblon.....	15	12	9	8	11	17	13	16	16	181
Bayombong.....	13	4	8	8	12	17	19	17	21	129
Echague.....	12	10	8	8	10	12	16	14	13	169
Tuguegarao.....	6	3	4	5	12	11	17	18	19	112
Aparri.....	16	11	8	5	10	10	13	14	12	155

FOURTH OR INTERMEDIATE "B" TYPE.—TIPO CUARTO O TIPO INTERMEDIO B.

Jolo.....	10	8	9	10	15	16	13	15	14	15	158
Davao.....	7	7	8	8	12	12	10	10	10	13	117
Catabato.....	11	11	9	13	17	19	14	18	16	17	177
Dapitan.....	15	11	9	10	10	13	14	10	11	14	155
Tegolaran.....	12	11	7	7	8	13	13	11	12	15	141
Maasin.....	11	8	7	5	6	9	11	11	12	11	115
Ormoc.....	16	8	12	10	12	17	18	17	18	20	191
Calbayog.....	20	15	14	13	16	19	18	17	19	21	218
Calapan.....	18	14	13	12	14	14	18	11	17	20	233
Naga.....	11	8	7	6	10	14	18	15	17	15	199
Baler.....	13	12	13	16	15	16	15	12	16	16	153
Basco.....	21	14	13	10	14	13	17	18	20	21	172
											207

Mean annual rainy days for the Philippines, 159. (Media anual de días de lluvia en Filipinas, 159.)
 Mean seasonal rainy days for the Philippines..... June to October, 88.
 Media de días de lluvia para las diferentes estaciones del año en Filipinas..... { November to May, 76.
 { Junio a octubre, 83.
 { Noviembre a mayo, 76.

53 stations included in Table XVIII, we have an annual average of 159 rainy days for the whole Archipelago.

Remarkable floods.—It is not our intention to give here a complete list of all the floods observed in the Philippines during the period 1903 to 1918, but only to mention the most remarkable as far as we have found them described in our Monthly Bulletins for that period. By floods we do not mean the inundations caused at times on the coasts of the Islands by the so-called hurricane or cyclonic waves which accompany the cyclones or typhoons in their movement of progression on the sea. We wish to mention only floods produced by heavy rains, whether these rains connected with typhoons or not.

Floods in Manila and surrounding provinces.—The most important floods in Manila and surrounding provinces for the period chosen are those of 1904 and 1914.¹ And it may be well to remark that in both cases there was no typhoon near Manila, but only quite distant typhoons over the Pacific northeast of the Philippines.

Floods of July, 1904.—On the floods of 1904 the following data are taken from the *General Weather Notes* for July, 1904, by Rev. Miguel Saderra Masó:

TABLE XIX.—Daily rainfall in the stations of central Luzon for July 12-15, 1904.

Station.	July 12.	July 13.	July 14.	July 15.	Total.
	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>
Tuguegarao -----	8.3	12.1		1.5	21.9
Vigan -----	6.9	10.9	74.2	81.5	173.5
Candon -----	117.9	2.0	10.4	1.5	131.8
San Fernando, Union -----	252.2	1.3	16.5	22.6	292.6
Baguio -----	393.7	41.4	26.4	12.4	473.9
Bolinao -----	124.7	4.3	54.1	70.1	253.2
Dagupan -----	145.8	6.4	21.8	22.6	196.6
Masinloc -----	374.4	79.0	76.2	50.8	580.4
Tarlac -----	128.3	46.7	36.1	34.3	245.4
Arayat -----	161.3	49.0	87.9	42.7	340.9
Porac -----	176.8	83.8	110.5	70.1	441.2
Olongapo -----	112.3	73.4	183.9	134.4	504.0
Marilao -----	166.1	167.6	35.6	46.2	415.5
Balanga -----	175.0	305.8	59.2	75.2	615.2
Manila -----	226.2	197.5	52.2	34.0	509.9
Sta. Ana, Manila -----	120.6	341.1	69.6	62.5	593.8
Corregidor -----	103.6	155.7	142.5	54.9	456.7
Malahi Island -----	12.7	90.7	59.7	26.9	190.0
Atimonan -----	0.2	3.3	1.3		4.8

¹ More important than any of these were the floods of 1919, of which we expect to give interesting details in a separate pamphlet. They were particularly remarkable for their extraordinary protracted duration. As to the heaviness of the rain that produced such floods, something has been said above in a footnote.

Looking now at the distribution of the rains as revealed in this table we find that the western coast of Zambales, the slopes on the east of its great mountain range, and the valley of the Pasig give us the greatest amounts and in about equal quantities. This precipitation explains the inundations of Tarlac, Zambales, Bataan, Manila, and even the disastrous flood of San Juan del Monte; for the soil in this last place is more or less broken and stony with a subsoil of volcanic tuff, which could not possibly absorb such an enormous quantity of water in a short time. The reader may imagine what would have been the effects of the flood if that immense amount of water which covered the plains of Santa Ana, Pasay, Uliuli, Sampaloc, etc., for many miles had been forced to escape through a narrow and steep channel. The newspapers published full accounts of the flood and the heavy losses it caused.

Floods of September, 1914.—On occasion of the floods of 1914, the author of these lines published a detailed account of the heavy rains that caused them, together with a comparative study of those rains and floods and other heavy rains or floods of the preceding years since 1865. Part of the information given there will be reproduced here, as it is considered particularly interesting: ¹

Many still remember the heavy rains and the consequent floods that occurred in Manila and in several provinces of the western part of Luzon during the first few days of this month of September. We have brought together here all the data we could obtain on the subject and we believe that it will not be without interest to our readers.

In the following table we give the amount of rain that was registered in our stations of Luzon on each of the three consecutive days of heavy rain, together with the total fall for the three days.

As the period of extraordinary rains began in Manila a little before midnight of August 31 and ended at about 6 a. m. on September 3, it follows that, as we reckon the daily rainfall for the Philippines from 6 a. m. to 6 a. m. of the next day, August 31 must be counted as one of the three days of heavy rain, whereas, if we would count the daily rainfall from midnight to midnight, September 3 should be included as one of the rainy days instead of August 31. Something similar happened in some of the other stations.

A cursory examination of the table shows the following facts:

(1) The rainiest zone of the period was that which includes the western part of the island from the Province of Pangasinan to that of Batangas, both included. It will also be remembered that in the provinces of this zone there occurred the greatest floods, the effects of which were spoken of for several days in the Manila press.

(2) The rains were not equally heavy throughout the whole

¹ *The Typhoons and Floods of September, 1914*, by Rev. José Coronas, S. J., Manila, 1914.

TABLE XX.—Rainfall in the stations of Luzon during the three days, September 1, 2, 3, 1914.

Stations.	August 31.	Sep-tember 1.	Sep-tember 2.	Sep-tember 3.	Total in 3 days.
	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>
Aparri		0	1	1	2
Laoag	56.6	78.7	59.4		194.7
Tuguegarao		3.8	15.7	0	19.5
Vigan		61	99.5	65.6	226.1
Candon	77.3	51.4	36.3		165
Echague		0	8.1	25.1	33.2
San Fernando, La Union		44.2	132.5	51.4	228.1
Baguio	190.6	259.5	95.6		545.7
Bolinao		15.5	60.5	124.8	200.8
Dagupan		129.3	96.7	184.6	410.6
Baler	16.5	1.8	6.4		24.7
Tarlac		5.4	17.8	18.6	41.8
San Isidro, Nueva Ecija	17	55.1	19.6		91.7
Iba		59.7	67	296.1	422.8
Olongapo		165.1	146.6	422.1	733.8
Montalban	264.2	274.3	182.9		721.4
Antipolo	114.8	282.9	248.9		646.6
Manila:					
In the park	151.4	239.4	249.2		640
On the tower	127.3	176.2	223.2		526.7
Lamao		147.8	186.4	196.9	531.1
Alabang		121.9	108	106.7	336.6
Corregidor		63.2	85.1	225	373.3
Santa Cruz, Laguna	95.5	157.2	92.4		345.1
Paracale		6.4	1.8	0	8.2
Silang		101.9	80	102.3	284.2
Ambulong, Tanauan, Batangas		97.5	103.4	228.3	429.2
Atimonan		34.6	26.1	33.8	94.5
Batangas		54.4	25.2	244.9	324.5
Nueva Caceres		5.8	2.1	2.6	10.5
Legaspi		12	3.8	6.3	22.1

of this zone, nor were the maximum falls recorded on the same dates. The heaviest rains fell (precluding from Baguio) in Olongapo, Antipolo, Lamao, Manila, and Montalban; in other words, the Provinces of Rizal and Bataan and the southern part of the Province of Zambales. The greatest amount of rain of the three days was recorded on the 1st, in Antipolo, Montalban, and Santa Cruz, Laguna; on the 2d, in Manila; and on the 3d, in Bolinao, Dagupan, Iba, Olongapo, Lamao, Corregidor, Silang, Ambulong, and Batangas.

(3) Outside the zone mentioned above, the rains of this period were somewhat abundant in the western part of northern Luzon, viz., in the Provinces of La Union, Ilocos Sur and Ilocos Norte; but small throughout the whole of the eastern part of the island.

With regard to the hourly distribution of the rain in Manila during the three days, September 1, 2, and 3, we may note that the hours in which it rained most were from 11 p. m., August 31, to 6 a. m. September 1 (92 mm. on the tower and 103.2 mm. in the park, in seven hours), from 8 p. m., September 1, to 8 a. m. of the 2d (184.8 mm. on the tower and 250 mm.

in the park, in twelve hours), and from 9 p. m. of the 2d to 6 a. m. of the 3d (105.5 mm. on the tower and 117.2 mm. in the park, in nine hours). We do not think that the flood would have been so high if the amount of rain that actually fell had been better divided during the hours of these three days.

To form some idea of the extraordinary rainfall in Manila during these days it will be sufficient to point out the following facts:

(a) The normal rainfall of Manila for the whole of the month of September, is 370.3¹ mm.; so that the amount of rain that fell in the first three days of September, 1914, was 148.4 mm. greater than the normal of the whole month. Moreover, even the rainfall of the first two days was 33.9 mm. greater than the normal.

(b) During the last fifty years there have only been two occasions on which the rainfall for three consecutive days was greater than in the present period. These quantities were 804.7 mm. for September 24, 25, and 26, 1867, and 571.6 mm. for July 18, 19, and 20, 1899. Two other amounts which come close to that of this year are 500.5 mm. for July 28, 29, 30, 1880, and 475.9 mm. for July 12, 13, 14, 1904.

It will not be without interest to copy here from the records of the Observatory the following data concerning the greatest rainfalls for three days that have occurred in Manila since 1865:

TABLE XXI.—*Greatest rainfalls for three successive days in Manila, 1865–1914.*

Year.	Month.	Days.	Daily rainfall.	Total in 3 days.	Year.	Month.	Days.	Daily rainfall.	Total in 3 days.
			<i>mm.</i>	<i>mm.</i>				<i>mm.</i>	<i>mm.</i>
1867	September	{ 24 25 26	{ 336 306.8 162.4	{ 804.7	1890	July	{ 14 15 16	{ 58.7 124.3 189.1	{ 372.1
1872	August	{ 2 3 4	{ 226.5 129.2 27.4	{ 388.1	1899	{ . . . do	{ 9 10 11	{ 209.8 158.7 54.7	{ 423.2
1880	July	{ 28 29 30	{ 44.4 166 290.1	{ 500.5	1904	{ . . . do	{ 18 19 20	{ 169.3 253.5 148.8	{ 571.6
1883	. . . do	{ 28 29 30	{ 154.6 156.9 114	{ 425.5	1904	. . . do	{ 12 13 14	{ 226.2 197.5 52.2	{ 475.9
1884	. . . do	{ 20 21 22	{ 178.3 179.5 62.2	{ 420	1914	September	{ 1 2 3	{ 169.5 234.7 114.5	{ 518.7

It may be asked whether the floods observed in these periods were as great as the total amount of rain during the three days would seem to indicate. As we have not at hand data on floods that occurred previous to 1899, we restrict ourselves to the floods of 1899, 1904, and 1914. Of these three, the greatest was the one of 1904; then comes very similar in character, although perhaps a little inferior, that of this year, 1914; and in the third place the flood of 1899, which was of very slight importance compared with the other two. And yet, against what we would

¹ The normal given in this report obtained from the period 1903–1918 is 358.2 mm.

expect, we find that the total amounts of rain for the three days corresponding to these floods are in inverse order, viz., 1899, 1914, and 1904. If instead of three days we take only two days, the result is not much more satisfactory, for we have 423.7 mm. in 1904, 422.8 mm. in 1899, and 404.2 mm. for 1914; so that the rainfall in two days is almost the same for 1904 and 1899 and both of them greater than in 1914, and yet, as was indicated above, the floods of 1904 and 1914 were very similar, and that of 1899 very much smaller.

Prescinding from other circumstances that could influence more or less the greatness of the floods, and fixing our attention only on the manner in which the greater or less amount of rain probably influences the flood, we believe that it is not so much the sum total of rain in two or three consecutive days that has the greatest influence in producing greater or smaller floods, as the greater or less amount of rain accumulated in intervals of a few hours. Moreover, even supposing the same or similar quantities of rain in the same number of hours, the greatness of the consequent flood will depend in great part on whether this rainy period has followed two or three days of more or less wet weather during which the subsoil has already been saturated, or has followed two or three days of little or no rain.

With this, let us see what happened in the three floods we are engaged upon. In 1904, which is the year of the greatest floods, 281.1 mm. of rain fell in fifteen hours (July 12, 1 p. m. to July 13, 4 a. m.), while in 1899 and 1914 the greatest amount accumulated in twelve hours was respectively 182 mm. (July 19, 1 a. m. to 1 p. m.), and 184.8 mm. (September 1, 8 p. m. to September 2, 8 a. m.). According to this it would appear that the flood of 1899 ought not to have been less than that of 1914, nor the one of 1914 so similar to that of 1904. Nevertheless, it must be remembered that while the three days of rainfall in 1899 began suddenly after six days of practically no rain, in 1914 they took place after a series of wet days and specially after two days in which the rain had been somewhat heavy, viz., 43.3 and 57.9 mm., respectively, on August 30 and 31. On the other hand, although it is true that the three days of rain in 1904 had also been preceded by a few more or less wet days, yet these rains were of much less importance than those which preceded the 1914 period of rains; thus during the two days preceding July 12, 1904, only 30.5 and 26.7 mm. were collected in the gauges of Manila, and during these same days there were intervals of several hours without any rain at all, with more than five hours sunshine on the 10th, and more than two hours on the 11th, while in 1914 there were only two hours of sunshine on the 30th and none at all on the 31st of August. Hence though the accumulation of water in a determinated period of hours was considerably less in 1914 than in 1904, nevertheless the saturated condition of the subsoil at the beginning of the three days of abundant rain in September, 1914, caused the flood to be much greater than would otherwise have been the case.

Floods in central and northern Luzon.—These floods are generally caused by typhoons crossing the northern part of Luzon during the typhoon season from May to October, and especially from July to September. They are quite frequent, particularly in the Provinces of Cagayan, Ilocos Norte and Ilocos Sur, owing to the frequency of typhoons striking the northernmost part of Luzon. We say that these floods are *generally* produced by typhoons crossing northern Luzon, not to exclude possible cases in which floods may be produced at times in northeastern Luzon by heavy rains owing to northerly currents so common in the winter months. Thus we see a case, recorded in the Monthly Bulletin of the Manila Observatory for December, 1903, of great floods that occurred in the region of the Cagayan River as an effect of strong and protracted northerly winds produced by the coexistence of a high pressure center to the north of Luzon and of a low pressure area covering the Visayas, Mindanao, and the Sulu Sea. Another similar case, but of much greater importance, is mentioned in the Monthly Bulletin for November, 1906, in which the rains in northeastern Luzon were so abundant, especially in the southern part of Cagayan Province and in Isabela Province, that Tuguegarao reported the enormous amount of 1,086.9 mm. of rain in only eleven days: from November 20 to 30. The consequent floods were terrible, causing in the Cagayan Valley great loss of life and incalculable material damages.

The most important of these floods produced by typhoons in central and northern Luzon during the period 1903 to 1918 are those of October, 1908, October, 1909, and July, 1911. In the three cases a severe typhoon was traversing the northernmost part of Luzon. The following is taken from what we said on these floods in three of our pamphlets concerning typhoons.¹

Floods of October, 1908.—The floods were general in all the rivers of central and northern Luzon, and so extraordinary that a similar flood is almost unknown in the Philippines. To the data given above by eyewitnesses we have to add that the flood of the Agno River destroyed several kilometers of railroad track of the Dagupan Railroad, and that the Bued River cut away a considerable part of the plateau of Pozorrubio and caused great damage to the Benguet Road.

Floods of October, 1909.—The first typhoon of October 17 to 18, which was of much greater intensity, was, moreover, accom-

¹ *Three Typhoons in Luzon, October 4 to 13, 1908, The Typhoons of October, 1909, and The Typhoons of July, 1911*, by Rev. José Coronas, S. J., 1909 and 1911.

panied by torrential rains, at least in some provinces of Luzon, and even at considerable distances from the vortex. These caused unusually heavy floods, such as have rarely been seen in the Philippines. The extraordinary rainfall of October 17 and 18 and the consequent flood were responsible for so extensive damages along the famous Benguet Road, that the latter had to be closed to traffic for two months.

To the slow progress of this typhoon must likewise be attributed—not precisely the fact that in some regions the rains were so excessively heavy—but that, like the hurricane winds, they lasted for so many hours. The amount of water which fell at Baguio during the twenty-four hours from 6 a. m. of the 17th to 6 a. m. of the 18th is the largest on record in the Philippines¹ viz, 689.7 millimeters (27.15 inches).

Rains so extraordinary in intensity and duration could not fail to produce terrible floods in central and northern Luzon as already mentioned.

Floods of July, 1911.—The most striking feature of this typhoon were the extraordinarily heavy rains which from July 14 to 17 fell in western Luzon, but especially in Baguio. It seems incredible that during so short an interval of time 2,238.7 millimeters should have fallen at Baguio; and we would have had difficulties in believing it, had we not found it thus registered by the pluviometer on the "quadruple register" as used at the first-class stations of the Weather Bureau.

The total amount of precipitation for Baguio was distributed over the four days as follows: On the 14th, 879.8 millimeters; 15th, 733.6 millimeters; 16th, 424.9 millimeters; 17th, 200.4 millimeters.

The accounts which the daily papers published of the enormous losses caused by the heavy rains and consequent floods on July 16 to 18, are presumably still fresh in the memory of everybody. Above all the damages done to the railway from Manila to Naguilian and Camp One, and to the Benguet Road deserve to be mentioned.

Floods in the Visayas and Mindanao.—These floods, like those of northern Luzon, occur mainly during typhoons or depressions that cross the Visayas or Mindanao, particularly from November to January, or also while low-pressure areas cover those islands in the winter months. Severe typhoons and consequent heavy rains and floods are quite frequent in Samar and Leyte.

In December, 1903, great floods were reported from the Visayas and northern Mindanao; also from northern Mindanao on December, 1909, and from the Visayas on January, 1916. But the most remarkable were those of Mindanao during a typhoon on the 22d to 24th of January, 1916.

¹ We said this in 1909: This daily amount, however, was surpassed during the heavy rains of July, 1911.

The following is taken from one of our pamphlets on typhoons: ¹

The floods that occurred in Mindanao as an effect of the heavy rains observed there, are generally considered as the worst and most destructive experienced in many years in that island. The losses were enormous, particularly in Agusan Province, where all the rivers rose to an average of about 25 feet (7 to 8 meters) above their ordinary level, all the towns having been 3 to 4 feet (one meter or more) under the water, and some of them 10 to 16 or even 17 feet (3 to 5 meters).

It can be surely stated that the immense region from Ebro and Los Martires to Veruela and Gracia was transformed into a great lake where only the tops of the trees were visible. The crops were a complete loss in many of the towns, a great number of labor animals was killed, and many houses, wharfs, and bridges were practically swept away by the rushing waters.

In the Provinces of Lanao and Bukidnon many strong bridges were washed away, a great number of roads were destroyed or greatly damaged, and the crops, particularly in the low valleys, were either totally or partially lost. In Misamis Province there were enormous losses caused by the floods to the crops, bridges, and roads. The rivers throughout the province rose to a height of about 21 to 22 feet (6 to 7 meters) above their ordinary level. In Davao Province a great deal of damage was done to roads and bridges, some of them having been totally destroyed: in the town of Moncayo the water was 20 feet (6 meters) high in the streets, and practically all the houses and bridges were destroyed. In the Province of Zamboanga the bridges between the Capital and the Penal Colony of San Ramon were destroyed by the torrential rains.

Extraordinary periods of drought.—From what has been said above on the general causes of rainfall in the Philippines, it is evident that, as they generally affect the whole Archipelago, if at any time there is a failure of rainfall, it will generally be felt not only in Luzon but also in the Visayas and Mindanao. The periods of extraordinary drought, however, are not, as a rule, very long, but rather limited to the winter and spring months. Hence it is that a year of extraordinary drought in the Philippines does not necessarily mean a very dry year as a whole, because the rains that fall in summer and autumn often fully compensate the lack of rain of the first part of the year. Thus the extraordinary drought of October, 1911, to May, 1912, was hardly noticed in the annual amounts of those two years corresponding to Manila and in the general amounts of the stations on the western part of Luzon.

Table XXII will help one to see at once the years in which there

¹ *The Typhoons and Floods of January, 1916*, by Rev. José Coronas, S. J., Manila, 1916.

TABLE XXII.—*Rainfall from November to May for*TABLA XXII.—*Lluvia de noviembre a mayo para*

YEAR. Año.	ZAMBOANGA.		DAVAO.		SURIGAO.	
	TOTAL IN 7 MONTHS. Total de 7 meses.	PERCENT- AGE OF NORMAL. Por ciento de la normal.	TOTAL IN 7 MONTHS. Total de 7 meses.	PERCENT- AGE OF NORMAL. Por ciento de la normal.	TOTAL IN 7 MONTHS. Total de 7 meses.	PERCENT- AGE OF NORMAL. Por ciento de la normal.
1902-1903.	<i>mm.</i> 148.3	<i>mm.</i> 35.3	<i>mm.</i> 634.6	<i>mm.</i> 58.4	<i>mm.</i> 1,318.7	<i>mm.</i> 55.9
1903-1904.			1,234.2	105.2	2,487.5	105.4
1904-1905.	299.8	71.5	1,211.7	103.3	1,278.7	54.2
1905-1906.	281.5	67.1				
1906-1907.	496.6	118.4	1,182.5	100.8		
1907-1908.	137	32.7	1,396.2	161.6	3,232.3	139
1908-1909.					2,319.1	98.2
1909-1910.			1,391.3	161.2	3,290.3	139.4
1910-1911.			1,334.5	113.7	2,628.8	111.4
1911-1912.	315.2	75.1	975.7	83.2	1,268.9	53.8
1912-1913.	390.6	93.1	895.7	76.3		
1913-1914.	348.1	83	1,064.7	90.8		
1914-1915.	168.7	40.2	505.6	43.1	1,494.5	63.3
1915-1916.	302.3	191.2	1,303.6	111.1	3,061.9	129.7
1916-1917.	306.1	192.1	1,057	90.1	2,505.5	106.1
1917-1918.	340.5	200.3	1,188	101.3	3,390.7	143.6
Mean Media	419.6		1,173.2		2,360.6	

YEAR. Año.	LEGASPI.		BATANGAS.		ATIMONAN.	
	TOTAL IN 7 MONTHS. Total de 7 meses.	PERCENT- AGE OF NORMAL. Por ciento de la normal.	TOTAL IN 7 MONTHS. Total de 7 meses.	PERCENT- AGE OF NORMAL. Por ciento de la normal.	TOTAL IN 7 MONTHS. Total de 7 meses.	PERCENT- AGE OF NORMAL. Por ciento de la normal.
1902-1903.	<i>mm.</i> 1,014.8	<i>mm.</i> 53.1	<i>mm.</i> 423.4	<i>mm.</i> 91.6	<i>mm.</i> 657	<i>mm.</i> 41.6
1903-1904.	3,475	181.9	891.1	192.8	1,913.6	121.5
1904-1905.	713.4	37.3			1,130.2	71.6
1905-1906.	1,372.6	71.8			1,336	84.7
1906-1907.	1,881.6	98.5			1,502.8	95.2
1907-1908.	2,614.1	136.8	423.4	91.6	1,942.5	123.1
1908-1909.	2,119.1	110.9	891.1	192.8	2,866	131.6
1909-1910.	2,340.8	148.7	566.1	122.6	1,419.6	90
1910-1911.	2,377.5	124.4	776.4	168.1	1,845.1	116.9
1911-1912.	800.1	41.9	82.5	17.9	346.7	22
1912-1913.	1,904.6	99.7	331.3	82.6	1,276.6	80.9
1913-1914.	1,259.6	65.9	340.7	73.7	1,239.2	81.7
1914-1915.	745.8	39	88.3	19.2	512.4	32.5
1915-1916.	2,611.1	136.6	853.2	184.6	2,716.8	172.1
1916-1917.	2,856.1	149.5	326.3	70.7	2,388	133
1917-1918.	1,933.7	103.8	353.3	76.4	1,608.4	101.9
Mean Media	1,910.6		462.1		1,578.2	

several stations of the Philippines, 1903 to 1918.

varias estaciones de Filipinas, 1903 a 1918.

CEBU.		ILOILO.		CAPIZ.		CALBAYOG.	
TOTAL IN 7 MONTHS. Total de 7 meses.	PERCENTAGE OF NORMAL. Por ciento de la normal.	TOTAL IN 7 MONTHS. Total de 7 meses.	PERCENTAGE OF NORMAL. Por ciento de la normal.	TOTAL IN 7 MONTHS. Total de 7 meses.	PERCENTAGE OF NORMAL. Por ciento de la normal.	TOTAL IN 7 MONTHS. Total de 7 meses.	PERCENTAGE OF NORMAL. Por ciento de la normal.
mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.
348.6	55.1	336.1	52.1	543.3	51.8	652.8	49
1,262.8	199.4	1,093	171.3	3,259.9	310.8	1,918.8	144.2
255.3	40.3	472.5	74.1	953.9	90.9	603.7	45.4
380.9	60.2	.....	.....	.....	.....	1,194.7	89.8
667.8	105.5	434.2	68.1	.....	.....	.....	.....
820	129.5	709.5	111.2	661	63	1,363.5	102.4
531.6	84	747.4	117.1	.....	.....	1,263.5	94.9
1,308.3	206.6	1,012.1	158.6	.....	.....	1,901.3	142.9
741.3	117.1	937.8	147	1,073	102.3	1,650	124
252.5	39.9	165.4	25.9	244.3	23.3	522.7	39.3
.....	.....	774.5	121.4	864.9	82.4	1,230.6	92.5
307.3	48.6	485	76	483.4	46.1	943.7	70.9
224.9	35.5	257.8	40.4	213.9	20.4	504	37.9
.....	.....	867.8	136	1,578.5	150.5	2,336	175.5
897	141.7	766.2	120.1	1,118.1	106.6	1,638.5	123.1
865.8	136.7	511	80.1	1,593.2	151.9	2,239.5	168.3
633.2	.....	638	.....	1,049	.....	1,330.9	.....

MANILA.		OLONGAPO.		SAN ISIDRO.		DAGUPAN.	
TOTAL IN 7 MONTHS. Total de 7 meses.	PERCENTAGE OF NORMAL. Por ciento de la normal.	TOTAL IN 7 MONTHS. Total de 7 meses.	PERCENTAGE OF NORMAL. Por ciento de la normal.	TOTAL IN 7 MONTHS. Total de 7 meses.	PERCENTAGE OF NORMAL. Por ciento de la normal.	TOTAL IN 7 MONTHS. Total de 7 meses.	PERCENTAGE OF NORMAL. Por ciento de la normal.
mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.
191.1	48.2	152.5	45.9	256	62.2	317	64.7
368.6	92.9	299.6	90.2	438.8	106.6	543.1	110.9
303.2	76.4	.....	.....	245.3	59.6	296.8	60.6
437	110.2	.....	.....	605.3	147.1	1,009.7	206.2
347.3	87.6	171.4	51.6	.....	.....	403.3	82.4
708.1	178.5	463	139.3	531.7	129.2	485.2	99.1
588.2	148.3	600.2	180.6	592.4	143.9	704.9	144
581.1	146.5	728.9	219.3	535.1	130	609	124.4
559.9	141.2	377.1	113.5	531.3	129.1	489.1	99.9
84.9	21.4	38.4	11.6	188.8	45.9	260.6	53.2
430.1	108.4	.....	.....	296	71.9	563.4	115.1
223.2	56.3	.....	.....	339.8	82.6	301.7	61.6
157	39.6	195.8	58.9	228.3	55.5	342.2	69.9
567.3	143	.....	.....	525.5	127.7	558.8	114.1
367.1	92.6	352.1	106	428.5	104.1	471.2	96.2
431.2	108.7	276	83.1	430.7	104.6	476.8	97.4
396.6	.....	332.3	.....	411.6	.....	489.6	.....

was an extraordinary lack of rainfall during the period 1903 to 1918. Only a few stations have been chosen, for which the total rainfall from November to May is given for every year of that period together with the percentage of the normal for the seven months, November to May.

It appears from this table that there has been a general lack of rain in the years 1903, 1905, 1912, 1914, and 1915. But the most important and more general periods of drought were those of 1903, 1912, and 1915. A few words on each of them will be of interest.

Drought of 1903.—As far as Manila is concerned we may say that the distribution of rainfall for the year 1903 was very extraordinary. There was a considerable lack of rain throughout the year, except only in December, thus making that year the driest on record since 1865 with the only exception of 1885. That the conditions shown by Manila records did not differ

TABLE XXIII.—*Rainfall in the Philippines during the year 1903.*

Station.	January to May.				June to October.			
	Normal.	1903	Difference.	Per cent.	Normal.	1903	Difference.	Per cent.
	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>		<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	
Aparri.....	528.8	260.6	—268.2	49	969.2	1,033	+ 63.8	107
Tuguegarao.....	66	188.8	+122.8	286	495.1	1,105.1	+610	223
Vigan.....	97	72.7	— 24.3	75	1,704.9	1,826.5	+121.6	107
Bolinao.....	146.7	118.6	— 28.1	81	2,242.2	1,795.5	—446.7	80
San Isidro.....	262.4	60.8	—201.6	23	1,349.6	982.9	—366.7	73
Manila.....	184.2	62.4	—121.8	34	1,536.2	773.7	—762.5	50
Daet.....	927.8	330.1	—588.7	37	1,316.5	722.6	—593.9	55
Atimonan.....	604.3	257.9	—346.4	43	1,261.9	1,184.1	— 77.8	94
Legaspi.....	974.4	552.6	—421.8	57	1,228.3	759	—469.3	62
Iloilo.....	334.3	180.7	—153.6	54	1,272.9	1,249.4	— 23.5	98
Cebu.....	331.5	169.8	—161.7	51	852.6	758.2	— 94.4	89
Bacolod.....	476.7	164.7	—312	34	1,748.2	1,234.6	—513.6	71
Surigao.....	1,532.1	836.4	—695.7	55	734.9	540.5	—194.4	74
Davao.....	733.9	509.9	—224	69	891.5	794.6	— 96.9	89
Zamboanga.....	235.1	71.8	—163.3	31	464.8	321.3	—143.5	69
Jolo.....	524.5	229.3	—295.2	44	721.9	1,074.7	+352.8	149

Station.	November to December.				Annual.			
	Normal.	1903	Difference.	Per cent.	Normal.	1903	Difference.	Per cent.
	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>		<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	
Aparri.....	490.1	561.3	+ 71.2	115	1,988.1	1,854.9	— 133.2	93
Tuguegarao.....	139.3	441.9	+302.6	317	700.4	1,735.8	+1,035.4	248
Vigan.....	65.8	119.1	+ 53.3	181	1,867.7	2,018.3	+ 150.6	108
Bolinao.....	42.5	147.5	+105	347	2,431.4	2,061.6	— 369.8	85
San Isidro.....	157.8	210.4	+ 52.6	133	1,769.8	1,254.1	— 515.7	71
Manila.....	194.5	194.3	— .2	100	1,914.9	1,030.4	— 884.5	54
Daet.....	642.5	1,575.6	+933.1	245	2,886.8	2,628.3	— 258.5	91
Atimonan.....	794.2	1,073.9	+279.7	135	2,660.4	2,515.9	— 144.5	95
Legaspi.....	758.1	1,573.4	+815.3	208	2,960.8	2,885	— 75.8	97
Iloilo.....	189.1	652.8	+463.7	345	1,796.3	2,082.9	+ 286.6	116
Cebu.....	288	504.9	+216.9	175	1,472.1	1,432.9	— 39.2	97
Bacolod.....	326.3	591.2	+264.9	181	2,551.2	1,990.5	— 560.7	78
Surigao.....	895.6	600.2	—295.4	67	3,162.6	1,977.1	—1,185.5	63
Davao.....	252.5	307.7	+ 55.2	122	1,877.9	1,612.2	— 265.7	86
Zamboanga.....	186.2	277.7	+ 91.5	149	886.1	670.8	— 215.3	76
Jolo.....	288	405.2	+117.2	141	1,534.4	1,709.2	+ 174.8	111

much from those shown by the observations of several other stations throughout the Archipelago, can be easily deduced from Table XXIII and the following remarks taken from the *General Weather Notes* for December, 1903, by Rev. Miguel Saderra Masó:

We believe that this table which is a continuation of the one we presented in the *General Weather Notes* of May, will not be without interest, for it shows very clearly how really abnormal the distribution of the rainfall has been this year throughout the Archipelago. We include in this table only the principal stations from which we possess data taken previous to the establishment of the Philippine Weather Bureau, so that we may obtain a truer normal value. To make things more clear, we have divided the year into three periods, namely, the dry season, January to May; the rainy season, June to October; and the relatively dry season, November to December. We find then, first, that this year has been a relatively dry year all over the Islands, since the total rainfall, except at very few places, has been below the normal; second, that the deficit is due to the scant rainfall during the first two periods of the year, so that if it were not for the abundant compensation in December, the year 1903, even considering the total rainfall alone, would have been from every point of view one of the driest years ever known in the Archipelago.

Drought of 1912.—The period of drought observed in the Philippines from October, 1911, to May, 1912, was by far more acute and severe than that of 1903; and judging from the records of Manila, we have every reason to believe that certainly for Manila and very probably for a large number of other stations, it was the worst ever experienced since the foundation of the Manila Observatory in 1865. This may be shown by the following table and remarks, which we reproduce from one of our pamphlets on this subject¹ although we have added as an appendix after the table the years 1912 to 1918 in order that the same table may help later to study the drought of 1914–1915.

In the following table XXIV we offer to the reader statistics which show clearly to what extraordinary and almost incredible an extent the rainfall of the last eight months has been deficient, even if compared with the driest years which Manila has experienced since meteorological records are being kept. The table comprises the following data: (1) The total rainfall during the three months of October, November, and December, for each year from 1865 to 1911; (2) the total rainfall during the five months of January to May, for each year from 1866 to 1912;

¹ *The Extraordinary Drought in the Philippines, October, 1911, to May, 1912*, by Rev. José Coronas, S. J., Manila, 1912.

(3) the total rainfall for the eight months, October to May, for each year of the period under consideration; and finally (4) the mean or normal amounts of rain for each of the three preceding groups of months for the period 1865 to 1911.

TABLE XXIV.—*Distribution of rainfall at Manila for the months of October to May, 1865-1918.*

Years.	October to December.	January to May.	October to May.	Years.	October to December.	January to May.	October to May.
	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>		<i>mm.</i>	<i>mm.</i>	<i>mm.</i>
1865-66	380.9	230.4	611.3	1893-94	187.3	205.4	392.7
1866-67	672.4	243.0	915.4	1894-95	393.1	292.1	685.2
1867-68	362.1	84.0	446.1	1895-96	261.3	192.9	454.2
1868-69	431.7	216.6	648.3	1896-97	139.2	96.6	235.8
1869-70	832.5	325.7	1,158.2	1897-98	338.4	332.7	671.1
1870-71	390.7	40.1	430.8	1898-99	536.9	211.0	747.9
1871-72	338.4	182.7	521.1	1899-1900	450.0	73.5	523.5
1872-73	363.4	206.7	570.1	1900-1	391.4	109.7	501.1
1873-74	356.7	76.0	432.7	1901-2	865.1	94.4	959.5
1874-75	198.7	154.0	352.7	1902-3	198.3	62.4	260.7
1875-76	265.7	256.9	522.6	1903-4	270.0	174.3	444.3
1876-77	181.2	203.6	384.8	1904-5	241.2	201.7	442.9
1877-78	296.3	101.5	397.8	1905-6	212.3	398.7	611.0
1878-79	311.6	329.8	641.4	1906-7	572.8	97.2	670.0
1879-80	550.1	226.9	777.0	1907-8	340.3	589.7	930.0
1880-81	314.9	194.6	509.5	1908-9	573.2	253.6	826.8
1881-82	311.6	240.9	552.5	1909-10	426.2	319.9	746.1
1882-83	602.6	432.6	1,035.2	1910-11	539.9	265.4	805.3
1883-84	237.7	102.8	340.5	1911-12	23.8	70.8	94.6
1884-85	258.3	29.0	287.3				
1885-86	172.6	158.0	330.6	Mean	380.5	200.3	580.8
1886-87	516.3	402.5	918.8				
1887-88	470.0	77.3	547.3				
1888-89	290.5	117.2	407.7	1912-13	348.8	251.7	600.5
1889-90	698.3	193.0	891.3	1913-14	188.6	154.3	342.9
1890-91	480.2	126.3	606.5	1914-15	133.6	63.6	197.2
1891-92	405.3	177.9	583.2	1915-16	555.8	176.9	732.7
1892-93	231.3	243.2	474.5	1916-17	406.1	184.6	590.7
				1917-18	645.5	126.3	771.8

Even a cursory inspection of the table leads to the following conclusions:

(a) The rainfall at Manila for the months of October to December, 1911, differs from the normal for these three months by -356.7 millimeters.

(b) For the five months from January to May, 1912, this difference amounts to -129.5 millimeters.

(c) For the eight months, from October 1, 1911, to May 31, 1912, the total rainfall at Manila remained 486.2 millimeters below the normal amount for this period.

(d) The total amount of rain which fell at Manila during October, November and December, 1911, differs by -115.4 millimeters from the minimum recorded for the same three months during the forty-six years preceding. The said minimum occurred on October to December, 1896, and was 139.2 millimeters. It must further be remarked that only during five other years the rainfall during these months had remained below 200 millimeters. On the other hand, the heaviest rainfalls recorded for these three months in question during the same period, were 832.5 and 865.1 millimeters, corresponding to October to December of 1869 and 1901, respectively.

(e) As regards the precipitation at Manila during the five months from January to May, 1912, we find that the amount is not the absolute minimum of rainfall for this group of months during the period 1865 to 1912, since three years show a still smaller quantity, to wit, 1871, 1885, and 1903.

(f) The total rainfall for the eight months from October, 1911, to May, 1912, is, however, 141.2 millimeters below the absolute minimum which had been recorded for these months during the entire period. The latter was 235.8 millimeters, and belongs to the months of October, 1896, to May, 1897. Only three times since the establishment of the Manila Observatory had the total rainfall corresponding to these eight months been less than 300 millimeters. The greatest total for this group of months was 1,158.2 millimeters, and fell from October, 1869, to May, 1870.

In order to show that this drought was general throughout the Archipelago, Table XXV and the following remarks are taken from the pamphlet mentioned above:

The fact that in a series of observations covering so long a period and made at so many different stations positive differences are so very rare is, beyond doubt, a very noteworthy and striking circumstance. If we prescind from the positive signs shown by the differences for the six stations in northern Luzon during December, there remain only one or another, certainly well isolated case, which has little or no significance if we consider the long period of eight months and the number of stations. That the rains during December exceeded the normal amount for that month at the stations in northern Luzon was due to a typhoon which, though out of season and abnormal in character, brought beneficial rains to this part of the Archipelago, and more particularly to the valleys of Benguet, Isabela, and Cagayan Provinces. The track of this typhoon may be seen in the Monthly Bulletin of the Weather Bureau for December, 1911. The vortex of this storm passed north of, and close to, Tuguegarao in the evening of December 8.

Drought of 1915.—In the table given above, showing the rainfall at Manila for the months of October to December and October to May, it is evident that the year 1915 occupies the second place after 1912 as a year of extraordinary drought. That this period of drought was also general throughout the Archipelago is shown by Table XXVI, which was prepared in 1915 but has not yet been published.

A comparison between the droughts of 1911–1912 and 1914–1915 may not be out of place. For this reason Table XXVII has been prepared which it is thought will be of the greatest interest.

TABLE XXV.—Rainfall at twenty-seven stations of the Philippines, during the drought of October, 1911, to May, 1912.

Station.	October.		November.		December.		January.		February.		March.		April.		May.	
	Total.	Departure from normal.	Total.	Departure from normal.	Total.	Departure from normal.	Total.	Departure from normal.	Total.	Departure from normal.	Total.	Departure from normal.	Total.	Departure from normal.	Total.	Departure from normal.
Jolo.....	189.8	mm. 21.9	134.67	mm. -50.9	90.5	mm. 72.1	73.8	mm. 26.4	69.4	mm. 24.8	.....	mm.	103.2	mm. 5.1	.....	mm.
Zamboanga.....	17.4	84.5	27.2	85.4	188.5	17.5	90.8	51.5	18.4	42	2.3	18.1	27.4	5.8	60.5	7.3
Davao.....	259.1	91.9	62.8	198.5	20.1	155.4	155.4	6.8	65.9	81.3	38.6	113.3	268.5	79.9	156.9	84.9
Butuan.....	105.2	53.8	154.1	247.5	390.7	123.7	96.8	91.2	150.6	98.5	72.7	84.5	79.2	20.5	20.5	91.9
Surigao.....	255.8	31.3	175.9	390.7	390.7	164.9	233.2	98.2	197.7	205.8	132.5	143.6	121.1	130.5	17.8	91.3
Tagbilaran.....	254.6	24.4	.....	.....	32.4	149.8	4.5	84.1	156	88.7	4.6	69.5	151.7	11.8	11.8	13.3
Maasin.....	234.8	49	108.6	182	318.5	2.4	73.7	61	189.1	1	17.5	85.1	44.4	19.6	0	53.5
Orrao.....	142.6	84.5	94	116.9	42.1	148.6	67.5	112.3	90.6	12.8	17.5	70.1	34.5	31.6	4	88.7
Cebu.....	110.2	71.8	54.6	94.2	66.8	96.6	25.3	71.9	33.8	35.8	14.4	43.6	25.1	9	32.5	66.7
Iloilo.....	92.5	133.5	73.5	105.8	48.9	83.3	8	40	11.3	17.6	8.4	22.1	3	35.8	12.2	144
Capiz.....	154.2	337.4	406.9	222	37.2	262.7	17.3	129.8	56.1	62	17.2	8.7	8.4	47	32.5	153
Borongan.....	436.8	85.1	406.9	85.7	278.3	340.5	196.5	235.5	250.7	177.1	62.6	167.6	152.1	86.5	33.9	133.6
Calbayog.....	152.8	93.4	82.3	182.6	53.8	223.5	30	109.7	198.6	18.1	12.7	94.3	122	15	23.3	133.6
Legaspi.....	94.4	234.1	184.4	168.9	71.7	415.3	77.8	313.6	252.6	57.9	75	104	102.6	64.4	94	84.2
Nueva Caceres.....	45.1	161.6	44.3	205.2	42.4	223.8	1.3	102.5	.....	.....	.....	.....	.....	.....	.....	.....
Atimonan.....	169.9	195.7	52.3	418	57.6	325.3	89.3	102.5	54.6	74.1	25.7	56.1	13.5	94	123.7	126.9
Corregidor.....	13.3	176.7	0	76.2	5.6	41.4	6.6	7	4.8	6.6	0	7.9	16	8	80.2	76.4
Manila.....	9.7	179.3	6.1	124.1	8	53.3	21.9	51	24.6	13.9	2.6	15.9	0.8	31.4	20.9	89.8
Olongapo.....	58.9	153	0	72.7	13.7	15.8	2.3	4.3	0	1.4	8.6	3.6	0.8	51.2	11.5	226
San Isidro.....	58.4	124.8	0	97.5	19.8	30	5.6	10.8	3.9	1.6	5.3	8.3	12.7	20.4	141.5	58.2
Tarlac.....	46.3	152.9	3.6	85.4	29.4	16.6	23.8	16.8	18.5	7.9	9.7	15.5	48	17.6	114.5	73.4
Dagupan.....	137.5	66.6	0	71.5	30.3	13.4	8.1	2.8	8.4	11.2	3.8	26.4	18.5	51.3	193.5	73.9
Baguio.....	144.6	345.4	16.8	79	276.6	213.2	2.6	25.4	2.9	10.3	3.6	39.5	18	110.6	233.4	222.1
San Fernando, La Union.....	c 47.2	90.9	0	51.3	42.8	27.2	0	8.6	0	6.4	3.6	39.5	7.6	20.8	2.1	132.7
Vigan.....	54.1	108.9	26	45.3	33.5	27.2	0	11.2	0	1.8	0	3.8	0	63	149.6	30.5
Tuguegarao.....	21.6	229.7	26	259.6	284	128.3	28.6	8	56.1	19.2	5.6	26.3	7.4	68	49.6	30.5
Apurri.....	280	5.9	36.6	254.1	353.6	110.7	185	27.9	56.1	39.7	15.6	32.7	27.6	14.4	46.6	65.3

^a 22 days of observation only. ^b 25 days of observation only. ^c 21 days of observation only.

RAINFALL.

TABLE XXVI.—Rainfall at thirty-eight stations of the Philippines, October, 1914, to May, 1915.

Station.	October.		November.		December.		January.		February.		March.		April.		May.	
	Total,	De- parture	Total,	De- parture	Total,	De- parture	Total,	De- parture	Total,	De- parture	Total,	De- parture	Total,	De- parture	Total,	De- parture
	mm.	normal.	mm.	normal.	mm.	normal.	mm.	normal.	mm.	normal.	mm.	normal.	mm.	normal.	mm.	normal.
Jolo.....	144.4	62.9	164.2	10.5	68.8	85.3	58.7	27.7	6.1	79.9	92.9	21.1	114.7	7.9	242.1	57.2
Isabela, Basilan.....	72.2	174.8	68.6	88.3	49.5	96.3	22.1	28.5	1.3	74.4	13.7	12.2	14.7	69.2	309.3	183.5
Zamboanga.....	58.3	49.7	39.7	56.7	44.6	53.7	11.8	35.2	0.3	48.1	3.0	47.6	21.9	12.4	45.7	25.1
Davao.....	309.8	60.9	48.9	113.1	75.9	130.2	89.9	42.1	0.3	121.9	72.6	12.9	43.8	123.3	174.5	62.7
Surigao.....	250.9	13.2	289.8	103.6	449.8	78.8	390.8	52.4	58.5	294.6	87.1	162.9	173.5	86.2	45.5	75.1
Maasin.....	105	126.6	103.6	184.2	201.5	102.6	197.5	37.3	0	154.9	7.1	78.5	31.7	30.3	142.9	26.7
Cebu.....	73.7	133.4	43.6	99.9	81.3	67.1	54.1	87.8	0	62.5	8.3	45.4	0	30.3	36.6	51.1
Iloilo.....	50	200.6	2.8	167.7	53.3	64.1	63.2	16.2	0	24.9	1.6	26.2	5.9	33.5	131	80.1
San Jose de Buenavista.....	41.4	308.9	16.9	143.9	4.6	55.7	2.3	20.8	0	11.4	3.3	15.7	0	18.4	166.5	1.4
Ormoc.....	22.6	214.3	42.1	80.1	14.8	71.5	144	9.3	3.1	183.6	18.8	53	14.7	49.7	174	1.2
Tacloban.....	155.7	94.4	197	132.2	177.8	177.6	305.7	76.6	14	174.7	108	8.4	57.6	78.6	127.2	14.6
Capiz.....	211.7	2.3	33.3	230.6	25.6	213.2	51.1	81.7	19.7	73.3	7.1	15.1	15.7	82	82.2	140.4
Borongan.....	102.2	356.1	376.1	113.3	437.8	176.4	409.4	50.2	34.8	343.9	211.8	5.2	152.7	27	39.5	117.8
Calbayog.....	203.7	116.8	156.5	109.5	45.7	234.5	52.8	76.6	28.5	124.8	45.1	38.8	9.6	30.6	173.8	92.2
Masbate.....	18.5	118.4	74.2	112.8	63.3	140.3	22.2	94.3	15.8	119.8	7.1	38.8	34.5	19.8	62.9	51.2
Romblon.....	199.5	108.4	72.9	118.3	101.8	118.3	49.9	49.7	18.8	43	30.8	105.2	58.1	102.7	62.3	60.8
Legaspi.....	150.5	180.2	211	127.7	169.8	313.1	143.9	205.1	45.4	217.9	65.9	70.3	56.9	77.2	73.4	51.5
Viracpi.....	158	110	173.6	211.2	244.6	194.2	116.6	46	14	187.2	65.9	21.7	10.3	94.3	21.3	89.4
Naga.....	41.5	206.7	81.3	213.2	74.2	227.8	12.7	93.8	1.8	74.8	36.3	2.8	0	34.1	33.2	115.7
Batangas.....	63.7	152.9	4.8	187.2	16.3	103.2	38.4	19.3	0	113.4	6.5	8.1	5	33.7	126.2	13.7
Atimonan.....	204.4	173.5	94.5	353	124.1	266.4	156.9	36.9	2.3	10	3.9	6.8	33.9	55.9	33.2	157.7
Corregeidor.....	36.9	143.3	10.7	66.9	17.9	35.5	2.3	10	9.7	4.5	0	6	0	39.9	50.4	57.2
Manila.....	40.2	243.7	41	97.7	52.4	9.7	5.6	21.3	3.8	6.5	3.3	8.1	5	33.7	126.2	13.7
Olongapo.....	8.6	230	0	71.8	0	35.4	1.0	4.5	0	2.6	0	5.5	1.8	33.7	50.4	57.2
Iba.....	50.3	109.6	6.4	37.3	8.7	18.2	2.5	4.4	3	3.1	3.5	8.1	1.8	33.7	192.5	18.4
San Isidro.....	13.6	162.3	6.4	85.2	12.8	35.8	2.1	13.4	2.1	2.8	5.9	24.8	14	36.2	185.2	82.7
Tarlac.....	50.3	128.4	1.8	81.3	1.8	40.5	20.8	12.8	5.1	3.3	1.8	19.3	3.8	36.2	199.6	85.5
Dagupan.....	201.5	5.2	29.4	61.2	1.8	13.5	4.9	4.7	10.7	6.4	35.1	6.2	107.4	29.3	177.5	90.8
Baguio.....	63.2	395.9	5.1	60.3	7.5	46.3	3.1	29.6	0	13.2	5.1	29.7	74.7	38.7	304.1	132
San Fernando, La Union.....	22.4	134.1	61.2	162.2	90.8	58.2	0	10.5	22.4	15.7	5.1	5.2	8.7	7.5	284.9	116.7
Echague.....	60	144.5	1	47.4	5.1	6.6	6.9	23.9	4.3	30	8.1	23.6	39.1	34.1	345.9	151.4
Candon.....	0	198.3	0	47.4	2	5.4	0	3	0	6.1	0	9.7	4.6	3.8	193.6	24.7
Vigan.....	18.1	160.5	82.1	38.6	59.5	85.3	20.1	6.2	2.3	14.3	5.3	2.3	15.5	3	354.8	216.8
Turkeygao.....	101.5	169.3	9.4	188.7	0	24.8	0	1.2	2.3	4.9	3.3	25.2	3	17.1	242.9	115.5
Laoag.....	17.1	247.4	186.7	27.2	73.2	175.9	114	91.2	7.6	80.3	13.5	8.7	52.1	10.6	852.7	618.8
Aparri.....	176.7	110	186.7	98	357	175.9	399.9	151.1	76	6	75.5	23.3	52.1	10.6	130.6	19.8
Basco.....	109.3	215.6	505.2	167.1	857	3.4	399.9	151.1	76	6	85.9	34.4	60.8	59.9	593	326.3

b 30 days of observation only.

a 29 days of observation only.

TABLE XXVII.—Total rainfall for the periods October to May and February to April at thirty-five stations of the Philippines, 1911 to 1912, and 1914 to 1915.

Station.	Total rainfall for 8 months.				Total rainfall for 3 months.				
	October, 1911, to May, 1912.		October, 1914, to May, 1915.		February to April, 1912.		February to April, 1915.		
	mm.	mal.	mm.	mal.	mm.	mal.	mm.	mal.	
Isabela, Basilan.....	619.6	540.8	78.8	66.2	62.9	19.1	43.8	29.9	9.1
Zamboanga.....	332.6	227	105.6	43.6	43.9	36.9	11.2	43.9	33.7
Davao.....	1,234.8	815.4	419.4	86.9	373	116.4	256.6	85.6	26.7
Surigao.....	1,524.7	1,745.4	+220.7	61.5	451.3	319.1	132.2	52.3	37.3
Maasin.....	986.6	789.3	197.3	71.1	251	38.8	212.2	82	12.7
Cebu.....	362.7	298.6	64.1	44	73.3	9.3	64	49	6.3
Iloilo.....	257.9	307.8	+49.9	30.7	24.3	7.5	16.8	26.3	8.1
San Jose de Buenavista.....	151.1	232	+80.9	18.2	12	0	11.7	17.7	8.1
Cuyo.....	181.6	233.8	+52.2	29.6	11.5	36.6	11.5	36.5	16.4
Ormoc.....	484.2	614.4	+130.2	43.5	133.1	36.6	96.5	59.7	16.4
Taclohan.....	908.5	1,139	+230.5	55.2	307.2	179.6	127.6	69.6	16.7
Capiz.....	398.5	316.1	82.4	28	81.7	27.3	54.4	49.9	18.1
Borongan.....	1,817.3	1,908.5	+91.2	61.9	465.4	399.2	66.4	56	48.1
Calbayog.....	365.4	601	+235.6	46.3	333.3	209.5	123.8	90.8	37.1
Masbate.....	536.8	384.5	152.3	38.6	129.8	32.5	97.3	58.5	14.7
Romblon.....	894.5	571.1	323.4	44.9	126.8	84.1	42.7	77.5	21.4
Legaspi.....	765.2	896.3	+131.1	40.5	434.2	158.8	275.4	71.3	21.2
Virac.....	88	903	+815	41.2	341.4	186.8	204.6	72.3	26.4
Batangas.....	88	152	+64	12.2	90.3	8.9	2.5	5.3	4
Atimonan.....	516.6	716.8	+200.2	28.1	39.3	103.7	13.4	32.3	97.1
Corregidor.....	110.4	203.7	+93.3	21.5	11.2	7.6	1.5	22.3	16.1
Manila.....	94.6	197.2	+102.6	16.6	28	7.6	20.4	41	16.2
Olongapo.....	97.3	204.4	+107.1	15.8	8.6	2.3	6.8	11.6	17.7
Iba.....	268.6	267.4	1.2	45.8	30.2	14.3	15.9	37.5	17.9
San Isidro.....	247.2	241.9	5.3	45.7	21.9	13.9	11.9	41.1	15
Tarlac.....	294.6	136	158.6	49.3	77.2	10.7	66.5	77.4	10.7
Dagupan.....	398.1	538.7	+140.6	58.6	22.7	153.2	130.5	18.3	123.4
Baguio.....	685.9	487.1	198.8	39.5	11.2	79.8	67.9	12.3	43.4
San Fernando, La Union.....	103.3	407.1	+303.7	23.3	11.2	33.6	22.4	36.6	109.8
Echague.....	409.7	555.3	+145.6	44.3	31.9	51.5	17.6	22.9	37
Vigan.....	88.1	399	+307.2	22.8	20.8	20.8	17.9	0	37.4
Tuguegarao.....	522.8	599	+77.2	55.9	13	88.9	73.9	11.7	79.9
Laosag.....	90.2	899	+804.3	15.5	154.3	13.8	13.8	0	79.8
Aparrí.....	1,001.1	816.4	184.7	76.2	99.3	135.2	35.9	54.7	74.4
Basco.....	1,355.6	2,187.1	+831.5	71.7	270.3	222.7	47.6	75.5	62.2

It seems to follow from this table: (1) that the two droughts must be considered as very extraordinary and very general throughout the Philippines; (2) that taking the whole period of eight months from October to May, the drought of 1911-1912 was more severe than that of 1914-1915; and (3) that considering only the months of February to April, the latter, with the exception of northern Luzon, was more severe, especially in southeastern Luzon, the eastern Visayas and eastern Mindanao. And almost the same result would have been obtained if the months of January and May had been included in the second period, as seems to be shown by the preceding table, in which the difference from the normal is given for each station and each month.

Longest periods of rainless days in the droughts of 1911-1912 and 1914-1915.—We will finish this chapter by giving in the following table XXVIII the longest periods of rainless days observed at several stations of the Philippines during the two severest periods of drought of which we have just spoken. Periods of less than 15 days have not been considered of sufficient importance to be included in the table. For stations having several periods of more than 15 rainless days, only the longest periods are mentioned.

TABLE XXVIII.—*Longest periods of rainless days in the droughts of 1911-1912 and 1914-1915.*

Station.	Drought of October 1911, to May, 1912.		Drought of October 1914, to May, 1915.	
	Number of days.	Periods.	Number of days.	Periods.
Jolo	30	Jan. 18-Feb. 16.	27	Feb. 4-Mar. 2.
Isabela	21	Jan. 25-Feb. 14.	36	Jan. 23-Feb. 27.
	37	Mar. 3-Apr. 8.		
Zamboanga	25	Mar. 15-Apr. 8.	31	Dec. 15-Jan. 14.
Davao	18	Mar. 11-28.		
Cotabato	15	Mar. 14-28.	38	Jan. 22-Feb. 28.
Cagayan	22	Nov. 5-26.	38	Jan. 22-Feb. 28.
	35	Mar. 6-Apr. 9.		
Dapitan	15	May 3-17.	55	Feb. 13-Apr. 8.
Butuan	51	Mar. 8-Apr. 27.	20	Feb. 8-27.
	32	Apr. 29-May 30.	57	Jan. 21-Mar. 18.
Dumaguete	28	Jan. 7-Feb. 3.	33	Mar. 21-Apr. 22.
	23	Mar. 8-30.	16	Nov. 2-17.
Tagbilaran	29	Apr. 28-May 26.	67	Jan. 22-Mar. 29.
			27	Jan. 29-Feb. 24.
Iwahig			33	Mar. 19-Apr. 20.
Surigao	15	May 3-17.	65	Jan. 22-Mar. 27.
Maasin	23	Mar. 8-30.		
	46	Apr. 16-May 31.	25	Apr. 13-May 7.
Cebu	16	May 9-24.	48	Jan. 19-Mar. 7.
	22	Jan. 14-Feb. 4.	22	Mar. 29-Apr. 19.
Iloilo	34	Mar. 8-Apr. 10.	25	Nov. 1-25.
	35	Apr. 12-May 16.	68	Jan. 20-Mar. 28.
	56	Nov. 17-Jan. 11.	22	Mar. 30-Apr. 20.
San Jose de Buenavista	23	Jan. 13-Feb. 4.	59	Jan. 19-Mar. 18.
	36	Mar. 6-Apr. 10.	44	Mar. 20-May 2.
Cuyco	112	Nov. 14-Mar. 4.	22	Dec. 6-27.
	36	Mar. 6-Apr. 10.	125	Dec. 29-May 2.

TABLE XXVIII.—*Longest periods of rainless days in the droughts of 1911-1912 and 1914-1915—Continued.*

Station.	Drought of October 1911, to May, 1912.		Drought of October 1914, to May, 1915.	
	Number of days.	Periods.	Number of days.	Periods.
Ormoc			29	Jan. 29-Feb. 26.
Capiz	29	Apr. 28-May 26.	21	Feb. 26-Mar. 18.
Calbayog	21	Mar. 6-26.	25	Mar. 30-Apr. 23.
Masbate	29	Apr. 28-May 26.	21	Mar. 30-Apr. 19.
Romblon	17	Jan. 13-29.	16	Mar. 28-Apr. 12.
Naga	22	Mar. 20-Apr. 10.	19	Jan. 3-21.
			22	Jan. 31-Feb. 21.
			19	Feb. 23-Mar. 13.
			19	Apr. 1-19.
Batangas	22	Oct. 24-Nov. 14.	43	Jan. 31-Mar. 14.
	25	Feb. 22-Mar. 17.	37	Mar. 22-May 3.
	45	Mar. 23-May 6.		
Atimonan	15	Mar. 3-17.	16	Feb. 13-23.
			21	Dec. 23-Jan. 12.
Ambulong, Tanauan, Batangas			29	Jan. 31-Feb. 28.
			24	Mar. 2-25.
			21	Mar. 28-Apr. 17.
Silang	24	Oct. 21-Nov. 13.		
	23	Feb. 7-29.		
Santa Cruz, Laguna			24	Jan. 30-Feb. 22.
			23	Mar. 29-Apr. 20.
	24	Oct. 24-Nov. 16.	21	Jan. 31-Feb. 20.
Manila	22	Nov. 20-Dec. 11.	25	Mar. 28-Apr. 21.
	25	Mar. 19-Apr. 12.	24	Apr. 23-May 16.
	24	Apr. 14-May 7.		
	22	Oct. 26-Nov. 16.	59	Jan. 14-Mar. 13.
Antipolo	25	Feb. 18-Mar. 13.	22	Apr. 23-May 14.
	22	Mar. 16-Apr. 6.		
	24	Apr. 13-May 6.		
Corregidor	44	Oct. 25-Dec. 7.	29	Oct. 18-Nov. 15.
	64	Feb. 8-Apr. 11.	35	Dec. 25-Jan. 28.
			71	Feb. 23-May 4.
Olongapo	62	Jan. 14-Mar. 15.		
	48	Mar. 19-May 5.		
	45	Oct. 24-Dec. 7.		
Iba	33	Dec. 10-Jan. 11.	38	Dec. 16-Jan. 22.
	22	Feb. 22-Mar. 14.	64	Feb. 24-Apr. 28.
	21	Apr. 9-29.		
	44	Oct. 25-Dec. 7.		
San Isidro, Nueva Ecija	25	Feb. 22-Mar. 17.	24	Jan. 29-Feb. 21.
	41	Mar. 19-Apr. 28.	36	Mar. 26-Apr. 30.
Tarlac	36	Nov. 2-Dec. 7.	46	Jan. 7-Feb. 21.
	29	Feb. 18-Mar. 17.		
	43	Oct. 26-Dec. 7.	39	Nov. 15-Dec. 23.
	30	Dec. 11-Jan. 9.	35	Dec. 25-Jan. 28.
Dagupan	26	Jan. 11-Feb. 5.	21	Feb. 1-21.
	31	Feb. 8-Mar. 9.		
	27	Mar. 11-Apr. 6.		
	39	Dec. 11-Jan. 8.	18	Dec. 27-Jan. 13.
Bolinao	49	Jan. 20-Mar. 8.	36	Jan. 17-Feb. 21.
	36	Mar. 10-Apr. 14.	37	Mar. 29-May 4.
	36	Nov. 2-Dec. 7.		
Baguio	33	Dec. 11-Jan. 12.	32	Nov. 8-Dec. 9.
	27	Feb. 18-Mar. 15.	58	Jan. 27-Mar. 25.
	50	Oct. 19-Dec. 7.	99	Nov. 15-Feb. 21.
San Fernando, Union	100	Dec. 11-Mar. 19.	24	Feb. 23-Mar. 18.
	35	Mar. 21-Apr. 24.	27	Mar. 20-Apr. 15.
Echague	26	Feb. 20-Mar. 16.	26	Jan. 26-Feb. 20.
			25	Mar. 1-25.
	51	Oct. 18-Dec. 7.		
Candon	29	Dec. 10-Jan. 7.	44	Oct. 1-Nov. 13.
	138	Jan. 9-May 25.	122	Dec. 16-Apr. 16.
	23	Oct. 2-24.	25	Oct. 2-26.
Vigan	43	Oct. 26-Dec. 7.	48	Oct. 28-Dec. 14.
	165	Dec. 12-May 24.	68	Jan. 8-Mar. 16.
			22	Dec. 15-Jan. 5.
Tuguegarao	43	Feb. 1-Mar. 14.	22	Jan. 30-Feb. 20.
	24	Mar. 18-Apr. 10.	28	Feb. 22-Mar. 21.
	67	Oct. 2-Dec. 7.		
Laog	28	Dec. 12-Jan. 8.	97	Nov. 14-Feb. 18.
	102	Jan. 29-May 9.	49	Mar. 15-May 2.
Aparri	23	Mar. 19-Apr. 10.	16	Apr. 8-23.
Basco	19	Feb. 25-Mar. 14.		

Special attention should be called to the most extraordinary period of over 100 days without rain observed in Cuyo, Candon, Vigan and Laoag in the drought of 1911 to 1912, and in Cuyo and Candon in the drought of 1914 to 1915. It follows from the data given in Table XXVIII that the longest periods of rainless days occurred in the western part of the Archipelago. Not to be misled, however, we must remember that this was to be expected if we take into consideration the normal monthly distribution of rainfall in the Philippines. Because, on the one hand, the western part of the Archipelago is the region in which, even in normal years, the dry season is very pronounced, especially during the months of December to April, while, on the other hand, the eastern coasts of southern Luzon, Samar, Leyte and Surigao have in normal years the most persevering and abundant rains from November to January or February. Hence it is that the percentage of rainfall given in Table XXVII shows better the severity of the drought for a particular place than the absolute amount of rainfall or the number of rainless days.

IV. RELATIVE HUMIDITY AND CLOUDINESS.

Relative humidity as a climatic factor.—We take from Hann's *Handbook of Climatology*¹ the following remarks on the relative humidity of the air as a climatic factor:

For purely climatological purposes the relative humidity is, unquestionably, the most convenient expression for the amount of water vapour in the air. When we describe the air as being damp, or dry, we are usually speaking quite unconsciously of the relative humidity. The air is moist in our climate in winter, notwithstanding the small amount of water vapour which it then contains; while the air is dry in summer, although it then contains two or three times as much vapour as in winter. The relative humidity, next to the temperature, determines the need which is felt by organisms for water, and also controls evaporation.

The relative humidity is, furthermore, by no means an expression which is used only in computations. It is a perfectly definite climatic factor, as can be seen from the fact that it is directly indicated by organic substances. All organic substances are more or less hygroscopic, and their condition, so far as it depends upon the humidity of the air, is determined by the relative, and not by the absolute, humidity. Thus it happens that organic substances, such as membranes or hairs, furnish us with excellent means for the direct measurement of the relative humidity of the air. All other measurements of humidity are indirect, and involve a somewhat difficult calculation, the results of which are in certain respects less accurate than those obtained by means of the hair hygrometer. The readings of the psychrometer below freezing are a case in point. The relative humidity is therefore the most natural expression for the humidity of the air as a climatic factor, for it reacts directly upon organic substances.

In *The Weather and Climate of Chicago* by Cox and Armington we find the following statements on the same subject which will be of interest to our readers:

The term *humidity* has reference to the quantity of moisture present in the air at all times in the state of invisible vapor. The air is said to be dry when but little is present, and humid when the quantity is relatively considerable. If the quantity of moisture is measured as weight per unit of volume, as, for example, grains per cubic foot, the numerical value is designated the absolute humidity. If, however, as is most common in

¹ English translation by Ward, page 52.

statistics relating to weather and climate, the measurement is expressed as a percentage of the quantity of vapor that can possibly exist at the temperature in question, then the numerical value is called the relative humidity.

The conditions of humidity have at times fully as much to do with comfort and salubrity as do those of temperature, sunshine, and wind. Paradoxical as it may seem, a high degree of humidity makes a hot wave sensibly hotter, and a cold wave colder, than is the case when the amount of moisture in the air is relatively low. High humidity in warm weather, by materially retarding the evaporation of perspiration from the pores of the body, prevents the cooling produced by this process in other heated periods. On the other hand, during times of cold weather, by penetrating the clothing and communicating dampness to it, an atmosphere with high humidity increases the conductive qualities of the fabric and permits a more rapid escape of the body's heat. The disagreeable features of damp climates, whether warm or cold, and the comparative pleasantness of regions in which the atmosphere has a low percentage of moisture are well known. Residents of the foothills along the eastern sides of the Rockies, and those of the dry sections of the interior Northwest, experience temperatures of zero and below with less discomfort than even much higher winter temperatures bring to localities of greater relative humidity; and the heat of many arid regions is rendered less oppressive by the extreme dryness of the air, while very moist climates are enervating at temperatures but little above the average.

Relative humidity is high in the Philippines.—That there is a very great amount of water vapor in the atmosphere of the Philippine Islands will be clearly seen from the data which will be presently given. This quantity of vapor is due to the extraordinary evaporation from the seas that surround them on all sides, to the richness of their vegetation, to the different prevailing winds in the different seasons of the year, and finally to the abundant rains so proper of a tropical country. The first two may be considered as general causes of the great humidity which is generally observed in all our islands throughout the year, while the other two may influence in a different degree the humidity of the different months of the year and of the different regions of the Archipelago. Thus in winter, when the rains are so abundant in the eastern part of the Philippines owing to the prevailing northeasterly winds, the humidity must be greater there than in the western part where a dry season prevails. On the contrary, from June to October, the rains, although quite general throughout the Archipelago, are more abundant in the western part of the Philippines, which is more exposed to the prevailing westerly and southwesterly

winds; hence the humidity of the air is greater there than in the eastern part of the Archipelago.¹

Mean monthly and annual relative humidity.—Table XXIX gives the mean monthly and annual relative humidity for thirteen stations of the Philippines, together with the mean annual range for each station. The highest annual mean is that of Baguio, with 85.7 per cent; then follow, in order, the annual means of Surigao and Paracale, in which stations the rains are frequent throughout the whole year. The stations with the lowest annual humidity are Cebu, in the Visayas; and Vigan, Dagupan, San Isidro (Nueva Ecija), and Manila, in the central and western part of Luzon. The annual means of the thirteen stations chosen vary between 85.7 per cent and 76.7 per cent.

The greatest mean annual range, 19.9, is that of San Isidro, Nueva Ecija, in the interior of Luzon, and the lowest, 3.3, is that of Paracale, on the northern coast of Camarines. Generally speaking, stations more exposed to the northeast monsoon have the lowest annual ranges of humidity; they have also the highest annual means. These stations show the highest monthly mean humidity in December, while in the others the highest monthly mean is that of August or September. With a few exceptions, the lowest monthly mean for all the stations chosen is that of April.

Plate XIII gives a graphic representation of the monthly distribution of relative humidity in Baguio, Manila, Legaspi, Cebu, and Surigao. This plate shows clearly: (1) the small annual range of Cebu and Legaspi as compared with that of the other three stations; (2) that the mean monthly minimum of Surigao is that of August, which may be the case with other stations of Mindanao, owing to their distance from the summer typhoon belt; (3) that the lowest monthly mean of Baguio is that of February: and as Vigan has its minimum also in February (see Table XXIX), this may possibly be the case in all the stations of northwestern Luzon; (4) that the highest monthly mean of Legaspi, Cebu and Surigao is that of December, while Baguio shows the highest mean in August, and Manila in September.

Relative humidity of the Philippines, compared with that of 22 selected cities of the United States of America.—In Table XXX² we give the monthly and annual relative humidity for a few stations in the Philippines, together with that of 22

¹ See *Climatología de Filipinas* in *El Archipiélago Filipino*, Vol. II, pages 55 and 56.

² This table has been prepared with data published in *Climatology of the United States*, by A. J. Henry, Washington, 1906.

TABLE XXIX.—Mean monthly and annual relative humidity for several stations in the Philippines.
 TABLA XXIX.—Media mensual y anual de la humedad relativa para varias estaciones de Filipinas.

	JAN- UARY. Enero.	FEB- RUARY. Febrero.	MARCH. Marzo.	APRIL. Abril.	MAY. Mayo.	JUNE. Junio.	JULY. Julio.	AUGUST. Agosto.	SEP- TEMBER. Sep- tiembre.	OCTO- BER. Octubre.	NOVEM- BER. Noviem- bre.	DECEM- BER. Diciem- bre.	AN- NUAL. Annual.	MEAN AN- NUAL RANGE. Oscila- ción media anual.
SURIGAO (1903-1918).														
Mean relative humidity (%) [Me- dia de la humedad relativa (%)].	88.4	86.5	86.2	86.4	85.2	84.5	81.1	79	81	84.5	87.3	88.6	84.9	9.6
Highest mean relative humidity (%) [Media máxima de la hu- medad relativa (%)].	92	92	90	92	89	89	87	84.1	87	89	89.4	93	93	
Year (Año).....	{ 1904 1916	1904	1907	1904	1903	1903	1903	1906	1903	1904	1910	1903	1903	
Lowest mean relative humidity (%) [Media mínima de la hu- medad relativa (%)].	85.4	81.3	84.3	80.8	79.3	81.1	70.6	73.9	74.5	80.8	86	84.5	70.6	
Year (Año).....	1913	1914	1905	1917	1913	1913	1918	1913	1918	1913	1916	1912	1918	
CEBU (1903-1918).														
Mean relative humidity (%) [Me- dia de la humedad relativa (%)].	77.2	76	73.6	73.4	75.2	76.7	77.6	76.2	77.8	79	78.7	79	76.7	5.6
Highest mean relative humidity (%) [Media máxima de la hu- medad relativa (%)].	82	82.6	80.4	78	80.4	82.2	83.7	81	83.6	85	83.3	84.1	85	
Year (Año).....	1904	1908	1907	1904	1907	1903	1907	1905	1908	1904	1908	1908	1904	
Lowest mean relative humidity (%) [Media mínima de la hu- medad relativa (%)].	71	67.9	70.2	70	70.1	70	68.7	70.9	71	73.3	74.3	74.9	67.9	
Year (Año).....	1910	1913	1910	1917	1918	1910	1910	1910	1918	1914	1913	1914	1915	
LOILO (1903-1918).														
Mean relative humidity (%) [Me- dia de la humedad relativa (%)].	80.3	78	74.7	73.1	77.7	81	83.4	82.9	84.1	83.5	82.9	82.5	80.3	11
Highest mean relative humidity (%) [Media máxima de la hu- medad relativa (%)].	86.7	86	79	80.9	86	85	88	91	90	87	87.1	89	91	
Year (Año).....	1918	1904	1904	1905	1904	1904	{ 1903 1904	1904	1904	{ 1903 1904	1917	1903	1904	

TABLE XXIX.—*Mean monthly and annual relative humidity for several stations in the Philippines—Continued.*
 TABLA XXIX.—Media mensual y anual de la humedad relativa para varias estaciones de Filipinas—Continuación.

	JAN- UARY. Enero.	FEB- RUARY. Febrero.	MARCH. Marzo.	APRIL. Abril.	MAY. M. yo.	JUNE. Junio.	J. LY. Julio.	AUGUST. Agosto.	SEPTEM- BER. Septiem- bre.	OCTO- BER. Octubre.	NOVEM- BER. Noviem- bre.	DECEM- BER. Diciem- bre.	MEAN AN- NUAL RANGE ANNUAL. Oscila- ción media anual.
LOILO (1903-1918)—Continued.													
Lowest mean relative humidity (%) [Media mínima de la humedad relativa (%)]	72.9	65.6	64.6	64.1	69.2	76.3	73.3	78.8	81.9	77	75.3	75.7	64.1
Year (Año)	1912	1915	1912	1912	1912	1912	1910	1910	1916	1914	1914	1914	1912
TACLOBAN (1904-1918).													
Mean relative humidity (%) [Media de la humedad relativa (%)]	83.5	82.1	80.1	80.6	81.7	83	81.7	79.7	81.4	83.8	85.1	85.6	82.4
Highest mean relative humidity (%) [Media máxima de la humedad relativa (%)]	91.8	87.5	86	85	86.5	85.7	85.7	83.2	85.5	88.7	90.8	89.8	91.8
Year (Año)	1918	1917	1918	1911	1916	1918	1916	1917	1917	1914	1917	1916	1918
LEGASPI (1903-1918).													
Mean relative humidity (%) [Media de la humedad relativa (%)]	82	80.8	79.6	78.5	79.2	80.6	81.9	81.9	83.4	82.8	83.1	83.9	81.5
Highest mean relative humidity (%) [Media máxima de la humedad relativa (%)]	86.5	90.2	88.7	83.6	82.6	84.6	84.9	86	85.1	85.3	85.9	89	90.2
Year (Año)	1911	1917	1905	1905	1905	1918	1909	1907	1905	1917	1917	1903	1917
ATIMONAN (1903-1918).													
Lowest mean relative humidity (%) [Media mínima de la humedad relativa (%)]	77.5	75.1	75	74.6	74.2	75	79	77.7	81.2	78.4	80	79.4	74.2
Year (Año)	1912	1914	1903	1909	1912	1903	1904	1909	1909	1911	1911	1911	1912
Mean relative humidity (%) [Media de la humedad relativa (%)]	84.5	83	81.1	79.9	81.7	82.9	82.7	81.6	84.4	85.2	84.9	86.1	83.2

TABLE XXIX.—Mean monthly and annual relative humidity for several stations in the Philippines—Continued.

TABLA XXIX.—Media mensual y anual de la humedad relativa para varias estaciones de Filipinas—Continuación.

	JAN- UARY. Enero.	FEB- RUARY. Febrero.	MARCH. Marzo.	APRIL. Abril.	MAY. Mayo.	JUNE. Junio.	JULY. Julio.	AUGUST. Agosto.	SEPTEM- BER. Septem- bre.	OCTO- BER. Octubre.	NOVEM- BER. Noviem- bre.	DECEM- BER. Diciem- bre.	AN- NUAL. RANGG Anual. Oscila- ción media anual.
DAGUPAN (1903-1918).													
Mean relative humidity (%) [Me- dia de la humedad relativa (%)]	75.1	73.7	73	72.8	77	80.5	85.4	86	85.7	82.3	78.8	77.6	79
Highest mean relative humidity (%) [Media máxima de la hu- medad relativa (%)]	82.5	83.1	79.2	80.3	82.2	83.9	89.9	89.9	89.7	85.3	86.2	85	89.9
Year (Año)	1910	1912	1910	1911	1910	1912	1911	1912	1910	1909	1909	1910	{1911 1912}
Lowest mean relative humidity (%) [Media mínima de la hu- medad relativa (%)]	69.4	68	69	67.3	69.2	76	79.9	83	82.5	76.9	72.4	72.9	67.3
Year (Año)	1907	1903	1906	1915	1905	1903	1916	{1903 1909}	1908	1914	1905	1906	1915
BAGUO (1910-1918).													
Mean relative humidity (%) [Me- dia de la humedad relativa (%)]	81	80.8	81.2	82.7	87	87.7	92.2	94.1	92.6	88.5	81.2	79.8	85.7
Highest mean relative humidity (%) [Media máxima de la hu- medad relativa (%)]	88.1	88.9	86.2	86.7	90.2	90.4	96.5	96.7	94.7	91.2	85.8	86.4	96.7
Year (Año)	1911	1910	1910	1917	1910	1911	1918	1911	1914	1918	1916	1917	1911
Lowest mean relative humidity (%) [Media mínima de la hu- medad relativa (%)]	78.4	76.1	72.2	75.2	84.4	85.7	88	91	91.3	83.1	74.6	71.4	71.4
Year (Año)	1914	1915	1912	1915	1912	1915	1916	1917	1916	1914	1918	1918	1918
VIGAN (1903-1918).													
Mean relative humidity (%) [Me- dia de la humedad relativa (%)]	71.8	71.4	72.9	73	74.6	80	84.1	85.3	84.5	80	75.4	74	77.2
Highest mean relative humidity (%) [Media máxima de la hu- medad relativa (%)]	87.3	83.3	81.8	82.8	79.9	85	88.3	88.8	90.5	86.1	83.8	87.5	90.5
Year (Año)	1912	1912	1914	1914	1907	1904	1914	1914	1914	1912	1912	1911	1914

Lowest mean relative humidity (%) [Media minima de la humedad relativa (%)]	60.7	60	67.6	68	65	75	80	80.3	79.3	76	66.4	67.5	60
Year (Año)	1918	1903	1918	1903	1903	1903	1903	1909	1908	{ 1904 1907 }	1905	1907	1903
APAREI (1903-1918).													
Mean relative humidity (%) [Media de la humedad relativa (%)]	83.8	81.8	81.3	80.9	81.3	80.6	82	83.2	84.3	84.5	84.9	86.1	82.9
Highest mean relative humidity (%) [Media maxima de la humedad relativa (%)]	87.2	86.9	85.4	85	85.4	86.3	86	87.7	88.9	88.3	91.2	89.6	91.2
Year (Año)	1908	1908	1917	1909	1908	1905	1904	1908	1905	1905	1906	1916	1906
Lowest mean relative humidity (%) [Media minima de la humedad relativa (%)]	79.6	78	77.4	76.3	75.6	75.2	77.5	80.1	80.2	80.3	78.9	79.8	75.2
Year (Año)	1910	1903	1912	1918	{ 1912 1918 }	1918	1910	1918	1918	1914	1911	1909	1918

MONTHLY AND ANNUAL MEAN RELATIVE HUMIDITY

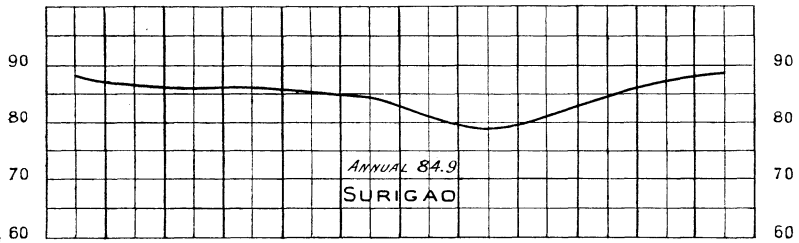
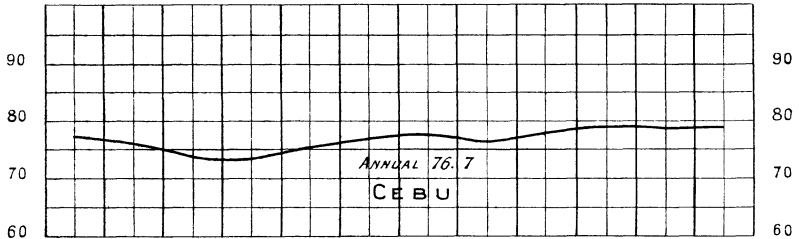
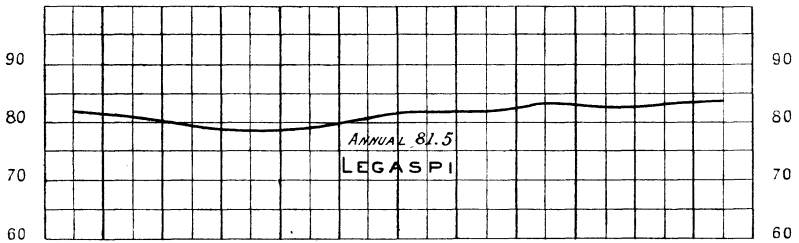
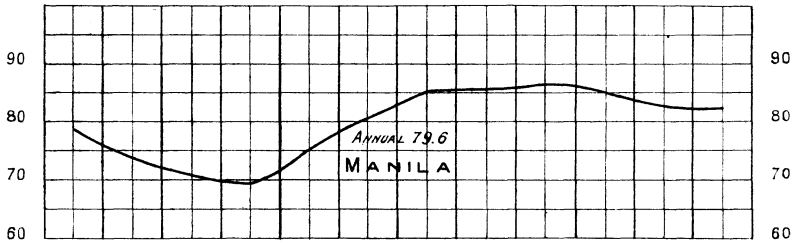
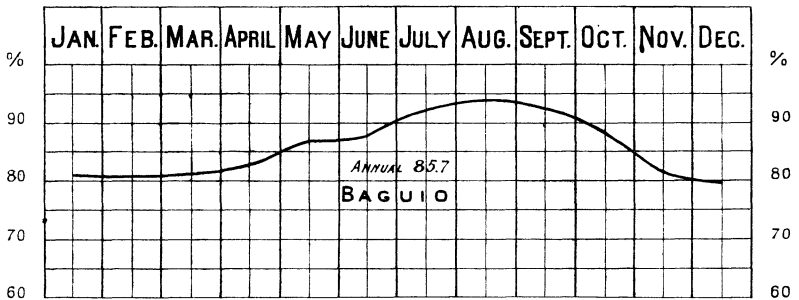


TABLE XXX.—Mean monthly and annual relative humidity of the Philippines compared with that of 22 selected cities of the United States of America.

TABLE XXX.—Media mensual y anual de la humedad relativa de Filipinas comparada con la de 22 ciudades escogidas de los Estados Unidos de América.

STATION. Estación.	JANU- ARY. Enero.	FEBRU- ARY. Febrero.	MARCH. Marzo.	APRIL. Abril.	MAY. Mayo.	JUNE. Junio.	JULY. Julio.	AUGUST. Agosto.	SEPTEM- BER. Septiem- bre.	OCTO- BER. Octubre.	NOVEM- BER. Noviem- bre.	DECEM- BER. Diciem- bre.	ANNUAL. Anual.	MEAN ANNUAL RANGE. Oscila- ción media anual.
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
Manila	79	74	71	69	75	80	85	85	86	85	83	82	80	17
Batavia	81	81	81	83	87	88	94	94	93	88	81	80	86	80
Legaspi	82	81	80	78	79	81	82	82	83	83	83	84	82	14
Cebu	77	76	74	73	75	77	78	76	78	79	79	79	77	6
Iloilo	80	78	75	73	78	81	83	83	84	84	83	82	80	11
Albany, New York	81	80	78	70	69	72	72	71	75	80	80	82	76	13
Boston, Massachusetts	72	72	70	66	69	72	72	76	75	75	75	72	72	10
Buffalo, New York	78	78	74	72	70	72	72	72	72	72	74	71	73	8
Chicago, Illinois	82	82	78	72	72	74	72	72	70	72	77	81	75	12
Denver, Colorado	54	56	52	49	52	48	48	48	44	46	48	52	50	12
Detroit, Michigan	83	81	77	70	70	70	68	70	74	75	79	82	75	15
El Paso, Texas	48	41	30	24	24	28	44	48	48	45	44	46	24	24
Galveston, Texas	84	85	84	83	80	80	84	78	78	76	80	82	81	9
Havre, Montana	79	80	77	60	61	60	54	53	61	66	74	77	67	27
Jacksonville, Florida	80	78	76	73	74	79	79	82	84	82	82	82	79	11
Key West, Florida	81	80	76	73	74	76	74	74	78	78	80	80	77	8
Los Angeles, California	65	68	72	72	76	74	76	75	72	73	78	64	82	14
Marquette, Michigan	87	86	84	80	72	73	72	76	72	76	82	83	78	13
Moorhead, Minnesota	87	86	84	74	66	74	74	74	73	76	85	86	78	21
New Orleans, Louisiana	79	78	77	74	74	76	78	78	77	74	79	79	77	6
New York, New York	74	72	72	68	71	74	74	76	76	74	74	73	73	8
Northfield, Vermont	80	76	77	72	72	76	78	84	80	82	80	79	78	13
Omaha, Nebraska	76	76	72	64	66	68	66	67	67	64	70	76	75	12
Portland, Oregon	85	80	74	70	70	68	64	67	72	80	85	86	80	22
San Francisco, California	80	78	78	74	78	80	84	86	81	80	78	80	76	8
Seattle, Washington	84	79	75	71	82	80	68	70	76	82	84	84	76	16
Washington, D. C.	73	70	70	64	72	74	74	77	78	76	74	72	73	14

TABLE XXXI.—Extreme values of the relative humidity for Manila, 1903-1918.

TABLA XXXI.—Valores extremos de la humedad relativa de Manila, 1903-1918.

	JANU- ARY. Enero.	FEB- RUARY. Febrero.	MARCH. Marzo.	APRIL. Abril.	MAY. Mayo.	JUNE. Junio.	JULY. Julio.	AUGUST. Agosto.	SEPTEM- BER. Septiem- bre.	OCTO- BER. Octubre.	NOVEM- BER. Noviem- bre.	DECEM- BER. Diciem- bre.	ANNUAL. Annual.
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
Mean daily maximum (Máxima media diaria)	93.1	90.4	88.1	87	90	93.6	95.8	95.4	95.8	95.4	94.7	94.8	92.8
Mean daily minimum (Mínima media diaria)	60.5	54.5	49.8	49.5	56.8	63.2	70.9	71.8	72.2	68.9	65.7	64.6	62.4
Mean daily range (Oscilación media diaria)	32.6	35.9	38.3	37.5	33.2	30.4	24.9	23.6	23.6	26.5	29	30.2	30.4
Highest mean daily maximum (Máxima media diaria más alta)	95.9	93.8	92.6	92.9	93.7	96.2	97.3	97.7	98	97.7	97.4	96.5	95.3
Lowest mean daily minimum (Mínima media diaria más baja)	55.8	45.7	42.3	40.9	49.5	54.3	66.6	64.6	66.7	61.7	54.7	56.2	59.8
Mean of the absolute maximum (Media de las máximas absolutas)	98.2	97	95.6	95.2	97.4	99	98.9	99.2	98.8	99	98.5	98.6	99.8
Mean of the absolute minimum (Media de las mínimas absolutas)	47.9	42	36.2	36.9	41.3	46.5	58.8	60	60.6	55.8	49.8	49.1	34.2
Mean absolute range (Media de las oscilaciones absolutas)	50.3	55	59.4	58.3	56.1	52.5	40.1	39.2	38.2	43.2	48.7	49.5	65.6
Highest absolute maximum (Máxima absoluta)	100	99	99	99	100	100	100	100	100	100	100	100	100
Year (Año)	1913	(*)	(*)	(*)	{ 1906 1914 }	(*)	(*)	(*)	(*)	{ 1904 1906 }	{ 1904 1908 }	{ 1904 1908 }	(*)
Lowest absolute minimum (Mínima absoluta)	42	35.5	30	30	27	32	51	48	55	42	40.5	36	27
Year (Año)	{ 1905 1912 }	1915	1913	{ 1903 1905 }	1912	1903	1915	1903	1903	1914	1913	1911	1912
Extreme range (Oscilación absoluta)	58	63.5	69	69	73	68	49	52	45	58	59.5	64	73

* On several years.

selected cities of the United States of America. But in order that a good comparison can be made, it should be remarked that while the humidity for the Philippines is the average of 24 or 6 daily observations, that of the United States has been deduced from only two daily observations, at 8 a. m. and 8 p. m. Now, monthly and annual mean values of relative humidity obtained by the last method are almost invariably higher than those obtained by the other two methods used in the Philippines. Hence, in making the comparison, the United States values should be considered even lower than what they appear in Table XXX. It is evident from this table that, with the exception of places near the coasts, the monthly and annual means of relative humidity for the United States are much lower than those of the Philippines. Our readers will notice, however, the great difference between the values of different stations of the United States. To explain this, we should bear in mind that there are several factors that determine the amount of humidity in the air, like temperature, altitude, surrounding mountains, distance from the sea or lakes, etc.

The geographic distribution of relative humidity in the United States is thus described by Henry: ¹

The chief characteristics of the geographic distribution of relative humidity in the United States are as follows: (1) Along the coasts there is a belt of high humidity at all seasons, the percentage of saturation ranging from 75 to 80 per cent. (2) Inland from about the ninety-seventh meridian eastward to the Atlantic coast the amount varies between 70 and 75 per cent. (3) The dry region is in the Southwest, where the average annual value is not over 50 per cent. In this region is included Arizona, New Mexico, southwestern Colorado, and the greater portion of both Utah and Nevada. The mean annual relative humidity in the remaining portion of the elevated country comprised between the one hundredth meridian on the east and the Sierra Nevada and Cascades on the west varies between 50 and 65 per cent.

In July, August, and September the mean values in the Southwest sink as low as 20 and 30 per cent, while along the Pacific coast districts they continue about 80 per cent the year around. In Atlantic coast districts and generally east of the Mississippi River the variation from month to month is not great. April is probably the driest month in the year.

Extreme values of relative humidity for Manila.—In Table XXXI complete information is given concerning the extreme values of relative humidity for Manila. The annual mean daily

¹ *Climatology of the United States*, page 61.

TABLE XXXII.—*Mean hourly relative humidity for Manila, monthly, annual and semi-annual, 1903-1918.*
 TABLA XXXII.—Medias horarias mensuales, anuales y semi-anuales de la humedad relativa en Manila, 1903-1918.

MONTH. Mes.	MONTH.											Noon. Medio- dia.
	1 a.	2 a.	3 a.	4 a.	5 a.	6 a.	7 a.	8 a.	9 a.	10 a.	11 a.	
	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>
January (Enero).....	87.7	88.7	89.4	90.2	90.7	91.3	91.2	89.8	74.3	70.2	68.1	66.6
February (Febrero).....	83.4	84.8	86.1	87.1	88	88.6	88	78.4	69.5	65.7	61	62.2
March (Marzo).....	80.8	82.5	83.9	85.1	86	86.8	85.4	73.3	63.7	62.7	61.1	58.7
April (Abril).....	79.8	81.5	82.8	83.9	85	85.7	79.4	68.7	63.8	62.3	60.2	57.6
May (Mayo).....	84.5	85.6	86.6	87.4	88.1	88	81.8	73.4	69.1	67.1	64.8	62.9
June (Junio).....	89.1	89.9	90.5	91.2	91.6	91.4	86.4	79.1	74.3	72.5	69.8	68.3
July (Julio).....	91.8	92.3	92.7	93	93.4	93.4	90.1	84.8	80.8	78.5	76.6	75.3
August (Agosto).....	91.5	91.9	92.3	92.6	92.9	93	90.3	85.2	81.4	79.5	77.1	75.8
September (Septiembre).....	92.5	93	93.2	93.5	93.8	93.9	91.4	85.8	81.8	79.5	77.1	76.2
October (Octubre).....	92.3	92.7	93.1	93.3	93.5	93.6	91	83.7	78.5	75.8	74.3	73.4
November (Noviembre).....	90.9	91.4	91.9	92.2	92.5	92.9	91	82.5	76.3	73.1	71.8	70.7
December (Diciembre).....	90.9	91.4	91.7	92	92.4	93	92.2	84	76.7	72.6	70.8	70
Annual mean (Media anual).....	87.9	88.8	89.5	90.1	90.7	91	88	80.1	74.3	71.6	69.7	68.1
Mean, November to May (Media, Noviembre a Mayo).....	85.4	86.6	87.5	88.3	89	89.5	86.7	77.4	70.7	67.7	65.8	64.1
Mean, June to October (Media, Junio a Octubre).....	91.4	92	92.4	92.7	93	93.1	89.8	83.7	79.4	77	75.1	73.8

MONTH. Mes.	1 p.		2 p.		3 p.		4 p.		5 p.		6 p.		7 p.		8 p.		9 p.		10 p.		11 p.		MID-NIGHT. Media-noche.	MEAN. Media.	MEAN DIURNAL RANGE. Oscilación diaria.
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
January (Enero).....	65.5	64.4	64.0	65.5	68.7	74.2	77.6	80.2	82.1	83.6	85.0	86.4	87.7	88.7	89.2	90.2	90.2	89.1	88.5	88.5	88.5	88.5	86.4	78.7	21.3
February (Febrero).....	60.7	58.8	58	58.5	61.2	66.7	71.1	74.1	76.4	78.9	80.6	82.1	83.6	84.6	85.6	86.9	87.9	88.5	89.1	89.5	89.5	88.4	78.7	30.6	
March (Marzo).....	56.1	54	53.5	54.2	56.9	62.2	66.9	70.3	72.9	75.4	76.8	78.3	79.4	80.5	81.5	82.5	83.5	84.5	85.5	86.5	87.5	88.5	78.7	70.2	83.3
April (Abril).....	55.1	53.4	53.2	54.4	57.4	62.2	66.5	69.6	72.1	74.8	76.1	78.3	79.8	81.1	82.4	83.8	85.1	86.4	87.8	89.1	90.4	91.7	78.7	70.2	32.3
May (Mayo).....	61.4	61.3	62.4	64.4	67.3	71.3	74.2	76.6	78.8	81.4	83.1	85.5	87.8	89.1	90.4	91.7	93.0	94.3	95.6	96.9	98.2	99.5	78.7	70.2	26.8
June (Junio).....	67.8	67.5	68.9	71.4	73.7	77.3	80.4	82.7	85.1	87.4	89.7	91.6	93.9	95.2	96.5	97.8	99.1	100.4	101.7	103.0	104.3	105.6	86.4	78.7	28.3
July (Julio).....	74.8	74.9	76.6	78.2	80.5	83.7	85.7	87.7	89.7	91.7	93.7	95.7	97.7	99.7	101.7	103.7	105.7	107.7	109.7	111.7	113.7	115.7	86.4	78.7	27.9
August (Agosto).....	75.3	75.7	77.3	78.8	80.9	83.9	85.8	87.8	89.7	91.6	93.5	95.4	97.3	99.2	101.1	103.0	104.9	106.8	108.7	110.6	112.5	114.4	86.4	78.7	19.7
September (Septiembre).....	75.9	76.3	77.5	79.6	82.7	85.7	87.3	88.4	89.5	90.6	91.7	92.8	93.9	95.0	96.1	97.2	98.3	99.4	100.5	101.6	102.7	103.8	86.4	78.7	18.4
October (Octubre).....	73.2	73.8	75.1	77.5	81.7	85.4	86.9	88.4	89.9	91.4	92.9	94.4	95.9	97.4	98.9	100.4	101.9	103.4	104.9	106.4	107.9	109.4	86.4	78.7	20.4
November (Noviembre).....	70.2	70.5	71.2	73.5	78.4	82.5	84.5	86.5	88.5	90.5	92.5	94.5	96.5	98.5	100.5	102.5	104.5	106.5	108.5	110.5	112.5	114.5	86.4	78.7	22.7
December (Diciembre).....	69.4	69.2	69.6	71.9	76.1	80.9	83.4	85.1	86.6	88.1	89.6	91.1	92.6	94.1	95.6	97.1	98.6	100.1	101.6	103.1	104.6	106.1	86.4	78.7	23.3
Annual mean (Media anual).	67.1	66.6	67.3	69	72.1	76.3	79.2	81.3	83	84.5	85.8	86.9	87.5	88.2	88.9	89.5	90.1	90.7	91.3	91.9	92.5	93.1	86.4	79.5	24.4
Mean, November to May (Media, Noviembre a Mayo).....	62.6	61.7	61.7	63.2	66.6	71.4	74.9	77.4	79.5	81.2	82.6	84.1	85.2	86.1	86.9	87.4	87.9	88.4	88.9	89.4	89.9	90.4	86.4	76.1	27.8
Mean, June to October (Media, Junio a Octu- bre).....	73.3	73.6	75.1	77	79.9	83.2	85.2	86.6	87.9	89.1	90.1	90.9	91.4	91.9	92.4	92.9	93.4	93.9	94.4	94.9	95.4	95.9	86.4	78.4	19.8

TABLE XXXIII.—*Mean monthly and annual cloudiness for several stations in the Philippines.*
 TABLA XXXIII.—Media mensual y anual de la nubosidad para varias estaciones de Filipinas.

	JAN- UARY. Enero.	FEB- RUARY. Febrero.	MARCH. Marzo.	APRIL. Abril.	MAY. Mayo.	JUNE. Junio.	JULY. Julio.	AUGUST. Agosto.	SEP- TEMBER. Septiembre.	OCTOBER. Octubre.	NOV- EMBER. Noviembre.	DECEM- BER. Diciembre.	ANNUAL. Anual.
SURIGAO (1903-1918).													
Mean cloudiness (0-10) [Media de la nubosidad (0-10)]	7.3	7.1	6.3	6.0	5.8	6.4	7.0	6.6	7.1	6.8	6.8	7.4	6.7
Maximum mean cloudiness (0-10) [Media máxima de la nubosidad (0-10)]	9.5	8.9	8	7.3	7.8	7.8	7.7	8.1	8.1	8.2	8.3	8.6	9.5
Year (Año)	1918	1908	1916-18	1918	1916	1918	1906-08	1918	1906	1915	1908	1908	1918
Minimum mean cloudiness (0-10) [Media mínima de la nubosidad (0-10)]	5.9	5.2	4.6	4.6	4.9	1.87	5.5	4.6	5.8	4.3	5.2	5.1	1.87
Year (Año)	1913	1914	1903	1909	1903	1912	1904	1903	1912	1912	1912-14	1912	1912
CEBU (1903-1918).													
Mean cloudiness (0-10) [Media de la nubosidad (0-10)]	5.1	5.2	4.4	4.2	5	5.9	6.3	6	6.4	5.9	5.5	5.7	5.5
Maximum mean cloudiness (0-10) [Media máxima de la nubosidad (0-10)]	7.4	7	5.8	5.9	6.3	6.9	7.2	7.4	7.4	7.1	6.5	7.3	7.4
Year (Año)	1904	1904	1909	1904	1904-17	1904-18	1903	1904	1904-06	1918	1916	1918	1904-06
Minimum mean cloudiness (0-10) [Media mínima de la nubosidad (0-10)]	3.9	2.7	2.6	2.8	3.6	4.7	5.1	4.7	5	3.4	2.9	4	2.6
Year (Año)	1911	1915	1913	1915	1912	1913	1910	1909	1913	1911	1911	1911-14	1913
ILOILO (1903-1918).													
Mean cloudiness (0-10) [Media de la nubosidad (0-10)]	5.5	5.4	4.6	4.6	6	7.2	7.8	7.5	7.6	7	6.3	6.4	6.3
Maximum mean cloudiness (0-10) [Media máxima de la nubosidad (0-10)]	8.2	7.2	6.6	6.3	7.7	8.2	8.9	8.7	8.7	8	8.3	8.1	8.9
Year (Año)	1918	1908-18	1909	1917	1908	1908-14	1908	1907	1910	1905	1910	1908	1908
Minimum mean cloudiness (0-10) [Media mínima de la nubosidad (0-10)]	3.7	2.3	2.5	2.3	4.2	5.7	6.7	5.9	6.8	4.6	4.5	4.7	2.3
Year (Año)	1912	1915	1915	1912	1912	1903	1916	1903	1918	1914	1914	1914	1912-15
TACLOBAN (1904-1918).													
Mean cloudiness (0-10) [Media de la nubosidad (0-10)]	7.1	6.9	6.3	6	6.7	7.4	8	7.7	7.8	7.2	7.1	7.4	7.1

Maximum mean cloudiness (0-10) [Media de la nubosidad (0-10)]	9.9	9.1	9.8	9.6	9.2	9.2	9.2	9.9
Year (Año)	1918	1913	1917	1918	1917	1917	1917	1918
Minimum mean cloudiness (0-10) [Media mínima de la nubosidad (0-10)]	5.2	5.5	6.5	5.2	6.2	5.5	6.2	4
Year (Año)	1912	1912	1910	1914	1914	1914	1911	1905
LEGASPI (1903-1918).								
Mean cloudiness (0-10) [Media de la nubosidad (0-10)]	5.6	5.4	6.4	6	6.4	5.8	6	5.4
Maximum mean cloudiness (0-10) [Media máxima de la nubosidad (0-10)]	9.1	7.8	7.8	7.5	7.6	7.2	7.7	9.1
Year (Año)	1918	1917	1909	1912	1916	1908	1909	1918
Minimum mean cloudiness (0-10) [Media mínima de la nubosidad (0-10)]	3.2	2.7	5.4	4	5.2	4.1	3.7	2
Year (Año)	1905	1915	1907-10	1909	1913	1914	1911	1912
ATIMONAN (1903-1918).								
Mean cloudiness (0-10) [Media de la nubosidad (0-10)]	7.2	6.4	7.6	7.3	7.8	7.4	7.7	6.9
Maximum mean cloudiness (0-10) [Media máxima de la nubosidad (0-10)]	9.5	8.6	9	8.7	9.1	8.4	9.1	9.5
Year (Año)	1918	1917-18	1909	1907	1906-10	1905	1909	1918
Minimum mean cloudiness (0-10) [Media mínima de la nubosidad (0-10)]	4.9	3.9	6.1	5.4	6	5.5	5.8	3.6
Year (Año)	1905	1905	1904	1903	1903	1914	1911	1903-09
PARACALE (1911-1918).								
Mean cloudiness (0-10) [Media de la nubosidad (0-10)]	7.7	6.8	7.5	7.3	7.8	7.4	7.8	6.9
Maximum mean cloudiness (0-10) [Media máxima de la nubosidad (0-10)]	10	9.2	8.6	7.8	9	9.5	8.8	10
Year (Año)	1918	1917	1917	1912	1917	1917	1915	1918
Minimum mean cloudiness (0-10) [Media mínima de la nubosidad (0-10)]	6.1	3.5	6.6	6.6	7	5.6	6.4	3.3
Year (Año)	1912	1915	1915	1916-17	1913	1914	1911	1912
MANILA (1903-1918).								
Mean cloudiness (0-10) [Media de la nubosidad (0-10)]	6.2	5.9	8.2	8.1	8.1	6.7	6.9	6.7
Maximum mean cloudiness (0-10) [Media máxima de la nubosidad (0-10)]	7.7	7.1	9	9.3	8.9	8.4	8.9	9.3
Year (Año)	1904	1918	1917	1907	1906-10	1917	1903	1907
Minimum mean cloudiness (0-10) [Media mínima de la nubosidad (0-10)]	3.9	3.8	7.4	6.4	7.4	4.5	5	3
Year (Año)	1905	1915	1906	1909	1913-18	1914	1914	1915

TABLE XXXIII.—*Mean monthly and annual cloudiness for several stations in the Philippines—Continued.*

TABLA XXXIII.—Media mensual y anual de la nubosidad para varias estaciones de Filipinas—Continuación.

STATION. Estación.	JANU- ARY. Enero.	FEBRU- ARY. Febrero.	MARCH. Marzo.	APRIL. Abril.	MAY. Mayo.	JUNE. Junio.	JULY. Julio.	AUGUST. Agosto.	SEPTEM- BER. Septiem- bre.	OCTO- BER. Octubre.	NOVEM- BER. Noviem- bre.	DECEM- BER. Diciem- bre.	ANNUAL. Annual.
SAN ISIDRO (1903-1918).													
Mean cloudiness (0-10) [Media de la nubosidad (0-10)]	5.5	5.6	5.2	5.4	6.4	6.8	7.7	7.7	7.6	6.8	5.7	5.8	6.4
Maximum mean cloudiness (0-10) [Media máxima de la nubosidad (0-10)]	8.2	7.7	8.2	8.1	8.8	8.9	8.8	9.2	9.5	9	7.8	7.8	9.5
Year (Año)	1906	1905-06	1906	1906	1906	1905	1905-06	1906	1906	1906	1904	1903	1906
Minimum mean cloudiness (0-10) [Media mínima de la nubosidad (0-10)]	3.6	2.9	3.4	3.4	4.5	5.3	6.4	6.2	6.7	4.4	3.6	3.7	2.9
Year (Año)	1914	1915	1914	1915	1918	1915	1916	1917	1915	1914	1914-18	1914	1915
DAGUPAN (1903-1918).													
Mean cloudiness (0-10) [Media de la nubosidad (0-10)]	4.2	4	3.5	3.9	5.8	6.9	8	8.1	7.8	6.4	5	4.6	5.7
Maximum mean cloudiness (0-10) [Media máxima de la nubosidad (0-10)]	6.1	5.9	5.6	5	7.3	8.6	9	9	8.8	7.7	7.5	6.9	9
Year (Año)	1916	1918	1910	1911	1910	1916	1918	1907-08	1906-10	1917	1906	1903	1907-08
Minimum mean cloudiness (0-10) [Media mínima de la nubosidad (0-10)]	2.9	1.9	2.2	2.7	4.1	5.4	6.9	6.7	6.9	3.8	2.1	2.6	1.9
Year (Año)	1905	1915	1914	1914	1905	1903	1910-15	1909	1915	1914	1918	1914	1915
BAGUO (1910-1918).													
Mean cloudiness (0-10) [Media de la nubosidad (0-10)]	5.2	5.4	5.3	5.9	7	7.4	8.6	8.9	8.4	7.1	5.5	5.2	6.7
Maximum mean cloudiness [Media máxima de la nubosidad (0-10)]	6.4	7.2	7	7.1	8.5	8.5	9.7	9.7	9.3	8.3	8.2	7.6	9.7
Year (Año)	1913	1910	1910	1910	1910	1912	1918	1911	1912	1912	1910	1910	1911-18
Minimum mean cloudiness [Media mínima de la nubosidad (0-10)]	4.1	3.3	4	4.8	5.6	6.3	6.9	8.3	7.5	5.5	2.8	3.1	2.8
Year (Año)	1915	1915	1918	1914	1918	1918	1916	1918	1915	1914	1918	1918	1918
VIGAN (1903-1918).													
Mean cloudiness (0-10) [Media de la nubosidad (0-10)]	2.9	2.9	2.4	2.5	4.5	5.6	6.8	7.1	6.4	4.6	3.3	3.6	4.4
Maximum mean cloudiness (0-10) [Media máxima de la nubosidad (0-10)]	4.8	4.4	4	4.2	6.4	7.6	8.5	8.3	7.9	6.3	5.4	5.5	8.5
Year (Año)	1916	1918	1906	1906	1906-15	1905	1918	1907	1912	1903-17	1917	1903	1918

Minimum mean cloudiness (0-10) [Media mínima de la nubosidad (0-10)].....	1.1 1909	1.2 1907	1.2 1909	0.6 1909	3 1911	3.2 1909	5 1907	4.1 1909	5.2 1909	1.8 1907	0.8 1907	2.4 1908	0.6 1909
APARRI (1903-1918).													
Mean cloudiness (0-10) [Media de la nubosidad (0-10)].....	6.6	5.8	4.6	3.2	4.5	5.2	6.3	6.6	6.2	5.9	6.1	7.2	5.7
Maximum mean cloudiness (0-10) [Media máxima de la nubosidad (0-10)].....	9.6 1918	7.6 1918	6.7 1917	4.6 1911	7.1 1915	7.1 1904	8.6 1904	8.2 1916	7.9 1906	7.5 1903	8.7 1906	9.3 1917	9.6 1918
Minimum mean cloudiness (0-10) [Media mínima de la nubosidad (0-10)].....	3.4 1905	3 1906	1.6 1912	2 1912	2 1905	2.7 1910	4.6 1910	3.7 1909	4 1909	2.4 1907	3.5 1907-18	4.1 1911	1.6 1912

range deduced from the mean daily maximum and mean daily minimum of the whole period 1903-1918 is 30.4. The extreme range as deduced from the absolute extreme values of the same period is 73, the highest absolute humidity having been 100 per cent and the lowest 27 per cent. The monthly absolute highest humidity is 99 per cent for the three months February to April, and 100 per cent for the other nine months of the year. The monthly absolute lowest humidity varies from 27 per cent in May to 55 in September.

Mean hourly relative humidity for Manila.—Table XXXII shows the hourly mean values of relative humidity in Manila for every month, together with the annual and semi-annual values. There is only a single daily oscillation, altogether opposite to the daily temperature oscillation described in chapter II, the minimum occurring during the early hours of the afternoon, and the maximum in the early morning. The annual mean daily range is 24.4, it being smaller in the summer months when the temperature oscillation is also smaller, and greater in the months of February to April, when the temperature range is likewise greater. The semi-annual daily range is 27.8 for the period of November to May, and 19.8 for the period of June to October.

Mean monthly and annual cloudiness.—We give in Table XXXIII the mean monthly and annual cloudiness for thirteen stations of the Philippines. Cloudiness means the portion of sky covered by clouds, and this is expressed in tenths of the whole sky. Thus, for instance, a cloudiness of 5.5 indicates that 55 per cent of the whole sky is covered by clouds. Our mean values are based upon observations made between 6 a. m. and 7 p. m. only.

The mean annual cloudiness as shown in the table varies from 4.4 in Vigan to 7.1 in Tacloban. As a rule, there is a direct relation between cloudiness, rainfall and relative humidity, although this relation does not always appear so clearly in the average values. Hence the monthly distribution of cloudiness in the regions in the eastern part of the Philippines, where rains are so frequent during the whole year, is quite different from that of the regions in the western part of the Archipelago, where a dry season prevails in winter and spring. The cloudiness of Vigan is very small if compared with that of the other stations included in Table XXXIII, especially from November to April; and the same must be the case in practically all the stations of Ilocos Sur and Ilocos Norte, as they are the driest in winter and spring.

V. WINDS.

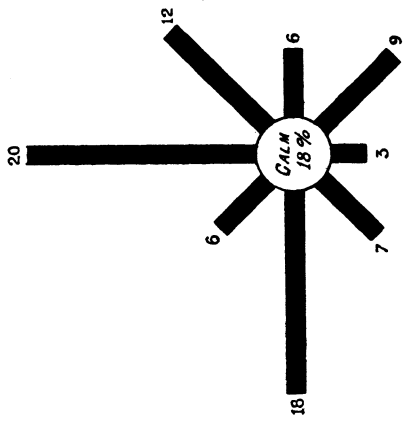
Both the wind velocity and the frequency of the different wind directions are considered as important climatic factors. It is to be regretted that we can not give at present more complete information concerning these elements, particularly as to the number of gales experienced in each station or in each of our provinces and subprovinces; but we hope that on some future occasion we may be able to say something more on this matter. Even in regard to the frequency of different wind directions, data are given here but for a few stations, the time allowed for this report being too limited to attempt to include more stations, as was done in some of the preceding chapters.

Frequency of wind directions: monthly, annual and semi-annual percentages.—Table XXXIV shows the monthly percentages of wind directions for eight stations of the Philippines, while the corresponding annual and semi-annual percentages are given in Table XXXV, and graphically represented in eight plates, XIV to XXI. The stations chosen are Zamboanga and Surigao, for Mindanao; Cebu and Iloilo, for the Visayas; and Legaspi, Manila, Baguio, and Aparri, for Luzon. The Manila percentages are deduced from 24 daily observations and given for sixteen points of the compass; but those of the other seven stations are deduced from six daily observations and for only eight points of the compass, by joining two points in one as shown in Tables XXXIV and XXXV. Zamboanga and Baguio are the only stations which appear with a period of observations of less than sixteen years, the reason being that six daily observations have been made only since July, 1909, in Baguio, and since October, 1916, in Zamboanga. The period of two years for Zamboanga is too small, and the percentages given for that station are, therefore, not so valuable as those obtained for the other stations. Yet, we thought it better to include here the wind frequency for that place, even though the data given have to be considered as of a temporary character.

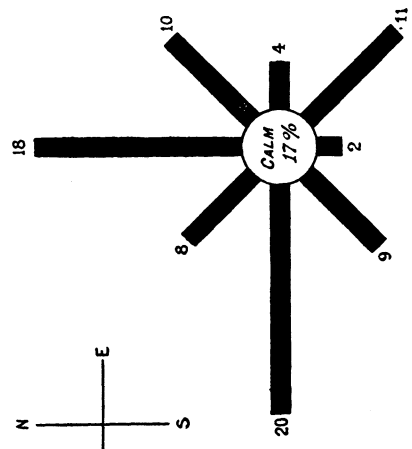
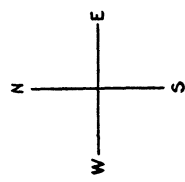
We will now say a few words on the results obtained for each of the stations chosen, particularly on the annual and semi-annual percentages.

Zamboanga.—There is only a slight difference between the three graphs representing the annual and semi-annual percent-

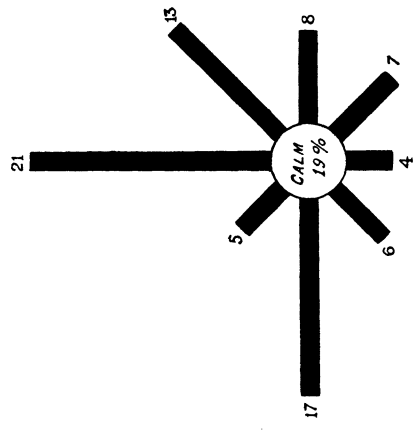
ANNUAL AND SEMIANNUAL PERCENTAGES OF WIND DIRECTIONS AT ZAMBOANGA.



ANNUAL

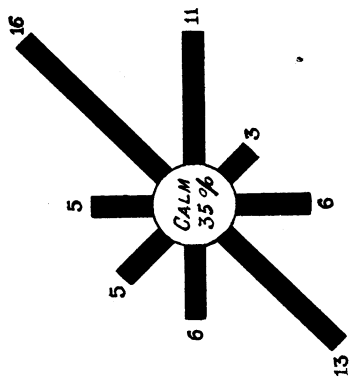
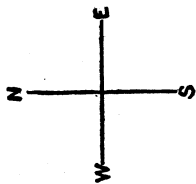


JUNE TO OCTOBER
PLATE XIV.

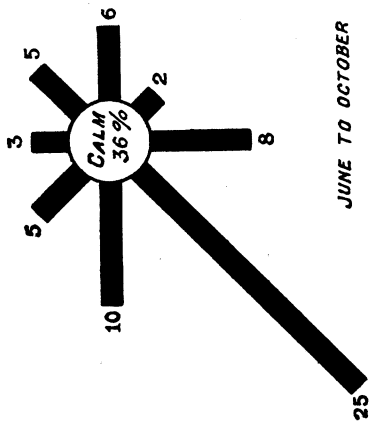


NOVEMBER TO MAY

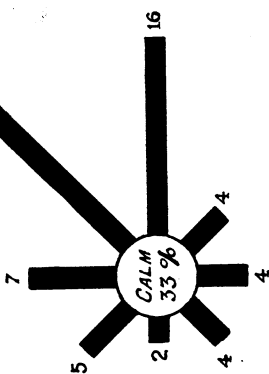
ANNUAL AND SEMIANNUAL PERCENTAGES OF WIND DIRECTIONS AT SURIGAO.



ANNUAL

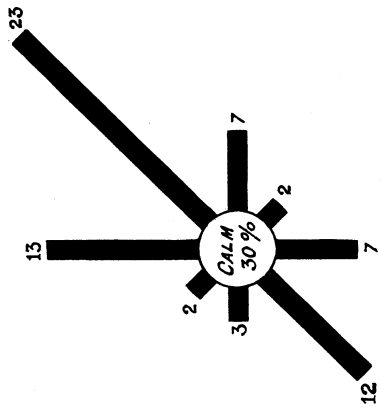
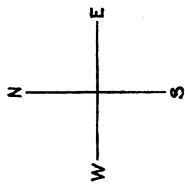


JUNE TO OCTOBER

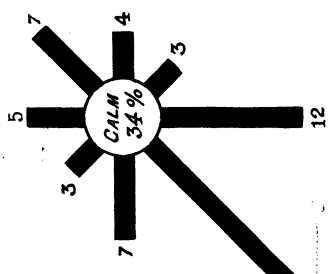


NOVEMBER TO MAY

ANNUAL AND SEMI-ANNUAL PERCENTAGES OF WIND DIRECTIONS AT CEBU.

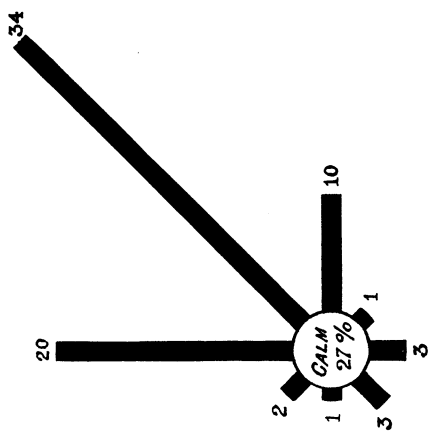


ANNUAL



JUNE TO OCTOBER

PLATE XVI.



NOVEMBER TO MAY.

ANNUAL AND SEMIANNUAL PERCENTAGES OF WIND DIRECTIONS AT ILOILO.

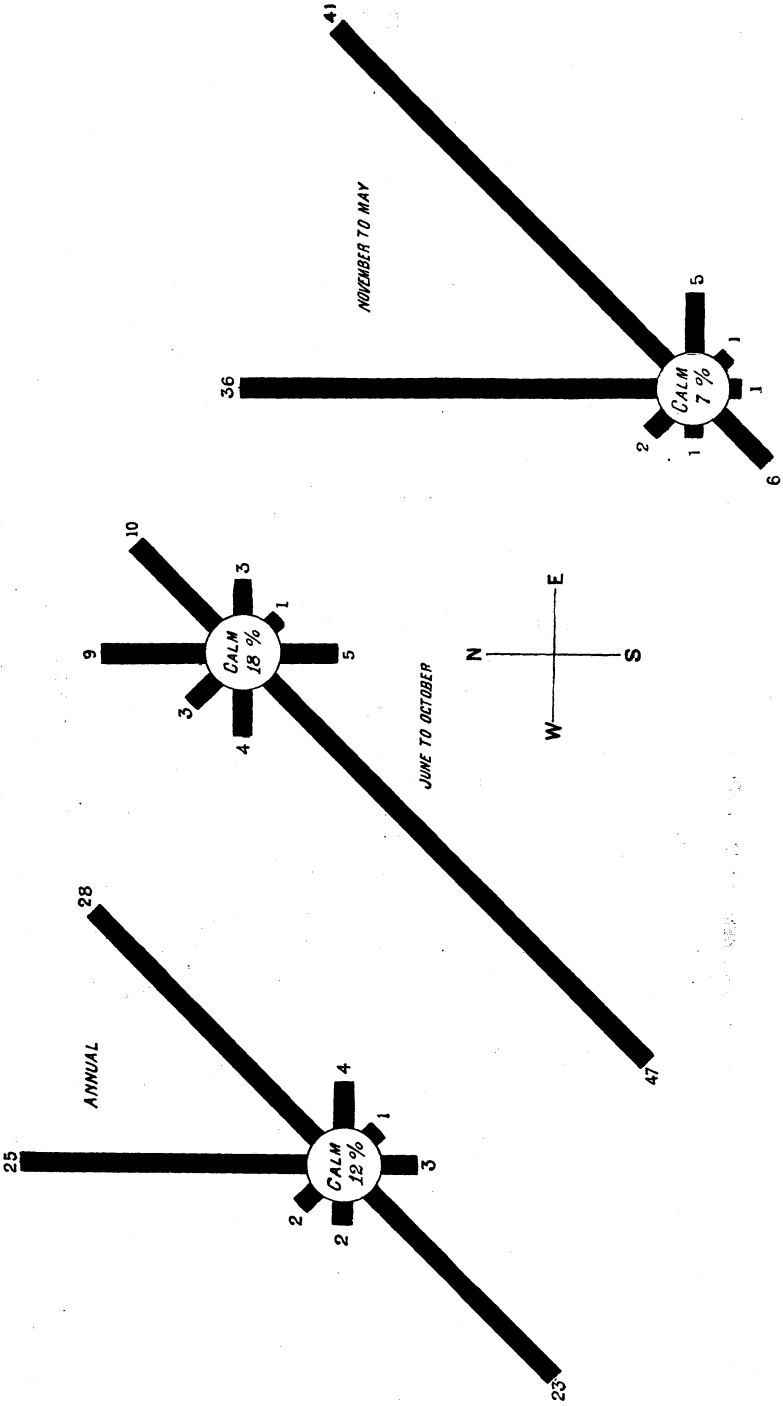
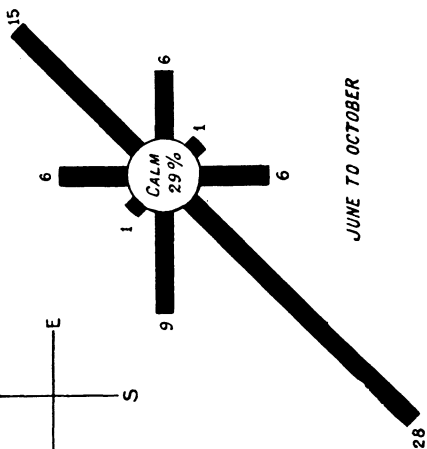
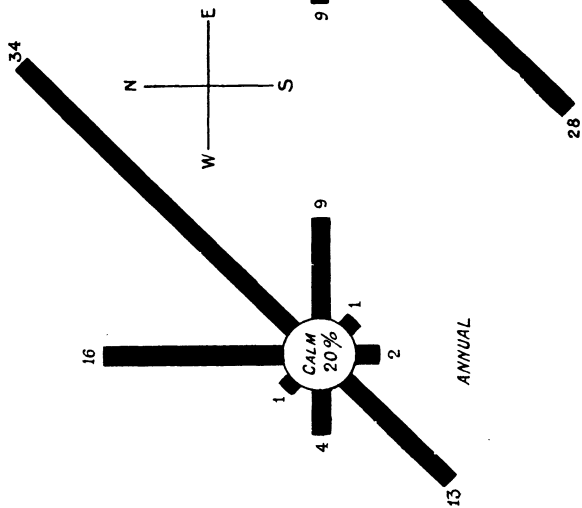
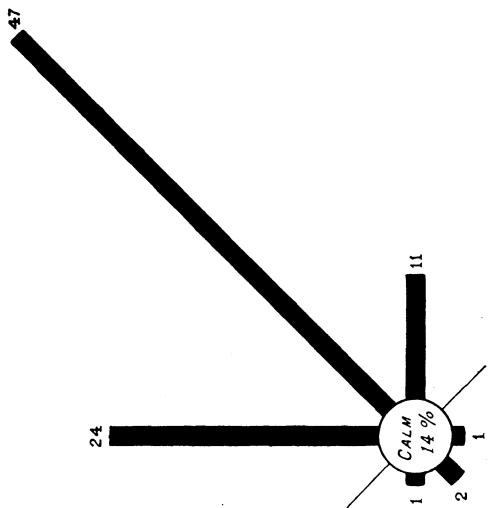


PLATE XVII.

ANNUAL AND SEMIANNUAL PERCENTAGES OF WIND DIRECTIONS AT LEGASPI.

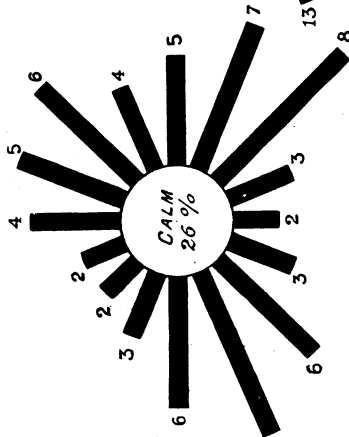
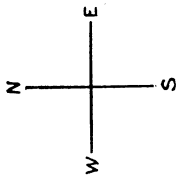


JUNE TO OCTOBER

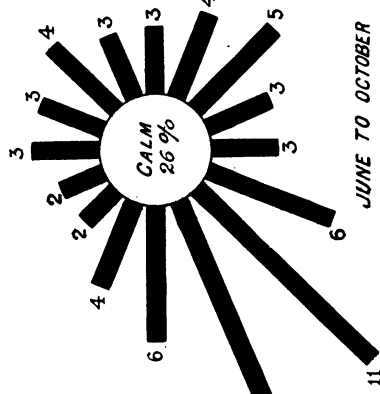


NOVEMBER TO MAY

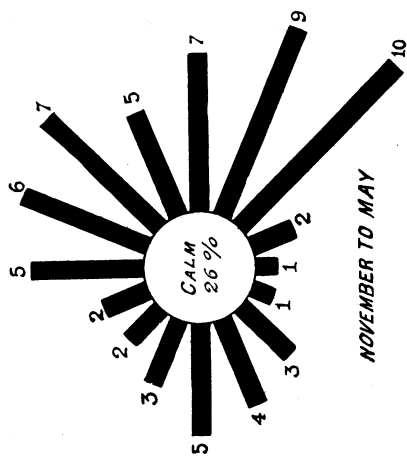
ANNUAL AND SEMIANNUAL PERCENTAGES OF WIND DIRECTIONS AT MANILA.



ANNUAL



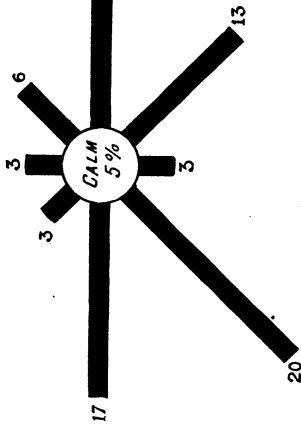
JUNE TO OCTOBER



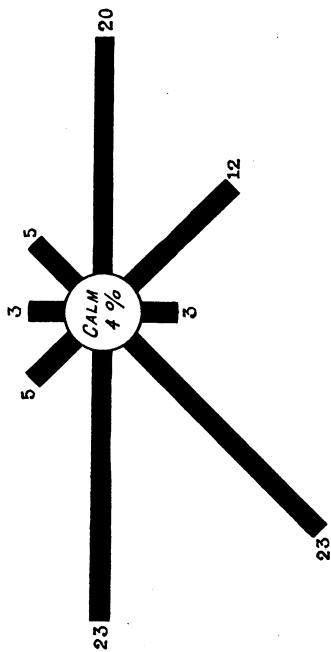
NOVEMBER TO MAY

ANNUAL AND SEMIANNUAL PERCENTAGES OF WIND DIRECTIONS AT BAGUIO.

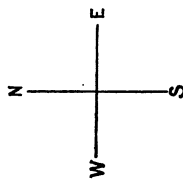
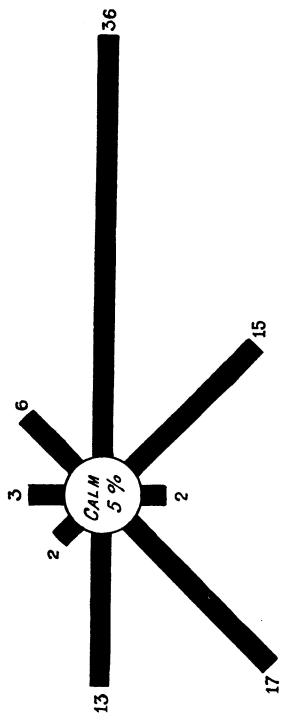
ANNUAL



JUNE TO OCTOBER



NOVEMBER TO MAY



ANNUAL AND SEMIANNUAL PERCENTAGES OF WIND DIRECTIONS AT APARRI.

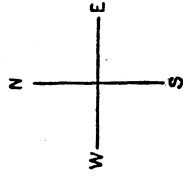
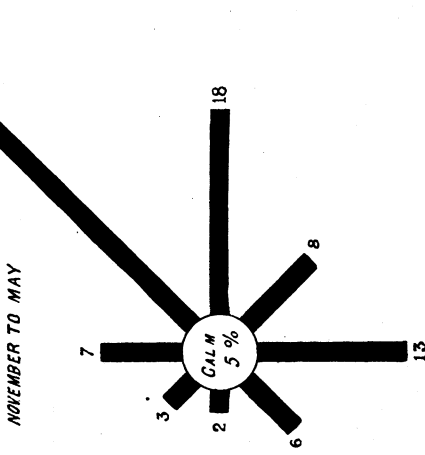
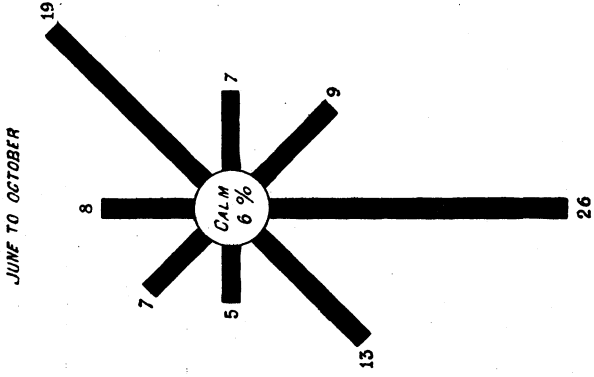
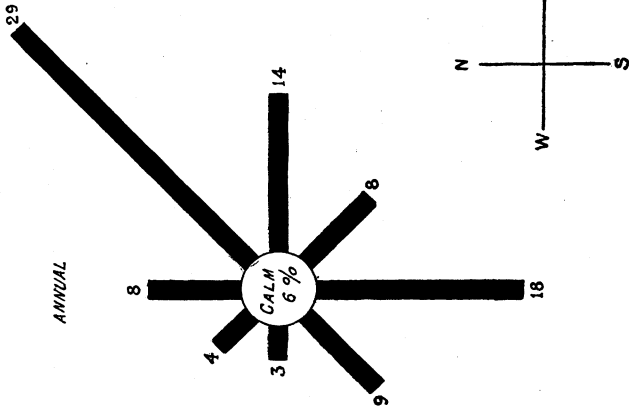


TABLE XXXIV.—*Monthly percentages of wind directions at several stations of the Philippines.*TABLA XXXIV.—*Porcentajes mensuales de las direcciones del viento en varias estaciones de Filipinas.*

ZAMBOANGA, 1917-1918.

DIRECTION. Dirección.	JANUARY. Enero.	FEBRUARY. Febrero.	MARCH. Marzo.	APRIL. Abril.	MAY. Mayo.	JUNE. Junio.	JULY. Julio.	AUGUST. Agosto.	SEPTEMBER. Septiembre.	OCTOBER. Octubre.	NOVEMBER. Noviembre.	DECEMBER. Diciembre.
N, NNE	18	19	21	23	26	19	27	19	13	13	16	25
NE, ENE	24	17	9	12	10	11	14	8	10	5	9	12
E, ESE	13	10	6	4	6	5	6	3	5	2	7	8
SE, SSE	5	7	7	8	8	10	15	10	9	9	6	7
S, SSW	2	5	5	3	3	1	1	2	3	3	5	3
SW, WSW	3	4	5	6	9	11	10	8	9	9	12	5
W, WNW	11	14	25	22	16	20	15	26	15	25	15	16
NW, NNW	6	3	3	7	6	11	5	8	9	9	3	8
Calm	18	21	18	15	16	12	7	15	26	24	28	16

SURIGAO, 1903-1918.

N, NNE	11	11	6	6	6	4	2	2	2	4	5	7
NE, ENE	32	29	30	22	14	8	3	3	3	7	16	24
E, ESE	14	16	20	20	15	11	4	3	3	6	9	15
SE, SSE	3	3	5	6	5	5	1	1	2	3	3	4
S, SSW	2	2	3	3	6	8	9	10	8	6	6	3
SW, WSW	2	2	2	3	6	12	26	36	30	19	11	4
W, WNW	1	2	1	2	4	6	13	12	12	9	4	2
NW, NNW	6	4	3	3	4	5	5	4	5	5	8	6
Calm	29	30	29	34	39	40	37	29	35	41	37	35

CEBU, 1903-1918.

N, NNE	27	23	22	15	8	6	3	2	3	9	19	24
NE, ENE	39	41	40	37	20	12	4	3	4	13	23	37
E, ESE	9	10	13	13	10	7	3	2	2	6	7	5
SE, SSE	0	1	1	1	4	4	3	2	2	4	2	1
S, SSW	1	1	1	2	10	11	14	14	15	7	4	2
SW, WSW	1	0	0	1	7	15	32	34	28	15	6	3
W, WNW	0	0	0	0	2	4	8	9	7	5	3	1
NW, NNW	1	1	1	2	2	3	2	3	3	4	4	2
Calm	23	24	23	28	37	37	33	30	35	37	32	26

ILOILO, 1903-1918.

N, NNE	43	42	40	36	18	13	6	3	5	17	33	42
NE, ENE	47	48	48	41	21	13	5	4	6	22	39	45
E, ESE	4	4	6	8	7	4	2	2	1	4	3	3
SE, SSE	0	0	0	0	1	2	1	1	1	1	1	0
S, SSW	0	0	0	0	4	7	7	5	4	4	1	1
SW, WSW	1	1	1	5	23	33	55	64	54	26	10	3
W, WNW	1	0	0	0	2	4	5	4	5	4	1	0
NW, NNW	2	1	1	2	5	4	2	2	3	3	2	1
Calm	2	3	3	7	19	19	16	16	20	20	11	5

LEGASPI, 1903-1918.

N, NNE	30	25	22	18	11	6	3	1	4	13	27	32
NE, ENE	51	50	52	50	36	25	9	5	8	27	41	49
E, ESE	7	10	16	17	15	11	4	5	5	7	8	6
SE, SSE	0	0	0	1	1	1	1	1	1	1	1	0
S, SSW	0	0	0	1	3	6	7	6	7	4	1	0
SW, WSW	0	0	0	1	5	13	35	46	35	12	3	1
W, WNW	0	0	0	0	2	4	10	14	10	5	2	1
NW, NNW	1	0	0	0	1	1	1	1	2	1	1	1
Calm	11	14	9	12	28	33	31	23	28	29	16	10

TABLE XXXIV.—*Monthly percentages of wind directions at several stations of the Philippines—Continued.*TABLA XXXIV.—*Porcentajes mensuales de las direcciones del viento en varias estaciones de Filipinas—Continuación.*

MANILA, 1903-1918.

DIRECTION. Dirección.	JANUARY. Enero.	FEBRUARY. Febrero.	MARCH. Marzo.	APRIL. Abril.	MAY. Mayo.	JUNE. Junio.	JULY. Julio.	AUGUST. Agosto.	SEPTEMBER. Septiembre.	OCTOBER. Octubre.	NOVEMBER. Noviembre.	DECEMBER. Diciembre.
N	8	5	3	2	3	3	3	2	3	5	8	9
NNE	8	6	3	3	3	3	2	2	3	6	10	11
NE	8	7	6	4	5	4	3	3	3	6	10	9
ENE	5	5	5	4	4	3	2	2	2	4	5	5
E	6	8	10	8	6	5	3	2	2	4	6	5
ESE	6	11	14	14	8	7	3	3	3	5	5	4
SE	7	10	16	17	10	9	4	3	4	4	4	3
SSE	1	2	4	5	3	3	3	2	3	2	1	1
S	1	1	1	1	2	4	4	4	3	2	1	1
SSW	1	1	1	2	3	5	7	8	6	3	1	1
SW	2	2	2	3	7	8	14	18	12	4	2	2
WSW	4	4	4	5	8	9	15	19	15	7	4	3
W	5	6	6	6	7	6	6	6	6	5	4	4
WNW	3	3	3	3	4	3	4	3	3	4	3	3
NW	2	2	1	2	2	2	2	2	2	2	2	2
NNW	3	2	2	1	1	1	2	1	2	2	4	3
Calm	29	24	20	20	25	25	23	21	27	34	32	34

BAGUIO, 1910-1918.

N, NNE	3	3	2	3	4	3	4	3	4	4	2	3
NE, ENE	5	5	7	7	8	7	4	5	4	7	5	7
E, ESE	43	39	31	27	21	28	17	10	18	30	44	44
SE, SSE	16	14	14	14	14	18	12	6	10	13	17	18
S, SSW	2	2	2	2	3	4	3	2	2	3	3	3
SW, WSW	16	18	21	19	21	16	29	32	23	16	13	14
W, WNW	8	11	16	19	20	17	23	33	27	16	9	8
NW, NNW	2	2	2	3	5	4	5	5	7	5	2	1
Calm	6	5	5	4	5	4	4	4	5	6	6	3

APARRI, 1903-1918.

N, NNE	5	8	7	9	10	9	8	9	9	6	6	4
NE, ENE	38	37	38	30	24	15	14	13	18	37	46	47
E, ESE	28	22	16	13	7	6	6	3	8	14	17	23
SE, SSE	9	8	8	9	9	11	8	8	8	9	6	8
S, SSW	8	12	14	17	23	33	35	32	8	11	7	7
SW, WSW	4	6	7	8	12	12	15	16	21	8	7	5
W, WNW	2	1	2	4	5	5	5	6	14	3	6	1
NW, NNW	2	2	3	4	4	5	6	8	6	3	3	1
Calm	6	4	4	5	5	4	4	5	7	8	7	6

TABLE XXXV.—Annual and semiannual percentages of wind directions at several stations of the Philippines.

TABLA XXXV.—Porcentajes anuales y semi-anales de las direcciones del viento en varias estaciones de Filipinas.

ZAMBOANGA, 1917-1918.

DIRECTION. Dirección.	ANNUAL. Anual.		JUNE TO OCTOBER. Junio a Octubre.		NOVEMBER TO MAY. Noviembre a Mayo.	
	TOTAL Total.	PER CENT. Por ciento.	TOTAL Total.	PER CENT. Por ciento.	TOTAL Total.	PER CENT. Por ciento.
N, NNE	870	20	331	18	539	21
NE, ENE	519	12	177	10	342	13
E, ESE	265	6	73	4	192	8
SE, SSE	371	9	195	11	176	7
S, SSW	138	3	40	2	98	4
SW, WSW	325	7	168	9	157	6
W, WNW	804	18	370	20	434	17
NW, NNW	283	6	153	8	130	5
Calm	781	18	305	17	476	19

SURIGAO, 1903-1918.

N, NNE	1,750	5	403	3	1,347	7
NE, ENE	5,037	16	665	5	4,372	24
E, ESE	3,633	11	766	6	2,867	16
SE, SSE	1,060	3	300	2	760	4
S, SSW	1,764	6	1,119	8	645	4
SW, WSW	4,174	13	3,403	25	771	4
W, WNW	2,054	6	1,436	10	418	2
NW, NNW	1,574	5	647	5	927	5
Calm	10,988	35	4,946	36	6,042	33

CEBU, 1903-1918.

N, NNE	4,643	13	698	5	3,945	20
NE, ENE	7,889	23	1,080	7	6,809	34
E, ESE	2,509	7	585	4	1,924	10
SE, SSE	729	2	434	3	295	1
S, SSW	2,349	7	1,777	12	572	3
SW, WSW	4,153	12	3,620	25	533	3
W, WNW	1,171	3	970	7	201	1
NW, NNW	846	2	445	3	401	2
Calm	10,526	30	5,041	34	5,485	27

LOILO, 1903-1918.

N, NNE	8,659	25	1,320	9	7,339	36
NE, ENE	9,850	28	1,503	10	8,347	41
E, ESE	1,388	4	398	3	990	5
SE, SSE	254	1	152	1	102	1
S, SSW	999	3	791	5	208	1
SW, WSW	8,086	23	6,833	47	1,253	6
W, WNW	791	2	646	4	145	1
NW, NNW	781	2	394	3	387	2
Calm	4,117	12	2,651	18	1,466	7

LEGASPI, 1903-1918.

N, NNE	5,569	16	804	6	4,765	24
NE, ENE	11,606	34	2,112	15	9,494	47
E, ESE	3,121	9	897	6	2,224	11
SE, SSE	259	1	161	1	98	0
S, SSW	988	2	843	6	145	1
SW, WSW	4,407	13	4,093	28	314	2
W, WNW	1,401	4	1,236	9	165	1
NW, NNW	204	1	122	1	82	0
Calm	7,038	20	4,161	29	2,877	14

TABLE XXXV.—Annual and semiannual percentages of wind directions at several stations of the Philippines—Continued.

TABLA XXXV.—Porcentajes anuales y semi-anuales de las direcciones del viento en varias estaciones de Filipinas—Continuación.

MANILA, 1903-1918.

DIRECTION. Dirección.	ANNUAL. Anual.		JUNE TO OCTOBER. Junio a octubre.		NOVEMBER TO MAY Noviembre a mayo.	
	TOTAL.	PER CENT. Por ciento.	TOTAL.	PER CENT. Por ciento.	TOTAL.	PER CENT. Por ciento.
N.....	6,068	4	1,761	3	4,307	5
NNE.....	7,032	5	1,348	3	5,184	6
NE.....	7,887	6	2,236	4	5,651	7
ENE.....	5,287	4	1,492	3	3,795	5
E.....	7,561	5	1,842	3	5,719	7
ESE.....	9,387	7	2,319	4	7,068	9
SE.....	10,895	8	2,933	5	7,962	10
SSE.....	3,699	3	1,743	3	1,956	2
S.....	3,068	2	2,025	3	1,043	1
SSW.....	4,453	3	3,336	6	1,117	1
SW.....	8,868	6	6,470	11	2,398	3
WSW.....	11,336	8	7,701	13	3,635	4
W.....	7,732	6	3,409	6	4,323	5
WNW.....	4,763	3	2,063	4	2,700	3
NW.....	2,707	2	1,209	2	1,498	2
NNW.....	2,821	2	1,008	2	1,813	2
Calm.....	36,787	26	15,352	26	21,435	26

BAGUIO, 1910-1918.

N, NNE.....	622	3	286	3	336	3
NE, ENE.....	1,153	6	441	5	712	6
E, ESE.....	5,764	29	1,679	20	4,085	36
SE, SSE.....	2,732	13	976	12	1,756	15
S, SSW.....	503	3	235	3	263	2
SW, WSW.....	3,915	20	1,981	23	1,984	17
W, WNW.....	3,434	17	1,938	23	1,496	13
NW, NNW.....	687	3	414	5	273	2
Calm.....	904	5	358	4	546	5

APARRI, 1903-1918.

N, NNE.....	2,659	8	1,230	8	1,429	7
NE, ENE.....	10,315	29	2,774	19	7,541	37
E, ESE.....	4,770	14	1,067	7	3,703	18
SE, SSE.....	2,953	8	1,277	9	1,676	8
S, SSW.....	6,456	18	3,857	26	2,599	13
SW, WSW.....	3,271	9	1,951	13	1,320	6
W, WNW.....	1,216	3	727	5	489	2
NW, NNW.....	1,521	4	969	7	552	3
Calm.....	1,901	6	834	6	1,067	5

ages of wind directions for Zamboanga. The most prevailing winds during the year are those from N-NNE and W-WNW, the former having the highest percentage for the whole year as well as for the period November to May, while the latter have the highest percentage in the other period, June to October: but the differences are rather small. The winds with the smallest percentage throughout the year are those from S-SSW. The annual percentage of calm is only 18. With more years of observations these percentages may change, as stated above, yet there is reason to believe that the wind directions are in Zamboanga more regular than in other stations, owing to its distance from the typhoons that influence the weather in the Philippines from June to October, and to the almost absolute lack of typhoons over the southern part of Mindanao.

Surigao.—Contrary to what has been observed in Zamboanga, we have here a great contrast between the graph for November to May and that for June to October. The prevailing winds for the former period are those from NE-ENE and E-ESE, the percentages for the other directions being very small. In the latter period the winds from SW-WSW prevail, the smallest percentages being those of SE-SSE and N-NNE directions. In the annual graph the greatest percentage is that of the winds from NE-ENE; next follow the percentages of SW-WSW and E-ESE. The last annual percentage is that of SE-SSE winds. The annual percentage of calm is 35, almost twice as great as that of Zamboanga.

Cebu.—According to the annual graph, the winds that prevail the most during the year are those from NE-ENE; next in order are those from N-NNE and SW-WSW. The least prevailing winds are SE-SSE, NW-NNW and W-WNW. The annual percentage of calm is 30. There is also in this station a great contrast between the prevailing wind directions of the period November to May and those of the period June to October, northeasterly winds having the greatest percentage in the former period, and southwesterly winds in the latter.

Iloilo.—What has been said of the prevailing wind directions at Cebu may be applied to Iloilo, as shown in Plate XVII, with the only difference that the percentage of calm at Iloilo is but 12, as against 30 in Cebu, for which reason the percentages of the prevailing winds are much higher in Iloilo than in Cebu. We may add that the percentages of the not prevailing winds are smaller in Iloilo, which helps also to make the percentages

of the prevailing winds so extraordinarily pronounced in the graphs of this station.

Legaspi.—There appears in this station a very pronounced high percentage for the northeasterly directions, both in the annual graph and in the graph for November to May. The prevailing winds for the period June to October are SW-WSW, with a percentage of 28, but even then the percentage of the northeasterly directions is 15. The percentage of calm is 20 for the whole year, 29 for the period June to October, and only 14 for the period November to May.

Manila.—The frequency of wind directions in Manila is very different from that of the preceding stations. In the annual graph (Plate XIX) we can easily distinguish the directions that prevail in Manila in the several months of the year, according to Table XXXIV: ESE and SE in February to April; WSW and SW in July to September; and NNE, NE in November to January. As shown in Table XXXIV, the winds in October are variable, there being no much prevailing direction for that month, while in May and June winds from SW and WSW prevail almost as much as those from ESE and SE. The smallest percentages in Manila belong to the wind directions SSE to SSW and WNW to NNW. The annual and semi-annual percentages of calm are the same, 26. In the graph for June to October there appears a highest percentage for the winds SW and WSW. In the graph for November to May, the highest percentages belong to the SE, ESE, and E winds; next, with percentages not much smaller, come the winds from NE and NNE.

Baguio.—The annual percentage of calm for Baguio is only 5. The most prevailing wind directions during the year are E-ESE, with a percentage of 29; then follow the winds from SW-WSW, with 20 per cent, and next those from W-WNW, with 17 per cent. In the graph for November to May there appears a very pronounced high percentage for the E-ESE winds, while in the graph for the period June to October the percentage for the E-ESE winds is not much below that of the chiefly prevailing SW-WSW and W-WNW winds. However, upon carefully examining Table XXXIV, we will see that during the three months from July to September there is a very pronounced high percentage of SW-WSW and W-WNW winds. The smallest percentages at Baguio are for the S-SSW, N-NNE, and NW-NNW winds.

Aparri.—The annual percentage of calm for Aparri is only 6, almost as small as that of Baguio. The most prevailing winds

during the year are those from NE-ENE; next come those from S-SSW. The smallest percentages are those from W-WNW and NW-NNW. In the period June to October, the highest percentage is that of S-SSW winds, there being a good percentage, however, of NE-ENE winds. In the period November to May there is a very high percentage for the NE-ENE winds; but there is also a good percentage of E-ESE and S-SSW winds. In Table XXXIV we see that in May the winds from S-SSW prevail almost as much as those from NE-ENE; and in October the prevailing winds are those from NE-ENE.

Monthly and daily velocity of the wind.—Our readers will find in Table XXXVI the monthly and daily mean velocity of the wind, together with the maximum and minimum daily velocity, for several stations in the Philippines: one in Mindanao, two in the Visayas, and four in Luzon. The greatest monthly mean velocity is that of Baguio, viz. 10,866 km.; then follow Iloilo, with 9,878 km.; Aparri, with 9,265 km., and Cebu, with 8,783 km. That of Manila is only 6,203 km. The greatest daily mean velocities are those of Baguio with 368 km., Iloilo with 326 km., and Aparri with 306 km. Manila has a daily mean velocity of only 204 km. The maximum daily velocity was recorded at Baguio during the typhoon of July 15, 1911: it was 2,478 km. It was during the same typhoon that Manila anemographs registered the maximum daily wind velocity of the whole period 1903–1918, 1,317 km.

Maximum hourly velocity of the wind at Manila.—The maximum daily velocity of the wind, which is given in Table XXXVI, does not show, as a rule, the strongest and most violent or destructive winds experienced in a particular place. Hurricane winds caused by destructive typhoons passing over a place may last for a few hours only, while ordinary gales produced by distant typhoons are at times protracted for a full day or more; and, consequently, the total daily velocity of the wind in the latter cases will often be greater than in the former. Again, a typhoon may pass over a place during the night and the hours of the greatest violence will thus be distributed over two days. In this case the total daily wind velocity will not be so great as it would have been had all the greatest hourly velocities been recorded on the same day. Hence it is not surprising that the strongest typhoons felt in Manila during the period 1903–1918 are not shown by the maximum daily wind velocities given in Table XXXVI.

It would be very desirable, therefore, to have information given as to the maximum wind velocities for one hour and even for

fractions of an hour in a particular place, in order to give an idea of the strongest winds that may be expected during the passage of a typhoon. Lack of time prevents us from giving this information for other stations besides Manila, and even for Manila we can only offer in Table XXXVII the maximum hourly velocity of the wind for every year and every month of the period 1903-1918. It is hoped that we may on some future occasion be able to give more details on this subject.

The maximum hourly velocity of the whole period was 80.5 km.; it was recorded from 1 to 2 p. m. on September 26, 1905, with winds from the NE quadrant, when a destructive typhoon, commonly known as *The Cantabria typhoon*, passed close to the south of Manila. It will be well to remark that, although the maximum total velocity of the wind was 80.5 kilometers for one full hour, yet there were gusts of short duration of much greater velocities, the highest recorded being 46 meters per second (165.7 kilometers or 103 miles per hour) when the center of the typhoon was about 24 miles from the city.

During the whole period of 16 years there were twelve cases of hourly wind velocities of more than 60 kilometers: three in September, two in July, two in October, and one each in April, May, June, November, and December. The maximum hourly velocity for August was no higher than 56.5 kilometers. All these highest wind velocities were caused by typhoons.

TABLE XXXVI.—*Monthly and daily mean wind*TABLA XXXVI.—*Media velocidad del viento, men*

STATION. Estación.	JANUARY. Enero.	FEBRUARY. Febrero.	MARCH. Marzo.	APRIL. Abril.	MAY. Mayo.
SURIGAO (1912-1918).					
Monthly mean velocity (Velocidad media mensual).....	<i>Km.</i> 6,323.2	<i>Km.</i> 6,775.2	<i>Km.</i> 6,612.4	<i>Km.</i> 5,303.4	<i>Km.</i> 3,967
Daily mean velocity (Velocidad media diaria).....	264.2	251.8	221.2	185	145.6
Maximum daily velocity (Velocidad máxima diaria).....	786	683.1	490.9	476.9	506.2
Date (Fecha).....	5, 1917	1, 1913	25, 1916	12, 1916	27, 1914
Minimum daily velocity (Velocidad mínima diaria).....	68.2	75.2	79.2	82.3	46.1
Date (Fecha).....	1, 1918	23, 1917	28, 1918	9, 1918	17, 1918
CEBU (1908-1918).					
Monthly mean velocity (Velocidad media mensual).....	10,354.4	8,193.5	9,786.5	8,886.5	7,980.2
Daily mean velocity (Velocidad media diaria).....	302.3	290.7	313	287.1	231.2
Maximum daily velocity (Velocidad máxima diaria).....	734.2	628.2	876.6	577	1,154.8
Date (Fecha).....	8, 1918	2, 1913	22, 1915	22, 1915	31, 1914
Minimum daily velocity (Velocidad mínima diaria).....	103	99	103.5	96.3	86.6
Date (Fecha).....	1, 1908	16, 1911	16, 1909	22, 1910	25, 1912
LOILO (1908-1918).					
Monthly mean velocity (Velocidad media mensual).....	13,601.8	11,739	13,066	10,198.3	7,361.3
Daily mean velocity (Velocidad media diaria).....	420.3	408.8	412.7	341.3	241.3
Maximum daily velocity (Velocidad máxima diaria).....	805.4	695.7	642.7	631	552.1
Date (Fecha).....	9, 1918	18, 1918	1, 1915	25, 1915	3, 1914
Minimum daily velocity (Velocidad mínima diaria).....	84.7	126.9	111.5	114.4	94
Date (Fecha).....	4, 1916	8, 1916	23, 1909	13, 1913	1, 1911
LEGASPI (1908-1918).					
Monthly mean velocity (Velocidad media mensual).....	11,365.9	7,715.5	8,010.9	6,974.2	5,730.9
Daily mean velocity (Velocidad media diaria).....	295.3	284.1	265.5	237.7	174.8
Maximum daily velocity (Velocidad máxima diaria).....	674.2	628.7	638	905.3	525.1
Date (Fecha).....	25, 1918	2, 1910	1, 1916	16, 1914	5, 1913
Minimum daily velocity (Velocidad mínima diaria).....	7.4	56.6	90.5	52.3	28.4
Date (Fecha).....	15, 1913	9, 1913	6, 1911	30, 1911	9, 1909
MANILA (1903-1918).					
Monthly mean velocity (Velocidad media mensual).....	4,780.9	5,152.9	6,554	6,556.6	6,421.6
Daily mean velocity (Velocidad media diaria).....	154.2	182.4	211.4	218.6	207.2
Maximum daily velocity (Velocidad máxima diaria).....	485.5	414	412	824	1,157.5
Date (Fecha).....	11, 1907	2, 1912	13, 1903	29, 1905	18, 1906
Minimum daily velocity (Velocidad mínima diaria).....	34.5	64	70	88.5	57.5
Date (Fecha).....	20, 1910	7, 1912	17, 1907	27, 1910	11, 1904
BAGUIO (1910-1918).					
Monthly mean velocity (Velocidad media mensual).....	11,015.5	9,819.9	10,422.4	9,962.9	9,840
Daily mean velocity (Velocidad media diaria).....	350.9	345.2	336.8	328.7	357.7
Maximum daily velocity (Velocidad máxima diaria).....	767.1	815.4	623.3	655.5	1,183.8
Date (Fecha).....	1, 1915	2, 1918	12, 1911	24, 1910	9, 1913
Minimum daily velocity (Velocidad mínima diaria).....	160.3	152.2	189.8	173.8	185.9
Date (Fecha).....	22, 1910	26, 1911	23, 1911	27, 1911	20, 1910

velocity for several stations of the Philippines.

sual y diaria, para varias estaciones de Filipinas.

JUNE. Junio.	JULY. Julio.	AUGUST. Agosto.	SEPTEMBER. Septiembre.	OCTOBER. Octubre.	NOVEMBER. Noviembre.	DECEMBER. Diciembre.	ANNUAL. Anual.
<i>Km.</i>	<i>Km.</i>	<i>Km.</i>	<i>Km.</i>	<i>Km.</i>	<i>Km.</i>	<i>Km.</i>	<i>Km.</i>
4,253.9	6,543	7,155.2	6,809.1	4,533.2	5,519	5,629.8	5,785.4
141.8	211	212.2	224.1	182	184	198.5	201.8
716.9	540.5	505.1	765.6	535.4	680.3	569.2	786
27, 1918	28, 1913	14, 1913	2, 1913	14, 1912	24, 1912	28, 1916	Jan. 5, 1917
61.9	67.8	62.1	71.5	54.2	63.3	41.8	41.8
4, 1916	18, 1916	14, 1917	15, 1916	20, 1917	25, 1917	24, 1917	Dec. 24, 1917
7,077.5	8,809	9,868.7	9,393.7	8,932.8	7,259.7	8,851.4	8,782.8
235.9	318.5	311.1	287.5	271.4	254.3	279.8	281.9
1,385.7	1,352.8	940.9	1,262.6	1,295.5	1,140.8	1,171.6	1,385.7
28, 1918	16, 1913	22, 1914	3, 1913	2, 1918	25, 1912	7, 1915	June 28, 1918
75.4	52.5	82.1	70.9	68	79.2	101.4	52.5
29, 1912	17, 1912	14, 1909	6, 1912	13, 1912	11, 1908	7, 1908	July 17, 1912
6,633	9,180.3	9,158.6	8,582.4	8,023.8	9,516.8	11,474.8	9,878
231.7	299.3	337.1	292.9	253.5	304.2	366.7	325.8
883.7	829.1	875.8	812.2	832.4	724.3	634.5	883.7
28, 1918	15, 1911	21, 1907	3, 1913	16, 1912	28, 1912	28, 1916	June 28, 1918
102.2	97.3	100.6	88.8	87.9	80.3	46.2	46.2
12, 1911	3, 1911	17, 1918	9, 1910	2, 1911	25, 1917	14, 1912	Dec. 14, 1912
4,786.4	5,639.9	6,348	5,993.2	6,788.1	7,369.4	8,949.6	7,139.3
167.6	223.1	231.7	210	216.7	253.3	289.7	237.5
896.9	846.1	572.5	609.3	620.3	1,066.1	699.7	1,066.1
28, 1918	14, 1911	28, 1914	3, 1913	2, 1918	1, 1910	6, 1915	Nov. 1, 1910
15.3	22.6	12.7	42.6	33.9	27.3	32.7	7.4
16, 1909	23, 1910	25, 1910	10, 1908	5, 1913	18, 1912	19, 1912	Jan. 15, 1913
6,235.1	8,312.7	9,179.8	7,117	5,061.3	4,571.9	4,492.8	6,203
207.8	268.2	296.1	237.2	163.3	152.4	144.9	203.6
1,229	1,317	1,044	1,021	1,048	622	943	1,317
25, 1904	15, 1911	29, 1905	18, 1909	29, 1915	3, 1915	7, 1915	July 15, 1911
45	29	39.5	38	45	33.5	45.5	29
11, 1907	17, 1916	9, 1904	18, 1915	29, 1913	3, 1909	18, 1913	July 17, 1916
10,007.7	13,028	14,908.7	11,773	9,762	9,041	10,805.6	10,865.6
338.5	457.7	460	413.7	326.3	343.9	351.9	367.6
1,749.3	2,477.9	1,720.2	2,266.8	1,136.7	1,190.7	1,305.7	2,477.9
29, 1918	15, 1911	1, 1912	28, 1911	24, 1915	29, 1912	8, 1915	July 15, 1911
190.6	180.5	168.2	158.8	158.7	115.9	154.8	115.9
14, 1911	30, 1911	2, 1910	26, 1915	19, 1915	20, 1912	6, 1917	Nov. 20, 1912

TABLE XXXVI.—*Monthly and daily mean wind velocity*TABLA XXXVI.—*Media velocidad del viento, mensual y*

STATION. Estación.	JANUARY. Enero.	FEBRUARY. Febrero.	MARCH. Marzo.	APRIL. Abril.	MAY. Mayo.
APARRI (1908-1918).					
Monthly mean velocity (Velocidad media mensual)	<i>Km.</i> 10,027.3	<i>Km.</i> 9,218.4	<i>Km.</i> 10,395.5	<i>Km.</i> 8,873.2	<i>Km.</i> 8,924.9
Daily mean velocity (Velocidad media diaria)	327.9	338.3	331.2	295.8	287.3
Maximum daily velocity (Velocidad máxima diaria)	806.7	809.4	750.6	691.3	1,015.7
Date (Fecha)	30, 1913	13, 1917	26, 1909	18, 1911	7, 1910
Minimum daily velocity (Velocidad mínima diaria)	33.8	119.1	135.1	146.8	140.7
Date (Fecha)	27, 1911	16, 1909	12, 1912	7, 1913	29, 1915

for several stations of the Philippines—Continued.

diaria, para varias estaciones de Filipinas—Continuación.

JUNE. Junio.	JULY. Julio.	AUGUST. Agosto.	SEPTEMBER. Septiembre.	OCTOBER. Octubre.	NOVEMBER. Noviembre.	DECEMBER. Diciembre.	ANNUAL. Anual.
<i>Km.</i> 8,626.1	<i>Km.</i> 8,619.7	<i>Km.</i> 8,726.8	<i>Km.</i> 8,261.7	<i>Km.</i> 8,725.7	<i>Km.</i> 10,594.6	<i>Km.</i> 10,184.4	<i>Km.</i> 9,264.9
297.2	289.8	283.3	287.5	281.7	322	335.3	306.4
1,499.8 29, 1918	1,050.7 29, 1913	1,517.1 16, 1913	1,307 4, 1913	1,047.5 28, 1915	954.3 28, 1908	933.9 8, 1911	1,517.1 Aug. 16, 1913
145.7 1, 1908	127.4 20, 1910	110.4 3, 1918	97.4 24, 1914	72.2 4, 1910	60.3 15, 1910	64.4 3, 1914	33.8 Jan. 27, 1911

TABLE XXXVII.—Maximum hourly velocity of the wind for Manila, 1903-1918.

TABLA XXXVII.—Velocidad máxima diaria del viento en Manila, 1903-1918.

YEAR. Año.	JANU- ARY. Enero.	FEBRU- ARY. Febrero.	MARCH. Marzo.	APRIL. Abril.	MAY. Mayo.	JUNE. Junio.	JULY. Julio.	AUGUST. Agosto.	SEPTEM- BER. Septiem- bre.	OCTO- BER. Octubre.	NOVEM- BER. Noviem- bre.	DECEM- BER. Diciem- bre.	ANNUAL. Annual.
	Km.	Km.	Km.	Km.	Km.	Km.	Km.	Km.	Km.	Km.	Km.	Km.	Km.
1903.	33.5	30	38.5	34.5	36	37.5	49	56	48	47.5	41	34	56
1904.	26.5	24.5	30	29	32	65	43.5	42.5	55.5	28.5	35	23	65
1905.	21.5	31	30.5	69	28.5	43.5	38.5	56.5	80.5	35	28.5	26	80.5
1906.	34	32.5	34	34	69.5	31.5	35	50.5	73	29.5	29.5	31.5	73
1907.	36.5	29	35.5	32.5	38.5	35	40.5	50	48.5	55	27.5	31.5	55
1908.	29.5	29.5	29.5	29.5	54	37.5	42	48	42.5	77	42	47	77
1909.	25	33.5	36.5	31	31.5	39.5	51	34.5	62	70	36	30	70
1910.	29	34.5	30	28.5	38	23.5	41	39	40	37	32	34	41
1911.	17.5	38.5	27	39	25	42	68	54	55	22	26.5	35	68
1912.	25	35.5	33	32	30	38	44	46	50	41	44	30	50
1913.	21	30	30	29	34	29	69	46	50	50	29	26.5	69
1914.	28	26	28.5	34	34	64	53	53	41	22	23	18	64
1915.	27.5	27.5	28	31	35	43	36.5	42	35	58	68	68	68
1916.	36	25.5	24	26	31	39.5	32.5	43	42	22	25	23.5	43
1917.	27	29	25	23	29	26.5	41	38	38	29	22	21.5	41
1918.	27.5	32	25	28	35	67	42	39	37.5	47	25	35	67
Highest (Máxima) Year (Año)	36.5 1907	38.5 1911	38.5 1903	69 1905	69.5 1906	67 1918	69 1913	56.5 1905	80.5 1905	77 1908	68 1915	68 1915	80.5 1905

VI. TYPHOONS.

That typhoons have a great influence on the climate and the weather in the Philippines, cannot be reasonably doubted. Our rainfall in summer and autumn, many of our prevailing winds, particularly in summer, the great wind velocity of several months for a good number of our stations, etc., etc., are to be attributed to the influence of typhoons. Most of the greatest changes of weather experienced in our Archipelago as to precipitation, humidity, cloudiness, winds, are caused only by typhoons. Hence the importance of this matter in any writing on the weather and climate of the Philippines.

Hann in his *Handbook of Climatology*¹ has the following to say on the value of the distribution of storm frequency in descriptive climatology:

Professor Abbe lays great stress upon the determination of the number of storm centres that pass over a given locality, or the storm frequency, and upon the direction of movements of these storms. We fully agree with Abbe in believing that charts of the tracks of barometric minima, and of their frequency of occurrence upon these tracks, are a valuable aid in descriptive climatology. Such charts furnish direct evidence concerning the changeableness and the peculiarities of the weather at any definite place. Charts showing the distribution of storm frequency are therefore also of importance in determining the boundaries between climates.

In this report we are going to touch on typhoons only as far as they affect the weather and the climate of the Philippines. Therefore, in studying the monthly and annual frequency of typhoons we will not consider all the depressions or typhoons that have been observed throughout the Far East, as has been done in practically all the previous publications of the Manila Observatory, but only those which have either traversed the Archipelago, or at least have approached sufficiently near to influence our weather. If in connection with our climate and weather all the typhoons of the Far East would be included, even those that remain in the Pacific very far away in the region of the Ladrone or of the Bonin Islands, the results ob-

¹ English translation by Ward, page 83.

tained would be simply misleading, as they would convey the idea, at least for many people, that the number of typhoons felt monthly or yearly in the Philippines is much greater than it really is.

Again, distinction should be made between remarkable or, as a rule, destructive typhoons, and ordinary typhoons. A remarkable or destructive typhoon is one of the greatest natural calamities that may occur in any place, when it is traversed by the cyclonic center, causing terrible disasters on land and in the seas, and enormous material damages. But depressions and ordinary typhoons, owing to the beneficial rains that they produce with the corresponding increase of cloudiness and lowering of air temperature, are often rather a blessing to the Philippines than a cause of serious damage.

The same may be said of typhoons, even intense or very remarkable, which do not reach the Islands, but remain either in the Pacific or in the China Sea, within 500 or 300 miles from our Archipelago. It is true that all these typhoons are also dangerous for navigation; but this danger is greatly minimized by the prompt and proper distribution of typhoon warnings as it is done in the Philippines.

Accordingly, it is our intention in this report to talk first and more in detail of the remarkable typhoons that have really traversed the Philippines during the period of sixteen years, 1903 to 1918. Then some information will be given on the depressions or ordinary typhoons that have crossed the Philippine during the period of 11 years, 1908 to 1918, and finally something will be said on the typhoons, whether remarkable or otherwise, which have not touched the Archipelago, but have approached sufficiently near to exert a general influence on the weather of the Philippines during the same period 1908, to 1918. With very few exceptions, low-pressure areas with no definite center and no definite track have not been considered in this report.

Our readers may wonder why information concerning the ordinary typhoons over the Philippines, and also the distant typhoons, is taken from the period 1908 to 1918 and not from the longer period 1903 to 1918. The reason is that our two daily weather maps began to be drawn only at the end of 1907, the year 1908 being the first for which we have these important means for the study of depressions and typhoons. Without these maps prepared daily, it is very hard to prepared complete statistics of typhoons, particularly of ordinary typhoons, and much

more to determine the provinces which were traversed by the cyclonic center.

List of remarkable typhoons in the Philippines, 1903-1918.—By remarkable typhoons in the Philippines we mean here those storms which have traversed or touched the Philippines, causing the barometers, in or near the cyclonic center, to fall below 742 mm., if the correction for gravity is not applied, or below 740 mm., if the gravity correction is applied. For the sake of uniformity with our previous publications all the barometric readings given in this chapter are not corrected for gravity. As a rule, typhoons which produce such a falling of the barometer cause considerable damage in the regions situated within their destructive area.

A complete list of all the remarkable typhoons which have occurred in the Philippines in the period of 16 years, 1903-1918, are included in Table XXXVIII. This table gives for each typhoon the date on which the cyclonic center traversed the Philippines; the lowest barometric minimum observed in the station which was nearest to the center; the direction followed by the typhoon and its rate of progress while passing near the place whose barometric minimum is given; and, finally, the provinces and subprovinces which happened to be within the destructive area of the typhoon or which are supposed to have been mostly affected by the stormy weather and hurricane winds.

A few remarks may be necessary for the better understanding of the information contained in this table:

1. As to the lowest barometric reading, it is evident that quite often the barometer must have been much lower in the center of the typhoon, because not always have we been so fortunate as to get observations from places situated on the very track of the typhoon. Thus, for instance, in cases of typhoons passing through the Babuyan Islands, the nearest station reporting meteorological observations will be either Aparri or Basco, distant from the center of the storm from 25 to 50 miles. Hence it is that we have included in the list a few barometric minima higher than 742 mm., when we were perfectly sure that the barometer was much lower in the center.

2. Regarding the rate of progress as contained in the table, we wish to insist on that we give the rate of progress of the typhoon just at the time which it crossed the Philippines, and generally while the center was near the place of the lowest barometric minimum. And as it is not so uncommon that a typhoon decreases in velocity while within the Archipelago, the rate of

TABLE XXXVIII.—*Remarkable typhoons in the Philippines, 1903-1918.*

Year.	Month.	Day.	Lowest pressure.	Direction.	Rate of progress.	Provinces and subprovinces traversed by the destructive area of the typhoon.
1903.	June.....	3	740.7 at Capiz.	W by N	11	Surigao, Leyte, Cebu, Occidental Negros, Iloilo, Capiz, Antique Mindoro and Northern Palawan.
	October.....	20	735.7 at Aparri.	W by N	6	Babuyan Islands (Cagayan), Cagayan and Ilocos Norte.
	do.....	25	720.4 at Tuguegarao.	W	14	Cagayan, Isabela, Abra, Ilocos Norte and Ilocos Sur.
	June.....	26	730 at Basco.	NNW	9	Cagayan, Babuyan Islands (Cagayan) and Batanes.
1904.	October.....	31	751.3 at Jolo ¹	W by N	8	Davao and Sulu.
	April.....	30	738 at Baler.	WNW	7	Catanduanes, Ambos Camarines, Northern Tayabas, Nueva Ecija, Nueva Vizcaya, Tarlac, Pangasinan, Amburayan, Benguet and La Union.
1905.	July.....	1	713.2 at Basco.	WNW	12-13	Batanes and Babuyan Islands (Cagayan).
	August.....	29	727 at Basco.	WNW	9	Babuyan Islands (Cagayan).
	September.....	25	690.1 { On board steamship <i>Pathfinder</i> at San Policarpo Bay, Samar.	WNW	18	Samar, Leyte, Sorsogon, Masbate, Albay, Ambos Camarines, Southern Tayabas, Romblon, Marinduque, Mindoro, Batangas, Laguna, Rizal, Cavite, Manila city, Bulacan, Pampanga, Batangas and Zambales.
1906.	May.....	26	741.4 { On board steamship <i>Fathomer</i> at Lamit Bay, Ambos Camarines.	NNW by W	8	Samar, Catanduanes, Albay and Ambos Camarines.
	September.....	7	743.9 at Basco ²	NW	10	Babuyan Islands (Cagayan) and Batanes.
	do.....	19	736 at Aparri.	WNW	13	Cagayan and Ilocos Norte.
	do.....	27	708 at Baler.	WNW	9	Northern Tayabas, Bulacan, Isabela, Nueva Ecija, Nueva Vizcaya, Tarlac, Ifugao, Lepanto, Amburayan, Benguet, La Union, Zambales and Pangasinan.
1907.	January.....	10	735.6 { On board steamship <i>Lisicua</i> at Santa Rita Bay, Samar.	WSW	11	Samar, Leyte, Masbate, Cebu and Occidental Negros.
	August.....	22	743.5 at Vigan ³	NE	8	Ilocos Sur, Ilocos Norte, Cagayan and Babuyan Islands (Cagayan).
	May.....	28	738.8 at Basco	NE	17	Ilocos Norte and Babuyan Islands (Cagayan).
	September.....	23	699.1 at Borongan.	WNW	15	Samar, Leyte, Masbate, Romblon, Mindoro and Northern Palawan.
1908.	October.....	4	716 at Baler.	WNW	17	Northern Tayabas, Isabela, Nueva Vizcaya, Nueva Ecija, Amburayan, Benguet, Ifugao, Bontoc, Lepanto, La Union, Tarlac, Pangasinan and Ilocos Sur.
	do.....	8	722.9 at Echague.	WNW	21	Northern Tayabas, Isabela, Nueva Vizcaya, Ifugao, Bontoc, Lepanto, Amburayan, Benguet, Abra, Ilocos Sur and La Union.
	do.....	13	711 at Tuguegarao.	NW by W	11	Isabela, Cagayan, Abra and Ilocos Norte.
	November.....	20	730 at Baler.	WNW	28-30	Catanduanes, Northern Tayabas, Nueva Ecija, Nueva Vizcaya, Samar, Leyte, Masbate, Sorsogon, Albay, Ambos Camarines, Romblon, Southern Tayabas, Marinduque, Mindoro, Laguna, Batangas, Cavite, Bataan, Zambales and Pangasinan.
	December.....	5	719.6 at Borongan.	WNW	15	

Year	Date	Time	Wind	Direction	Remarks
1909	July	29	730.4	E by N	Ilocos Norte, Ilocos Sur, Abra and Cagayan.
	October	2	737.8	WNW	Batanes.
	do.	17	710.4	WNW	Isabela, Cagayan, Babuyan Islands (Cagayan), Abra and Ilocos Norte.
	do.	24	735.8	NW by W	Catanduanes, Ambos Camarines, Northern Tayabas, Rizal, Bulacan, Nueva Ecija, Pampanga, Tarlac, Zambales and Pangasinan.
1910	November	6	728.5	WNW	Surigao, Samar, Leyte, Cebu, Masbate, Iloilo, Capiz, Antique, Romblon, Mindoro and Northern Palawan.
	August	28	741.4	NE	Batanes.
	September	24	725	W	Isabela, Nueva Vizcaya, Ifugao, Lepanto, Bontoc, Abra, Amburayan, Benguet, La Union and Ilocos Sur.
	do.	28	743.2	W	Batanes.
	November	1	731.6	WSW	Samar, Leyte, Cebu, Occidental Negros, Iloilo, Capiz, Antique, and Northern Palawan.

¹ This was a destructive typhoon and particularly remarkable for having crossed the Philippines at such a low latitude to the south of Jolo. This is to be considered as a very rare case. As to the barometric minimum in the center of the typhoon, we think it very probable that it must have been below 742 mm. The only observations we have are those from Jolo where the barometer fell only to 751.3 mm. That the typhoon was very well developed and of great intensity can be judged from the following notes of Reverend José Algué taken from our Monthly Bulletin of October, 1904. The attention of our readers is called to the extraordinary cyclonic wave mentioned in these notes:

"The cyclone was first felt in Caraga, our most eastern station, shortly after noon, October 29. The cyclonic wave was most extraordinary and altogether unprecedented for that locality, as we learn from the observer at that station. The waves dislodged great rocks, some of them more than 3 cubic meters in size. Their direction was southerly, even when the wind blew from the NE with frequent squalls of wind and rain, the wind reaching a force of from 6 to 7. The wind blew from the northeast during the afternoon and evening of the 29th, and then veered to the east, south-east and south by the morning of the 30th. Here we have a notable case of a cyclonic wave. In Davao the weather began to change on the evening of the 29th. The waves grew in force that night, and the next morning were so violent that they threatened to inundate the whole shore with the great cyclonic wave which entered the Gulf of Davao open to the southeast and south. So great was the force of the swell that, according to the natives, nothing of the kind had been seen there in many years. Two boats were lost in the gulf and several persons drowned. The wind did not grow very strong but the rain was torrential, overflowing the rivers and in a few hours registering more than 125 millimeters. The vortex made its way along to the south of Mindanao and reached the meridian of Cotabato the evening of the 30th. By the next morning it had already passed south of Jolo, as we learn from the observations made at that station.

"In Isabela de Basilan, on the night of the 30th, the storm destroyed a great part of the fruit trees and unroofed several houses, causing widespread consternation among the people. From the account of passengers on the transport *Liscum*, the storm began in Zamboanga on the 30th with increasing wind and the sea so rough that the transport had to leave the wharf and put to sea. The waves in their violence destroyed the wooden superstructure of the wharf for a length of 33 meters, besides doing other damage. In Jolo, to judge from the few remarks of the observer, supplemented by further details from other accounts, the storm must have been very severe. The wind began to blow hard Sunday morning, the 30th, and in the course of the day waxed steadily stronger. It tore down telephone lines and wrought havoc among trees of every kind. In Siasi several buildings were destroyed; in Maimbon, the capital of the Sultan, the public school was laid in ruins. This cyclone, therefore, entered the Archipelago to the south of Cape San Agustín on the evening of October 29, and, passing close to Sarangani Island, crossed the Sulu Group and emerged into the China Sea the night of the 31st."

² The barometric minimum must have been much lower in the center, as it passed over 60 miles to the NE and N of Aparri through the Babuyan Islands.

³ The barometric minimum must have been much lower in the center as it passed over 20 miles NW and N of Vigan through Ilocos Norte. No observations could be obtained from Laosg.

TABLE XXXVIII.—Remarkable typhoons in the Philippines, 1908—1918—Continued.

Year.	Month.	Day.	Lowest pressure.	Direction.	Rate of progress.	Provinces and subprovinces traversed by the destructive area of the typhoon.
1911.	July	2	739 at Echague.	NW by W	13	{ Isabela, Nueva Vizcaya, Hugao, Lepanto, Bontoc, Abra, Amburayan, Benguet, Ilocos Sur and La Union.
	do.	15	736.8 at Tuguegarao.	NW by W	7	{ Isabela, Agusan, Abra and Ilocos Norte.
	August	1	739.2 at Aparri.	W by N	9	{ Cagayan, Babuyan Islands (Cagayan) and Ilocos Norte.
	do.	26	690.7 at Basco.	NW	13	{ Babuyan Islands (Cagayan) and Batanes.
	September	17	742.2 at Aparri 6.	W	14	{ Babuyan Islands (Cagayan).
	do.	27	721.5 at Tuguegarao.	WNW	10	{ Cagayan, Isabela, Abra and Ilocos Norte.
	December	8	741.2 at Tuguegarao.	WNW	9	{ Cabela, Cagayan, Bontoc, Abra, Ilocos Sur and Ilocos Norte.
	September	28	730.4 at Basco.	NNE	5	{ Surigao, Leyte, Bohol, Cebu, Oriental Negros, Occidental Negros, Iloilo, Capiz, Antique, Masbate, Romblon, Mindoro and Batan-gas.
	October	15	707.5 at Malitbog, Leyte.	W	8	{ Isabela, Cagayan, Bontoc, Abra, Ilocos Sur and Ilocos Norte.
	do.	27	737.3 at Tuguegarao.	WNW	11	{ Surigao, Agusan, Leyte, Bohol, Cebu, Oriental Negros, Occidental Negros, Iloilo, Antique and Northern Palawan.
November	7	739.4 { On board steamship <i>Mg-rindaque</i> at Dumaran Channel, Palawan.	W by N	18	{ Samar, Leyte, Cebu, Masbate, Occidental Negros, Iloilo, Capiz, Antique, Romblon, Mindoro and Northern Palawan.	
do.	24	698.1 at Tacloban.	W by N	15	{ Samar, Leyte, Cebu, Masbate, Occidental Negros, Iloilo, Capiz, Norte, and Abra.	
May	5	{ 727.8 at Borongan.	W by N	8	{ Samar, Sorsogon, Albay, Catanduanes and Ambos Camarines.	
do.	15	{ 733 at Laoag.	N	8	{ Cagayan, Abra, Ilocos Norte and Ilocos Sur.	
do.	29	740.8 at Virac.	NE	6	{ Cagayan, Babuyan Islands (Cagayan) and Ilocos Norte.	
do.	16	732.1 at Aparri 7.	WNW	11	{ Cagayan, Babuyan Islands (Cagayan) and Ilocos Norte.	
August	4	735.9 at Aparri.	WNW	9	{ Cagayan, Babuyan Islands (Cagayan).	
September	16	741.2 at Aparri.	WNW	13	{ Samar, Sorsogon, Albay, Catanduanes, Ambos Camarines, Northern Tayabas, Southern Tayabas, Bulacan, Nueva Ecija, Nueva Vizcaya, Pangasinan, Hugao, Lepanto, Bontoc, Amburayan, Benguet, Abra, Ilocos Sur and Ilocos Norte.	
June	18	736.6 at Batag.	NW	10	{ Batanes.	
August	13	735.1 at Basco.	WNW	11	{ Samar, Sorsogon, Albay, Catanduanes, Ambos Camarines, Southern Tayabas, Marinduque, Batangas, Mindoro, Laguna, Rizal, Cavite, Bataan and Zambales.	
October	23	710 { On board steamship <i>Gabrielle Poizat</i> at Tabaco Bay, Albay.	W	10	{ Cagayan, Isabela, Abra, Ilocos Norte, and Babuyan Islands (Cagayan).	
do.	29	716.3 at Aparri.	WNW	8	{ Catanduanes, Ambos Camarines, Northern Tayabas, Rizal, Bulacan, Pampanga, Nueva Ecija, Tarlac, Zambales, Nueva Vizcaya, Hugao, Lepanto, Amburayan, Benguet, Ilocos Sur, La Union and Pangasinan.	
November	3	720 at Baler.	NW by W	24	{ Sainar, Sorsogon, Albay, Catanduanes, Ambos Camarines, Southern Tayabas, Marinduque, Laguna, Rizal, Batangas, Cavite and Bataan.	
December	6	727 at Virac.	W by N	10		

1916.....	September.....	4	743	at Aparri 8	W by N	8	Babuyan Islands (Cagayan).
1917.....	August.....	13	734.7	at Aparri.	NW	11	Cagayan, Ilocos Norte and Babuyan Islands (Cagayan).
.....	.....do.....	18	736.6	at Basco.	NW	13	Batanes.
1918.....	June.....	29	722.4	at Aparri.	NW	14	Cagayan, and Babuyan Islands (Cagayan).
.....	December.....	25	724	(On board steamship <i>Ang- ipolo</i> at Magallanes Bay, Sorsogon.)	WSW	12	(Samar, Catanduanes, Sorsogon, Albay, Masbate, Romblon, Mindoro and Northern Palawan.

⁴The center of the typhoon passed over 20 miles to the north of Basco, and hence the barometric minimum in the center must have been below 742 mm. The typhoon was still more developed when it was in the China Sea shortly after it had left the Batan Islands. The steamers *Wagayayag*, *Pompey*, and *Moyang* came to be successively within the vortex, or very close to it, the first mentioned at dawn of the 29th, the second in the afternoon of the same day, and the third in the early morning of the 30th. Their respective barometric minima were 719.57 mm., 719.81 mm. and 712.97 mm. (See *The Typhoons of September, 1910*, by Rev. José Coronas, S. J., 1910.)

⁵On the barometric minimum of this typhoon we copy here what we said in our pamphlet, *The Typhoon of the Batanes and Southern Formosa, August 21 to 29, 1911*:

"It is most unfortunate that we shall never know the lowest point reached by the barometer while the storm passed over Santo Domingo (Basco). As is seen in the reproduction, the recording pen reached the lower limit of the paper (716 millimeters) about two hours before the vortex passed. On the other hand, the observer was at that critical time in dire straits, endeavoring to save the instruments and other delicate belongings of the station from utter ruin, finding it thus impossible to make direct observations while the vortex was in the immediate neighborhood. Even those observations which he had made during the hours preceding the worst phase of the phenomenon he lost to his great chagrin in the confusion, and had to substitute for them the readings of the barographic curve.

"Our inability to ascertain the barometric minimum during this typhoon is so much the more to be regretted, as we believe that it would have proved to be one of the lowest, if not actually the lowest, ever observed in the Philippines. To this conclusion we are led by the barograph curve which shows 715 millimeters some two hours before the minimum, and still more by a comparison of same with that traced at Koshun, southern Formosa, which we reproduce on the same plate. It is evident at first sight that according to these curves the minimum must have been considerably lower at Santo Domingo than at Koshun. But for the latter place, where direct hourly observations have been made, we find a minimum of 702.9 millimeters. Moreover, if already prior to the barometer's reaching 715 millimeters (from 6 to 7 a. m.) the descent attained a rate of more than 10 millimeters per hour, as may be seen in the curve, we do not believe that we are exaggerating matters if we suppose that during the two hours immediately preceding the minimum, the barometer fell as much as 12 to 15 millimeters per hour and, hence, that the minimum was 690 millimeters and possibly still lower. The observer of Santo Domingo remarks very well in his report: "I believe that, if the two branches of descent and ascent of the barograph were prolonged, we would have a minimum below 690 millimeters." Now, so low a minimum can be compared only with the one recorded on board the survey steamer *Pathfinder* during the ill-famed *Cantabria Typhoon*, which was 690.12 millimeters and has hitherto rightly been considered as the lowest pressure ever observed in the Philippines."

⁶The barometric minimum must have been much lower in the center which passed over 60 miles to the north of Aparri. The steamer *Kumeric* met the storm in the China Sea on the 18th with a barometric minimum of 732.8 mm.

⁷This typhoon appears in Plate XXIV as a very remarkable typhoon because although the barometric minimum of Aparri was not lower than 732.1 mm., yet the barometer must have fallen much more in the center judging from the enormous amount of damage done in the Babuyanes 30 miles north of Aparri, and from the very extraordinarily low barometric minimum observed next day, the 17th, on board the steamer *Empire*, 683.17 mm. (See our *Monthly Bulletin* for August, 1913.)

⁸The barometric minimum must have been much lower in the center, as it passed over 40 miles to the north of Aparri.

progress deduced from the two dates given in our Plates XXII to XXV at the beginning and end of each track, may often differ from that given in Table XXXVIII.

3. As will be explained later, the last column contains those provinces and subprovinces whose boundary line was within 50 miles from the cyclonic center in cases of very remarkable typhoons, and within 30 miles in cases of only remarkable typhoons.

The attention of our readers should be called to the great variety observed in the rate of progress of typhoons traversing the Philippines, the greatest having been 28 to 30 miles per hour, while the lowest was only 2 to 3 miles per hour. The former velocity was obtained in the case of a typhoon that crossed the central part of Luzon in a WNW direction on November, 1908; and the latter was observed whilst a typhoon of a very abnormal track, which had been moving first to NE from the China Sea, was recurving very slowly to N and NW near the Batan Islands on August, 1910. Velocities higher than 20 miles per hour have been observed only in two other cases of remarkable typhoons that traversed Luzon to the north of Manila: one in October, 1908, and the other in November, 1915. The average velocity of the 60 typhoons contained in Table XXXVIII is 11.6 miles per hour.

Tracks of remarkable typhoons in the Philippines, 1903-1918.—Plates XXII to XXV show the tracks of the 60 remarkable typhoons that traversed the Philippines during the period 1903-1918. The dates given at the beginning and end of each track refer generally to the position of the typhoon at 6 a. m. The following remarks on these tracks should prove of great interest to our readers:

1. There appears an evident tendency on the part of big typhoons to cross the Philippines through the northern part of Luzon and the Balintang Channel. This is particularly remarkable in the years 1911 to 1913, as shown in Plate XXIV.

2. We distinguish in these plates by a heavier line the typhoons which we call very remarkable, their barometric minima being lower than 720. Out of 60 typhoons there appear in these plates 14 as very remarkable: 9 to the north of Manila, and 5 to the south. This means that about 23 per cent of the remarkable typhoons are very remarkable. It should be noticed, however, that, as in several cases we could not get observations from places very near the center of the typhoons, it is very probable that several other typhoons which appear now in our plates as remarkable would appear as very remarkable if more weather reports could have been obtained. This is particularly probable

TRACKS OF REMARKABLE TYPHOONS IN THE PHILIPPINES, 1903-1906.

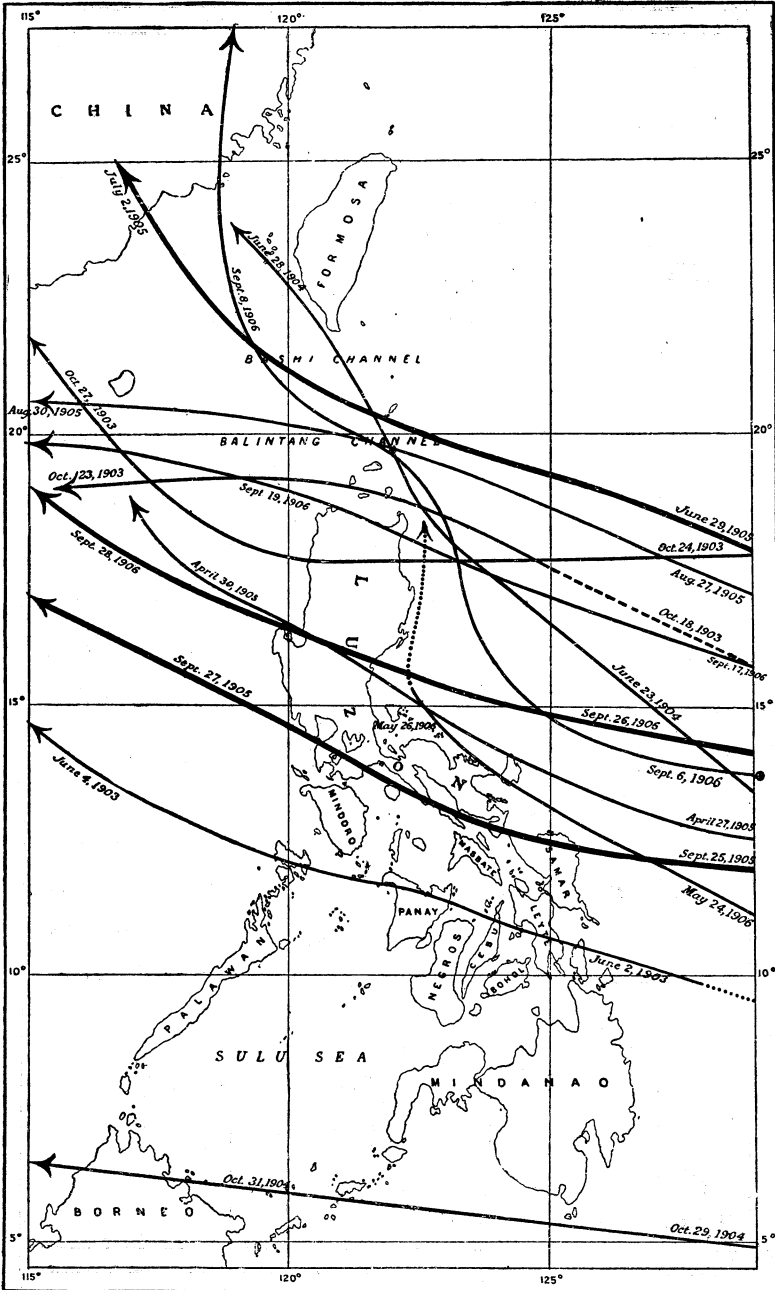
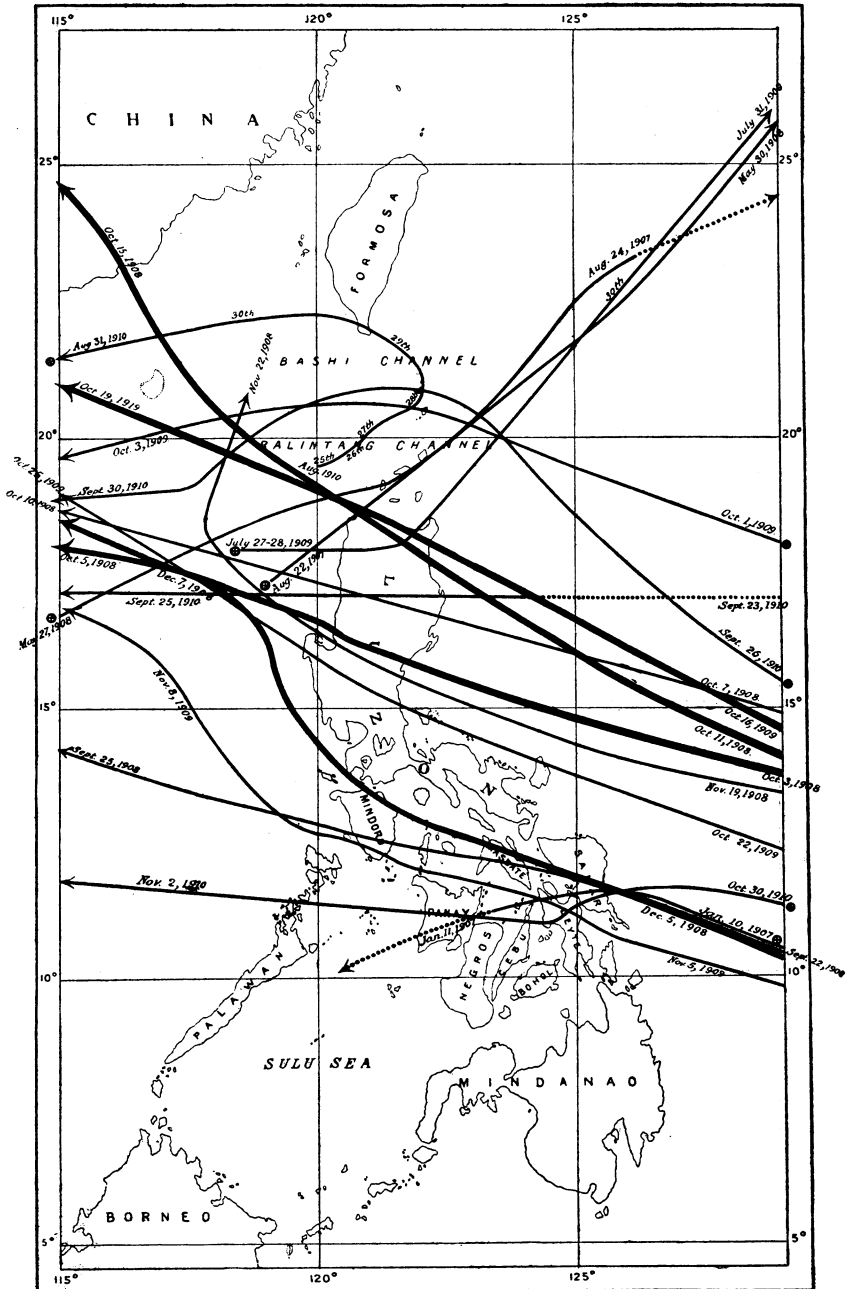


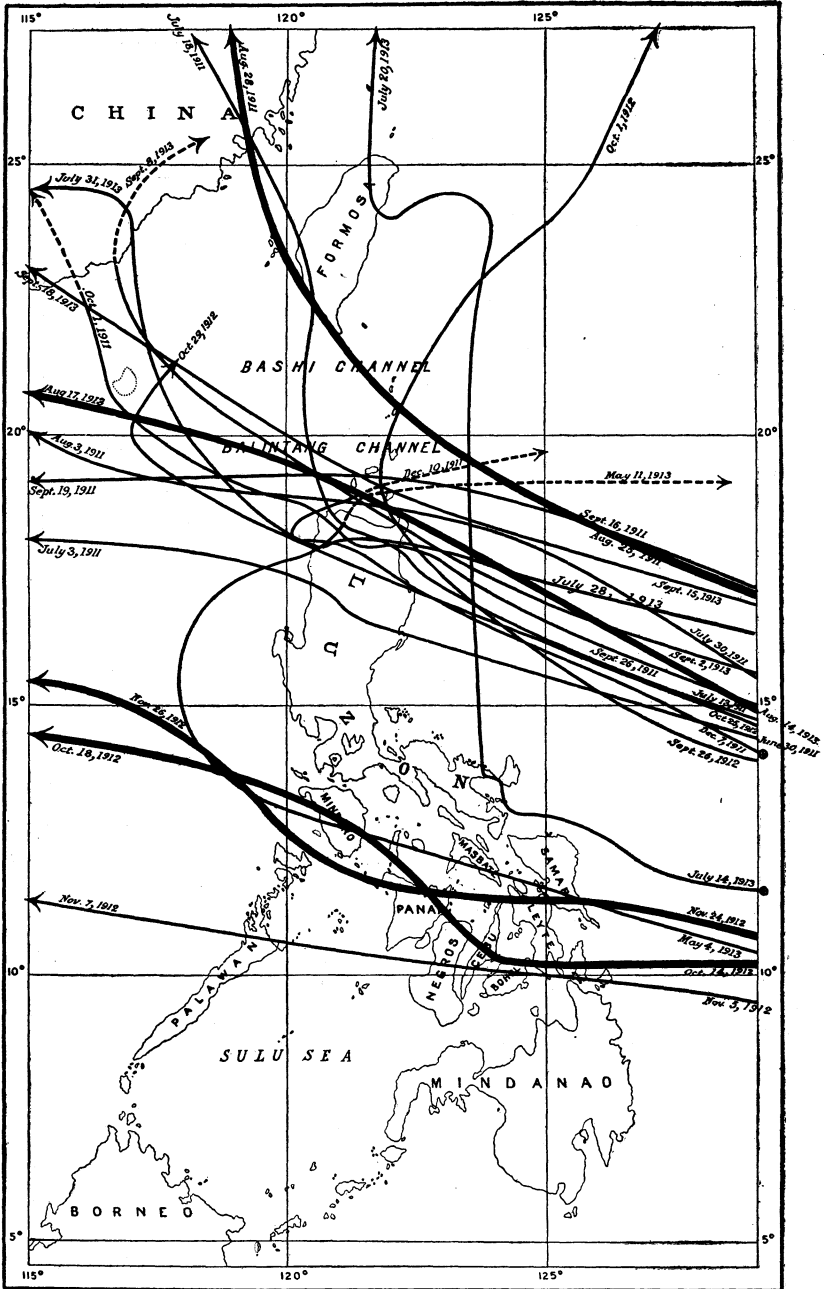
PLATE XXII.

TRACKS OF REMARKABLE TYPHOONS IN THE PHILIPPINES, 1907-1910.



Very remarkable typhoon with a barometric minimum below 720mm. Remarkable typhoon with a barometric minimum below 742mm. Abnormal track.

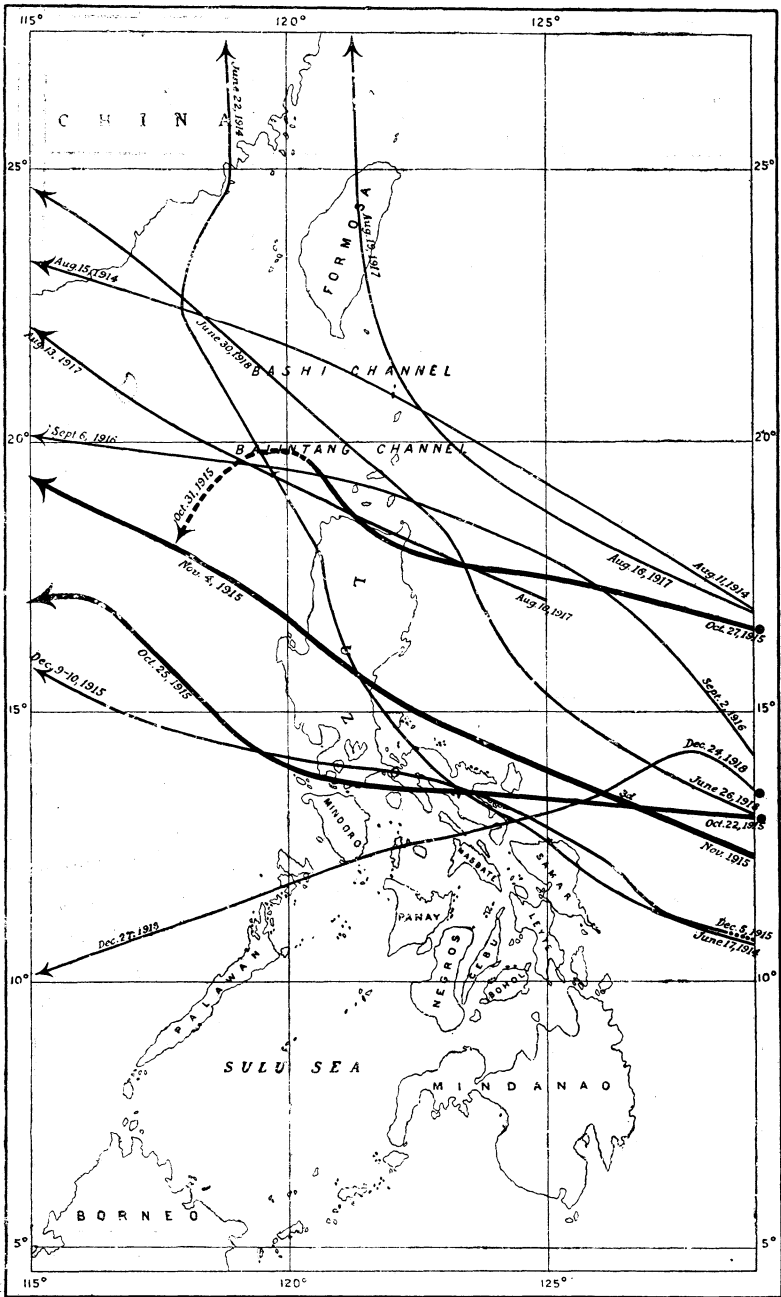
TRACKS OF REMARKABLE TYPHOONS IN THE PHILIPPINES, 1911-1913.



— Very remarkable typhoon with a barometric minimum below 720mm.; — Remarkable typhoon with a barometric minimum below 742mm.; - - - Abnormal track.

PLATE XXIV.

TRACKS OF REMARKABLE TYPHOONS IN THE PHILIPPINES, 1914-1918.



Very remarkable typhoon with a barometric minimum below 720mm; — Remarkable typhoon with a barometric minimum below 742mm; - - - Abnormal track.

in regard to typhoons that crossed the Babuyan Islands between Aparri and Basco.

3. Out of the 14 very remarkable typhoons there were no more than 4 typhoons with a barometric minimum lower than 700 mm.; two over Samar in September, 1905, and September, 1908 (690.1 mm. and 699.1 mm. respectively), one over Leyte in November, 1912, (693.1 mm.), and the other over the Batanes in August, 1911 (690 ? mm.). Besides, the typhoon which crossed the Babuyan Islands on August, 1913, was also in all probability, even on the 16th., one of the most remarkable typhoons, as the barometric minimum observed the next day on board the steamer *Empire* was as low as 683.17 mm.

4. It is evident from these plates that the annual frequency of remarkable typhoons is very variable, there being at times periods of several years with very few typhoons and other periods with the greatest number of typhoons. Thus Plate XXV shows only 11 remarkable typhoons for 5 years, 1914 to 1918, while Plate XXIV has 18 typhoons for only 3 years, 1911 to 1913.

5. In order to show how far these remarkable typhoons may affect the weather in Manila, we say that 46 passed to the north of Manila, and only 15 to the south, their distance from the city being as follows:

0-30 miles.....	1
30-60 miles.....	5
60-120 miles.....	11
Over 120 miles.....	44

It is evident from this that Manila has been considerably free from the destructive effects of remarkable typhoons, as there was only one in 16 years that passed within 30 miles from the city. This was the typhoon known as *The Cantabria Typhoon*¹ which traversed Luzon through the Provinces of Sorsogon, Tayabas, Laguna, Batangas, and Cavite on September, 1905.

Our readers may like to know why is it that rainy and squally weather is often protracted for several days in Manila when typhoons pass over 120 miles north of Manila, and particularly when they traverse Cagayan Province or the Balintang Channel, while it lasts only for much shorter time when a typhoon passes nearer through the Provinces of Nueva Ecija, Tarlac, or Pangasinan. Several reasons may be advanced to explain this fact: (1) With typhoons coming from higher latitudes to the north-east of Manila, the squally winds from W and WSW will begin to blow much sooner in Manila than in cases of typhoons coming

¹ For further details on this typhoon see *The Cantabria Typhoon*, by Rev. Miguel Saderra Mata, S. J., 1906.

from lower latitudes to the east of Manila; (2) when a typhoon is passing not very far to the north of Manila, the winds in the city will not be blowing for a long time from the southwest quadrant, but will back soon to S and even to SE, while in cases of typhoons crossing the northernmost part of Luzon or the Balintang Channel, the winds in Manila will keep blowing from the SW quadrant without hardly backing to the S, much less to the SE, especially if the typhoon inclines northward in the direction of the Formosa Channel, which is not a rare case; (3) it often happens that a typhoon near the Balintang Channel recurves north and northeast, while a typhoon will hardly ever recurve when traversing the provinces of central Luzon it being a well-known fact that a typhoon decreases considerably, as a rule, its rate of progress during the time of recurving north-eastward; (4) in cases of a typhoon over the Balintang Channel, especially if it recurves north or northeast, there remains sometimes behind it for several days a low-pressure area extending from the China Sea to the Pacific across northern Luzon and the Balintang Channel, the effect of which is a prolonged period of rains and more or less squally southwesterly winds in Manila; this does not happen in cases of typhoons passing nearer to Manila across central Luzon.

6. The most common and ordinary directions followed by typhoons while crossing the Philippines are WNW and W by N.

7. There appear in Plate XXIII four typhoons formed in the China Sea and moving northeastward or eastward immediately after their formation. One of them crossed the northern part of Luzon in July, 1909, two the Babuyan Islands in August, 1907, and May, 1908, respectively, and the other passed very close to the Batan Islands in August, 1910. The latter, while in the neighborhood of the Batanes, recurved N and NW toward southern Formosa.¹ These tracks are altogether abnormal and very seldom observed in the Philippines.

8. Although Plates XXII to XXV do not show the place of origin of the remarkable typhoons of the Philippines formed in the Pacific, it may interest our readers to have some information as to the region in which they were probably formed. As our weather maps began to be drawn only at the end of 1907, as stated above, we lack sufficient means to point out the place of origin of the remarkable typhoons of the period 1903 to 1907. Hence we will consider only those formed in the Pacific during

¹ See *The Typhoon of the Batan Islands, Formosa and Indo-China, August 25 to September 2, 1910*, by Rev. José Coronas, S. J., 1910.

the period of 11 years, 1908 to 1918. There were in all 42 remarkable typhoons in the Philippines during this period, which came from the Pacific, their place of origin as to longitude and latitude being as follows:

125°-135° longitude.....	13
135°-145° longitude.....	24
East of 145° longitude.....	5
5°-10° latitude.....	15
10°-15° latitude.....	24
15°-20° latitude.....	3

For further details and the full tracks of these typhoons our readers are referred to our *Monthly Bulletins* for the period 1908 to 1918.

Monthly and annual distribution of the remarkable typhoons in the Philippines, 1903-1918.—We give in Table XXXIX, distributed by months and years, the 60 remarkable typhoons of the Philippines for the period 1903 to 1918. The greatest number of these typhoons occurred in September and October, these being 13 in each of these two months. Then follows the month of August, with 9 typhoons. July and November have each 6 typhoons, while June and December appear with only 4 each. One was observed in January and one in April. Not a single one occurred in February and March. The years of 1908 and 1911 are the years of maximum frequency of remarkable typhoons, 7 having been observed in each. There were 6 remarkable typhoons in 1913, and 5 in each of the years 1909 and 1912. Only one remarkable typhoon occurred in the year 1916 and no more than two in each of the years 1904, 1907, 1914, 1917, and 1918.

Percentage and distribution by provinces and subprovinces of the remarkable typhoons of the Philippines, 1903-1918.—It has been always of the greatest interest, especially for those who are engaged in the agricultural development of the Philippines, to know to what extent the different regions of the Archipelago are exposed to typhoons, and most particularly to remarkable and destructive typhoons. Having this in view, we offer in Table XL the distribution by provinces and subprovinces, with the corresponding percentage, of the 60 remarkable typhoons observed in the Philippines during the period 1903 to 1918. The percentage is also graphically shown in Plate XXVI. A few remarks may be necessary for the better understanding of both the table and the plate:

1. In order that the information may be of practical value, we realized that it would not be enough to include in each ty-

TABLE XXXIX.—*Monthly and annual distribution of remarkable typhoons in the Philippines, 1903-1918.*

TABLA XXXIX.—Distribución mensual y anual de tifones notables de Filipinas, 1903-1918.

Year.	JANU- ARY. Enero.	FEB- RUARY. Febrero.	MARCH. Marzo.	APRIL. Abril.	MAY. Mayo.	JUNE. Junio.	JULY. Julio.	AUGUST. Agosto.	SEPTEM- BER. Septiem- bre.	OCTO- BER. Octubre.	NOVEM- BER. Noviem- bre.	DECEM- BER. Diciem- bre.	ANNUAL. Annual.
1903.						1				2			3
1904.						1	1	1	1	1			2
1905.			1					3					4
1906.					1								4
1907.	1												2
1908.					1		1	1	1	3	1	1	7
1909.										3			5
1910.							1	2	2	1	1	1	8
1911.							2	2	1				5
1912.							2	1	2	2	2		9
1913.					1			1					2
1914.						1				2	1	1	5
1915.									1				2
1916.								2					4
1917.												1	1
1918.						1							2
Total.	1			1	3	4	6	9	13	13	6	4	60
Per cent.	1.7			1.7	5	6.7	10	15	21.7	21.7	10	6.7	

PERCENTAGE OF REMARKABLE TYPHOONS, BY PROVINCES AND SUBPROVINCES,
1903-1918.

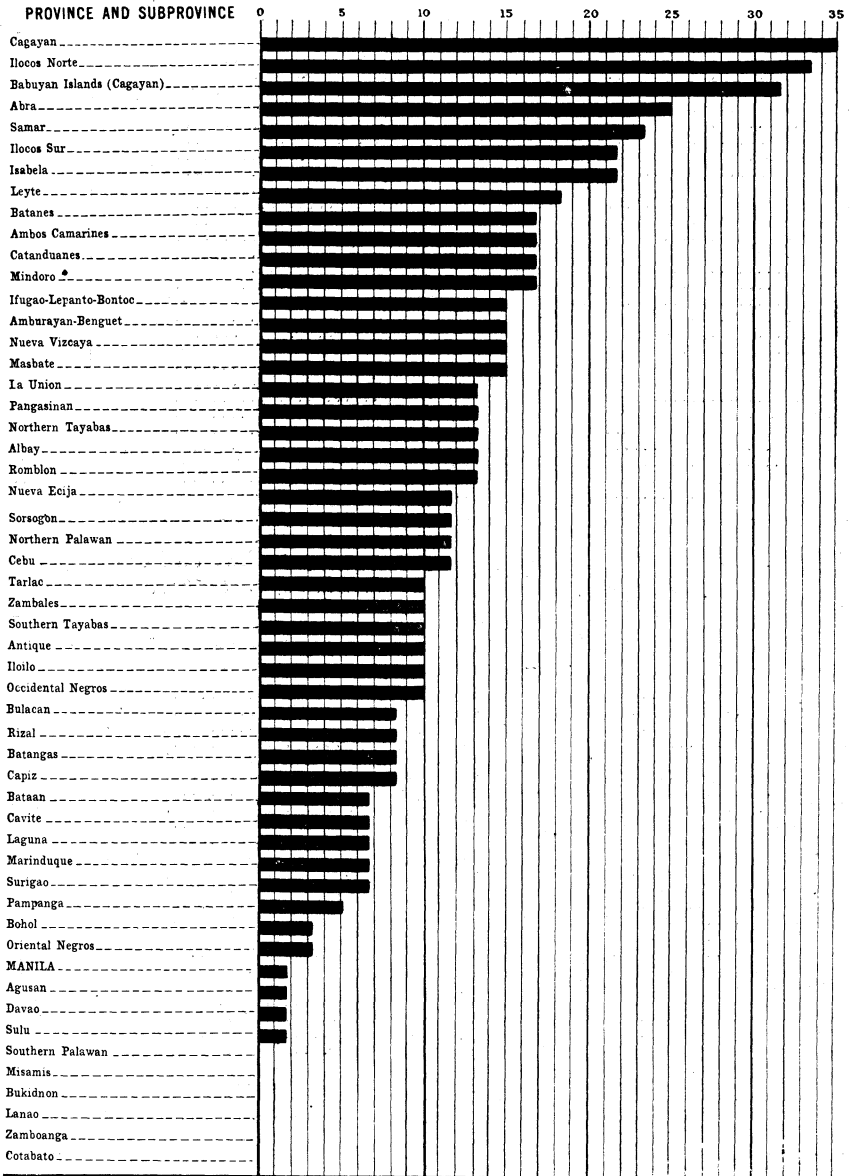


PLATE XXVI.

TABLE XL.—*Distribution and percentage of remarkable typhoons, by provinces and subprovinces, 1908–1918.*

Province and subprovince.	Total.	Per cent.	Province and subprovince.	Total.	Per cent.
Sulu	1	1.7	Southern Tayabas	5	8.3
Cotabato	0	0	Northern Tayabas	8	13.3
Davao	1	1.7	Batangas	5	8.3
Zamboanga	0	0	Laguna	4	6.7
Lanao	0	0	Cavite	4	6.7
Bukidnon	0	0	Rizal	5	8.3
Agusan	1	1.7	Manila (city)	1	1.7
Misamis	0	0	Bataan	4	6.7
Surigao	4	6.7	Bulacan	5	8.3
Southern Palawan	0	0	Pampanga	3	5.0
Northern Palawan	7	11.7	Zambales	6	10.0
Oriental Negros	2	3.3	Tarlac	6	10.0
Occidental Negros	6	10.0	Nueva Ecija	7	11.7
Bohol	2	3.3	Pangasinan	8	13.3
Cebu	7	11.7	Nueva Vizcaya	9	15.0
Leyte	11	18.3	Amburayan-Benguet (sub-provinces)	9	15.0
Iloilo	6	10.0	La Union	8	13.3
Antique	6	10.0	Ifugao-Lepanto-Bontoc (sub-provinces)	9	15.0
Capiz	5	8.3	Isabela	13	21.7
Samar	14	23.3	Abra	15	25.0
Masbate (subprovince)	9	15.0	Ilocos Sur	13	21.7
Romblon	8	13.3	Cagayan	21	35.0
Mindoro	10	16.7	Ilocos Norte	20	33.3
Marinduque (subprovince)	4	6.7	Babuyan Islands (Cagayan)	19	31.7
Sorsogon	7	11.7	Batanes	10	16.7
Albay	8	13.3			
Catanduanes (subprovince)	10	16.7			
Ambos Camarines	10	16.7			

TABLE XLI.—*Distribution and percentage of depressions and ordinary typhoons, by provinces and subprovinces, 1908–1918.*

Province and subprovince.	Total.	Per cent.	Province and subprovince.	Total.	Per cent.
Sulu	1	1.6	Southern Tayabas	9	14.8
Cotabato	2	3.3	Northern Tayabas	2	3.3
Davao	5	8.2	Batangas	3	4.9
Zamboanga	3	4.9	Laguna	6	9.8
Lanao	3	4.9	Cavite	4	6.6
Bukidnon	3	4.9	Rizal	2	3.3
Agusan	3	4.9	Manila (city)	0	0
Misamis	2	3.3	Bataan	3	4.9
Surigao	3	4.9	Bulacan	2	3.3
Southern Palawan	6	9.8	Pampanga	1	1.6
Northern Palawan	8	13.1	Zambales	2	3.3
Oriental Negros	3	4.9	Tarlac	1	1.6
Occidental Negros	3	4.9	Nueva Ecija	1	1.6
Bohol	3	4.9	Pangasinan	0	0
Cebu	5	8.2	Nueva Vizcaya	1	1.6
Leyte	12	19.7	Benguet-Amburayan (sub-provinces)	2	3.3
Iloilo	2	3.3	La Union	2	3.3
Antique	2	3.3	Ifugao-Lepanto-Bontoc (sub-provinces)	3	4.9
Capiz	2	3.3	Isabela	3	4.9
Samar	14	23.0	Abra	2	3.3
Masbate (subprovince)	6	9.8	Ilocos Sur	2	3.3
Romblon	5	8.2	Cagayan	4	6.6
Mindoro	7	11.5	Ilocos Norte	1	1.6
Marinduque (subprovince)	3	4.9	Babuyan Islands (Cagayan)	8	13.1
Sorsogon	5	8.2	Batanes	6	9.8
Albay	4	6.6			
Catanduanes (subprovince)	7	11.5			
Ambos Camarines	6	9.6			

phoon only those provinces and subprovinces which had been situated in the very track of the typhoon, because by following this method many provinces in which these typhoons proved to be destructive and even very destructive, would not have been mentioned here. Thus, to give only one example, the *Cantabria Typhoon* was very destructive in Albay Province, yet the very center of the typhoon did not cross that province, but Sorsogon Province. Hence we decided to include all the provinces and subprovinces whose boundary line nearest to the center of the typhoon was situated within its area of destruction, or in other words, all the provinces and subprovinces which had been mostly affected by the storm. And as, on the one hand, the area of destruction is very different for different typhoons, and on the other hand we thought it practically impossible to find out in each particular case whether any part of any province was really within the destructive area of the typhoon, we decided to include in Table XL and Plate XXVI all the provinces and subprovinces whose nearest boundary line was within 50 miles from the cyclonic center in cases of very remarkable typhoons, or within 30 miles in cases of simply remarkable typhoons.

2. In our endeavor to avoid any misleading impression as to the frequency of typhoons in the different provinces and subprovinces of the Philippines, we thought it better to divide into a northern and southern part the Provinces of Tayabas and Palawan which are too long from north to south. For the same reason we mention the Babuyan Islands separately from Cagayan, although those islands belong to Cagayan Province.

A glance at our Plate XXVI will be sufficient to show which regions of our Archipelago are more or less exposed to frequently destructive typhoons. The Province of Cagayan is the worst in this respect, 35 per cent of the remarkable typhoons belonging to that province. Ilocos Norte and Babuyan Islands come next with 33.3 and 31.7 per cent, respectively. Then follow Abra with 25 per cent and Samar with 23.3 per cent. Provinces with less than 10 per cent are those in the neighborhood of Manila, like Rizal, Bulacan, Pampanga, Cavite, Bataan, Batangas, etc., also the Provinces of Marinduque, Capiz, Bohol, Oriental Negros, and Surigao. Provinces with no remarkable typhoon or hardly any are Sulu and the different provinces of Mindanao Island with the only exception of Surigao.

Ordinary typhoons or depressions in the Philippines, 1908-

1918.—We will say a few words now on the ordinary typhoons or depressions which have traversed the Philippines during the period of 11 years, 1908 to 1918, causing a barometric minimum generally lower than 755 mm. (gravity correction not applied) but higher than 742 mm. They were in all 61 while the number of remarkable typhoons during the same period was only 45. Their distribution by months with the corresponding percentage is as follows:

Month.	Number.	Per cent.
January	3	4.9
February		
March	3	4.9
April	3	4.9
May	6	9.8
June	2	3.3
July	6	9.8
August	2	3.3
September	8	13.1
October	8	13.1
November	15	24.6
December	5	8.2
Total	61	

November is the month which appears with the greatest number of ordinary typhoons or depressions, 15; next follow September and October, with 8 typhoons each. February is the only month altogether free from depressions and typhoons. June and August have only two each, while December has about the same number as July: 5 and 6, respectively. May has also 6, and January, March and April, have only 3 each.

The percentage and distribution by provinces and subprovinces of these 61 depressions or ordinary typhoons of the Philippines is contained in Table XLI. For the proper understanding of this table we have to remark that, contrary to what we did with the remarkable typhoons, we consider here only for each typhoon those provinces and subprovinces which were really situated in the very track of the typhoon and, therefore, were traversed by the very cyclonic center. The greatest percentages (23.0 and 19.7, respectively) are those of Samar and Leyte, while Cagayan, Ilocos Norte, and Ilocos Sur have very small percentages, only 6.6, 1.6 and 3.3, respectively. Other provinces of northern Luzon have also small percentages of ordinary typhoons. This seems to show that the typhoons which so often cross the northern part of Luzon are generally remarkable typhoons; but the typhoons that traverse also frequently Samar and Leyte are about half remarkable typhoons and half ordinary typhoons.

By uniting the remarkable and the ordinary typhoons we have a resultant percentage of 23.1 for Samar and 20.7 for Cagayan. In other words, Samar may have a total number of typhoons somewhat greater than Cagayan, but Cagayan has a much greater number of remarkable typhoons.

Typhoons of the Pacific or the China Sea affecting the weather of the Philippines, 1908-1918.—We will now give some information on those typhoons, either ordinary or remarkable, that did not touch the Philippines, but approached sufficiently near to affect the general weather conditions of the Archipelago during the period of 11 years, 1908 to 1918.

In all the cases which will be considered here we may truly say that the Archipelago was within the body of the storm, the barometric readings being generally lower than 755 mm. (gravity correction not applied), at least in that part of the Philippines nearest to the typhoon, although the center of the storm might have been some hundred miles away. The greater or lesser influence of these typhoons on our weather depends not only on the distance of the center but also on the dimensions of the typhoon. It happens at times that a very big typhoon 500 miles away in the Pacific, or even farther, influences the weather of the Archipelago as much, and perhaps even more, than another much smaller typhoon within 300 miles of the Philippines. Again, a big typhoon situated about 100 miles from the Philippines may be felt as strongly or more than an ordinary typhoon traversing the Archipelago. Thus a Formosa typhoon, which passed about 80 miles to the northeast of the Batan Islands on September, 1912, caused the barometer of Basco to fall to 738.4 mm., the force of the winds being naturally proportioned to such a low reading of the barometer. But this is to be considered as rather a rare case. The great majority of the typhoons which will be considered here have been within 300 miles of the Philippines, and their influence on our weather has been quite often less than in the cases of ordinary typhoons crossing the Archipelago.

Typhoons not touching the Philippines are either Pacific typhoons or China Sea typhoons. Of the Pacific typhoons some go straight to Formosa, others cross the Loochoo Islands moving northwestward or westward, others recurve to Japan, and others remain in the Pacific. The China Sea typhoons, with a few exceptions, move either to the China coast or to Indochina. During the period of 1908 to 1918 there have been 60 Pacific typhoons and 24 China Sea typhoons affecting clearly the weather condi-

tions of the Philippines: a total of 84 in 11 years. Their monthly percentage and distribution is as follows:

Month.	Pacific typhoons.		China Sea typhoons.	
	Number.	Per cent.	Number.	Per cent.
January	1	1.7		
February	1	1.7		
March				
April	1	1.7		
May	2	3.3		
June	2	3.3	5	20.8
July	11	18.3	5	20.8
August	12	20	7	29.2
September	19	31.7	7	29.2
October	3	5		
November	4	6.7		
December	4	6.7		
Total	60		24	

It is evident from this that the months in which the Pacific typhoons occur most frequently are July, August, and September, the maximum frequency being that of September. China Sea typhoons sufficiently near to influence the weather of the Philippines were observed only from June to September, the maximum frequency occurring in August and September.

Grand total of remarkable and ordinary typhoons or depressions of the Philippines and of the Pacific and China Sea typhoons affecting the weather of the Archipelago, 1908-1918.— We will finish this chapter by grouping together all the typhoons, whether remarkable or ordinary, whether traversing the Philippines or not, but which have affected the general conditions of the Philippines during the period of 11 years from 1908 to 1918. Their monthly percentage and distribution is as follows:

Month.	Percent- age.	Total.
January	2.1	4
February .....	.5	1
March	1.6	3
April	2.1	4
May	5.3	10
June	5.8	11
July	14.2	27
August	14.7	28
September	22.6	43
October	11.1	21
November	13.2	25
December	6.8	13
Total in 11 years		190
Annual mean		17.3

The attention of our readers should be called to the annual mean of typhoons, 17, as against the annual mean 25 deduced from previous periods of years (1890-1898 and 1890-1901), when all the depressions and typhoons of the whole Far East were included in the statistics of typhoons,¹ and not only those which really affected the weather of the Philippines, as it has been done in this report.

¹ See *Climatología de Filipinas* in *El Archipiélago Filipino*, Vol. II, page 195, and *Cyclones of the Far East*, page 87.

APPENDIX.

WEATHER ON OFFICIAL HOLIDAYS IN MANILA, 1903-1918.

We thought it might be of interest to many of our readers to include here in an appendix some information regarding the character of the weather experienced at Manila on the most important of our holidays during the past 16 years covered by this report. Weather conditions referring to these days are graphically shown in Plates XXVII, XXVIII, and XXIX, while the corresponding data are given in Tables XLII, XLIII, and XLIV.

Occupation Day (August 13) has been always, with only three exceptions (1903, 1909 and 1917), a rainy day, the winds prevailing in thirteen cases from the W or SW quadrants. July 4 does not have so many rainy days, although the number of days with rain is greater than the number of days without rain; the winds in ten cases out of sixteen prevailed also from the W or SW quadrants. Rizal Day, Christmas, New Year's and Thanksgiving Days, all have a few cases of rain, which, as a rule, was of little importance, the winds prevailing in most of the cases from the N or E quadrants. For further details see the adjoined tables.

It is to be remarked here that the weather conditions in the eastern part of the Archipelago, like Albay, Samar, Surigao, etc., would be quite different for the four holidays falling in winter, from November to January, as the rainy season is there at its height during these months.

TABLE XLII.—Weather of New Year's day and July 4 in Manila, 1903–1918.

TABLA XLII.—Estado del tiempo en Manila el día de Año Nuevo y 4 de Julio, 1903–1918.

NEW YEAR'S DAY.—DÍA DE AÑO NUEVO.

YEAR. Año.	TEMPERATURE. Temperatura.			PREVAIL- ING DIREC- TION. Dirección domi- nante.	WIND. Viento.		RAINFALL. Lluvia.		WEATH- ER. Estado del tiempo.	SUN- SHINE. Horas de sol.
	MEAN. Me- dia.	MAXI- MUM. Máxima.	MINI- MUM. Mínima.		VELOCITY. Velocidad.		MILLI- METERS. Mili- metros.	INCHES. Pulga- das.		
					HOURLY AVER- AGE. Media horaria.	HOURLY MAXI- MUM. Máxima horaria.				
°C.	°C.	°C.	Km.	Km.						
1903....	25.9	30.7	19.8	Variable	8.0	19	.....	.....	○ ○	h. m.
1904....	25	29.7	19.6	W, S	4.6	9	.....	.....	○ ○	9 10
1905....	24	30	20.7	N	10.	21	.....	.....	○ ○	7 15
1906....	25.4	30.3	21.6	NE	7	28	0.1	0.005	○ ○	4 30
1907....	24.4	29.2	19.1	NNE	9.5	27.5	.....	.....	○ ○	2 10
1908....	25	31.2	21.1	ESE	5.1	13	.....	.....	○ ○	0 50
1909....	24	27.2	21.2	NE, E	5.1	20	1.7	.066	○ ○	7 55
1910....	25.2	30.8	21	Variable	4.4	11.5	.....	.....	○ ○	0 05
1911....	23.6	30.4	18.7	SE quad.	5.3	14.5	.....	.....	○ ○	7 30
1912....	24.3	32.1	17.2	E quad.	5.8	16.5	.....	.....	○ ○	8 10
1913....	23.9	26.6	22.8	N	7	20	33.3	1.31	○ ○	7 40
1914....	24.6	31.7	20	N	5.1	14	.....	.....	○ ○	0 00
1915....	24.3	31.1	18.4	SE quad.	5.4	15	.....	.....	○ ○	6 55
1916....	25.4	29	22.3	N quad.	4.6	9.5	2.8	.11	○ ○	8 50
1917....	25.7	32.3	21.3	E quad.	5.5	14	.....	.....	○ ○	0 15
1918....	23.4	28	18.8	NW quad.	5.4	13.5	.....	.....	○ ○	9 05
									○ ○	2 10

JULY 4TH.—4 DE JULIO.

YEAR. Año.	TEMPERATURE. Temperatura.			PREVAIL- ING DIREC- TION. Dirección domi- nante.	WIND. VIENTO.		RAINFALL. Lluvia.		WEATH- ER. Estado del tiempo.	SUN- SHINE. Horas de sol.
	MEAN. Me- dia.	MAXI- MUM. Máxima.	MINI- MUM. Mínima.		VELOCITY. Velocidad.		MILLI- METERS. Mili- metros.	INCHES. Pulga- das.		
					HOURLY AVER- AGE. Media horaria.	HOURLY MAXI- MUM. Máxima horaria.				
°C.	°C.	°C.	Km.	Km.						
1903....	28.8	32.4	23.3	WSW	9.1	20	.....	.....	○ ○	h. m.
1904....	26.5	28.9	23.8	SW	25.2	40	3.4	0.132	○ ○	8 20
1905....	26	30.3	22	Variable	4	12	6	.236	○ ○	3 15
1906....	28.7	32.8	22.7	WSW	7.4	17	.....	.....	○ ○	2 30
1907....	27.2	32.4	22.3	WNW	4.7	14	.....	.....	○ ○	10 55
1908....	27.3	32.3	23.4	nw, sw	9.5	23.5	.7	.026	○ ○	9 35
1909....	25.6	29.9	22.7	ESE	5.4	16	4.4	.172	○ ○	7 55
1910....	26.6	31.3	22.9	WSW	5.8	13	.....	.....	○ ○	0 05
1911....	26.6	32.8	22.2	SE quad.	3.7	9	.....	.....	○ ○	2 55
1912....	26.5	32	24	W quad.	5.9	20	7.3	.287	○ ○	5 00
1913....	27.2	32	23.8	N, SE	5.2	10.5	.....	.....	○ ○	0 35
1914....	26.3	29.1	24.2	WSW	13.2	28.5	7.1	.28	○ ○	2 40
1915....	29.2	32.9	25.2	WSW	15	33.5	.....	.....	○ ○	0 00
1916....	26.6	30.8	23.5	SE	6.9	20	3	.01	○ ○	10 00
1917....	26.7	31.2	24	SW	14	26	23.9	.94	○ ○	2 15
1918....	26.5	31.1	22.5	N quad.	8.5	24.5	2	.08	○ ○	4 35
									○ ○	4 00

○, Clear (despejado); ○, partly cloudy (nublado en parte); ●, overcast (cubierto).

TABLE XLIII.—Weather of Occupation and Thanksgiving days in Manila, 1903-1918.

TABLA XLIII.—Estado del tiempo de los días de Ocupación y Acción de Gracias en Manila, 1903-1918.

OCCUPATION DAY.—DÍA DE OCUPACIÓN.

YEAR. Año.	TEMPERATURE. Temperatura.			WIND. Viento.		RAINFALL. Lluvia.		WEATH- ER. Estado del tiempo.	SUN- SHINE. Horas de sol.	
	MEAN. Media.	MAXI- MUM. Máxi- ma.	MINI- MUM. Míni- ma.	PREVAIL- ING DIREC- TION. Dirección domi- nante.	VELOCITY. Velocidad.		MILLI- METERS. Mil- li- metro.			INCHES. Pulga- das.
					HOURLY AVER- AGE. Media horaria.	HOURLY MAXI- MUM. Máxi- ma horaria.				
1903....	29.1	32.7	24.4	WSW	Km. 7.7	Km. 18	.....	.....	h. m. 10 05
1904....	26.3	28.4	23.8	SW	14.6	34	4.6	0.18	0 20	
1905....	25.8	29.9	23.4	SSW	5.4	10	18.7	.786	3 40	
1906....	27.3	32.4	23.1	NNE, NNW	6.2	19	1.7	.066	5 40	
1907....	26.6	30.4	23.4	SW	8.6	27	45.1	1.774	5 10	
1908....	26.5	31.1	22.9	WSW	12.9	34	5.7	.224	9 25	
1909....	27.7	32.3	24.8	WSW	6.2	16	.....	.....	9 00
1910....	26.6	31	23.8	WSW	12.4	29	62.5	2.46	6 10	
1911....	25.1	27.6	23.6	SW quad.	19.1	43	133.1	5.24	0 00	
1912....	25.3	27.2	23.2	SW quad.	13.9	31	10.9	.43	0 00	
1913....	26.5	31	23.7	SW	11.2	24	8.4	.33	3 20	
1914....	27.2	31.2	24.2	SW	27.8	40	21.1	.83	0 35	
1915....	24.3	25.6	22.8	NE quad.	4.9	19	63.2	2.49	0 00	
1916....	27.4	30	25.5	ssw, sw	25.4	42	22.6	.89	0 00	
1917....	27.5	31.6	23.6	SW	6.5	14.5	.....	.....	1 10
1918....	24.3	26.3	23	SE quad.	10.5	28	18.3	.72	0 00	

THANKSGIVING DAY.—DÍA DE ACCIÓN DE GRACIAS.

YEAR. Año.	TEMPERATURE. Temperatura.			WIND. Viento.		RAINFALL. Lluvia.		WEATH- ER. Estado del tiempo.	SUN- SHINE. Horas de sol.	
	MEAN. Media.	MAXI- MUM. Máxi- ma.	MINI- MUM. Míni- ma.	PREVAIL- ING DIREC- TION. Dirección domi- nante.	VELOCITY. Velocidad.		MILLI- METERS. Mil- li- metros.			INCHES. Pulga- das.
					HOURLY AVER- AGE. Media horaria.	HOURLY MAXI- MUM. Máxi- ma horaria.				
1908....	24.8	29.7	19.5	E	Km. 6.4	Km. 14	.....	.....	h. m. 5 00
1904....	24.4	29.4	21.5	ESE	4.7	12	.....	.....	1 45
1905....	25.4	32.3	19.9	ENE	6.6	19	.....	.....	7 45
1906....	25.1	29	22.6	NNW	4.3	12	0.4	0.015	1 05	
1907....	25.5	30.7	21.8	W	3.4	12.5	1	.04	5 35	
1908....	25	29.8	21.4	NNE	5.8	17.5	.....	.....	3 50
1909....	25	28.3	22.4	NE quad.	6.6	16	.....	.....	1 30
1910....	26.8	32.3	23.7	NE quad.	4.4	12	4	.015	8 10	
1911....	23.4	31.5	16.8	W quad.	5.3	16	.....	.....	8 45
1912....	26	30.7	23.4	N	12.1	27	1.7	.066	1 45	
1913....	23.9	26.8	21.3	NNE	9.7	22	3	.12	0 00	
1914....	26.5	33.7	20.7	NNE	7.3	19.5	.....	.....	5 40
1915....	26.3	31.5	23	SW quad.	3.1	11	.....	.....	4 50
1916....	23.9	30.3	20	NNE	7.2	17	.....	.....	3 45
1917....	26.2	31.7	22.5	W quad.	5	16	2.8	.11	7 25	
1918....	25.2	32	21.3	NE, E	4.9	15	.5	.02	6 25	

TABLE XLIV.—Weather of Christmas and Rizal days in Manila, 1903-1918.

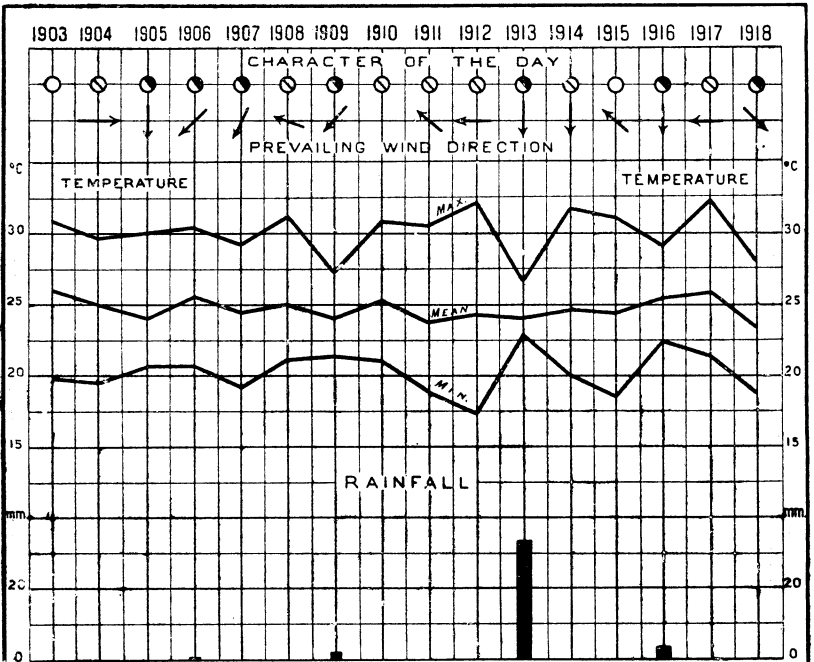
TABLA XLIV.—Estado del tiempo en Manila los días de Navidad y de Rizal, 1903-1918.

CHRISTMAS DAY.—DÍA DE NAVIDAD.

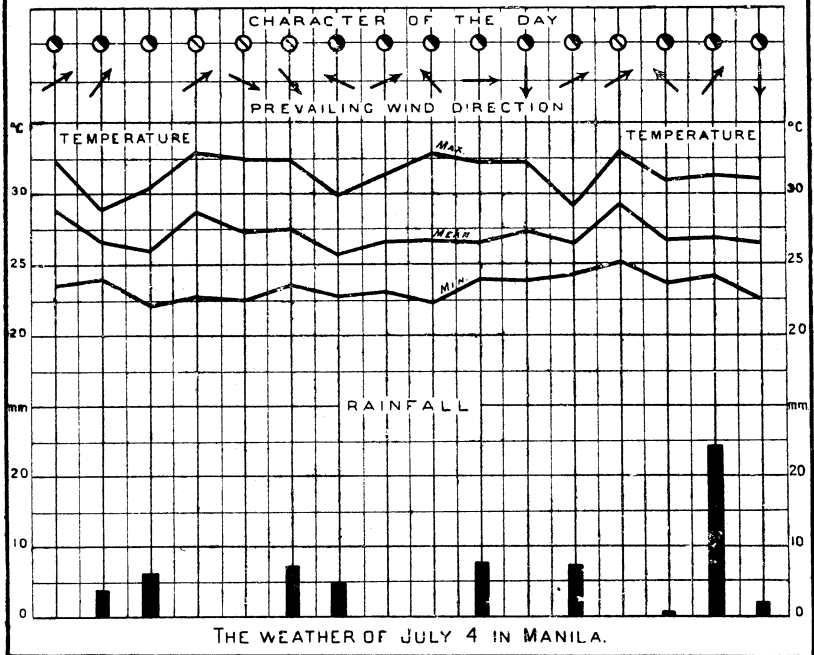
YEAR. Año.	TEMPERATURE. Temperatura.			PREVAIL- ING DIREC- TION. Dirección dominante.	WIND. Viento.		RAINFALL. Lluvia.		WEATH- ER. Estado del tiempo.	SUN- SHINE. Horas de sol.	
	MEAN. Media.	MAXI- MUM. Máxi- ma.	MINI- MUM. Míni- ma.		VELOCITY. Velocidad.		MILLI- METERS. Mili- metros.	INCHES. Pulga- das.		h.	m.
					HOURLY AVER- AGE. Media horaria.	HOURLY MAXI- MUM. Máxi- ma horaria.					
1903....	26.2	29.7	22.2	N	5.5	12	.....	.....	●	2	25
1904....	23.8	28	20	W, ENE	4.5	12	.....	.....	●	2	30
1905....	25.6	30.1	22.1	N	5.4	12	0.7	0.026	●	0	55
1906....	24.8	30.6	19.4	Variable	3.8	10	.1	.005	●	6	25
1907....	25.1	30.9	21.5	ENE	3.6	13	.....	.....	○	4	05
1908....	25.3	32.1	20.5	ENE	4.2	9.5	.....	.....	○	6	25
1909....	24.3	29.8	20.7	NNE	6.7	19.5	.....	.....	●	4	15
1910....	25	29.9	20.6	N quad.	4.3	8.5	.....	.....	●	3	40
1911....	25.8	33.5	20.6	E quad	8.4	20	.....	.....	○	7	30
1912....	24.8	30.7	21.1	NNE	8.5	23.5	.5	.02	○	3	05
1913....	25.6	31.5	21.2	NE quad.	7	26.5	.....	.....	○	5	15
1914....	25.9	31.9	22.2	SE	4.9	18	.....	.....	○	8	35
1915....	25	30	22	N	6.9	18	.....	.....	○	3	00
1916....	24.8	31	20	NE	5.2	13	.....	.....	○	8	05
1917....	25	29.2	22.5	N, NNE	8	20	.....	.....	○	1	00
1918....	25.4	30	19.9	N, NNW	15.8	35	7.6	.30	○	1	50

RIZAL DAY, DECEMBER 30.—DÍA DE RIZAL, DICIEMBRE 30.

YEAR. Año.	TEMPERATURE. Temperatura.			PREVAIL- ING DIREC- TION. Dirección dominante.	WIND. Viento.		RAINFALL. Lluvia.		WEATH- ER. Estado del tiempo.	SUN SHINE. Horas de sol.	
	MEAN. Media.	MAXI- MUM. Máxi- ma.	MINI- MUM. Míni- ma.		VELOCITY. Velocidad.		MILLI- METERS. Mili- metros.	INCHES. Pulga- das.		h.	m.
					HOURLY AVER- AGE. Media horaria.	HOURLY MAXI- MUM. Máxi- ma horaria.					
1903....	26.2	29.9	21.1	WSW	3.4	10	.....	.....	●	4	05
1904....	23.5	27.4	19.3	N	5.4	18	1.4	0.054	○	0	05
1905....	26.6	31.3	22	WNW, E	6.6	14	.....	.....	○	7	15
1906....	23	29.3	18.3	N	5.1	14	.....	.....	○	8	50
1907....	24	29.1	19.8	NNE	4.5	9	3	.01	○	1	35
1908....	24	30.1	19.4	E	6.1	23	.....	.....	○	5	05
1909....	25.1	30	20.9	N quad.	4.9	14	.....	.....	○	7	25
1910....	23.5	29	19.3	ESE	5.2	11	.....	.....	○	1	55
1911....	23.8	32.1	17.4	SE quad.	7.7	18.5	.....	.....	○	7	10
1912....	24.6	29.8	21.9	E quad.	7.7	15	.....	.....	○	4	15
1913....	25.1	29.4	21.6	NNE	11.7	25	1.3	.05	○	0	10
1914....	24	30.3	20.2	E quad.	4.4	12	3	.01	○	3	15
1915....	26.3	30.6	23.6	E	4.9	15.5	5.8	.23	○	6	10
1916....	23.5	26.8	21.2	NNW	8.8	15	.....	.....	○	0	00
1917....	23.5	29.6	20	N quad.	5.7	12	.....	.....	○	4	05
1918....	25.5	30.3	21.3	E quad.	4.2	9	.3	.01	○	4	25

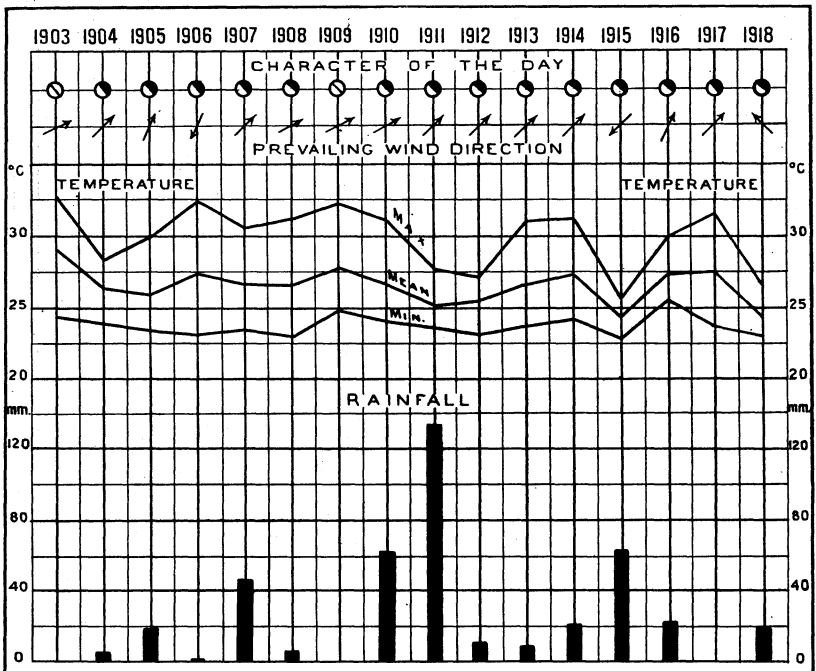


THE WEATHER OF NEW YEAR'S DAY IN MANILA.

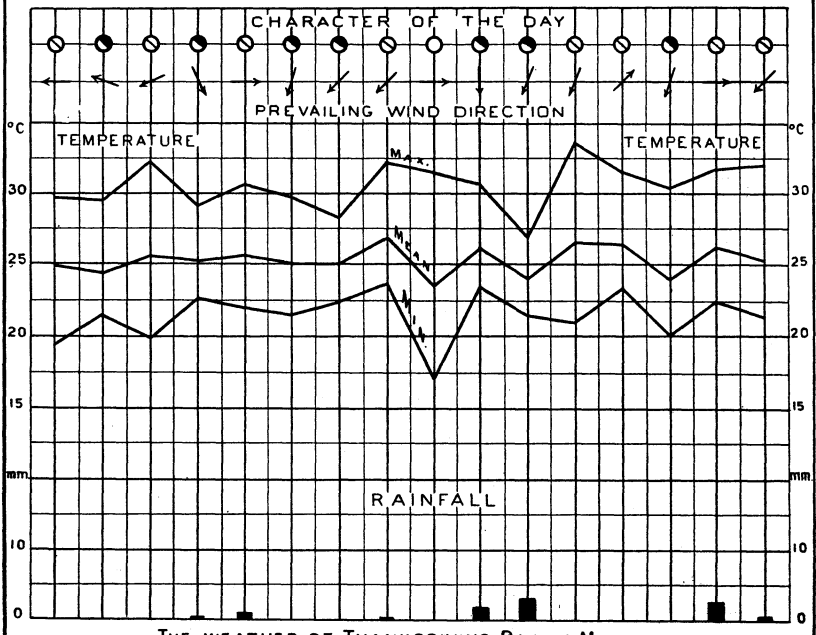


THE WEATHER OF JULY 4 IN MANILA.

○, Clear; ⊙, partly cloudy; ●, overcast.



THE WEATHER OF OCCUPATION DAY IN MANILA.



THE WEATHER OF THANKSGIVING DAY IN MANILA.

○, Clear; ⊙, partly cloudy; ⊕, overcast.

LIST OF GEOGRAPHIC NAMES.

PREFACE TO THE LIST OF GEOGRAPHIC NAMES.

CONTENTS.

The names in the following list form a complete index of all names which appear on the atlas maps. The name of the same place is repeated whenever it appears on separate maps. The repetitions are grouped in adjacent lines with the name always listed first under the map of largest scale. The few names outside the colored area of a province are in general not given as they are usually found on the map of the adjacent province.

The list is arranged in six columns headed:

Name.	Map.	Latitude.
Feature.	Page.	Longitude.

NAME.

The word in this column is the unabbreviated form of the word given on the maps. Space limitation necessitated the following abbreviations on maps.

Maps.	List.	Maps.	List.
S.	for San.	N.	for North
Sta.	for Santa	S.	for South
Sto.	for Santo	E.	for East
Stma.	for Santisima	W.	for West
1. ^o	for First	2. ^o	for Second

Throughout the list the full names are printed. These full names are arranged in strictly alphabetical sequence of letters even when the name consists of two or more words or when initial letters appear in the recognized form of the name. The only exception to this rigid alphabetical sequence is that all double names with the first word "San" "Santa" or "Santo" are grouped together. Within each of these groups the arrangement is alphabetical with respect to the second word. Names which would break the continuity of the group are postponed to the end of the group.

Whenever the same name occurs a number of times, all repetitions within each province are grouped together and the several groups are arranged in alphabetical order of provinces.

Repetitions of the same name within the same province are arranged in geographical order from north to south.

The spelling of Philippine geographic names is somewhat loose, due to scarcity of fixed and authoritative forms. Considerable variation in the spelling of the same word occurs in different localities, among different individuals, and at different times.

To minimize this confusion a "Committee on Geographic Names" was appointed by the Governor-General on November 5, 1903. This committee has full authority to adopt and prescribe the spellings to be used in all Government publications. All forms adopted by this committee have been used both on the maps and in the index list.

Decisions of this committee however constitute only about 21 per cent of the names used on the maps.

The authority adopted for the remaining 79 per cent is the "Standard List" of the Coast and Geodetic Survey. This standard list has been compiled from a combination of the following authorities:

Municipal officials.

Census of 1903.

Bureau of Education.

Bureau of Posts.

Laws and Executive Orders.

The Coast and Geodetic Survey in 1908 addressed communications to the president of each municipality requesting lists of all barrios and sitios under his jurisdiction, with each name spelled in accordance with the most approved local usage. The replies constitute the authority designated "Municipal Officials."

The Census of 1903 publishes names originating from its local enumerators.

The Bureau of Education compiled a similar list from its teachers residing in each locality in 1911-1912.

The Bureau of Posts compiled a similar list from the local postmasters in 1904.

An examination of legislative acts and executive orders gave rise to another list having official sanction.

The various forms arising from all the above authorities were tabulated in parallel columns and the most prevalent form was adopted.

These adoptions constitute the above-mentioned "Standard List" of the Coast and Geodetic Survey. This list was used as the standard authority for all atlas names.

Occasionally the map-name may differ slightly from the list-name. This is due to the fact that the maps were prepared first and contain the few errors inevitable in all publications. The subsequent compilation of the list was made directly from the standard list and hence gave opportunity to discover the few errors which had crept into the map names. Therefore when the spelling in the list differs from that of the map, the list form is in agreement with the standard list and is generally preferable, to the extent that it represents a systematic attempt to give the most widely current form.

Cross-referencing has not been attempted since it would largely increase the bulk of the list. Whenever a desired name cannot be found, search should be made for alternative forms on the following basis of letters which are very frequently interchangeable:

C = K
 U = W
 J = H
 V = B
 B = P

Such interchanges are frequent not only in the initial letter but also within the body of the name.

Apart from spelling there are often two distinct types of names. One is the official type which appears on all maps and documents and in all Spanish or English usage. The other is an unofficial type prevalent in the local dialects. Many geographic names were bestowed by the early Spanish explorers who introduced them to literature and thus fixed the official form. In the local dialects, however, words of foreign origin are considerably distorted and in this modified form have wide current use. The modification may be so great that its derivation is not recognizable and the name appears as a different word. These unofficial forms while in wide conversational use in the dialects are seldom found in literature. The official form will always be recognized even in conversation in dialect.

FEATURE.

Under this column is given the description of the object named, usually in one word. The geographical features such as mountain, island, river, cape, etc., are self-explanatory. Administrative features, however, predominate in number and require some explanation as to the significance of the terms used.

Province.

The entire area of the Archipelago is divided into provinces. For the water limits of each group of provinces forming a

large island, see map of the Philippine Islands. See also the colored area of each individual map for separate provincial limits.

Provinces are of two types called "regularly organized" and "special-government" provinces.

The maps show no distinction between the two types. Either type may have subprovinces, the Mountain Province offering the most conspicuous example. Regularly organized provinces have full electoral rights in Philippine and provincial affairs and are administered through the Department of the Interior. These provinces constitute the most advanced and populous sections, and are characterized by population predominantly Christian in type. The special-government provinces have limited electoral rights and are administered through the Bureau of Non-Christian Tribes. They constitute the more inaccessible and less densely populated regions and are characterized by a predominance of non-Christian inhabitants. As these provinces advance in material and social conditions the tendency is to advance them in political status to that of regularly organized provinces. At the time of preparation of the atlas the following provinces had special-government features:

Agusan.	Lanao.	Mountain.
Bukidnon.	Sulu.	Nueva Vizcaya.
Cotabato.	Zamboanga.	Palawan.
Davao.	Mindoro.	

Municipality.

This is the term usually applied to the local governments of Christian population. The whole area of each regularly organized province is divided into smaller areas designated municipalities, each having a separate local government.¹

In the special-government provinces a few of the most important towns are also classed as municipalities.

Municipal district.

This term is applied to most local governments of non-Christian population in the Department of Mindanao and Sulu. In the following special-government provinces all areas not organized as full municipalities are designated municipal districts.¹

Agusan.	Davao.	Sulu.
Bukidnon.	Lanao.	Zamboanga.
Cotabato.		

¹ In rare cases where a regularly organized province includes important non-Christian groups the municipal area may be designated "municipal district" or "township."

Townships.

In the following special-government provinces all areas not organized as full municipalities are designated townships.¹

Mountain.	Nueva Vizcaya.
Mindoro.	Palawan.

Barrio.

This is the usual term for the subdivisions of municipal areas. The barrio is the smallest administrative unit among the political subdivisions and constitutes the great bulk of all the small villages in the Philippines. The list does not show the municipality to which a barrio belongs. In case this is needed, reference to the map will indicate the two or three nearest municipalities, and further reference to the population statistics will determine the municipality.

Ranchería.

In non-Christian territory the term "ranchería" is sometimes used to denote a subdivision corresponding to the barrio.

In Apayao there are no organized barrios and all the subdivisions are called *rancherías*.

Settlement.

Settlements are usually unorganized isolated communities in the special-government provinces. They are more important than *rancherías* or barrios but have not yet been given an organized local government.

Sitio.

This is a term widely used to designate localities within a barrio. The *sitio* has no organization, nor has it definite area or boundary. It is a loose term applied to a place, either inhabited or uninhabited. Its name may refer to some natural permanent characteristic or merely to a past event no longer evident.

Rest houses.

These are Government lodging places provided with beds and food for the accommodation of travellers in the Mountain Province. They are situated on the main trails and are numbered in increasing order from Baguio northward.

MAP.

Under this column is given the name of the map on which the name of the object appears. In practically all cases this is

¹ In rare cases where a regularly organized province includes important non-Christian groups the municipal area may be designated "municipal district" or "township."

the same as the province in which the object is situated, but a few exceptions made the heading "Map" preferable to "Province." Some maps are of subprovinces, two are of incorporated cities while three are of the entire Archipelago. Also Palawan, Tayabas, and Sorsogon are each in two maps designated "North" and "South."

In a few rare cases a name is listed when it appears on a provincial map but in an adjacent province outside the colored area of the map-province itself. These cases only occur for unimportant places not given on the map of the adjacent province.

LATITUDE.

This column gives the distance of the place north of the equator, as measured on the graduations on the right and left borders of each map. This graduation shows projection lines printed across the map and subdivisions of the spaces between lines. Each projection line is numbered with either a whole degree ($^{\circ}$) or with a number of degrees and minutes ($^{\circ}$ '). The numbering increases from bottom to top. Each degree contains 60 minutes (') so the value of the unnumbered subdivisions may be obtained by dividing the number of minutes between any two adjacent projection lines by the number of spaces. As the scale of the maps varies considerably the smallest subdivision may be either 1', 5', or 10'.

The latitude given for any place is that of the nearest subdivision only. No interpolation for fractions of subdivisions has been attempted. For this reason a name which appears on two maps of different scales may be placed in the list with two slightly different latitudes, but each will correspond to the nearest subdivision of the map specified. Places toward the bottom of a map, below the lowest projection line marked with a whole degree, will always have a degree one less than the smallest printed on the map.

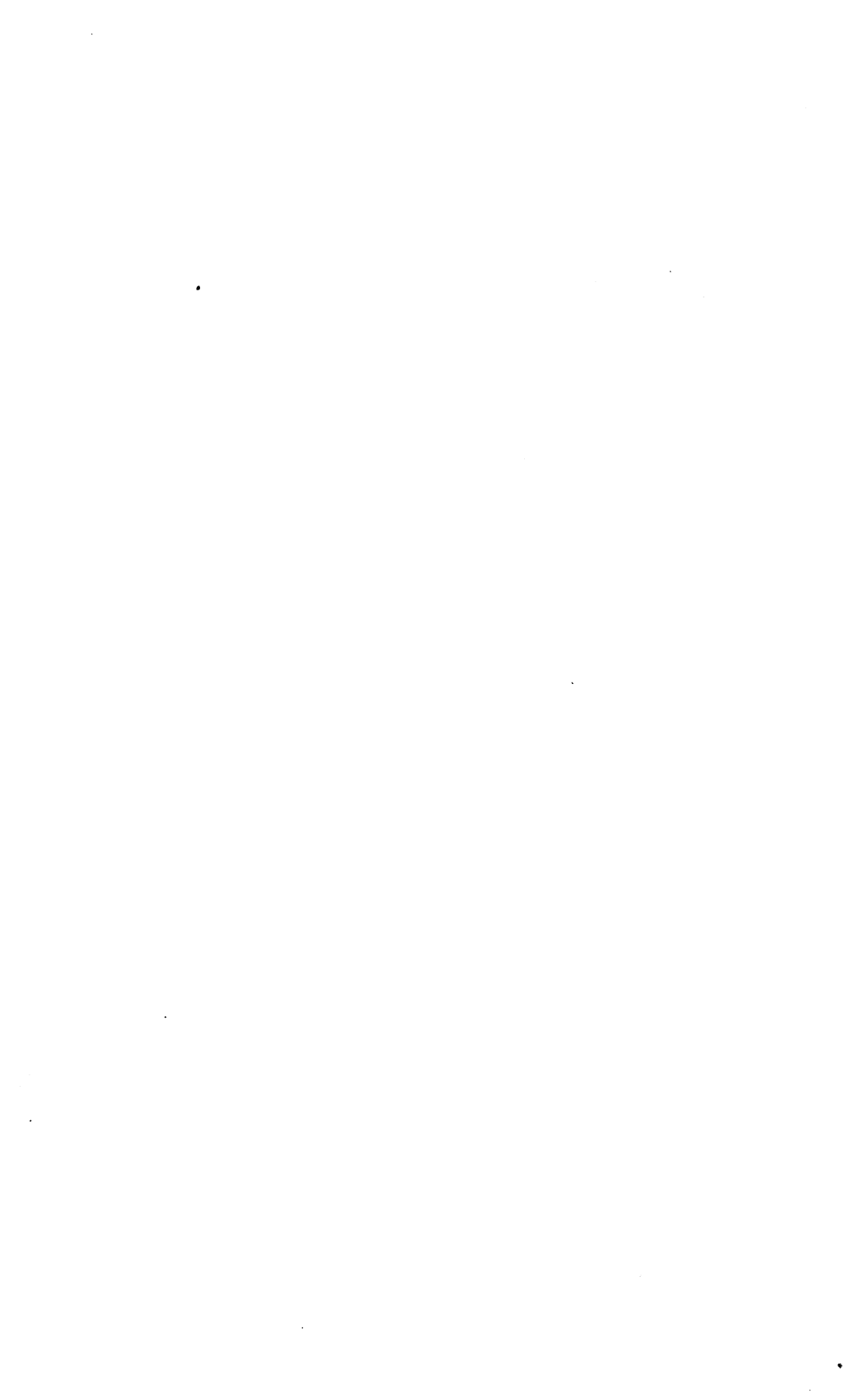
LONGITUDE.

This column gives the distance of the place east of the meridian of Greenwich, England, as measured on the graduation on the top and bottom border of each map. In the same manner as for latitude, this graduation shows projection lines printed across the map and subdivisions of the spaces between lines. Each projection line is numbered with a whole degree ($^{\circ}$) or with a number of degrees and minutes ($^{\circ}$ '). The numbering increases from left to right, or from west to east. Each degree contains

60 minutes (') so the value of the unnumbered subdivisions may be obtained by dividing the number of minutes between any two projection lines by the number of spaces. As the scale of the maps varies considerably the smallest subdivision may be either 1', 5', or 10'. The subdivision for longitude is always the same as for latitude. The longitude given for any place is that of the nearest subdivision only. No interpolation for fractions of subdivisions is attempted. For this reason a name which appears on two maps of different scales may be placed in the list with two slightly different longitudes, but each will correspond to the nearest subdivision of the map specified. Places toward the western edge of a map, to the left of the left-hand projection line marked with a whole degree, will always have a degree one less than the smallest printed on the map.

MINERAL RESOURCES.

The List of Geographic Names is followed by a subordinate list in which all known mineral outcrops or indications are collected according to mineral, and then tabulated under alphabetical sequence of provinces. This list will give a rapid survey of the distribution of each mineral in all localities where it has been reported.



LIST OF GEOGRAPHIC NAMES.

Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
A.				° /	° /
Abaca	Barrio	Bohol	106	9 54	124 29
Abaca	Barrio	Cagayan	118	17 35	121 50
Abaca	Barrio	Iloilo	166	11 10	122 45
Abaca	Barrio	Leyte	186	11 05	124 55
Abaca	Sitio	Nueva Vizcaya	216	16 00	121 14
Abaccan	Barrio	Amburayan Subprovince	198	17 02	120 34
Abagon	Barrio	Tarlac	266	15 37	120 37
Abagu	Sitio	Lanao	178	7 45	123 50
Abanon	Barrio	Pangasinan	236	15 53	120 20
Abao	Mountain	Ifugao Subprovince	206	16 50	120 55
Abao	Mountain	Lepanto Subprovince	210	16 50	120 55
Abar	Barrio	Nueva Ecija	212	15 47	120 58
Abas	Barrio	Abra	78	17 30	120 46
Abas	River	Abra	78	17 31	120 47
Abbatuan	Sitio	Isabela	170	17 00	122 00
Abbot	Sitio	Kalinga Subprovince	208	17 42	121 26
Abian	Barrio	Nueva Vizcaya	216	16 26	121 08
Abiang	Barrio	Benguet Subprovince	202	16 35	120 42
Abihilan	Barrio	Bohol	106	9 40	124 18
Abijao	Barrio	Leyte	186	11 10	124 25
Abijao	Barrio	Samar	248	11 10	125 35
Ableg	Barrio	Kalinga Subprovince	208	17 24	121 11
Ableg	Sitio	Abra	78	17 28	120 56
Aboaba	Sitio	Palawan (S)	228	9 10	118 00
Abolan	Barrio	Isabela	170	16 35	121 45
Aborlan	Barrio	Palawan (S)	228	9 20	118 30
ABRA	Province	Abra	78	17 30	120 50
Abra	Province	Philippine Islands	72	18	121
Abra	River	Abra	78	17 31	120 43
Abra	River	Abra	78	17 21	120 42
Abra	River	Ilocos Sur	162	17 33	120 29
Abra	River	Lepanto Subprovince	210	17 05	120 44
Abra de Ilog	Township	Mindoro	190	13 25	120 45
Abualan	Sitio	Abra	78	17 42	120 46
Abuanan	Barrio	Occidental Negros	220	10 30	123 00
Abubutan	Sitio	Lepanto Subprovince	210	17 02	120 46
Abucay	Municipality	Bataan	94	14 43	120 32
Abucay	Barrio	Ilocos Norte	158	18 10	120 44
Abucayan	Barrio	Camarines Sur	126	13 42	123 27
Abuluan	River	Isabela	170	17 05	122 05
Abulug	Municipality	Cagayan	118	18 25	121 30
Abulug	River	Apayao Subprovince	200	18 11	121 23
Abulug	River	Mountain Province	196	18 15	121 25
Abung	Barrio	Batangas	102	13 46	121 26
Abuor	Barrio	Ilocos Sur	162	17 26	120 29
Abuyo (new)	Sitio	Nueva Vizcaya	216	15 53	121 15
Abuyo (old)	Sitio	Nueva Vizcaya	216	15 54	121 14
Abuyog	Municipality	Leyte	186	10 45	125 00
Abuyog	Barrio	Sorsogon (N)	252	12 56	124 03
Abuyog	Sitio	Camarines Norte	122	14 10	122 39
Acao	Barrio	Iloilo	166	10 50	122 30
Acao	Barrio	La Union	182	16 32	120 21
Aclan	River	Capiz	130	11 24	122 17
Aclan	Sitio	Ilocos Norte	158	18 28	120 54
Acle	Sitio	Bulacan	114	15 03	121 04
Acnal	Sitio	Benguet Subprovince	202	16 32	120 50
Acocolao	Barrio	Tarlac	266	15 40	120 33
Acsmiao	Barrio	Abra	78	17 46	120 58
Acupan	Sitio	Benguet Subprovince	202	16 20	120 40
Adaoy	Barrio	Benguet Subprovince	202	16 35	120 50
Addang	Sitio	Kalinga Subprovince	208	17 23	121 24
Adela	Barrio	Cebu	138	10 45	124 25
Adgao	Barrio	Iloilo	166	10 45	122 20
Adgaolan	River	Agusan	82	8 20	125 30
Adiagnao	Barrio	Camarines Sur	126	13 43	123 42
Adlay	Barrio	Surigao	262	9 25	125 55
Actuyun	Barrio	Bukidnon	110	7 45	124 55
Acuas	Barrio	Nueva Ecija	212	15 30	120 58
Aduyungan	Barrio	Ifugao Subprovince	206	16 55	121 12

Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
Adya	Barrio	Batangas	102	13 53	121 08
Afusingbato	Barrio	Cagayan	118	17 50	121 45
Agaga	Barrio	Ilocos Norte	158	18 27	120 39
Agagat	Barrio	Benguet Subprovince.	202	16 36	120 34
Agagrao	Barrio	Ilocos Sur	162	17 23	120 31
Agamala	Mountain	Ilocos Norte	158	18 16	120 54
Agamitan	Barrio	Davao	154	8 00	126 00
Agaoa	Barrio	Lepanto Subprovince.	210	17 09	120 52
Agas	Sitio	Batangas	102	13 39	121 20
Agauan	Barrio	Cagayan	118	17 50	121 40
Agay	Barrio	Agusan	82	9 00	125 35
Agayayan	Barrio	Misamis	194	8 50	125 05
Agban	Barrio	Albay	86	13 43	124 23
Agbannaog	Barrio	Nueva Ecija	212	15 43	121 05
Agbatang	Barrio	Romblón	244	12 55	121 40
Agbuaya	Sitio	Bohol	106	9 49	124 02
Agbunud	Rancheria	Apayao Subprovince.	200	18 07	121 04
Agdagnan	Barrio	Capiz	130	11 26	122 24
Agdangan	Sitio	Camarines Sur	126	13 29	123 19
Agdeppa	Barrio	Tayabas (S)	270	13 50	121 55
Agub	Barrio	La Union	182	16 53	120 25
Agubo	Barrio	Nueva Vizcaya	216	16 34	121 12
Agkawayan	Barrio	Bohol	106	9 53	124 30
Aglalana	Barrio	Mindoro	190	13 45	120 15
Aglalana	Barrio	Capiz	130	11 13	122 39
Aglao	Barrio	Iloilo	166	11 10	122 40
Agloloma	Barrio	Zambales	274	15 00	120 17
Agloloma	River	Bataan	94	14 28	120 23
Aglubang	River	Bataan	94	14 29	120 25
Agnaga	Barrio	Mindoro	190	13 00	121 15
Agnipa	Barrio	Romblon	244	12 30	122 20
Agno	Municipality	Romblon	244	12 30	122 15
Agno	Bay	Pangasinan	236	16 07	119 43
Agno	Barrio	Pangasinan	236	16 08	119 45
Agno	Gorge	Benguet Subprovince.	202	16 29	120 36
Agno	River	Pangasinan	236	16 09	120 41
Agno	River	Benguet Subprovince.	202	16 31	120 46
Agno	River	Benguet Subprovince.	202	16 13	120 42
Agno	River	Mountain Province	196	16 30	120 49
Agno	River	Pangasinan	236	16 13	120 42
Agnoknok	River	Pangasinan	236	16 03	120 08
Agoho	Barrio	Romblon	244	12 20	121 55
Agoho	Barrio	Albay	86	13 36	124 03
Agoho	Barrio	Misamis	194	9 15	124 40
Agoho	Sitio	Tayabas (S)	270	14 00	122 10
Agoho	Point	Sorsogon (S)	252	12 02	123 40
Agoho	Point	Albay	86	13 36	124 02
Agong	Mountain	Romblon	244	12 15	122 00
Agoo	Municipality	Mindoro	190	12 25	121 20
Agopop	Barrio	La Union	182	16 30	120 22
Agora	Rancheria	Zambales	274	15 33	119 58
Agos	River	Apayao Subprovince	200	18 11	121 16
Agpanabat	Barrio	Tayabas (N)	270	14 35	121 30
Agpangi	Barrio	Romblon	244	12 30	122 15
Agpudlos	Barrio	Leyte	186	11 35	124 25
Agricultural Colony	Barrio	Romblon	244	12 35	122 00
Agricultural Schol.	Farm	Lanao	178	8 10	124 15
Agriculture School	Sitio	Nueva Ecija	212	15 44	120 56
Agriculture College	Univ. of P. I.	Laguna	174	14 10	121 15
Agriculture College	Farm	Zamboanga	278	6 40	122 10
Agsao	Barrio	Romblon	244	12 30	122 25
Agsubay	Mountain	Capiz	130	11 16	122 53
Agta	Point	Tayabas (N)	270	14 40	121 55
Agtambi	Barrio	Capiz	130	11 21	122 42
Agtambo	Barrio	Iloilo	166	11 10	122 40
Agtangao	Barrio	Abra	78	17 34	120 38
Agtanguay	Barrio	Capiz	130	11 24	122 44
Agtatacay	Barrio	Iloilo	166	11 00	122 40
Agtipal	Barrio	La Union	182	16 44	120 22
Agtiwa	Barrio	Romblon	244	12 25	122 25
Agtongo	Barrio	Romblon	244	12 35	122 15
Aguada	Sitio	Sorsogon (N)	252	12 49	123 51
Aguaton	Sitio	Ifugao Subprovince.	206	16 46	121 14
Agudo	Mountain	Capiz	130	11 23	123 00
Aguet	Barrio	Abra	78	17 37	120 43
Agulla	Barrio	Antique	90	11 30	122 05
Aguliar	Municipality	Pangasinan	236	15 54	120 14
Aguliar	Barrio	Iloilo	166	10 35	122 40
Agumatang	Barrio	Zambales	274	15 04	120 04
Aguinardo	Barrio	Leyte	186	10 05	124 55

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Aguining	Barrio	Bohol	106	10	05	124	36
Aguisan	Barrio	Occidental Negros	220	10	10	122	50
Aguja	Point	Sorsogon (N)	252	12	42	123	23
Agunita	Barrio	Ilocos Norte	158	18	05	120	43
Agus	River	Lanao	178	8	05	124	10
Agus	Sitio	Samar	248	11	25	125	30
AGUSAN	Province	Agusan	82	8	40	125	40
Agusan	Province	Philippine Islands	72	9		126	
Agusan	River	Agusan	82	8	30	125	40
Agusan	River	Bukidnon	110	8	20	124	45
Agusan	River	Davao	154	7	20	126	00
Agusan	Barrio	Misamis	194	8	30	124	45
Agusuhin	Barrio	Zambales	274	14	49	120	12
Agutaya	Township	Palawan (N)	228	11	10	121	00
Agutayan	Barrio	Iloilo	166	11	05	122	40
Ajong	Barrio	Oriental Negros	224	9	25	123	15
Ajos	Barrio	Iloilo	166	11	15	123	00
Ajos	Barrio	Tayabas (S)	270	13	35	122	20
Ajuy	Municipality	Iloilo	166	11	10	123	00
Alabaan	Barrio	Ilocos Norte	158	18	01	120	41
Alabang	Barrio	Rizal	240	14	26	121	03
Alabat	Municipality	Tayabas (S)	270	14	05	122	00
Alacata	Island	Tayabas (S)	270	14	10	122	00
Alacacn	Municipal district	Abra	78	17	46	120	49
Alacaygar	Sitio	Pangasinan	236	16	09	120	26
Alacaygan	Barrio	Iloilo	166	11	00	122	50
Alad	Island	Occidental Negros	220	10	50	123	05
Alad	Barrio	Romblon	244	12	40	122	15
Alaludig	Barrio	Romblon	244	12	40	122	15
Alalainao Sur	Barrio	La Union	182	16	30	120	25
Alaludig	Sitio	Abra	78	17	30	120	42
Alam	Sitio	Apayao Subprovince	200	18	17	121	26
Alambihud	Barrio	Cebu	138	9	55	123	35
Alaminos	Municipality	Laguna	174	14	04	121	15
Alaminos	Municipality	Pangasinan	236	16	10	119	59
Alan	River	Cotabato	150	6	35	124	30
Alang	Barrio	Nueva Vizcaya	216	16	13	120	53
Alangalang	Municipality	Leyte	186	11	10	124	50
Alanib	Barrio	Bukidnon	110	7	55	125	00
Alap	Barrio	Bontoc Subprovince	204	17	04	120	57
Alapan	Barrio	Cavite	134	14	25	120	55
Alas	Bay	Sorsogon (S)	252	12	13	123	17
Alasas	Barrio	Capiz	130	11	30	122	16
Alasasin	Sitio	Bataan	94	14	26	120	34
Alauihao	Barrio	Camarines Norte	122	14	07	122	55
Alauli	Barrio	Pampanga	232	14	52	120	42
Alava	Barrio	Pangasinan	236	16	10	120	31
Alayao	Barrio	Camarines Norte	122	14	16	122	35
Alayao	Sitio	Abra	78	17	28	120	46
Alayao	Mountain	Camarines Norte	122	14	16	122	31
Alba	Barrio	Surigao	262	8	55	126	05
Albulate	Barrio	Samar	248	11	50	124	55
Albasan	Barrio	Capiz	130	11	44	122	20
ALBAY	Province	Albay	86	13	15	123	40
Albay	Province	Philippine Islands	72	13		124	
Albay	Gulf	Albay	86	13	10	123	55
Albay	Capital	Albay	86	13	08	123	44
Albay	Capital, Albay	Philippine Islands	72	13		124	
Albian	Sitio	Benguet Subprovince	202	16	17	120	40
Albuera	Municipality	Leyte	186	10	55	124	40
Albuna	Sitio	Agusan	82	8	05	125	45
Alburquerque	Municipality	Bohol	106	9	37	123	57
Alcala	Municipality	Cagayan	118	17	55	121	40
Alcala	Municipality	Pangasinan	236	15	51	120	31
Alcantara	Municipality	Cebu	138	10	00	123	25
Alcantara	Barrio	Romblon	244	12	15	122	05
Alchan	Mountain	Bontoc Subprovince	204	17	15	121	00
Alchan	Mountain	Kalinga Subprovince	208	17	15	121	00
Alchan	Mountain	Mountain Province	196	17	15	121	00
Alcoy	Municipality	Cebu	138	9	45	123	30
Alegria	Municipality	Cebu	138	9	45	123	20
Alegria	Barrio	Antique	90	10	50	122	10
Alegria	Barrio	Bohol	106	9	36	123	59
Alegria	Barrio	Capiz	130	11	51	121	53
Alegria	Barrio	Iloilo	166	10	25	122	35
Alegria	Barrio	Nueva Ecija	212	15	42	120	40
Alegria	Barrio	Romblon	244	12	50	122	05
Alegria	Barrio	Sorsogon (S)	252	11	47	124	03
Alegria	Barrio	Surigao	262	10	05	126	05
Alegria	Sitio	Antique	90	12	00	120	12

Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
				° ' /	° ' /
Alemania.	Barrio.	Nueva Ecija.	212	15 43	120 41
Alfonso.	Municipality.	Cavite.	134	14 08	120 51
Alfonso.	Barrio.	Lepanto Subprovince.	210	17 10	120 37
Alfonso XII.	Barrio.	Capiz.	130	11 25	122 20
Alfonso XIII.	Sitio.	Palawan (S).	228	9 10	118 00
Aliaga.	Municipality.	Nueva Ecija.	212	15 30	120 51
Aliang.	Barrio.	Albay.	86	13 11	123 27
Alibaddabag.	Sitio.	Isabela.	170	17 00	122 05
Alibago.	Barrio.	Isabela.	170	17 10	121 50
Alibagon.	Barrio.	Capiz.	130	11 44	122 17
Alibangsay.	Barrio.	Benguet Subprovince.	202	16 36	120 27
Alibatan.	Island.	Mindoro.	190	12 15	121 15
Alibijaban.	Island.	Tayabas (S).	270	13 20	122 45
Alibunan.	Barrio.	Iloilo.	166	11 10	122 30
Alicante.	Barrio.	Occidental Negros.	220	10 55	123 00
Alice.	Channel.	Sulu.	258	4 40	119 00
Alice.	Channel.	Philippine Islands.	72	5	119
Alice.	Reef.	Sulu.	258	4 45	119 05
Aligbay.	Island.	Zamboanga.	278	8 45	123 15
Alihawan.	Barrio.	Bohol.	106	9 41	124 24
Alihod.	Mountain.	Lanao.	178	8 10	124 25
Alijis.	Barrio.	Occidental Negros.	220	10 25	122 50
Alikad.	Sitio.	Nueva Vizcaya.	216	16 14	121 36
Alilem.	Township.	Amburayan Subprovince.	198	16 54	120 32
Alilem.	Township.	Mountain Province.	196	16 55	120 30
Alilintao.	Rancheria.	Apayao Subprovince.	200	17 58	121 13
Alima.	Barrio.	Cavite.	134	14 28	120 56
Alimit.	River.	Mountain Province.	196	16 50	121 15
Alimit.	River.	Ifugao Subprovince.	206	16 47	121 16
Alimit.	Barrio.	Ifugao Subprovince.	206	16 54	121 16
Alimodian.	Municipality.	Iloilo.	166	10 50	122 25
Alimsoq.	Barrio.	Albay.	86	13 14	123 51
Alinao.	Sitio.	Camarines Norte.	122	14 07	122 52
Alinea.	Sitio.	Nueva Ecija.	212	15 26	121 08
Alingac.	Sitio.	Kalinga Subprovince.	208	17 29	121 11
Alingarog.	Barrio.	Samar.	248	11 05	125 45
Alinguigan.	Barrio.	Isabela.	170	17 10	121 55
Alinta.	Sitio.	Kalinga Subprovince.	208	17 35	121 26
Alipang.	Barrio.	Benguet Subprovince.	202	16 20	120 27
Alipaoy.	Barrio.	Mindoro.	190	13 25	120 30
Alipit.	Barrio.	Laguna.	174	14 14	121 24
Alitagtag.	Municipality.	Batangas.	102	13 52	121 00
Alitap.	Barrio.	Tayabas (S).	270	14 10	121 45
Alitas.	Barrio.	Tayabas (N).	270	14 40	121 40
Aliwan.	Sitio.	Bontoc Subprovince.	204	17 07	121 17
Alilacapan.	Sitio.	Apayao Subprovince.	200	18 15	121 34
Aliligangan.	Barrio.	Ilocos Sur.	162	17 10	120 30
Alilauan.	Sitio.	Nueva Vizcaya.	216	16 18	121 04
Alilay.	Sitio.	Benguet Subprovince.	202	16 37	120 41
Alilen.	Municipality.	Samar.	248	12 30	124 15
Alimacen.	Barrio.	Tayabas (S).	270	13 50	122 00
Alimagro.	Island.	Samar.	248	11 55	124 20
Alimagro.	Municipality.	Samar.	248	11 55	124 15
Alimaguer.	Barrio.	Nueva Vizcaya.	216	16 22	121 06
Alimdras.	Sitio.	Tarlac.	266	15 34	120 39
Alimeria.	Barrio.	Leyte.	186	11 35	124 20
Allo.	Barrio.	Cebu.	138	9 30	123 25
Aloguinsan.	Municipality.	Cebu.	138	10 15	123 35
Aloran.	Municipality.	Misamis.	194	8 25	123 50
Alos.	Barrio.	Pangasinan.	236	16 07	119 58
Alsem.	Barrio.	Ilocos Norte.	158	18 18	120 42
Altavas.	Municipality.	Capiz.	130	11 32	122 29
Alto.	Peak.	Leyte.	186	11 05	124 45
Alto.	Peak.	Relief.	72	11	125
Altura.	Barrio.	Batangas.	102	14 08	121 05
Alubijid.	Barrio.	Misamis.	194	8 35	124 30
Alugan.	Barrio.	Samar.	248	12 15	125 30
Aluling.	Sitio.	Lepanto Subprovince.	210	16 59	120 46
Alulud.	Barrio.	Cavite.	134	14 13	120 53
Alumbrado.	Barrio.	Laguna.	174	14 08	121 23
Alunero.	Barrio.	Tayabas (S).	270	14 00	122 25
Alung.	Sitio.	Pampanga.	232	15 04	120 32
Aluntayan.	Sitio.	Nueva Vizcaya.	216	16 03	121 28
Alup.	River.	Cotabato.	150	6 45	124 55
Alup.	Barrio.	Cotabato.	150	6 50	124 50
Alupay.	Barrio.	Batangas.	102	13 51	121 18
Alupipeu.	Sitio.	Nueva Vizcaya.	216	15 58	121 28
Alzate.	Barrio.	La Union.	182	16 55	120 25
Amacalan.	Barrio.	Tarlac.	266	15 35	120 36
Amadeo.	Municipality.	Cavite.	134	14 10	120 55

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Amagusán	Barrio	Leyte	186	10	15	125	15
Amalbalán	Barrio	Pangasinán	236	15	58	119	52
Amalia	Island	Camarines Norte	122	14	23	123	02
Amaloy	Mountain	Bukidnon	110	8	30	125	15
Amalui	Barrio	Zamboanga	278	6	25	122	09
Amanumbus	Sitio	Cotabato	150	7	00	124	45
Amaraceilen	Barrio	Cotabato	150	6	55	125	05
Amarao	Barrio	Ilocos Sur	162	17	03	120	25
Amatong	Barrio	Romblon	244	12	25	122	00
Amaya	Barrio	Cavite	134	14	23	120	50
Ambaguio	Barrio	Lepanto Subprovince	210	17	10	120	50
Ambakon	Sitio	Agusan	82	8	45	125	35
Ambalayát	Barrio	Amburayan Subprovince	198	16	55	120	30
Ambangonan	Barrio	Benguet Subprovince	202	16	18	120	29
Ambangonan	Sitio	La Union	182	16	18	120	29
Ambayoan	Barrio	Bontoc Subprovince	204	17	01	121	01
Ambigaton	Barrio	Bontoc Subprovince	204	17	10	121	15
Ambil	Island	Mindoro	190	13	50	120	20
Ambil	Barrio	Mindoro	190	13	50	120	15
Ambogao	Sitio	Bontoc Subprovince	204	17	07	121	23
Ambongdolan	Barrio	Benguet Subprovince	202	16	32	120	37
Amboyuan	Barrio	Iloilo	166	10	35	122	05
Ambugan	Island	Bohol	106	10	04	124	01
Ambuklao	Barrio	Benguet Subprovince	202	16	29	120	45
Ambulogan	Barrio	Ilocos Sur	162	17	28	120	30
Ambulong	Island	Mindoro	190	12	10	121	00
Ambulong	Barrio	Mindoro	190	12	15	121	00
Ambulong	Barrio	Batangas	102	14	05	121	03
AMBURAYÁN	Subprovince	Amburayan Subprovince	198	16	50	120	30
Amburayan	Subprovince	Mountain Province	196	16	50	120	30
Amburayan	River	Amburayan Subprovince	198	16	41	120	33
Amdangle	Barrio	Ifugao Subprovince	206	16	48	121	11
Amduntog	Barrio	Ifugao Subprovince	206	16	45	121	04
Amgyang	Sitio	Lepanto Subprovince	210	16	58	120	43
Amilongan	Barrio	Amburayan Subprovince	198	16	52	120	35
Amio	Barrio	Oriental Negros	224	9	30	123	00
Amlao	Barrio	Kalinga Subprovince	208	17	24	121	19
Amlimay	Barrio	Benguet Subprovince	202	16	42	120	50
Ammobocan	Barrio	Isabela	170	16	50	121	50
Ammubuan	Barrio	Cagayan	118	18	25	121	30
Amnay	River	Mindoro	190	13	00	120	55
Amnay	Sitio	Mindoro	190	13	00	121	00
Amontay	Barrio	Tayabas (S)	270	13	45	122	10
Amontoc	Barrio	Amburayan Subprovince	198	16	39	120	28
Ampalauag	Mountain	Bontoc Subprovince	204	17	02	121	19
Ampalauag	Mountain	Ifugao Subprovince	206	17	02	121	19
Ampaoid	Mountain	Davao	154	8	00	125	40
Ampaoid	Mountain	Relief	72	8		126	
Amparo	Municipal district.	Agusan	82	8	50	125	30
Amparo	Barrio	Leyte	186	10	05	124	55
Ampayao	Barrio	Ilocos Sur	162	17	10	120	34
Ampayao	Mountain	Lepanto Subprovince	210	17	11	120	34
Ampayon	Barrio	Agusan	82	9	00	125	35
Ampid	Barrio	Rizal	240	14	41	121	07
Ampiro	Mountain	Misamis	194	8	25	123	40
Ampuagan	Barrio	Ilocos Sur	162	17	21	120	30
Ampusungan	Township	Lepanto Subprovince	210	16	47	120	44
Ampusungan	Township	Mountain Province	196	16	50	120	45
Amsic	Barrio	Pampanga	232	15	10	120	34
Amtic	Sitio	Albay	86	13	18	123	38
Amtuagan	Barrio	Abra	78	17	20	120	42
Amucian	Barrio	Kalinga Subprovince	208	17	38	121	20
Amugao	Sitio	Apayao Subprovince	200	18	08	121	09
Amulung	Municipality	Cagayan	118	17	50	121	45
Amulungan	Mountain	Lanao	178	8	15	124	30
Amungan	Barrio	Zambales	274	15	22	119	57
Amutag	Sitio	Sorsogon (N)	252	12	23	123	16
Amutag	Sitio	Sorsogon (S)	252	12	23	123	16
Amuyao	Mountain	Bontoc Subprovince	204	17	01	121	08
Amuyao	Mountain	Ifugao Subprovince	206	17	01	121	08
Amuyao	Mountain	Ifugao Subprovince	206	16	52	121	25
Amya	Sitio	Cebu	138	10	45	123	55
Anaa	Barrio	Amburayan Subprovince	198	16	53	120	33
Anaa	Sitio	Ifugao Subprovince	206	15	52	121	17
Anabel	Barrio	Bontoc Subprovince	204	17	08	121	04
Anablan	Sitio	Nueva Vizcaya	216	16	18	120	59
Anabu	Barrio	Cavite	134	14	23	120	56
Anacol	River	Apayao Subprovince	200	18	26	121	07
Anacol	River	Mountain Province	196	18	25	121	10
Anahao	Barrio	Romblon	244	12	25	121	55

Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
Anahao	Sitio	Surigao	262	8 55	126 10
Anahawan	Barrio	Leyte	186	10 20	124 55
Anahawan	Barrio	Leyte	186	10 15	125 15
Anajao	Port	Albay	86	13 57	124 21
Anajauan	Island	Surigao	262	9 35	126 10
Anak	Sitio	Nueva Vizcaya	216	16 17	121 43
Ananao	Barrio	Lepanto Subprovince	210	17 09	120 37
Anangui	Barrio	Ilocos Norte	158	18 07	120 35
Anao	Municipality	Tarlac	266	15 44	120 35
Anao	Barrio	Pampanga	232	15 08	121 41
Anao	Sitio	Capiz	130	11 34	122 24
Anaoon	Barrio	Surigao	262	9 45	125 25
Anapog	Barrio	Cebu	138	11 00	123 55
Anas	Sitio	Leyte	186	10 40	125 00
Anatam	Barrio	Bulacan	114	15 06	120 57
Anauayan	Island	Iloilo	166	11 05	123 10
Anawan	Island	Tayabas (N)	270	14 55	122 05
Anawang	Sitio	Nueva Vizcaya	216	16 06	121 29
Anayan	Municipal district	Abra	78	17 53	120 56
Anayan	River	Abra	78	17 52	120 53
Ancheta	Barrio	Ilocos Sur	162	17 20	120 31
Anda	Municipality	Bohol	106	9 45	124 35
Anda	Municipality	Pangasinan	236	16 18	119 57
Andarayan	Barrio	Isabela	170	16 55	121 50
Andis	Island	Samar	248	11 40	125 30
Anduyan	Sitio	La Union	182	16 21	120 27
Anepahan	Sitio	Palawan (S)	228	9 40	118 30
Angaaoeng	River	Amburayan Subprovince	198	16 46	120 35
Angad	Barrio	Abra	78	17 35	120 38
Angadanan	Municipality	Isabela	170	16 45	121 45
Angaki	Township	Lepanto Subprovince	210	17 09	120 40
Angaki	Township	Mountain Province	136	17 10	120 40
Angaleyguey	Barrio	Benguet Subprovince	202	16 44	120 49
Angas	Barrio	Camarines Norte	122	14 03	123 02
Angat	Municipality	Bulacan	114	14 56	121 02
Angayan	Barrio	Pangasinan	236	15 54	120 42
Anganan Viejo	Barrio	Isabela	170	16 45	121 40
Angela	Sitio	Isabela	170	17 00	122 00
Angela	Municipality	Pampanga	232	15 08	120 35
Angeles	Barrio	Tayabas (S)	270	14 05	121 55
Angeles	Barrio	Tayabas (S)	270	14 00	121 55
Angilan	Barrio	Bohol	106	9 44	124 22
Angilan	Barrio	Bohol	106	9 48	123 57
Angilan	Barrio	Cebu	138	10 15	123 35
Angilo	Mountain	Rizal	240	14 53	121 19
Angilo	Mountain	Relief	72	15	121
Angit	Barrio	La Union	182	16 31	120 24
Angit	Barrio	Camarines Norte	122	14 07	122 58
Anglas	Barrio	Laguna	174	14 16	121 29
Angono	Barrio	Rizal	240	14 32	121 09
Angsikan	Sitio	Davao	154	7 30	125 30
Anhauan	Barrio	Capiz	130	11 32	122 48
Anib	Barrio	Camarines Sur	126	13 49	123 03
Anibawan	Bay	Tayabas (N)	270	15 00	122 05
Anibung	Barrio	Laguna	174	14 13	121 28
Anibungan	Barrio	Surigao	262	8 00	126 25
Anilao	Barrio	Mindoro	190	12 45	121 30
Anilauan	Barrio	Iloilo	166	10 45	122 15
Anima Sola	Island	Sorsogon (N)	252	13 13	123 03
Aningoay	Barrio	Zambales	274	14 55	120 14
Aniniy	Barrio	Antique	90	10 25	121 55
Anipa	Barrio	Isabela	170	17 05	121 50
Anislag	Barrio	Albay	86	13 06	123 41
Anitla	Mountain	Ifugao Subprovince	206	16 52	121 12
Ankileng	Barrio	Bontoc Subprovince	204	17 03	120 54
Anlubi	Sitio	Albay	86	14 04	124 11
Anog	Barrio	Sorsogon (N)	252	12 48	124 01
Anonang	Sitio	Albay	86	13 51	124 19
Anonang	Sitio	Bohol	106	9 43	124 11
Anonang	Sitio	Zambales	274	15 08	120 03
Ansaquit	Sitio	Amburayan Subprovince	198	16 40	120 29
Ansad	Barrio	Ilocos Sur	162	17 19	120 27
Ansipisp	Barrio	Nueva Vizcaya	216	16 20	120 51
Antadao	Barrio	Bontoc Subprovince	204	17 05	120 55
Antamok	Barrio	Benguet Subprovince	202	16 24	120 40
Antequera	Municipality	Bohol	106	9 47	123 54
Antipolo	Municipality	Rizal	240	14 35	121 10
Antipolo	Barrio	Albay	86	13 33	124 12
Antipolo	Barrio	Batangas	102	13 55	121 10

Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
Antipolo	Barrio	Bohol	106	9 39	124 19
Antipolo	Barrio	Camarines Sur	126	13 30	123 09
Antipolo	Barrio	Ifugao Subprovince	206	16 43	121 03
Antipolo	Barrio	Laguna	174	14 07	121 20
Antipolo	Barrio	Occidental Negros	220	10 20	123 30
Antipolo	Barrio	Surigao	262	8 45	126 15
ANTIQUE	Province	Antique	90	11 10	122 00
Antique	Province	Philippine Islands	72	11	122
Antique	Barrio	Antique	90	10 40	122 00
Antolayan	Barrio	Cebu	138	10 40	123 45
Antolon	Barrio	Camarines Sur	126	13 48	123 46
Arusan	Mountain	Rizal	240	14 50	121 18
Anulid	Barrio	Pangasinan	236	15 50	120 29
Anuling	Barrio	Bohol	106	9 51	124 26
Anuling	Barrio	Cavite	134	14 07	120 54
Anuling	Barrio	Tarlac	266	15 39	120 23
Anuling	Island	Palawan (N)	228	9 40	121 20
Anulok	Sitio	Bontoc Subprovince	204	17 10	121 16
Anunas	Mountain	Nueva Ecija	212	15 45	121 07
Anungan	Sitio	Zamboanga	278	7 25	122 05
Anus	Barrio	Batangas	102	13 52	121 03
Anus	Barrio	Tayabas (S)	270	13 50	122 10
Aoasen	River	Amburayan Subprovince	198	17 03	120 36
Apad	Barrio	Tayabas (S)	270	14 00	122 20
Apad	Barrio	Tayabas (S)	270	14 00	122 10
Apad	Sitio	Albay	86	13 20	123 28
Apadi	Rancheria	Apayao Subprovince	200	18 05	121 07
Apagen	Rancheria	Apayao Subprovince	200	18 15	121 01
Apaleng	Barrio	La Union	182	16 36	120 23
Apalit	Municipality	Pampanga	232	14 57	120 46
Apang	Barrio	Amburayan Subprovince	198	16 53	120 35
Aparri	Municipality	Cagayan	118	18 20	121 40
Aparri	Sitio	Isabela	170	16 55	121 35
Aparri	Sitio	Zambales	274	15 08	120 03
Apatan	Sitio	Kalinga Subprovince	208	17 32	121 20
Apatot	Barrio	Ilocos Sur	162	17 19	120 25
Apatot	Barrio	La Union	182	16 48	120 25
Apaya	Barrio	Amburayan Subprovince	198	16 53	120 35
APAYAO	Subprovince	Apayao Subprovince	200	18 05	121 15
Apayao	Subprovince	Mountain Province	196	18 05	121 15
Apayao	Barrio	Cagayan	118	17 50	121 30
Apayao	River	Apayao Subprovince	200	18 20	120 59
Apayao	River	Apayao Subprovince	200	18 10	121 04
Apayao	River	Mountain Province	196	18 10	121 05
Apdo	Barrio	Antique	90	10 35	122 00
Aplaya	Barrio	Batangas	102	13 47	121 01
Apo	Island	Mindoro	190	12 40	120 25
Apo	Island	Oriental Negros	224	9 05	123 15
Apo	Island	Philippine Islands	72	13	120
Apo	Volcano	Cotabato	150	7 00	125 15
Apo	Volcano	Davao	154	7 00	125 15
Apo	Volcano	Philippine Islands	72	7	125
Apo	Volcano, active	Relief	72	7	125
Apoapo	Sitio	Zambales	274	15 11	120 03
Apo East	Pass	Mindoro	190	12 40	120 35
Apoloy	Barrio	Oriental Negros	224	9 10	123 00
Aponan	Barrio	Benguet Subprovince	202	16 39	120 47
Apua Grande	Island	Camarines Norte	122	14 05	123 05
Apud	Barrio	Albay	86	13 08	123 13
Apugan	Sitio	Bulacan	114	14 50	121 04
Apurauan	Sitio	Palawan (S)	228	9 40	118 20
Aputan	Rancheria	Apayao Subprovince	200	18 07	121 02
Aquib	Barrio	Ilocos Sur	162	17 27	120 29
Aquino	Barrio	Capiz	130	11 49	122 06
Aquino	Barrio	Misamis	194	8 35	123 40
Arab	Barrio	Abr	78	17 31	120 36
Araceli	Barrio	Palawan (N)	228	10 30	120 00
Aragon	Barrio	Davao	154	7 50	126 20
Aranda	Barrio	Occidental Negros	220	10 15	122 55
Arangasa	Island	Surigao	262	8 50	126 20
Arangayan	Barrio	Nueva Ecija	212	15 45	120 53
Arangin	Barrio	Ilocos Sur	162	17 07	120 31
Aranguel	Barrio	Capiz	130	11 27	122 56
Arangureng	Barrio	Tarlac	266	15 21	120 34
Ararampang	Barrio	La Union	182	16 47	120 25
Arasasan	Barrio	Antique	90	11 30	122 05
Arasasan	Barrio	Antique	90	10 35	122 00
Arayat	Municipality	Pampanga	232	15 09	120 46
Arayat	Mountain	Pampanga	232	15 12	120 44
Arayat	Volcano, dormant	Relief	72	15	121

Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
				° /	° /
Arboledan	Point	Ilocos Norte	158	18 01	120 29
Arena	Island	Palawan (N)	228	9 10	120 50
Arena	Island	Sorsogon (N)	252	13 09	122 48
Arena	Island	Philippine Islands	72	9	121
Arena	Point	Davao	154	7 00	126 00
Arena	Point	Tayabas (S)	270	13 15	122 40
Arenas	Point	Zambales	274	15 37	119 54
Arevalo	Municipality	Iloilo	166	10 40	122 30
Arevalo	Barrio	Leyte	186	11 20	124 20
Argao	Municipality	Cebu	138	9 55	123 35
Argao	Barrio	Capiz	130	11 55	121 57
Argao	Barrio	Tayabas (S)	270	13 35	121 50
Aringay	Municipality	La Union	182	16 24	120 21
Aringin	Barrio	Tarlac	266	15 46	120 34
Aripip	Rancheria	Apayao Subprovince	200	18 06	121 19
Aritao	Township	Nueva Vizcaya	216	16 18	121 02
Armenia	Barrio	Sorsogon (S)	252	12 15	123 44
Armenia	Barrio	Tarlac	266	15 26	120 34
Arnap	Barrio	Ilocos Sur	162	17 37	120 26
Arnedo	Barrio	Pangasinan	236	16 22	119 53
Aroganga	Barrio	Samar	248	12 05	125 20
Aroroy	Municipality	Sorsogon (N)	252	12 31	123 24
Aroroy	Municipality	Sorsogon (S)	252	12 31	123 24
Arpili	Barrio	Cebu	138	10 30	123 40
Arrasasan	Barrio	Surigao	262	8 55	126 20
Arrecife	Island	Palawan (S)	228	8 30	117 30
Artacho	Barrio	Pangasinan	236	16 12	120 31
Artuz	Barrio	Capiz	130	11 17	122 29
Arubub	Barrio	Isabela	170	16 30	121 40
Asa	Sitio	Kalinga Subprovince	208	17 31	121 19
Asassi	Barrio	Cagayan	118	17 55	121 45
Asdum	Barrio	Camarines Norte	122	14 06	122 50
Asgad	Barrio	Samar	248	11 10	125 40
Asi	Mountain	Apayao Subprovince	200	18 11	121 10
Asia	Sitio	Occidental Negros	220	9 35	122 30
Asid	Bay	Sorsogon (S)	252	12 05	123 30
Asiga	River	Agusan	82	9 15	125 40
Asiga	Barrio	Kalinga Subprovince	208	17 36	121 17
Asilang	Barrio	Ilocos Sur	162	17 43	120 30
Asilap	Sitio	Nueva Vizcaya	216	16 32	121 12
Asin	River	Ifugao Subprovince	206	16 43	120 57
Asin	Sitio	Benguet Subprovince	202	16 31	120 48
Asin	Sitio	Benguet Subprovince	202	16 26	120 30
Asin	Sitio	Lepanto Subprovince	210	17 17	120 34
Asingan	Municipality	Pangasinan	236	16 00	120 40
Asta	Sitio	Nueva Ecija	212	15 45	120 57
Astorga	Barrio	Capiz	130	11 15	122 48
Astorga	Sitio	Davao	154	6 50	125 30
Asturias	Municipality	Cebu	138	10 35	123 45
Asturias	Barrio	Sulu	258	6 00	121 00
Asuncion	Barrio	Leyte	186	10 10	124 50
Atate	Sitio	Nueva Ecija	212	15 33	121 05
Ati	Barrio	Albay	86	14 04	124 13
Atimonan	Municipality	Tayabas (S)	270	14 00	121 55
Atiotis	Barrio	Antique	90	10 35	122 00
Atip	Mountain	Abra	78	17 51	120 42
Atok	Township	Benguet Subprovince	202	16 35	120 41
Atok	Township	Mountain Province	196	16 35	120 40
Atulayan	Island	Camarines Sur	126	13 35	123 34
Atupatup	Sitio	Cebu	138	11 15	123 45
Auayan	Barrio	Camarines Sur	126	13 44	122 59
Auqui	Island	Surigao	262	9 25	126 05
Aureliana	Sitio	Antique	90	10 55	122 00
Aurora	Sitio	Leyte	186	11 25	124 20
Ava	Sitio	Camarines Sur	126	13 29	123 06
Awa	Barrio	Ifugao Subprovince	206	16 48	120 59
Awan	Rancheria	Apayao Subprovince	200	18 16	120 59
Awang	Municipal district	Cotabato	150	7 05	124 15
Awasan	Bay	Surigao	262	9 55	125 35
Awitan	Barrio	Camarines Norte	122	14 12	122 51
Ayaas	Mountain	Rizal	240	14 45	121 12
Ayala	Barrio	Zamboanga	278	7 00	121 55
Ayam	Sitio	Bataan	94	14 31	120 36
Ayangan	Barrio	Ifugao Subprovince	206	16 54	121 13
Ayaoan	Barrio	La Union	182	16 49	120 22
Ayogan	Barrio	Camarines Sur	126	13 33	123 20
Ayson	Barrio	Tarlac	266	15 35	120 34
Ayudante	Barrio	Ilocos Sur	162	17 10	120 26
Ayung	Sitio	Kalinga Subprovince	208	17 28	121 12
Ayungon	Barrio	Oriental Negros	224	9 50	123 10

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Ayuquitan.....	Municipality.....	Oriental Negros.....	224	9	30	123	15
Ayuquitan Viejo.....	Barrio.....	Oriental Negros.....	224	9	25	123	40
Azagra.....	Barrio.....	Romblon.....	244	12	15	122	15
Azpitia.....	Municipal district.....	Agusan.....	82	8	40	125	55
B.							
Baaba.....	Sitio.....	Zarboanga.....	278	6	40	121	55
Baabang.....	Point.....	Romblon.....	244	12	20	122	05
Baac.....	Sitio.....	Kalinga Subprovince.....	208	17	31	121	23
Baanan.....	Barrio.....	Laguna.....	174	14	10	121	26
Baao.....	Lake.....	Camarines Sur.....	126	13	28	123	19
Baao.....	Municipality.....	Camarines Sur.....	126	13	27	123	22
Baas.....	Sitio.....	Bohol.....	106	10	09	124	13
Baay.....	Municipal district.....	Abra.....	78	17	33	120	53
Baay.....	Barrio.....	Benguet Subprovince.....	202	16	37	120	26
Baay.....	Barrio.....	Itogao Subprovince.....	206	16	47	121	06
Baay.....	Barrio.....	Ilocos Norte.....	158	18	07	120	34
Baay.....	Sitio.....	Camarines Norte.....	122	14	06	122	44
Baay.....	River.....	Abra.....	78	17	34	120	47
Baayad.....	Barrio.....	Palawan (N).....	228	10	50	121	00
Babag.....	Sitio.....	Davao.....	154	7	50	126	00
Babaguan.....	Barrio.....	Davao.....	86	13	57	124	20
Babak.....	Barrio.....	Davao.....	154	7	10	125	40
Babalasioan.....	Barrio.....	Ilocos Sur.....	162	17	23	120	32
Babatnigon.....	Municipality.....	Leyte.....	186	11	25	124	50
Babatnigon.....	Sitio.....	Camarines Norte.....	122	13	51	123	03
Babatnigon.....	Point.....	Cagayan.....	118	18	40	121	00
Babatnigon.....	Barrio.....	Cebu.....	138	9	50	123	30
Babatnigon.....	Barrio.....	Bulacan.....	114	15	06	121	05
Babayangan.....	Caves.....	Bontoc Subprovince.....	204	17	11	121	21
Bahay Paniqui.....	Sitio.....	Bohol.....	106	10	07	124	18
Babba.....	Barrio.....	Bataan.....	94	14	41	120	26
Baboy.....	Peak.....	Cagayan.....	113	19	10	121	40
Babuyan.....	Islands.....	Cagayan.....	118	19	30	122	00
Babuyan.....	Island.....	Philippine Islands.....	72	19		122	
Babuyan.....	Island.....	Cagayan.....	118	18	40	121	40
Babuyan.....	Channel.....	Relief.....	72	20		122	
Babuyan.....	Volcano, active.....	Bataan.....	94	14	26	120	35
Babuyan.....	Barrio.....	Palawan (S).....	228	10	00	118	50
Babuyan.....	Barrio.....	Pangasinan.....	236	15	52	120	00
Baca.....	Mountain.....	Nueva Ecija.....	212	15	24	121	12
Baca.....	Mountain.....	Relief.....	72	15		121	
Bacacay.....	Municipality.....	Albay.....	86	13	18	123	48
Bacacay.....	Mountain.....	Camarines Norte.....	122	14	13	122	50
Bacacay.....	Point.....	Camarines Norte.....	122	14	16	122	52
Bacag.....	Barrio.....	Pangasinan.....	236	15	56	120	35
Bacal.....	Barrio.....	Nueva Ecija.....	212	15	40	120	53
Bacalan.....	Barrio.....	Antique.....	90	11	35	122	05
Bacan.....	Barrio.....	Iloilo.....	166	10	55	122	25
Bacangan.....	Sitio.....	Amburayan Subprovince.....	198	17	04	120	34
Bacao.....	Barrio.....	Batangas.....	102	13	43	121	13
Bacao.....	Barrio.....	Palawan (N).....	228	10	30	119	50
Bacarra.....	Municipality.....	Ilocos Norte.....	158	18	15	120	37
Bacarra.....	River.....	Ilocos Norte.....	158	18	15	120	35
Bacay.....	Point.....	Iloilo.....	166	10	50	122	45
Bacay.....	Barrio.....	Iloilo.....	166	10	50	122	45
Bacayao.....	Barrio.....	Nueva Ecija.....	212	15	40	120	45
Baccuit.....	Barrio.....	La Union.....	182	16	32	120	19
Bachauan.....	Barrio.....	Romblon.....	244	12	25	122	15
Baclaran.....	Barrio.....	Rizal.....	240	14	32	121	00
Baclayan.....	Municipality.....	Bohol.....	106	9	38	123	55
Bacnotan.....	Municipality.....	La Union.....	182	16	44	120	21
Baco.....	Islands.....	Mindoro.....	190	13	30	121	10
Baco.....	Mountain.....	Mindoro.....	190	12	50	121	10
Baco.....	Mountain.....	Relief.....	72	13		121	
Baco.....	Barrio.....	Mindoro.....	190	13	25	121	10
Bacolod.....	Capital.....	Occidental Negros.....	220	10	40	122	55
Bacolod.....	Capital, Occidental Negros.....	Philippine Islands.....	72	11		123	
Bacolod.....	Barrio.....	Surigao.....	262	8	55	126	15
Bacolor.....	Municipality.....	Pampanga.....	232	15	00	120	39
Bacon.....	Municipality.....	Sorsogon (N).....	252	13	02	124	02
Bacong.....	Municipality.....	Oriental Negros.....	224	9	15	123	20
Bacong.....	Barrio.....	Bohol.....	106	9	44	124	34
Bacong.....	Barrio.....	Iloilo.....	166	10	50	122	40
Bacong.....	Barrio.....	Tayabas (N).....	270	15	45	121	30
Bacong.....	Sitio.....	Albay.....	86	13	07	123	26
Bacococ.....	Barrio.....	Abra.....	78	17	40	120	48
Bacoor.....	Municipality.....	Cavite.....	134	14	28	120	56
Bacot.....	Sitio.....	Amburayan Subprovince.....	198	16	41	120	31

Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
Bacsayan.	Barrio	Ilocos Sur	162	17 04	120 28
Bacsil.	Barrio	Ilocos Sur	162	17 43	120 28
Bacsil.	Barrio	La Union	182	16 43	120 21
Bartad.	Barrio	Pangasinan	236	15 59	120 37
Bactad.	Sitio.	Ifugao Subprovince.	206	16 43	121 17
Bactalan.	Sitio.	Apayao Subprovince.	200	18 04	121 34
Bacuag.	Municipality.	Surigao	262	9 35	125 40
Bacud.	Sitio.	Surigao	262	9 45	125 30
Bacuit.	Bay	Palawan (N).	223	11 10	119 20
Bacuit.	Township	Palawan (N).	223	11 10	119 20
Baculin.	Bay	Davao	154	7 30	126 30
Baculin.	Barrio	Davao	154	7 30	126 30
Baculong.	Barrio	Tarlac	266	15 33	120 39
Baculongan.	Barrio	Benguet Subprovince.	202	16 47	120 50
Bacungan.	Sitio.	Palawan (S)	223	9 50	118 40
Badajoz.	Municipality.	Romblon	244	12 35	122 10
Badus.	Barrio	Surigao	262	9 40	125 35
Baday.	Sitio	Isabela	170	16 40	121 30
Badia.	Barrio	Zamboanga.	278	6 30	122 10
Badian.	Bay	Cebu	138	9 55	123 55
Badian.	Island.	Cebu	138	9 55	123 20
Badian.	Municipality.	Cebu	138	9 50	123 25
Badiang.	Barrio	Bohol.	106	9 43	124 35
Badiang.	Barrio	Leyte.	186	10 10	124 50
Badiang.	Barrio	Sorsogon (N)	252	12 34	123 58
Badiang.	Barrio	Sorsogon (S).	252	12 34	123 58
Badiangan.	Barrio	Antique.	90	10 40	122 05
Badiangan.	Sitio.	Lanao.	173	7 50	123 50
Badoc.	Island	Ilocos Norte	153	17 56	120 25
Badoc.	Municipality.	Ilocos Norte	153	17 56	120 28
Bae.	Barrio	Cebu	138	10 00	123 35
Bae.	Barrio	Oriental Negros.	224	10 00	123 10
Baesa.	Barrio	Rizal	240	14 40	121 00
Baeto.	Point	Mindoro	190	13 30	120 40
Baga.	Mountain.	Zamboanga.	278	7 55	122 40
Baga.	Mountain.	Relief	72	8	123
Bagababoy.	Island.	Sorsogon (N)	252	12 42	123 37
Bagabag.	Township	Nueva Vizcaya.	216	16 37	121 15
Bagabag.	Barrio	Isabela	170	17 05	121 55
Bagabono.	Sitio.	Camarines Sur	126	13 50	122 49
Bagac.	Municipality.	Bataan	94	14 26	120 23
Bagac.	River	Bataan	94	14 36	120 25
Bagacay.	Barrio	Bohol.	106	10 09	124 15
Bagacay.	Barrio	Camarines Norte.	122	14 11	122 51
Bagacay.	Barrio	Camarines Sur	126	13 47	123 19
Bagacay.	Barrio	Cebu	138	10 50	124 00
Bagacay.	Barrio	Iloilo	166	11 10	122 50
Bagacay.	Barrio	Oriental Negros.	224	9 15	123 35
Bagacay.	Barrio	Sorsogon (N)	252	12 59	124 08
Bagacay.	Sitio.	Iloilo	166	10 50	122 15
Bagacay.	Sitio.	Samar	248	11 30	125 20
Bagahupi.	Barrio	Leyte.	186	11 20	124 55
Bagakay.	Sitio.	Leyte.	186	10 55	124 55
Bagalay.	Barrio	Abra.	78	17 37	120 42
Bagalayag.	Mountain.	Sorsogon (S)	252	12 05	123 48
Bagamanoc.	Barrio	Albay	86	13 57	124 17
Bagambangan.	Island.	Palawan (N).	223	11 10	119 40
Bagambanua.	Island	Bohol.	106	10 03	123 54
Baganga.	Bay	Davao	154	7 30	126 30
Baganga.	Municipality.	Davao	154	7 30	126 30
Bagani.	Barrio	Ilocos Sur	162	17 12	120 28
Bagapuso.	Sitio	Camarines Sur	126	13 28	123 09
Bagasau.	Barrio	Cebu	138	10 45	123 50
Bagatao.	Island	Sorsogon (N)	252	12 50	123 48
Bagay.	Barrio	Cebu	138	11 10	124 00
Bagbag.	Barrio	Batangas	102	14 02	121 06
Bagbag.	Barrio	Ilocos Norte	153	13 08	120 45
Bagbag.	Barrio	La Union	182	16 29	120 22
Bagbag.	Barrio	La Union	240	14 41	121 02
Bagbago.	Barrio	Ilocos Norte	153	13 08	120 45
Bagbaguin.	Barrio	Bulacan.	114	14 43	121 00
Bagbagun.	Sitio	Zamboanga.	278	6 40	121 50
Bagbaujan.	River	Mindoro	190	13 10	120 45
Bagbao.	Municipality.	Cagayan	113	17 55	121 45
Bagbao.	Sitio	Agusan	82	9 20	125 30
Bagigan.	Sitio.	Lanao	178	7 45	123 50
Bagiu.	Sitio.	Davao.	154	7 10	125 30
Bagnen.	Barrio	Lepanto Subprovince.	210	17 02	120 53
Bagnon.	Barrio.	Camarines Sur	126	13 44	122 51
Bago.	Municipality.	Occidental Negros.	220	10 30	122 50

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Bago	Barrio	Davao	154	7	00	125	30
Bago	Sitio	Ilocos Norte	153	18	21	120	44
Bago	River	Amburayan Subprovince.	198	16	52	120	35
Bago	River	Occidental Negros	220	10	35	123	05
Bagombong	Barrio	Rizal	240	14	21	121	22
Bagong	Barrio	Bulacan	114	14	57	121	04
Bagong	Barrio	Bulacan	114	14	54	120	57
Bagong Cambangay	Barrio	Bohol	106	10	00	124	21
Bagtangan	Barrio	Lepanto Subprovince.	210	16	46	120	46
Bagtason	Barrio	Antique	90	11	00	122	05
Bagto	Sitio	Agusan	82	9	15	125	35
Bagubantay	Barrio	Amburayan Subprovince.	198	16	50	120	40
Bagubaut	Barrio	Rizal	240	14	39	121	02
Bagubaut	Point	Sorsogon (N)	252	12	27	123	34
Baguhan	Point	Sorsogon (S)	252	12	27	123	34
Baguinbin	Barrio	Bohol	106	10	00	124	08
Baguingue	Barrio	Leyte	186	11	00	124	25
BAGUIO	Barrio	Ifugao Subprovince.	206	16	45	121	04
Baguio	City, incorporated.	Baguio	140	16	24	120	36
Baguio	City, do.	Benguet Subprovince.	202	16	24	120	36
Baguio	City, do.	Mountain Province.	196	16	25	120	35
Bagulayag	City, do.	Philippine Islands	72	16		121	
Bagulibud	Sitio	Romblon	244	12	25	121	55
Bagulin	Point	Zamboanga	278	7	35	122	30
Bagulin	Township	Benguet Subprovince.	202	16	37	120	27
Bagulipat	Township	Mountain Province.	196	16	40	120	30
Bagumbang	Mountain	Sorsogon (S)	252	12	11	123	43
Bagumbayan	Sitio	Misamis	194	8	05	123	45
Bagumbayan	Barrio	Cagayan	118	17	45	121	25
Bagumbayan	Barrio	Laguna	174	14	16	121	24
Bagumbayan	Barrio	Rizal	240	14	29	121	03
Bagumbun	Sitio	Laguna	174	14	33	121	26
Bagunsikat	Mountain	Davao	154	7	40	126	20
Bagunut	Barrio	Nueva Ecija	212	15	44	121	02
Bagutot	Barrio	Cagayan	118	18	00	121	45
Baha	Barrio	La Union	182	16	44	120	22
Bahabaha	Barrio	Batangas	102	13	53	120	42
Bahai Pari	Barrio	Bohol	106	10	08	124	23
Bahaon	Sitio	Pampanga	232	15	02	120	53
Bahaon	Mountain	Agusan	82	8	15	125	15
Bahaon	Mountain	Bukidnon	110	8	15	125	15
Bahay	Mountain	Relief	72	8		125	
Bahbah	Barrio	Camarines Sur	126	13	32	123	03
Baheli	Municipal district.	Agusan	82	8	40	125	55
Bahi	Sitio	Palawan (S)	228	10	00	118	50
Bahi	Barrio	Camarines Sur	126	13	53	123	37
Bahi	Barrio	Surigao	262	8	30	126	05
Bahia Honda	Barrio	Tayabas (S)	270	13	20	121	50
Bahisan	Point	Palawan (S)	228	9	20	118	10
Bahyan	Sitio	Agusan	82	8	25	126	00
Bai	Barrio	Benguet Subprovince.	202	16	33	120	38
Bail	Sitio	Bontoc Subprovince.	204	17	15	121	21
Bailen	Barrio	La Union	182	16	17	120	25
Bais	Municipality.	Cavite	134	14	11	120	48
Bais	Municipality.	Oriental Negros	224	9	35	123	05
Bajuacan	Barrio	Amburayan Subprovince.	188	16	53	120	33
Baka	Mountain	Apayao Subprovince.	200	17	55	121	17
Bakag	Sitio	Cotabato	150	6	00	124	30
Bakalan	Barrio	Abra	78	17	44	120	53
Bakari	Barrio	Zamboanga	278	7	45	122	35
Bakhaw	Barrio	Bontoc Subprovince.	204	17	16	121	22
Bakhawan	Barrio	Iloilo	166	10	45	122	40
Bakingking	Barrio	Romblon	244	12	55	121	40
Bakiog	Municipal district.	Agusan	82	8	45	125	30
Bakulin	Sitio	Davao	154	7	30	126	00
Bakulin	Point	Surigao	262	8	30	126	20
Bakulud	Barrio	Surigao	262	8	30	126	20
Bakulug	Municipal district.	Lanao	178	7	50	124	10
Bakun	Mountain	Apayao Subprovince.	200	17	54	121	21
Bakun	Township	Amburayan Subprovince.	198	16	48	120	39
Bakun	Township	Mountain Province.	196	16	50	120	40
Balaat	River	Amburayan Subprovince.	198	16	49	120	39
Balabac	Barrio	Abra	78	17	48	120	57
Balabac	Strait	Palawan (S)	228	7	40	117	00
Balabac	Strait	Philippine Islands	72	8		117	
Balabac	Island	Palawan (S)	228	8	00	117	00
Balabac	Island	Philippine Islands	72	8		117	
Balabac	Barrio	Palawan (S)	228	8	00	117	00
Balabac	Mountain	Antique	90	11	35	122	10
Balabac	Mountain	Capiz	130	11	36	122	09

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Balabac	Mountain	Rizal	240	14	49	121	11
Balabag	Mountain	Bukidnon	110	7	55	124	40
Balabag	Mountain	Bulacan	114	14	50	121	11
Balabag	Mountain	Lanao	178	7	55	124	40
Balabag	Barrio	Oriental Negros	224	9	15	123	15
Balabagon	Barrio	Cebu	138	9	55	123	25
Balabak	Island	Zamboanga	278	6	55	122	10
Balabao	Sitio	Lanao	178	18	00	124	00
Balacad	Barrio	Ilocos Norte	158	18	09	120	33
Balacay	Island	Albay	36	13	43	124	24
Balagan	Sitio	Isabela	170	16	55	122	05
Balagbag	Barrio	Camarines Sur	126	13	34	123	09
Balagbag	Sitio	Rizal	240	14	31	121	02
Balagon	Barrio	Samar	248	11	55	125	15
Balait	Mountain	Abra	78	17	26	121	00
Balait	Mountain	Kalinga Subprovince	202	16	37	121	00
Balakbak	Barrio	Benguet Subprovince	208	17	37	120	37
Balakibok	Mountain	Zambales	274	14	56	120	21
Balaknit	Sitio	Apayao Subprovince	200	17	54	121	33
Balaktasan	Barrio	Zamboanga	278	6	45	122	00
Balamban	Municipality	Cebu	138	10	30	123	45
Balanacan	Barrio	Tayabas (S)	270	13	30	121	50
Balanga	Capital	Bataan	74	14	41	120	32
Balanga	Capital, Bataan	Philippine Islands	72	15	15	120	00
Balanga	Barrio	Batangas	102	13	48	121	09
Balangabang	Barrio	Nueva Vizcaya	216	16	22	120	52
Balangao	Barrio	Bontoc Subprovince	204	17	06	121	17
Balangiga	Municipality	Samar	243	11	05	125	25
Balangis	Sitio	Cotabato	150	6	10	124	15
Balangon	Barrio	Batangas	102	13	54	120	52
Balanguingue	Island	Sorsogon (S)	252	11	50	124	06
Balanguingui	Island	Sulu	258	6	00	121	45
Balanoajan	Sitio	Romblon	244	12	20	122	35
Balansay	Barrio	Mindoro	190	13	10	120	40
Balantugan	Barrio	Abra	78	17	19	120	41
Balao	Barrio	Mindoro	190	13	25	120	45
Balaoa	Barrio	Lepanto Subprovince	210	16	59	120	50
Balaoan	Municipality	La Union	182	16	50	120	24
Balaoang	Barrio	Tarlac	266	15	40	120	31
Balaoang	Barrio	Bulacan	114	15	09	121	01
Balaquid	Barrio	Leyte	186	11	30	124	35
Balaquilong	Barrio	Batangas	102	14	04	120	56
Balaring	Barrio	Capiz	130	11	32	122	41
Balaring	Barrio	Misamis	194	8	25	123	50
Balaring	Barrio	Occidental Negros	220	10	50	123	00
Balas	Barrio	Batangas	102	14	05	121	00
Balasan	Municipality	Iloilo	166	11	30	123	05
Balasbas	Sitio	Benguet Subprovince	202	16	14	120	37
Balasian	River	Lepanto Subprovince	210	17	08	120	44
Balasig	Barrio	Isabela	114	14	51	121	01
Balasing	Barrio	Bulacan	150	7	25	124	45
Balat	Sitio	Cotabato	194	8	00	133	40
Balatacan	Sitio	Misamis	208	17	29	121	23
Balatan	Sitio	Kalinga Subprovince	190	12	15	121	25
Balatasan	Barrio	Mindoro	102	13	40	121	12
Balatbat	Barrio	Batangas	138	9	50	123	35
Balatic	Point	Cebu	208	17	25	121	06
Balatok	Barrio	Kalinga Subprovince	130	11	26	122	45
Balatuacan	Barrio	Capiz	110	7	25	125	05
Balaturan	Sitio	Bukidnon	150	7	25	125	05
Balaturan	Sitio	Cotabato	154	6	50	125	20
Balaturan	Sitio	Davao	208	17	24	121	23
Balawag	Sitio	Kalinga Subprovince	102	13	50	120	43
Balayan	Bay	Batangas	102	13	56	120	44
Balayan	Municipality	Batangas	266	15	33	120	42
Balayag	Barrio	Tarlac	274	14	55	120	12
Balaybay	Barrio	Zambales	178	7	50	124	20
Balaygay	Barrio	Lanao	174	14	08	121	30
Balayong	Barrio	Laguna	134	14	16	120	48
Balayungan	Sitio	Cavite	208	17	26	121	12
Balbalan	Township	Kalinga Subprovince	196	17	25	121	10
Balbalasang	Township	Mountain Province	208	17	29	121	04
Balbalasang	Barrio	Kalinga Subprovince	78	17	24	120	46
Balbalayang	Sitio	Abra	158	17	55	120	32
Balbaldes	Barrio	Ilocos Norte	182	16	29	120	25
Balebec	Barrio	La Union	252	12	28	123	30
Baleno	Barrio	Sorsogon (N)	252	12	28	123	30
Baleno	Barrio	Sorsogon (S)	216	15	50	121	35
Baler	Bay	Nueva Vizcaya	270	15	50	121	35
Baler	Bay	Tayabas (N)	270	15	50	121	35

Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
Baler	Bay	Philippine Islands	72	16	122
Baler	Municipality	Tayabas (N)	270	15 45	121 35
Balere	Barrio	Leyte	186	10 50	124 55
Balesin	Barrio	Tayabas (N)	270	14 25	122 05
Balete	Municipal district	Agusan	82	8 40	125 55
Balete	Barrio	Batangas	102	14 01	121 06
Balete	Barrio	Batangas	102	13 50	120 55
Balete	Barrio	Batangas	216	16 12	121 01
Balete	Barrio	Nueva Vizcaya	190	16 12	121 01
Balete	Barrio	Mindoro	232	15 55	121 30
Balete	Barrio	Pampanga	266	15 39	120 41
Balete	Barrio	Tarlac	266	15 39	120 39
Balete 1ro.	Barrio	Cavite	134	14 12	120 56
Balete 2do.	Barrio	Cavite	134	14 11	120 59
Balian	Barrio	Laguna	174	14 24	121 28
Baliangao	Municipality	Misamis	194	8 40	123 35
Balias	Sitio	Cotabato	150	5 40	125 20
Balibago	Barrio	Batangas	102	13 39	121 21
Balibago	Barrio	Laguna	174	14 18	121 06
Balibago	Barrio	Pampanga	232	15 10	120 35
Balibago	Barrio	Tarlac	266	15 32	120 37
Balibago	Sitio	Pampanga	232	15 15	120 42
Balicaocao	Barrio	Misamis	194	8 35	123 50
Balicasag	Island	Bohol	106	9 31	123 41
Balic Balic	Barrio	City of Manila	146	14 37	121 00
Balicuatro	Islands	Samar	248	12 37	124 25
Balicuatro	Point	Samar	248	12 35	124 20
Baliculting	Sitio	Bulacan	114	15 08	121 04
Baliga	Sitio	Abra	78	17 18	120 43
Balighot	Barrio	Capiz	130	11 24	122 49
Baligian	Sitio	Zamboanga	278	7 50	122 10
Baliguian	Island	Iloilo	166	11 10	123 20
Bahia	Barrio	Cotabato	150	6 40	124 05
Bahil	Barrio	Bohol	106	9 43	124 18
Bahil	Barrio	Bontoc Subprovince	204	17 04	120 56
Bahil	Barrio	Lepanto Subprovince	210	16 53	120 49
Bahil	Sitio	Zamboanga	278	7 40	122 10
Balihihan	Municipality	Bohol	106	9 45	123 57
Balihing	Barrio	Nueva Vizcaya	216	16 13	120 56
Baliling	Sitio	Lepanto Subprovince	210	16 59	120 43
Balimbing	Municipal district	Sulu	258	5 00	119 55
Balimbing	Barrio	Sulu	258	5 05	120 00
Balimbing	Barrio	Tayabas (S)	270	13 25	121 55
Balimbing	Sitio	Lanao	178	8 00	123 50
Balimad	Barrio	Albay	86	13 18	123 33
Balinatio	Sitio	Samar	248	11 05	125 35
Balinacaguin	Municipality	Pangasinan	236	16 05	119 56
Balinacanauay	Barrio	Tarlac	266	15 29	120 41
Balinaciagao	Barrio	Kalinga Subprovince	208	17 25	121 12
Balingaoan	Barrio	Ilocos Sur	162	17 14	120 26
Balingasag	Municipality	Misamis	194	8 45	124 45
Balingasay	Barrio	Pangasinan	236	16 22	119 51
Balingauan	Point	Mindoro	190	13 15	121 25
Balinguan	Barrio	Mindoro	194	9 00	124 50
Balinasasayao	Barrio	Misamis	194	9 20	123 05
Balintad	Lake	Oriental Negros	224	9 20	123 05
Balintad	Barrio	Bukidnon	110	8 15	124 40
Balintad	Sitio	Lanao	178	7 55	123 50
Balintang	Islands	Batanes	98	20 01	122 08
Balintang	Channel	Batanes	98	20 05	122 00
Balintang	Channel	Cagayan	118	19 40	121 40
Balintang	Barrio	Philippine Islands	72	20	122
Balintawac	Barrio	Rizal	240	14 40	121 00
Balintingon	Mountain	Nueva Ecija	212	15 16	121 12
Balitoogan	Barrio	Lepanto Subprovince	210	17 02	120 53
Balio	Barrio	Ilocos Sur	162	17 22	120 29
Balio	Barrio	Ilocos Sur	162	17 05	120 27
Palioag	Barrio	Ilocos Sur	162	17 25	120 36
Baliscan	Island	Abra	78	17 25	120 36
Baliscan	Island	Tayabas (S)	270	14 15	121 55
Balisong	Sitio	Amburayan Subprovince	198	16 52	120 40
Balitan	Barrio	Cotabato	150	5 40	125 15
Baliti	Sitio	Leyte	186	11 10	124 25
Baliti	Sitio	Surigao	262	9 45	125 25
Balitoc	Barrio	Batangas	102	13 52	120 38
Balituacan	Sitio	Pampanga	232	15 15	120 43
Baliuag	Municipality	Bulacan	114	14 58	120 54
Baliw	Barrio	La Union	182	16 43	120 20
Baliwagan	Sitio	Misamis	194	8 45	124 45
Baliwang	Barrio	Bontoc Subprovince	204	17 12	121 02
Ballacayu	Barrio	Isabela	170	17 30	121 50
Ballasio	Barrio	Ilocos Sur	162	17 30	120 31
Ballayangen	Barrio	Kalinga Subprovince	208	17 35	121 19

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Ballesteros.....	Municipality.....	Cagayan.....	118	18	25	121	30
Baloc.....	Barrio.....	Tarlac.....	266	15	41	120	21
Balogo.....	Barrio.....	La Union.....	182	16	46	120	20
Balo.....	Sitio.....	Bontoc Subprovince.....	204	17	13	121	24
Baloc.....	Barrio.....	Nueva Ecija.....	212	15	38	120	54
Balocaua.....	Barrio.....	Samar.....	248	12	05	124	10
Balod.....	Sitio.....	Samar.....	248	11	30	125	05
Balognonan.....	Barrio.....	Albay.....	86	14	03	124	08
Balogo.....	Sitio.....	Camarines Sur.....	126	13	54	123	34
Balolan.....	Sitio.....	Kalinga Subprovince.....	208	17	37	121	20
Balombon.....	Sitio.....	Camarines Norte.....	122	14	14	122	42
Balanga.....	Sitio.....	Cotabato.....	150	6	10	124	20
Balongay.....	Sitio.....	Tayabas (N).....	270	15	00	121	50
Baloy.....	Mountain.....	Antique.....	90	11	10	122	15
Baloy.....	Mountain.....	Capiz.....	130	11	10	122	15
Baloy.....	Mountain.....	Iloilo.....	166	11	10	122	15
Baloy.....	Sitio.....	Benguet Subprovince.....	202	16	23	120	43
Balsik.....	River.....	Bataan.....	94	14	56	120	27
Balsik.....	Sitio.....	Bataan.....	94	14	53	120	28
Baluan.....	Barrio.....	Cotabato.....	150	6	05	125	15
Baluarte.....	Barrio.....	Bulacan.....	114	14	43	120	54
Baluay.....	Barrio.....	Benguet Subprovince.....	202	16	32	120	32
Balubad.....	Barrio.....	Bulacan.....	114	14	49	120	52
Balubad.....	Barrio.....	Pampanga.....	232	15	02	120	33
Balucuc.....	Barrio.....	Pampanga.....	232	14	58	120	51
Balud.....	Barrio.....	Leyte.....	186	11	15	124	40
Balud.....	Barrio.....	Samar.....	248	12	30	124	55
Balud.....	Barrio.....	Sorsogon (S).....	252	12	02	123	12
Balud.....	River.....	Benguet Subprovince.....	202	16	29	120	48
Balug.....	Barrio.....	Isabela.....	170	17	15	121	50
Balugan.....	Barrio.....	Bontoc Subprovince.....	204	17	04	120	53
Balugang.....	Barrio.....	Ilocos Sur.....	162	17	18	120	32
Balugo.....	Barrio.....	Albay.....	86	13	17	123	33
Balugo.....	Barrio.....	Camarines Sur.....	126	13	30	123	04
Balugo.....	Barrio.....	Romblon.....	244	12	55	122	05
Balugo.....	Barrio.....	Tayabas (S).....	270	13	55	122	25
Balugo.....	Sitio.....	Mindoro.....	190	13	00	120	55
Balugo.....	Sitio.....	Romblon.....	244	12	35	122	00
Baluguhan.....	Barrio.....	Mindoro.....	190	13	20	120	40
Balukbaluk.....	Island.....	Zamboanga.....	278	6	40	121	40
Balun.....	Sitio.....	Benguet Subprovince.....	202	16	13	120	41
Balung.....	Sitio.....	Cotabato.....	150	7	05	124	25
Balungao.....	Municipality.....	Pangasinan.....	236	15	54	120	40
Balungay.....	Barrio.....	Nueva Vizcaya.....	216	16	19	120	58
Balus.....	Barrio.....	Zamboanga.....	278	7	10	122	15
Balut.....	Island.....	Davao.....	154	5	20	125	20
Balut.....	Municipal district.....	Cotabato.....	150	7	20	124	20
Balut.....	Municipal district.....	Lanao.....	178	8	05	124	10
Balut.....	Barrio.....	Bataan.....	94	14	49	120	32
Balut.....	Barrio.....	Bataan.....	94	14	41	120	34
Balutictic.....	Mountain.....	Abra.....	78	17	29	121	00
Balutictic.....	Mountain.....	Kalinga Subprovince.....	208	17	29	121	00
Balutictic.....	Mountain.....	Mountain Province.....	196	17	30	121	00
Balutu.....	Barrio.....	Tarlac.....	266	15	18	120	42
Balza.....	Barrio.....	Cagayan.....	118	18	20	121	45
Bamban.....	Point.....	Camarines Norte.....	122	14	21	122	28
Bamban.....	Municipality.....	Tarlac.....	266	15	16	120	34
Bambang.....	Township.....	Nueva Vizcaya.....	216	16	24	121	06
Bambang.....	Barrio.....	Bulacan.....	114	14	46	120	53
Bambang.....	Barrio.....	Pampanga.....	232	15	05	120	49
Bambang.....	Barrio.....	Rizal.....	240	41	31	121	04
Bambannan.....	Island.....	Sulu.....	258	5	35	120	20
Banaao.....	Township.....	Lepanto Subprovince.....	210	16	56	120	50
Banaao.....	Township.....	Mountain Province.....	196	16	55	120	50
Banaao.....	Barrio.....	Ifugao Subprovince.....	206	16	50	121	08
Banaba.....	Barrio.....	Tarlac.....	266	15	31	120	38
Banaba.....	Sitio.....	Pampanga.....	232	15	07	120	30
Banaban.....	Barrio.....	Bulacan.....	114	14	56	121	03
Banaba Norte.....	Barrio.....	Cavite.....	134	14	14	120	50
Banaba Sur.....	Barrio.....	Cavite.....	134	14	12	120	52
Banaoan.....	Sitio.....	Lepanto Subprovince.....	210	17	05	120	43
Banaoan.....	Island.....	Bohol.....	106	10	12	124	10
Banaoan.....	Barrio.....	Bohol.....	106	10	12	124	10
Banadero.....	Barrio.....	Batangas.....	102	14	05	121	04
Banadero.....	Barrio.....	Laguna.....	174	14	13	121	01
Banahao.....	Barrio.....	Bohol.....	106	9	58	124	06
Banahao.....	Mountain.....	Laguna.....	174	14	04	121	29
Banahao.....	Mountain.....	Tayabas (S).....	270	14	05	121	30
Banahao.....	Volcano, dormant.....	Relief.....	72	14		122	

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Banahaw.....	Sitio.....	Surigao.....	262	8	40	126	05
Banalo.....	Barrio.....	Batangas.....	102	13	39	121	11
Banan.....	Rancheria.....	Apayao Subprovince.....	200	18	18	121	01
Banao.....	Barrio.....	Albay.....	86	13	13	123	35
Banao.....	Barrio.....	Davao.....	154	7	40	126	30
Banao.....	Sitio.....	Benguet Subprovince.....	202	16	26	120	45
Banaoang.....	Barrio.....	Pangasinan.....	236	16	00	120	26
Banaoang.....	Barrio.....	Tarlac.....	266	15	43	120	32
Banaran.....	Island.....	Sulu.....	258	5	00	120	05
Banaran.....	Municipal district.....	Sulu.....	258	5	00	120	05
Banasi.....	Barrio.....	Camarines Norte.....	122	14	06	123	02
Banat.....	Sitio.....	Kalinga Subprovince.....	208	17	30	121	04
Banatao.....	Sitio.....	Kalinga Subprovince.....	208	17	19	121	30
Banate.....	Municipality.....	Iloilo.....	166	11	00	122	50
Banaue.....	Township.....	Ifugao Subprovince.....	206	16	55	121	04
Banaue.....	Township.....	Mountain Province.....	196	16	55	121	05
Banawang.....	Barrio.....	Bataan.....	94	14	37	120	23
Banaybanay.....	Barrio.....	Batangas.....	102	13	56	121	07
Banaybanay.....	Barrio.....	Laguna.....	174	14	15	121	08
Banayoyo.....	Municipality.....	Ilocos Sur.....	162	17	14	120	29
Banban.....	Barrio.....	Oriental Negros.....	224	9	15	123	35
Banban.....	River.....	Ilocos Norte.....	158	18	27	120	43
Banbanuan.....	Sitio.....	Apayao Subprovince.....	200	18	08	121	16
Banbayan.....	Sitio.....	Misamis.....	194	8	45	124	45
Bancaan.....	Barrio.....	Cavite.....	134	14	19	120	45
Bancabanca.....	Barrio.....	Laguna.....	174	14	12	121	21
Bancagan.....	Barrio.....	La Union.....	182	16	33	120	23
Bancal.....	Bay.....	Iloilo.....	166	11	30	123	10
Bancal.....	Barrio.....	Zambales.....	274	15	18	120	00
Bancalan.....	Island.....	Palawan (S).....	228	8	10	117	10
Bancasan.....	Barrio.....	Cebu.....	138	11	05	123	55
Bancay.....	Mountain.....	Nueva Ecija.....	212	15	46	120	45
Bancay.....	Mountain.....	Relief.....	72	16		121	
Banco.....	Barrio.....	Isabela.....	170	17	25	121	45
Banco.....	Barrio.....	Laguna.....	174	14	14	121	23
Bancod.....	Barrio.....	Cavite.....	134	14	12	120	53
Bancolasi.....	Barrio.....	Rizal.....	240	14	39	120	57
Bancoran.....	Island.....	Palawan (S).....	228	8	00	118	40
Bancoran.....	Island.....	Philippine Islands.....	72	8		119	
Bancuro.....	Barrio.....	Mindoro.....	190	13	20	121	20
Banday.....	Barrio.....	Leyte.....	186	10	20	125	00
Bandi.....	Barrio.....	Abra.....	78	17	43	120	39
Bandilaan.....	Mountain.....	Oriental Negros.....	220	9	10	123	35
Banengbeng.....	Barrio.....	Benguet Subprovince.....	202	16	31	120	32
Banga.....	Port.....	Zamboanga.....	278	7	30	122	25
Banga.....	Municipality.....	Capiz.....	130	11	38	122	20
Banga.....	Barrio.....	Batangas.....	102	14	01	120	57
Banga.....	Barrio.....	Bulacan.....	114	14	54	120	52
Banga.....	Barrio.....	Iloilo.....	166	10	40	122	15
Bangaan.....	Municipal district.....	Zamboanga.....	278	7	30	122	25
Bangaan.....	Barrio.....	Ifugao Subprovince.....	206	16	54	121	08
Bangac.....	Barrio.....	Isabela.....	170	17	10	121	55
Bangad.....	Barrio.....	Isabela.....	170	17	30	121	45
Bangad.....	Barrio.....	Kalinga Subprovince.....	208	17	17	121	09
Bangad.....	Sitio.....	Bataan.....	94	14	38	120	33
Bangad.....	Sitio.....	Rizal.....	240	14	22	121	13
Bangai.....	Point.....	Davao.....	154	7	40	126	30
Bangalao.....	Island.....	Sulu.....	258	6	00	121	35
Bangan.....	Barrio.....	Cagayan.....	118	18	30	121	15
Banganay.....	Sitio.....	Mindoro.....	190	13	05	120	50
Bangantalinga.....	Barrio.....	Zambales.....	274	15	21	119	58
Bangao.....	Barrio.....	Benguet Subprovince.....	202	16	49	120	51
Bangao.....	Sitio.....	Ifugao Subprovince.....	206	16	50	121	16
Bangar.....	Municipality.....	La Union.....	182	16	54	120	25
Bangar.....	Barrio.....	Tarlac.....	266	15	36	120	40
Bangar.....	Point.....	Pangasinan.....	236	16	08	120	06
Bangay.....	Barrio.....	Ilocos Norte.....	158	18	05	120	42
Bangbang.....	Mountain.....	Apayao Subprovince.....	200	17	41	121	16
Bangbang.....	Mountain.....	Kalinga Subprovince.....	208	17	40	121	15
Bangbanglang.....	Mountain.....	Abra.....	78	17	19	120	57
Bangbanglang.....	Mountain.....	Kalinga Subprovince.....	208	17	19	120	57
Bangbanglang.....	Mountain.....	Mountain Province.....	196	17	20	120	55
Bangbanglang.....	Mountain.....	Relief.....	72	17		121	
Bangcalasag.....	Sitio.....	Bataan.....	94	14	50	120	26
Bangu.....	Barrio.....	Tarlac.....	266	15	18	120	36
Bangu.....	Municipal district.....	Abra.....	78	17	36	121	00
Bangkal.....	Barrio.....	Bulacan.....	114	14	43	120	58
Bangkud.....	Barrio.....	Bukidnon.....	110	7	55	125	10
Banglayan.....	Barrio.....	Ilocos Sur.....	162	17	28	120	30

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Banglos	Barrio	Tayabas (N)	270	14	45	121	40
Bangon	Barrio	Leyte	186	11	25	124	20
Bangon	Barrio	Samar	248	11	55	124	40
Bangon	Barrio	Romblon	244	12	25	122	00
Bangong	Barrio	Abra	78	17	36	120	54
Bangued	Capital.	Abra	78	17	36	120	37
Bangued	Capital, Abra	Philippine Islands	72	18		121	
Banguil	Bay	Ilocos Norte	158	18	34	120	43
Banguil	Municipality	Ilocos Norte	158	18	32	120	46
Banguitan	Barrio	Lepanto Subprovince	210	17	04	120	51
Bangunay	Barrio	Agusan	82	9	20	125	35
Bangyan	Sitio	Davao	154	6	20	125	30
Bani	Municipality	Pangasinan	236	16	11	119	52
Bani	Barrio	Camarines Sur	126	13	58	123	20
Bani	Barrio	Tarlac	266	15	40	120	39
Bani	Sitio	La Union	182	16	13	120	25
Bani	Point	Zambales	274	15	34	119	55
Banicain	Sitio	Bataan	94	14	48	120	17
Banil	Sitio	Mindoro	190	13	10	121	10
Banilad	Barrio	Oriental Negros	224	9	15	123	20
Banilian	Sitio	Nueva Vizcaya	216	16	24	120	59
Banisanlan	Municipal district	Cotabato	150	7	30	124	45
Bankiruhan	Barrio	Albay	86	13	04	123	45
Banlasan	Barrio	Bohol	106	9	53	123	56
Banlat	Barrio	Rizal	240	14	41	121	03
Banlic	Barrio	Laguna	174	14	14	121	08
Banlot	Barrio	Cebu	138	10	00	123	35
Banna	Municipality	Ilocos Norte	158	17	59	120	39
Banochoc	Sitio	Camarines Norte	122	14	25	122	57
Banochoc	Sitio	Camarines Norte	122	14	17	122	35
Banog	Barrio	Pangasinan	236	16	11	119	54
Banogo	Sitio	Lanao	178	7	40	124	40
Banot	Barrio	Tayabas (S)	270	13	55	122	05
Banquel	Barrio	Samar	248	11	35	124	55
Banquero	Barrio	Isabela	170	17	00	121	45
Bantac	Island	Palawan (N)	228	12	10	120	20
Bantan Grande	Barrio	Bataan	94	14	39	120	34
Bantan Pequeño	Barrio	Bataan	94	14	40	120	34
Bantaoy	Barrio	Ilocos Sur	162	17	36	120	22
Bantay	Municipality	Ilocos Sur	162	17	35	120	23
Bantay	Barrio	Tayabas (S)	270	13	25	121	55
Bantayan	Island	Cebu	138	11	15	123	45
Bantayan	Municipality	Cebu	138	11	10	123	45
Bantayan	Barrio	Cavite	134	14	25	120	51
Bantayan	Barrio	Samar	248	12	30	124	50
Bantayan	Sitio	Taybas (S)	270	13	40	122	30
Banti	Barrio	Laguna	174	14	11	121	27
Bantig	Barrio	Leyte	186	10	10	124	50
Banti Goolong	Mountain	Abra	78	17	41	120	34
Bantigui	Island	Misamis	194	9	10	124	50
Bantigui	Point	Sorsogon (N)	252	12	51	123	44
Bantigui	Point	Batangas	102	13	41	121	28
Bantigui	Barrio	Leyte	186	10	20	124	45
Bantigui	Sitio	Camarines Sur	126	13	32	122	58
Bantolinao	Barrio	Bohol	106	9	49	123	56
Banton	Island	Romblon	244	12	55	122	05
Banton	Sitio	Lanao	178	8	00	123	55
Bantoncillo	Island	Romblon	244	12	55	122	00
Bantug	Barrio	Isabela	170	16	45	121	40
Bantug	Barrio	Isabela	170	16	35	121	45
Bantug	Barrio	Nueva Ecija	212	15	46	120	40
Bantug	Barrio	Nueva Ecija	212	15	34	120	55
Bantug	Barrio	Pangasinan	236	16	01	120	41
Bantug	Barrio	Tarlac	266	15	37	120	41
Bantug	Barrio	Tarlac	266	15	25	120	44
Bantulán	Barrio	Palawan (N)	228	10	50	119	40
Banuangurang	Barrio	Sorsogon (N)	252	13	01	123	36
Banuyao	Barrio	Iloilo	166	10	40	122	15
Bao	Barrio	Cebu	138	10	45	124	00
Bao	Barrio	Cotabato	150	7	25	124	40
Bao	Barrio	Leyte	186	11	05	124	30
Bao	Sitio	Camarines Sur	126	13	39	122	50
Baocaran	Sitio	Palawan (N)	228	10	50	121	00
Baobo	River	Davao	154	8	00	125	50
Baong	Mountain	Ifugao Subprovince	206	16	49	121	18
Baoy	Sitio	Camarines Sur	126	13	47	122	46
Baqui	Barrio	La Union	182	16	45	120	23
Barachac	Sitio	Lepanto Subprovince	210	17	08	120	42
Barambang	Mountain	Lanao	178	7	45	124	40
Barana	Sitio	Camarines Norte	122	13	59	123	05

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Barandal	Barrio	Laguna	174	14	11	121	08
Barangabang	Sitio	Abra	78	17	30	120	34
Barangin	Barrio	Isabela	170	16	55	121	50
Baraoas	Barrio	Ilocos Sur	162	17	17	120	26
Baraoas	Barrio	La Union	182	16	38	120	24
Baras	Municipality	Albay	86	13	40	124	22
Baras	Barrio	Lanao	178	7	40	124	00
Baras	Barrio	Rizal	240	14	31	121	16
Baras	Barrio	Samar	248	11	00	125	45
Barasanan	Barrio	Antique	90	10	30	122	00
Barat	Barrio	Ilocos Norte	158	18	31	120	36
Barbacan	Barrio	Palawan (N)	228	10	20	119	20
Barbarit	Barrio	Amburayan Subprovince	198	16	51	120	40
Barbasa	Municipality	Antique	90	11	10	122	00
Barcelona	Municipality	Sorsogon (N)	252	12	52	124	08
Barcelona	Barrio	Ilocos Norte	158	18	07	120	46
Barcelona	Sitio	Iloilo	166	10	35	122	40
Barceloneta	Barrio	Camarines Sur	126	13	46	123	03
Bari	Island	Cagayan	118	18	50	121	15
Bari	Barrio	Antique	90	10	45	122	00
Bariw	Sitio	Camarines Sur	126	13	37	122	51
Barili	Municipality	Cebu	138	10	05	123	30
Baringcucurong	Barrio	Amburayan Subprovince	198	16	58	120	29
Barion	Sitio	Bukidnon	110	7	35	124	50
Barira	Municipal district	Cotabato	150	7	25	124	15
Barisibis	Sitio	Abra	78	17	25	120	45
Bariw	Barrio	Albay	86	13	10	123	38
Bariak	Barrio	Zamboanga	278	7	00	122	10
Barlig	Barrio	Bontoc Subprovince	204	17	03	121	06
Baro	Barrio	Pangasinan	236	16	00	120	40
Baroa	Sitio	Lanao	178	8	00	123	50
Barobo	Barrio	Surigao	262	8	30	126	05
Baroc	Barrio	Iloilo	166	10	40	122	25
Barong	Barrio	Ilocos Norte	158	18	04	120	44
Baroro	River	La Union	182	16	43	120	20
Barotac Nuevo	Municipality	Iloilo	166	10	55	122	40
Barotac Viejo	Municipality	Iloilo	166	11	00	122	50
Barra	Sitio	Sorsogon (S)	252	12	04	123	38
Barrera	Port	Sorsogon (N)	252	12	32	123	22
Barrera	Port	Sorsogon (S)	252	12	32	123	22
Barrera	Barrio	Camarines Sur	126	13	50	122	56
Barrientos	Barrio	La Union	182	16	51	120	22
Barton	Sitio	Palawan (N)	228	10	20	119	10
Barton	Sitio	Palawan (S)	228	10	20	119	10
Barugo	Municipality	Leyte	186	11	20	124	45
Baruyan	Barrio	Mindoro	190	13	25	121	05
Baruyen	Barrio	Ilocos Norte	158	18	31	120	43
Baruyen	River	Ilocos Norte	158	18	29	120	41
Basa	Municipal district	Agusan	82	8	05	126	05
Basaan	Island	Bohol	106	10	13	124	20
Basak	Barrio	Bukidnon	110	7	55	125	00
Basak	Barrio	Oriental Negros	224	9	15	123	35
Basak	Barrio	Oriental Negros	224	10	15	123	20
Basak	Sitio	Cebu	138	10	40	123	55
Basak	Sitio	Cotabato	150	6	50	124	10
Basao	Barrio	Bontoc Subprovince	204	17	14	121	07
Basao	Sitio	Bontoc Subprovince	204	17	14	121	23
Basay	Barrio	Oriental Negros	224	9	25	122	40
Basbas	Island	Sulu	258	5	20	120	15
Basbas	Island	Sulu	258	6	00	120	30
Basca	Sitio	La Union	182	16	28	120	27
Bascaran	Barrio	Nueva Vizcaya	216	16	33	121	14
Basco	Capital	Batanes	98	20	28	121	59
Basco	Capital, Batanes	Philippine Islands	72	20			
Basdaco	Barrio	Bohol	106	9	47	123	47
Basdio	Barrio	Bohol	106	9	45	124	30
Basey	Municipality	Samar	248	11	20	125	05
Bashi	Channel	Philippine Islands	72	21		122	
Basiad	Bay	Camarines Norte	122	14	09	122	19
Basiad	Bay	Tayabas (S)	270	14	10	122	20
Basiad	Barrio	Camarines Norte	122	14	10	122	20
Basiao	Barrio	Bohol	106	10	04	124	33
Ba ig	Sitio	Amburayan Subprovince	198	16	49	120	31
Basigon	River	Camarines Norte	122	14	10	122	40
Basilan	Island	Zamboanga	278	6	35	122	00
Basilan	Island	Philippine Islands	72	7		122	
Basilan	Strait	Zamboanga	278	6	50	122	05
Basilan	Point	Zamboanga	278	6	40	121	50
Baslay	Island	Sorsogon (S)	252	11	56	124	04
Basot	Island	Camarines Sur	126	13	58	123	52

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Bassa	Point	Davao	154	7	10	125	40
Basud	Municipality	Camarines Norte	122	14	04	122	58
Basud	Barrio	Albay	86	13	17	123	29
Basud	Sitio	Camarines Sur	126	13	55	123	32
Basuk	Point	Zamboanga	278	7	50	122	05
BATAAN	Province	Bataan	94	14	40	120	25
Bataan	Province	Philippine Islands	72	15	20	120	25
Bataan	Barrio	Batangas	102	13	42	121	42
Batac	Municipality	Ilocos Norte	158	18	04	120	34
Batad	Barrio	Ifugao Subprovince	206	16	56	121	30
Batag	Island	Samar	248	12	40	125	05
Batakag	Sitio	Bontoc Subprovince	204	17	06	121	05
Batal	Barrio	Isabela	170	16	40	121	35
Batalan	River	Bataan	94	14	42	120	18
Batalay	Barrio	Albay	86	13	35	124	18
Batan	Island	Albay	86	13	15	124	00
Batan	Islands	Batanes	98	20	40	122	00
Batan	Island	Batanes	98	20	25	121	58
Batan	Island	Philippine Islands	72	20	25	122	00
Batan	Barrio	Albay	86	13	14	124	03
Batan	Barrio	Benguet Subprovince	202	16	38	120	46
Batan	Barrio	Capiz	130	11	35	122	30
Batan	Coal Mining Co.	Albay	86	13	17	124	02
Batanan	Sitio	Davao	154	6	10	125	30
BATANES	Province	Batanes	98	20	40	122	00
Batanes	Province	Philippine Islands	72	20	20	122	00
Batang	Barrio	Ifugao Subprovince	206	16	41	121	06
Batang	Barrio	Camarines Sur	126	13	33	123	03
Batang	Barrio	Bukidnon	110	8	05	124	45
Batang 1.º	Barrio	Pampanga	232	14	49	120	37
Batangan	Barrio	Tayabas (N)	270	14	45	121	35
Batangan	River	Mindoro	190	12	40	121	15
BATANGAS	Province	Batangas	102	14	00	121	00
Batangas	Province	Philippine Islands	72	14	14	121	00
Batangas	Capital	Batangas	102	13	45	121	04
Batangas	Capital, Batangas	Philippine Islands	72	14	14	121	00
Batangen	Barrio	Batangas	102	13	43	121	00
Batas	Barrio	Amburayan Subprovince	198	17	03	120	35
Batas	Island	Palawan (N)	228	11	10	119	40
Batasan	Island	Bohol	106	10	01	123	59
Batasan	Barrio	Bulacan	114	15	10	120	56
Batasan	Barrio	Mindoro	190	13	00	120	45
Batasan	Barrio	Pampanga	232	15	09	120	47
Batasan	Barrio	Pampanga	232	14	53	120	43
Batasan	Mountain	Rizal	240	14	47	121	18
Batbat	Barrio	Albay	86	13	03	123	28
Batbatan	Island	Antique	90	11	30	121	55
Batbato	Barrio	Amburayan Subprovince	198	16	55	120	33
Bateria	Barrio	Cebu	138	11	10	124	00
Batiano	Barrio	Romblon	244	12	25	122	00
Batikan	Barrio	Tayabas (N)	270	14	45	121	40
Batinal	Barrio	Bukidnon	110	8	25	124	35
Batsuan	Sitio	Cotabato	150	7	10	124	35
Bato	Lake	Albay	86	13	19	123	22
Bato	Lake	Camarines Sur	126	13	19	123	21
Bato	Municipality	Albay	86	13	37	124	18
Bato	Municipality	Camarines Sur	126	13	21	123	22
Bato	Municipality	Leyte	186	10	20	124	45
Bato	Barrio	Capiz	130	11	35	122	48
Bato	Barrio	Cebu	138	10	20	123	35
Bato	Barrio	Ilocos Sur	162	17	20	120	30
Bato	Barrio	La Union	182	16	32	120	24
Bato	Barrio	Zambales	274	15	24	119	55
Bato	Sitio	Davao	154	7	30	126	00
Bato	Sitio	Davao	154	5	50	125	30
Bato	Sitio	Palawan (N)	228	10	50	119	30
Bato	Point	Davao	154	6	50	126	00
Bato	River	Albay	86	13	40	124	16
Batobalani	Barrio	Camarines Norte	122	14	15	122	45
Batobato	Barrio	Palawan (N)	228	10	50	121	00
Batohon Daco	Barrio	Oriental Negros	224	9	10	123	10
Batoliniao	Point	Cagayan	118	18	25	122	05
Batonan	Barrio	Antique	90	11	20	122	05
Batonan	Barrio	Surigao	262	8	25	126	10
Battung	Rancheria	Apayao Subprovince	200	17	48	121	10
Batu	Barrio	Zamboanga	278	6	40	122	10
Batuan	Municipality	Bohol	106	9	47	124	09
Batuan	Barrio	Sorsogon (N)	252	12	25	123	47
Batuan	Barrio	Sorsogon (S)	252	12	25	123	47

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Batuan	Sitio	Cavite	134	14	13	120	37
Batuanan	Barrio	Bohol	106	9	53	124	27
Batuang	Barrio	Benguet Subprovince	202	16	21	120	40
Batuhan	Sitio	Sorsogon (N)	252	12	23	123	35
Batuhan	Sitio	Sorsogon (S)	252	12	23	123	35
Batulao	Mountain	Batangas	102	14	03	120	43
Batung	Mountain	Bukidnon	110	7	40	125	10
Bauan	Municipality	Batangas	102	13	48	121	00
Bauan	Barrio	Cagayan	118	17	45	121	40
Bauang	Municipality	La Union	182	16	32	120	20
Bauang	Point	La Union	182	16	31	120	19
Bauang	River	La Union	182	16	31	120	22
Bauguen	Municipality	Ilocos Sur	162	17	09	120	33
Bauko	Township	Lepanto Subprovince	210	16	59	120	52
Bauko	Township	Mountain Province	196	17	00	120	50
Baugon	Municipal district	Bukidnon	110	8	20	124	40
Bautista	Municipality	Pangasinan	236	15	49	120	28
Bautista	Barrio	Albay	86	13	02	123	35
Bautista	Barrio	La Union	182	16	27	120	20
Bawa	Barrio	Tarlac	266	15	36	120	37
Baway	Barrio	Ilocos Sur	162	17	36	120	28
Bay, Laguna de	Lake	Laguna	174	14	20	121	15
Bay, Laguna de	Lake	Rizal	240	14	20	121	10
Bay	Islands	Laguna	174	14	14	121	17
Bay	Islands	Palawan (N)	228	10	40	119	20
Bay	Municipality	Laguna	174	14	11	121	17
Bay	Barrio	Abrá	78	17	44	120	47
Bay	Sitio	Palawan (S)	228	9	30	118	40
Bayabao	Barrio	Lanao	178	7	55	123	50
Bayabas	Rancheria	Nueva Vizcaya	216	15	50	121	31
Bayabas	Barrio	Agusan	82	9	10	125	35
Bayabas	Barrio	Bulacan	114	14	57	121	06
Bayabas	Barrio	Benguet Subprovince	202	16	29	120	29
Bayabas	Barrio	Davao	154	7	00	125	20
Bayabas	Barrio	Misamis	194	8	30	124	35
Bayabas	Sitio	Leyte	186	11	00	124	55
Bayabas	Sitio	Nueva Ecija	212	15	44	120	47
Bayabas	Mountain	Camarines Norte	122	14	01	122	44
Bayag	Township	Apayao Subprovince	200	18	16	121	02
Bayag	Township	Mountain Province	196	18	15	121	05
Bayambang	Municipality	Pangasinan	236	15	49	120	27
Bayambang	Barrio	Pangasinan	236	15	53	119	54
Bayanan	Barrio	Rizal	240	14	25	121	03
Bayanbayan	Barrio	Rizal	240	14	39	121	06
Bayandati	Barrio	Bataan	94	14	40	120	17
Bayang	Municipal district	Lanao	178	7	50	124	15
Bayang	Barrio	Agusan	82	9	05	125	35
Bayang	Barrio	Iloilo	166	11	00	122	55
Bayang	Point	Iloilo	166	11	00	122	55
Bayanga	Barrio	Bukidnon	110	8	20	124	35
Bayanluma	Barrio	Cavite	134	14	25	120	57
Bayansubay	Barrio	Rizal	240	14	24	121	14
Bayas	Island	Iloilo	166	11	25	123	10
Bayauajan	Barrio	Bohol	106	9	46	124	04
Baybay	Municipality	Leyte	186	10	40	124	50
Baybay	Barrio	Bulacan	114	14	57	121	02
Baybay	Barrio	Camarines Sur	126	13	43	123	34
Baybay	Barrio	Capiz	130	11	44	122	19
Baybay	Barrio	La Union	182	16	18	120	21
Baybayading	Barrio	Ilocos Sur	162	17	08	120	33
Baybayaos	Barrio	Tarlac	266	15	38	120	23
Baybayin	Barrio	Batangas	102	13	49	121	16
Baybayog	Barrio	Cagayan	118	17	55	121	40
Baye	Barrio	Capiz	130	11	23	122	35
Bayil	Sitio	Kalinga Subprovince	208	17	13	121	14
Baylo	Municipal district	Agusan	82	8	30	125	40
Bayo	Barrio	Antique	90	10	30	121	55
Bayo	Barrio	Cagayan	118	17	45	121	45
Bayoccan	Sitio	Ifugao Subprovince	206	16	38	121	40
Bayog	Barrio	Laguna	174	14	12	121	14
Bayog	Sitio	Albay	86	13	04	123	27
Bayog	Sitio	Bontoc Subprovince	204	17	13	121	19
Bayombong	Capital	Nueva Vizcaya	216	16	30	121	09
Bayombong	Capital, Nueva Vizcaya	Philippine Islands	72	16		121	
Bayong	Sitio	Ifugao Subprovince	206	16	52	121	00
Bayuan	River	Oriental Negros	224	9	25	122	55
Bayubud	Barrio	Batangas	102	14	03	120	44
Bayucain	Barrio	Laguna	174	14	10	121	27
Bayug	Barrio	Isabela	170	16	40	121	30

Name.	Feature	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Bayug	Mountains.	Bukidnon	110	8	20	124	30
Bayug	Mountains.	Lanao	178	8	20	124	30
Bayug	River	Lanao	178	8	20	124	25
Bayugao	Barrio	Ilocos Sur	162	17	04	120	27
Bayugo	Sitio.	Rizal	240	14	20	121	18
Bayul	Sitio.	Bontoc Subprovince.	204	17	12	121	16
Bayunan	Barrio	Iloilo	166	10	35	122	10
Bayuyungan.	Barrio	Batangas.	102	14	03	120	56
Bazar	Barrio	Abra.	78	17	28	120	49
Bebe.	Barrio	Pampanga.	232	14	52	120	42
Beherron	Barrio	Camarines Sur	126	13	32	123	09
Becerril	Barrio	Cebu	138	9	40	123	25
Beccues.	Barrio	Amburayan Subprovince	198	16	59	120	27
Belen	Barrio	Iloilo	166	11	00	122	45
Belison.	Sitio.	Antique	90	10	50	121	55
Bellang	Sitio.	Lepanto Subprovince	210	16	48	120	41
Benagalet	Point	Batangas.	102	13	43	120	52
BENGUET.	Subprovince	Benguet Subprovince	202	16	30	120	40
Benguet.	Subprovince	Mountain Province	196	16	30	120	40
Benguet	Road	La Union	182	16	16	120	34
Benihagan.	Sitio.	Romb'on	244	12	05	121	55
Benituan	River	Tarlac	266	15	38	120	43
Benneng	River	Benguet Subprovince	202	16	25	120	47
Bentigan	Barrio	Nueva Ecija	212	15	45	120	39
Beri	Barrio	Samar	248	11	35	125	05
Besalan	Barrio	Ilocos Sur	162	17	06	120	29
Besao	Township	Lepanto Subprovince	210	17	05	120	29
Besao	Township	Mountain Province	196	17	05	120	52
Bessang	Barrio	Ilocos Sur	162	17	18	120	32
Bessie	Island.	Palawan (S)	228	9	00	118	10
Betis.	Barrio	Pampanga.	232	14	59	120	39
Biabas	Barrio	Bohol	106	9	58	124	32
Biabas	Barrio	Bohol	106	9	49	124	32
Biak na bato.	Sitio.	Bulacan	114	15	08	124	24
Biak na bato	Barrio	Leyte	186	10	05	125	00
Biangué.	Barrio	Zambales.	274	15	16	120	08
Biao	Barrio	Davao	154	7	20	125	30
Biao	Sitio.	Ilocos Sur	162	17	23	120	27
Biasing.	Barrio	Palawan (N).	228	10	40	119	50
Biasong	Barrio	Leyte	186	11	00	124	30
Bical	Sitio.	Nueva Ecija	212	15	42	120	54
Biclat.	Sitio.	Bulacan	114	15	07	120	59
Bicobian	Port	Isabela.	170	17	15	122	57
Bicol.	River	Camarines Sur	125	13	44	123	07
Bicutan	Barrio	Rizal	240	14	30	121	04
Bidduang.	Barrio	Cagayan	118	18	30	121	20
Biding	Barrio	Ilocos Norte	158	18	03	120	41
Biga	Barrio	Laguna	174	14	09	121	08
Bigaa	Municipality.	Bulacan	114	14	49	120	55
Bigaa	Barrio	Albay	86	13	12	123	45
Bigaa	Barrio	Antique	90	11	15	122	05
Bigaa	Barrio	Antique	90	10	50	122	00
Bigaa	Barrio	Laguna	174	14	18	121	08
Bigaan	Sitio.	Camarines Sur	126	13	50	122	59
Bigbiga	Barrio	Ilocos Sur	162	17	19	120	26
Big Lun.	River	Cotabato.	150	6	00	125	20
Bignay	Barrio	Batangas.	102	13	42	121	14
Bignay	Barrio	Tayabas (S)	270	13	50	121	30
Biguin	Barrio	Sorsogon (N)	252	12	42	123	54
Bikal	Barrio	Camarines Sur	126	13	48	123	51
Bikal	Barrio	Camarines Sur	126	13	43	122	59
Bikigan	Barrio	Bontoc Subprovince.	204	17	11	121	02
Bila	Sitio.	Cotabato.	150	6	00	125	15
Bilad	Barrio	Tarlac	266	15	44	120	26
Bilan	Sitio.	Cotabato.	150	6	45	124	55
Bilanbilangan.	Island.	Bohol.	106	10	15	124	27
Bilangbilang	Barrio	Zamboanga.	278	6	55	122	10
Bilao	Barrio	Capiz	130	11	29	122	34
Bilar.	Municipality.	Bohol.	106	9	43	124	06
Bilat.	Sitio.	Sorsogon (S).	252	12	10	123	17
Bilatan.	Island.	Sulu	258	5	00	120	00
Bili	Sitio.	Ifugao Subprovince.	206	16	39	121	06
Bilibinwang.	Barrio	Batangas.	102	13	59	120	57
Bilibiran	Barrio	Rizal	240	14	30	121	10
Bilic	Sitio.	Nueva Ecija.	212	15	39	121	09
Bilig.	Sitio.	Amburayan Subprovince	198	16	50	120	36
Biliran	Island.	Leyte	186	11	35	124	30
Biliran	Municipality.	Leyte	186	11	30	124	30
Bilis	Barrio	Benguet Subprovince.	202	16	31	120	29
Billanguan.	Island.	Sulu	258	5	40	120	15

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Bilong	Sitio	Ifugao Subprovince	206	16	48	121	17
Bilulo	Barrio	Bataan	94	14	37	120	33
Biluso	Barrio	Cavite	134	14	14	120	57
Bimmanga	Barrio	Amburayan Subprovince	198	16	57	120	26
Bimotubot	Barrio	La Union	182	16	35	120	25
Binabag	Barrio	Cebu	138	11	05	124	00
Binabalian	Barrio	Pangasinan	236	16	25	119	56
Binabalian	Barrio	Zambales	274	15	36	119	55
Binaca	Mountain	Cotabato	150	7	00	124	05
Binacayan	Barrio	Cavite	134	14	27	120	55
Binacud	Barrio	Ilocos Sur	162	17	53	120	30
Binagbag	Barrio	Bulacan	114	14	57	121	02
Binahaan	Barrio	Camarines Sur	126	13	49	122	45
Binahaan	Barrio	Camarines Sur	126	13	42	122	52
Binahaan	Barrio	Tayabas (S)	270	14	00	121	45
Binahian	Barrio	Tayabas (S)	270	13	50	122	20
Binalayan	Barrio	Leyte	186	11	45	124	20
Binalabagan	Municipality	Occidental Negros	220	10	10	122	50
Binalabagan	River	Occidental Negros	220	10	15	123	00
Binalian	Barrio	Nueva Vizcaya	216	16	26	120	58
Binalonan	Municipality	Pangasinan	236	16	03	120	36
Binan	Municipality	Laguna	174	14	20	121	05
Binang	Barrio	Laguna	174	14	15	121	25
Binanga	Port	Bataan	94	14	44	120	16
Binangonan	Municipality	Rizal	240	14	28	121	11
Binansagan	Sitio	Kalinga Subprovince	208	17	34	121	23
Binarena	Point	Mindoro	190	13	15	120	30
Binatagan	Barrio	Camarines Norte	122	14	02	122	54
Binatangan	Sitio	Nueva Vizcaya	216	16	18	121	28
Binauangan	Barrio	Camarines Norte	122	14	18	122	25
Binay	Barrio	Tayabas (S)	270	13	30	122	35
Bincay	Sitio	Leyte	186	10	55	125	00
Binday	Barrio	Pangasinan	236	16	08	120	27
Bineng	Barrio	Benguet Subprovince	202	16	30	120	34
Binga	Sitio	Palawan (N)	228	10	40	119	20
Bingao	Barrio	Ilocos Norte	158	18	09	120	35
Bingao	Barrio	Ilocos Norte	158	17	56	120	41
Binhagan	Sitio	Ifugao Subprovince	206	16	49	121	12
Binhagan	Mountain	Ifugao Subprovince	206	16	48	121	11
Binian	Barrio	Zamboanga	278	7	55	123	20
Binibitinan	Sitio	Tayabas (N)	270	14	55	121	50
Binictican	River	Bataan	94	14	49	120	20
Binicuil	Barrio	Occidental Negros	220	10	00	122	50
Binirayan	Barrio	Batanga	102	14	05	120	57
Binlod	Barrio	Cebu	138	9	55	123	35
Binnaca	Mountain	Amburayan Subprovince	198	16	41	120	36
Binnaca	Mountain	Benguet Subprovince	202	16	40	120	36
Binnmaley	Municipality	Pangasinan	236	16	02	120	16
Binogsakan	Barrio	Abay	86	13	12	123	34
Binondo	District	City of Manila	146	14	36	120	58
Binongaan	Barrio	Romblon	244	12	30	122	05
Binongan	River	Abra	78	17	45	120	52
Binoni	Barrio	Misamis	194	9	10	124	50
Binoyoan	Barrio	Camarines Sur	126	13	25	123	18
Bintacan	Sitio	Isabela	170	17	10	122	00
Bintacan	River	Isabela	170	17	10	122	05
Bintauan	Barrio	Nueva Vizcaya	216	16	35	121	11
Bintog	Barrio	Bulacan	114	14	54	120	54
Bintuan	Barrio	Palawan (N)	228	12	00	120	00
Binuangan	Barrio	Bulacan	114	14	43	120	54
Binuangan	Sitio	Bataan	94	14	31	120	23
Binuangan	Sitio	Misamis	194	8	55	124	45
Binuangan	River	Bataan	94	14	31	120	25
Binubusan	Barrio	Batanga	102	13	58	120	38
Binuhangan	Barrio	Leyte	186	11	40	124	35
Binulasan	Barrio	Tayabas (N)	270	14	45	121	40
Binulauan	Mountain	Kalinga Subprovince	208	17	18	121	05
Binuluangan	Island	Iloilo	166	11	30	123	10
Binungan	Sitio	Cotabato	150	7	30	125	15
Binuni	Point	Lanao	178	8	10	124	00
Binuntuan	Barrio	Capiz	130	11	25	122	53
Binurun	Point	Abay	86	13	40	124	25
Binusuran	Barrio	Abra	78	17	36	120	55
Biocos	Barrio	Oriental Negros	224	9	30	123	10
Birauan	Barrio	Samar	248	11	40	124	45
Biri	Island	Samar	248	12	40	124	20
Birook	Sitio	Nueva Vizcaya	216	16	08	121	17
Bisal	Mountain	Bulacan	114	15	15	121	08
Bisangol	Barrio	Ilocos Sur	162	17	15	120	29
Bisliang Munti	Sitio	Tayabas (N)	270	14	40	122	00

Name.	Feature.	Map.	Fac- ing page.	Lati- tude.		Longi- tude.	
				o	'	o	'
Bislig	Bay	Surigao	262	8	15	126	20
Bislig	Barrio	Surigao	262	8	15	126	20
Bisucay	Island.	Palawan (N)	228	10	50	121	00
Bitá	Sitio.	Kalinga Subprovince.	208	17	26	121	30
Bitadton	Barrio	Antique.	90	11	30	122	05
Bitag	Sitio	La Union.	182	16	24	120	27
Bitalag.	Barrio	Amburayan Subprovince.	198	16	58	120	28
Bitalag.	Barrio	La Union.	182	16	45	120	22
Bitan	Mountain	Lanao.	178	7	30	124	10
Bitanagan	River	Davao	154	7	00	126	10
Bitao	Barrio	Bukidnon	110	8	10	124	35
Bitao	Barrio	Oriental Negros	224	9	20	123	35
Bitao	Barrio	Surigao	262	8	50	126	20
Bitao	Sitio.	Surigao	262	9	05	125	55
Bitao	Mountain	Romblon	244	12	30	122	05
Bitao	Barrio	Laguna	174	14	08	121	31
Bitaugan	Point	Davao	154	6	50	126	00
Bitik.	Barrio	Tayabas (S)	270	13	30	122	00
Bitinan	Island.	Sulu.	258	6	05	121	30
Bitlingan.	Sitio.	Lepanto Subprovince.	210	16	56	120	42
Bito	Lake.	Leyte	186	10	45	125	00
Bito	Barrio	Camarines Sur	126	13	58	123	15
Bito	Barrio	Leyte	186	10	45	125	00
Bito	Sitio.	Amburayan Subprovince	198	17	00	120	31
Bito	Sitio.	Amburayan Subprovince	198	16	42	120	30
Bito	Sitio.	Lepanto Subprovince.	210	17	04	120	40
Bito	Sitio.	Lepanto Subprovince.	210	16	52	120	44
Biton	Sitio.	Sorsogon (N)	252	12	45	123	51
Bitoon	Barrio	Capiz.	130	11	19	122	40
Bitoon	Barrio	Cebu	138	10	05	123	25
Bitu	Barrio	Cotabato.	150	7	10	124	20
Bituca	Sitio.	Batangas.	102	14	02	121	07
Bitwagan.	Barrio	Bontoc Subprovince	204	17	09	121	04
Biwag.	Rancheria	Apayao Subprovince.	200	17	59	121	06
Biyasong	Barrio	Leyte.	186	10	20	125	15
Biyong	Barrio	Albay.	86	13	46	124	24
Black Rock.	Islet	Palawan (N)	228	8	50	119	50
Black Rock.	Pass	Sorsogon (S)	252	12	18	123	49
Black Rock.	Islet	Sorsogon (S)	252	12	17	123	49
Bianca	Point	Zamboanga.	278	8	30	123	00
Bianca Aurora	Barrio	Samar	248	12	00	124	55
Bianco	Barrio	Bukidnon	110	8	45	124	50
Blik	Mountain	Cotabato	150	7	00	124	15
Blik	Mountain	Relief.	72	7		124	
Boa	Sitio.	Surigao	262	10	05	125	40
Boan	Island.	Philippine Islands	72	6		118	
Boac	Municipality.	Tayabas (S)	270	13	25	121	50
Boayan	Island.	Palawan (N)	228	10	30	119	10
Boayan	Island.	Palawan (S)	228	10	30	119	10
Bobon	Municipality.	Samar	248	12	30	124	35
Bobon	Barrio	Ilocos Norte	158	18	30	120	35
Bobon	Barrio	Leyte.	186	10	15	125	15
Bobon	Barrio	Samar	248	11	05	125	40
Bobonan	Barrio	Pangasinan.	236	16	09	120	31
Bobonot	Barrio	Pangasinan	236	16	01	119	52
Bobontugan	Barrio	Misamis.	194	8	40	124	45
Boca Chica	Barrio	Sorsogon (N)	352	13	07	122	57
Boca Engaño	Sitio.	Sorsogon (N)	252	12	47	123	19
Bocal	Sitio.	Camarines Norte	122	14	09	122	51
Bocaeu.	Municipality.	Bulacan.	114	14	48	120	56
Bocon.	Barrio	Albay.	86	13	52	124	08
Bogtol	Barrio	Bohol	106	9	47	123	59
Bogo.	Municipality.	Cebu	138	11	05	124	00
Bogo.	Barrio	Cebu	138	9	50	123	35
Bogtong.	Barrio	Sorsogon (N)	252	12	52	124	06
Bogtong.	Barrio	Sorsogon (S)	252	11	52	124	05
Bogtong.	Island.	Sorsogon (S)	252	11	52	124	05
Bogui	Sitio.	Bontoc Subprovince	204	17	16	121	21
Bohan	Island.	Sulu.	258	7	05	118	25
Boho	Barrio	Cebu	138	10	10	123	30
BOHOL	Province.	Bohol.	106	10	00	124	00
Bohol.	Island.	Philippine Islands	72	10		124	
Bohol.	Strait.	Bohol.	106	10	00	123	45
Bohol.	Strait.	Cebu	138	9	50	123	40
Bohol.	Barrio	Palawan (N)	228	10	30	119	50
Bojeador	Cape.	Ilocos Norte	158	18	30	120	34
Bojeador	Cape.	Philippine Islands.	72	19		121	
Bojelebung	Constabulary Camp	Zamboanga.	278	6	30	122	10

Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
				° ' "	° ' "
Bokiawan	Barrio	Ifugao Subprovince	206	16 49	121 03
Bokod	Township	Benguet Subprovince	202	16 30	120 50
Bokod	Township	Mountain Province	196	16 30	120 50
Bokos	Barrio	Ifugao Subprovince	206	16 56	121 01
Bolanon	Barrio	Occidental Negros	220	10 55	123 30
Bolaabalite	Barrio	Camarines Sur	126	13 48	123 21
Bolauan	Mountain	Nueva Vizcaya	216	16 15	121 55
Bolbog	Sitio	Mindoro	190	13 15	121 10
Bolbok	Municipality	Batangas	102	13 50	121 23
Bolbolo	Barrio	Abra	78	17 22	120 36
Bolinao	Cape	Pangasinan	236	16 22	119 49
Bolinao	Cape	Philippine Islands	72	16	120
Bolinao	Municipality	Pangasinan	236	16 23	119 53
Bolinao	Sitio	Ilocos Norte	158	17 52	120 34
Bolinauan	Barrio	Cebu	138	10 05	123 40
Boliney	Municipal district	Abra	78	17 24	120 48
Bolirao	Barrio	Leyte	186	11 05	124 55
Bolisong	Barrio	Oriental Negros	224	9 40	123 10
Bolitic	Barrio	Zambales	274	15 43	119 54
Bolo	Barrio	Albay	86	13 28	123 40
Bolo	Barrio	Batangas	102	13 47	120 59
Bolo	Barrio	Iloilo	166	10 55	122 25
Bolo	Barrio	Iloilo	166	11 30	123 05
Bolo	Barrio	Tarlac	266	15 34	120 40
Bolobolo	Barrio	Agusan	82	9 25	125 30
Bolocboloc	Barrio	Oriental Negros	224	9 20	123 15
Bolod	Islands	Sulu	258	6 15	121 40
Bolod	Barrio	Albay	86	13 09	123 38
Bolodan	Sitio	Camarines Sur	126	13 49	123 26
Bolog	Barrio	Ifugao Subprovince	206	16 44	121 09
Bolog	River	Ifugao Subprovince	206	16 40	121 11
Bololo	Barrio	Albay	86	13 09	123 32
Bolong	Barrio	Nueva Vizcaya	216	16 08	120 56
Bolong	Sitio	Zamboanga	278	7 05	122 15
Bolos	Barrio	Sorsogon (N)	252	12 46	123 59
Boljo-on	Municipality	Cebu	138	9 40	123 30
Bolton	Barrio	Davao	154	6 40	125 20
Bonabona	Sitio	Palawan (S)	228	8 40	117 30
Bona Cerca	Barrio	Cavite	134	14 11	120 53
Bonaffa	Sitio	Bontoc Subprovince	204	17 12	121 21
Bonayan	Barrio	Lepanto Subprovince	210	16 59	120 55
Bonbon	Barrio	Bohol	106	9 40	124 04
Bonbon	Barrio	Misamis	194	9 10	124 35
Bonbon	Barrio	Sorsogon (S)	252	12 16	123 29
Bonbon	Sitio	Antique	90	11 50	121 30
Bonbon	Sitio	Cebu	138	10 15	123 35
Bonbon	Sitio	Occidental Negros	220	10 15	123 05
Bonbonon	Barrio	Bohol	106	10 08	124 35
Bonbonon	Barrio	Oriental Negros	224	9 05	123 10
Boncol	Barrio	Laguna	174	14 09	121 26
Bondoc	Peninsula	Tayabas (S)	270	13 30	122 30
Bondoc	Point	Tayabas (S)	270	13 10	122 35
Bondoc	Sitio	Tayabas (S)	270	13 20	122 30
Bone	Barrio	Nueva Vizcaya	216	16 15	121 00
Bonfal	Barrio	Nueva Vizcaya	216	16 31	121 10
Bonga	Island	Rizal	240	14 19	121 15
Bonga	Barrio	Leyte	186	11 30	124 35
Bonga	Barrio	Samar	248	11 55	124 45
Bonga	Barrio	Samar	248	11 50	125 00
Bonga	Barrio	Sorsogon (N)	252	12 55	123 50
Bongabo	Sitio	Bontoc Subprovince	204	17 11	121 20
Bongabon	Municipality	Nueva Ecija	212	15 38	121 08
Bongabon	Barrio	Mindoro	190	12 45	121 30
Bongabong	Sitio	Ifugao Subprovince	206	16 42	121 04
Bongabong	River	Mindoro	190	12 40	121 25
Bonga Mayor	Barrio	Bulacan	114	14 57	120 57
Bongbong	Sitio	Rizal	240	14 24	121 13
Bongcoacan	Barrio	Bohol	106	9 36	124 08
Bonglio	Barrio	Samar	248	12 30	125 00
Bongliw	Barrio	Tayabas (S)	270	13 25	122 05
Bongo	Island	Cotabato	150	7 20	124 00
Bongro	Barrio	Ilocos Sur	162	17 33	120 26
Bonleo	Bay	Tayabas (N)	270	15 05	121 55
Bonot	Sitio	Surigao	262	9 25	125 55
BONTOC	Subprovince	Bontoc Subprovince	204	17 10	121 15
Bontoc	Subprovince	Mountain Province	196	17 10	121 15
Bontoc	Capital	Mountain Province	196	17 05	121 00
Bontoc	Capital Mountain Province	Philippine Islands	72	17	121

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Bontoc.....	Capital.....	Bontoc Subprovince.....	204	17	06	120	59
Bontoc.....	Barrio.....	Leyte.....	186	10	20	124	55
Bonuan Gueset.....	Barrio.....	Pangasinan.....	236	16	05	120	20
Bool.....	Barrio.....	Bohol.....	106	9	38	123	53
Boor.....	Sitio.....	Rizal.....	240	14	22	121	14
Boot.....	Barrio.....	Batangas.....	102	14	03	121	05
Borabod.....	Barrio.....	Camarines Sur.....	126	13	46	123	32
Borabod.....	Barrio.....	Camarines Sur.....	126	13	42	123	16
Borak.....	Sitio.....	Samar.....	248	11	20	125	25
Borbon.....	Municipality.....	Cebu.....	138	10	50	124	00
Borbon.....	Municipal district.....	Agusan.....	82	8	30	125	55
Borobor.....	Barrio.....	Ilocos Sur.....	162	17	39	120	25
Boroc.....	Barrio.....	Leyte.....	186	11	00	124	40
Borocay.....	Island.....	Capiz.....	130	11	59	121	55
Borol.....	Barrio.....	Bulacan.....	114	14	50	120	54
Borong.....	Sitio.....	Cotabato.....	150	6	20	124	10
Borongan.....	Port.....	Samar.....	248	11	35	125	30
Borongan.....	Municipality.....	Samar.....	248	11	35	125	25
Borseth.....	Barrio.....	Leyte.....	186	11	15	124	50
Bosoboso.....	Barrio.....	Rizal.....	240	14	38	121	14
Boston.....	Barrio.....	Davao.....	154	7	50	126	20
Bota.....	Barrio.....	Tayabas (S).....	270	13	55	122	05
Botiguis.....	Island.....	Cebu.....	138	11	05	123	40
Botiguis.....	Barrio.....	Cebu.....	138	11	05	123	40
Botocan.....	Barrio.....	Laguna.....	174	14	09	121	29
Botol.....	Barrio.....	Ilocos Sur.....	162	17	15	120	25
Botolan.....	Point.....	Zambales.....	274	15	14	120	00
Botolan.....	Municipality.....	Zambales.....	274	15	17	120	01
Botolan.....	Mountain.....	Zambales.....	274	15	14	120	02
Botong.....	Barrio.....	Batangas.....	102	13	52	120	55
Bowen.....	Island.....	Palawan (S).....	228	8	20	117	20
Bua.....	Sitio.....	Benguet Subprovince.....	202	16	24	120	39
Buabua.....	Barrio.....	Samar.....	248	11	05	125	40
Buad.....	Island.....	Samar.....	248	11	40	124	50
Buagan.....	Mountain.....	Abra.....	78	17	31	121	02
Buagan.....	Mountain.....	Kalinga Subprovince.....	208	17	31	121	02
Bual.....	Barrio.....	Cotabato.....	150	7	10	124	30
Buan.....	Barrio.....	Davao.....	154	7	40	125	50
Buanoy.....	Barrio.....	Cebu.....	138	10	30	123	40
Buao.....	Barrio.....	Samar.....	248	12	05	124	50
Buaya.....	Barrio.....	Kalinga Subprovince.....	208	17	34	121	14
Buaya.....	Barrio.....	Samar.....	248	11	35	125	00
Buaya.....	River.....	Ilocos Sur.....	162	17	07	120	31
Buayaan.....	Barrio.....	Lanao.....	178	8	00	124	20
Buayan.....	Municipal district.....	Cotabato.....	150	6	00	125	15
Buayan.....	River.....	Cotabato.....	150	6	10	125	15
Bubu.....	Island.....	Zamboanga.....	278	7	05	122	15
Bubuan.....	Island.....	Sulu.....	258	6	10	121	00
Bubuan.....	Island.....	Sulu.....	258	5	25	120	35
Bubuan.....	Island.....	Zamboanga.....	278	6	20	121	55
Bubug.....	Point.....	Mindoro.....	190	12	20	121	00
Bubug.....	Sitio.....	Apayao Subprovince.....	200	17	43	121	15
Bubug.....	Sitio.....	Occidental Negros.....	220	10	45	123	00
Bubulo.....	Barrio.....	Bulacan.....	114	15	06	121	00
Bubuyan.....	Barrio.....	Laguna.....	174	14	10	121	06
Bucao.....	Barrio.....	Amburayan Subprovince.....	198	16	40	120	25
Bucao.....	Barrio.....	Tayabas (N).....	270	14	40	121	55
Bucao.....	River.....	Zambales.....	274	15	16	120	05
Bucari.....	Barrio.....	Iloilo.....	166	10	50	122	20
Bucas Grande.....	Island.....	Surigao.....	262	9	40	125	55
Bucay.....	Municipality.....	Abra.....	78	17	32	120	43
Bucaya.....	Barrio.....	Iloilo.....	166	10	35	122	05
Bucloc.....	Municipal district.....	Abra.....	78	17	26	120	52
Bucloc.....	River.....	Abra.....	78	17	28	120	56
Bucnit.....	Sitio.....	Lepanto Subprovince.....	210	17	05	120	43
Bucutua.....	Island.....	Sulu.....	258	6	10	121	50
Budlanan.....	Island.....	Bohol.....	106	9	57	123	55
Buduan.....	Barrio.....	Ilocos Norte.....	158	18	29	120	39
Buduk.....	Sitio.....	Lanao.....	178	8	00	123	55
Buenavista.....	Municipality.....	Iloilo.....	166	10	40	122	40
Buenavista.....	Municipality.....	Tayabas (S).....	270	13	15	121	55
Buenavista.....	Barrio.....	Agusan.....	82	9	00	125	25
Buenavista.....	Barrio.....	Albay.....	86	13	13	124	10
Buenavista.....	Barrio.....	Albay.....	86	13	03	123	48
Buenavista.....	Barrio.....	Albay.....	86	13	00	123	29
Buenavista.....	Barrio.....	Antique.....	90	11	25	122	05
Buenavista.....	Barrio.....	Bohol.....	106	9	52	124	14
Buenavista.....	Barrio.....	Camarines Sur.....	126	13	52	123	19
Buenavista.....	Barrio.....	Cavite.....	134	14	19	120	54
Buenavista.....	Barrio.....	Leyte.....	186	11	10	124	40

Name.	Feature.	Map.	Facing page	Latitude.		Longitude.	
				°	'	°	'
Buenavista	Barrio	Leyte	186	10	45	125	00
Buenavista	Barrio	Palawan (S)	228	10	00	118	50
Buenavista	Barrio	Samar	248	12	00	124	55
Buenavista	Barrio	Sorsogon (N)	252	13	03	124	06
Buenavista	Barrio	Surigao	262	9	55	125	30
Buenavista	Barrio	Sorsogon (N)	252	12	54	124	07
Buenavista	Barrio	Sorsogon (N)	252	12	27	123	42
Buenavista	Barrio	Sorsogon (S)	252	12	27	123	42
Buenavista	Barrio	Surigao	262	9	05	126	10
Buenavista	Barrio	Tarlac	266	15	37	120	40
Buenavista	Sitio	Antique	90	12	00	121	25
Buenavista	Sitio	Nueva Ecija	212	15	41	120	54
Buenavista	Sitio	Romblon	244	12	20	121	55
Buenavista	Sitio	Romblon	244	12	05	121	55
Buenavista Norte	Barrio	Bohol	106	10	05	124	08
Buenavista Sur	Barrio	Bohol	106	10	04	124	08
Bued	Barrio	Nueva Ecija	212	15	49	120	39
Bued	Barrio	Pangasinan	236	16	01	120	23
Bued	River	Benguet Subprovince	202	16	16	120	33
Bued	River	Mountain Province	196	16	15	120	30
Buenlag	Barrio	Pangasinan	236	16	00	120	22
Bueno	Barrio	Pangasinan	236	15	47	120	18
Buenos Aires	Barrio	Bohol	105	9	48	124	10
Buenos Aires	Barrio	Camarines Sur	126	13	54	123	18
Buensuceso	Barrio	Pampanga	232	15	12	120	40
Buensuceso	Barrio	Pampanga	232	15	08	120	42
Buer	Barrio	Pangasinan	236	15	51	120	16
Buga	Barrio	Albay	86	13	17	123	22
Bugabos	River	Agusan	82	8	50	125	30
Bugabuga	Sitio	Leyte	186	11	10	124	25
Bugadog	Sitio	Amburayan Subprovince	198	16	41	120	29
Bugang	Barrio	Bohol	106	9	45	124	08
Bugao	Sitio	Albay	86	14	00	124	16
Bugayoy	Sitio	Ifugao Subprovince	205	16	48	121	03
Bugasan	Barrio	Samar	248	11	45	125	30
Bugasan	Municipal district	Cotabato	150	7	25	124	15
Bugasong	Municipality	Antique	90	11	05	122	05
Bugawas	Sitio	Benguet Subprovince	202	16	15	120	42
Bugho	Barrio	Bohol	106	9	48	123	51
Bugho	Barrio	Bohol	106	9	39	124	05
Bugho	Barrio	Cebu	138	10	10	123	40
Bugho	Barrio	Leyte	186	10	45	124	55
Buglit	Barrio	Tarlac	266	15	31	120	37
Bugjo	Barrio	Leyte	186	11	15	124	50
Bugkaon	Barrio	Bukidnon	110	7	55	125	05
Bugko	Barrio	Samar	248	12	30	124	50
Bugnay	Barrio	Bontoc Subprovince	204	17	12	121	06
Bugo	Barrio	Antique	90	10	55	122	05
Bugo	Barrio	Misamis	194	8	30	124	45
Bugsanga	River	Mindoro	190	12	30	121	05
Bugsuk	Island	Palawan (S)	228	8	10	117	20
Bugsuk	Island	Philippine Islands	72	8		117	
Bugtong	Barrio	Sorsogon (S)	252	12	20	123	16
Bugui	Point	Sorsogon (N)	252	12	36	123	14
Bugui	Point	Sorsogon (S)	252	12	36	123	14
Buguias	Township	Benguet Subprovince	202	16	43	120	50
Buguias	Township	Mountain Province	196	16	45	120	50
Buguibug	Barrio	Ilocos Sur	162	17	06	120	32
Buguey	Municipality	Cagayan	118	18	20	121	50
Bugwasan	Bay	Tayabas (N)	270	15	05	122	00
Buhangin	Barrio	Tayabas (N)	270	15	45	121	35
Buhangin	Sitio	Mindoro	190	13	20	121	15
Buhatan	Barrio	Albay	86	13	14	123	50
Buhatan	Barrio	Sorsogon (N)	252	12	58	124	03
Buhay	Sitio	Davao	154	7	50	126	00
Buhaynasapa	Barrio	Batangas	102	13	47	121	24
Buhi	Lake	Camarines Sur	126	13	26	123	30
Buhi	Municipality	Camarines Sur	126	13	25	123	30
Bujaoen	Barrio	Zambales	274	14	59	120	18
Bujo	Island	Sorsogon (N)	252	12	35	123	36
Bujo	Island	Sorsogon (S)	252	12	35	123	36
Bukal	Barrio	Batangas	102	13	54	120	54
Bukal	Barrio	Batangas	102	13	52	120	40
Bukal	Barrio	Batangas	102	13	51	121	05
Bukal	Barrio	Batangas	102	13	49	121	04
Bukal	Barrio	Batangas	102	13	46	121	14
Bukal	Barrio	Cavite	134	14	17	120	45
Bukal	Barrio	Laguna	174	14	15	121	33
Bukal	Barrio	Laguna	174	14	14	121	22
Bukal	Barrio	Laguna	174	14	11	121	10

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Bukal	Barrio	Laguna	174	14	10	121	26
Bukal	Barrio	Tayabas (S)	270	13	55	121	25
Bukandala	Barrio	Cavite	134	14	24	120	56
BUKIDNON	Province	Bukidnon	110	8	10	125	00
Bukidnon	Province	Philippine Islands	72	8		125	00
Bukol	Barrio	Laguna	174	14	30	121	25
Bula	Municipality	Camarines Sur	126	13	28	123	17
Bulabud	Barrio	Capiz	130	11	37	122	18
Bulac	Barrio	Bulacan	114	14	50	121	01
Bulac	Barrio	Oriental Negros	220	9	10	123	15
BULACAN	Province	Bulacan	114	15	00	121	00
Bulacan	Province	Philippine Islands	72	15		121	
Bulacan	Municipality	Bulacan	114	14	48	120	53
Bulacan	Barrio	Leyte	186	10	30	124	45
Bulacan	Barrio	Mindoro	190	13	40	120	25
Bulacao	Barrio	Sorsogon (N)	252	12	53	124	06
Bulacaue	Point	Iloilo	166	11	35	123	10
Bulacnin	Barrio	Batangas	102	13	59	121	08
Bulacus	Barrio	Pampanga	232	14	50	120	40
Bulagao	Mountain	Abra	78	17	39	120	31
Bulagao	Mountain	Ilocos Sur	162	17	39	120	31
Bulag Este	Barrio	Ilocos Sur	162	17	36	120	26
Bulala	Barrio	Ilocos Sur	162	17	34	120	22
Bulala	Barrio	La Union	182	16	44	120	21
Bulala	Sitio	Amburayan Subprovince	198	16	57	120	34
Bulala	Sitio	Amburayan Subprovince	198	16	40	120	29
Bulala	Sitio	Kalinga Subprovince	208	17	33	121	11
Bulalacao	Island	Palawan (N)	228	11	40	120	10
Bulalacao	Bay	Mindoro	190	12	15	121	20
Bulalacao	Township	Mindoro	190	12	30	121	25
Bulalacao	Barrio	Camarines Sur	126	13	42	123	47
Bulalacao	Barrio	Lepanto Subprovince	210	16	50	120	48
Bulalacao	Barrio	Mindoro	190	12	20	121	20
Bulalagui	Point	Cebu	138	11	15	124	05
Bulan	Island	Sulu	258	6	05	121	50
Bulan	Municipality	Sorsogon (N)	252	12	40	123	52
Bulan	Barrio	Camarines Sur	126	13	48	123	00
Bulanao	Barrio	Antique	90	11	45	122	00
Bulangao	Sitio	Nueva Vizcaya	216	16	23	121	05
Bulanglang	Barrio	Benguet Subprovince	202	16	35	120	28
Bulaquin	Barrio	Tayabas (S)	270	14	00	121	20
Bularit	Barrio	Tarlac	266	15	34	120	37
Bulasa	Barrio	Cebu	138	9	55	123	35
Bulata	Barrio	Occidental Negros	220	9	50	122	25
Bulauan	Sitio	Isabela	170	16	50	122	05
Bulauon	Barrio	Zambales	274	15	25	119	55
Bulawan	Barrio	Camarines Sur	126	13	45	122	53
Bulbul	Mountain	Benguet Subprovince	202	16	42	120	51
Bulbulala	Barrio	Ilocos Norte	158	18	13	120	42
Bulbulala	Barrio	Ilocos Sur	162	17	16	120	27
Bulbulala	Barrio	La Union	182	16	49	120	25
Buldun	Municipal district	Cotabato	150	7	30	124	20
Bule	Sitio	Rizal	240	14	27	121	03
Buli	Barrio	Batangas	102	13	53	120	57
Buli	Sitio	Abra	78	17	41	120	42
Buli	Sitio	Bataan	94	14	28	120	33
Buli	Sitio	Cavite	134	14	16	120	44
Buli	Sitio	Mindoro	190	13	55	120	55
Bulihan	Barrio	Batangas	102	13	54	121	18
Bulihan	Barrio	Bulacan	114	14	53	120	54
Bulihan	Barrio	Bulacan	114	14	52	120	48
Buliluyan	Cape	Palawan (S)	228	8	20	117	10
Bulingsung	Barrio	Zamboanga	278	8	00	123	35
Buljao	Barrio	Camarines Norte	122	14	10	122	49
Bullag	Sitio	Ifugao Subprovince	206	16	48	121	14
Bulo	Sitio	Sorsogon (N)	252	12	25	123	34
Bulo	Sitio	Sorsogon (S)	252	12	25	123	34
Bulosao	Barrio	Samar	248	11	10	125	15
Bulsa	River	Tarlac	266	15	27	120	23
Bulu	Rancheria	Apayao Subprovince	200	18	03	121	13
Bulualto	Barrio	Bulacan	114	15	13	120	57
Buluan	Lake	Cotabato	150	6	40	124	55
Buluan	Island	Zamboanga	278	7	40	122	30
Buluan	Municipal district	Cotabato	150	6	45	124	50
Buluan	Rancheria	Apayao Subprovince	200	17	44	121	24
Buluan	Barrio	Zamboanga	278	7	40	122	30
Buluan	Sitio	Cotabato	150	7	20	124	30
Buluan	Sitio	Samar	248	11	40	125	10
Buluan	Mountain	Cotabato	150	7	15	124	50
Buluang	Sitio	Palawan (N)	228	12	10	119	50

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Buluang	Barrio	Camarines Sur	126	13	18	123	20
Buluog	Sitio	Camarines Sur	126	13	31	123	21
Bulusan	Municipality	Sorsogon (N)	252	12	45	124	08
Bulusan	Volcano	Sorsogon (N)	252	12	47	124	03
Bulusan	Volcano, active	Relief	72	13		124	
Bulwagan	Sitio	Camarines Norte	122	14	19	122	43
Bumbuneg	Barrio	Amburayan Subprovince	198	16	40	120	25
Bunaguit	Municipal district	Agusan	82	8	40	125	30
Bunakan	Barrio	Cebu	138	11	15	123	40
Bunauan	Barrio	Davao	154	7	10	125	40
Bunawan	Municipal district	Agusan	82	8	10	125	55
Bundagul	Barrio	Pampanga	232	15	14	120	37
Bunducan	Barrio	Sorsogon (S)	252	11	44	124	04
Buneg	Municipal district	Abra	78	17	41	120	55
Buneg	Rancheria	Apayao Subprovince	200	17	42	121	12
Bunga	Barrio	Albay	86	13	17	123	45
Bunga	Barrio	Capiz	130	11	25	122	33
Bunga	Mountain	Lanao	178	7	35	124	10
Bungalum	Sitio	Davao	154	7	10	125	30
Bungan	Sitio	Davao	154	7	20	125	30
Bungau	Municipal district	Sulu	258	5	10	119	45
Bungau	Barrio	Sulu	258	5	00	119	45
Bungau	Barrio	Sulu	258	5	00	119	45
Bungca	Barrio	Iloilo	166	10	55	122	40
Bungcayo	Barrio	Amburayan Subprovince	198	16	43	120	27
Bungol	Barrio	La Union	182	16	46	120	25
Bungsuang	Barrio	Capiz	130	11	14	122	42
Bunhian	Barrio	Ifugao Subprovince	206	16	57	121	17
Bunnay	Barrio	Isabela	170	16	45	121	45
Bunot	Barrio	Apayao Subprovince	200	18	23	121	02
Bunot	Rancheria	Rizal	240	14	27	121	13
Bunsuran	Barrio	Bulacan	114	14	52	120	56
Bunutan	Barrio	Bulacan	114	14	45	120	53
Buquit	Point	Davao	154	5	30	125	20
Buraan	Sitio	Ilocos Norte	158	18	32	120	37
Burahit	Barrio	Isabela	170	16	40	121	30
Burak	Barrio	Samar	243	11	10	125	40
Burauen	Municipality	Leyte	186	11	00	124	55
Burayoc	Barrio	Ilocos Norte	158	18	36	120	47
Burayoc	Barrio	La Union	182	16	43	120	22
Burburan	Mountain	Ilocos Norte	158	18	25	120	49
Burdeos	Bay	Tayabas (N)	270	14	45	122	05
Burdeos	Barrio	Tayabas (N)	270	14	50	122	00
Burgos	Municipality	Ilocos Norte	158	18	31	120	39
Burgos	Municipality	Ilocos Sur	162	17	19	120	30
Burgos	Municipality	Pangasinan	236	16	04	119	52
Burgos	Barrio	Nueva Ecija	212	15	49	120	52
Burgos	Barrio	Leyte	186	10	00	125	00
Burgos	Barrio	Rizal	240	14	43	121	08
Burgos	Barrio	Sorsogon (N)	252	12	24	123	44
Burgos	Barrio	Sorsogon (S)	252	12	24	123	44
Burgos	Barrio	Surigao	262	9	15	126	10
Burgos	Barrio	Tarlac	266	15	41	120	29
Burgos	Sitio	Samar	243	11	35	124	50
Buri	Point	Sorsogon (S)	252	11	56	123	43
Buri	Barrio	Samar	243	11	50	124	50
Buri	Sitio	Camarines Sur	126	13	34	122	55
Burias	Island	Sorsogon (N)	252	13	00	123	06
Burias	Island	Philippine Islands	72	13		123	
Burias	Pass	Sorsogon (N)	252	13	00	123	15
Burias	Barrio	Capiz	130	11	27	122	33
Burnay	Mountain	Abra	78	17	57	120	55
Burnay	Mountain	Ilocos Norte	158	17	57	120	55
Burney	Barrio	Ifugao Subprovince	206	16	50	121	07
Burol	Barrio	Cavite	134	14	20	120	56
Burol	Sitio	Nueva Ecija	212	15	33	121	00
Buruanga	Municipality	Capiz	130	11	51	121	54
Buruncan	Point	Mindoro	190	12	10	121	15
Busa	Sitio	Lepanto Subprovince	210	16	57	120	55
Busainga	Port	Sorsogon (N)	252	13	07	123	02
Busak	Sitio	Camarines Sur	126	13	39	123	00
Busao	Barrio	Bohol	106	9	45	123	54
Busing	Barrio	Ilocos Sur	162	17	37	120	23
Busing	Island	Sorsogon (N)	252	13	09	122	58
Busing	Barrio	Sorsogon (N)	252	13	09	122	07
Busot	Sitio	Lepanto Subprovince	210	17	07	120	37
Bustos	Municipality	Bulacan	114	14	58	120	55
Busu	Sitio	Davao	154	7	00	126	10
Busuanga	Island	Palawan (N)	228	12	10	120	00
Busuanga	Island	Philippine Islands	72	12		120	

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Busuanga	Barrio	Palawan (N)	228	12	10	120	00
Busuk	Bay	Zamboanga	278	7	35	122	30
Buswang	Barrio	Capiz	130	11	43	122	23
Butac	Barrio	Amburayan Subprovince	198	16	57	120	36
Butag	Barrio	Sorsogon (N)	252	12	38	123	56
Butaanan	Island	Camarines Sur	126	14	07	123	19
Butaanan	Barrio	Camarines Sur	126	14	06	123	19
Butbut	Barrio	Bontoc Subprovince	204	17	14	121	06
Butbutigui	Barrio	Amburayan Subprovince	198	16	58	120	36
Buteg	Rancheria	Apayao Subprovince	200	18	12	121	06
Butig	Lake	Lanao	178	7	45	124	15
Butig	Municipal district	Lanao	178	7	45	124	20
Butigui	Barrio	Bontoc Subprovince	204	17	07	121	26
Butir	Barrio	Ilocos Sur	162	17	22	120	30
Butitio	Barrio	Ifugao Subprovince	206	16	43	120	58
Butsi	Sitio	Cotabato	150	7	25	125	05
Butuan	Bay	Agusan	82	9	05	125	25
Butuan	Capital	Agusan	82	8	55	125	30
Butuan	Capital, Agusan	Philippine Islands	72	9		126	
Butulan	Davao	Davao	154	5	40	125	30
Buyacaoan	Barrio	Benguet Subprovince	202	16	48	120	49
Buyallao	Point	Mindoro	190	12	20	121	30
Buyasyas	Barrio	Nueva Vizcaya	216	16	18	120	57
Buyausen	Sitio	Abra	78	17	17	120	42
Buyo	Barrio	Albay	86	13	37	124	10
Buyo	Barrio	Albay	86	13	07	123	52
Buyo	Barrio	Sorsogon (N)	252	12	49	123	17
Buyo	Barrio	Sorsogon (N)	252	12	27	123	46
Buyo	Barrio	Sorsogon (S)	252	12	27	123	46
Buyo	Sitio	Albay	86	13	03	123	33
Buyoc	Sitio	Ifugao Subprovince	206	16	45	121	11
Buyuan	Barrio	Iloilo	166	10	40	122	20
Buyya	Sitio	Ifugao Subprovince	206	16	52	121	10
C.							
Caacob	Sitio	Antique	90	11	50	121	30
Caalanguan	Sitio	Mindoro	190	13	00	121	00
Caanas	Barrio	Iloilo	166	11	20	123	05
Caang	Sitio	Amburayan Subprovince	198	16	53	120	40
Caanian	Barrio	La Union	182	16	41	120	21
Caataban	Barrio	Ilocos Norte	158	18	14	120	34
Caayongan	Sitio	Surigao	262	9	25	125	55
Caba	Municipality	La Union	182	16	26	120	21
Caba	Sitio	Ifugao Subprovince	206	16	47	121	10
Cababaan	Sitio	Ilocos Norte	158	18	21	120	36
Cababuyan	Barrio	Ifugao Subprovince	206	16	52	121	05
Cabacongan	Barrio	Bohol	106	9	52	123	46
Cabacongan	Barrio	Leyte	186	10	55	125	00
Cabacungan	Barrio	Samar	248	12	35	124	20
Cabadbaran	Municipality	Agusan	82	9	10	125	30
Cabadiangan	Plateau	Occidental Negros	220	9	50	122	35
Cabagan	Municipality	Isabela	170	17	25	121	45
Cabagsay	Sitio	Albay	86	13	07	123	29
Cabahan	Island	Romblon	244	12	10	122	00
Cabalayangan	Barrio	La Union	182	16	30	120	22
Cabalete	Island	Tayabas (S)	270	14	15	121	50
Cabalian	Municipality	Leyte	186	10	15	125	10
Cabalian	Point	Romblon	244	12	05	122	00
Cabalian	Volcano, dormant	Relief	72	10		125	
Cabalitian	Island	Pangasinan	236	16	07	120	07
Cabalitian	Railroad Station	Pangasinan	236	15	56	120	46
Cabalitocan	Barrio	La Union	182	16	49	120	21
Caballo	Island	Cavite	134	14	22	120	37
Cabaluan	River	Zambales	274	15	43	120	02
Cabanatuan	Capital	Nueva Ecija	212	15	29	120	58
Cabanatuan	Capital, Nueva Ecija	Philippine Islands	72	15		121	
Cabangan	Municipality	Zambales	274	15	10	120	03
Cabangaran	Sitio	Ilocos Norte	158	18	22	120	47
Cabangla	Barrio	Capiz	130	11	30	122	32
Cabangtohan	Barrio	Antique	90	10	35	121	55
Cabanuangan	Barrio	Isabela	170	16	35	121	40
Cabaritan	Barrio	Cagayan	118	18	25	121	30
Cabaroan	Barrio	Abra	78	17	24	120	42
Cabaroan	Barrio	Ilocos Sur	162	17	40	120	25
Cabaroan	Barrio	Ilocos Sur	162	17	35	120	22
Cabaroan	Barrio	Ilocos Sur	162	17	19	120	28
Cabaroan	Barrio	La Union	182	16	45	120	22
Cabaroan	Barrio	La Union	182	16	17	120	21
Cabaroan	Barrio	Lepanto Subprovince	210	17	15	120	35

Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
Cabarruyan	Island	Pangasinan	236	16 18	119 58
Cabaruyan	Barrio	Abra	78	17 33	120 29
Cabaruyan	Barrio	Abra	78	17 27	120 54
Cabasan	Barrio	Albay	86	13 21	123 52
Cabataan	Mountain	Rizal	240	14 50	121 15
Cabatuan	Municipality	Iloilo	166	10 55	122 30
Cabatuan	Barrio	Isabela	170	16 55	121 40
Cabatuan	Barrio	Samar	248	12 30	125 15
Cabaun	Island	Samar	248	12 35	124 30
Cabay	Sitio	Samar	248	11 25	125 30
Cabayugan	Barrio	Pangasinan	236	15 44	120 21
Cabayugan	Sitio	Sorsogon (S)	252	12 01	123 42
Cabacab	Barrio	Albay	86	13 37	124 03
Cabacaben	Barrio	Bataan	94	14 27	120 35
Cabacabin	Sitio	Camarines Norte	122	14 20	122 45
Cabang	Island	Bohol	106	9 59	124 00
Cabiao	Municipality	Nueva Ecija	212	15 15	120 51
Cabignayan	Barrio	Mindoro	190	13 30	120 35
Cabiguan	Barrio	Sorsogon (N)	252	13 01	123 39
Cabilagalin	Sitio	Camarines Norte	122	14 10	122 42
Cabilang Baybay	Barrio	Cavite	134	14 19	121 03
Cabilao	Island	Bohol	106	9 53	123 46
Cabilauan	Island	Palawan (N)	228	12 10	120 10
Cabinangan	Rancheria	Nueva Vizcaya	216	16 10	121 37
Cabingaan	Island	Sulu	258	5 40	121 05
Cabittaogan	Barrio	Ilocos Sur	162	17 35	120 21
Cabittaoren	Barrio	Ilocos Norte	158	17 58	120 44
Cabiyangan	Point	Cebu	138	10 20	123 35
Cabodiangan	Point	Romblon	244	12 25	122 25
Cabolotan	Barrio	Romblon	244	12 35	122 10
Cabra	Island	Mindoro	190	13 55	120 35
Cabaran	Barrio	Albay	86	13 06	123 35
Cabu	Barrio	Nueva Ecija	212	15 32	121 03
Cabuan	Barrio	Misamis	194	9 05	124 50
Cabucan	Island	Sulu	258	6 10	120 55
Cabucbucan	Barrio	Nueva Ecija	212	15 41	121 06
Cabugan Chico	Island	Leyte	186	10 25	125 15
Cabugan Grande	Island	Leyte	186	10 30	125 15
Cabugao	Bay	Albay	86	13 33	124 15
Cabugao	Bay	Ilocos Sur	162	17 50	120 25
Cabugao	Municipality	Ilocos Sur	162	17 48	120 27
Cabugao	Barrio	Albay	86	13 36	124 17
Cabugao	Barrio	Amburayan Subprovince	198	16 58	120 29
Cabugao	Sitio	Kalinga Subprovince	208	17 27	121 14
Cabugabug	Barrio	Capiz	130	17 26	122 55
Cabulalan	Barrio	Ilocos Norte	158	17 58	120 41
Cabulalan	Island	Bohol	106	10 09	124 03
Cabulanglangan	Barrio	Amburayan Subprovince	198	16 55	120 28
Cabulauan	Islands	Palawan (N)	228	11 20	120 10
Cabuli	Point	Palawan (N)	228	11 30	119 30
Cabulilisan	Barrio	Leyte	186	10 30	124 50
Cabulusan	Barrio	Abra	78	17 36	120 36
Cabuntog	Barrio	Surigao	262	9 45	126 10
Caburao	Barrio	Abra	78	17 32	120 33
Cabusao	Barrio	Ilocos Sur	162	17 15	120 27
Cabutagan	Municipality	Camarines Sur	126	13 44	123 07
Cabutagan	Barrio	Camarines Sur	126	13 47	122 55
Cabuyao	Municipality	Laguna	174	14 17	121 08
Cabuyao	Barrio	Laguna	174	14 09	121 24
Cabuyoan	Barrio	Tayabas (S)	270	13 15	122 05
Cacandongan	Sitio	Albay	86	13 53	124 13
Cacapián	Barrio	Ilocos Sur	162	17 46	120 30
Cacarong	Barrio	La Union	192	16 41	120 21
Cacataan	Barrio	Bulacan	114	14 54	120 58
Cacawit	Island	Sulu	258	5 30	120 25
Cacbolo	Barrio	Tayabas (S)	270	14 05	121 35
Caccaja	Island	Palawan (S)	228	10 30	119 00
Caceres	Sitio	Ifugao Subprovince	206	16 44	121 04
Cacnipa	Barrio	Cebu	138	9 35	123 25
Cacraray	Island	Palawan (S)	228	10 30	119 00
Cadacad	Barrio	Albay	86	13 18	123 52
Cadaclan	Barrio	Ilocos Sur	162	17 29	120 34
Cadadanan	River	Ifugao Subprovince	206	16 39	121 01
Cadagasan	Barrio	Lepanto Subprovince	210	16 55	120 51
Cadajonan	Barrio	Ilocos Norte	158	18 31	120 44
Cadakan	Sitio	Samar	248	12 25	125 15
Cadangan	Barrio	Leyte	186	10 45	125 00
Cada Negrito	Sitio	Nueva Vizcaya	216	16 37	121 32
Cadanglaan	Barrio	Ilocos Sur	162	17 52	120 31
Cadanglaan	Barrio	Ilocos Sur	162	17 14	120 28

Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
				° ' "	° ' "
Caddag	Sitio	Isabela	170	16 55	122 00
Cadean	Sitio	Samar	248	12 25	125 15
Cafig	Mountain	Camarines Norte	122	14 10	122 27
Cadig	Mountain	Tayabas (S)	270	14 10	122 30
Cafig	Mountain	Relief	72	14	122
Caditaan	Barrio	Sorsogon (N)	252	12 48	123 51
Cadiz	Municipality	Occidental Negros	220	10 55	123 20
Cadiz Viejo	Barrio	Occidental Negros	220	11 00	123 10
Cadongdongan	Rancheria	Apayao Subprovince	200	18 31	121 00
Caduhaan	Barrio	Occidental Negros	220	10 55	123 10
Cadulan	Barrio	Sorsogon (S)	252	12 13	123 53
Cadulunan	Barrio	Antique	90	10 50	122 05
Caduruan	Point	Sorsogon (S)	252	11 43	122 04
Cagamutan	Barrio	Samar	248	12 20	125 15
Caganayan	Municipal district	Abra	78	17 49	120 48
Caganbuac	Sitio	Mindoro	190	13 10	121 10
Cagara	Barrio	Sorsogon (N)	252	12 27	123 30
CAGARA	Barrio	Sorsogon (S)	252	12 27	123 30
CAGAYAN	Province	Cagayan	118	18 00	122 00
Cagayan	Province	Philippine Islands	72	18	122
Cagayan	Capital	Misamis	194	8 30	124 40
Cagayan	Capital, Misamis	Philippine Islands	72	9	125
Cagayan	River	Bukidnon	110	8 20	124 25
Cagayan	River	Cagayan	118	18 20	121 40
Cagayan	River	Isabela	170	16 25	121 45
Cagayan	River	Nueva Vizcaya	216	16 22	121 43
Cagayan	Islands	Palawan (N)	228	9 40	121 10
Cagayan	Islands	Philippine Islands	72	10	121
Cagayancillo	Township	Palawan (N)	228	9 30	121 10
Cagayancillo	Island	Palawan (N)	228	9 30	121 10
Cagayan de Sulu	Municipal district	Sulu	258	7 00	118 30
Cagayan Sulu	Island	Sulu	258	7 00	118 30
Cagayan Sulu	Island	Philippine Islands	72	7	119
Cagbulauan	Island	Albay	86	13 19	123 56
Cagdayanao	Barrio	Surigao	262	9 55	125 40
Cagnipa	Barrio	Camarines Sur	126	13 43	123 43
Cagoras	Sitio	Samar	248	11 55	125 15
Cagpile	Barrio	Samar	248	12 15	125 20
Cagpipi	Sitio	Samar	248	12 20	124 30
Cagsao	Barrio	Camarines Sur	126	13 46	123 18
Cagsiy	Barrio	Tayabas (S)	270	14 15	121 45
Cagtalaba	Sitio	Camarines Norte	122	14 10	122 22
Cagting	Sitio	Bohol	106	10 00	124 34
Cagua	Mountain (v o l - cano)	Cagayan	118	18 15	122 05
Cagua	Volcano, dormant	Relief	72	18	122
Caguait	Barrio	Surigao	262	8 55	126 15
Cagubatan	Barrio	Lepanto Subprovince	210	16 56	120 50
Cagubay	Barrio	Pangasinan	236	15 52	120 15
Cagunan	Sitio	Amburayan Subprovince	198	16 44	120 31
Caguray	Barrio	Mindoro	190	12 15	121 05
Caguray	River	Mindoro	190	12 25	121 10
cahagnaan	Barrio	Leyte	186	10 10	124 45
Caibirán	Municipality	Leyte	186	11 35	124 35
Caíma	Bay	Camarines Sur	126	13 41	122 51
Caíman	Point	Pangasinan	236	15 55	119 46
Caingín	Barrio	Bulacan	114	14 59	120 57
Cainta	Municipality	Rizal	240	14 35	121 07
Cairauan	Barrio	Antique	90	11 10	122 00
Cairilao	Mountain	Batangas	102	14 07	120 45
Cajayagan	Barrio	Samar	248	12 40	125 00
Cajidiocan	Municipality	Romblon	244	12 25	122 40
Cajoagan	Island	Samar	248	12 35	124 50
Calaba	Barrio	Abra	78	17 37	120 37
Calaba	Barrio	Nueva Ecija	212	15 18	120 52
Calabaca	Sitio	Camarines Norte	122	14 18	122 27
Calaban	Barrio	Ifugao Subprovince	206	16 44	120 59
Calabanga	Municipality	Camarines Sur	126	13 42	123 12
Calabasa	Sitio	Camarines Norte	122	14 10	122 46
Calabaza	Point	Zamboanga	278	6 45	122 05
Calabazas	Island	Iloilo	166	11 05	123 00
Calabagan	Settlement	Nueva Vizcaya	216	16 08	122 00
Calabogo	Barrio	Romblon	244	12 30	122 20
Calabornay	Barrio	Camarines Norte	122	14 16	122 48
Calabugdong	Island	Palawan (N)	228	11 10	119 40
Calaca	Municipality	Batangas	102	13 56	120 49
Calagbagnan	Barrio	Camarines Sur	126	13 50	122 57
Calagalag	Sitio	Oriental Negros	224	9 50	123 10
Calagnaán	Island	Iloilo	166	11 30	123 15
Calagua	Islands	Camarines Norte	122	14 26	122 56

Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
Calaguaguin	Bay	Zambales	224	14 52	120 04
Calaguiman	Barrio	Bataan	94	14 45	120 32
Calagundian	Barrio	Samar	248	12 25	124 20
Calakad	Barrio	Kalinga Subprovince	208	17 19	121 25
Calalabangan	Sitio	Nueva Vizcaya	216	16 20	121 40
Calamagui	Barrio	Isabela	170	17 10	121 50
Calamba	Island	Laguna	174	14 13	121 12
Calamba	Municipality	Laguna	174	14 13	121 10
Calamba	Barrio	Misamis	194	8 35	123 40
Calamba	Barrio	Oriental Negros	224	10 10	123 15
Calambat	Barrio	Abra	78	17 45	120 43
Calambayanga	Island	Camarines Norte	122	14 19	122 39
Calamian	Island Group	Palawan (N)	128	12 00	120 00
Calamian	Island Group	Philippine Islands	72	12	120
Calamias	Barrio	Batangas	102	13 52	121 09
Calamintao	Sitio	Mindoro	190	13 10	120 45
Calampinay	Barrio	Camarines Sur	126	13 48	123 03
Calan	Barrio	Batangas	102	14 00	120 46
Calana	Sitio	Kalinga Subprovince	208	17 25	121 24
Calancawan	Barrio	Camarines Norte	122	14 12	122 55
Calancuasan	Barrio	Nueva Ecija	212	15 48	120 39
Calangaman	Island	Cebu	138	11 05	124 15
Calango	Barrio	Oriental Negros	224	9 10	123 10
Calantas Rock	Islet	Sorsogon (N)	252	12 31	124 05
Calantas Rock	Islet	Sorsogon (S)	252	12 31	124 05
Calanutan	Railroad Station	Pangasinan	236	15 52	120 39
Calao	Barrio	Isabela	170	16 40	121 35
Calao	Barrio	Sorsogon (N)	252	13 00	124 09
Calao	Sitio	Kalinga Subprovince	208	17 21	121 29
Calaoaan	Barrio	Ilocos Sur	162	17 10	120 26
Calaoit	Barrio	Ilocos Sur	162	17 39	120 27
Calapacuan	Barrio	Zambales	274	14 52	120 14
Calapan	Capital	Mindoro	190	13 25	121 10
Calapan	Capital, Mindoro	Philippine Islands	72	13	121
Calapan	Point	Mindoro	190	13 25	121 10
Calapangan	Barrio	Cagayan	118	18 00	121 35
Calapauan	Barrio	Capiz	130	11 17	122 43
Calape	Municipality	Bohol	106	9 53	123 52
Calape	Barrio	Cebu	138	11 10	124 00
Calape	Barrio	Occidental Negros	220	10 15	123 00
Calape	Barrio	Samar	248	11 55	125 00
Calarayan	Barrio	Samar	248	12 35	124 15
Calasgasan	Barrio	Camarines Norte	122	14 05	122 56
Calasiao	Municipality	Pangasinan	236	16 01	120 21
Calasomanga	Sitio	Tayabas (N)	270	15 00	121 50
Calasuche	Barrio	Sorsogon (S)	252	12 13	123 32
Calatagan	Municipality	Batangas	102	13 50	120 38
Calatagan	Point	Batangas	102	13 49	120 37
Calatio	Barrio	Sorsogon (N)	252	12 49	124 00
Calaton	Point	Romblon	244	12 10	122 05
Calatrava	Barrio	Occidental Negros	220	10 35	123 30
Calatrava	Barrio	Romblon	244	12 40	122 05
Calatugas	Sitio	Palawan (S)	228	9 10	118 10
Calauag	Bay	Tayabas (S)	270	14 05	122 10
Calauag	Municipality	Tayabas (S)	270	13 55	122 20
Calauag	Barrio	Palawan (N)	228	10 40	119 30
Calauan	Municipality	Laguna	174	14 09	121 19
Calavite	Cape	Mindoro	190	13 25	120 20
Calavite	Cape	Philippine Islands	72	13	120
Calavite	Mountain	Mindoro	190	13 30	120 25
Calavite	Mountain	Relief	72	13	120
Calawit	Barrio	Palawan (N)	228	12 20	120 00
Calawitan	Barrio	Pampanga	232	15 05	120 55
Calayab	Barrio	Ilocos Norte	158	18 09	120 31
Calayab	Barrio	Ilocos Sur	162	17 39	120 22
Calayan	Island	Cagayan	118	19 20	121 30
Calayan	Island	Philippine Islands	72	19	122
Calayan	Barrio	Cagayan	118	19 20	121 30
Calayogan	Barrio	Bohol	106	9 51	123 48
Calbasag	Barrio	Leyte	186	11 00	125 05
Calbayog	Municipality	Samar	248	12 05	124 35
Calbiga	Municipality	Samar	248	11 40	125 00
Calbueg	Barrio	Pangasinan	236	15 57	120 23
Caldera	Bay	Zamboanga	278	7 00	122 00
Calcanon	Sitio	Kalinga Subprovince	258	17 36	121 24
Calibab	Sitio	Abra	78	17 28	120 48
Calibang	Island	Palawan (N)	228	11 30	119 40
Calibon	Point	Lanao	178	7 50	123 53
Calibunan	Barrio	Agusan	82	9 05	125 30
Calibungan	Barrio	Tarlac	266	15 36	120 43

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Calibuyo	Barrio	Cavite	134	14	22	120	48
Calicoan	Island	Samar	248	11	00	125	50
Calliing	Barrio	Occidental Negros	220	10	00	122	30
Calima	Barrio	Mindoro	190	13	10	121	30
Calimbahan	Barrio	Capiz	130	11	44	122	15
Calimugtong	Barrio	Ilocos Sur	162	17	12	120	30
Calingatán	Barrio	Batangas	102	13	58	121	07
Calinog	Barrio	Iloilo	166	11	10	122	30
Calintaan	Island	Sorsogon (N)	252	12	32	124	06
Calintaan	Island	Sorsogon (S)	252	12	32	124	06
Calintaan	Barrio	Mindoro	190	12	35	120	55
Calios	Barrio	Nueva Ecija	212	15	19	121	08
Calipahan	Barrio	Nueva Ecija	212	15	36	120	55
Calipuan	Sitio	Apayao Subprovince	200	18	11	121	15
Calittacan	Barrio	Nueva Vizcaya	216	16	11	120	56
Calituban	Island	Bohol	106	10	15	124	18
Calivo	Municipality	Capiz	130	11	43	122	22
Callaguip	Barrio	Ilocos Norte	158	18	05	120	29
Callan	Barrio	Iloilo	116	10	55	122	40
Callao	Barrio	Cagayan	118	17	55	121	45
Callao	Barrio	Cagayan	118	17	40	121	50
Callao	Sitio	Abra	78	17	25	120	39
Callitong	Barrio	Ilocos Sur	162	17	18	120	31
Calmanoc	Barrio	Bohol	106	9	47	123	49
Calmay	Barrio	Iloilo	166	11	00	122	25
Calmay	Barrio	Pangasinan	236	16	03	120	20
Calo	Barrio	Batangas	102	13	41	121	12
Calo	Barrio	Laguna	174	14	11	121	16
Calobaoan	Barrio	Pangasinan	236	15	51	120	20
Calobocob	Sitio	Cavite	134	14	18	120	48
Calolbon	Municipality	Albay	86	13	36	124	06
Calomboyan	Barrio	Pangasinan	236	15	57	120	18
Calonacon	Barrio	Romblon	244	12	35	122	00
Calongbuyan	Barrio	La Union	182	16	49	120	24
Caloocan	Municipality	Rizal	240	14	39	120	58
Caloocan	Barrio	Batangas	102	14	05	120	58
Caloocan	Barrio	Pangasinan	236	16	02	120	17
Calot	Sitio	Benguet Subprovince	202	16	29	120	31
Calubacan	Sitio	Rizal	240	14	24	121	14
Calubian	Municipality	Leyte	186	11	25	124	25
Caluluan	Barrio	Tarlac	266	15	23	120	43
Calulut	Barrio	Pampanga	232	15	06	120	39
Calumbuyan	Barrio	Batangas	102	13	48	120	40
Calumpang	Barrio	Bulacan	114	14	52	120	47
Calumpang	Barrio	Laguna	174	14	12	121	24
Calumpang	Barrio	Rizal	240	14	38	121	05
Calumpang	Barrio	Rizal	240	14	28	121	11
Calumpang Norte	Barrio	Cavite	134	14	15	120	50
Calumpit	Municipality	Bulacan	114	14	55	120	46
Calumpit	Barrio	Batangas	102	13	43	121	14
Calumpit	Barrio	Laguna	174	14	28	121	24
Calumpoa	Mountain	Rizal	240	14	45	121	18
Calunangan	Barrio	Leyte	186	10	50	124	30
Calunasan	Barrio	Bohol	106	9	54	123	54
Calunasan	Barrio	Leyte	186	11	00	124	30
Calungan	Sitio	Cotabato	150	7	05	124	45
Calungbuyan	Barrio	Ilocos Sur	162	17	10	120	26
Calungusan	Barrio	Bataan	94	14	39	120	34
Calupag	Island	Sulu	258	5	15	120	20
Calusa	Island	Palawan (N)	228	9	30	121	00
Calutan	Barrio	Tayabas (S)	270	13	50	121	55
Caluya	Township	Antique	90	11	55	121	30
Caluya	Island	Antique	90	11	55	121	35
Camachili	Barrio	Bataan	94	14	39	120	35
Camagong	Barrio	Albay	86	13	13	123	27
Camagong	Barrio	Laguna	174	14	25	121	25
Camagsaan	Sitio	Camarines Norte	122	14	19	122	28
Camaguan	Sitio	Kalinga Subprovince	208	17	19	121	24
Cama Juan	Sitio	Nueva Ecija	212	15	23	120	46
Camalaniugan	Municipality	Cagayan	118	18	15	121	40
Camaley	Barrio	Pangasinan	236	16	00	120	18
Camalig	Municipality	Albay	86	13	11	123	39
Camalig	Barrio	Bulacan	114	14	46	121	00
Camaligan	Municipality	Camarines Sur	126	13	37	123	10
Camanbugan	Barrio	Bohol	106	10	02	124	27
Camandag	Island	Samar	248	12	00	124	25
Camandag	Barrio	Iloilo	166	10	55	122	15
Camandingan	Sitio	Ilocos Norte	158	18	04	120	87
Camanga	Sitio	Ilocos Norte	158	17	55	120	84
Camangaan	Barrio	Ilocos Sur	162	17	34	120	24

Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
				° /	° /
Camangahan	Barrio	Antique	90	11 00	122 00
Camangdag	Sitio	Cavite	134	14 17	120 41
Camarang	Barrio	Isabela	170	16 45	121 40
Camarao	Barrio	Ilocos Sur	162	17 28	120 28
CAMARINES NORTE.	Province	Camarines Norte	122	14 10	122 40
Camarines Norte	Province	Philippine Islands	72	14	123
CAMARINES SUR.	Province	Camarines Sur	126	13 40	123 20
Camarines Sur	Province	Philippine Islands	72	14	123
Camarobalan	Sitio	Camarines Sur	126	13 26	123 12
Camasusu	Island	Sorsogon (S)	252	12 10	123 14
Camayaan	Barrio	Samar	248	12 15	124 50
Cambacay	Barrio	Bohol	106	9 48	124 08
Cambagui	Barrio	Bohol	106	9 45	124 02
Cambakis	Barrio	Bohol	106	9 53	123 47
Cambal	Sitio	Rizal	240	14 41	121 07
Cambalo	Point	Romblon	244	12 30	122 40
Cambalo	Barrio	Romblon	244	12 30	122 40
Cambaly	Barrio	Benguet Subprovince	202	16 37	120 27
Cambangai	Point	Cebu	138	11 15	123 40
Cambaogay	Barrio	Bohol	106	10 01	123 19
Cambaog	Barrio	Bulacan	114	14 56	120 54
Cambariti	Sitio	Albay	86	14 01	124 10
Cambasac	Barrio	Surigao	262	9 45	126 00
Cambasi	Barrio	Pampanga	232	14 52	120 41
Cambitala	Barrio	Nueva Ecija	212	15 44	121 08
Camcamalog	Sitio	Kalinga Subprovince	208	17 33	121 26
Camias	Barrio	Bulacan	114	15 11	120 53
Camias	Barrio	Pampanga	232	15 12	120 40
Camiguin	Island	Cagayan	118	18 55	121 55
Camiguin	Island	Philippine Islands	72	19	122
Camiguin	Volcano, dormant	Relief	72	19	122
Camiguin	Island	Misamis	194	9 10	124 40
Camiguin	Island	Philippine Islands	72	9	125
Camiguin	Volcano, active	Relief	72	9	125
Camiling	River	Tarlac	266	15 30	120 17
Camiling	Municipality	Tarlac	266	15 41	120 25
Camiling	Barrio	La Union	182	16 48	120 25
Camindoroan	Barrio	Ilocos Sur	162	17 45	120 26
Camingingel	Mountain	Abra	78	17 11	120 52
Camingingel	Mountain	Lepanto Subprovince	210	17 11	120 52
Camino	Barrio	Tarlac	266	15 21	120 36
Camire	Barrio	Leyte	186	11 10	125 00
Camogtong	Barrio	Romblon	244	12 30	122 00
Camotes	Sea	Cebu	138	10 30	124 20
Camotes	Sea	Philippine Islands	72	11	124
Camp 3	Road gate	Benguet Subprovince	202	16 17	120 36
Camp 4	Road gate	Benguet Subprovince	202	16 19	120 37
Camp 30, Rest house	Lodging	Benguet Subprovince	202	16 32	120 42
Camp 59, Rest house	Lodging	Benguet Subprovince	202	16 39	120 46
Camp 88, Rest house	Lodging	Benguet Subprovince	202	16 46	120 48
Campagao	Barrio	Bohol	106	9 44	124 07
Campalingo	Barrio	Romblon	244	12 20	122 35
Campanario	Barrio	Sorsogon (N)	252	13 09	123 00
Camp John Hay	U. S. Post Army	City of Baguio	140	16 24	120 37
Camp Kalao	Constabulary Post	Davao	154	7 50	126 00
Camp Keithley	U. S. Army Post	Lanao	178	8 00	124 15
Camp McGrath	U. S. Army Post	Ratanga	102	13 46	121 04
Campo	Barrio	Cagayan	118	17 50	121 35
Campomanes	Sitio	Occidental Negros	220	9 40	122 30
Camp One	Sitio	Pangasinan	236	16 13	120 31
Campote	Rancheria	Nueva Vizcaya	216	16 20	121 13
Camp Overton	U. S. Army Post	Lanao	178	8 10	124 15
Campoyo	Point	Oriental Negros	224	9 40	123 10
Camp Stomander	Barrio	Sulu	258	6 00	121 10
Camp Stotsenburg	U. S. Army Post	Pampanga	232	15 11	120 31
Camurong	Barrio	Mindoro	190	13 30	120 50
Canabungan	Island	Palawan (S)	228	8 10	117 10
Canaclo	Sitio	Samar	248	11 20	125 30
Canahauan	Islands	Samar	248	11 50	124 40
Canal (Ilogots)	Rancheria	Nueva Vizcaya	216	15 48	121 30
Canaman	Barrio	Camarines Sur	126	13 39	123 10
Canamay	Point	Oriental Negros	224	9 35	123 10
Canan	Sitio	Isabela	170	16 25	121 45
Canangay	Barrio	Cebu	138	11 00	124 00
Canangcaan	Barrio	Bohol	106	9 43	123 56
Canangcaan	Sitio	Camarines Norte	122	14 02	122 57
Canani	Sitio	Samar	248	12 25	124 30
Canano	Sitio	Samar	248	11 40	125 05
Canao	Sitio	Kalinga Subprovince	208	17 32	121 14
Canaoay	Barrio	La Union	182	16 36	120 18

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Canapi.	Barrio	Isabela.	170	17	10	121	50
Canarem.	Barrio	Tarlac	266	15	36	120	42
Canaron.	Island	Palawan (N)	228	11	10	120	20
Canas.	Island	Iloilo	166	11	30	123	15
Canaua	Sitio	Samar	248	12	25	124	50
Canavid.	Barrio	Samar	248	12	00	125	25
Cancelides	Barrio	Samar	248	11	20	125	35
Canda	Barrio	Tayabas (S)	270	13	55	121	35
Candaba	Swamp.	Pampanga.	232	15	05	120	52
Candaba	Municipality.	Pampanga.	232	15	05	120	49
Candaguit.	Barrio	Cebu	138	10	00	123	35
Candanay.	Barrio	Oriental Negros	224	9	15	123	30
Candanglaan.	Sitio	La Union.	182	16	24	120	22
Candating.	Barrio	Pampanga.	232	15	09	120	49
Candelaria.	Municipality.	Tayabas (S)	270	13	55	121	25
Candelaria.	Municipality.	Zambales.	274	15	38	119	55
Candelaria.	Barrio	Capiz.	130	11	37	122	23
Candelaria.	Sitio	Ilocos Sur.	162	17	11	120	33
Candijay.	Municipality.	Bohol.	106	9	49	124	30
Candon	Point	Ilocos Sur	162	17	13	120	24
Candon	Municipality.	Ilocos Sur	162	17	12	120	27
Canduo	Barrio	Bohol.	106	9	37	124	11
Canduyong	Barrio	Romblon	244	12	25	121	55
Caneo.	Barrio	Bontoc Subprovince	204	17	05	121	01
Cangaluyan	Island	Pangasinan	236	16	19	120	01
Cangaranan	River	Antique	90	11	00	122	10
Cangmaya.	Barrio	Bohol.	106	9	57	124	08
Cangmunag.	Barrio	Oriental Negros	224	9	05	123	30
Caniat	Sitio	Nueva Vizcaya.	216	16	20	120	57
Canicanian	Barrio	Tayabas (N)	270	14	45	122	00
Canigao	Island	Leyte	186	10	15	124	45
Canigao.	Channel	Bohol.	106	10	10	124	42
Canilay	Barrio	Samar	248	12	00	125	20
Canimo	Island	Camarines Norte.	122	14	07	123	04
Caninguan.	Barrio	Iloilo	166	11	05	122	25
Canioan.	Barrio	Bulacan.	114	14	55	120	46
Canipan.	Sitio	Palawan (S)	228	8	30	117	20
Canipo.	Island	Palawan (N)	228	11	40	120	10
Canipo.	Island	Palawan (N)	228	11	00	121	00
Canjalon	Sitio	Romblon	244	12	20	122	40
Canlalay	Barrio	Laguna	174	14	20	121	04
Canlangit	Barrio	Bohol.	106	9	49	124	18
Canlaon.	Volcano	Occidental Negros.	220	10	25	123	10
Canlaon.	Volcano	Oriental Negros.	224	10	25	123	10
Canlaon.	Volcano, active.	Relief.	72	10		123	
Canluban.	Barrio	Laguna	174	14	13	121	07
Canluto	Barrio	Oriental Negros.	224	9	45	123	05
Canogan	Barrio	Isabela	170	17	25	121	45
Canomiang	Sitio	Romblon	244	12	35	122	10
Canomoy.	Sitio	Sorsogon (S)	252	12	07	123	13
Canoyep.	Barrio	Tayabas (S)	270	13	30	122	25
Cansilan	Point	Oriental Negros.	224	9	25	122	40
Cansubayon	Barrio	Bohol.	106	9	50	123	53
Cantalid	Sitio	Bohol.	106	9	43	123	58
Cantamis.	Barrio	Bohol.	106	9	49	123	50
Cantigdas	Barrio	Bohol.	106	9	46	124	08
Cantilan	Municipality.	Surigao	262	9	20	122	00
Cantingas	Point.	Romblon	244	12	20	122	35
Canton.	Island.	Camarines Norte.	122	14	05	123	06
Canton.	Sitio.	Kalinga Subprovince.	208	17	27	121	20
Cantoria	Barrio	La Union.	182	16	51	120	24
Cantulayan.	Barrio	Oriental Negros.	224	9	10	123	30
Canubing	Barrio	Mindoro	190	13	20	121	10
Canutuan	Rancheria	Nueva Vizcaya.	216	16	15	121	13
Canyaba	Mountain	Samar	248	12	10	125	05
Canyaba	Mountain	Relief.	72	12		125	
Caoyan	Municipality.	Ilocos Sur	162	17	33	120	23
Caoyan	Barrio	Pangasinan	236	16	05	120	03
Caoyan	Sitio.	Pangasinan	236	16	08	119	50
Caorasan.	Sitio.	Camarines Sur	126	13	22	123	13
Cap	Island.	Sulu	258	5	55	120	10
Capaclan.	Barrio	Romblon	244	12	35	122	15
Capalangan.	Barrio	Pampanga.	232	14	56	120	46
Capalonga.	Municipality.	Camarines Norte	122	14	20	122	30
Capaniquian.	Sitio.	Zambales.	274	14	59	120	05
Capantayan	Barrio	Cavite	134	14	15	120	45
Capariaan	Barrio	Ilocos Sur	162	17	33	120	24
Capariaan	Barrio	Ilocos Sur	162	17	01	120	27
Caparisipan.	Sitio	Ilocos Norte	158	18	36	120	48
Capas.	Municipality.	Tarlac	266	15	20	120	35

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Capataan.	Barrio	Pangasinan	236	16	00	120	18
Capaya	Barrio	Pampanga	232	15	09	120	38
Capayang	Barrio	Tayabas (S)	270	13	30	121	50
Capayas	Barrio	Palawan (N)	228	10	30	119	40
Capid.	Point	Romblon	244	12	10	122	00
Capines	Point	Samar	248	11	05	125	15
Capinitan	Sitio	Amburayan Subprovince	198	17	04	120	34
Capintalan	Barrio	Nueva Vizcaya	216	16	10	121	00
Capitan	Barrio	Cagayan	118	17	45	121	45
Capitan	Sitio	Bataan	94	14	40	120	28
Capitancillo	Island.	Cebu	138	11	00	124	05
Capitangan.	Barrio	Bataan	94	14	42	120	32
CAPIZ.	Province	Capiz	130	11	30	122	30
Capiz.	Province	Philippine Islands	72	11		123	
Capiz.	Capital	Capiz	130	11	35	122	45
Capiz.	Capital, Capiz	Philippine Islands	72	12		123	
Capnoyan	Island.	Palawan (N)	228	10	40	121	00
Capones.	Islands.	Zambales	274	14	55	120	02
Caponga	Barrio.	Benguet Subprovince	202	16	31	120	38
Capon Grande	Island.	Zambales	274	14	55	120	01
Capoccan	Municipality.	Leyte	186	11	20	124	40
Capotoan.	Mountain	Samar	248	12	10	125	00
Capual.	Island.	Sulu	258	6	00	121	25
Capucao	Sitio.	Misamis	194	8	10	123	35
Capul.	Island.	Samar	248	12	25	124	10
Capul.	Municipality.	Samar	248	12	25	124	10
Capuluán.	Barrio	Tayabas (S)	270	13	45	122	30
Caput.	Sitio.	Bataan	94	14	38	120	32
Caputatan.	Barrio	Camarines Sur	126	13	45	123	51
Caputatan.	Barrio	Cavite	134	14	11	120	44
Caraballo.	Mountains.	Nueva Ecija	212	16	07	121	00
Caraballo.	Mountains.	Nueva Vizcaya	216	16	10	121	05
Caraballo.	Mountains.	Relief.	72	16		121	
Carabang.	Island.	Camarines Sur	126	13	40	122	47
Carabao.	Island.	Cavite	134	14	16	120	37
Carabao.	Island.	Romblon	244	12	05	121	55
Caraga.	Bay	Davao	154	7	20	126	30
Caraga.	Municipality.	Davao	154	7	20	126	30
Caragnag.	Barrio	Albay	86	13	37	124	06
Caraisan	Barrio	Ilocos Sur	162	17	42	120	27
Caramay	Barrio	Palawan (N)	228	10	10	119	10
Caramoan.	Peninsula.	Camarines Sur	126	13	50	123	35
Caramoan.	Municipality.	Camarines Sur	126	13	46	123	52
Caramoran.	Barrio	Albay	86	13	59	124	08
Carampao	Sitio.	Kalinga Subprovince.	208	17	19	121	32
Caramutan	Barrio	Tarlac	266	15	27	120	43
Caran.	Sitio	Palawan (N)	228	10	30	120	00
Caranan	Barrio	Camarines Sur	126	13	31	123	01
Caranas.	Barrio	Iloilo	166	10	55	122	30
Carandaga.	Island.	Palawan (N)	228	10	40	120	10
Carangan.	Barrio	Misamis	194	8	10	123	50
Carangian	Barrio	Tarlac	266	15	29	120	34
Carangian	Barrio	Samar	248	12	30	124	30
Carao.	Barrio	Benguet Subprovince	202	16	31	120	51
Caratan.	Sitio.	Apayao Subprovince.	200	18	14	121	35
Carayacay.	Barrio	Samar	248	12	05	125	10
Carayman.	Barrio	Samar	248	12	05	124	40
Carcar	Municipality.	Cebu	138	10	05	123	40
Cardis	Barrio	Benguet Subprovince	202	16	35	120	27
Cardona	Municipality.	Rizal	240	14	29	121	14
Cardona.	Barrio	Tarlac	266	15	35	120	35
Caribquib	Barrio	Ilocos Norte	158	18	01	120	40
Caridad.	Barrio	Cavite	134	14	28	120	53
Caridad.	Barrio	Leyte	186	10	50	124	45
Caridad.	Barrio	Leyte	186	10	15	124	45
Caridad.	Barrio	Samar	248	11	10	125	35
Caridad.	Barrio	Surigao	262	9	25	126	05
Carigara	Bay	Leyte	186	11	25	124	40
Carigara	Municipality.	Leyte	186	11	20	124	40
Caringo	Island.	Camarines Norte	122	14	03	123	06
Carifio	Barrio	Tarlac	266	15	39	120	36
Carisac.	Barrio	Albay	86	13	18	123	28
Caritan	Sitio.	Antique	90	11	00	122	00
Carlatan	Barrio	La Union	182	16	38	120	19
Carlota.	Island.	Romblon	244	13	00	121	55
Carmelo.	Barrio	Antique	90	10	50	122	05
Carmelo.	Barrio	Cebu	138	10	45	123	50
Carmelo.	Sitio.	Davao	154	7	20	126	20
Carmen	Port	Cebu	138	10	35	124	00
Carmen	Municipality.	Bohol	106	9	50	124	12

Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
				° /	° /
Carmen	Municipality	Cebu	138	10 35	124 00
Carmen	Barrio	Agusan	82	9 00	125 15
Carmen	Barrio	Capiz	130	11 21	122 37
Carmen	Barrio	Cavite	134	14 13	121 01
Carmen	Barrio	Nueva Ecija	212	15 27	120 50
Carmen	Barrio	Occidental Negros	220	10 25	122 55
Carmen	Barrio	Pampanga	232	15 00	120 32
Carmen	Barrio	Romblon	244	12 40	122 10
Carmen	Barrio	Surigao	262	9 15	126 00
Carmen	Sitio	Davao	154	7 50	126 20
Carmen	Mineral Spring	Camarines Norte	122	14 12	122 33
Carmona	Municipality	Cavite	134	14 19	121 03
Carnasa	Island	Cebu	138	11 30	124 05
Carogo	Island	Sorsogon (S)	252	12 11	123 15
Carolán	Sitio	Occidental Negros	220	9 55	122 55
Carolina	Sitio	Occidental Negros	220	11 00	123 10
Carolinás	Barrio	Camarines Sur	126	13 40	123 17
Caronan	Hill	Bulacan	114	15 12	121 09
Carot	Barrio	Pangasinán	236	16 21	119 59
Carpenito	Barrio	Surigao	262	8 25	126 20
Carranglan	Municipality	Nueva Ecija	212	15 58	121 04
Carranglan	Mountain	Nueva Ecija	212	15 56	121 01
Carrascal	Municipality	Surigao	262	9 20	125 55
Carriado	Barrio	Sorsogon (N)	252	12 42	124 02
Carsuan	Barrio	Abra	78	17 33	120 30
Cartagena	Sitio	Occidental Negros	220	9 50	122 25
Carupian	Barrio	Cagayan	118	18 00	121 45
Caruray	Barrio	Palawan (S)	228	10 20	119 00
Casamata	Barrio	Iloilo	166	11 10	123 00
Casanayan	Barrio	Capiz	130	11 31	123 03
Casandig	Barrio	Samar	248	11 50	125 05
Casantaan	Barrio	La Unión	182	16 16	120 24
Casauman	River	Davao	154	7 10	126 20
Caset	Sitio	Ilocos Sur	162	17 50	120 31
Casibu	Rancheria	Nueva Vizcaya	216	16 23	121 13
Casicallan	Rancheria	Apayao Subprovince	200	18 12	121 35
Casicallan	Barrio	Cagayan	118	18 05	121 40
Casiguran	Sound	Nueva Vizcaya	216	16 05	122 00
Casiguran	Sound	Tayabas (N)	270	16 10	122 05
Casiguran	River	Amburayan Subprovince	198	16 43	120 30
Casiguran	Municipality	Sorsogon (N)	252	12 52	124 00
Casiguran	Municipality	Tayabas (N)	270	16 15	122 10
Casihagen	Rancheria	Nueva Vizcaya	216	16 10	121 16
Casilagan	Barrio	Ilocos Sur	162	17 28	120 33
Casilagan	Barrio	La Unión	182	16 15	120 29
Casili	Rancheria	Apayao Subprovince	200	18 10	121 35
Casiligan	Barrio	Mindoro	190	13 05	121 25
Casini	Sitio	Sorsogon (N)	252	12 41	124 00
Casirahan	Island	Palawan (N)	228	10 40	120 20
Caslama	Mountain	Ilocos Norte	158	18 08	120 56
Casogoran	Bay	Samar	248	10 45	125 45
Castanos	Barrio	Cavite	134	14 09	120 50
Castilla	Municipality	Sorsogon (N)	252	12 57	123 53
Castillejos	Municipality	Zambales	274	14 56	120 12
Castillo	Barrio	Batangas	102	13 53	121 16
Casul	Barrio	Misamis	194	8 35	123 35
Casusan	Barrio	Misamis	194	8 25	123 50
Cataban	Sitio	Palawan (N)	228	11 00	119 20
Catabangan	Barrio	Camarines Sur	126	13 53	122 39
Catabayungan	Barrio	Isabela	170	17 25	121 45
Catablangan	Rancheria	Apayao Subprovince	200	17 47	121 10
Catabogan	Sitio	Kalinga Subprovince	208	17 39	121 24
Catadungan	Sitio	Samar	248	11 25	125 25
Catagbacan	Barrio	Bohol	106	9 51	123 49
Catagdaan	Barrio	Bohol	106	9 53	124 23
Cataingan	Municipality	Sorsogon (S)	252	12 00	124 00
Catalaban	Island	Samar	248	11 50	125 30
Catalangan	River	Isabela	170	16 55	122 10
Catalangan	Sitio	Isabela	170	17 00	122 05
Cataluan	Mountain	Apayao Subprovince	200	18 27	121 00
Cataluan	Mountain	Mountain Province	196	18 30	121 00
Catanagan	Barrio	Camarines Sur	126	13 49	123 46
Catanauan	Municipality	Tayabas (S)	270	13 35	122 20
Catandaan	Barrio	Batangas	102	14 05	120 41
Catanduanes	Subprovince	Albay	86	13 45	124 15
Catanduanes	Island	Albay	86	13 45	124 15
Catanduanes	Island	Philippine Islands	72	14	124
Catang	Island	Bohol	106	9 58	123 55
Catarman	Municipality	Misamis	194	9 05	124 40

Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
Catarman	Municipality	Samar	248	12 30	124 40
Catarman	Barrio	Cebu	138	10 25	124 00
Catarman	Point	Davao	154	8 00	126 30
Catayagan	Sitio	Ilocos Sur	162	17 08	120 27
Catbalogan	Capital	Samar	248	11 45	124 55
Catbalogan	Capital, Samar	Philippine Islands	72	12	125
Catburauan	Sitio	Albay	86	13 01	123 19
Catburauan	Mountain	Albay	86	13 04	123 20
Cateel	Bay	Davao	154	7 50	126 30
Cateel	Municipality	Davao	154	7 50	126 30
Cateel	River	Davao	154	7 40	126 20
Catengan	Sitio	Lepanto Subprovince	210	17 04	120 50
Caterman	Barrio	Ilocos Sur	162	17 13	120 25
Catibac	Barrio	Misamis	194	9 10	124 35
Catigbian	Barrio	Bohol	106	9 51	124 00
Catihan	Sitio	Surigao	262	9 05	125 55
Catimo	Barrio	Tayabas (S)	270	13 55	122 30
Catiningan	Barrio	Mindoro	190	13 05	121 25
Catlubong	Barrio	Benguet Subprovince	202	16 43	120 51
Catmon	Municipality	Cebu	138	10 45	124 00
Catmon	Barrio	Bulacan	114	14 49	121 00
Catmon	Barrio	Leyte	186	11 30	124 25
Catmon	Barrio	Leyte	186	11 05	124 35
Catmon	Mountain	Lanao	178	8 05	123 50
Catmondaan	Barrio	Cebu	138	10 40	124 00
Catubig	Municipality	Samar	248	12 25	125 00
Catubig	River	Samar	248	12 25	125 00
Catugan	Barrio	Bohol	106	9 38	124 13
Catugan	Barrio	Cagayan	118	18 10	121 40
Catundulan	Point	Sorsogon (N)	252	12 56	123 32
Caturay	Barrio	Tarlac	266	15 38	120 36
Caul	Mountain	Benguet Subprovince	202	16 26	120 53
Cauayan	Island	Palawan (N)	228	11 10	120 40
Cauayan	Municipality	Isabela	170	16 55	121 45
Cauayan	Municipality	Occidental Negros	220	10 00	122 35
Cauayan	Barrio	Albay	86	13 04	123 50
Cauayan	Barrio	Capiz	130	11 37	122 28
Cauayan	Barrio	Cebu	138	9 50	123 30
Cauayan	Barrio	Leyte	186	11 20	124 55
Cauayan	Barrio	Leyte	186	10 15	125 05
Cauayan	Barrio	Misamis	194	8 35	123 35
Cauayan	Barrio	Pampanga	232	15 09	120 40
Cauayan	Barrio	Samar	248	12 30	124 40
Cauayan	Barrio	Sorsogon (N)	252	12 23	123 35
Cauayan	Barrio	Sorsogon (S)	252	12 23	123 35
Cauayan	Barrio	Tayabas (S)	270	13 20	122 30
Cauayan	Sitio	Romblon	244	12 40	122 10
Cauayan	Sitio	Sorsogon (S)	252	11 56	123 47
Cauayanbugtung	Barrio	Pampanga	232	15 12	120 55
Caubyan	Islands	Bohol	106	10 17	124 11
Cauggan	Barrio	Abra	78	17 35	120 33
Cauit	Island	Camarines Sur	126	13 47	123 16
Cauit	Point	Rizal	240	14 25	121 14
Cauit	Point	Surigao	262	9 20	126 10
Cauitan	Mountain	Kalinga Subprovince	208	17 16	121 00
Caupasan	Barrio	Abra	78	17 41	120 39
Caut	Barrio	Tarlac	266	15 25	120 43
Cautit	Sitio	Abra	78	17 32	120 35
Cavili	Island	Palawan (N)	228	9 20	120 50
Cavili	Island	Philippine Islands	72	9	121
Cavinitan	Barrio	Albay	86	13 35	124 12
Cavinti	Municipality	Laguna	174	14 15	121 30
CAVITE	Province	Cavite	134	14 15	120 50
Cavite	Province	Philippine Islands	72	14	121
Cavite	Capital	Cavite	134	14 29	120 55
Cawayan	Capital, Cavite	Philippine Islands	72	14	121
Cawayan	Barrio	Ifugao Subprovince	206	16 38	121 05
Cawayan	Sitio	Nueva Vizcaya	216	15 58	121 21
Cawit	Point	Romblon	244	12 15	122 40
Cayambanan	Barrio	Pangasinan	236	16 00	120 36
Cayang	Barrio	Cebu	138	11 05	124 00
Cayapa	Barrio	Amburayan Subprovince	198	16 49	120 38
Cayapa	Barrio	Ifugao Subprovince	206	16 51	121 02
Cayapo	Mountain	Bataan	94	14 32	120 32
Caybobo	Point	Bataan	94	14 30	120 32
Caylaway	Barrio	Batangas	102	14 09	120 37
Caypayi	Mountain	Rizal	240	14 43	121 16
CAYUS	Barrio	Lepanto Subprovince	210	17 10	120 40
CEBU	Province	Cebu	138	10	124
Cebu	Island	Philippine Islands	72	10	124

Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
				° ' "	° ' "
Cebu	Capital.	Cebu	138	10 20	123 55
Cebu	Capital, Cebu	Philippine Islands	72	10	124
Celebes	Sea	Philippine Islands	72	5	123
Cerna	Barrio	Ilocos Sur	162	17 31	120 24
Cervantes	Capital	Lepanto Subprovince	210	16 59	120 44
Cervantes	Township	Mountain Province	196	17 00	120 45
Cervantes	Barrio	Occidental Negros	220	10 50	123 30
Cervantes	Barrio	Samar	248	12 20	124 40
Cetaceo	Mountain	Cagayan	118	17 45	122 05
Cetaceo	Mountain	Relief	72	18	122
Chakalan	Sitio	Cotabato	150	5 50	125 25
Chaua	Sitio	Batanes	98	20 26	121 58
Chavaiyan	Barrio	Batanes	98	20 18	121 53
Chico	Island	Sorsogon (S)	252	11 55	123 36
Chico	River	Amburayan Subprovince	198	16 57	120 34
Chico	River	Bontoc Subprovince	204	17 13	121 06
Chico	River	Cagayan	118	17 40	121 30
Chico	River	Kalinga Subprovince	208	17 30	121 26
Chico	River	Mountain Province	196	17 15	121 05
Chico Pampanga	River	Nueva Ecija	212	15 15	120 46
Chico Pampanga	River	Tariac	266	15 25	120 45
Chinapuliran	Sitio	Batanes	98	20 45	121 50
Chinela	Island	Capiz	130	11 44	123 00
Chomaldos	Barrio	Nueva Vizcaya	216	16 19	120 50
Cimarron	Islets	Camarines Sur	126	14 03	123 30
Cinco Picos	Mountain	Zambales	274	14 47	120 09
Clarín	Municipality	Bohol	106	9 57	124 01
Claver	Barrio	Surigao	262	9 35	125 45
Claveria	Municipality	Cagayan	118	18 35	121 05
Claveria	Municipal district	Bukidnon	110	8 40	124 55
Claveria	Barrio	Sorsogon (N)	252	12 54	123 15
Klawit (See Klawit)	Mountain	Lepanto Subprovince	210	15 58	120 58
Cleopatra Needle	Mountain	Palawan (S)	228	10 10	119 00
Cleopatra Needle	Mountain	Relief	72	10	119
Clotilde	Rock	Philippine Islands	72	6	118
Coal Harbor	Anchorage	Albay	86	13 15	123 55
Coamen	Island	Bohol	106	10 07	123 59
Cobo	Barrio	Albay	86	14 01	124 08
Cobrador	Island	Romblon	244	12 40	122 15
Cobre	Island	Sorsogon (S)	252	11 57	123 38
Coco	Island	Zamboanga	278	6 45	122 15
Coco	Barrio	Camarines Sur	126	13 33	123 01
Cocoro	Island	Palawan (N)	228	10 50	121 10
Codon	Barrio	Albay	86	13 40	124 02
Codoog	Barrio	Ilocos Sur	162	17 27	120 31
Cogon	Barrio	Capiz	130	11 36	122 47
Cogon	Barrio	Capiz	130	11 31	122 49
Cogon	Sitio	Romblon	244	12 05	121 55
Cogonon	Barrio	Bukidnon	110	8 10	124 45
Cogton	Mountain	Bohol	106	9 57	124 29
Cogton	Mountain	Relief	72	10	124
Colapnit	Barrio	Camarines Sur	126	13 45	123 48
Colapsin	Point	Davao	154	6 40	125 30
Colaylayan	Sitio	Palawan (N)	228	11 20	119 50
Coliog	Barrio	Abra	78	17 42	120 45
Colipapa	Barrio	Occidental Negros	220	9 30	122 35
College of Agriculture	University of Philippine Islands	Laguna	174	14 10	121 15
Colo	Barrio	Ilocos Norte	158	18 00	120 32
Colocoito	Bay	Batangas	102	13 42	121 27
Colocoto Rocks	Islets	Palawan (N)	228	12 30	120 00
Coloncogong	Barrio	Camarines Sur	126	13 43	123 58
Colorada	Point	Sorsogon (N)	252	12 33	123 23
Colorada	Point	Sorsogon (S)	252	12 33	123 23
Colorado	Barrio	Agusan	82	9 20	125 35
Colos	Sitio	Lepanto Subprovince	210	16 52	120 47
Colubot	Barrio	Tarlac	266	15 47	120 35
Colvo	Barrio	Batangas	102	13 47	120 56
Comas	Island	Pangasinan	236	16 09	120 07
Comillas	Barrio	Tarlac	266	15 25	120 42
Comillas	Sitio	Lepanto Subprovince	210	16 57	120 45
Comiran	Island	Palawan (S)	228	7 50	117 10
Compol	Barrio	Misamis	194	9 10	124 40
Compostela	Municipality	Cebu	138	10 25	124 00
Compostela	Barrio	Cebu	138	9 45	123 25
Compostela	Barrio	Davao	154	7 40	126 00
Comun	Barrio	Albay	86	13 08	123 39
Concepcion	Bay	Iloilo	166	11 15	123 05
Concepcion	Municipality	Romblon	244	12 55	121 45
Concepcion	Municipality	Tarlac	266	15 20	120 39

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Concepcion	Township	Lepanto Subprovince	210	17	08	120	37
Concepcion	Township	Mountain Province	196	17	10	120	35
Concepcion	Barrio	Capiz	130	11	17	122	36
Concepcion	Barrio	La Union	182	16	13	120	28
Concepcion	Barrio	Leyte	186	10	25	124	45
Concepcion	Barrio	Leyte	186	10	10	125	00
Concepcion	Barrio	Nueva Ecija	212	15	38	120	46
Concepcion	Barrio	Nueva Ecija	212	15	26	120	48
Concepcion	Barrio	Occidental Negros	220	10	40	123	05
Concepcion	Barrio	Pampanga	232	14	57	120	35
Concepcion	Barrio	Romblon	244	12	25	122	05
Concepcion	Barrio	Samar	248	12	15	125	15
Concepcion	Barrio	Samar	248	11	55	125	05
Concepcion	Barrio	Tayabas (S)	270	14	00	122	00
Concepcion	Barrio	Tayabas (S)	270	13	55	122	15
Conconig	Barrio	Hocos Sur	162	17	07	120	27
Concord	Municipal district	Samar	248	11	50	125	15
Concordia	Municipal district	Agusan	82	8	40	125	35
Concordia	Barrio	Pangasinan	236	16	02	119	48
Conde	Barrio	Batangas	102	13	44	121	06
Conde	Barrio	Batangas	102	13	41	121	08
Cone	Mountain	Batangas	122	13	59	122	58
Congcong	Mountain	Camiguines Norte	90	10	40	122	10
Conner	Township	Apayao Subprovince	200	17	48	121	19
Conner	Township	Mountain Province	196	17	50	121	20
Consolacion	Barrio	Cebu	138	10	25	124	00
Consolacion	Barrio	Leyte	186	10	25	125	00
Consolacion	Barrio	Surigao	262	9	40	126	00
Constancia	Barrio	Holo	166	10	35	122	40
Consuegra	Barrio	Leyte	186	11	20	124	30
Consuelo	Barrio	Cebu	138	10	40	124	20
Consuelo	Barrio	Surigao	262	9	20	126	00
Consuelo	Sitio	Misamis	194	8	55	125	10
Conversion	Barrio	Nueva Ecija	212	15	53	121	08
Conwap	River	Nueva Vizcaya	216	16	07	121	25
Copia	Island	Davao	154	7	20	125	50
Coral	Sitio	Palawan (S)	228	8	30	117	20
Corcuera	Barrio	Romblon	244	12	45	122	00
Cordillera Central	Mountain Range	Lepanto Subprovince	210	17	08	120	53
Cordillera Central	Mountain Range	Mountain Province	196	17	30	121	00
Cordillera Central	Mountain Range	Relief	72	17		121	
Cordon	Barrio	Isabela	170	16	40	121	30
Cordova	Municipality	Cebu	138	10	15	123	55
Cordova	Barrio	Cagayan	118	17	45	121	40
Corella	Municipality	Bohol	106	9	41	123	55
Corinto	Municipal district	Agusan	82	8	45	125	30
Coro	Barrio	Cebu	138	9	45	123	30
Coron	Island	Palawan (N)	228	11	50	120	20
Coron	Township	Palawan (N)	228	12	00	120	10
Coronado	Bay	Zamboanga	278	8	00	122	10
Coronel	Sitio	Nueva Ecija	212	15	34	121	06
Coronon	Barrio	Davao	154	6	50	125	30
Corral Iloco	Barrio	Tarlac	266	15	41	120	38
Corregidor	Island	Cavite	134	14	23	120	35
Corrooy	Barrio	Amburayan Subprovince	193	16	48	120	26
Corte	Barrio	Bohol	106	10	07	124	09
Corte	Barrio	Cebu	138	10	35	124	00
Cortes	Municipality	Bohol	106	9	43	123	53
Cortes	Barrio	Surigao	262	9	15	126	10
Corumi	Sitio	Palawan (S)	228	8	50	118	00
Cosina	Barrio	Bukidnon	110	8	10	124	45
Costa Rica	Barrio	Sorsogon (N)	252	12	26	123	43
Costa Rica	Barrio	Sorsogon (S)	252	12	26	123	43
COTABATO	Province	Cotabato	150	7	00	124	40
Cotabato	Province	Philippine Islands	72	7		125	
Cotabato	Capital	Cotabato	150	7	15	124	15
Cotabato	Capital, Cotabato	Philippine Islands	72	7		124	
Cotecot	Sitio	Antique	90	10	50	121	55
Coteuton	Barrio	Tayabas (S)	270	13	35	122	15
Cotmo	Barrio	Camarines Sur	126	13	28	123	09
Cotta	Barrio	Tayabas (S)	270	13	55	121	35
Cresta	Mountain	Isabela	170	17	20	122	05
Cresta de Gallo	Island	Romblon	244	12	10	122	40
Cruz	Islands	Davao	154	7	10	125	50
Cruz	Mountain	Bulacan	114	14	56	121	10
Cruz na Daan	Sitio	Bulacan	114	15	02	120	56
Cuapo	Sitio	Kalinga Subprovince	208	17	24	121	08
Cuatro	Islands	Leyte	186	10	30	124	40
Cuba	Barrio	Benguet Subprovince	202	16	37	120	37
Cubag	Barrio	Isabela	170	17	25	121	45

Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
				° /	° /
Cubay	Barrio	Antique	90	11 05	122 05
Cubay	Barrio	Iloilo	166	10 35	122 05
Cubcubbuot	Barrio	Ilocos Sur	162	17 10	120 30
Cubol	Barrio	Ilocos Norte	158	18 00	120 31
Cudian	Barrio	Capiz	130	11 33	122 42
Cuenca	Municipality	Batangas	102	13 54	121 03
Cuenca	Barrio	Benguet Subprovince	202	16 15	120 30
Cuernos de Negros	Mountain	Oriental Negros	224	9 15	123 10
Cuernos de Negros	Volcano, dormant	Relief	72	9	123
Cueva	Point	Sorsogon (N)	252	13 07	122 56
Cuevas	Municipal district	Agusan	82	8 00	126 05
Cugunan	Barrio	Batangas	102	14 03	120 39
Culao	Barrio	Ilocos Norte	158	18 04	120 42
Culasan	Sitio	Kalinga Subprovince	208	17 31	121 24
Culasi	Municipality	Antique	90	11 25	122 05
Culasi	Barrio	Camarines Norte	122	13 56	123 05
Culasi	Barrio	Capiz	130	11 37	122 43
Culasi	Barrio	Cebu	138	9 30	123 20
Culasi	Barrio	Iloilo	166	11 05	123 00
Culasi	Barrio	Leyte	186	11 25	124 30
Culasi	Point	Camarines Norte	122	13 59	123 05
Culasian	Barrio	Leyte	186	11 20	124 35
Culasian	Sitio	Palawan (S)	228	8 50	117 30
Culebra	Island	Batangas	102	13 38	120 57
Culebra	Island	Iloilo	166	11 20	123 15
Culebra	Island	Pangasinan	236	15 53	119 47
Culiag	Sitio	Camarines Norte	122	14 12	122 34
Culianin	Barrio	Bulacan	114	14 55	120 54
Culiculi	Barrio	Rizal	240	14 33	121 00
Culili	Point	Ilocos Norte	158	18 05	120 28
Culili	Barrio	Amburayan Subprovince	198	16 49	120 34
Culion	Island	Palawan (N)	228	11 50	120 00
Culion	Island	Philippine Islands	72	12	120
Culion	Township	Palawan (N)	228	11 50	120 00
Culipat	Barrio	Tarlac	266	15 30	120 37
Cullabeng	Barrio	Ilocos Norte	158	17 58	120 31
Cullalabo	Sitio	Isabela	170	17 05	121 05
Cumanchil	Mountain	Bontoc Subprovince	204	17 15	121 40
Cumu	Barrio	Isabela	170	16 45	121 45
Cumubao	Sitio	Isabela	170	17 20	121 55
Cunalom	Barrio	Leyte	186	10 30	124 45
Cunilan	Island	Sulu	258	6 05	120 30
Cunsad	Barrio	Iloilo	166	11 00	122 25
Cupang	Barrio	Batangas	102	13 51	120 59
Cupang	Barrio	La Union	182	16 16	120 23
Cupang	Barrio	Rizal	240	14 26	121 03
Curag	Sitio	Isabela	170	17 00	121 35
Currimao	Barrio	Ilocos Norte	158	18 01	120 29
Curuan	Sitio	Zamboanga	278	7 10	122 15
Cutcut	Barrio	Pampanga	232	15 08	120 35
Cutcut	Barrio	Tarlac	266	15 20	120 35
Cutcutan	Barrio	Bohol	106	9 36	124 14
Cutud	Barrio	Pampanga	232	15 11	120 37
Cutug	Sitio	Nueva Vizcaya	216	16 30	121 10
Cuyab	Barrio	Laguna	174	14 23	121 04
Cuyapo	Municipality	Nueva Ecija	212	15 47	120 40
Cuyo	Islands	Palawan (N)	228	11 00	121 00
Cuyo	Islands	Philippine Islands	72	11	121
Cuyo	Township	Palawan (N)	228	10 50	121 00
Cuyo West	Pass	Palawan (N)	228	11 10	120 30
D.					
Daan Bantayan	Municipality	Cebu	138	11 15	124 00
Daanglungsod	Barrio	Cebu	138	9 20	123 25
Daanglungsod	Barrio	Misamis	194	8 50	125 10
Daap	Sitio	Zamboanga	278	7 05	122 10
Daat	Sitio	Bohol	106	10 06	124 15
Dabburab	Barrio	Isabela	170	16 55	121 50
Dacanlao	Barrio	Batangas	102	13 56	120 47
Dacligan	Sitio	Ifugao Subprovince	206	16 49	121 07
Daco	Island	Oriental Negros	224	9 35	123 10
Daco	Island	Surigao	262	9 45	126 10
Daco	Sitio	Sorsogon (S)	252	12 19	123 42
Dacudac	Barrio	Lepanto Subprovince	210	16 54	120 49
Dadaeman	Sitio	Ilocos Norte	158	18 19	120 38
Dadalaquiten	Barrio	Ilocos Sur	162	17 53	120 27
Dadas	Sitio	Cotabato	150	7 15	124 30
Daet	Capital	Camarines Norte	122	14 07	122 57
Daet	Capital, Camarines Norte	Philippine Islands	72	14	123

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Daga	Barrio	Occidental Negros	220	11	00	123	15
Dagambaan	Barrio	Bukidnon	110	8	10	124	40
Dagami	Municipality	Leyte	186	11	05	124	55
Dagang	Barrio	Camarines Norte	122	14	14	122	47
Dagao	Sitio	Apayao Subprovince	200	18	28	121	17
Dagao	Sitio	Bukidnon	110	7	50	125	15
Dagatan	Barrio	Batangas	102	13	44	121	12
Dagat Rocks	Islets	Albay	86	13	59	123	59
Daggan	Rancheria	Nueva Vizcaya	216	16	04	121	27
Dagman	Sitio	Lepanto Subprovince	210	17	07	120	40
Dagot	Mountain	Abra	78	17	50	120	42
Daguoman	Municipal district	Abra	78	17	27	120	55
Daguif	Sitio	Camarines Norte	122	14	11	122	40
Dagulaan	Point	Lanao	178	7	50	123	40
Dagumbuan	Barrio	Bukidnon	110	7	50	125	00
Dagumo	Mountain	Cotabato	150	6	35	124	20
Dagundo	Mountain	Relief	72	6		124	
Dagundalahon	Barrio	Bukidnon	110	8	10	124	45
Dagupan	Municipality	Pangasinan	236	16	03	120	20
Dagupan	Barrio	Benguet Subprovince	202	16	17	120	30
Daha	Barrio	Capiz	130	11	34	122	18
Daha	Barrio	Leyte	186	11	25	124	15
Dahakit	Point	Surigao	262	9	35	126	00
Dahat	Barrio	Camarines Sur	126	13	46	123	29
Dahican	Bay	Camarines Norte	122	14	19	122	37
Dahican	Sitio	Camarines Norte	122	14	18	122	37
Dahikan	Sitio	Laguna	174	14	18	121	30
Dain	Sitio	Lepanto Subprovince	210	17	00	120	43
Dait	Barrio	Bohol	106	10	03	124	06
Dakalan	Barrio	Kalinga Subprovince	208	17	13	121	13
Daklan	Barrio	Benguet Subprovince	202	16	31	120	38
Daklan	Barrio	Benguet Subprovince	202	16	31	120	50
Dalaga	Mountain	Laguna	174	13	59	121	15
Dalaguet	Municipality	Cebu	138	9	45	123	30
Dalalu Rest House	Lodging	Ifugao Subprovince	206	16	56	121	23
Dalama	Barrio	Lanao	178	8	00	124	05
Dalanaoan	Barrio	Zambales	274	15	00	120	16
Dalanganem	Island	Palawan (N)	228	10	40	120	10
Dalapanap*	Barrio	Bontoc Subprovince	204	17	12	121	25
Dalaulg	Barrio	Cagayan	118	18	00	121	45
Dalawa	Barrio	Amburayan Subprovince	198	16	54	120	31
Dalaya	Barrio	Cagayan	118	18	20	121	45
Dalayap	Barrio	Pampanga	232	15	04	120	53
Dalayap	Barrio	Pampanga	232	15	01	120	52
Dalayauan	Barrio	Palawan (N)	228	10	30	120	00
Daldalao	Sitio	Abra	78	17	26	120	50
Daldalayap	Barrio	Tarlac	266	15	42	120	20
Dalena	Barrio	Isabela	170	17	30	121	50
Dalhogan	Barrio	Camarines Sur	126	13	43	123	39
Dahao	Barrio	Davao	154	7	00	125	30
Dalig	Barrio	Batangas	102	13	56	120	42
Dalig	Barrio	Bulacan	114	14	51	120	55
Dalig	Barrio	Rizal	240	14	29	121	14
Dalig	Barrio	Rizal	200	18	13	121	04
Dahigan	Rancheria	Apayao Subprovince	200	18	13	121	04
Dahigan	Barrio	Camarines Sur	126	13	56	123	18
Dahikan	Barrio	Bontoc Subprovince	204	17	08	120	55
Dahimag	Sitio	Abra	78	17	29	120	36
Dahingding	Sitio	Cebu	138	11	15	124	00
Dalingoan	Barrio	Amburayan Subprovince	198	16	49	120	40
Dalipid	Barrio	Capiz	130	11	32	122	27
Dalipey	Barrio	Amburayan Subprovince	198	16	47	120	35
Dalipey	Barrio	Lepanto Subprovince	210	16	48	120	43
Dalipuga	Sitio	Lanao	178	8	20	124	15
Dalirig	Barrio	Bukidnon	110	8	20	124	55
Dalit	Barrio	Abra	78	17	21	120	34
Dallawas	Rancheria	Apayao Subprovince	200	18	11	121	03
Dallipaoen	Barrio	La Union	182	16	32	120	22
Dallog	Sitio	Ifugao Subprovince	206	16	57	121	22
Dalnacan	Sitio	Kalinga Subprovince	208	17	22	121	24
Daluangan	Barrio	Bukidnon	110	8	05	125	05
Dalupaon	Barrio	Camarines Sur	126	13	33	122	57
Dalupiri	Island	Cagayan	118	19	05	121	15
Dalupiri	Island	Philippine Islands	72	19		121	
Dalupiri	Island	Samar	248	12	25	124	15
Dalupirip	Sitio	Benguet Subprovince	202	16	20	120	44
Dam	Manila Water Supply	Rizal	240	14	44	121	11
Damag	Barrio	Ifugao Subprovince	206	17	01	121	19
Damag	Pass	Ifugao Subprovince	206	17	01	121	16

Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
Damanit	River	Abra	78	17 19	120 48
Dambo	Barrio	Laguna	174	14 23	121 24
Damilisan	Barrio	Iloilo	166	10 40	122 10
Dammang	Barrio	Isabela	170	16 40	121 40
Dammay	Barrio	Ilocos Sur	162	17 30	120 24
Dammi	Island	Sulu	258	5 50	120 25
Damolog	Barrio	Bukidnon	110	7 25	124 55
Damortis	Barrio	La Union	182	16 14	120 24
Dampalit	Barrio	Rizal	240	14 41	120 57
Dampig	Barrio	Ilocos Norte	158	18 33	120 49
Dampil	Sitio	Misamis	194	8 50	124 45
Dampol 1 ^o	Barrio	Bulacan	114	14 54	120 50
Dampol 2 ^o	Barrio	Bulacan	114	14 55	120 50
Danac	Municipal district	Abra	78	17 24	120 52
Danaili	Barrio	Cagayan	118	18 25	121 25
Dananao	Barrio	Bontoc Subprovince	204	17 16	121 07
Danao	Lake	Leyte	186	11 05	124 40
Danao	Municipality	Cebu	138	10 30	124 00
Danao	Barrio	Bohol	106	10 00	124 15
Danao	Barrio	Bohol	106	9 47	124 23
Danao	Barrio	Romblon	244	12 30	122 40
Danao	Barrio	Sorsogon (N)	252	12 44	123 51
Danao	Sitio	Sorsogon (S)	252	11 57	123 09
Danao	Sitio	Tayabas (S)	270	13 15	122 00
Danar	Barrio	Ilocos Sur	162	17 15	120 26
Dancalan	Barrio	Camainas Norte	122	14 13	122 51
Dancalan	Barrio	Occidental Negros	220	10 00	122 45
Dancalan	Barrio	Sorsogon (N)	252	12 55	123 35
Dancalan	Barrio	Tayabas (S)	270	13 50	122 30
Dandolit	Sitio	Palawan (S)	228	8 40	117 20
Danco-Saklit	Barrio	Bontoc Subprovince	204	17 12	121 03
Danganun	Sitio	Zamboanga	278	7 30	122 05
Dangas	Sitio	Albay	86	13 51	124 18
Dangas	Mountain	Zambales	274	14 56	120 23
Dangdangla	Barrio	Abra	78	17 36	120 38
Dangdangla	Barrio	La Union	182	16 41	120 22
Dangla	Rancheria	Apayao Subprovince	200	18 07	121 10
Danglas	Municipality	Abra	78	17 42	120 39
Dango	Sitio	Samar	248	12 25	122 15
Dangui	Rancheria	Nueva Vizcaya	216	16 07	121 00
Danicop	Barrio	Bohol	106	9 50	124 20
Danlalualan	Sitio	Davao	154	6 40	125 10
Danlig	Barrio	Palawan (N)	228	10 30	119 40
Dansalan	Capital	Lanao	178	8 00	124 20
Dansalan	Capital, Lanao	Philippine Islands	72	8	124
Dao	Municipality	Antique	90	10 30	121 55
Dao	Municipality	Capiz	130	11 23	122 41
Dao	Barrio	Batangas	102	14 01	120 46
Dao	Barrio	Bohol	106	9 35	123 49
Dao	Barrio	Pampanga	232	15 11	120 35
Daoangan	Barrio	Kalinga Subprovince	208	17 29	121 15
Dapa	Municipality	Surigao	262	9 45	126 05
Dapao	Barrio	Lanao	178	7 50	124 05
Dapao	Lake	Lanao	178	7 50	124 05
Dapauan	Barrio	Romblon	244	12 25	122 00
Dapdap	Barrio	Albay	86	13 13	124 02
Dapdap	Barrio	Capiz	130	11 46	122 16
Dapdap	Barrio	Cebu	138	10 50	124 30
Dapdap	Barrio	Iloilo	166	10 45	122 20
Dapdap	Barrio	Pampanga	232	15 13	120 37
Dapdap	Barrio	Samar	248	12 05	125 30
Dapdap	Barrio	Samar	248	11 55	124 45
Dapdap	Barrio	Sorsogon (S)	252	12 13	123 46
Dapdap	Barrio	Tayabas (S)	270	14 15	122 15
Dapdap	Barrio	Tayabas (S)	270	14 05	121 35
Dapitan	Municipality	Zamboanga	278	8 40	123 25
Dapitan	Bay	Zamboanga	278	8 40	123 20
Dapnan	Barrio	Davao	154	7 40	126 30
Dappig	Sitio	Isabela	170	16 25	121 45
Daquit	Barrio	Cebu	138	10 10	123 30
Daraga	Barrio	Albay	86	13 09	123 43
Daraga	Barrio	Sorsogon (S)	252	11 54	123 52
Daragutan	Sitio	Isabela	170	16 55	122 00
Daram	Island	Samar	248	11 40	124 45
Daram	Barrio	Samar	248	11 40	124 50
Darampua	Sitio	Cotabato	150	7 00	124 35
Daramuangan	Barrio	La Union	182	16 33	120 23
Darangan	Barrio	Rizal	240	14 30	121 11
Darao	Barrio	Ilocos Sur	162	17 45	120 29
Darapidap	Barrio	Ilocos Sur	162	17 12	120 25

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Darasa	Barrio	Batangas	102	14	04	121	09
Darasdas	Barrio	Ilocos Norte	158	18	07	120	48
Dardarat	Barrio	Amburayan Subprovince	198	16	58	120	26
Dardarat	Barrio	Ilocos Sur	162	17	47	120	25
Darigayos	Barrio	La Union	182	16	50	120	20
Darigayos	Point	La Union	182	16	50	120	20
Daron	Barrio	Davao	154	7	00	125	30
Darras	Rancheria	Apayao Subprovince	200	18	16	121	04
Darraena	Point	Ilocos Sur	162	17	46	120	24
Dasaan	Island.	Sulu	258	5	45	120	25
Dasay	Barrio	Ilocos Sur	162	17	24	120	30
Dasay	Barrio	La Union	182	16	40	120	24
Dasmariñas	Municipality.	Cavite	134	14	20	120	56
Dasol	Municipality.	Pangasinan	236	16	00	119	53
Dasol	Bay	Pangasinan	236	15	54	119	50
Dassalan	Island.	Zamboanga	278	6	45	121	30
Data	Barrio	Lepanto Subprovince	210	17	01	120	53
Data	Mountain	Benguet Subprovince	202	16	51	120	51
Data	Mountain	Ifugao Subprovince	206	16	51	120	51
Data	Mountain	Lepanto Subprovince	210	16	51	120	51
Data	Mountain	Mountain Province	196	16	50	120	50
Datacan	Barrio	Benguet Subprovince	202	16	34	120	37
Dato Mantaulil	Sitio.	Cotabato	150	7	10	124	55
Dato Unot	Sitio.	Cotabato	150	7	10	125	05
Datubato	Island.	Sulu	258	5	55	120	20
Dauajon	Island.	Leyte	186	11	15	124	20
Dauan	Sitio.	Davao	154	6	50	126	10
Daullican	Sitio.	Nueva Vizcaya	216	16	30	122	13
Dauin	Municipality.	Oriental Negros	224	9	10	123	15
Dauis	Municipality.	Bohol	106	9	38	123	52
Dauis	Barrio	Tayabas (S)	270	13	20	121	55
DAVAO	Province	Davao	154	7	00	126	00
Davao	Province	Philippine Islands	72	7		126	
Davao	Gulf	Davao	154	6	40	125	50
Davao	Gulf	Philippine Islands	72	6		125	
Davao	Capital.	Davao	154	7	00	125	40
Davao	Capital, Davao.	Philippine Islands	72	7		126	
Davao	River	Davao	154	7	20	125	30
Davila	Barrio	Ilocos Norte	158	18	28	120	35
Dawo	Barrio	Samar	248	12	20	124	30
Dayap	Barrio	Laguna	174	14	12	121	20
Dayhagan	Barrio	Sorsogon (N)	252	12	27	123	17
Dayhagan	Barrio	Sorsogon (S)	252	12	27	123	17
Dayni	Barrio	Cavite	134	14	12	120	50
Dayongdong	Sitio.	Romblon	244	12	40	122	10
Dayquitan	Barrio	Tayabas (S)	270	13	15	121	55
Deal	Point	Zamboanga	278	7	20	122	45
Deatobato	Island.	Sulu	258	5	55	120	05
Deet	Barrio	Abra	78	17	37	120	40
Deet	Barrio	Samar	248	12	20	124	50
De la Paz	Barrio	Batangas	102	13	39	121	08
De la Paz	Barrio	Laguna	174	14	21	121	05
De la Paz	Barrio	Laguna	174	14	11	121	32
De la Paz Plot	Barrio	Batangas	102	13	38	121	07
Delapena	Barrio	Iloilo	166	11	05	120	45
Del Carmen	Barrio	Camarines Norte	122	14	10	122	57
Delian	Island.	Palawan (N)	228	11	50	120	20
Del Monte	Point	Mindoro	190	13	30	120	25
Del Remedio	Barrio	Laguna	174	14	05	121	18
Del Rosario	Barrio	Pampanga	232	15	05	120	38
Delus	Sitio.	Cotabato	150	6	05	124	30
Deposed	Sitio	Batanes	98	20	44	121	53
Dequez	Island.	Batanes	98	20	21	121	48
Derap	Barrio	Ilocos Norte	158	18	32	120	37
Desolation	Point	Surigao	262	10	30	125	40
Despujols	Barrio	Misamis	194	8	35	124	30
Despujols	Barrio	Romblon	244	12	30	122	00
Destacado	Island.	Samar	248	12	15	124	05
Deugunug	Mountain	Nueva Ecija	212	16	01	121	10
Devilla	Barrio	Tayabas (S)	270	13	25	122	00
Diablo	Point	Romblon	244	12	35	122	00
Diagan	Sitio.	Sorsogon (S)	252	12	15	123	51
Dialao	Point	Ilocos Norte	158	18	38	120	48
Dibagat	Rancheria	Apayao Subprovince	200	18	05	121	06
Dibonag	Mountain	Nueva Ecija	212	15	45	121	11
Dibuluan	Barrio	Isabela	170	16	30	121	45
Dibuluan	Sitio.	Isabela	170	17	00	122	05
Dibutarec	Sitio.	Isabela	170	16	45	122	25
Dibutanun	Rancheria	Nueva Vizcaya	216	15	59	121	40
Dicalayo	Sitio.	Nueva Vizcaya	216	16	29	122	11

Name.	Feature.	Map.	Facing page.	Latitude	Longitude.
				° ' "	° ' "
Dicamay	Sitio	Isabela	170	16 45	122 05
Dicapansan	Point	Tayabas (N)	270	15 25	121 30
Diclum	Barrio	Antique	90	10 30	121 55
Dicolor	Barrio	Tarlac	266	15 37	120 33
Didicas Rocks	Islets	Cagayan	118	19 05	122 10
Didicas Rocks	Islets	Philippine Islands	72	19	122
Didicas Rocks	Volcano, active	Relief	72	19	122
Difun	Mountain	Nueva Vizcaya	216	16 24	121 33
Digos	Barrio	Davao	154	6 40	125 20
Diit	Barrio	Leyte	186	11 15	125 00
Dikabisagan	Barrio	Isabela	170	17 05	122 25
Dikalungan	Mountain	Cotabato	150	6 40	124 20
Dikania	River	Nueva Vizcaya	216	15 50	121 20
Dikney	Sitio	Nueva Vizcaya	216	16 10	121 38
Dikulum	Barrio	Zamboanga	278	7 55	122 15
Dilabayan	Sitio	Lanao	178	8 00	124 25
Diladila	Barrio	Pampanga	232	15 01	120 35
Dilan	Barrio	Pangasinan	236	16 05	120 31
Dilan	Sitio	Ifugao Subprovince	206	16 40	121 07
Dilao	Barrio	Batangas	102	13 59	120 41
Dilasac	Bay	Nueva Vizcaya	216	16 25	122 15
Dilasac	Point	Nueva Vizcaya	216	16 23	122 13
Dilavo	Sitio	Ilocos Norte	158	18 26	120 35
Dile	Point	Ilocos Sur	162	17 34	120 20
Dili	Barrio	Ilocos Sur	162	17 02	120 27
Diliman	Barrio	Bulacan	114	15 01	120 57
Dimalansan	Port	Isabela	170	17 20	122 20
Dimalinao	Sitio	Lanao	178	7 55	124 00
Dimasalang	Municipality	Sorsogon (S)	252	12 11	123 51
Dimasari	Barrio	Isabela	170	17 05	122 25
Dimiaio	Municipality	Bohol	106	9 36	124 10
Dimipac	Island	Palawan (N)	228	12 20	119 50
Dimiurug	Barrio	Bukidnon	110	7 45	124 50
Dinacpan	Rancheria	Apayao Subprovince	200	17 45	121 18
Dinadauauan	Sitio	Nueva Vizcaya	216	16 05	121 50
Dinagat	Municipality	Surigao	262	10 00	125 35
Dinagat	Island	Surigao	262	10 10	125 35
Dinagat	Island	Philippine Islands	72	10	126
Dinagat	Sound	Surigao	262	10 00	125 50
Dinahican	Barrio	Tayabas (N)	270	14 40	121 45
Dinaig	Municipal district	Cotabato	150	7 10	124 10
Dinalungan	Sitio	Nueva Vizcaya	216	16 06	121 55
Dinalupihan	Municipality	Bataan	94	14 52	120 28
Dinaran	Island	Palawan (N)	228	12 00	120 20
Dinas	Barrio	Zamboanga	278	7 35	123 20
Dinasayan	Sitio	Lepanto Subprovince	210	16 50	120 44
Dinatadmo	Point	Isabela	170	16 40	122 20
Dinawan	Mountain	Ilocos Norte	158	18 13	120 55
Dingalan	Bay	Tayabas (N)	270	15 15	121 25
Dingle	Municipality	Iloilo	166	11 00	122 40
Dingle	Barrio	Capiz	130	11 35	122 21
Dinglis	Sitio	Bontoc Subprovince	204	17 08	121 01
Dingras	Municipality	Ilocos Norte	158	18 07	120 42
Dinipan	Sitio	Nueva Vizcaya	216	16 10	122 07
Dinrika	Barrio	Camarines Sur	126	13 56	123 29
Dintan	Barrio	Abra	78	17 22	120 35
Dinwiddie	Barrio	Lepanto Subprovince	210	16 57	120 43
Diogo	Island (volcano)	Batanes	98	20 42	121 57
Diogo	Volcano, dormant	Relief	72	21	122
Dipalali	Sitio	Nueva Vizcaya	216	16 12	122 08
Dipalu	Barrio	Zamboanga	278	7 45	123 05
Dipanguit	Barrio	Isabela	170	16 35	121 40
Dipolog	Municipality	Zamboanga	278	8 35	123 20
Dipusa	Sitio	Isabela	170	16 55	122 00
Diriqui	Inlet	Ilocos Norte	158	18 28	120 34
Diriqui	Sitio	Ilocos Norte	158	18 28	120 35
Disdis	Township	Benguet Subprovince	202	16 30	120 29
Disdis	Township	Mountain Province	196	16 30	120 30
Disulap	Sitio	Isabela	170	16 55	122 05
Disun	Sitio	Zamboanga	278	8 05	123 35
Dit	Island	Palawan (N)	228	11 10	121 00
Dita	Barrio	Batangas	102	13 56	120 54
Dita	Barrio	Batangas	102	13 55	121 04
Dita	Barrio	Batangas	106	10 02	124 28
Dita	Barrio	Laguna	174	14 17	121 07
Dita	Sitio	Tayabas (S)	270	14 05	122 15
Ditall	Rancheria	Nueva Vizcaya	216	15 56	121 34
Ditsan	Municipal district	Lanao	178	8 00	124 20
Diuata	Point	Agusan	82	9 05	125 15
Diuata	Point	Misamis	194	9 05	125 15

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Diuata.	Mountains.	Surigao	262	8	50	125	55
Diuata.	Mountains.	Relief.	72	9		126	
Diuet.	Sitio.	Nueva Vizcaya.	216	16	14	122	05
Diuran.	Sitio.	Batanes.	98	20	26	122	00
Diutay.	Island.	Oriental Negros.	224	9	40	123	10
Divilacan.	Bay.	Isabela.	170	17	25	122	15
Divisoria.	Barrio.	Cagayan.	118	17	30	121	45
Diviuisa.	Point.	Isabela.	170	16	45	122	25
Doc Can.	Island.	Sulu.	258	5	50	119	55
Dodo.	Sitio.	Bontoc Subprovince.	204	17	02	121	01
Dolaoan.	Barrio.	Pangasinan.	236	16	19	119	58
Dolores.	Municipality.	Abra.	78	17	39	120	43
Dolores.	Municipality.	Samar.	248	12	00	125	30
Dolores.	Municipality.	Tayabas (S).	270	14	00	121	25
Dolores.	Barrio.	Capiz.	180	11	17	122	37
Dolores.	Barrio.	Iloilo.	166	10	30	122	40
Dolores.	Barrio.	Laguna.	174	14	06	121	20
Dolores.	Barrio.	Nueva Ecija.	212	15	35	120	53
Dolores.	Barrio.	Pampanga.	232	15	12	120	33
Dolores.	Barrio.	Pampanga.	232	15	06	120	31
Dolores.	Barrio.	Pampanga.	232	15	02	120	41
Dolores.	Barrio.	Tarlac.	266	15	32	120	35
Dolores.	Barrio.	Tarlac.	266	15	22	120	34
Domang.	Sitio.	Nueva Vizcaya.	216	16	24	121	07
Dome Peak.	Mountain.	Tarlac.	266	15	20	120	11
Dome Peak.	Mountain.	Zambales.	274	15	20	120	11
Domlog.	Barrio.	Cebu.	138	10	25	123	40
Domorog.	Barrio.	Sorsogon (S).	252	11	50	123	58
Domulpot.	Barrio.	Benguet Subprovince.	202	16	33	120	38
Domulug.	Sitio.	Bataan.	94	14	34	120	32
Dononay.	Island.	Palawan (N).	228	9	30	121	20
Dongdong.	Island.	Sulu.	258	5	50	121	15
Dongon.	Bay.	Mindoro.	190	12	45	120	50
Dongon.	Point.	Mindoro.	190	12	45	120	50
Dominob.	Barrio.	Zamboanga.	278	8	30	123	10
Don Pedro.	Barrio.	Pangasinan.	236	15	53	120	26
Donsol.	Municipality.	Sorsogon (N).	252	12	54	123	36
Dool.	Sitio.	Davao.	154	6	40	125	30
Doong.	Island.	Cebu.	138	11	05	123	40
Doong.	Barrio.	Cebu.	138	11	05	123	40
Doos.	Barrio.	Leyte.	186	10	25	124	45
Dorog.	Barrio.	Iloilo.	166	10	50	122	20
Dorst.	Mountain.	Pampanga.	232	15	08	120	26
Dos Cuernos.	Mountain.	Cagayan.	118	17	30	122	05
Dos Cuernos.	Mountain.	Isabela.	170	17	30	122	05
Dos Cuernos.	Mountain.	Relief.	72	17		122	
Dos Hermanas.	Islands.	Romblon.	244	13	00	121	55
Dos Hermanas.	Barrio.	Occidental Negros.	220	10	45	123	00
Dos Picos.	Mountain.	Cavite.	134	14	13	120	40
Doyong.	Barrio.	Pangasinan.	236	15	57	120	23
Duancaiao.	Sitio.	Camarines Norte.	122	14	10	122	40
Duao.	Sitio.	Ifugao Subprovince.	206	16	51	121	13
Dubinan.	Barrio.	Isabela.	170	16	40	121	30
Duca.	Barrio.	Leyte.	186	11	20	124	45
Ducait.	Sitio.	Nueva Vizcaya.	216	16	22	121	05
Ducligan.	Barrio.	Ifugao Subprovince.	206	16	55	121	10
Duenas.	Municipality.	Iloilo.	166	11	05	122	35
Duero.	Municipality.	Bohol.	106	9	42	124	24
Dugadog.	Barrio.	Amburayan Subprovince.	198	16	41	120	24
Dugio.	Sitio.	Ifugao Subprovince.	206	16	43	121	04
Dugo.	Barrio.	Cagayan.	118	18	15	121	40
Dugpa.	Barrio.	Kalinga Subprovince.	208	17	32	121	23
Dugungan.	Barrio.	Camarines Norte.	122	14	06	122	54
Duhat.	Barrio.	Bulacan.	114	14	47	120	58
Duhat.	Barrio.	Laguna.	174	14	15	121	23
Dukanunday.	Sitio.	Zamboanga.	278	8	05	122	35
Dulag.	Municipality.	Leyte.	186	10	55	125	05
Dulangan.	Barrio.	Capiz.	180	11	27	122	58
Dulangan.	Barrio.	Romblon.	244	12	30	122	30
Dulao.	Sitio.	La Union.	182	16	22	120	20
Dulhugan.	Barrio.	Leyte.	186	10	55	124	25
Dulig.	Barrio.	Pangasinan.	236	16	00	120	10
Duludin.	Sitio.	Cotabato.	150	6	45	125	00
Dulungon.	Barrio.	Bukidnon.	110	7	45	125	00
Dumabatu.	Rancheria.	Nueva Vizcaya.	216	16	20	121	42
Dumagadag.	Barrio.	Abra.	78	17	46	120	46
Dumaguete.	Capital.	Oriental Negros.	224	9	20	123	20
Dumaguete.	Capital, Oriental Negros.	Philippine Islands.	72	9		123	

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Dumaguít	Barrio	Capiz	130	11	36	122	29
Dumaguk	Sitio	Zamboanga	278	7	50	123	10
Dumalag	Municipality	Capiz	130	11	18	122	38
Dumalaguíng	Barrio	Bukidnon	110	8	20	125	05
Dumangas	Municipality	Iloilo	166	10	50	122	40
Dumangas	Point	Iloilo	166	10	50	122	45
Dumanjúg	Municipality	Cebu	138	10	05	123	25
Dumanquílás	Bay	Zamboanga	278	7	30	123	05
Dumarais	Barrio	Tarlac	266	15	26	120	40
Dumaran	Island	Philippine Islands	72	11		120	
Dumaran	Island	Palawan (N)	228	10	30	119	50
Dumaran	Township	Palawan (N)	228	10	30	119	50
Dumarao	Municipality	Capiz	130	11	16	122	42
Dumatalto	River	Nueva Vizcaya	216	16	25	121	28
Dumayco	Barrio	Abra	78	17	34	120	40
Dummun	Barrio	Cagayan	118	18	00	121	40
Dumog	Sitio	Nueva Vizcaya	216	16	05	122	03
Dungan	Sitio	Tarlac	266	15	22	120	41
Dupag	Barrio	Kalinga Subprovince	208	17	24	121	15
Dupang	Sitio	Zamboanga	278	7	50	123	15
Dupax	Township	Nueva Vizcaya	216	16	17	121	05
Dupay	Sitio	Amburayan Subprovince	198	16	51	120	36
Duplas	Barrio	Amburayan Subprovince	198	16	51	120	30
Duplas	Barrio	Benguet Subprovince	202	16	18	120	29
Duplas	Barrio	La Union	182	16	40	120	25
Duquis	Barrio	Amburayan Subprovince	198	17	01	120	35
Duvek	Sitio	Batanes	98	20	18	121	52
Duyagan	Point	Mindoro	190	12	35	121	35
E.							
East	Point	Davao	154	7	10	125	50
East Bucas	Island	Surigao	262	9	45	126	05
Fbro	Municipal district	Agusan	82	8	30	125	55
Echague	Municipality	Isabela	170	16	45	121	40
Egana	Barrio	Antique	90	10	45	122	00
Eguia	Barrio	Pangasinan	236	15	55	119	53
Egut	Sitio	Samar	248	12	25	124	55
Elefante	Island	Tayabas (S)	270	13	10	122	00
Ellet	Barrio	Benguet Subprovince	202	16	36	120	47
El Salvador	Barrio	Misamis	194	8	35	124	30
Empelet	Sitio	Ifugao Subprovince	206	16	49	121	15
Encanto	Point	Tayabas (N)	270	15	45	121	40
Encarnada	Point	Pangasinan	236	16	11	122	04
Enclaro	Sitio	Occidental Negros	220	10	10	122	50
Engano	Cape	Cagayan	118	18	35	122	10
Engano	Cape	Philippine Islands	72	19		122	
Enganoso	Mountain	Sorsogon (N)	252	12	52	123	14
Engineer Island	Government ship-yard	City of Manila	146	14	36	120	58
Enora	Mountain	Bulacan	114	14	54	121	18
Enrile	Municipality	Cagayan	118	17	35	121	40
Entao	Barrio	Antique	90	11	10	122	00
Entrance	Island	Camarines Norte	122	14	20	122	35
Eran	Bay	Palawan (S)	228	9	00	117	40
Erenas	Barrio	Samar	248	12	25	124	20
Erenas	Barrio	Samar	248	11	50	124	55
Ermita	District	City of Manila	146	14	35	120	59
Ermita	Sitio	Ilocos Sur	162	17	38	120	21
Ermitano	Barrio	Rizal	240	14	37	121	02
Escalante	Municipality	Occidental Negros	220	10	50	123	35
Escano	Barrio	Nueva Ecija	212	15	42	120	41
Escarceo	Point	Mindoro	190	13	30	121	00
Escarpada	Point	Cagayan	118	18	30	122	15
Espana	Barrio	Romblon	244	12	25	122	30
Esperanza	Municipal district	Agusan	82	8	45	125	35
Esperanza	Barrio	Cavite	134	14	08	120	52
Esperanza	Barrio	Cebu	138	10	40	124	20
Esperanza	Barrio	Cebu	138	10	40	124	25
Esperanza	Barrio	Leyte	186	11	10	124	55
Esperanza	Barrio	Leyte	186	10	15	124	50
Esperanza	Barrio	Leyte	186	10	00	125	15
Esperanza	Barrio	Misamis	194	9	00	14	50
Esperanza	Barrio	Pangasinan	236	16	11	120	30
Esperanza	Barrio	Sorsogon (S)	252	11	45	124	02
Esperanza	Barrio	Tayabas (N)	270	16	15	122	10
Espiritu Santo	Cape	Samar	248	12	35	125	15
Espiritu Santo	Cape	Philippine Islands	72	13		125	
Estancia	Municipality	Iloilo	166	11	30	123	10
Estancia	Barrio	Albay	86	13	22	123	40
Estancia	Sitio	Ilocos Norte	158	18	23	120	36

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Estar	Sitio	Palawan (N)	228	11	10	119	40
Estefania	Barrio	Cagayan	118	17	50	121	45
Estela	Barrio	Leyte	186	10	10	125	10
Ester	Barrio	Ilocos Norte	158	18	14	120	43
Estipona	Barrio	Tarlac	266	15	36	120	39
Estrella	Barrio	Albay	86	13	02	123	32
Estrella	Barrio	Mindoro	190	13	20	121	20
Eteb	Sitio	Lepanto Subprovince	210	17	10	120	41
F.							
Fabrica	Barrio	Batangas	102	13	38	121	12
Fabrica	Barrio	Camarines Sur	126	13	30	123	17
Fabrica	Barrio	Sorsogon (N)	252	12	49	124	06
Factoria	Sitio	Occidental Negros	220	10	50	123	20
Factoria	Barrio	Samar	248	12	05	125	30
Faire	Municipality	Cagayan	118	17	55	121	35
Famosa	Barrio	Sorsogon (N)	252	12	38	123	41
Famy	Municipality	Laguna	174	14	26	121	27
Ferrol	Barrio	Romblon	244	12	20	121	55
Finuelisan	Barrio	Bontoc Subprovince	204	17	08	120	54
Finugu	Barrio	Cagayan	118	18	05	121	40
Flat Top	Mountain	Camarines Norte	122	14	11	122	25
Flecha	Mountain	Zamboanga	278	7	25	123	25
Flecha	Point	Zambonaga	278	7	20	123	25
Flora	Barrio	Ilocos Sur	162	17	40	120	24
Flores	Barrio	Antique	90	11	20	122	05
Floridablanca	Municipality	Pampanga	232	14	59	120	31
Forista	Barrio	Albay	86	13	04	123	39
Fondeado	Island	Palawan (S)	228	9	50	119	00
Font	Island	Cagayan	118	18	55	121	50
Fort McKinley	United States Army Post	Rizal	240	14	33	121	03
Fort Mills	United States Army Post	Cavite	134	14	23	120	35
Fortune	Island	Batangas	102	14	04	120	30
Fraille	Island	Cavite	134	14	18	120	37
Frances	Reef	Sulu	258	4	25	119	15
Fraternidad	Barrio	Agusan	82	9	10	125	30
Fuego	Point	Batangas	102	14	08	120	34
Fuga	Island	Cagayan	118	18	50	121	20
Fuga	Island	Philippine Islands	72	19		121	
Fuga	Barrio	Cagayan	118	18	20	121	40
Fugu	Barrio	Cagayan	118	17	45	121	30
Fugu	Barrio	Isabela	170	17	05	121	55
Fugu	Barrio	Isabela	170	17	20	121	45
Fugu Norte	Barrio	Isabela	170	16	30	121	45
Fugu Sur	Barrio	Isabela	118	18	15	121	45
Fula	Barrio	Cagayan	208	17	29	121	22
Fullan	Sitio	Kalinga Subprovince	126	13	40	123	07
Fundado	Barrio	Camarines Sur	170	17	00	121	50
Furao	Barrio	Isabela	118	17	55	121	40
Fusian	Barrio	Cagayan	118	17	55	121	40
Fusina	Barrio	Cagayan	118	18	15	121	40
G.							
Gaang	Barrio	Kalinga Subprovince	208	17	14	121	13
Gaas	Barrio	Leyte	186	10	40	124	50
Gaas	Inlet	Surigao	262	10	10	125	40
Gaba	Barrio	Albay	86	13	16	123	59
Gabaldon	Barrio	Nueva Ecija	212	15	43	120	51
Gabao	Barrio	Ilocos Sur	162	17	16	120	25
Gabao	Barrio	Sorsogon (N)	252	12	43	123	59
Gabas	Barrio	Leyte	186	10	45	124	45
Gabauan	Barrio	Romblon	244	12	25	122	00
Gabo	Barrio	Ilocos Norte	158	18	11	120	31
Gabo	Port	Surigao	262	9	50	125	40
Gaboc	Barrio	Bohol	106	9	41	123	53
Gabongabon	Mountain	Agusan	82	8	40	125	50
Gabut	Barrio	Nueva Vizcaya	216	16	19	121	04
Gacat	Barrio	Leyte	186	10	20	125	00
Gadeng (new)	Sitio	Nueva Vizcaya	216	16	00	121	22
Gadeng (old)	Sitio	Nueva Vizcaya	216	16	02	121	20
Gadu	Barrio	Cagayan	118	17	40	121	35
Gadungan	Barrio	Lanao	178	7	50	124	00
Gainza	Municipality	Camarines Sur	126	13	37	123	09
Gairan	Barrio	Cebu	138	11	05	124	00
Gakang	Island	Bohol	106	9	33	123	44
Galarin	Barrio	Pangasinan	236	15	48	120	22
Galas	Barrio	Laguna	174	14	24	121	25
Galera	Port	Mindoro	190	13	30	120	55
Galiano	Sitio	La Union	182	16	26	120	28
Galicia	Barrio	Albay	86	13	17	123	57

Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
				° /	° /
Galicia	Barrio	Occidental Negros	220	10 00	122 45
Galimuyod	Municipality	Ilocos Sur	162	17 11	120 23
Galangan	Sitio	Zamboanga	278	7 55	123 15
Galintan	Mountain	Davao	154	7 00	126 10
Galoc	Island	Palawan (N)	228	12 00	119 50
Gamao	Barrio	Batangas	102	13 39	120 56
Gamat	Sitio	Lepanto Subprovince	210	16 48	120 44
Gamay	Barrio	Samar	248	12 25	125 20
Gambang	Sitio	Amburayan Subprovince	198	16 40	120 32
Gamu	Municipality	Isabela	170	17 05	121 50
Gamut	Barrio	Surigao	262	8 30	126 15
Gamutan	Sitio	Rizal	240	14 23	121 14
Gana	Barrio	La Union	182	16 26	120 21
Ganakgak	Sitio	Bontoc Subprovince	204	17 14	121 23
Ganano	River	Isabela	170	16 35	121 30
Ganano	River	Nueva Vizcaya	216	16 33	121 31
Ganasi	Municipal district	Lanao	178	7 50	124 05
Gandara	Municipality	Samar	248	12 00	124 50
Gandia	Sitio	Davao	154	7 40	126 00
Gango	Barrio	Misamis	194	8 10	123 50
Ganon	Sitio	Sulu	258	5 55	121 25
Gantung	Mountain	Palawan (S)	228	9 00	117 50
Gao-oa	Sitio	Ilocos Norte	158	18 36	120 53
Gapan	Municipality	Nueva Ecija	212	15 19	120 57
Gappal	Sitio	Isabela	170	16 50	121 50
Garcia	Barrio	Capiz	130	11 14	122 30
Garcia Hernandez	Municipality	Bohol	106	9 37	124 18
Gargato	Barrio	Occidental Negros	220	10 15	122 50
Garit	Barrio	Isabela	170	16 40	121 40
Garita	Barrio	Isabela	170	17 25	121 50
Garitan	Barrio	Amburayan province	198	16 57	120 27
Garlang	Barrio	Bulacan	114	15 07	120 58
Garza	Island	Mindoro	190	12 15	121 10
Gasan	Municipality	Tayabas (S)	270	13 20	121 50
Gata	Municipal district	Lanao	178	8 00	124 25
Gatang	Sitio	Sulu	258	5 10	120 05
Gatas	Mountain	Zambales	274	15 15	120 19
Gatbo	Barrio	Camarines Sur	126	13 36	123 21
Gate	Barrio	Sorsogon (N)	252	12 40	123 59
Gatjwin	Barrio	Pampanga	232	15 09	120 45
Gatid	Barrio	Laguna	174	14 16	121 23
Gato	Island	Cebu	138	11 25	124 00
Gato	Island	Sorsogon (N)	252	12 26	123 12
Gato	Island	Sorsogon (S)	252	12 26	123 12
Gattaran	Municipality	Cagayan	118	18 05	121 40
Gatto	Sitio	Apayao Subprovince	200	18 28	121 18
Gaus	Island	Bohol	106	10 11	124 34
Gawi	Barrio	Cebu	138	9 35	123 30
Gaya Gaya	Barrio	Bulacan	114	14 47	121 04
Gayaman	Barrio	Abra	78	17 17	120 41
Gayamat	Barrio	Mindoro	190	13 25	120 25
Gayan	Barrio	Lepanto Subprovince	210	16 58	120 56
General	Barrio	Cebu	138	10 40	124 25
General	Island	Surigao	262	9 25	126 00
General Luna	Barrio	Surigao	262	10 15	125 35
Gerona	Municipality	Tarlac	266	15 36	120 36
Getulio	Barrio	Iloilo	166	10 45	126 40
Gibalon	Barrio	Sorsogon (N)	252	12 47	123 52
Gibato	Barrio	Capiz	130	11 13	122 49
Gibgos	Barrio	Camarines Sur	126	13 51	123 46
Gibon	Barrio	Capiz	130	11 52	122 02
Gibong	River	Agusan	82	8 30	125 55
Giebuan	Barrio	Samar	248	12 15	124 50
Gigantangan	Island	Leyte	186	11 35	124 15
Gigaquit	Municipality	Surigao	262	9 35	125 40
Gigmoto	Barrio	Albay	86	13 47	124 23
Gigoso	Barrio	Samar	248	11 05	125 30
Gihian	Barrio	Bukidnon	110	8 25	125 00
Gihulngan	Municipality	Oriental Negros	224	10 10	123 15
Gilbert	Island	Samar	248	12 35	124 25
Giligoan	Barrio	Oriental Negros	224	9 05	122 55
Giligaon	Point	Oriental Negros	224	9 05	122 55
Gimagaan	Barrio	Sorsogon (N)	252	12 57	123 34
Gimamaa	Barrio	Cebu	138	10 40	123 55
Gimankil	Mountain	Bukidnon	110	8 35	125 10
Gimbaluron	Municipal district	Bukidnon	110	8 15	124 40
Ginablan	Barrio	Sorsogon (N)	252	12 57	123 42
Ginabuyan	Barrio	Leyte	186	11 15	124 25
Ginagoman	Barrio	Romblon	244	12 20	121 55
Ginangra Exterior	Barrio	Sorsogon (N)	252	12 46	123 51
Ginatilan	Municipality	Cebu	138	9 35	123 20

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Gines	Barrio	Iloilo	166	11	05	122	30
Gines	Barrio	Iloilo	166	11	05	122	40
Gines	Barrio	Iloilo	166	10	55	122	20
Gines	Barrio	Iloilo	166	10	55	122	30
Gingoog	Municipality	Misamis	194	8	50	125	05
Gingoog	Bay	Misamis	194	9	00	125	05
Ginipaán	Sitio	Camarines Norte	122	14	00	123	03
Ginobatan	Barrio	Bohol	106	10	02	124	22
Ginsularan	Barrio	Bohol	106	9	43	124	26
Ginuyuran	Barrio	Bukidnon	110	7	50	125	00
Giporios	Barrio	Samar	248	11	05	125	25
Gitagom	Sitio	Misamis	194	8	35	124	25
Gitung	Municipal district	Sulu	258	6	00	121	05
Giwang	Barrio	Bohol	106	9	47	124	30
Giwang	Barrio	Cebu	138	9	40	123	30
Giwanon	Barrio	Bohol	106	9	45	123	47
Giwanon	Barrio	Bohol	106	9	38	123	54
Glan	Municipal district	Cotabato	150	5	45	125	10
Goa	Municipality	Camarines Sur	126	13	42	123	29
Gobob	Barrio	Kalinga Subprovince	208	17	28	121	25
Gobon	Barrio	Romblon	244	12	50	122	05
Gogon	Barrio	Sorsogon (N)	252	13	02	124	10
Gohang	Barrio	Ifugao Subprovince	206	16	56	121	02
Golo	Island	Mindoro	190	13	40	120	20
Golo	Pass	Mindoro	190	13	40	120	15
Golod	Barrio	Batangas	102	14	02	120	56
Golongoro	Sitio	Zambales	274	15	06	120	06
Gonzaga	Municipality	Cagayan	118	18	15	122	00
Gonzales	Barrio	Pangasinan	236	15	55	120	46
Gorda	Point	Albay	86	13	32	123	36
Gorda	Point	Bohol	106	9	36	124	16
Gorda	Point	Davao	154	7	00	126	20
Gorda	Point	Romblon	244	12	40	122	10
Gorda	Point	Zamboanga	278	8	00	122	15
Gordon	Barrio	Tayabas (S)	270	14	05	122	05
Gosi	Barrio	Cagayan	118	17	35	121	45
Goto	Point	Romblon	244	13	00	122	00
Goto	Sitio	Nueva Vizcaya	216	15	57	121	22
Gotosan	Barrio	Leyte	186	11	25	124	25
Gracia	Municipal district	Agusan	82	8	10	125	45
Granada	Barrio	Cebu	138	9	35	123	30
Granada	Barrio	Occidental Negros	220	10	40	123	00
Granada	Sitio	Cebu	138	10	30	123	45
Grande	Island	Zambales	274	14	46	120	14
Green Island	Bay	Palawan (N)	228	10	10	119	20
Grove	Point	Camarines Norte	122	14	09	122	59
Grulio	River	Zambales	274	15	00	120	07
Guadalupe	Municipal district	Agusan	82	8	40	125	40
Guadalupe	Barrio	Cebu	138	11	00	124	00
Guadalupe	Barrio	Cebu	138	10	10	123	35
Guadalupe	Barrio	Cebu	138	9	54	123	25
Guadalupe	Barrio	Leyte	186	10	35	124	45
Guadalupe	Barrio	Leyte	186	10	10	124	45
Guadalupe	Barrio	Occidental Negros	220	10	30	123	20
Guadalupe	Barrio	Rizal	240	14	34	121	02
Guagua	Municipality	Pampanga	232	14	58	120	38
Guagua	River	Pampanga	232	14	54	120	38
Gubang	Barrio	Leyte	186	10	40	124	55
Gubang	Sitio	Lepanto Subprovince	116	16	50	120	49
Gubat	Municipality	Sorsogon (N)	252	12	55	124	07
Gubat	Barrio	Camarines Norte	122	14	07	122	59
Gubawang	Barrio	Zamboanga	278	7	45	122	40
Gubuc	Sitio	Apayao Subprovince	200	18	05	121	13
Gudel	Sitio	Amburayan Subprovince	198	16	55	120	31
Gueddem	Rancheria	Apayao Subprovince	200	18	14	121	30
Guenned	Rancheria	Apayao Subprovince	200	18	05	121	16
Guesset	Barrio	La Union	187	16	31	120	24
Guevara	Barrio	Tarlac	266	15	29	120	43
Guianga	Municipal district	Davao	154	7	00	125	30
Guibul	Mountain	Ifugao Subprovince	206	16	44	120	57
Guidaquid	Sitio	Lepanto Subprovince	210	17	18	120	35
Guiddam	Barrio	Cagayan	118	18	20	121	30
Guigol	Sitio	Palawan (N)	228	10	40	119	30
Guiguinto	Municipality	Bulacan	144	14	50	120	53
Guijalo	Barrio	Camarines Sur	126	13	44	123	52
Guiljungan	Barrio	Occidental Negros	220	10	40	122	40
Guimaras	Island	Iloilo	166	10	35	122	40
Guimaras	Strait	Iloilo	166	10	40	122	50
Guimaras	Strait	Occidental Negros	220	10	30	122	45
Guimba	Municipality	Nueva Ecija	212	15	39	120	46
Guimbal	Municipality	Iloilo	166	10	40	122	20

Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
Gimbrayan	Barrio	Romblon	244	12 10	122 00
Guimud	Barrio	Ilocos Sur	162	17 44	120 27
Guinaang	Barrio	Bontoc Subprovince.	204	17 08	120 59
Guinaang	Barrio	Kalinga Subprovince.	208	17 24	121 09
Guinabasan	Sitio	Cebu	138	10 40	123 45
Guinabong	Sitio	Apayao Subprovince.	200	17 58	121 11
Guinaacutan	Barrio	Camarines Norte.	122	14 10	122 52
Guinauayan	Island	Sorsogon (S)	252	11 49	123 54
Guinauayan	Barrio	Sorsogon (S)	252	11 49	123 55
Guinayan	Barrio	Rizal	240	14 42	121 08
Guinayangan	Municipality.	Tayabas (S)	270	13 55	122 30
Guinbangaan	Barrio	Antique	90	11 05	122 05
Guinbangaan	Barrio	Antique	90	10 45	122 00
Guinbithagan	Island	Sorsogon (S)	252	12 02	123 33
Guindacpan	Island	Bohol	106	10 14	124 17
Guindaguitan	Barrio	Bohol	106	9 38	124 09
Guindauhan	Island	Romblon	244	12 40	122 05
Guinduganan	Point	Sorsogon (N)	252	13 02	123 57
Guindulman	Municipality.	Bohol	106	9 46	124 29
Guinhalaran	Barrio	Occidental Negros	220	10 45	123 00
Guinhalinan	Barrio	Tayabas (S)	270	13 40	122 30
Guinhon	Barrio	Ifugao Subprovince.	206	16 58	121 10
Guinlabo	Island	Palawan (N)	228	11 10	121 00
Guinlo	Barrio	Palawan (N)	228	10 50	119 30
Guinlutugan	Island	Sorsogon (S)	252	11 57	123 33
Guinobatan	Municipality.	Albay	86	13 12	123 36
Guinobatan	Barrio	Sorsogon (N)	252	12 30	123 23
Guinobatan	Barrio	Sorsogon (S)	252	12 30	123 23
Guinpingan	Barrio	Romblon	244	12 40	122 15
Guinsaanan	Barrio	Albay	86	13 40	124 24
Guinsay	Barrio	Cebu	138	10 30	124 00
Guinsiliban	Barrio	Misamis	194	9 05	124 45
Guintacan	Barrio	Cebu	138	11 20	123 55
Guintacan	Island	Cebu	138	11 20	123 55
Guintas	Barrio	Antique	90	10 40	122 00
Guintiguiban	Barrio	Romblon	244	12 50	122 00
Guintinua	Island	Camarines Norte.	122	14 25	122 57
Guintuyilan	Sitio	Leyte	186	10 10	125 10
Guinusod	Barrio	Amburayan Subprovince.	198	17 02	120 34
Guinzadan	Barrio	Lepanto Subprovince.	210	16 58	120 52
Guiob	Barrio	Mindoro	190	12 15	121 15
Guioeng	Barrio	Benguet	202	16 43	120 50
Guiong	Barrio	Zamboanga	278	6 25	122 00
Guipan	Sitio	Nueva Vizcaya.	216	16 02	121 18
Guirayan	Mountain	Amburayan Subprovince.	198	16 46	120 39
Guisguis	Barrio	Tayabas (S)	270	13 55	121 30
Guisguis	Barrio	Zambales	274	15 47	119 58
Guisian	Barrio	Tayabas (S)	270	13 35	121 55
Guisihan	Barrio	Antique	90	11 05	122 05
Guisit	Barrio	Ilocos Sur	162	17 43	120 25
Guitao	Sitio	Nueva Vizcaya.	216	16 25	121 07
Guiuan	Municipality.	Samar	248	11 00	125 45
Guiuanon	Island	Iloilo	166	10 25	122 35
Guiuanon	Sitio	Cebu	138	9 45	123 20
Guium	Sitio	Sorsogon (S)	252	11 59	123 44
Guiwan	Mountain	Nueva Vizcaya.	216	15 56	121 18
Guiwanon	Sitio	Cebu	138	11 10	123 45
Gujanang	Island	Sulu	258	6 05	121 15
Gulac	Sitio	Isabela	170	16 40	121 30
Gulap	Barrio	Pampanga	232	15 06	120 49
Gulod	Barrio	Batangas	102	13 46	121 05
Gulod	Barrio	Laguna	174	14 15	121 10
Gumaca	Municipality.	Tayabas (S)	270	13 55	122 05
Gumahang	Sitio	Sorsogon (N)	252	12 34	123 18
Gumahang	Sitio	Sorsogon (S)	252	12 34	123 18
Gumalac	Island	Leyte	186	11 00	124 20
Gumasa	Sitio	Cotabato	150	5 45	125 10
Gumaus	Barrio	Camarines Norte.	122	14 19	122 44
Gumbang	Barrio	Lepanto Subprovince.	210	16 45	120 47
Gumbon	River	Cotabato	150	6 50	124 30
Gummung	Rancheria.	Apayao Subprovince.	200	17 54	121 11
Gun Boat	Harbor	Sulu	258	7 00	118 30
Gurugon	Barrio	Bontoc Subprovince.	204	17 02	120 56
Guruyan	Barrio	Sorsogon (N)	252	12 47	123 59
Gusa	Barrio	Misamis	194	8 30	124 40
Gusaran	Barrio	Benguet Subprovince.	202	16 39	120 50
Gusing	Barrio	Ilocos Sur	162	17 23	120 31
Gusig	Mountain	Ilocos Sur	78	17 30	120 29
Gutad	Barrio	Pampanga	232	14 56	120 59
Gutivan	Barrio	Romblon	244	12 25	122 40
Guyam	Barrio	Cavite	134	14 09	120 52
Guyong	Barrio	Bulacan	114	14 50	120 58

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
H.							
Habana	Sitio	Capiz	130	11	53	122	01
Habay	Barrio	Cavite	184	14	27	120	57
Haban	Barrio	Ifugao Subprovince.	206	16	48	121	07
Hagdan	Sitio	Cebu	138	11	20	123	55
Hagdanan	Peak	Mindoro	190	12	30	121	15
Hagnaya	Barrio	Capiz	130	11	24	122	32
Hagonoy	Municipality.	Bulacan	114	14	50	120	44
Hagonoy	Barrio	Rizal	240	14	31	121	04
Haights Place	Tourist hotel	Benguet Subprovince.	202	16	38	120	45
Halag	Barrio	Cavite	184	14	16	120	43
Halag	Barrio	Ifugao Subprovince.	206	16	51	121	09
Halang	Barrio	Cavite	184	14	18	120	46
Halang	Barrio	Cavite	184	14	12	120	55
Halang	Barrio	Laguna	174	14	20	121	03
Halang	Barrio	Laguna	174	14	19	121	28
Halapitan	Municipal district.	Agusan	82	8	15	125	40
Halcon	Mountain	Mindoro	190	13	15	121	00
Halcon	Mountain	Relief	72	13		121	
Halian	Island	Surigao	262	9	55	125	50
Halog	Barrio	La Union	182	16	22	120	25
Halong	Barrio	Ifugao Subprovince.	206	16	52	121	02
Halsey	Harbor	Palawan (N)	228	11	40	120	00
Hamanao	Sitio	Oriental Negros	224	10	25	123	10
Hambian	Barrio	Romblon	244	12	55	122	05
Hambian	Point	Batangas	102	14	10	120	35
Hamilo	Barrio	Batangas	102	14	10	120	36
Hampton	Barrio	Samar	248	12	05	124	50
Hamuranon	Barrio	Camarines Sur	126	13	25	123	12
Handayan	Barrio	Bohol	106	10	10	124	11
Handig	Point	Samar	248	10	50	125	40
Hanopol	Barrio	Bohol	106	9	47	124	02
Hapao	Barrio	Ifugao Subprovince.	206	16	53	121	00
Harigue	Sitio	Antique	90	11	50	121	25
Hasaan	Barrio	Misamis	194	8	40	124	45
Helm	Harbor	Samar	248	12	20	125	20
Hen and Chickens	Islands	Palawan (S)	228	10	00	118	30
Hernana Mayor	Island	Zambales	274	15	48	119	48
Hernana Menor	Island	Zambales	274	15	44	119	49
Hermosa	Municipality.	Bataan	94	14	50	120	30
Hermosa	Barrio	Pangasinan	236	15	57	119	52
Hermosa	Barrio	Pangasinan	236	15	46	120	24
Hernandez	Barrio	Cebu	138	9	50	123	35
Hernani	Municipality.	Samar	248	11	15	125	30
Hernani	Barrio	Samar	248	11	20	125	40
Hibangan	Barrio	Leyte	186	11	05	124	50
Hibaiyo	Barrio	Oriental Negros	224	10	15	123	20
Hibunawan	Barrio	Leyte	186	10	55	124	50
Hibuson	Island	Surigao	262	10	25	125	30
High Peak	Mountain	Zambales	274	15	29	120	07
High Peak	Mountain	Relief	72	15		120	
Higosan	Sitio	Leyte	186	10	20	124	55
Hilis	River	Davao	154	7	50	125	30
Hikdop	Island	Surigao	262	9	55	125	30
Hilabangan	River	Occidental Negros	220	10	00	123	00
Hilacan	Barrio	Albay	86	13	59	124	09
Hilanglong	Mountain	Agusan	82	9	05	125	45
Hilonghilong	Mountain	Relief	72	9		126	
Hilongos	Municipality.	Leyte	186	10	20	124	45
Himacay	Sitio	Pampanga	232	15	01	120	53
Himamaylan	Municipality.	Occidental Negros	220	10	05	122	50
Himarco	Barrio	Leyte	186	11	05	124	25
Himatagan	Barrio	Leyte	186	10	15	125	10
Himayangan	Barrio	Leyte	186	10	10	125	05
Himogaan	Barrio	Occidental Negros	220	10	55	123	25
Himuae	Barrio	Leyte	186	10	20	124	45
Hinalinan	Barrio	Antique	90	11	45	122	05
Hinalinan	Barrio	Antique	90	11	15	122	00
Hinalinan	Barrio	Antique	90	11	05	122	05
Hinatuan	Municipality.	Surigao	262	8	20	126	20
Hinatuan	Island	Surigao	262	9	45	125	45
Hindang	Municipality.	Leyte	186	10	25	124	45
Hingatungan	Barrio	Leyte	186	10	35	125	10
Hintatungan	Mountain	Leyte	186	10	35	125	05
Hingiwín	Barrio	Tayabas (S)	270	13	55	121	50
Hingoso	Barrio	Tayabas (S)	270	13	40	122	10
Hingutanan	Island	Bohol	106	10	14	124	29
Hingaran	Municipality.	Occidental Negros	220	10	15	122	50
Hinlayagan	Barrio	Bohol	106	10	02	124	20
Hinolaso	Barrio	Samar	248	12	00	125	15
Hinugusan	Barrio	Romblon	244	12	30	122	05

Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
Hinunangan	Municipality.	Leyte	186	10 25	125 10
Hinundayan	Municipality.	Leyte.	186	10 20	125 15
Hipona	Barrio	Capiz	130	11 25	122 54
Hitoma	Barrio	Albay.	86	13 47	124 03
Hiuacloy	Barrio	Camarines Sur	126	13 43	123 36
Hobong	Barrio	Albay.	86	13 53	124 08
Hokob	Sitio.	Cotabato.	150	5 55	124 55
Homapon	Barrio	Albay.	86	13 05	123 44
Homonhon	Island.	Samar	248	10 45	125 45
Homonhon	Barrio	Samar	248	10 45	125 45
Honda	Bay	Palawan (S)	228	9 50	118 50
Hondagua	Barrio	Tayabas (S)	270	13 55	122 15
Hook	Bay	Tayabas (N).	270	14 55	121 50
Horadaba Rocks	Islets	Albay	86	14 07	124 17
Hornos	Point	Bataan.	94	14 25	120 28
Horoan	Barrio	Albay.	86	13 30	123 37
Hospital	Gate, Baguio	Benguet, Subprovince	202	16 24	120 36
Hot Spring	Mineral water.	Bataan.	94	14 27	120 28
Hot Spring	Mineral water.	Nueva Ecija	212	15 52	121 08
Hot Spring	Mineral water.	Nueva Ecija	212	15 49	121 12
Huag	Island.	Camarines Norte.	122	14 26	123 00
Huagdan	Barrio	Bohol.	106	9 59	124 34
Hubangon	Barrio	Misamis.	194	9 10	124 45
Hubasan	Barrio	Samar	248	12 30	124 20
Hubay	Barrio	Leyte.	186	11 35	124 15
Hubo	Barrio	Sorsogon (N)	252	12 51	123 51
Hucab	Barrio	Ifugao Subprovince.	206	16 46	121 09
Humagikhhik	Barrio	Romblon	244	12 35	122 10
Humalan	Point	Camarines Norte.	122	14 12	122 20
Hundred	Islands.	Pangasinan	236	16 13	120 02
Hungduan	Barrio	Ifugao Subprovince.	206	16 50	121 00
Hupi	Barrio	Sorsogon (N)	252	12 58	124 06
I.					
Iba	Capital.	Zambales.	274	15 20	119 58
Iba	Capital, Zambales	Philippine Islands	72	15 55	120
Iba	Barrio	Cavite	134	14 13	120 59
Iba	Barrio	Tarlac	266	15 27	120 25
Iba	Sitio.	Camarines Norte.	122	14 16	122 42
Iba	Mountain	Tarlac	266	15 22	120 09
Iba	Mountain	Zambales.	274	15 22	120 09
Ibaan	Municipality.	Batangas.	102	13 50	121 08
Ibambang Bacong.	Barrio	Tayabas (S)	270	13 40	122 15
Ibajay	Municipality.	Capiz.	130	11 50	122 10
Ibajay	River	Capiz.	130	11 36	122 12
Ibanao	Barrio	Lepanto Subprovince.	210	16 59	120 53
Ibo	Barrio	Cebu	138	10 30	124 00
Ibolo	River	Mindoro	190	13 05	121 10
Ibona	River	Tayabas (N).	270	15 15	121 20
Ibugos	Island.	Batanes	98	20 20	121 50
Ibulao	River	Ifugao Subprovince.	206	16 42	121 15
Ibulao	River	Mountain Province.	196	16 45	121 10
Ibung	Barrio	Nueva Vizcaya.	216	16 37	121 11
Ibus	Island.	Lanao.	178	7 40	124 00
Icadambanauan	Island.	Palawan (N)	228	10 50	119 40
Ichon	Barrio	Leyte.	186	10 05	124 55
Ida	Barrio	Amburayan Subprovince.	198	17 00	120 33
Idiacacan	Barrio	Antique.	90	11 40	122 05
Idiang	Barrio	Batanes.	98	20 24	121 57
Idio	Barrio	Antique.	90	11 35	122 05
Idioc.	Sitio	Camarines Norte.	122	14 10	122 47
IFUGAO.	Subprovince.	Ifugao	206	16 50	121 10
Ifugao	Subprovince	Mountain Province.	196	16 50	121 10
Igang	Barrio	Capiz.	130	11 23	122 28
Igang	Barrio	Leyte.	186	10 40	124 50
Igbancal	Barrio	Antique.	90	10 30	122 00
Igbaras	Municipality.	Iloilo	166	10 40	122 15
Igbarauan	Sitio.	Antique.	90	11 00	122 00
Igbobon	Barrio	Antique.	90	10 55	122 00
Igbon	Island.	Iloilo	166	11 15	123 10
Igburi	Sitio.	Antique.	90	10 55	122 05
Igcadum	Barrio	Iloilo	166	10 30	122 05
Igcado	Barrio	Antique.	90	10 35	122 00
Igcocolo	Barrio	Iloilo	166	10 40	122 20
Igdagmay	Barrio	Antique.	90	10 50	122 00
Igdalig	Mountain	Iloilo	166	10 50	122 10
Iglesia	Point	Palawan (S)	228	8 30	117 30
Igsoro	Barrio	Antique.	90	11 05	122 10
Iguig	Municipality.	Cagayan	118	17 45	121 45
Iiyu	Sitio	Nueva Vizcaya.	216	16 16	121 06

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Icik	Barrio	Batangas	102	14	08	121	03
Ikmin	River	Abra	78	17	24	120	47
Ilabas	Barrio	Antique	90	10	50	122	00
Ilacon	Island	Occidental Negros	220	11	05	123	10
Ilagan	Capital	Isabela	170	17	10	121	55
Ilagan	Capital, Isabela	Philippine Islands	72	17		122	
Ilagan	Barrio	Lepanto Subprovince	210	17	00	120	56
Ilagarian	Point	Sorsogon (S)	252	12	07	123	23
Ilap	Sitio	Ifugao Subprovince	206	16	43	121	12
Ilauran	Barrio	Romblon	244	12	30	122	20
Ilaya	Barrio	Zamboanga	278	8	35	123	25
Ilayang Oayin	Barrio	Tayabas (S)	270	14	10	121	40
Ili	Rancheria	Apayao Subprovince	200	17	50	121	17
Ilian	Barrio	Palawan (N)	228	10	20	119	30
Iligan	Municipality	Lanao	178	8	15	124	15
Iligan	Bay	Lanao	178	8	20	124	00
Iligan	Bay	Misamis	194	8	25	124	00
Iligan	Point	Cagayan	118	18	20	122	20
Ilihan	Barrio	Batangas	102	13	38	121	05
Ilihan	Barrio	Cebu	138	10	55	124	00
Ilihan	Barrio	Romblon	244	12	50	122	05
Ilihan	Mountain	Leyte	186	10	30	125	05
Ilin	Island	Mindoro	190	12	15	121	05
Ilin	Point	Mindoro	190	12	10	121	05
Iloilio	Barrio	Pangasinan	236	16	00	119	46
Illana	Bay	Lanao	178	7	30	123	45
Iloc	Island	Palawan (N)	228	11	20	119	40
Ilocano	Barrio	Amburayan Subprovince	198	16	55	120	29
ILOCOS NORTE	Province	Ilocos Norte	158	18	10	120	45
Ilocos Norte	Province	Philippine Islands	72	18		121	
ILOCOS SUR	Province	Ilocos Sur	162	17	30	120	30
Ilocos Sur	Province	Philippine Islands	72	17		120	
Ilog	Municipality	Occidental Negros	220	10	00	122	45
Ilog	River	Occidental Negros	220	9	55	122	50
ILOILO	Province	Iloilo	166	11	00	122	40
Iloilo	Province	Philippine Islands	72	11		123	
Iloilo	Capital	Iloilo	166	10	40	122	35
Iloilo	Capital, Iloilo	Philippine Islands	72	11		123	
Iloilo	Strait	Iloilo	166	10	30	122	25
Ilom	Sitio	Cebu	138	10	40	123	55
Ilungkug	Sitio	Lanao	178	7	55	124	00
Imaao	Barrio	Camarines Sur	126	13	33	123	19
Imacoto	Sitio	Albay	86	13	05	123	18
Imaro	Sitio	Mindoro	190	13	00	121	00
Imaruan	Island	Palawan (N)	228	11	10	120	50
Imba	Barrio	Antique	90	11	55	121	35
Imbatog	Barrio	Bukidnon	110	8	20	124	40
Immaybus	Barrio	Ilocos Sur	162	17	44	120	28
Imnajbu	Barrio	Batanes	98	20	23	122	00
Imoc	Barrio	Laguna	174	14	07	121	18
Impalutau	Barrio	Bukidnon	110	8	10	125	00
Impasugong	Municipality	Bukidnon	110	8	15	125	00
Impo	Barrio	Leyte	186	11	20	124	50
Importante	Barrio	Antique	90	11	15	122	05
Imugan	Township	Nueva Vizcaya	216	16	10	120	55
Imuruan	Bay	Palawan (N)	228	10	40	119	10
Imurung	Barrio	Cagayan	113	17	55	121	55
Imus	Municipality	Cavite	134	14	26	120	56
Inabaan	Barrio	La Union	182	16	16	120	28
Inabang	Barrio	Nueva Vizcaya	216	16	13	121	08
Inabanga	Municipality	Bohol	106	10	02	124	04
Inabanga	River	Bohol	106	9	58	124	17
Inabayan	Sitio	Mindoro	190	13	20	121	05
Inaclagan	Barrio	Tayabas (S)	270	13	55	122	05
Inagauan	Barrio	Palawan (S)	228	9	30	118	40
Inagbun	Sitio	Palawan (S)	228	8	40	117	40
Inalad	Barrio	Oriental Negros	224	9	05	123	05
Inalad	Sitio	Leyte	186	11	35	124	20
Inaman	Mountain	Iloilo	166	10	55	122	15
Inamlag	Sitio	Camarines Norte	122	14	12	122	34
Inampulugan	Island	Iloilo	166	10	25	122	40
Inandeng	Sitio	Palawan (N)	228	10	30	119	20
Inang	Barrio	Sorsogon (N)	252	13	00	123	43
Inangatan	Barrio	Leyte	186	11	15	124	25
Inang Maharang	Sitio	Albay	86	13	04	123	54
Inapulangan	Sitio	Samar	243	10	45	125	40
Inapuy (see Anabel)	Barrio	Bontoc Subprovince	204	17	08	121	04
Inararan	Barrio	Sorsogon (N)	252	12	42	123	52
Inatangan	Sitio	Kalinga Subprovince	208	17	29	121	04
Inayauan	Barrio	Occidental Negros	220	9	55	122	25

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Inayupan.....	Barrio.....	Leyte.....	186	10	50	122	55
Indan.....	Municipality.....	Camarines Norte.....	122	14	10	122	54
Indan.....	Point.....	Camarines Norte.....	122	14	13	122	55
Indang.....	Municipality.....	Cavite.....	134	14	12	120	53
Indangan.....	Sitio.....	Cotabato.....	150	6	55	125	10
Indiana.....	Barrio.....	Nueva Vizcaya.....	216	16	20	121	04
Induyong.....	Barrio.....	Abra.....	78	17	34	120	36
Ineangan.....	Barrio.....	Nueva Vizcaya.....	216	16	19	121	06
Infanta.....	Municipality.....	Pangasinan.....	236	15	50	119	54
Infanta.....	Municipality.....	Tayabas (N).....	270	14	45	121	40
Ingalan.....	Island.....	Camarines Norte.....	122	14	23	122	57
Ingud.....	Barrio.....	Isabela.....	170	16	50	121	45
Iniban.....	Barrio.....	Oriental Negros.....	224	9	55	123	10
Inirangan.....	Barrio.....	Pangasinan.....	236	16	11	119	56
Initao.....	Municipality.....	Misamis.....	194	8	30	124	15
Initao.....	Mountain.....	Misamis.....	194	8	30	124	20
Initao.....	Point.....	Misamis.....	194	8	35	124	20
Inlamut.....	Sitio.....	Ifugao Subprovince.....	206	16	51	121	11
Inloman.....	Mountain.....	Benguet Subprovince.....	202	16	23	120	46
Inopacan.....	Municipality.....	Leyte.....	186	10	30	124	45
Intramuros.....	District.....	City of Manila.....	146	14	36	120	58
Inugtan.....	Barrio.....	Davao.....	154	7	50	126	00
Inuman.....	Mountain.....	Bulacan.....	114	14	53	121	14
Inyauan.....	Sitio.....	Antique.....	90	11	45	121	55
Iphag.....	Barrio.....	Leyte.....	186	11	10	124	50
Ipil.....	Barrio.....	Bohol.....	106	10	05	124	20
Ipil.....	Barrio.....	Isabela.....	170	16	40	121	40
Ipil.....	Barrio.....	Romblon.....	244	12	30	122	25
Ipil.....	Barrio.....	Surigao.....	262	9	50	125	25
Ipil.....	Barrio.....	Tayabas (S).....	270	14	05	122	15
Ipil.....	Barrio.....	Zamboanga.....	278	7	45	122	35
Ipil.....	River.....	Bohol.....	106	10	05	124	21
Iponan.....	Barrio.....	Misamis.....	194	8	30	124	35
Irahan.....	Barrio.....	Palawan (S).....	228	9	50	118	40
Irao.....	Island.....	Cagayan.....	118	19	00	121	10
Iraya.....	Mountain.....	Batanes.....	98	20	29	122	01
Iraya.....	Volcano, dormant.....	Relief.....	72	20		122	
Irid.....	Mountain.....	Rizal.....	240	14	47	121	20
Iriga.....	Municipality.....	Camarines Sur.....	126	13	25	123	25
Iriga.....	Mountain.....	Camarines Sur.....	126	13	27	123	26
Iriga.....	Volcano, dormant.....	Relief.....	72	13		123	
Irirum.....	Barrio.....	Mindoro.....	190	12	35	120	55
Irisan.....	Barrio.....	Benguet Subprovince.....	202	16	26	120	33
Irosin.....	Municipality.....	Sorsogon (N).....	252	12	42	124	02
Irurulong.....	Barrio.....	Nueva Ecija.....	212	15	27	121	20
Irurus.....	Sitio.....	Cotabato.....	150	7	30	124	40
Isabel.....	Island.....	Romblon.....	244	13	00	121	55
ISABELA.....	Province.....	Isabela.....	170	17	00	122	00
Isabela.....	Province.....	Philippine Islands.....	72	17		122	
Isabela.....	Municipality.....	Occidental Negros.....	220	10	15	123	00
Isabela.....	Municipality.....	Zamboanga.....	278	6	40	122	00
Isarog.....	Mountain.....	Camarines Sur.....	126	13	39	123	22
Isarog.....	Volcano, dormant.....	Relief.....	72	14		123	
Isit.....	Barrio.....	Abra.....	78	17	39	120	41
Island.....	Bay.....	Palawan (S).....	228	9	00	118	10
Itanga.....	Sitio.....	Nueva Vizcaya.....	216	16	11	121	15
Itbayat.....	Island.....	Philippine Islands.....	72	21		122	
Itbayat.....	Island.....	Batanes.....	98	20	45	121	52
Itbayat.....	Township.....	Batanes.....	98	20	44	121	50
Itbayat.....	Township.....	Batanes.....	98	20	22	121	59
Itbud.....	Barrio.....	Rizal.....	240	14	26	121	12
Itban.....	Barrio.....	Cotabato.....	150	6	50	124	45
Itig.....	Sitio.....	Cotabato.....	150	6	35	124	30
Itim-Itim.....	Mountain.....	Cotabato.....	150	6	35	124	30
Itoc.....	Barrio.....	Camarines Norte.....	122	14	18	122	29
Itogon.....	Township.....	Benguet Subprovince.....	202	16	22	120	41
Itogon.....	Township.....	Mountain Province.....	196	16	20	120	40
Itum.....	Barrio.....	Bohol.....	106	9	43	124	25
Iuisan.....	Municipality.....	Capiz.....	130	11	31	122	42
Ivana.....	Township.....	Batanes.....	98	20	23	121	56
Iwahig.....	Penal Colony.....	Palawan (S).....	228	9	40	118	40
J.							
Jabonga.....	Municipal district.....	Agusan.....	82	9	20	125	30
Jaen.....	Municipality.....	Nueva Ecija.....	212	15	20	120	55
Jaena.....	Barrio.....	Capiz.....	130	11	25	122	24
Jagna.....	Municipality.....	Bohol.....	106	9	39	124	22
Jaguimit.....	Sitio.....	Cebu.....	138	10	15	123	40
Jalajala.....	Municipality.....	Rizal.....	240	14	21	121	19
Jalajala.....	Point.....	Rizal.....	240	14	18	121	18
Jalauhuan.....	Barrio.....	Mindoro.....	190	12	45	120	50

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Jalas	Barrio	Capiz	130	11	40	122	24
Jalaur	River	Hiloilo	166	11	10	122	20
Jaminay	Barrio	Hiloilo	166	11	05	122	35
Jamindan	Municipality.	Capiz	130	11	25	122	30
Jamoyaan	Barrio	Surigao	262	9	55	126	00
Janabatas	Channel.	Leyte	186	11	25	124	50
Janao	Bay	Batangas	102	13	46	120	50
Jandig	Barrio	Bohol	106	9	46	123	50
Jangan	Barrio	Sorsogon (S)	252	12	01	123	16
Janiuay	Municipality.	Hiloilo	166	10	55	122	30
Janosa	Barrio	Rizal	240	14	21	121	13
Jao	Island.	Bohol	106	10	10	124	22
Jao	Barrio	Bohol	106	10	10	124	21
Japitan	Barrio	Occidental Negros	220	10	45	123	30
Japonan	Barrio	Samar	248	12	15	125	25
Jaro	Municipality.	Hiloilo	166	10	45	122	35
Jaro	Municipality.	Leyte	186	11	10	124	45
Jaulo	Island.	Camarines Norte	122	14	21	122	27
Javier	Barrio	Surigao	262	8	30	126	05
Jelicuon	Barrio	Hiloilo	166	10	55	122	35
Jesus	Point	Albay	86	13	07	123	56
Jesus	Point	Camarines Norte	122	14	21	122	31
Jetafe	Municipality.	Bohol	106	10	09	124	09
Jiabong	Barrio	Samar	248	11	45	124	55
Jibitnil	Island.	Cebu	138	11	10	123	55
Jilantangan	Island.	Cebu	138	11	10	123	50
Jilantangan	Barrio	Cebu	138	11	10	123	50
Jimalalud	Municipality.	Oriental Negros	224	10	00	123	10
Jimenez	Municipality.	Misamis	194	8	20	123	50
Jintotolo	Channel.	Capiz	130	11	48	123	05
Jintotolo	Channel.	Sorsogon (S)	252	11	48	123	05
Jintotolo	Barrio	Sorsogon (S)	252	11	51	123	08
Jintotolo	Island.	Sorsogon (S)	252	11	51	123	08
Jipapad	Municipal district	Samar	248	12	15	125	15
Jobasan	Sitio.	Samar	248	12	25	125	15
Jobo	Point	Surigao	262	8	40	126	15
Jolo	Island.	Sulu	258	6	00	121	10
Jolo	Island.	Philippine Islands	72	6		121	
Jolo	Capital.	Sulu	258	6	05	121	00
Jolo	Capital, Sulu	Philippine Islands	72	6		121	
Jolo	Barrio	Mindoro	190	13	25	120	30
Jomalig	Island.	Tayabas (N)	270	14	40	122	20
Jomalig	Pass	Tayabas (N)	270	14	40	122	15
Jones	Municipality.	Romblon	244	13	00	122	05
Jones	Mountain	Pangasinan	236	16	07	120	37
Jonobjonob	Barrio	Occidental Negros	220	10	50	123	30
Jordan	Municipality.	Hiloilo	166	10	40	122	35
Jordan	Barrio	Ilocos Sur	162	17	53	120	28
Jovellar	Municipality.	Albay	86	13	04	123	36
Jovellar	Sitio.	Davao	154	7	00	126	30
Joyo	Sitio.	Ifugao Subprovince.	206	16	43	121	01
Juban	Municipality.	Sorsogon (N)	252	12	51	123	59
Jubgan	Barrio	Surigao	262	9	40	125	25
Julita	Barrio	Capiz	130	11	28	122	20
Julita	Barrio	Leyte	186	11	20	124	35
Julita	Barrio	Leyte	186	11	00	124	55
Julnad	Barrio	Ifugao Subprovince.	206	16	51	121	07
Jumbit	Islands.	Albay	86	13	38	124	28
Junes	Mountain	Hiloilo	166	10	40	122	05
Juraojurao	Island.	Antique	90	10	25	122	00
K.							
Kabacnan	Rancheria	Apayao Subprovince.	200	17	55	121	11
Kabadiangan	Barrio	Samar	248	12	40	125	05
Kabadyangan	Barrio	Cebu	138	10	30	124	00
Kabahian	Barrio	Agusan	82	8	55	125	35
Kabakan	Municipal district	Cotabato	150	7	10	124	50
Kabakan	River	Cotabato	150	7	10	125	00
Kabankalan	Municipality.	Occidental Negros	220	10	00	122	50
Kabankalan	Barrio	Sorsogon (S)	252	12	21	123	21
Kabasalan	Municipal district	Zamboanga	278	7	50	122	45
Kabasalan	Mountain	Zamboanga	278	7	50	122	50
Kabasaran	Sitio.	Cotabato	150	7	30	124	20
Kabasi	Barrio	Albay	86	13	14	123	31
Kabatokan	Sitio.	Davao	254	7	20	125	30
Kabatuan	Mountain	Agusan	82	9	30	125	40
Kabayan	Township	Benguet Subprovince	202	16	37	120	50
Kabayan	Township	Mountain Province	196	16	40	120	50
Kabayan	Barrio	Benguet Subprovince	202	16	39	120	50
Kabayo	Sitio.	Bataan	94	14	38	120	23

Name.	Feature.	Map.	Fac- ing page.	Lati- tude.	Longi- tude.
				° /	° /
Kabidian.	Barrio	Bohol.	106	9 52	124 29
Kabingbing.	Barrio	Zamboanga.	278	6 25	122 05
Kabitoonan.	Barrio	Cebu	138	10 20	123 35
Kaboynan.	Barrio	Leyte.	186	11 05	125 00
Kabuaya.	Sitio.	Davao	154	6 30	126 10
Kabugan.	Island.	Zamboanga.	278	7 10	122 15
Kabugao.	Capital.	Apayao Subprovince.	200	18 01	121 11
Kabugao.	Township	Mountain Province.	196	18 60	121 10
Kabugaoan.	Sitio.	Apayao Subprovince.	200	18 08	121 04
Kabukum.	Sitio.	Cotabato.	150	6 40	124 45
Kabul.	Sitio.	Bukidnon.	110	8 30	125 00
Kabulao.	Barrio	Bohol.	106	9 55	124 33
Kabulig.	River	Bukidnon.	110	8 40	124 55
Kaburan.	Sitio.	Davao	154	5 50	125 40
Kabut.	Island.	Zamboanga.	278	7 45	122 50
Kabuyao.	Sitio.	Bulacan.	114	14 56	121 08
Kabuyao.	Sitio.	Lanao.	178	8 00	123 50
Kadahanan.	Sitio.	Davao	154	7 30	126 20
Kadaklan.	Barrio	Bontoc Subprovince.	204	17 03	121 11
Kadugmayan.	Barrio	Bukidnon.	110	8 05	124 45
Kagaluan.	Barrio	Kalinga Subprovince.	208	17 24	121 12
Kaganhaw.	Barrio	Tayabas (S)	270	13 25	122 00
Kaganuhan.	Point	Davao	154	6 20	126 10
Kagdayanaw.	Sitio.	Surigao	262	9 30	125 50
Kagotungan.	Barrio	Abra.	78	17 28	120 36
Kagsing.	Barrio	Cebu	138	9 35	123 20
Kahintinusa.	Island.	Zamboanga.	278	6 25	122 05
Kakaon.	Barrio	Bukidnon.	110	8 10	124 40
Kalabasita.	Barrio	Bohol.	106	9 46	124 17
Kalafug.	Rancheria	Apayao Subprovince.	200	17 46	121 20
Kalago.	Sitio.	Lanao	178	7 40	124 40
Kalain.	Sitio.	Lanao.	178	7 50	123 50
Kalakab.	Barrio	Isabela.	170	16 45	121 45
Kalampuyangan.	Sitio.	Davao	154	7 00	126 10
Kalan.	Sitio.	Cotabato.	150	6 20	124 40
Kalanganan.	Municipal district.	Cotabato.	150	7 15	124 15
Kalantas.	Barrio	Pampanga.	232	15 01	120 31
Kalao.	Township	Bontoc Subprovince.	204	17 13	121 22
Kalao.	Township	Mountain Province.	196	17 10	121 25
Kalaonan.	Mountain.	Bulacan.	114	15 02	121 20
Kalapadan.	Bay	Albay.	86	13 37	124 22
Kalasangai.	Barrio	Bukidnon.	110	8 05	125 05
Kalatungan.	Mountain	Bukidnon.	110	7 55	124 50
Kalaug.	Sitio	Cotabato.	150	7 35	124 45
Kalavera.	Barrio	Cebu	138	10 25	123 40
Kalayakan.	Sitio.	Bulacan.	114	15 12	121 05
Kalbay.	Sitio.	Davao	154	5 50	125 30
Kalian.	Barrio	Davao	154	6 10	125 40
Kalian.	Barrio	Leyte.	186	10 10	125 05
Kalian.	Point	Davao	154	6 10	125 40
Kaliantana.	Barrio	Zamboanga.	278	7 45	122 40
Kalibigaho.	Sitio.	Camarines Norte	122	14 20	122 41
Kaliking.	Barrio	Benguet Subprovince	202	16 33	120 41
Kalilangan.	Barrio	Bukidnon	110	7 45	124 50
Kalinawan.	Barrio	Rizal	240	14 25	121 12
KALINGA.	Subprovince	Kalinga.	208	17 30	121 20
Kalinga.	Subprovince	Mountain Province.	196	17 30	121 20
Kalingmono.	Sitio	Cotabato	150	6 40	124 05
Kalipan.	Sitio	Zamboanga	278	7 40	122 25
Kalokot.	Island	Tayabas (N)	270	14 55	122 10
Kalongkooan.	Island	Tayabas (N)	270	14 55	122 10
Kaluayan.	Mountain.	Bukidnon	110	8 40	125 10
Kalubkob 1.°	Barrio	Batangas	102	13 45	121 25
Kalubkob 2.°	Barrio	Batangas	102	13 45	121 26
Kalubkob.	Barrio	Cavite	134	14 13	120 57
Kaludlud.	Island	Zamboanga.	278	6 45	121 25
Kalugmanan.	Barrio	Bukidnon	110	8 15	124 55
Kalumalay.	River	Davao	154	8 00	125 30
Kalumsing.	Barrio	Lepanto Subprovince.	210	17 17	120 34
Kalunuran.	Barrio	Cavite	134	14 25	120 51
Kamanga.	Sitio	Cotabato	150	5 50	125 00
Kamansa.	Barrio	Davao	154	7 40	125 50
Kamansi.	Sitio	Davao	154	7 00	126 10
Kamantaogan.	Sitio	Davao	154	7 50	126 00
Kamarchan.	Lake	Agusan	82	8 10	125 50
Kamatayan.	Sitio	Misamis	194	8 40	124 45
Kambahag.	Lake	Agusan	82	8 05	125 50
Kambitoo.	Barrio	Bohol	106	9 59	124 09
Kamboang.	Barrio	Cebu	138	10 00	123 25
Kambulo.	Barrio	Ifugao Subprovince.	206	16 57	121 09
Kambuyo.	Barrio	Bohol	106	9 44	124 16

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Kamiros	Barrio	Iloilo	166	11	00	122	45
Kanan	Barrio	Abra	78	17	40	120	40
Kanan	River	Tayabas (N)	270	14	50	121	30
Kananganan	Sitio	Davao	154	7	20	125	40
Kanatan	Barrio	Davao	154	7	30	125	50
Kanapun	Barrio	Zamboanga	278	8	00	122	20
Kanasujan	Barrio	Cebu	138	10	10	123	40
Kanayaan	Barrio	Bohol	106	9	38	124	19
Kandabong	Barrio	Bohol	106	9	44	124	32
Kandadam	Barrio	Leyte	186	10	40	124	50
Kandamiang	Barrio	Cebu	138	9	25	123	20
Kandoos	Sitio	Davao	154	7	30	126	20
Kangaktol	Barrio	Cebu	138	10	00	123	30
Kanghalo	Barrio	Cebu	138	10	00	123	30
Kanghumaod	Barrio	Cebu	138	10	05	123	30
Kanhaway	Barrio	Bohol	106	9	45	124	20
Kanhaway	Barrio	Samar	248	11	40	125	28
Kanibuang	Barrio	Cebu	138	10	45	123	31
Kanithaan	Island	Surigao	262	10	10	125	50
Kanipa	Sitio	Davao	154	7	10	125	55
Kanipaon	Barrio	Leyte	186	10	25	125	50
Kanlampay	Barrio	Leyte	186	11	10	124	40
Kanmansad	Sitio	Tayabas (S)	270	13	15	122	30
Kanoling	Barrio	Bohol	106	9	49	124	31
Kanoling	Barrio	Bohol	106	9	56	124	12
Kantoyok	Barrio	Bohol	106	9	57	124	04
Kantuod	Barrio	Cebu	138	10	30	123	45
Kanumay	Mountain	Rizal	240	14	39	121	19
Kapai	Municipal district	Lanao	178	8	10	124	25
Kapakuhan	Barrio	Ilocos Norte	158	18	02	120	36
Kapakulan	Barrio	Sorsogon (S)	252	12	13	123	29
Kapala	Barrio	Cotabato	150	5	45	125	15
Kapalolong	River	Davao	154	7	40	125	30
Kapangan	Township	Benguet Subprovince	202	16	35	120	35
Kapangan	Township	Mountain Province	196	16	35	120	35
Kapangan	Mountain	Benguet Subprovince	202	16	35	120	34
Kapangian	Barrio	Iloilo	166	11	05	122	30
Kapangian	Barrio	Leyte	186	11	15	125	00
Kapantao	Mountain	Agusan	82	8	40	125	20
Kapantao	Mountain	Bukidnon	110	8	40	125	15
Kapantao	Mountain	Relief	72	9		125	
Kaparan	Barrio	Zamboanga	278	7	45	122	30
Kapasilas	Sitio	Lanao	178	7	50	123	55
Kapatagan	Municipal district	Lanao	178	8	00	123	55
Kapaya	Sitio	Cotabato	150	6	35	124	30
Kapayagan	Sitio	Cotabato	150	7	30	125	15
Kapayawan	Barrio	Zambales	274	15	17	120	00
Kapiasan	Sitio	Lanao	178	7	35	124	50
Kapilejan	Point	Romblon	244	12	50	122	05
Kapiligian	Mountain	Ifugao Subprovince	206	16	51	120	56
Kapiligian	Mountain	Lepanto Subprovince	210	16	51	120	56
Kapilihan	Sitio	Cebu	138	10	35	123	55
Kapinatan	Rancheria	Apayao Subprovince	200	18	08	121	21
Kapipian	Sitio	Samar	248	12	15	124	40
Kapunitan	Barrio	Bataan	94	14	37	120	35
Kapuy	Barrio	Sorsogon (N)	252	12	59	123	56
Karagawan	Rancheria	Apayao Subprovince	200	17	55	121	10
Karaha	Sitio	Cotabato	150	6	55	124	10
Karakitan	Rancheria	Apayao Subprovince	200	17	43	121	19
Karakun	Sitio	Lanao	178	7	55	124	00
Kariga	Barrio	Camarines Sur	126	13	43	123	08
Karkaran	Barrio	Albay	86	13	14	123	59
Karungdung	Barrio	Sulu	258	5	50	121	20
Karuvuvan	Sitio	Batanes	98	20	48	121	54
Kasao	Sitio	Apayao Subprovince	200	18	07	121	00
Kasay	Barrio	Antique	90	10	25	122	00
Kasay	Barrio	Cebu	138	9	50	123	35
Kasay	Barrio	Tayabas (S)	270	13	15	122	30
Kasayan	Sitio	Davao	154	6	00	125	30
Kasika	Barrio	Bohol	106	9	45	124	34
Kasilayan	River	Agusan	82	8	25	125	35
Kasili	Barrio	Ilocos Sur	162	17	40	120	22
Kasili	Barrio	Tayabas (S)	270	13	35	122	00
Katabau	Barrio	Cotabato	150	5	55	124	50
Katakian Grande	Island	Tayabas (N)	270	14	50	122	15
Katakupun	Sitio	Palawan (S)	228	8		117	
Katalogan	Sitio	Davao	154	7	30	126	10
Katanglad	Mountain	Bukidnon	110	8	05	124	55
Katanglad	Mountain	Relief	72	8	00	125	
Kataringan	Barrio	Bukidnon	110	8	55	124	50

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Katgipsipan	Mountain	Nueva Vizcaya	216	16	02	121	26
Katipunán	Barrio	Agusan	82	9	10	125	35
Katiwing	Barrio	Leyte	186	10	20	125	15
Katolohan	Barrio	Cebu	138	9	40	123	25
Katongkatong	Sitio	Palawan (S)	228	7	50	117	00
Katungauan	Barrio	Bohol	106	9	46	124	28
Kauayan	Sitio	Davao	154	6	20	125	20
Kaulungan	Island	Zamboanga	278	6	25	122	15
Kausugan	Barrio	Agusan	82	9	10	125	30
Kawasan	Barrio	Cebu	138	10	10	123	30
Kawayan	Municipality.	Leyte	186	11	40	124	20
Kawit	Municipality.	Cavite	134	14	27	120	54
Kawit	Barrio	Albay	86	13	07	123	54
Kawit	Barrio	Cebu	138	11	10	123	55
Kawit	Barrio	Cebu	138	10	45	124	30
Kawit	Sitio	Tayabas (S)	270	13	25	121	50
Kawit	Point	Albay	86	13	08	123	52
Kawit	Point	Zamboanga	278	7	30	122	05
Kawit-Kawit	Sitio	Zamboanga	278	7	30	122	05
Kayab	Sitio	Tayabas (S)	270	13	25	122	40
Kayam	Barrio	Bohol	106	9	37	124	16
Kayan	Township	Lepanto Subprovince	210	16	59	120	48
Kayan	Township	Mountain Province	196	17	00	120	50
Kayapa	Township	Nueva Vizcaya	216	16	18	120	52
Kaykiwit	Barrio	Cavite	134	14	10	120	53
Kay Mate	Sitio	Bulacan	114	14	57	121	06
Kaypambo	Barrio	Bulacan	114	14	51	120	59
Kaytitinga	Barrio	Cavite	134	14	06	120	50
Kebaritan	Sitio	Bukidnon	110	7	50	124	40
Kerupa	Sitio	Cotabato	150	7	30	124	35
Kiagaun	Barrio	Bukidnon	110	8	45	124	50
Kiangan	Capital	Ifugao Subprovince	206	16	47	121	05
Kiangan	Towship	Mountain Province	196	16	45	121	05
Kias	Trail	Benguet Subprovince	202	16	20	120	38
Kiat	Sitio	Amburayan Subprovince	198	16	52	120	31
Kibalat	Sitio	Abra	78	17	23	120	45
Kibangay	Sitio	Davao	154	7	20	125	20
Kibaning	River	Bukidnon	110	7	35	121	55
Kibawi	Barrio	Bukidnon	110	7	30	125	00
Kibulawan	Barrio	Bukidnon	110	8	15	124	35
Kibungan	Township	Benguet Subprovince	202	16	42	120	39
Kibungan	Township	Mountain Province	196	16	40	120	40
Kidapaun	Municipal district	Cotabato	150	7	00	125	05
Kilbay	Barrio	Camarines Sur	126	13	54	122	35
Kili	Sitio	Lepanto Subprovince	210	16	49	120	44
Kilim	Barrio	Leyte	186	10	45	124	45
Kiling	Barrio	Leyte	186	11	05	125	00
Kilingan	Sitio	Nueva Vizcaya	216	16	00	121	28
Kiliog	Barrio	Bukidnon	110	8	20	124	45
Kiluntadun	Mountain	Agusan	82	8	40	125	50
Kimallasag	Barrio	Abra	78	17	27	120	36
Kimpusa	Barrio	Amburayan Subprovince	198	16	59	120	31
Kinabalian	Mountain	Agusan	82	8	15	125	25
Kinabiti	Barrio	Abra	78	17	23	120	36
Kinachawa	Sitio	Leyte	186	10	00	125	15
Kinagatan	Sitio	Rizal	240	14	23	121	13
Kinalangan	Sitio	Camarines Sur	126	13	57	122	38
Kinalansan	Barrio	Camarines Sur	126	13	42	123	33
Kinaludan	Sitio	Agusan	82	9	00	125	40
Kinapusan	Island	Sulu	258	7	10	118	30
Kinapusan	Island	Sulu	258	5	15	120	40
Kinatooog	Sitio	Agusan	82	9	25	125	30
Kinaya	River	Bukidnon	110	8	35	124	55
Kinayuya	Barrio	Capiz	130	11	23	122	39
Kinga	Sitio	Ifugao Subprovince	206	16	49	121	00
Kinokitan	Barrio	Bohol	106	9	41	124	04
Kiokong	Barrio	Bukidnon	110	7	45	125	05
Kipit	Bay	Zamboanga	278	8	05	122	30
Kipit	Point	Zamboanga	278	8	05	122	25
Kipit	Sitio	Zamboanga	278	8	05	122	30
Kipot	Barrio	Batangas	102	13	46	121	24
Kisarum	Sitio	Lanao	178	7	45	124	45
Kitab	Sitio	Apayao Subprovince	200	18	30	121	12
Kitakita	Barrio	Nueva Ecija	212	15	49	121	00
Kitcharao	Barrio	Agusan	82	9	30	125	35
Kitubud	Mountain	Cotabato	150	7	15	124	40
Kiualan	Point	Lanao	178	8	15	124	15
Klawit	Mountain	Ifugao Subprovince	206	16	58	120	58
Klawit	Mountain	Mountain Province	196	17	00	121	00
Klawit	Mountain	Relief	72	17		121	00

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Kling	Municipal district.	Cotabato	150	6	00	124	45
Klondyke	Road gate	Benguet Subprovince	202	16	15	120	32
Kogtong	Barrio	Bohol	106	9	50	124	32
Kolalo	Sitio	Lepanto Subprovince	210	16	54	120	46
Kolambugan	Municipal district.	Lanao	178	8	10	123	55
Kolanconan	Sitio	Tayabas (N)	270	14	40	122	00
Kollago	Barrio	Abra	78	17	45	120	44
Kolonia	Barrio	Cebu	138	10	40	123	50
Kolumbugan	Sitio	Cotabato	150	7	20	124	45
Kongkong	Rancheria	Nueva Vizcaya	216	16	24	121	13
Koronadal	Municipal district.	Cotabato	150	6	05	125	00
Kosukos	Sitio	Ilocos Sur	162	17	29	120	35
Kotkot	Barrio	Cebu	138	10	25	124	00
Kuabo	Sitio	Davao	154	6	50	126	00
Kuadbasang	Island	Sulu	258	5	25	120	10
Kubangan	Island	Zamboanga	278	6	40	121	30
Kulaguhan	Sitio	Davao	154	6	20	126	10
Kulaman	Sitio	Davao	154	6	00	125	40
Kulapu	Sitio	Davao	154	7	20	125	20
Kulasi	Sitio	Samar	248	10	45	125	45
Kulasian	Barrio	Zamboanga	278	7	40	122	50
Kulasihan	Sitio	Lanao	178	8	05	124	00
Kulassein	Island	Sulu	258	6	25	120	45
Kulawingon	Barrio	Bukidnon	110	8	10	124	40
Kulian	Sitio	Davao	154	6	20	125	20
Kulis	Barrio	Bataan	94	14	51	120	28
Kulo	Barrio	Bataan	94	14	51	120	25
Kulungan	Point	Davao	154	6	40	125	30
Kumalarang	Municipal district.	Zamboanga	278	7	45	123	05
Kumao	Rancheria	Apayao Subprovince	200	18	06	121	10
Kunasao	Sitio	Lanao	178	7	50	123	55
Kumasie	Sitio	Davao	154	6	30	125	30
Kutapic	Sitio	Ifugao Subprovince	206	16	52	121	00
L.							
Laang	Barrio	Abra	78	17	36	120	44
Labaan	Barrio	Abra	78	17	27	120	49
Labac	Barrio	Cavite	134	14	19	120	45
Labang	Sitio	Benguet Subprovince	202	16	12	120	40
Labangan	Barrio	Laguna	174	14	10	121	24
Lahangan	Barrio	Zamboanga	278	7	50	123	35
Labao	River	Agusan	82	8	45	125	45
Labas	Sitio	Cotabato	150	7	15	124	30
Labasin	Sitio	Laguna	174	14	00	121	20
Labayo	Barrio	Laguna	174	14	14	121	31
Labayug	Barrio	Pangasinan	236	16	10	120	33
Labheng	Barrio	Cagayan	118	18	35	121	15
Labinab	Barrio	Isabela	170	16	55	121	45
Labnig	Barrio	Albay	86	13	23	123	40
Labnig	Barrio	Camarines Norte	122	14	16	122	49
Labo	Barrio	Ilocos Sur	162	17	46	120	28
Labo	Municipality	Camarines Norte	122	14	09	122	50
Labo	Barrio	Misamis	194	8	10	123	50
Labo	Mountain	Camarines Norte	122	14	01	122	48
Labo	Mountain	Tayabas (S)	270	14	00	122	45
Labo	Mountain	Relief	72	14		123	
Laboy	River	Benguet Subprovince	202	16	28	120	42
Labrador	Municipality	Pangasinan	236	16	02	120	09
Labrador	Barrio	Cebu	138	9	35	123	20
Labu	Barrio	Lanao	178	8	05	124	00
Labuan	Sitio	Zamboanga	278	7	50	121	55
Labuan Sug	Barrio	Zamboanga	278	7	45	122	35
Labuin	Barrio	Laguna	174	14	15	121	22
Labuon	Barrio	Bohol	106	9	52	123	52
Labut	Sitio	Ilocos Sur	162	17	30	120	26
La Caral	Barrio	Bukidnon	110	8	55	124	50
La Carlota	Municipality	Occidental Negros	220	10	25	122	55
Lacaron	Barrio	Capiz	130	11	25	122	44
La Castellana	Municipality	Occidental Negros	220	10	20	123	00
Lacmit	Barrio	Pampanga	232	15	08	120	44
Lacong	Barrio	Amburayan Subprovince	198	16	44	120	25
Lacub	Municipal district.	Abra	78	17	40	120	53
La Fortuna	Barrio	Bukidnon	110	8	10	125	00
Lafu	Barrio	Cagayan	118	18	10	121	40
Lafuente	Barrio	Nueva Ecija	212	15	26	120	55
Lagalag	Barrio	Tayabas (S)	270	13	55	121	25
Lagangilang	Municipality	Abra	78	17	37	120	44
Lagawe	Barrio	Ifugao Subprovince	206	16	49	121	42
Lagayan	Municipality	Abra	78	17	43	120	06
Lagben	Barrio	Abra	78	17	38	120	44

Name.	Feature.	Map.	Facing page	Latitude.	Longitude.
Laglagan	Sitio	Amburayan Subprovince	198	16 54	120 35
Laglogan	Sitio	Lepanto Subprovince	210	17 15	120 42
Lagnas	Barrio	Batangas	102	13 47	121 02
Lagonlong	Barrio	Misamis	194	8 50	124 45
Lagonoy	Gulf	Camarines Sur	126	13 35	123 45
Lagonoy	Municipality	Camarines Sur	126	13 44	123 31
Lagpa	Sitio	Camarines Norte	122	14 13	122 53
Laguerta	Barrio	Laguna	174	14 11	121 05
Laguimanoc	Municipality	Tayabas (S)	270	13 55	121 50
Laguio	Barrio	Camarines Sur	126	13 50	122 46
Lagulo	Barrio	Laguna	174	14 11	121 24
Lagum	Barrio	Agayan	118	17 40	121 50
LAGUNA	Province	Laguna	174	14 10	121 20
Laguna	Province	Philippine Islands	72	14	121
Laguna de Bay	Lake	Laguna	174	14 20	121 15
Laguna de Bay	Lake	Rizal	240	14 20	121 15
Lagundi	Barrio	Rizal	240	14 32	121 15
Lahuy	Island	Camarines Sur	126	13 56	123 50
Lais	Barrio	Davao	154	6 20	125 40
Laiya	Barrio	Batangas	102	13 41	121 24
Lajanosa	Island	Surigao	262	9 40	126 10
Lajoc	Barrio	Bohol	106	9 57	124 00
Lakaran	Barrio	Davao	154	6 30	125 30
Lakit	Islands	Zamboanga	278	6 40	121 25
Lalaan	Barrio	Cavite	131	14 11	120 58
Lalab	Barrio	Capiz	130	11 34	122 26
Lalabuar	Barrio	Lanao	178	7 35	124 05
La Laguna	Barrio	Tayabas (S)	270	13 50	122 25
Lalangan	Rancheria	Apayao Subprovince	200	18 11	121 19
Lalawigan	Barrio	Bataan	94	14 47	120 32
Lalawigan	Barrio	Camarines Norte	122	13 53	123 04
Lalawigan	Barrio	Samar	248	11 35	125 30
La Libertad	Municipality	Oriental Negros	224	10 00	123 15
Lal-lo	Municipality	Agayan	118	18 10	121 40
La Loma	Cemetery	Rizal	240	14 38	121 00
Lalud	Barrio	Camarines Sur	126	13 43	123 25
Lalungan	Point	Lanao	178	7 40	123 50
Lamagan	Mountain	Bontoc Subprovince	204	17 07	121 05
Lamakan	Sitio	Palawan (S)	228	9 10	117 50
Lamao	Barrio	Abra	78	17 26	120 52
Lamao	Barrio	Bataan	94	14 31	120 36
Lamao	Barrio	Romblon	244	12 35	122 20
Lamao	River	Bataan	94	14 31	120 35
Lambac	Barrio	Laguna	174	14 15	121 27
Lambac	Barrio	Rizal	240	14 21	121 14
Lambakin	Barrio	Nueva Ecija	212	15 22	120 52
Lambayo	Mountain	Apayao Subprovince	200	18 13	121 90
Lambayo	Mountain	Mountain Province	196	18 10	121 10
Lambes	Barrio	Pangasinan	236	16 16	119 54
Lambung	Barrio	Cebu	138	9 50	123 20
Lambunao	Municipality	Iloilo	166	11 05	122 30
Lambunao	Sitio	Occidental Negros	220	10 30	123 15
Lambusan	Barrio	Cebu	138	11 00	123 55
Lamidan	Sitio	Davao	154	6 00	125 40
Lamigan	Point	Davao	154	6 50	126 20
Lamit	Islands	Camarines Sur	126	13 58	123 34
Lamitan	Barrio	Zamboanga	278	6 40	122 10
Lamoc	Sitio	Ifugao Subprovince	206	16 43	121 07
Lamo	Barrio	Nueva Vizcaya	216	16 20	121 06
Lamon	Bay	Tayabas (N)	270	14 30	122 00
Lamon	Bay	Philippine Islands	72	14	122
Lampinigan	Island	Zamboanga	278	6 40	121 50
Lampon	Port	Tayabas (N)	270	14 40	121 35
Lamut	River	Ifugao Subprovince	206	16 41	121 09
Lamut	River	Nueva Vizcaya	216	16 40	121 15
Lamut	Barrio	Nueva Vizcaya	216	16 39	121 13
Lamut	Sitio	Nueva Vizcaya	216	16 21	121 05
Lanag	Barrio	Iloilo	166	10 50	122 15
Lanang	Barrio	Pampanga	232	15 07	120 49
Lanang	Barrio	Sorsogon (N)	252	12 25	123 22
Lanang	Barrio	Sorsogon (S)	252	12 25	123 22
LANAO	Province	Lanao	178	8 00	124 00
Lanao	Province	Philippine Islands	72	8	124
Lanao	Lake	Lanao	178	7 55	124 15
Lanao	Barrio	Cebu	138	10 45	124 30
Lanao	Barrio	Ilocos Norte	158	18 31	120 48
Lanat	Mountain	Zambales	274	15 39	120 02
Lancuas	Barrio	Lepanto Subprovince	210	17 15	120 36
Landang	Barrio	Zamboanga	278	6 55	122 15
Landayan	Barrio	Laguna	174	14 21	121 04

LIST OF GEOGRAPHIC NAMES.

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Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Laneb	Barrio	Nueva Vizcaya	216	16	14	120	55
Lanec	Municipal district.	Abra	78	17	47	120	55
Lane Rocks	Islets	Albay	86	14	07	124	00
Lanete	Barrio	Nueva Ecija	212	15	31	121	17
Langa	Sitio	Camarines Norte	122	14	03	122	55
Langangan	Township	Apayao Subprovince	200	18	34	121	00
Langangan	Township	Mountain Province	196	18	35	121	00
Langasian	Municipal district.	Agusan	82	8	15	125	40
Langatian	Barrio	Zamboanga	278	8	30	123	15
Langayan	Barrio	Ilocos Sur	162	17	17	120	26
Langcan	Sitio	Palawan (N)	228	10	30	119	50
Langiden	Municipality	Abra	78	17	35	120	34
Langigen	Sitio	Bontoc Subprovince	204	17	07	121	27
Langi-langiban	Sitio	Palawan (N)	228	11	00	119	30
Langub	Barrio	Cebu	138	10	35	123	45
Langub	Sitio	Cebu	138	11	20	123	55
Lanhil	Island	Zamboanga	278	6	45	122	20
Lanhil	Sitio	Zamboanga	278	6	45	122	20
Lanigay	Barrio	Albay	86	13	20	123	30
Laniton	Barrio	Camarines Norte	122	14	03	122	54
Lankaran	Island	Philippine Islands	72	3		113	
Lankiwa	Barrio	Laguna	174	14	18	121	03
Lanna	Barrio	Cagayan	118	17	40	121	40
Lanna	Barrio	Isabela	170	17	20	121	50
Lanot	Barrio	Camarines Norte	122	13	51	123	03
Lantang	Barrio	Bohol	106	9	44	124	13
Lantang	Sitio	Cotabato	150	7	05	124	00
Lantao	Islands	Tayabas (N)	270	14	45	122	30
Lantapan	Barrio	Bukidnon	110	7	55	125	05
Lantic	Barrio	Cavite	134	14	18	121	02
Lanumbaan	Mountain	Agusan	82	8	35	125	45
Lanutan	Barrio	Occidental Negros	220	10	45	123	05
Lanuza	Municipality	Surigao	262	9	15	125	06
Lanuza	Bay	Surigao	262	9	20	126	05
Laoag	Capital	Ilocos Norte	158	18	12	120	35
Laoag	Capital, Ilocos Norte.	Philippine Islands	72	18		121	
Laoag	River	Ilocos Norte	158	18	12	120	35
Laoak	Barrio	Pangasinan	236	16	03	120	34
Laoang	Municipality	Samar	248	12	35	125	00
Laoang	Island	Samar	248	12	35	125	00
Laog	Barrio	Bulacan	114	14	55	121	02
Lapac	Island	Sulu	258	5	30	120	45
Lapacan	Barrio	Bohol	106	10	03	124	07
Laparan	Municipal district.	Sulu	258	5	45	119	50
Laparan	Island	Sulu	258	5	55	120	00
La Paz	Municipality	Abra	78	17	40	120	41
La Paz	Municipality	Leyte	186	10	55	124	55
La Paz	Municipality	Tarlac	266	15	27	120	44
La Paz	Municipal district.	Agusan	82	8	20	125	45
La Paz	Barrio	Antique	90	11	20	122	05
La Paz	Barrio	Bohol	106	9	49	124	08
La Paz	Barrio	Bohol	106	9	42	123	52
La Paz	Barrio	Davao	154	7	20	125	40
La Paz	Barrio	Ilocos Norte	158	18	12	120	31
La Paz	Barrio	Iloilo	166	11	05	122	45
La Paz	Barrio	Pampanga	232	15	13	120	38
La Paz	Barrio	Samar	248	11	25	125	00
La Paz	Barrio	Surigao	262	9	00	126	15
La Paz	Barrio	Zambales	274	15	01	120	04
Lapinig	Island	Bohol	106	10	06	124	34
Lapinig	Barrio	Samar	248	12	20	125	20
Lapirawan	Barrio	Zamboanga	278	7	35	123	00
Lapitan	Point	Lanao	178	7	40	123	55
Lapog	Municipality	Ilocos Sur	162	17	45	120	27
Lapting	Barrio	Ilocos Sur	162	17	45	120	27
Lapu 1. ^o	Rancheria	Apayao Subprovince	200	17	46	121	17
Lapu 2. ^o	Rancheria	Apayao Subprovince	200	17	42	121	14
Lapuacan	Rancheria	Apayao Subprovince	200	18	00	121	13
Lapuan	Sitio	Davao	154	6	10	125	40
Lapuy	Sitio	Davao	154	7	10	125	30
Lara	Barrio	Palawan (S)	228	8	50	117	50
Lara	Barrio	Tarlac	266	15	28	120	43
Lara	Sitio	Sorsogon (N)	252	13	02	123	06
Larena	Municipality	Oriental Negros	224	9	15	123	35
Lasaan	Barrio	Laguna	174	14	06	121	27
Lasak	Sitio	Cotabato	150	6	50	124	00
Lasang	River	Davao	154	7	20	125	40
Lasitas	Sitio	Amburayan Subprovince	198	16	39	120	32
Las Navas	Sitio	Agusan	82	8	35	125	55

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Las Nieves	Municipal district.	Agusan	82	8	45	125	35
Las Piñas	Municipality.	Rizal	240	14	29	120	59
Las Salinas	Barrio.	Bohol	106	9	37	124	02
Lasud Manoc.	Barrio.	Ilocos Sur	162	17	05	120	26
Lataban	Barrio.	Cebu	138	10	25	123	55
Latabun	Sitio.	Zamboanga	278	7	10	122	05
Latag	Barrio.	Batangas	102	14	08	120	43
Lati	Municipal district.	Sulu	258	6	00	121	10
Latian	Mountain	Davao	154	6	10	125	30
Latian	Mountain	Cotabato	150	6	10	125	30
Latian	Mountain	Relief	72	6		126	
Latian	Sitio.	Davao	154	6	10	125	30
Latorre	Barrio.	Nueva Ecija	212	15	34	120	55
La Torre	Barrio.	Nueva Vizcaya	216	16	31	121	09
La Trinidad	Capital	Benguet Subprovince	202	16	28	120	35
La Trinidad	Township	Mountain Province	196	16	30	120	35
Lattauan	Sitio	Nueva Vizcaya	216	16	33	121	11
Latuan	Island	Sulu	258	5	05	120	15
Latuban	Rancheria	Apayao Subprovince	200	18	02	121	14
Latukan	Volcano.	Cotabato	150	7	40	124	30
Latukan	Volcano.	Lanao	178	7	40	124	30
Latukan	Volcano, dormant.	Relief	72	8		124	
Laua-an	Municipality.	Antique	90	11	10	122	00
Lauan	Sitio.	Lanao	178	8	00	123	45
Lauigan	Barrio.	Iloilo	166	10	30	122	00
Lauis	Barrio.	Bohol	106	10	04	124	04
Lauis	Barrio.	Zambales	274	15	36	119	56
Lauis	Point	Cebu	138	11	20	123	45
Lauun	Sitio.	Bataan	94	14	23	120	35
LA UNION	Province.	La Union	182	16	35	120	23
La Union	Province.	Philippine Islands	72	17		120	
La Union	Barrio.	Agusan	82	9	05	125	30
La Union	Barrio.	Davao	154	6	40	126	00
Laur	Municipality.	Nueva Ecija	212	15	35	121	11
Lavezares	Municipality.	Samar	248	12	30	124	20
Lawaan	Barrio.	Davao	154	7	20	125	40
Lawaan	Barrio.	Samar	248	11	50	125	05
Lawan	Bay	Samar	248	11	05	125	15
Lawan	Barrio.	Samar	248	11	10	125	20
Lawan	Sitio.	Leyte	186	10	35	125	10
Lawayan	Barrio.	Davao	154	6	00	125	40
Lawigan	Barrio.	Surigao	262	8	15	126	25
Lawigan	Barrio.	Zamboanga	278	7	10	122	15
Lawy	Barrio.	Tarlac	266	15	23	120	33
Laya	Barrio.	Bohol	106	9	37	123	57
Laya	Barrio.	Mindoro	190	12	50	120	45
Laya	Sitio.	Amburayan Subprovince	198	16	43	120	29
Laya	Sitio.	Kalinga Subprovince	208	17	29	121	30
Layagon	Barrio.	Iloilo	166	10	55	122	25
Layan	Sitio.	Davao	154	6	40	125	10
Laylay	Barrio.	Tayabas (S)	270	13	25	121	50
Laylaya	Barrio.	Lepanto Subprovince	210	17	04	120	49
Layog	Barrio.	Laguna	174	14	14	121	32
Layugan	Barrio.	Abra	78	17	30	120	42
Layugan	Barrio.	Laguna	174	14	15	121	26
Lazi	Municipality.	Oriental Negros	224	9	10	123	35
Lean	Island.	Palawan (N)	228	11	10	120	40
Lebak	Municipal district.	Cotabato	150	6	30	124	00
Lecoos	Riner	Benguet Subprovince	202	16	28	120	42
Legaspi	Barrio.	Albay	86	13	10	123	45
Legaspi	Barrio.	Cebu	138	9	45	123	20
Legleg	Barrio.	Cebu	138	16	42	120	23
Legleg	Barrio.	La Union	182	16	28	120	32
Legleg	Sitio.	Benguet Subprovince	202	16	28	120	35
Lemery	Municipality.	Batangas	102	13	53	120	55
Lemery	Barrio.	Iloilo	166	10	40	123	30
Lemery	Barrio.	Occidental Negros	220	10	10	123	30
Lemu	Barrio.	Iloilo	118	17	30	121	45
Lenga	Barrio.	Lepanto Subprovince	210	16	55	120	49
Lenneng	Barrio.	Abra	78	17	39	120	51
Lenneng	Rancheria	Apayao Subprovince	200	17	06	121	13
Leon	Municipality.	Iloilo	166	10	45	122	25
Lepanan	Sitio.	Amburayan Subprovince	198	16	56	120	32
LEPANTO	Subprovince.	Lepanto	210	17	00	120	45
Lepanto	Subprovince	Mountain Province	196	17	00	120	45
Lepanto	Barrio.	Leyte	186	10	15	125	10
Leseb	Barrio.	Lepanto Subprovince	210	16	57	120	53
Lettac	Barrio.	Amburayan Subprovince	198	16	46	120	27
Lettung	Sitio.	Bontoc Subprovince	204	17	15	121	22
Leyban	Sitio.	Rizal	240	14	37	121	24
LEYTE	Province	Leyte	186	11	00	125	00

Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
Leyte	Island	Philippine Islands	72	11	125
Leyte	Gulf	Leyte	186	10 50	125 10
Leyte	Gulf	Samar	248	10 50	125 30
Leyte	Gulf	Philippine Islands	72	11	125
Leyte	Municipality	Leyte	186	11 20	124 30
Lezo	Municipality	Capiz	130	11 40	122 19
Lian	Municipality	Batangas	102	14 02	120 39
Lian	River	Batangas	102	14 03	120 40
Lianga	Bay	Surigao	262	8 35	126 15
Lianga	Municipality	Surigao	262	8 40	126 05
Lianga	Barrio	Lanao	178	7 40	124 00
Liangan	Sitio	Lanao	178	8 10	124 00
Liangan	River	Lanao	178	8 10	124 05
Liantayan	Sitio	Lanao	178	7 55	124 25
Lias	Barrio	Bontoc Subprovince	204	17 05	121 08
Libacao	Municipality	Capiz	130	11 30	122 18
Libacao	Barrio	Occidental Negros	220	10 10	122 55
Libadan	Mountain	Cotabato	150	6 50	125 05
Libagao	Island	Antique	90	12 10	121 25
Libagon	Municipality	Leyte	186	10 20	125 05
Libak	Sitio	Zamboanga	278	6 30	121 55
Libang	River	Agusan	82	8 35	125 35
Libang	Barrio	Capiz	130	11 42	122 16
Libang	Sitio	Lepanto Subprovince	210	17 03	120 41
Libas	Barrio	Capiz	130	11 37	122 21
Libas	Barrio	Leyte	186	10 55	124 35
Libas	Barrio	Samar	248	11 45	125 25
Libas	Port	Samar	248	11 45	125 30
Libay	Barrio	Zamboanga	278	8 40	123 30
Libertad	Municipal district	Agusan	82	8 05	126 00
Libertad	Barrio	Agusan	82	8 55	125 30
Libertad	Barrio	Cebu	138	10 40	124 25
Libertad	Barrio	Leyte	186	10 55	124 30
Libertad	Barrio	Misamis	194	8 35	124 20
Libertad	Barrio	Romblon	244	12 30	122 00
Libho	Barrio	Batangas	102	13 44	121 03
Libho	Barrio	Bohol	106	9 41	124 00
Libho	Barrio	Tayabas (N)	270	14 40	121 55
Libing	Sitio	Cavite	134	14 15	120 55
Libis	Sitio	Mindoro	190	13 55	120 05
Libjo	Barrio	Surigao	262	10 10	125 30
Libmanan	Municipality	Camarines Sur	126	13 42	123 04
Libnaoan	Barrio	Ilocos Norte	158	18 11	120 43
Libo	Barrio	Oriental Negros	224	9 15	123 40
Libog	Municipality	Albay	86	13 14	123 46
Libolibo	Barrio	Amburayan Subprovince	198	16 53	120 36
Libolibo	Mountain	Amburayan Subprovince	198	16 54	120 37
Libon	Municipality	Albay	86	13 18	123 26
Libon	Barrio	Capiz	130	11 31	122 51
Libona	Municipal district	Bukidnon	110	8 20	124 45
Libsong	Barrio	Pangasinan	236	16 02	120 14
Libtong	Barrio	Amburayan Subprovince	198	16 58	120 27
Libtong	Barrio	Benguet Subprovince	202	16 30	120 27
Libuan	Sitio	Davao	154	7 20	126 30
Libuan	Sitio	Zamboanga	278	8 05	122 35
Libucan	Islands	Samar	248	11 55	124 40
Libucan	Barrio	Samar	248	11 35	124 40
Libueg	Barrio	Tarlac	266	15 43	120 24
Libuganon	River	Davao	154	7 40	125 30
Libuganon	Sitio	Davao	154	7 30	125 40
Libungan	Municipal district	Cotabato	150	7 10	124 20
Libungan	River	Cotabato	150	7 25	124 35
Libungan	Marsh	Cotabato	150	7 10	124 25
Libutan	Sitio	Zamboanga	278	8 25	123 20
Licab	Municipality	Nueva Ecija	212	15 32	120 46
Lico	Barrio	Romblon	244	12 25	122 40
Lico	Sitio	Camarines Norte	122	14 08	122 53
Licseb	Sitio	Lepanto Subprovince	210	17 15	120 39
Licuan	Municipal district	Abra	78	17 37	120 52
Licud	Mountain	Ilocos Norte	150	18 10	120 58
Lidaoan	Sitio	Lepanto Subprovince	210	17 13	120 40
Lidhida	Sitio	Lepanto Subprovince	210	17 10	120 47
Lidhidda	Municipality	Ilocos Sur	162	17 15	120 31
Ligao	Municipality	Albay	86	13 15	123 32
Ligas	Barrio	Cavite	134	14 27	120 58
Ligsay	Barrio	Ilocos Norte	158	17 56	120 28
Ligtong	Barrio	Cavite	134	14 26	120 52
Liguan	Barrio	Albay	86	13 16	123 55
Liguasan	Marsh	Cotabato	150	6 55	124 45
Likoy	Sitio	Bontoc Subprovince	204	17 10	121 20

Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
				° /	° /
Liktin	Barrio	Albay	86	13 36	124 07
Lila	Municipality	Bohol	106	9 36	124 06
Lilian	Barrio	Laguna	174	14 28	121 27
Lilio	Municipality	Laguna	174	14 08	121 26
Lilit	Sitio	Benguet Subprovince	202	16 12	120 37
Liloan	Municipality	Cebu	138	10 25	124 00
Liloan	Municipality	Leyte	186	10 10	125 05
Liloan	Barrio	Leyte	186	11 00	124 30
Liloan	Barrio	Oriental Negros	224	9 10	123 40
Lilui	Sitio	Zamboanga	278	8 10	122 40
Limanancang	Sitio	Palawan (N)	228	11 00	119 20
Limasawa	Island	Leyte	186	9 55	125 05
Limasun	Barrio	Zamboanga	278	7 10	121 55
Limay	Municipality	Bataan	94	14 34	120 36
Limban	Barrio	Davao	154	7 30	125 40
Limbones	Island	Cavite	134	14 14	120 35
Limbones	Cove	Cavite	134	14 15	120 36
Limbonglimbon	Barrio	Rizal	240	14 27	121 12
Limbuhan	Barrio	Sorsogon (S)	252	11 53	124 03
Limit	Point	Cavite	134	14 14	120 35
Limoccon	Barrio	Bohol	106	9 41	124 11
Limon	Barrio	Leyte	186	11 15	124 35
Limos	Barrio	Kalinga Subprovince	208	17 30	121 18
Limpat	Sitio	Bontoc Subprovince	204	17 15	121 20
Limun	Barrio	Zamboanga	278	7 10	122 15
Linabo	Barrio	Bukidnon	110	7 55	125 10
Linao	Barrio	Albay	86	13 15	123 25
Linao	Barrio	Albay	86	13 12	124 12
Linao	Barrio	Cagayan	118	18 25	121 35
Linao	Barrio	Cebu	138	10 15	123 50
Linao	Barrio	Leyte	186	11 00	124 35
Linao	Barrio	Leyte	186	10 30	124 45
Linao	Barrio	Tarlac	266	15 38	120 38
Linao	Bay	Cotabato	150	6 45	124 00
Linao	Mountain	Ilocos Norte	158	18 21	120 55
Linaon	Barrio	Occidental Negros	220	10 00	122 30
Linapacan	Island	Palawan (N)	228	11 30	119 50
Linapacan	Strait	Palawan (N)	228	11 30	120 00
Linawan	Barrio	Bohol	106	9 47	124 35
Linawan	Barrio	Romblon	244	12 35	122 00
Lincoed	Barrio	Bohol	106	9 44	123 51
Lincoed	Barrio	Iloilo	166	11 00	122 40
Lindaban	Barrio	Bukidnon	110	8 15	124 50
Linek	Barrio	Cotabato	150	7 10	124 10
Linga	Barrio	Laguna	174	14 15	121 22
Lingan	Sitio	Abra	78	17 24	120 41
Lingapan	Sitio	Apayao Subprovince	200	17 55	121 33
Lingayen	Gulf	Pangasinan	236	16 15	120 10
Lingayen	Capital	Pangasinan	236	16 01	120 14
Lingayen	Capital, Panga- sinan	Philippine Islands	72	16	120
Lingey	Barrio	Abra	78	17 17	120 53
Lingey	Barrio	Lepanto Subprovince	210	17 09	120 37
Lingig	Barrio	Surigao	262	8 00	126 25
Lingion	Barrio	Bukidnon	150	8 15	124 40
Lingsat	Barrio	Ilocos Sur	162	17 37	120 28
Lingsat	Barrio	Ilocos Sur	162	17 23	120 27
Lingsat	Barrio	La Union	182	16 39	120 19
Lingsat	Sitio	Ilocos Norte	158	17 58	120 28
Linguisan	Barrio	Zamboanga	278	7 30	122 30
Linosungan	Barrio	Zambales	274	14 57	120 09
Linothangan	Barrio	Oriental Negros	224	10 20	123 10
Lintagun	Barrio	Zamboanga	278	7 15	121 55
Lintic	Barrio	Ilocos Sur	162	17 13	120 30
Linugos	Barrio	Misamis	194	9 00	125 10
Linuk	Sitio	Lanao	178	7 50	124 15
Lio	Barrio	Romblon	244	12 35	122 20
Lioang	Sitio	Lepanto Subprovince	210	16 46	120 43
Liogliog	Barrio	Leyte	186	11 20	124 20
Liong	Barrio	Cotabato	150	7 05	124 30
Liozon	Barrio	Zambales	274	15 23	119 56
Lipa	Municipality	Batangas	102	13 56	121 10
Lipata	Barrio	Antique	90	11 30	122 05
Lipata	Barrio	Samar	248	12 30	124 15
Lipata	Barrio	Tayabas (S)	270	13 55	121 45
Lipata	Sitio	Samar	248	11 05	125 15
Lipata	Sitio	Surigao	262	10 10	125 30
Lipata	Sitio	Tayabas (S)	270	13 15	122 00
Lipatan	Barrio	Cagayan	118	17 50	121 30
Lipay	Barrio	Zambales	274	15 45	119 55

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Lipay	Sitio	Ilocos Norte	158	18	21	120	44
Lipayran	Island	Cebu	138	11	05	123	40
Lipcan	Barrio	Abra	78	17	35	120	37
Liputan	Barrio	Bulacan	114	14	45	120	56
Liquica	Barrio	La Union	182	16	26	120	24
Litayan	Barrio	Zamboanga	278	7	25	123	00
Litlit	Barrio	Cavite	134	14	12	120	56
Llaban Ilngot	Sitio	Nueva Vizcaya	216	16	38	121	26
Lloren	Barrio	La Union	182	16	21	120	26
Llorente	Municipality	Samar	248	11	25	125	35
Loacan	Barrio	Benguet Subprovince	202	16	34	120	40
Loay	Municipality	Bohol	106	9	36	124	01
Loay	River	Bohol	106	9	50	124	07
Loba Loba	Barrio	Camarines Sur	126	13	42	123	00
Lobgob	Barrio	Bohol	106	9	43	124	02
Lobi	Mountain	Leyte	186	11	00	124	50
Lobo	Municipality	Batangas	102	13	39	121	13
Lobo	Barrio	Benguet Subprovince	202	16	47	120	41
Lobo	Barrio	Benguet Subprovince	202	16	40	120	41
Lobo	Sitio	Ifugao Subprovince	206	17	00	121	19
Lobo	Mountain	Batangas	102	13	38	121	17
Lobo	Mountain	Benguet Subprovince	202	16	46	120	41
Loboc	Municipality	Bohol	106	9	38	124	02
Loboc Mobod	Barrio	Misamis	194	8	30	123	45
Loeloc	Barrio	Batangas	102	13	49	120	55
Loeloc	Barrio	Batangas	102	13	48	120	55
Loelotiduyog	Mountain	Kalinga Subprovince	208	17	35	121	09
Loeloclo	Point	Batangas	102	13	40	121	25
Loetob	Barrio	Bohol	106	9	40	124	14
Loeulan	Barrio	Misamis	194	8	15	123	50
Logob	Sitio	Bontoc Subprovince	204	17	05	121	10
Loksiku	Bay	Zamboanga	278	7	25	122	45
Lolomboy	Barrio	Bulacan	114	14	47	120	56
Loma	Barrio	Cavite	134	14	09	120	56
Lomboy	Barrio	La Union	182	16	17	120	23
Lomboy	Barrio	Tarlac	266	14	30	120	43
Lomboy	Barrio	Zambales	274	15	47	119	56
Lomes	Sitio	Benguet Subprovince	202	16	24	120	27
Lomonon	Barrio	Leyte	186	11	05	124	25
Long	Point	Palawan (S)	228	9	40	118	20
Longos	Municipality	Laguna	174	14	20	121	29
Longos	Barrio	Bulacan	114	14	52	120	48
Longos	Barrio	Pangasinan	236	16	07	120	23
Lonoy	Barrio	Amburayan Subprovince	198	16	41	120	25
Lonoy	Barrio	Bohol	106	10	01	124	05
Lonoy	Barrio	Bohol	106	9	44	124	20
Loo	Barrio	Benguet Subprovince	202	16	48	120	50
Loob	Barrio	Nueva Ecija	212	15	46	120	39
Looc	Municipality	Mindoro	190	13	45	120	15
Looc	Municipality	Romblon	244	12	15	122	00
Looc	Barrio	Bataan	94	14	28	120	35
Looc	Barrio	Batangas	102	14	10	120	37
Looc	Barrio	Bohol	106	9	39	124	22
Looc	Barrio	Bulacan	114	14	53	120	49
Looc	Barrio	Cebu	138	9	25	123	20
Looc	Barrio	Mindoro	190	13	45	120	15
Looc	Barrio	Rizal	240	14	29	121	13
Looc	Sitio	Misamis	194	8	50	124	50
Looc	Bay	Mindoro	190	13	45	120	15
Looc	Bay	Romblon	244	12	15	122	00
Looc	Bay	Sorsogon (S)	252	12	10	123	15
Looc Oslob	Barrio	Cebu	138	9	30	123	25
Leon	Municipality	Bohol	106	9	48	123	48
Lope de Vega	Barrio	Samar	248	12	15	124	40
Lopez	Municipality	Tayabas (S)	270	13	55	122	15
Loreto	Municipality	Surigao	262	10	20	125	35
Loreto	Municipal district	Agusan	82	8	10	125	45
Los Arcos	Municipal district	Agusan	82	8	40	126	00
Los Baños	Municipality	Laguna	174	14	11	121	13
Los Cochinos	Islets	Bataan	94	14	24	120	30
Los Frailes	Islands	Zambales	274	14	45	120	05
Los Martires	Municipal district	Agusan	82	8	30	125	45
Lossoc	Sitio	La Union	182	16	34	120	19
Lotlotan	Barrio	Oriental Negros	224	9	15	123	40
Loual	Barrio	Tayabas (N)	270	16	15	122	10
Lourdes	Municipal district	Bukidnon	110	8	30	124	25
Lourdes	Sitio	Pampanga	232	15	01	120	51
Loya	Sitio	Cebu	138	11	05	124	00
Loyola	Barrio	Surigao	262	8	20	126	20
Loyunsawang	Barrio	Leyte	186	10	45	125	05

Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
Luakan	Barrio	Bataan	94	14 52	120 26
Luan	Sitio	Cotabato	150	6 05	124 25
Luayan	Barrio	Cotabato	150	6 40	124 45
Luba	Municipality	Abra	78	17 22	120 42
Lubang	Island	Mindoro	190	13 45	120 10
Lubang	Islands	Philippine Islands	72	14	120
Lubang	Township	Mindoro	190	13 50	120 10
Lubang	Barrio	Camarines Sur	126	13 48	122 58
Lubao	Municipality	Pampanga	232	14 56	120 36
Lubas	Sitio	Albay	86	13 46	124 07
Lubas	Sitio	Camarines Norte	122	14 10	122 43
Lubayat	Sitio	Tayabas (N)	270	14 30	121 40
Lubban	Barrio	Cagayan	118	18 20	121 25
Lubic	Island	Palawan (N)	228	11 00	120 40
Lubigan	Barrio	Camarines Sur	126	13 46	122 58
Lublub	Barrio	Antique	90	11 05	122 10
Lublubla	Mountain	Apayao Subprovince	200	17 37	121 14
Lubnac	Barrio	Ilocos Norte	158	18 13	120 40
Lubnac	Sitio	Amburayan Subprovince	198	17 01	120 32
Lubo	Barrio	Cagayan	118	17 50	121 30
Lubo	Barrio	Kalinga Subprovince	208	17 15	121 14
Lubo	Sitio	Rizal	240	14 19	121 20
Lubon	Barrio	Lepanto Subprovince	210	17 02	120 49
Lubon	Sitio	Amburayan Subprovince	198	16 59	120 31
Lubong	Barrio	Ilocos Sur	162	17 22	120 29
Lubucac	Sitio	Kalinga Subprovince	208	17 31	121 16
Lubugan	Capital	Kalinga Subprovince	208	17 21	121 10
Lubugan	Township	Mountain Province	196	17 20	121 10
Lubugan	Municipality	Zamboanga	278	8 30	123 15
Lubuog	Barrio	Ifugao Subprovince	206	16 57	121 02
Lucanin	Sitio	Bataan	94	14 28	120 36
Lucap	Barrio	Pangasinan	236	16 11	120 00
Lucapon	Barrio	Zambales	274	15 42	119 56
Lucban	Municipality	Tayabas (S)	270	14 05	121 30
Lucban	Barrio	Batangas	102	13 58	120 45
Lucban	Sitio	Isabela	170	17 00	122 00
Lucbuan	Barrio	Palawan (N)	228	10 50	121 00
Lucbuban	Barrio	Benguet Subprovince	202	16 22	120 41
Lucbuban	Barrio	Ilocos Sur	162	17 08	120 33
Lucena	Capital	Tayabas (S)	270	13 55	121 35
Lucena	Capital, Tayabas	Philippine Islands	72	14	122
Lucena	Barrio	Iloilo	166	10 50	122 35
Lucero	Barrio	Pangasinan	236	16 24	119 54
Lugadoc	Sitio	Amburayan Subprovince	198	16 39	120 31
Lugait	Barrio	Misamis	194	8 20	124 15
Lugbung	Island	Romblon	244	12 35	122 15
Lugo	Barrio	Cebu	138	10 50	124 00
Lugui	Sitio	Camarines Norte	122	14 08	122 48
Lugus	Island	Sulu	258	5 40	120 50
Lugus	Barrio	Sulu	258	5 40	120 50
Luisiana	Municipality	Laguna	174	14 11	121 30
Luisita	Barrio	Tarlac	266	15 26	120 39
Lukatan	Sitio	Davao	154	7 00	126 30
Lukban	Barrio	Benguet Subprovince	202	16 27	120 36
Lukban	Sitio	Nueva Vizcaya	216	16 36	121 27
Lukidnon	Sitio	Nueva Vizcaya	216	15 58	121 12
Luklukan	Barrio	Camarines Norte	122	14 20	122 43
Lukmalalum	Barrio	Zamboanga	278	7 20	122 15
Luksuhin	Barrio	Batangas	102	13 53	120 38
Luksuhin	Barrio	Cavite	134	14 13	120 58
Lullutan	Barrio	Isabela	170	17 10	121 50
Lulu	Sitio	Cotabato	150	7 30	125 10
Luluno	Barrio	Abra	78	17 19	120 39
Lumaba	Barrio	Abra	78	17 28	120 37
Lumaguas	Sitio	Bukidnon	110	7 45	124 55
Lumakil	Sitio	Cotabato	150	6 05	125 40
Lumao	Lake	Agusan	82	8 25	125 40
Lumao	Barrio	Lanao	178	8 10	123 55
Lumapit	Barrio	Sulu	258	5 55	121 05
Lumarau	Barrio	Zamboanga	278	7 30	122 50
Lumban	Municipality	Laguna	174	14 18	121 23
Lumbang	Barrio	Batangas	102	13 59	121 12
Lumbang	Barrio	Batangas	102	13 55	120 49
Lumbang	Barrio	Romblon	244	12 25	122 40
Lumbang	Barrio	Sorsogon (S)	252	12 20	123 35
Lumbangan	Sitio	Batangas	102	13 38	121 19
Lumbatan	Municipal district	Lanao	178	7 50	124 15
Lumbayau	Barrio	Bukidnon	110	7 50	125 15
Lumbayau	Sitio	Zamboanga	278	7 50	123 20
Lumber Camp	Sitio	Bataan	94	14 32	120 38
Lumbia	Barrio	Bukidnon	110	8 25	124 35

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Lumbucan.	Island.	Palawan (S)	228	7	50	117	10
Lumiag.	Sitio.	Davao.	154	7	30	125	30
Lumil.	Barrio.	Batangas.	102	13	52	121	05
Lumil.	Barrio.	Cavite.	134	14	11	121	00
Lumintao.	River.	Mindoro.	190	12	35	121	00
Lumislis.	Island.	Bohol.	106	9	52	124	34
Lumot.	Mountain.	Bulacan.	114	15	04	121	06
Lumuyon.	Barrio.	Cotabato.	150	5	55	124	45
Lun.	River.	Cotabato.	150	6	05	125	25
Lun (Big).	River.	Cotabato.	150	6	00	125	20
Luna.	Municipality.	La Union.	182	16	51	120	23
Luna.	Barrio.	Antique.	90	10	45	122	03
Luna.	Barrio.	Occidental Negros.	220	10	55	123	10
Luna.	Barrio.	Occidental Negros.	220	10	50	123	25
Luna.	Barrio.	Pangasinan.	236	16	20	119	54
Luna.	Sitio.	Cotabato.	150	6	00	124	35
Lunas.	Barrio.	Romblon.	244	12	30	122	15
Lunas.	Mountain.	Leyte.	186	10	50	124	50
Lungod.	Mountain.	Kalinga Subprovince.	208	17	39	121	11
Lungog.	Barrio.	Ilocos Sur.	162	17	28	120	28
Lungon.	Sitio.	Amburayan Subprovince.	198	17	03	120	37
Lungsoddaan.	Barrio.	Bohol.	106	9	54	124	34
Lungsoddaan.	Barrio.	Bohol.	106	9	53	124	19
Lungsoddaan.	Barrio.	Bohol.	106	9	37	124	17
Lunuk.	Sitio.	Sulu.	258	5	10	120	30
Lupagan.	Barrio.	Misamis.	194	8	35	123	35
Lupao.	Municipality.	Nueva Ecija.	212	15	52	120	54
Lupao.	Sitio.	Lepanto Subprovince.	210	17	14	120	35
Lupi.	Municipality.	Camarines Sur.	126	13	48	122	55
Lupi.	Barrio.	Camarines Sur.	126	13	45	123	23
Lupi.	Barrio.	Sorsogon (N).	252	13	04	124	10
Lupo.	Barrio.	Capiz.	130	11	30	122	28
Luragan.	Barrio.	Bukidnon.	110	7	55	125	05
Lusaran.	Point.	Iloilo.	166	10	30	122	30
Lusod.	Barrio.	Nueva Vizcaya.	216	16	18	120	51
Lusod.	Mountain.	Benguet Subprovince.	202	16	22	120	48
Lusok.	Barrio.	Tayabas (S).	270	13	30	122	00
Lusong.	Barrio.	Abra.	78	17	22	120	42
Lusong.	Barrio.	Bataan.	94	14	27	120	26
Lusong.	Barrio.	Ilocos Norte.	158	18	37	120	49
Lusong.	Barrio.	Romblon.	244	12	30	122	05
Lusong.	Mountain.	Lepanto Subprovince.	210	16	50	120	50
Luta.	Barrio.	Batangas.	102	14	03	121	10
Lutab.	Barrio.	Benguet Subprovince.	202	16	37	120	50
Lutag.	Sitio.	Bontoc Subprovince.	204	17	12	121	21
Lutangan.	Island.	Zamboanga.	278	7	15	122	50
Lutao.	Barrio.	Bohol.	106	10	01	124	04
Lutiman.	Barrio.	Zamboanga.	278	7	35	122	55
Lutlut.	Sitio.	Kalinga Subprovince.	208	17	25	121	17
Lutungan.	Island.	Cebu.	138	11	10	123	40
Luuk.	Municipal district.	Sulu.	258	6	00	121	20
Luukdatan.	Sitio.	Sulu.	258	4	50	119	50
Luya.	Barrio.	Batangas.	102	13	49	120	56
Luya.	Sitio.	Amburayan Subprovince.	198	16	47	120	33
Luyaluya.	Barrio.	Tayabas (S).	270	14	10	121	45
Luyang.	Barrio.	Cebu.	138	10	35	124	00
Luyos.	Barrio.	Batangas.	102	14	07	121	04
Luzon.	Island.	Philippine Islands.	72	15	17	121	11
Luzon.	Barrio.	Davao.	154	6	30	126	00
Luzon.	Point.	Bataan.	94	14	28	120	24
Luzuriaga.	Municipality.	Oriental Negros.	224	9	15	123	15

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Maababucay.	Barrio.	Ilocos Norte.	158	18	10	120	46
Maagnas.	Barrio.	Camarines Sur.	126	13	43	123	40
Maajas.	Barrio.	Laguna.	174	14	10	121	15
Maalagas.	Barrio.	Batangas.	102	13	48	121	12
Maao.	Barrio.	Occidental Negros.	220	10	30	123	00
Maasam.	River.	Agusan.	82	8	30	125	30
Maasin.	Island.	Mindoro.	190	12	15	121	25
Maasin.	Municipality.	Iloilo.	166	10	55	122	25
Maasin.	Municipality.	Leyte.	186	10	10	124	50
Maasin.	Municipal district.	Agusan.	82	8	45	125	25
Maasin.	Barrio.	Bulacan.	114	15	03	120	57
Maasin.	Barrio.	Mindoro.	190	12	15	121	25
Maasin.	Barrio.	Tarlac.	266	15	40	120	20
Maayon.	River.	Capiz.	130	11	21	122	52
Maayon.	Barrio.	Capiz.	130	11	23	122	47
Mabagon.	Barrio.	Leyte.	186	10	25	124	45
Mabaka.	Barrio.	Bontoc Subprovince.	204	17	10	121	23

Name.	Feature	Map.	Facing page.	Latitude.	Longitude.
Mabaka.	Barrio	Kalinga Subprovince.	208	17 34	121 08
Mabaka.	River	Kalinga Subprovince.	208	17 34	121 15
Mabaka.	River	Mountain Province.	196	17 35	121 15
Mabalacat.	Municipality.	Pampanga.	232	15 14	120 34
Mabalor.	Barrio	Batangas.	102	13 47	121 10
Mabantad.	Barrio	Isabela.	170	17 00	121 50
Mabasa	Barrio	Nueva Vizcaya.	216	16 19	121 08
Mabatang	Barrio	Bataan.	94	14 44	120 32
Mabatobato	Sitio.	Camarines Norte.	122	14 16	122 39
Mabatoy	Barrio	Camarines Sur	126	13 33	123 23
Mabatu	Sitio.	Batanes.	98	20 25	121 57
Mabayo.	Sitio.	Nueva Vizcaya.	216	16 19	120 56
Mabec	Barrio	Bataan.	94	14 44	120 17
Mabiga	Barrio	Lepanto Subprovince.	210	16 59	120 42
Mabilang.	Barrio	Pampanga.	232	15 12	120 35
Mabilao.	Barrio	Tarlac.	266	15 40	120 29
Mabilila.	Barrio	Pangasinan.	236	16 10	120 25
Mabilila.	Sitio.	Ilocos Sur.	162	17 30	120 26
Mabilo.	Barrio	Capiz.	130	11 41	122 25
Mabini.	Municipality.	Batangas.	102	13 45	120 56
Mabini.	Municipality.	Bohol.	106	9 52	124 32
Mabini.	Barrio	Isabela.	170	17 05	121 45
Mabini.	Barrio	Sorsogon (N).	252	12 36	123 37
Mabini.	Barrio	Sorsogon (S).	252	12 36	123 37
Mabini.	Barrio	Tayabas (S).	270	13 45	122 10
Mabini.	Sitio.	Samar.	248	11 35	124 45
Mabita.	Municipality.	Laguna.	174	14 26	121 26
Mabitoang	Mountain.	Bulacan.	114	14 55	121 18
Mabiton	Barrio	Sorsogon (N).	252	12 50	123 16
Mabittayon.	Barrio	Ifugao Subprovince.	206	16 46	121 17
Mabittayon.	Mountain.	Ifugao Subprovince.	206	16 45	121 17
Maboboa.	Sitio.	Ilocos Norte.	158	18 38	120 51
Mabolinoc.	Mountain.	Zambales.	274	14 58	120 18
Mabolo	Barrio	Cavite.	134	14 27	120 56
Mabolo	Barrio	Cebu.	138	10 20	123 55
Mabontot	Barrio	Kalinga Subprovince.	208	17 20	121 11
Maboongan.	Sitio.	Camarines Norte.	122	13 55	123 05
Mabuambuan.	Barrio	Pampanga.	232	14 50	120 36
Mabulo	Barrio	Romblon.	244	12 25	122 30
Mabungao.	Sitio.	Bontoc Subprovince.	204	17 13	121 18
Mabungtot	Barrio	Abra.	78	17 35	120 32
Mabunlayo	Sitio.	Bukidnon	110	7 30	125 00
Mabusag	Barrio	Ilocos Norte.	158	17 57	120 30
Mabuttal.	Barrio	Cagayan	118	18 25	121 30
Macaas	Barrio	Cebu.	138	10 40	124 00
Macaclaay	Barrio	Nueva Ecija.	212	15 38	121 11
Macabari.	Barrio	Sorsogon (N).	252	12 49	124 09
Macabato	Sitio.	La Union.	182	16 25	120 24
Macabebe	Municipality.	Pampanga.	232	14 54	120 43
Macabinagan	Mountain.	Rizal.	240	14 48	121 14
Macabit.	Barrio	Pangasinan.	236	16 12	119 50
Macablang.	Barrio	Laguna.	174	14 18	121 06
Macabsing.	Barrio	Nueva Ecija.	212	15 41	121 08
Macajalar	Bay	Misamis.	194	8 40	124 35
Macalaskas.	Sitio.	Palawan (S).	228	10 00	118 50
Macalaut.	Barrio	Isabela.	170	16 45	121 45
Macalava	Island.	Zambales.	274	15 30	119 54
Macalaya	Barrio	Sorsogon (N).	252	12 53	123 46
Macalaya	Barrio	Surigao	262	9 35	125 35
Macalelon	Municipality.	Tayabas (S).	270	13 45	122 10
Macalieng	Barrio	Pangasinan.	236	16 15	120 01
Macalingao.	Island.	Bohol.	106	10 06	123 58
Macalino.	Mountain.	Apayao Subprovince.	200	18 24	121 14
Macalva	Barrio	La Union.	182	16 21	120 23
Macangani	Island.	Surigao	262	9 05	126 15
Macanlig	Barrio	Mindoro.	190	13 05	121 25
Macapagao.	Sitio.	Bohol.	106	9 51	123 56
Macapso	Barrio	Oriental Negros	224	10 25	123 20
Macasipac.	Barrio	Laguna.	174	14 30	121 26
Macatcatud.	Barrio	Ilocos Sur	162	17 42	120 28
Macate.	Sitio.	Nueva Vizcaya.	216	16 16	121 08
Macatel.	Rancheria.	Apayao Subprovince.	200	18 33	121 01
Macatunao.	Barrio	Laguna.	174	14 27	121 24
Macayawed.	Sitio.	Nueva Ecija.	212	15 50	15 56
Macayocayo.	Sitio.	Isabela.	170	16 50	122 05
Macrohon	Municipality.	Leyte.	186	10 05	124 55
Mactan	Island.	Cebu.	138	10 20	124 00
Mactaon	Sitio.	Samar	248	11 45	125 15
Maculabo	Island.	Camarines Norte.	122	14 24	122 49
Madalag	Barrio	Capiz.	130	11 32	122 18

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Madalag	Sitio.	Iloilo.	166	11	10	122	45
Madalag	Mountain Peaks.	Bontoc Subprovince.	204	17	08	121	22
Madalan	River.	Isabela.	170	16	45	122	00
Madallum	Municipal district.	Lanao.	178	7	50	124	05
Madalunot	Barrio	Batangas.	102	13	59	120	50
Madanao	Sitio.	Kalinga Subprovince.	208	17	19	121	18
Madangug	Barrio.	Bohol.	106	9	54	123	49
Madanlog	Point.	Sorsogon (N)	252	12	53	123	17
Madarang	Barrio.	Ilocos Sur	162	17	09	120	35
Madaum	Barrio.	Davao	154	7	20	125	50
Madayao	Sitio.	Amburayan Subprovince.	198	17	05	120	37
Madayegdeg	Barrio.	La Union.	182	16	37	120	19
Maddarulg	Barrio.	Cagayan	118	17	35	121	40
Maddiangat	Barrio.	Nueva Vizcaya.	216	16	32	121	32
Madlum.	Caves.	Bulacan.	114	15	11	121	07
Madocay.	Mountain.	Abra.	78	17	36	121	01
Madoldolon.	Barrio.	Palawan (N).	228	10	40	119	50
Madrelino	Barrio.	Surigao	262	9	20	126	10
Madrid	Barrio.	Surigao	262	9	15	125	55
Madridejos	Municipality.	Cebu	138	11	20	123	45
Madridejos	Barrio.	Cebu	138	9	45	123	20
Madua.	Barrio.	Bohol.	106	9	42	124	24
Maducayan.	Barrio.	Bontoc Subprovince.	204	17	10	121	15
Madunga.	Sitio.	Davao	154	6	30	125	20
Maduya.	Barrio.	Cavite	134	14	19	121	04
Maestre de Campo.	Island.	Romblon.	244	12	55	121	45
Maffanga.	Sitio.	Kalinga Subprovince.	208	17	23	121	28
Magaad.	Barrio.	Nueva Vizcaya.	216	16	38	121	13
Magabe.	Barrio.	Batangas.	102	13	58	120	43
Magabubun	Rancheria.	Apayao Subprovince.	200	18	06	121	17
Magais.	Sitio.	Camarines Sur.	126	13	56	122	35
Magalan	Municipality.	Pampanga.	232	15	13	120	40
Magallanes	Municipality.	Cavite	134	14	11	120	45
Magallanes	Municipality.	Sorsogon (N)	252	12	50	123	50
Magallanes	Barrio.	Agusan.	82	9	00	125	30
Magallanes	Barrio.	Romblon.	244	12	30	122	30
Magallanes	Barrio.	Samar	248	11	20	125	10
Magang.	Barrio.	Abra.	78	17	33	120	51
Maganoy.	Sitio.	Cotabato.	150	7	20	124	40
Maganui	Municipal district.	Cotabato.	150	6	55	124	30
Magao	Barrio.	Tarlac.	266	15	19	120	44
Magaogao	Sitio.	Kalinga Subprovince.	208	17	33	121	29
Magapta	Rancheria.	Apayao Subprovince.	200	18	03	121	14
Magarao	Municipality.	Camarines Sur.	126	13	40	123	11
Magaras	Sitio.	Camarines Norte.	122	13	55	123	05
Magasauangtubig.	Barrio.	Mindoro.	190	13	20	121	15
Magasawangsapa.	Barrio.	Bulacan.	114	14	53	120	59
Magaso	Barrio.	Leyte	186	10	50	124	55
Magaso	Barrio.	Oriental Negros	224	9	15	123	15
Magaspac	Barrio.	Tarlac.	266	15	37	120	36
Magassi.	Barrio.	Isabela.	170	17	20	121	50
Magat	River.	Ifugao Subprovince.	206	16	45	121	20
Magat	River.	Isabela.	170	16	50	121	25
Magat	River.	Mountain Province.	196	16	45	121	20
Magat	River.	Nueva Vizcaya.	216	16	37	121	16
Magaut.	Sitio.	Nueva Vizcaya.	216	16	09	121	15
Magbabo.	Barrio.	Occidental Negros.	220	10	25	123	20
Magcalon	Barrio.	Antique	90	10	45	121	55
Mugcaragit.	Island.	Sorsogon (S).	252	12	16	123	50
Magdalena	Municipality.	Laguna	174	14	12	131	26
Magdalena	Barrio.	Antique	90	10	25	132	00
Magdalena	Barrio.	Sorsogon (N)	252	12	27	123	32
Magdalena	Barrio.	Sorsogon (S).	252	12	27	123	32
Magtua.	Sitio.	Camarines Sur.	126	13	47	122	47
Magtuz.	Sitio	Davao	154	6	30	126	00
Magellan.	Bay	Cebu	138	10	30	124	00
Maggok.	Barrio.	Ifugao Subprovince.	206	16	48	121	02
Maghanay.	Sitio.	Nueva Vizcaya.	216	16	00	121	18
Maghilot.	Sitio.	Agusan.	82	8	15	123	00
Maghang.	Sitio.	Nueva Vizcaya.	216	16	19	121	03
Maging.	Municipal district.	Lanao.	178	7	55	124	25
Magica.	Sitio.	Camarines Norte.	122	14	03	123	02
Magkasog.	Barrio.	Leyte	186	10	15	125	05
Maglaol.	Barrio.	Ilocos Norte.	154	7	59	120	29
Maglaos.	Sitio.	Davao	154	7	50	126	20
Maglolo.	Sitio.	Samar	248	11	05	125	20
Magnarale.	Barrio.	Bulacan.	114	15	07	121	00
Magmet	Sitio.	Kalinga Subprovince.	208	17	21	121	17
Magnagay.	Sitio.	Kalinga Subprovince.	208	17	35	121	15
Magnao.	Barrio	Kalinga Subprovince.	208	17	26	121	17

Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
Magnesia.	Barrio.	Albay.	86	13 32	124 10
Magnwang.	Barrio.	Ilocos Norte.	158	12 01	120 32
Magolo.	Mountain.	Cotabato.	154	6 25	125 10
Magolo.	Mountain.	Davao.	154	6 30	125 10
Magosolon.	Mountain.	Capiz.	130	11 26	122 12
Magradongdong.	Sitio.	Albay.	86	13 03	123 25
Magsalangi.	Point.	Camarines Norte.	122	13 54	123 06
Magsalangi.	Sitio.	Camarines Norte.	122	13 53	123 05
Magsikap.	Barrio.	Tavabas (N).	270	14 50	121 35
Magsingal.	Municipality.	Ilocos Sur.	162	17 41	120 25
Magtang.	Sitio.	Antique.	90	11 50	121 25
Magtangtang.	Barrio.	Bohol.	106	10 01	124 09
Magting.	Barrio.	Misamis.	194	9 15	124 45
Magubay.	Barrio.	Samar.	248	12 10	124 35
Maguiling.	Barrio.	Cagayan.	118	17 45	121 30
Maguldan.	Sitio.	Cotabato.	150	7 20	124 05
Magulibus.	Sitio.	Davao.	154	5 50	125 40
Magum.	Sitio.	Davao.	154	6 50	126 10
Magumbali.	Barrio.	Pampanga.	232	15 08	120 54
Magungunay.	Barrio.	La Union.	182	16 28	120 24
Maguyepyep.	Sitio.	Abra.	78	17 26	120 45
Mahaba.	Barrio.	Romblon.	244	12 50	122 05
Mahabangdahilig.	Barrio.	Batangas.	102	13 43	121 05
Mahalit.	Barrio.	Leyte.	186	10 55	124 30
Mahalnas.	Barrio.	Sorsogon (N).	252	12 51	123 53
Mahanay.	Island.	Bohol.	106	10 11	124 14
Mahanay.	Barrio.	Bohol.	106	10 11	124 12
Mahanlud.	Barrio.	Capiz.	130	11 31	122 38
Mahinog.	Barrio.	Misamis.	194	9 10	124 50
Mailag.	Barrio.	Bukidnon.	110	7 50	125 05
Maitumaig.	Sitio.	Lanao.	178	7 50	123 45
Maimbung.	Municipal district.	Sulu.	258	5 55	121 00
Maimbung.	Barrio.	Sulu.	258	5 55	121 00
Maimdang.	Barrio.	Capiz.	130	11 19	122 44
Mainganay.	Barrio.	Ilocos Sur.	162	17 23	120 29
Mainget.	Point.	Cebu.	138	10 30	123 40
Mainit.	Lake.	Agusan.	82	9 25	125 30
Mainit.	Lake.	Surigao.	262	9 30	125 30
Mainit.	Barrio.	Bontoc Subprovince.	204	17 10	120 59
Mainit.	Barrio.	Cebu.	138	9 25	123 20
Mainit.	Barrio.	Romblon.	244	12 55	122 05
Mainit.	Barrio.	Surigao.	262	9 35	125 35
Maipalig.	Barrio.	Ilocos Norte.	158	17 59	120 36
Mairaira.	Point.	Ilocos Norte.	158	18 39	120 50
Maisan.	Barrio.	Bulacan.	114	14 42	120 59
Maitum.	Sitio.	Bohol.	106	9 53	124 04
Maitum.	Sitio.	Surigao.	262	9 00	125 55
Maiyapay.	Mountain.	Agusan.	82	8 50	125 25
Majaba.	Island.	Sorsogon (N).	252	12 26	123 15
Majaba.	Island.	Sorsogon (S).	252	12 26	123 15
Majaba.	Barrio.	Romblon.	244	12 55	121 45
Majacob.	Barrio.	Samar.	248	11 50	124 50
Majada.	Barrio.	Laguna.	174	14 11	121 06
Majayjay.	Municipality.	Laguna.	174	14 09	121 28
Makabagla.	Barrio.	Bukidnon.	110	8 25	124 25
Makabayao.	Sitio.	Lanao.	178	7 55	124 00
Makabugos.	Barrio.	Albay.	86	13 14	123 19
Makadar.	Barrio.	Lanao.	178	7 45	124 15
Makalpi.	Barrio.	Leyte.	186	11 15	124 45
Makar.	Barrio.	Cotabato.	150	6 05	125 10
Makati.	Municipality.	Rizal.	240	14 34	121 02
Makato.	Municipality.	Capiz.	130	11 43	122 17
Makaturing.	Volcano.	Lanao.	178	7 40	124 20
Makaturing.	Volcano, dormant.	Relief.	72	8	124
Makum.	Barrio.	Davao.	154	7 40	125 50
Makinabang.	Barrio.	Bulacan.	114	14 56	120 53
Makipa.	Barrio.	Bukidnon.	110	8 55	124 55
Makiwalo.	Barrio.	Samar.	248	12 30	124 40
Maktan.	Sitio.	Camarines Norte.	122	14 19	122 36
Makumbol.	Sitio.	Davao.	154	6 50	126 10
Mala.	Barrio.	Cagayan.	118	18 15	121 50
Malabag.	Barrio.	Cavite.	134	14 09	120 58
Malabago.	Barrio.	Zambales.	274	15 47	119 56
Malaban.	Barrio.	Laguna.	174	14 21	121 53
Malabanas.	Barrio.	Pampanga.	232	15 10	120 40
Malabang.	Municipality.	Lanao.	178	7 35	124 05
Malablabbaga.	Barrio.	Abra.	78	17 42	120 42
Malabobo.	Barrio.	Pangasinan.	236	15 43	120 18
Malaboc.	Sitio.	Capiz.	130	11 58	121 55

Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
				° ' ° '	° ' ° '
Malabog	Sitio	Cotabato	150	5 50	125 20
Malabon	Municipality	Cavite	134	14 23	120 53
Malabon	Municipality	Rizal	240	14 40	120 57
Malabon	Barrio	Zambales	274	15 39	119 57
Malabor	Barrio	Antique	90	11 15	122 05
Malabrigo	Barrio	Batangas	102	13 36	121 16
Malabugas	Barrio	Oriental Negros	224	9 20	122 45
Malabutuan	Sitio	Davao	154	5 50	125 40
Malabuyoc	Municipality	Cebu	138	9 40	123 20
Malac	Mountain	Rizal	240	14 47	121 14
Malacampo	Barrio	Tarlac	266	15 39	120 25
Malacbang	Sitio	Camarines Norte	122	14 12	122 48
Maladugao	River	Cotabato	150	7 20	124 45
Malaga	Barrio	Oriental Negros	224	9 45	123 10
Malaga	Barrio	Samar	248	12 15	124 25
Malagasang 1°	Barrio	Cavite	134	14 23	120 56
Malagasang 2°	Barrio	Cavite	134	14 22	120 56
Malagit	Barrio	Capiz	130	11 27	122 51
Malagit	Barrio	Iloilo	166	11 05	122 25
Malagnat	Sitio	Kalinga Subprovince	208	17 38	121 23
Malaguit	Barrio	Camarines Norte	122	14 17	122 48
Malagumuk	Sitio	Bukidnon	110	7 30	124 55
Malahi	Island	Rizal	240	14 18	121 15
Malaiiba	Barrio	Oriental Negros	224	10 20	123 10
Malalg	River	Lanao	178	7 40	124 25
Malainen	Barrio	Cavite	134	14 17	120 47
Malajacan	Barrio	Bulacan	114	14 45	120 58
Malajog	Barrio	Samar	248	12 05	124 30
Malakaban	Sitio	Rizal	240	14 20	121 13
Malaki	Barrio	Abra	78	17 38	120 45
Malalag	Bay	Davao	154	6 40	125 20
Malalan	Sitio	Davao	154	5 50	125 30
Malama	Barrio	Albay	86	13 08	123 26
Malamau	Island	Zamboanga	278	6 45	121 55
Malambo	Mountain	Bukidnon	110	7 40	125 15
Malambo	Mountain	Cotabato	150	7 40	125 15
Malambo	Mountain	Davao	154	7 40	125 20
Malambunga	Sitio	Palawan (S)	228	9 00	117 40
Malampay	Sitio	Bukidnon	110	7 35	125 10
Malampaya	Sound	Palawan (N)	228	10 50	119 20
Malanao	Island	Palawan (S)	228	9 30	118 40
Malanas	River	Abra	78	17 38	120 51
Malanday	Barrio	Bulacan	114	14 43	120 57
Malangaban	Island	Iloilo	166	11 15	123 15
Malangas	Barrio	Zamboanga	278	7 40	123 00
Malanipa	Island	Zamboanga	278	6 55	122 15
Malansad	Sitio	Camarines Sur	126	13 37	123 02
Malanut	Bay	Palawan (S)	228	9 20	118 00
Malapaao	River	Abra	78	17 40	120 32
Malapackun	Island	Palawan (S)	228	9 10	117 50
Malapantao	Mountain	Occidental Negros	220	9 55	122 40
Malapantao	Mountain	Relief	72	10	123
Malapasqua	Island	Cebu	138	11 20	124 05
Malapat	Sitio	Isabela	170	16 40	121 30
Malapatan	Barrio	Cotabato	150	5 55	125 15
Malapingan	Sitio	Sorsogon (N)	252	12 51	123 12
Malaquing Ilog	River	Laguna	174	13 55	121 20
Malasin	Barrio	Isabela	170	16 50	121 45
Malasin	Barrio	Nueva Vizcaya	216	16 18	121 06
Malasiqui	Municipality	Pangasinan	236	15 55	120 25
Malasugat	Bay	Zamboanga	278	7 05	122 15
Malatag	Sitio	Camarines Norte	122	14 12	122 35
Malate	District	City of Manila	146	14 34	120 59
Malauag	Barrio	Camarines Sur	126	13 23	123 17
Malauang	Sitio	Bataan	94	14 39	120 30
Malauli	Barrio	Pampanga	232	14 49	120 40
Malavatuan	Island	Mindoro	190	13 50	120 20
Malay	Barrio	Capiz	130	11 54	121 54
Malaya	Barrio	Lepanto Subprovince	210	16 57	120 41
Malaya	Mountain	Lepanto Subprovince	210	16 55	120 42
Malayal	Municipal district	Zamboanga	278	7 10	121 55
Malaybalay	Capital	Bukidnon	110	8 00	125 05
Malaybalay	Capital, Bukidnon	Philippine Islands	72	8	125
Malbago	Barrio	Cebu	138	11 20	123 45
Malabnay	Sitio	Palawan (N)	228	12 10	120 00
Malbog	Barrio	Tayabas (S)	270	14 00	122 25
Malbug	Barrio	Sorsogon (N)	252	12 59	123 44
Malbug	Barrio	Sorsogon (S)	252	12 08	123 59
Malbug	Mountain	Oriental Negros	224	9 10	122 00
Malbug	Mountain	Romblon	244	12 15	123 00
Malbug	River	Sorsogon (S)	252	12 05	123 43

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Malcampo	Barrio	Leyte	186	11	20	124	20
Malcampo	Barrio	Palawan (N)	228	10	20	119	20
Maldica	Sitio	Bataan	94	14	39	120	28
Maleco	Barrio	Nueva Vizcaya	216	16	08	120	55
Malecon	Barrio	Bontoc Subprovince	204	17	11	121	17
Malekong	Barrio	Bontoc Subprovince	204	17	07	120	59
Malepunyo	Mountain	Batangas	102	13	58	121	15
Malepunyo	Mountain	Laguna	174	13	58	121	15
Malepunyo	Mountain	Tayabas (S)	270	14	00	121	15
Males	Barrio	Bulacan	114	14	52	120	53
Malibago	Barrio	Leyte	186	11	25	124	50
Malibago	Barrio	Mindoro	190	13	05	121	25
Malibago	Barrio	Tayabas (S)	270	13	15	122	00
Malibas	Barrio	Sorsogon (S)	252	12	08	123	53
Malibato	Mountain	Cotabato	150	6	10	125	00
Malibay	Barrio	Rizal	240	14	32	121	00
Malibay	Sitio	Bulacan	114	15	14	121	04
Malibico	Barrio	Amburayan Subprovince	198	16	50	120	30
Malicut	Island	Sulu	258	6	05	120	25
Malideg	Barrio	Lepanto Subprovince	210	17	10	120	41
Malidong	Sitio	Albay	86	13	01	123	27
Maligay	Bay	Zamboanga	278	7	30	123	15
Maligayligay	Barrio	Iloilo	166	11	20	123	00
Maligligay	Sitio	Ilocos Norte	158	18	30	120	55
Malig	Barrio	Mindoro	190	13	50	120	10
Malilico	Barrio	Romblon	244	12	20	122	00
Malilipot	Municipality	Albay	86	13	19	123	44
Malimatoc	Barrio	Batangas	102	13	42	120	55
Malimono	Barrio	Surigao	262	9	35	125	25
Malinao	Municipality	Albay	86	13	24	123	42
Malinao	Municipality	Capiz	130	11	39	122	18
Malinao	Barrio	Bukidnon	110	8	50	125	15
Malinao	Barrio	Camarines Sur	126	13	40	123	00
Malinao	Barrio	Laguna	174	40	06	121	26
Malinao	Barrio	Samar	248	11	50	125	20
Malinao	Barrio	Tayabas (S)	270	14	00	121	50
Malinao	Sitio	Cotabato	150	7	35	124	45
Malinao	Mountain	Albay	86	13	25	123	35
Malinao	Mountain	Capiz	130	11	16	122	22
Malinao	Mountain	Relief	72	13		124	
Malinao	Inlet	Surigao	262	10	15	125	40
Malindang	Mountain	Misamis	194	8	15	123	35
Malindang	Mountain	Relief	72	8		124	
Malingin	Island	Iloilo	166	10	20	122	35
Malino	Barrio	Pampanga	232	15	08	120	40
Malinta	Barrio	Bulacan	114	14	42	120	58
Malisbug	Sitio	Occidental Negros	220	10	50	123	00
Malita	Municipal district	Davao	154	6	20	125	40
Malitao	Rancheria	Apayao Subprovince	200	18	06	121	01
Malitao	Barrio	Isabela	170	16	40	121	40
Malitbog	Municipality	Leyte	186	10	10	125	00
Malitbog	Municipal district	Bukidnon	110	8	30	124	55
Malitbog	River	Bukidnon	110	8	30	124	55
Malualu	Barrio	Tarlac	266	15	29	120	37
Malixi	Barrio	Surigao	262	8	25	126	15
Maljo	Barrio	Leyte	186	10	30	124	45
Mallango	Sitio	Kalinga Subprovince	208	17	18	121	08
Mallig	Sitio	Isabela	170	17	10	121	40
Mallig	River	Kalinga Subprovince	208	17	15	121	33
Mallig	River	Isabela	170	17	10	121	40
Mallig or Tardi	River	Mountain Province	196	17	20	121	35
Mallorga	Barrio	Samar	248	11	30	124	50
Malobago	Barrio	Albay	86	13	07	123	34
Malobago	Barrio	Leyte	186	10	45	124	55
Malobago	Barrio	Sorsogon (S)	252	12	03	123	59
Malobago	Barrio	Sorsogon (N)	252	12	31	123	20
Malobago	Barrio	Sorsogon (S)	252	12	31	123	20
Malobago	Sitio	Samar	248	11	30	125	25
Malobagonan	Barrio	Sorsogon (S)	252	11	44	124	03
Maloco	Barrio	Capiz	130	11	47	122	09
Maloconan	Barrio	Oriental Negros	224	9	05	123	00
Maloh	Barrio	Oriental Negros	224	9	05	123	00
Malolos	Capital	Bulacan	114	14	51	120	48
Malolos	Capital, Bulacan	Philippine Islands	72	15		121	
Maloma	Sitio	Zambales	274	15	07	120	04
Maloyon	Mountain	Nueva Ecija	212	15	53	121	03
Maluanluan	Barrio	Mindoro	190	13	05	121	25
Malubul	River	Cotabato	150	7	05	125	00
Malubutglubut	Island	Palawan (N)	223	11	30	119	40
Maluko	Municipality	Bukidnon	110	8	20	125	00

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				o	'	o	'
Maluno	Barrio	Isabela	170	17	00	121	55
Malunog	River	Apayao Subprovince	200	18	14	121	21
Malunog	Sitio	Apayao Subprovince	200	18	17	121	23
Malusak	Barrio	Tayabas (S)	270	14	00	122	00
Malusay	Barrio	Oriental Negros	224	10	10	123	15
Malusu	Barrio	Zamboanga	278	6	30	121	55
Maluya	Sitio	Bataan	94	14	38	120	30
Malvar	Municipality	Batangas	102	14	03	121	10
Maly	Barrio	Rizal	240	14	43	121	08
Manala	River	Pataan	94	14	34	120	33
Mamannak	Island	Zamboanga	278	6	35	121	35
Mamanoc	Island	Sulu	258	5	40	120	40
Mamanuc	Island	Sulu	258	5	40	120	25
Mamatad	Sitio	Pampanga	282	15	13	120	51
Mumatid	Barrio	Laguna	174	14	14	121	10
Mamatitang	Barrio	Pampanga	232	15	15	120	34
Mamawan	Barrio	Zamboanga	278	7	55	122	15
Mambahenauhan	Island	Philippine Islands	72	9	15	119	
Mambajao	Municipality	Misamis	194	8	15	124	45
Mambalili	Municipal district	Agusan	82	8	15	125	57
Mambangnan	Barrio	Nueva Ecija	212	15	21	120	21
Mambatangan	Barrio	Bukidnon	110	8	20	124	50
Mambiranan	Barrio	Iloilo	116	8	20	122	35
Mamboaya	Barrio	Bukidnon	110	8	20	124	35
Mambog	Barrio	Cavite	134	14	26	120	53
Mambog	Barrio	Zambales	274	15	19	120	01
Mambog	Barrio	Ilocos Sur	162	17	27	120	27
Mambug	Barrio	Kalinga Subprovince	208	17	27	121	21
Mambukayan	Barrio	Capiz	130	11	34	122	34
Mambukiao	Barrio	Capiz	130	11	34	122	34
Mambulao	Port	Camarines Norte	122	14	19	122	40
Mambulao	Municipality	Camarines Norte	122	14	17	122	42
Mamburao	Bay	Mindoro	190	13	15	120	35
Mamburao	Township	Mindoro	190	13	15	120	35
Mambusao	Municipality	Capiz	130	11	26	122	35
Mambusao	River	Capiz	130	11	23	122	27
Mambutua	Barrio	Agusan	82	9	00	125	35
Mamhot	Sitio	Camarines Norte	122	14	18	122	36
Mampanom	Sitio	Davao	154	7	10	126	30
Mamparang	Mountain	Nueva Vizcaya	216	16	22	121	30
Mampinsahan	Municipal district	Agusan	82	8	30	125	30
Mampissin	Sitio	Davao	154	7	20	125	50
Mamunit	Sitio	Tarlac	266	15	35	120	23
Manaa	Sitio	Benguet Subprovince	202	16	15	120	40
Manabanay	Sitio	Abra	78	17	50	120	49
Manabo	Municipality	Abra	78	17	26	120	42
Manacota	Rancheria	Apayao Subprovince	200	18	21	121	18
Manacsac	Barrio	Nueva Ecija	212	15	36	120	48
Manadding	Barrio	Zamboanga	278	7	40	123	00
Managa	Sitio	Davao	154	7	10	125	50
Managasi	Barrio	Cebu	138	10	55	124	00
Manago	Mountain	Abra	78	17	45	120	57
Managua	Mountain	Bukidnon	110	8	45	125	15
Manajao	Barrio	Samar	248	12	30	124	55
Manamoc	Island	Palawan (N)	228	11	20	120	40
Manamrag	Barrio	Albay	86	13	44	124	06
Manamuc	Barrio	Mindoro	190	12	55	120	50
Mananao	Barrio	Albay	86	13	14	124	08
Manangat	Barrio	Ilocos Sur	162	17	33	120	22
Manangol	Sitio	Kalinga Subprovince	208	17	20	121	09
Mananum	Barrio	Bukidnon	110	8	55	125	00
Manaoag	Municipality	Pangasinan	236	16	03	120	29
Manapla	Municipality	Occidental Negros	220	11	00	123	05
Manarang	Sitio	Ilocos Norte	158	18	19	120	41
Manatan	Sitio	Kalinga Subprovince	208	17	22	121	22
Manaul	Barrio	Laguna	174	14	11	121	22
Manay	Municipality	Davao	154	7	10	126	30
Manayday	Barrio	Abra	78	17	29	120	37
Mancajilan	Sitio	Nueva Ecija	212	15	18	121	10
Mancamagong	Sitio	Camarines Norte	122	14	02	123	02
Mancanda	Barrio	Camarines Sur	126	13	50	122	47
Mancatian	Barrio	Pampanga	232	15	05	120	33
Mancayo	Barrio	Camarines Norte	122	14	12	122	54
Mancruz	Barrio	Camarines Norte	122	14	05	122	57
Mandalagan	Sitio	Occidental Negros	220	10	40	122	55
Mandalagan	Mountain	Occidental Negros	220	10	40	123	15
Mandaloque	Barrio	Ilocos Norte	158	18	08	120	42
Mandao	Sitio	Camarines Norte	122	13	52	123	04
Mandao	Barrio	Sorsogon (S)	252	12	14	123	17
Mandaparon	Sitio	Oriental Negros	224	10	05	123	10
Mandasing	Barrio	Pampanga	232	15	04	120	49

Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
Mandaue	Municipality.	Cebu	138	10 20	123 55
Mandau	Island	Mindoro	190	13 50	120 20
Mandili	Barrio	Pampanga	232	15 10	120 54
Mandong	Barrio	Capiz	130	11 35	122 32
Mandurriao	Barrio	Iloilo	166	10 45	122 30
Manella	Barrio	Misamis	194	8 35	123 45
Managa	Sitio	Lepanto Subprovince.	210	17 13	120 34
Manga	Barrio	Pampanga	232	15 09	120 46
Manga	Barrio	Cebu	138	10 00	123 25
Mangagoy	Barrio	Surigao	262	8 10	126 20
Mangal	Sitio	Zamboanga	278	6 25	122 00
Mangalayan	Barrio	Tayabas (S)	270	14 00	121 55
Mangaldan	Municipality.	Pangasinan	236	16 05	120 24
Mangali	Barrio	Kalinga Subprovince.	208	17 17	121 15
Mangarin	Bay	Mindoro	190	12 20	121 05
Mangarin	Barrio	Mindoro	190	12 20	121 05
Mangas	Barrio	Cavite	134	14 08	120 52
Mangasag	Barrio	Romblon	244	12 50	122 05
Mangatarem	Municipality.	Pangasinan	236	15 47	120 17
Mangatarem	Mountain	Pangasinan	236	15 54	120 07
Mangatarem	Mountain	Relief	72	16	120
Mangeli	Sitio	Davao	154	6 00	125 40
Mangilag	Barrio	Tayabas (S)	270	13 55	121 25
Mangitayag	Barrio	Ilocos Norte	158	18 09	120 42
Mangolago	Barrio	Tarlac	266	15 35	120 44
Mangrove	Point	Camarines Norte	122	14 21	122 41
Manguiao	Barrio	Zamboanga	274	15 24	119 54
Manguirín	Barrio	Cebu	138	10 35	123 45
Mangumit	Sitio	Camarines Sur	126	13 45	123 17
Manguna	Barrio	Iloilo	174	14 12	121 03
Manharlahan	Sitio	Bukidnon	110	7 30	125 05
Manibaug	Barrio	Pampanga	232	15 07	120 34
Maniboc	Barrio	Pangasinan	236	16 02	120 13
Manicahan	Barrio	Zamboanga	278	7 00	122 15
Manicani	Island	Samar	248	11 00	125 40
Manicbel	River	Abra	78	17 29	120 51
Manigonigo	Island	Iloilo	166	11 35	123 10
Maniguin	Island	Antique	90	11 35	121 40
Manila	Bay	Cavite	134	14 25	120 45
Manila	Incorporated City	Manila	146	14 36	120 59
Manila	Insular Capital.	Rizal	240	14 36	120 59
Manila	Insular Capital.	Philippine Islands	72	15	121
Manila	Municipal district.	Agusan	82	8 50	125 30
Manila Water Supply.	Reservation.	Rizal	240	14 40	121 15
Maning	Sitio	Palawan (N)	228	10 50	121 00
Maningi	Point	Camarines Norte	122	14 14	122 21
Maninila	Barrio	Albay	86	13 13	123 38
Maniring	Sitio	Samar	248	12 25	125 05
Maniti	Sitio	Rizal	240	14 41	121 23
Manito	Municipality.	Albay	86	13 08	123 52
Maniwayan	Island	Tayabas (S)	270	13 35	122 10
Manjuyod	Municipality.	Oriental Negros	224	9 20	123 10
Mankayan	Township	Lepanto Subprovince.	210	16 52	120 48
Mankayan	Township	Mountain Province.	196	16 50	120 50
Manlabong	Barrio	Sorsogon (N)	252	13 04	124 09
Manlacho	Barrio	Antique	90	11 00	122 00
Manlagtang	Barrio	Cebu	138	11 00	124 00
Manmanoc	Mountain	Abra	78	17 40	121 05
Manmanoc	Mountain	Kalinga Subprovince.	208	17 40	121 05
Manmanoc	Mountain	Mountain Province	196	17 40	121 05
Manmanoc	Mountain	Relief	72	18	121
Manoc	Island	Sorsogon (S)	252	12 00	123 34
Manoc	Sitio	Kalinga Subprovince.	208	17 22	121 29
Manocmanoc	Islets	Cebu	138	11 35	124 00
Manog	Point	Mindoro	190	13 40	120 15
Manpili	Barrio	Camarines Norte	122	14 05	122 59
Manreza	Barrio	Davao	154	7 10	126 30
Manromiras	Sitio	Camarines Sur	126	13 35	123 00
Mansalay	Bay	Mindoro	190	12 30	121 25
Mansalay	Barrio	Mindoro	190	12 30	121 25
Mansalayayao	Barrio	Occidental Negros	220	10 20	123 05
Mansua	Sitio	Camarines Norte	122	14 08	122 59
Mantabuan	Island	Sulu	258	5 00	120 15
Mantalingahan	Mountain	Palawan (S)	228	8 50	117 40
Mantalingahan	Mountain	Relief	72	9	118
Mantalisay	Barrio	Camarines Sur	126	13 45	123 01
Mantanas	Barrio	Ilocos Sur	162	17 03	120 27
Mantang	Barrio	Samar	248	11 50	125 25
Mantangule	Island	Palawan (S)	228	8 10	117 10

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Mantatao	Island	Bohol	106	9	57	123	51
Mantaul, Dato	Sitio	Cotabato	150	7	10	124	55
Mantayuna	Sitio	Bukidnon	110	7	40	124	55
Manticao	Barrio	Misamis	194	8	25	124	15
Mantigbi	Sitio	Bataan	94	14	35	120	35
Mantingoy	Mountain	Kalinga Subprovince	203	17	15	121	10
Mantiquil	Barrio	Oriental Negros	224	9	10	123	05
Manuboc	Barrio	Sorsogon (N)	252	12	31	123	26
Manuboc	Barrio	Sorsogon (S)	252	12	31	123	26
Manucan	Island	Palawan (N)	228	9	40	121	20
Manucan	Barrio	Zamboanga	278	8	30	123	05
Manucanca	Island	Sulu	258	4	50	119	50
Manuc-Manucan	Island	Palawan (N)	228	7	40	118	30
Manunica	Barrio	Samar	248	11	25	125	00
Manurigao	Barrio	Davao	154	7	30	126	30
Manusuang	River	Agusan	82	9	10	125	35
Manuyog	Barrio	Misamis	194	9	05	124	45
Manzanilla	Barrio	Antique	90	10	55	122	00
Manzante	Sitio	Ilocos Sur	162	17	42	120	24
Maosoas	Barrio	Benguet Subprovince	202	16	17	120	29
Maon	Mountain	Bulacan	114	15	01	121	08
Maopan	Sitio	Albay	86	13	03	123	23
Mapacac	Sitio	Lepanto Subprovince	210	16	58	120	40
Mapait	Mountain	Nueva Ecija	212	15	32	121	07
Mapako	Barrio	Albay	86	13	10	123	33
Mapalad	Barrio	Tarlac	266	15	30	120	42
Mapalan	Point	Bataan	94	14	37	120	21
Mapalina	River	Bukidnon	110	7	55	125	00
Mapan	Sitio	Amburayan Subprovince	198	17	01	120	33
Mapanas	Barrio	Misamis	194	8	20	123	50
Mapandan	Municipality	Samar	248	12	30	125	15
Mapaniqui	Municipality	Pangasinan	236	16	02	120	27
Mapatag	Barrio	Pampanga	232	15	06	120	55
Mapatan	Mountain	Rizal	240	14	41	121	20
Mapatung	Barrio	Antique	90	10	35	122	00
Mapia Pupa	Sitio	Nueva Vizcaya	216	16	00	121	18
Mapisla	Barrio	Lanao	178	7	45	123	55
Mapitpita	Barrio	Abra	78	17	32	120	52
Mapitpita	Rancheria	Apayao Subprovince	200	17	53	121	11
Mapolopolo	Barrio	Pangasinan	236	15	54	120	22
Mapula	Barrio	Romblon	244	12	35	122	15
Mapulo	Barrio	Batangas	102	13	45	121	11
Mapunga	Sitio	Davao	154	7	50	126	00
Mapungas	Barrio	Davao	154	7	40	125	50
Mapuyo	Barrio	Leyte	186	11	45	124	25
Maquebenga	Rancheria	Nueva Vizcaya	216	16	12	121	14
Maqueda	Bay	Samar	248	11	45	125	00
Maqueda	Channel	Camarines Sur	126	13	50	124	00
Maquiling	Railroad Station	Batangas	102	14	09	121	08
Maquiling	Mountain	Batangas	102	14	08	121	12
Maquiling	Mountain	Laguna	174	14	08	121	12
Maquiling	Volcano, dormant	Relief	72	14		121	
Maquinang	Sitio	Zambales	274	15	05	120	12
Maquinang	Mountain	Zambales	274	15	05	120	11
Maracanao	Island	Palawan (N)	228	11	10	121	00
Marag	River	Apayao Subprovince	200	18	19	121	11
Maragat	Barrio	Apayao Subprovince	200	17	57	121	04
Maragayap	Rancheria	La Union	132	16	46	120	20
Maragnat	Rancheria	Apayao Subprovince	200	18	30	121	03
Maragondon	Municipality	Cavite	134	14	17	120	44
Marahan	Barrio	Cavite	134	14	08	120	51
Marakabak	Sitio	Cotabato	150	7	30	124	40
Maralison	Island	Antique	90	11	25	122	00
Maramag	Municipal district	Bukidnon	110	7	45	125	00
Marangas	Sitio	Palawan (S)	228	8	40	117	40
Maranghi	Barrio	Camarines Sur	126	13	30	123	07
Maranlangit	Mountain	Bukidnon	110	8	45	125	00
Marasat	Sitio	Isabela	170	16	55	121	35
Marasi	Bay	Palawan (S)	228	8	50	117	20
Marairai	Sitio	Isabela	170	16	50	121	50
Marauoy	Barrio	Batangas	102	13	58	121	10
Maravilla	Barrio	Cebu	138	10	55	123	55
Maravilla	Barrio	Laguna	174	14	13	121	24
Marayag	Barrio	Albay	86	13	18	123	27
Marayag	Barrio	Leyte	186	10	00	125	10
Marcelino	Point	Tayabas (N)	270	14	50	121	35
Maresira	Sitio	Cotabato	150	6	50	125	15
Margaay	Barrio	Ilocos Sur	162	17	26	120	28
Margos	Barrio	Davao	154	7	10	125	30
Margosatubig	Municipal district	Zamboanga	278	7	35	123	10

Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
				° ' "	° ' "
Margus	Barrio	Cotabato	150	5 35	125 20
Maria	Island	Cebu	138	11 30	124 05
Maria	Municipality	Oriental Negros	224	9 10	123 40
Maria	Barrio	Antique	90	11 05	122 05
Maria	Barrio	Samar	248	12 25	124 50
Maria Clara	Barrio	Leyte	186	10 05	124 50
Maria Cristina	Barrio	La Union	182	16 54	120 26
Maria Mercedes	Barrio	Capiz	130	11 33	122 15
Mariawa	Barrio	Albay	86	13 03	123 46
Maribago	Barrio	Cebu	138	10 20	124 00
Maribojoc	Municipality	Bohol	106	9 45	123 50
Maribojoc	Barrio	Surigao	262	8 10	126 35
Maricaban	Island	Batangas	102	13 39	120 53
Maricaban	Barrio	Batangas	102	13 40	120 50
Maricaban	Barrio	Rizal	240	14 32	121 50
Maricalom	Sitio	Occidental Negros	220	9 40	122 25
Marigondon	Barrio	Cebu	138	10 15	124 00
Marigondon	Barrio	Romblon	244	12 30	122 05
Marigondon	Barrio	Romblon	244	12 25	122 40
Marihatag	Barrio	Surigao	262	8 50	126 20
Marikina	Municipality	Rizal	240	14 38	121 06
Marikit	Sitio	Nueva Ecija	212	15 48	121 15
Marilao	Municipality	Bulacan	114	14 45	120 57
Marinab	Barrio	Sorsogon (N)	252	12 36	123 56
Marinab	Barrio	Sorsogon (S)	252	12 36	123 56
Marinduque	Island	Tayabas (S)	270	13 25	122 00
Marinduque	Island	Philippine Islands	72	13 12	122 00
Marinduque	Subprovince	Tayabas (S)	270	13 25	122 00
Maringalo	Sitio	Nueva Ecija	212	15 59	121 02
Marinig	Barrio	Laguna	174	14 16	121 10
Marintoc	Sitio	Sorsogon (S)	252	12 17	123 43
Maripi	Island	Sorsogon (S)	186	11 50	124 20
Maripipi	Municipality	Leyte	186	11 45	124 20
Mariroc	Barrio	Albay	86	13 20	123 41
Maritan	Sitio	Bataan	94	14 49	120 18
Mariul	Barrio	Tarlac	266	15 41	120 23
Mariveles	Port	Bataan	94	14 25	120 30
Mariveles	Municipality	Bataan	94	14 26	120 29
Mariveles	Quarantine Station.	Bataan	94	14 26	120 29
Mariveles	Mountain	Bataan	94	14 31	120 29
Mariveles	Mountain	Bataan	72	15 15	120 18
Marmarsang	Barrio	Amburayan Subprovince	198	16 56	120 35
Maronquillo	Barrio	Bulacan	114	14 58	121 00
Marozo	Barrio	Ilocos Sur	162	17 27	120 31
Martinez	Barrio	Antique	90	11 20	122 00
Marungas	Island	Sulu	258	6 05	121 00
Marungas	Municipal district.	Sulu	258	6 15	121 00
Marungco	Barrio	Bulacan	114	14 57	121 01
Marunot	Sitio	Leyte	138	11 10	124 25
Masa	Barrio	Cebu	138	10 00	123 30
Masaba	Barrio	Cebu	138	10 30	124 00
Masabod	Barrio	Misamis	194	8 10	123 35
Masadsadac	Mountain	Ilocos Norte	158	18 17	120 46
Masagana	Barrio	Bulacan	114	14 53	120 56
Masaguisi	Sitio	Mindoro	190	12 40	121 30
Masaguitsit	Barrio	Batangas	102	13 39	121 11
Masalong	Sitio	Camarines Norte	122	14 10	122 48
Masantol	Municipality	Pampanga	232	14 54	120 42
Masao	Barrio	Agusan	82	9 00	125 30
Masaraga	Mountain	Antique	86	13 19	123 37
Masarauag	Barrio	Albay	86	13 14	123 37
Masasa	Sitio	Batangas	102	13 39	120 52
Masaya	Barrio	Isabela	170	16 30	121 45
Masaya	Sitio	Laguna	174	14 09	121 16
Masayo	Barrio	Antique	90	10 35	122 00
Masbaranon	Barrio	Sorsogon (S)	252	11 47	124 01
Masbate	Island	Sorsogon (S)	252	12 12	123 40
Masbate	Island	Philippine Islands	72	12 12	124 00
Masbate	Municipality	Sorsogon (S)	252	12 22	123 37
Masi	Rancheria	Apayao Subprovince.	200	18 25	121 09
Masi	River	Apayao Subprovince.	200	18 23	121 09
Masi	Barrio	Lanao	178	7 50	123 50
Masi	Barrio	Cagayan	118	17 50	121 35
Masical	Barrio	La Union	182	16 34	120 23
Masicong	Barrio	Laguna	174	14 10	121 18
Masit	Barrio	Zamboanga	278	7 45	123 25
Masin	Sitio	Zamboanga	278	7 45	123 25
Masinao	Barrio	Laguna	174	14 30	121 25
Masinloc	Municipality	Zambales	274	15 32	119 57
Masinloc	Mountain	Zambales	274	15 33	120 02

Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
Masioioay	Sitio	Lepanto Subprovince	210	17 15	120 38
Masipac	River	Isabela	170	16 45	121 50
Masipi	Barrio	Isabela	170	17 25	121 55
Masiquil	Barrio	Ilocos Norte	158	18 32	120 45
Masisit	Barrio	Cagayan	118	18 55	121 15
Masiu	Municipal district	Lanao	178	7 50	124 20
Masla	Barrio	Lepanto Subprovince	210	17 02	120 49
Maslog	Municipal district	Samar	248	12 05	125 15
Maslog	Barrio	Albay	86	13 07	123 16
Maslog	Barrio	Cebu	138	10 30	124 00
Maslog	Sitio	Camarines Sur	126	13 57	123 00
Masonson	Barrio	Iloilo	166	11 15	123 00
Maspilil	Sitio	Lepanto Subprovince	210	17 01	121 44
Masudarg	Sitio	Bontoc Subprovince	204	17 11	120 25
Masula	Sitio	Bataan	94	14 39	120 24
Masuli	Barrio	Camarines Sur	126	13 21	123 24
Masungit Rock	Mountain	Rizal	240	14 36	121 19
Masupe	Barrio	La Union	182	16 48	120 25
Mataas na Gulod	Mountain	Cavite	134	14 12	121 41
Mataasnakahoy	Sitio	Nueva Ecija	212	15 37	123 15
Mataba	Barrio	Sorsogon (N)	252	12 33	123 15
Mataba	Barrio	Sorsogon (S)	252	12 33	123 15
Matabang	Barrio	Cebu	138	10 25	123 40
Matabao	Island	Sorsogon (S)	252	12 19	123 48
Matabao	Barrio	Bohol	106	9 55	123 56
Matagbac	Barrio	Cavite	134	14 08	122 50
Matagob	Barrio	Iloilo	166	11 00	122 30
Matagob	Barrio	Leyte	186	11 05	124 30
Matagob	Barrio	Leyte	186	11 30	124 25
Mataha	Island	Zamboanga	278	6 35	121 40
Matahao	Township	Batanes	98	20 25	121 58
Matain Hulo	Barrio	Zambales	274	14 51	121 15
Matalibong	Sitio	Albay	86	13 29	123 38
Mataling	River	Lanao	178	7 40	124 10
Matalipni	Barrio	Albay	86	13 24	123 40
Matalom	Municipality	Leyte	186	10 15	124 45
Matalvi	Point	Zambales	274	15 29	119 54
Matam	Barrio	Zamboanga	278	8 30	123 15
Matamp	Sitio	Lanao	178	7 45	123 55
Matanal	Point	Zamboanga	278	6 35	122 20
Matancan	Bay	Tayabas (N)	270	15 05	121 50
Matandumaten	Island	Camarines Norte	122	14 21	123 08
Matango	Sitio	Camarines Norte	122	14 13	122 52
Matanis	Sitio	Davao	154	5 50	125 30
Mataqui	Barrio	Camarines Norte	122	14 18	122 32
Matara	Barrio	Albay	86	13 11	123 22
Matarabis	Island	Palawan (N)	228	11 10	121 10
Matarem	Mountain	Batanes	98	20 24	121 58
Matarinao	Bay	Samar	248	11 15	125 35
Matarinao	Barrio	Samar	248	11 15	125 35
Matas	Sitio	Pampanga	232	15 11	120 37
Matataja	Barrio	Tayabas (S)	270	13 25	122 25
Matayuanac	Barrio	Batangas	102	14 02	122 44
Matayum	Barrio	Sorsogon (S)	252	11 58	124 03
Matayumtayum	Barrio	Tarlac	266	15 31	120 43
Mate	Barrio	Tayabas (S)	270	14 00	121 40
Matho	Barrio	Surigao	262	9 10	126 10
Mati	Municipality	Davao	154	7 00	126 20
Mati	Barrio	Bukidnon	110	8 25	124 00
Mati	Sitio	Cotabato	150	6 50	124 01
Matibuey	Barrio	Lepanto Subprovince	210	17 13	120 41
Matican	Barrio	Isabela	170	17 05	122 20
Matietic	Barrio	Bulacan	114	14 55	121 04
Matimbo	Barrio	Bulacan	114	14 49	120 50
Matimus	Point	Lanao	178	7 25	124 10
Matimus	Sitio	Lanao	178	7 25	124 10
Matinao	Barrio	Bohol	106	9 49	124 21
Matindag	Barrio	Nueva Ecija	212	15 47	120 41
Matingat	Sitio	Abra	78	17 47	120 39
Matinobo	Sitio	Abra	78	17 19	120 35
Matlang	Barrio	Leyte	186	10 55	124 25
Matnog	Municipality	Sorsogon (N)	252	12 36	124 05
Matnog	Municipality	Sorsogon (S)	252	12 36	124 05
Matnog	Sitio	Samar	248	11 20	125 00
Matocbo	Sitio	Lepanto Subprovince	210	16 57	120 40
Matoco	Barrio	Batangas	102	13 38	121 03
Matogdon	Barrio	Camarines Norte	122	14 07	122 49
Matogtoog	Barrio	Camarines Norte	122	14 02	123 02
Matuhog	Barrio	Tarlac	266	15 41	120 27
Matulid	Mountain	Bulacan	114	14 53	121 16

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Matungao	Barrio	Bulacan	114	14	48	120	53
Matungog	Sitio	Sorsogon (N)	252	12	35	123	14
Matungog	Sitio	Sorsogon (S)	252	12	35	123	14
Matuog	Barrio	Oriental Negros	224	9	55	123	10
Matutiniao	Barrio	Cebu	138	9	50	123	20
Matutum	Volcano	Davao	154	6	20	125	10
Matutum	Volcano	Cotabato	150	6	20	125	05
Matutum	Volcano, dormant	Relief	72	6		125	
Matutuna	Barrio	Romblon	244	12	30	122	00
Mauban	Municipality	Tayabas (S)	270	14	10	121	45
Mauban	Barrio	Bataan	94	14	39	120	18
Mauban	Mountain	Abra	78	17	21	120	57
Mauban	Mountain	Kalinga Subprovince	208	17	21	120	58
Maubanban	Mountain	Zambales	274	14	54	120	06
Maugat	Barrio	Batangas	102	13	52	121	18
Maugbi	Barrio	Occidental Negros	220	10	30	123	05
Mauhao	Barrio	Mindoro	190	12	20	121	20
Maul	Sitio	Lanao	178	8	00	124	15
Mauluin	Barrio	Laguna	174	14	16	121	27
Maumaun	Island	Bohol	106	10	11	124	28
Maungib	Barrio	Tarlac	266	15	39	120	39
Mauo	Barrio	Samar	248	12	25	124	20
Mauraro	Barrio	Albay	86	13	09	123	36
Mauyen	Sitio	Batanes	98	20	41	121	50
Mavien	Sitio	Batanes	98	20	22	121	56
Mawes	Island	Surigao	262	8	20	126	25
Mayabay	Barrio	Antique	90	11	15	122	05
Mayag	Sitio	Lepanto Subprovince	210	16	58	120	50
Mayamot	Sitio	Nueva Ecija	212	15	45	120	49
Mayan	Sitio	Batanes	98	20	46	121	52
Mayana	Barrio	Bohol	106	9	47	124	19
Mayantoc	Municipality	Tarlac	266	15	37	120	23
Mayasang	Sitio	Batangas	102	14	01	120	52
Mayatap	Sitio	Bontoc Subprovince	204	17	09	121	14
Maybancal	Barrio	Rizal	240	14	31	121	14
Maybato	Barrio	Antique	90	10	45	121	55
Maybocog	Barrio	Samar	248	11	30	125	30
Maybunga	Barrio	Rizal	240	14	35	121	05
Maycueva	Sitio	Camarines Sur	126	13	58	122	41
Maydolong	Barrio	Samar	248	11	30	125	30
Maygatasan	Municipal district	Agusan	82	8	45	125	40
Maygnaway	Barrio	Albay	86	13	41	124	03
Mayha	Barrio	Romblon	244	12	25	122	00
Mayo	Bay	Davao	154	7	00	126	20
Mayo	River	Davao	154	7	00	126	20
Mayo	Sitio	Davao	154	7	00	126	20
Mayon	Volcano	Albay	86	13	16	123	41
Mayon	Volcano, active	Relief	72	13		124	
Mayon	Barrio	Sorsogon (N)	252	12	58	123	49
Mayondon	Barrio	Laguna	174	14	12	121	14
Mayong	Barrio	Albay	86	13	31	123	36
Mayorga	Barrio	Leyte	186	10	55	125	00
Mayoyao	Township	Ifugao Subprovince	206	16	59	121	14
Mayoyao	Township	Mountain Province	196	17	00	121	15
Maypajo	Barrio	Rizal	240	14	39	120	58
Maytiguid	Island	Palawan (N)	228	11	00	119	40
Maytim	Barrio	Cavite	134	14	08	120	57
Mayuga	Barrio	Bohol	106	9	48	124	25
Mayuro	Barrio	Batangas	102	13	48	121	16
McArthur	Barrio	Cebu	138	10	40	124	30
McGrath, Camp	U. S. Army Post	Batangas	102	13	46	121	04
McKinley, Fort	U. S. Army Post	Rizal	240	14	33	121	03
McKinley	Barrio	Ilocos Sur	162	17	13	120	30
McKinley	Barrio	Oriental Negros	224	10	05	123	15
McKinley	Barrio	Samar	248	12	25	124	40
Medano	Island	Misamis	194	9	15	124	40
Medellin	Municipality	Cebu	138	11	10	124	00
Medina	Barrio	Capiz	130	11	27	122	14
Medina	Barrio	Cavite	134	14	10	120	46
Medina	Barrio	Misamis	194	8	55	125	00
Melgar	Barrio	Surigao	262	10	05	125	30
Melville	Cape	Palawan (S)	228	7	50	117	00
Melville	Cape	Philippine Islands	72	8		117	
Mendez Nuñez	Municipality	Cavite	134	14	08	120	54
Mengmeng	Mountain	Abra	78	17	13	120	55
Mengmeng	Mountain	Bontoc Subprovince	204	17	13	120	55
Menor	Island	Mindoro	190	12	40	120	25
Mercedes	Barrio	Camarines Norte	122	14	07	123	00
Mercedes	Barrio	Cebu	138	10	40	124	25

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Mercedes	Barrio	Davao	154	7	20	126	30
Mercedes	Barrio	Samar	248	11	05	125	45
Mercedes	Barrio	Zamboanga	278	7	00	122	10
Merida	Municipality	Leyte	186	10	55	124	30
Merui	Mountain	Cotabato	150	7	40	125	15
Mesecoy	Sitio	Palawan (N)	228	11	00	119	30
Mexico	Municipality	Pampanga	232	15	04	120	43
Meycayauan	Municipality	Bulacan	114	14	44	120	58
Meyngaran	Barrio	Sorsogon (S)	252	12	21	123	36
Miagao	Municipality	Iloilo	166	10	40	122	15
Mianay	Barrio	Capiz	130	11	30	122	43
Miarayon	Barrio	Bukidnon	110	8	00	124	55
Midsungan	Sitio	Cotabato	150	7	40	125	10
Migit	Sitio	Davao	154	7	30	126	30
Mikalung	Sitio	Bukidnon	110	7	30	125	00
Milagros	Municipality	Sorsogon (S)	252	12	13	123	30
Milagros	Municipal district	Agusan	82	8	40	125	35
Milan	Barrio	Capiz	130	11	27	122	28
Milaor	Municipality	Camarines Sur	126	13	35	123	10
Milaos	Sitio	Albay	86	13	02	123	41
Minaili	Sitio	Albay	86	14	01	124	15
Minalabac	Municipality	Camarines Sur	126	13	33	123	11
Minalin	Municipality	Pampanga	232	14	58	120	41
Minallo	Barrio	Isabela	170	17	00	121	50
Minalolan	Barrio	Oriental Negros	224	9	10	123	40
Minalunua	Mountain	Rizal	240	14	46	121	18
Minanga	Barrio	Cagayan	118	18	15	121	45
Mindagat	Barrio	Bukidnon	110	8	35	124	55
Mindanao	Island	Philippine Islands	72	8		125	
Mindanao	Sea	Philippine Islands	72	9		124	
Mindanao	Barrio	Cebu	138	9	40	123	20
Mindanao	River	Cotabato	150	7	00	124	30
MINDORO	Province	Mindoro	190	13	00	121	00
Mindoro	Island	Philippine Islands	72	13		121	
Mindoro	Strait	Philippine Islands	72	13		120	
Mindoro	Barrio	Ilocos Sur	162	17	33	120	21
Mindoro	Barrio	La Union	182	16	55	120	25
Mines	Sitio	Ilocos Norte	158	18	29	120	37
Mingay	Sitio	Apayao Subprovince	200	18	35	121	00
Minglanilla	Municipality	Cebu	138	10	15	123	50
Minis	Island	Sulu	258	6	10	121	05
Minis	Island	Zamboanga	278	6	35	121	30
Minlagas	Barrio	Misamis	194	8	50	125	00
Minolos	Barrio	Cebu	138	10	05	123	30
Minsoro	Barrio	Bukidnon	110	8	30	124	50
Mintac	Barrio	Sorsogon (S)	252	11	57	124	01
Minuhang	Barrio	Leyte	186	11	20	124	45
Minuit	Sitio	Palawan (N)	228	12	10	120	00
Minuluan	Sitio	Occidental Negros	220	10	45	123	00
Minuri	Sitio	Isabela	170	16	35	121	50
Mirador	Mountain	City of Baguio	140	16	25	120	35
Mirador	Observatory	City of Baguio	140	16	25	120	35
MIRANDA	Barrio	Occidental Negros	220	10	20	122	50
MISAMIS	Province	Misamis	194	8	30	124	30
Misamis	Province	Philippine Islands	72	9		124	
Misamis	Municipality	Misamis	194	8	10	123	50
Misericordia	Barrio	Albay	86	13	16	123	46
Misinsiman	Sitio	Bukidnon	110	7	30	124	55
Mision	Barrio	Cagayan	118	18	15	121	55
Mision	Barrio	Ilocos Sur	162	17	26	120	31
Mitla	Barrio	Pampanga	232	15	04	120	34
Mito	Mountain	Leyte	186	11	30	125	00
Miuban	Barrio	Bukidnon	110	7	40	125	00
Moalbual	Municipality	Cebu	138	9	55	123	25
Mobo	Barrio	Sorsogon (S)	252	12	20	123	39
Mocaboc	Island	Bohol	106	10	04	123	56
Mocpoc	Barrio	Bohol	106	9	52	123	48
Mogpog	Municipality	Tayabas (S)	270	13	30	121	50
Mohanook	River	Davao	154	7	30	126	20
Moises	Mountain	Isabela	170	17	10	122	15
Moises	Mountain	Relief	72	17		122	
Mojon	Barrio	Batangas	102	13	52	120	58
Mojon	Barrio	Cebu	138	10	15	123	50
Mojon	Barrio	Laguna	174	14	13	121	24
Mojon	Sitio	Nueva Ecija	212	15	33	121	14
Molar Rock	Islet	Camarines Sur	126	14	02	123	46
Moliguin	Barrio	Tayabas (S)	270	13	50	122	00
Molino	Barrio	Cavite	134	14	21	120	51
Molo	Barrio	Iloilo	166	10	40	122	35
Molocaboc	Island	Occidental Negros	220	11	00	123	35

Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
				° ' "	° ' "
Molopolo	Barrio	Leyte	186	10 05	124 55
Molopolo	Barrio	Leyte	186	10 10	125 10
Molugan	Barrio	Misamis	194	8 30	124 35
Mompog	Island	Tayabas (S)	270	13 30	122 10
Mompog	Pass	Tayabas (S)	270	13 35	122 05
Monbon	Barrio	Sorsogon (N)	252	12 44	124 01
Moncada	Municipality	Tarlac	266	15 44	120 34
Mondragon	Municipality	Samar	248	12 30	124 45
Mongabong	Sitio	Samar	248	11 20	125 05
Mongpong	River	Mindoro	190	12 50	120 55
Moning	Barrio	Albay	86	13 39	124 21
Monja	Island	Cavite	134	14 22	120 31
Monkayo	Municipal district	Davao	154	7 50	126 00
Monreal	Barrio	Sorsogon (N)	252	12 40	123 39
Monserrat	Barrio	Cebu	138	10 45	124 30
Monserrat	Barrio	Surigao	262	9 40	126 05
Monserrat	Sitio	Laguna	174	14 13	121 26
Monserrat	Mountain	Amburayan Subprovince	198	17 03	120 38
Montabiong	Barrio	Ifugao Subprovince	206	16 50	121 10
Montalban	Municipality	Rizal	240	14 44	121 09
Montalban	River	Rizal	240	14 44	121 15
Montana	Barrio	Bohol	106	9 37	123 56
Montaneza	Barrio	Cebu	138	9 40	123 20
Monte Alegre	Barrio	Cebu	138	10 40	124 20
Montero	Barrio	Ilocos Sur	162	17 14	120 29
Montevideo	Barrio	Bohol	106	9 46	124 13
Montserrat	Mountain	Lepanto Subprovince	210	17 03	120 38
Montufar	Point	Sorsogon (N)	252	13 01	124 12
Moriones	Barrio	Camarines Sur	126	13 35	123 27
Moriones	Barrio	Tarlac	266	15 27	120 28
Moro	Gulf	Zamboanga	278	6 50	122 50
Moro	Gulf	Philippine Islands	72	7	123
Moron	Municipality	Bataan	94	14 41	120 16
Morong	Municipality	Rizal	240	14 31	121 14
Mosimus	Mountain	Kalinga Subprovince	208	17 18	121 02
Mosung	River	Mindoro	190	12 50	121 20
Motiong	Barrio	Samar	248	11 45	125 00
MOUNTAIN	Province	Mountain Province	196	17 00	121 00
Mountain	Province	Philippine Islands	72	17	121
Mozon	Barrio	Batangas	102	13 51	120 59
Mozon	Sitio	Rizal	240	14 32	121 09
Mozozin	Barrio	Isabela	170	17 30	121 45
Muduk	Barrio	Zamboanga	278	7 30	122 50
Mukas	Sitio	Zamboanga	278	8 05	122 45
Mulanay	Municipality	Tayabas (S)	270	13 30	122 25
Mulibcong	Municipal district	Abra	78	17 34	120 58
Mulig	Barrio	Davao	154	7 00	125 30
Muligi	Island	Sulu	258	6 55	118 25
Mulita	River	Bukidnon	110	7 30	124 55
Mulundu	Municipal district	Lanao	178	7 55	124 25
Mumungan	Municipal district	Lanao	178	8 10	124 15
Munai	Municipal district	Lanao	178	8 00	124 05
Mungayang	Barrio	Ifugao Subprovince	206	16 49	121 06
Muñoz	Municipality	Nueva Ecija	212	15 43	120 57
Muntingilog	Barrio	Cavite	134	14 14	121 00
Muntinglupa	Municipality	Rizal	240	14 23	121 03
Muraaya	Barrio	Ilocos Sur	162	17 45	120 29
Murcia	Municipality	Occidental Negros	220	10 35	123 00
Murcia	Barrio	Tarlac	266	15 24	120 37
Murcielagos	Bay	Misamis	194	8 40	123 30
Murcielagos	Bay	Zamboanga	278	8 40	123 30
Murcielagos	Island	Zamboanga	278	8 10	122 25
Musimut	Rancheria	Apayao Subprovince	200	18 02	121 07
Muskut	Mountain	Kalinga Subprovince	208	17 28	121 09
Muti	Barrio	Zamboanga	278	7 20	122 15
Mutul	Sitio	Cotabato	150	6 00	125 10
N.					
Naatang	Barrio	Bohol	106	9 40	124 24
Naauan	Barrio	Misamis	194	8 25	124 15
Nabangig	Barrio	Sorsogon (S)	252	12 06	123 57
Nabangig	Sitio	Lepanto Subprovince	210	17 08	120 52
Nabas	Municipality	Capiz	130	11 50	122 05
Nabuan	Barrio	Isabela	170	16 40	121 35
Nabua	Municipality	Camarines Sur	126	13 24	123 22
Nabuangan	Sitio	Apayao Subprovince	200	18 04	121 32
Nabudis	Island	Batanes	98	20 54	121 57
Nabugtu	Island	Sorsogon (S)	252	11 51	123 46
Nabugtu	Island	Sorsogon (N)	252	12 24	123 15
Nabugtu	Island	Sorsogon (S)	252	12 24	123 15

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Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
				° ' "	° ' "
Nabulao	River	Occidental Negros	220	9 40	122 35
Nabulen Barit	Barrio	Abra	78	17 23	120 41
Nabunagan West.	Sitio	Ilocos Sur	162	17 32	120 25
Nabungkagan	Sitio	Leyte	186	11 25	124 50
Nabunut	Island	Iloilo	166	11 35	123 15
Nacayao	Barrio	Occidental Negros	220	10 45	123 05
Nacolod	Mountain	Leyte	186	10 25	125 05
Nactang	Barrio	Camarines Norte	122	14 18	122 26
Nacugang	Sitio	Amburayan Subprovince	198	16 57	120 33
Nadiudin	Mountain	Camarines Norte	122	14 00	122 50
Naga	Capital	Camarines Sur	126	13 37	123 11
Naga	Capital, Camarines Sur.	Philippine Islands	72	14	123
Naga	Municipality	Cebu	138	10 15	123 45
Naga	Barrio	Albay	86	13 29	123 40
Nagabon	Sitio	Samar	248	11 00	125 40
Nagan	River	Apayao Subprovince	200	18 10	121 16
Nagan	Rancheria	Apayao Subprovince	200	18 11	121 21
Naganaga	Barrio	Zamboanga	278	7 30	122 55
Nagarao	Island	Sorsogon (S)	252	11 49	123 50
Nagas	Barrio	Albay	86	13 26	123 41
Nagas	Barrio	Albay	86	13 06	123 18
Nagas	Point	Davao	154	6 40	126 10
Nagba	Barrio	Capiz	130	11 20	122 42
Nagbabalayan	Rancheria	Apayao Subprovince	200	18 02	121 09
Nagbaccayan	Rancheria	Apayao Subprovince	200	18 15	121 04
Nagbakalan	Barrio	Ilocos Norte	158	18 06	120 35
Nagbalagan	Barrio	Ilocos Norte	158	18 33	120 47
Nagbalaye	Barrio	Oriental Negros	224	9 15	122 50
Nagbalioartian	Barrio	Ilocos Sur	162	17 52	120 29
Nagbiga	Sitio	Bataan	94	14 27	120 27
Nagbukel	Municipality	Ilocos Sur	162	17 27	120 32
Nagbunga	Barrio	Zambales	274	14 58	120 10
Nagcarlan	Municipality	Laguna	174	14 08	121 25
Naghoom	Barrio	Camarines Sur	126	13 49	122 46
Nagiba	Barrio	Batangas	102	13 42	120 54
Nagiba	Barrio	Mindoro	190	13 20	121 15
Nagiba	Point	Mindoro	190	13 20	121 20
Naglabas	Sitio	Rizal	240	14 18	121 19
Naglibacan	Municipal district.	Abra	78	17 51	120 55
Nagongoyan	Sitio	Nueva Vizcaya	216	16 15	121 43
Nagoso	Barrio	Romblon	244	12 40	122 15
Nagpanaoan	Sitio	Ilocos Sur	162	17 06	120 27
Nagpandayan	Barrio	Nueva Ecija	212	15 36	120 46
Nagpapalcan	Barrio	Ilocos Norte	158	18 90	120 45
Nagpatayan	Barrio	Ilocos Norte	158	17 58	120 39
Nagpatpatan	Barrio	Ilocos Norte	158	18 04	120 46
Nagquirisan	Barrio	Iloilo	166	10 35	122 00
Nagrangtayan	Barrio	Cagayan	118	18 35	121 10
Nagrebcan	Barrio	Ilocos Sur	162	17 07	120 27
Nagrebcan	Barrio	La Union	182	16 50	120 24
Nagsabaran	Barrio	Cagayan	118	18 30	121 05
Nagsabaran	Barrio	Ilocos Sur	162	17 42	120 30
Nagsabaran	Sitio	Ilocos Norte	158	18 25	120 45
Nagsagupunan	Sitio	Ilocos Norte	158	18 10	120 47
Nagsaing	Barrio	Pangasinan	236	15 59	120 20
Nagsantaan	Barrio	Ilocos Sur	162	17 49	120 30
Nagsulay	Barrio	Bohol	106	9 36	124 07
Nagsulo	Sitio	Rizal	240	14 26	121 13
Nagtalontong	Barrio	Batangas	102	13 40	121 14
Nagtenga	Barrio	Ilocos Sur	162	17 03	120 28
Nagtupacan	Barrio	Abra	78	17 35	120 44
Nagubat	Island	Antique	90	12 10	121 25
Nagubugan	Sitio	Ilocos Norte	158	18 27	120 43
Naguey	Barrio	Benguet Subprovince	202	16 36	120 41
Nagui	Sitio	Leyte	186	11 15	124 30
Naguilian	Municipality	Isabela	170	17 00	121 50
Naguilian	Municipality	La Union	182	16 32	120 24
Naguilian	Rancheria	Apayao Subprovince	200	18 19	121 03
Naguilian	Rancheria	Apayao Subprovince	200	18 07	121 04
Naguilian	River	La Union	182	16 35	120 24
Naguilian	Road	La Union	182	16 30	120 30
Naguimba	Barrio	Ilocos Sur	162	17 15	120 30
Nagumbuaya	Point	Albay	86	13 33	124 20
Naguran	Island	Sorsogon (S)	252	12 08	123 28
Nagutan	Sitio	Davao	154	7 30	125 50
Nagyubuyuban	Barrio	La Union	182	16 39	120 25
Nahulid	Barrio	Leyte	186	10 20	125 00
Naiba	Sitio	Lepanto Subprovince	210	16 58	120 39
Naibuang	Sitio	Lepanto Subprovince	210	16 54	120 46

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Naic	Municipality.	Cavite	134	14	19	120	46
Naillaban	Sitio.	Sorsogon (S)	252	12	14	123	18
Nailli	Barrio	Capiz	130	11	46	122	10
Naipen	Sitio.	Kalinga Subprovince.	208	17	25	121	22
Naisud	Barrio	Capiz	130	11	49	122	12
Nakoda	Island	Palawan (S)	228	9	20	117	50
Nalasin Norte	Barrio	Ilocos Sur	162	17	16	120	31
Nalasin Sur	Barrio	Ilocos Sur	162	17	16	120	31
Nalbo	Barrio	Ilocos Sur	162	17	22	120	27
Nalbuan	Barrio	Abra	78	17	31	120	54
Nalidaon	Sitio	Amburayan Subprovince.	198	16	57	120	38
Nalsian	Barrio	Pangasinan.	236	15	51	120	27
Nalundan	Barrio	Iloilo	166	10	40	122	15
Nalundan	Barrio	Oriental Negros	224	9	45	123	05
Nalunod	Sitio	Leyte.	186	10	30	125	10
Nalusbitan	Mountain	Camarines Norte.	122	14	06	122	37
Nalusdan	Barrio	Antique	90	11	15	122	10
Nalvo	Barrio	La Union.	182	16	51	120	21
Namabbalan	Barrio	Cagayan	118	17	35	121	45
Namalpalan	Barrio	Ilocos Sur	162	17	40	120	22
Namanday	Barrio	Albay	86	13	19	123	57
Namarabar	Barrio	Abra.	78	17	33	120	39
Namatec	Barrio	Lepanto Subprovince	210	16	56	120	55
Namatian	Island	Sorsogon (S)	252	11	59	123	35
Namatangan	Sitio	Amburayan Subprovince.	198	17	00	120	34
Nambalan	Sitio	Tarlac	266	15	36	120	28
Namboongan	Barrio	La Union.	182	16	18	120	22
Nametha	Barrio	Amburayan Subprovince.	198	16	47	120	40
Namilagan	Sitio	Abra	78	17	42	120	38
Naminudut	Mountain	Nueva Vizcaya.	216	16	04	121	13
Namitpit	Barrio	Lepanto Subprovince	210	17	07	120	42
Namo	Barrio	Sorsogon (N)	252	12	43	123	51
Namonitan	Barrio	La Union.	182	16	15	120	24
Nampicuan	Municipality.	Nueva Ecija.	212	15	44	120	38
Namuco	Barrio	Batangas.	102	13	50	121	12
Nanagan	Rancheria	Apayao Subprovince.	200	18	07	121	00
Nanawatan	Rancheria	Apayao Subprovince.	200	17	44	121	17
Naneng	Barrio	Kalinga Subprovince.	208	17	24	121	16
Nanga	Islands.	Palawan (N)	228	12	20	120	20
Nangalao	Island	Palawan (N)	228	11	30	120	10
Nangalisan	Barrio	Benguet Subprovince	202	16	26	120	28
Nangalisan	Sitio	Ilocos Sur	162	17	06	120	26
Nangka	Barrio	Bukidnon	110	8	15	124	45
Nangka	Barrio	Cebu	138	10	35	123	40
Nangka	Barrio	Misamis	194	8	35	123	30
Nangka	Barrio	Occidental Negros.	220	10	50	123	05
Nangka	Barrio	Oriental Negros	224	9	25	122	50
Nangka	Barrio	Rizal.	240	14	40	121	06
Nangka	Barrio	Tayabas (S)	270	13	20	122	00
Nangka	Sitio	Bukidnon	110	7	40	125	00
Nangtud	Mountain	Antique	90	11	15	122	10
Nangtud	Mountain	Capiz	130	11	17	122	12
Nangtud	Mountain	Relief	72	11	47	122	12
Nanguneg	Barrio	Ilocos Sur	162	17	24	120	28
Nanhaya	Barrio	Laguna	174	14	14	121	20
Nanudalan	Mountain	Apayao Subprovince.	200	18	17	121	12
Naogsol	Barrio	Zambales	274	14	53	120	16
Napalauan	Mountain	Ifugao Subprovince.	206	16	50	120	58
Napalliran	Municipal district.	Bukidnon	110	8	50	124	50
Napalliran	River	Bukidnon	110	8	50	124	55
Napangan	Sitio	Apayao Subprovince.	200	18	16	121	35
Napawon	Barrio	Camarines Sur	126	13	44	123	29
Napayauan	Island	Sorsogon (N)	252	12	22	123	14
Napayauan	Island	Sorsogon (S)	252	12	22	123	14
Napindan	Barrio	Rizal	240	14	32	121	06
Napnapan	Barrio	Iloilo	166	10	45	122	25
Napo	Barrio	Cebu.	138	10	05	123	35
Napo	Barrio	Ilocos Sur	162	17	40	120	26
Napo	Barrio	Tayabas (S)	270	13	30	122	05
Napo	Point	Bataan	94	14	38	120	19
Naponapon	Barrio	Nueva Ecija.	212	15	49	121	11
Napsi	Sitio	Laguna.	174	14	32	121	25
Napsong	Barrio	Benguet Subprovince	202	16	44	120	42
Napuluan	Sitio	Zamboanga	278	7	45	123	25
Napuro	Barrio	Samar	248	12	00	124	45
Naranjos	Islands.	Samar	248	12	20	124	00
Narirong	Barrio	Antique.	90	11	10	122	05
Nariz	Point.	Palawan (S)	228	8	50	118	00
Naro	Barrio	Sorsogon (S)	252	12	11	123	52
Naro	Barrio	Sorsogon (S)	252	11	54	123	40

Name.	Feature.	Map.	Fac- ing page.	Lat- tude.	Longi- tude.
				° /	° /
Naro	Bay	Sorsogon (S)	252	12 14	123 51
Naro	Island	Sorsogon (S)	252	11 53	123 40
Narvacan	Municipality	Ilocos Sur	162	17 25	120 28
Narvaez	Barrio	Cavite	134	14 09	120 49
Nasaog	Barrio	Leyte	186	10 10	124 50
Nasipit	Barrio	Agusan	82	9 00	125 20
Naslo	Barrio	Iloilo	166	10 55	122 35
Naso	Point	Antique	90	10 25	121 55
Nasonogan	Barrio	Romblon	244	13 00	122 05
Nassiping	Barrio	Cagayan	113	18 00	121 35
Nasubata	Island	Palawan (S)	228	8 00	117 10
Nasugbu	Municipality	Batangas	102	14 04	120 38
Nasugbu	Mountain	Batangas	102	14 00	120 39
Nasugbu	Point	Batangas	102	14 05	120 37
Nasuli	Barrio	Antique	90	10 30	122 00
Natappian	Barrio	Cagayan	118	17 40	121 40
Nataragan	Municipal district	Abra	73	17 39	120 59
Natib	Mountain	Bataan	94	14 43	120 25
Natimaogan	Barrio	Cebu	138	10 40	124 00
Natividad	Municipality	Pangasinan	236	16 03	120 48
Natividad	Barrio	Iloilo	166	11 05	122 25
Natividad	Barrio	Samar	248	12 10	124 30
Nato	Barrio	Camaringes Sur	126	13 37	123 32
Nato	Sitio	Agusan	82	8 40	125 35
Natonin	Township	Bontoc Subprovince	204	17 06	121 18
Natonin	Township	Mountain Province	196	17 05	121 20
Natonoan	Sitio	Nueva Vizcaya	216	16 11	121 16
Natulungan	Sitio	Apayao Subprovince	200	18 27	121 19
Naujan	Lake	Mindoro	190	13 10	121 20
Naujan	Township	Mindoro	190	13 20	121 20
Naulid	Barrio	Iloilo	166	10 40	122 15
Naulo	Point	Zambales	274	15 42	119 54
Nava	Barrio	Leyte	186	10 20	125 10
Naval	Municipality	Leyte	186	11 35	124 25
Naval	Barrio	Leyte	186	10 25	124 45
Navatas	Barrio	Samar	248	11 30	124 50
Navitas	Barrio	Capiz	130	11 32	122 54
Navitas	Barrio	Tayabas (S)	270	13 40	122 20
Navotas	Municipality	Rizal	240	14 40	120 57
Navotas	Sitio	Mindoro	190	13 20	121 15
Naya	Sitio	Nueva Vizcaya	216	15 59	121 20
Nayapyap	Barrio	Amburayan Subprovince	198	16 50	120 41
Nayon	Barrio	Pangasinan	236	15 49	119 54
Nayon	River	Zambales	274	15 52	120 00
Nazareno	Barrio	La Union	182	16 21	120 22
Nazaret	Sitio	Davao	154	6 30	126 10
Nazasa	Bay	Zambales	274	14 49	120 05
Negra	Point	Ilocos Norte	158	18 33	120 38
Negron	Mountain	Zambales	274	15 06	120 22
Negros	Island	Philippine Islands	72	10 10	123 00
NEGROS OCCIDENTAL	Province	Negros Occidental	220	10 10	123 00
NEGROS ORIENTAL	Province	Negros Oriental	224	9 40	123 00
Nenita	Barrio	Samar	248	12 25	124 50
New Washington	Municipality	Capiz	130	11 39	122 26
Nibangon	Barrio	Zambales	274	14 54	120 15
Nikdad	Barrio	Bukidnon	110	8 25	124 40
Nilasin	Barrio	Tarlac	266	15 38	120 40
Nin	Bay	Sorsogon (S)	252	12 13	123 15
Nipa	Barrio	Iloilo	166	11 10	123 05
Nipa	Barrio	Sorsogon (S)	252	12 07	123 56
Nipa	Sitio	Antique	90	11 45	121 55
Nipaan	Sitio	Zamboanga	278	8 20	123 00
Nipaco	Barrio	Tarlac	266	15 39	120 33
Niugan	Barrio	Laguna	174	14 16	121 08
Nogas	Island	Antique	90	10 25	121 55
Nonan	Mountain	Abra	78	17 30	120 55
Nonoc	Barrio	Surigao	262	9 50	125 35
Nonoc	Sitio	Sorsogon (N)	252	12 56	123 10
Nonongaron	Sitio	Zambales	274	15 05	120 09
North	Island	Batanes	98	21 03	121 58
North	Lagoon	Sulu	258	4 45	119 20
North Bais	Bay	Oriental Negros	224	9 40	123 05
North Channel	Strait	Cavite	134	14 24	120 35
North Gigante	Island	Iloilo	166	11 40	123 20
North Pass	Strait	Batangas	102	13 35	121 07
North Ubian	Island	Sulu	258	6 10	120 25
Northwest Head	Point	Palawan (S)	228	10 10	118 40
Norzagaray	Municipality	Bulacan	114	14 55	121 03
Nouvilas Occidental	Barrio	Samar	248	11 15	125 10
Novaliches	Barrio	Rizal	240	14 43	121 02

Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
Novele	Municipal district.	Agusan	82	8 20	125 55
Noveleta	Municipality.	Cavite	134	14 26	120 53
Nuestra Señora de la Paz.	Barrio	Ilocos Norte	158	18 17	120 37
Nuestra Señora de Merced.	Barrio	Ilocos Norte	158	18 16	120 35
Nueva Apolonia	Barrio	Oriental Negros	224	10 25	123 15
NUEVA ECIJA	Province	Nueva Ecija	112	15 40	121 00
Nueva Ecija	Province	Philippine Islands	72	16	121
Nueva Era	Municipality.	Ilocos Norte	158	17 56	120 37
Nueva Esperanza	Barrio	Leyte	186	10 20	125 10
Nueva Invencion	Barrio	Iloilo	166	11 05	122 55
Nueva Sevilla	Barrio	Iloilo	166	11 00	122 50
NUEVA VIZCAYA	Province	Nueva Vizcaya	216	16 15	121 30
Nueva Vizcaya	Province	Philippine Islands	72	16	121
Nuevo Campo	Barrio	Surigao	262	9 30	125 40
Nuevo Sibagat	Municipal district.	Agusan	82	8 50	125 40
Nuevo Trabajo	Municipal district.	Agusan	82	8 30	125 35
Nugas	Barrio	Cebu	138	9 40	123 25
Nuin	Sitio	Davao	154	5 40	125 30
Numancia	Barrio	Surigao	262	9 55	126 00
Nunang	Barrio	Lanao	178	8 05	124 10
Nungnungan	Barrio	Bukidnon	110	7 40	124 55
Nunungan	Lake	Lanao	178	7 50	123 55
Nunuyan	Sitio	Zamboanga	278	7 45	122 10
Nusia	Barrio	Surigao	262	9 15	126 05
O.					
Oaig Daya	Barrio	Ilocos Sur	162	17 11	120 27
Oaqa	Barrio	Pangasinan	236	15 46	120 27
Oaqui	Barrio	La Union	182	16 51	120 25
Oas	Municipality	Albay	86	13 15	123 30
Oayongan	Sitio	Lepanto Subprovince	210	17 16	120 43
Obaliw	Barrio	Albay	86	13 15	123 30
Obando	Municipality	Bulacan	114	14 43	120 56
Obfal	Sitio	Bontoc Subprovince	204	17 09	121 21
Obo	Barrio	Albay	86	13 43	124 15
Obo	Barrio	Cebu	138	9 50	123 30
Obo	Sitio	Sorsogon (S)	252	11 59	123 10
Obod	Sitio	Amburayan Subprovince	198	16 53	120 37
Obong	Barrio	Cebu	138	9 45	123 30
Oboob	Barrio	Cebu	138	11 10	123 45
Obudan	Mountain	Benguet Subprovince	202	16 32	120 48
Obug	Sitio	Amburayan Subprovince	198	16 42	120 29
Obuhan	Barrio	Bohol	106	9 58	124 05
Ocata	Island	Camarines Sur	126	13 59	123 50
OCIDENTAL NEGROS	Province	Occidental Negros	220	10 30	123 00
Occidental Negros	Province	Philippine Islands	72	10	123
Oco	Barrio	Albay	86	13 50	124 15
Oco	Island	Palawan (N)	228	11 10	120 50
Ocop	Sitio	Abra	78	17 22	120 35
Ocoy	Barrio	Cebu	138	11 10	123 50
Odel	Island	Zamboanga	278	6 35	121 45
Odiongan	Municipality	Romblon	244	12 25	120 00
Odiongan	Barrio	Iloilo	166	11 20	123 10
Odiongan	Barrio	Misamis	194	8 50	125 10
Odlot	Barrio	Cebu	138	11 00	124 00
Odol	Barrio	Bohol	106	9 57	124 31
O'Donnell	Barrio	Tarlac	266	15 21	120 28
O'Donnell	River	Tarlac	266	15 25	120 32
Ogbong	Sitio	Albay	86	13 52	124 19
Ogong	Barrio	Rizal	240	14 35	121 05
Ogtoc	Sitio	Camarines Sur	126	13 47	122 44
Oguis	Barrio	Leyte	186	10 35	124 55
Olagbent	Sitio	Davao	154	6 20	125 20
Otango	Barrio	Cebu	138	10 10	123 35
Otango	Island	Cebu	138	10 15	124 05
Otanin	Bay	Pangasinan	236	16 15	119 47
Otas	Sitio	Camarines Sur	126	13 55	123 27
Oibuban	Barrio	Bohol	106	9 38	124 20
Olimbo	Sitio	Oriental Negros	224	9 30	122 45
Olingan	Barrio	Zamboanga	278	8 30	123 20
Olipanan	Sitio	Camarines Norte	122	14 19	122 35
Orivo	Barrio	Cebu	138	10 55	123 55
Olla	Barrio	Laguna	174	14 10	121 27
Olongapo	Barrio	Zambaies	274	14 49	120 16
Olongapo	Port	Bataan	94	14 49	120 17
Olongo	Barrio	Iloilo	166	10 40	122 10
Oloclo	Barrio	Batangas	102	13 38	121 13
Oloclo	Barrio	Ilocos Sur	162	17 16	120 27
Olutanga	Island	Zamboanga	278	7 20	122 50
Olutanga	Barrio	Zamboanga	278	7 25	122 55

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Olutaya	Island	Capiz	130	11	38	122	50
Omalo	Barrio	Camarines Sur	126	13	43	123	37
Omapui	Island	Sulu	258	4	55	119	25
Ombaw	Barrio	Camarines Sur	126	13	28	123	15
Omonai	Point	Camarines Sur	126	13	49	122	40
Omonai	Barrio	Bukidnon	110	7	25	124	50
Ondol	Barrio	Bohol	106	10	03	124	04
Ondoy	Barrio	Capiz	130	11	49	122	07
Ongos	Sitio	Camarines Norte	122	14	17	122	44
Oong	Barrio	Ifugao Subprovince	206	16	53	121	04
Oot	Point	Samar	248	12	35	124	55
Oplas	Sitio	Nueva Vizcaya	216	16	24	121	01
Oplis	Sitio	Laguna	174	14	08	121	26
Opol	Barrio	Misamis	194	8	30	124	35
Opon	Municipality	Cebu	138	10	20	125	55
Opul Rest House	Lodging	Ifugao Subprovince	206	16	55	121	26
Oquendo	Municipality	Samar	248	12	10	124	35
Ora Este	Barrio	Ilocos Sur	162	17	36	120	25
Orani	Municipality	Bataan	94	14	48	120	32
Oras	Municipality	Samar	248	12	10	125	25
Oras	Bay	Samar	248	12	10	125	30
Orcog	Mountain	Nueva Vizcaya	216	16	30	121	00
Orence	Barrio	Ilocos Sur	162	17	26	120	29
ORIENTAL NEGROS	Province	Oriental Negros	224	9	30	123	00
Oriental Negros	Province	Philippine Islands	72	10		123	
Orion	Municipality	Bataan	94	14	37	120	35
Orion	Hill	Bataan	94	14	35	120	34
Orioung	Sitio	Nueva Vizcaya	216	16	37	121	20
Ormoc	Municipality	Leyte	186	11	00	124	35
Ormoc	Bay	Leyte	186	11	00	124	35
Orong	Barrio	Occidental Negros	220	9	55	122	50
Oroquieta	Municipality	Misamis	194	8	30	123	50
Ortega	Barrio	Capiz	130	11	27	122	19
Oryod	Mountain	Bulacan	114	14	52	121	13
Oscariz	Barrio	Isabela	170	16	50	121	30
Osdung	Mountain	Benguet Subprovince	202	16	43	120	44
Osiado	Barrio	Sorsogon (N)	252	13	05	123	58
Oslob	Municipality	Cebu	138	9	30	123	25
Osmeña	Barrio	Samar	248	12	30	125	10
Osmeña	Barrio	Samar	248	11	10	125	10
Osmeña	Barrio	Surigao	262	10	10	125	30
Otabon	Barrio	Leyte	186	11	15	124	25
Oteiza	Barrio	Surigao	262	8	45	126	10
Otod	Barrio	Romblon	244	12	20	122	40
Otod	Sitio	Sorsogon (S)	252	12	02	123	18
Oton	Municipality	Iloilo	166	10	40	122	30
Oton	Barrio	Palawan (N)	228	11	10	119	30
Otukan	Barrio	Lepanto Subprovince	210	17	00	120	53
Otundo	Mountain	Nueva Vizcaya	216	15	57	121	27
Owak	Barrio	Bohol	106	9	42	124	08
Oy	Barrio	Bohol	106	9	40	123	59
Oyayao	Mountain	Bontoc Subprovince	204	17	08	121	15
Oyon	Bay	Zambales	274	15	34	119	56
Oyong	Barrio	Capiz	130	11	27	122	39
Oyu	Sitio	Kalinga Subprovince	208	17	37	121	23
Oyungan	Barrio	Iloilo	166	10	40	122	10
P.							
Paagan	Barrio	Amburayan Subprovince	198	16	49	120	27
Paagan	Barrio	La Union	182	16	47	120	21
Paambacon	Barrio	Oriental Negros	224	9	55	123	10
Paaraban	Sitio	Amburayan Subprovince	198	17	01	120	35
Pabanlag	Barrio	Pampanga	232	14	59	120	28
Pacac	Barrio	Abra	78	17	40	120	43
Pacac	Barrio	Nueva Ecija	212	15	41	120	44
Pacalbo	Barrio	Nueva Vizcaya	216	16	12	120	54
Pacang	Barrio	Ilocos Sur	162	17	21	120	30
Pacawol	Barrio	Ifugao Subprovince	206	16	48	121	02
Pacdan	Sitio	Ifugao Subprovince	206	16	47	121	02
Pacheco	Barrio	Cavite	158	17	54	120	46
Paciencia	Barrio	Ilocos Norte	134	14	11	120	31
Pacijan	Island	Cebu	138	10	40	124	20
Pack	Mountain	Benguet Subprovince	202	16	27	120	53
Pack	Mountain	Nueva Vizcaya	216	16	27	120	53
Paclasan	Barrio	Mindoro	190	12	35	121	30
Paco	Barrio	Bulacan	114	14	44	120	55
Paco	District	City of Manila	146	14	35	121	00
Paco	Barrio	Samar	248	12	15	124	55
Pacpaco	Barrio	Nueva Ecija	212	15	46	120	36
Padada	Barrio	Davao	154	6	40	125	20

Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
Padalis	Sitio	Nueva Vizcaya	216	0 /	0 /
Padalusan	Island	Zamboanga	216	15 56	121 12
Padan	Sitio	Amburayan Subprovince	278	7 30	122 40
Padang	Barrio	Samar	198	16 41	120 27
Padayao	Barrio	Amburayan Subprovince	248	11 20	125 40
Paddaya	Barrio	Cagayan	198	16 47	120 28
Padildil	Barrio	Abra	118	18 20	121 45
Padpadong	Barrio	Ilocos Norte	78	17 32	120 32
Padsan	Rancheria	Ilocos Norte	158	17 57	120 38
Paduk	Sitio	Nueva Vizcaya	158	18 02	120 43
Paduquit	River	Amburayan Subprovince	216	16 03	121 21
Padwal	Sitio	Ilocos Sur	198	16 59	120 35
Paet	Point	Davao	162	17 48	120 27
Paete	Municipality	Laguna	154	6 50	125 50
Pagadian	Bay	Zamboanga	174	14 22	121 29
Pagadian	Barrio	Zamboanga	278	7 45	123 30
Pagala	Barrio	Abra	278	7 50	123 25
Pagalad	Barrio	Romblon	78	17 34	120 43
Pagalongan	Mountain	Bukidnon	244	12 35	122 00
Paganao	Barrio	Abra	110	8 15	125 10
Pagas	Barrio	Nueva Ecija	78	17 40	120 47
Pagatanan	Rancheria	Apayao Subprovince	212	15 30	120 57
Pagbahan	Barrio	Mindoro	200	18 11	121 20
Pagbilao	Bay	Tayabas (S)	190	13 10	120 40
Pagbilao	Municipality	Tayabas (S)	270	13 55	121 45
Pagbillo Grande	Island	Tayabas (S)	270	14 00	121 40
Pagda	Sitio	Lepanto Subprovince	270	13 55	121 45
Pagdalan	Barrio	La Union	210	16 59	120 39
Pagdildilan	Barrio	La Union	182	16 35	120 19
Pagga	Sitio	Bontoc Subprovince	182	16 40	120 22
Pagong	Sitio	Ifugao Subprovince	204	17 14	121 22
Pagsabangan	Sitio	Davao	206	16 51	121 06
Pagsanaan	Barrio	Ilocos Norte	154	7 30	125 40
Pagsanaan	Barrio	Ilocos Sur	158	17 55	120 26
Pagsangahan	Barrio	Camarines Norte	162	17 42	120 25
Pagsangahan	Barrio	Tayabas (S)	122	14 03	122 56
Pagsangan	Sitio	Samar	270	13 15	122 30
Pagsanjan	Municipality	Laguna	248	12 20	124 40
Pagsanjan	River	Laguna	174	14 17	121 27
Pagsubaan	Sitio	Davao	174	14 19	121 27
Pagudpud	Barrio	Ilocos Norte	154	7 30	126 10
Pagudpud	Barrio	Ilocos Norte	158	18 34	120 47
Pagugu	Sitio	Amburayan Subprovince	182	16 35	120 19
Pagusi	Lake	Agusan	198	16 52	120 32
Paho	Barrio	Cebu	82	9 15	125 35
Paing	Barrio	Ilocos Sur	138	11 15	124 05
Paingan	Barrio	Amburayan Subprovince	162	17 34	120 27
Paingan	Sitio	Amburayan Subprovince	198	16 59	120 37
Pait	Barrio	Ilocos Norte	198	17 00	120 27
Paitan	Lake	Nueva Ecija	158	18 13	120 38
Paitan	Barrio	Nueva Ecija	212	15 50	120 44
Paitan	Barrio	Nueva Ecija	212	15 50	120 44
Paitan	Sitio	Nueva Vizcaya	216	16 29	121 09
Pajo	Barrio	Pampanga	232	15 09	120 50
Pajo	Sitio	Cavite	134	14 09	120 51
Pakawan	Sitio	Nueva Ecija	212	15 46	120 53
Pakimikan	Sitio	Bontoc Subprovince	204	17 12	121 23
Palacpac	Barrio	Ilocos Sur	154	7 10	125 40
Palacian	River	Nueva Vizcaya	162	17 09	120 30
Palacian	Sitio	Isabela	216	16 22	121 50
Palacpalac	Barrio	Pangasinan	170	16 25	121 45
Palacpalac	Barrio	Tarlac	236	16 08	120 32
Palaisan	Sitio	Nueva Vizcaya	266	15 32	120 42
Palale	Sitio	Camarines Norte	216	16 27	121 39
Palali	Sitio	Camarines Norte	122	14 06	122 54
Palali	Mountain	Nueva Vizcaya	122	14 19	122 29
Palali	Mountain range	Nueva Vizcaya	122	14 19	122 29
Palali Norte	Barrio	Ilocos Sur	216	16 27	121 20
Palampas	Barrio	Occidental Negros	162	17 11	120 28
Palanan	Municipality	Isabela	220	10 30	123 25
Palanan	Bay	Isabela	170	17 05	122 25
Palanan	Point	Isabela	170	17 10	122 25
Palanas	Mountain	Bulacan	170	17 10	122 30
Palanas	Barrio	Cebu	114	15 08	121 09
Palanas	Barrio	Sorsogon (S)	138	9 35	123 20
Palanas	Sitio	Bulacan	252	12 09	123 55
Palanas	Sitio	Leyte	114	15 03	120 57
Palandug	Sitio	Zamboanga	186	10 50	124 40
Palang	Barrio	Abra	278	8 10	122 55
Palanginan	Barrio	Zambales	78	17 33	120 31
			274	15 19	119 59

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Palangui	Barrio	Cavite	134	14	16	120	50
Palanit	Barrio	Samar	248	12	20	124	20
Palao	Barrio	Ifugao Subprovince	206	16	44	121	03
Palao Barakat	Sitio	Lanao	178	7	45	124	30
Palapag	Port	Samar	248	12	40	125	00
Palapag	Municipality	Samar	248	12	35	125	05
Palapag	Barrio	Capiz	130	11	36	122	49
Palapala	Barrio	Bulacan	114	15	03	121	00
Palasan	Island	Tayabas (N)	270	14	50	122	05
Palasipas	Sitio	Amburayan Subprovince	198	16	55	120	31
Palat	Barrio	Pampanga	232	15	03	120	32
Palauti	Island	Cagayan	118	18	35	122	10
Palauig	Point	Zambales	274	15	26	119	53
Palauig	Municipality	Zambales	274	15	26	119	54
Palauig	Barrio	Albay	86	13	34	124	08
PALAWAN	Province	Palawan (N)	228	11	00	120	00
PALAWAN	Province	Palawan (S)	228	9	00	118	00
Palawan	Province	Philippine Islands	72	10		119	
Palawan	Island	Philippine Islands	72	10		119	
Palawit	Barrio	Cavite	134	14	17	120	54
Palayag	Barrio	Cagayan	118	17	50	121	40
Palastina	Barrio	Camarines Sur	126	13	37	123	15
Palastina	Barrio	Nueva Ecija	212	15	46	121	01
Paligi	Barrio	Romblon	244	12	30	122	15
Palicud	Barrio	Ilocos Sur	162	17	24	120	30
Palicipcan	Sitio	Cavite	134	14	17	120	41
Paligui	Barrio	Pampanga	232	15	05	125	10
Paliguison	Sitio	Misamis	194	9	05	120	10
Palimbo	Barrio	Tariac	266	15	42	120	24
Palina	Barrio	Benguet Subprovince	202	16	45	120	41
Palinang	Sitio	Kalinga Subprovince	208	17	17	121	19
Palingwac	Barrio	Batangas	102	13	50	121	25
Paliparan	Barrio	Cavite	134	14	18	120	59
Palisih	Sitio	Bontoc Subprovince	204	17	12	121	23
Pallaw	Barrio	Abra	78	17	36	120	45
Palma	Barrio	Antique	90	11	15	122	05
Palmas	Island	Davao	154	5	30	126	30
Palmas	Island	Philippine Islands	72	6		127	
Palo	Municipality	Leyte	186	11	10	125	00
Palo	Sitio	Camarines Sur	126	13	16	123	16
Palo Alto	Barrio	Davao	154	8	00	126	20
Palocpoc	Barrio	Cavite	134	14	08	120	53
Palompon	Municipality	Leyte	186	11	05	124	20
Palong	Barrio	Camarines Sur	126	13	40	123	01
Paloyon	Barrio	Camarines Sur	126	13	23	123	22
Palsuguan	River	Abra	78	17	33	120	48
Paltoe	Barrio	Lepanto Subprovince	210	17	3	120	34
Paluan	Township	Mindoro	190	13	25	120	30
Paluan	Bay	Mindoro	190	13	25	120	25
Palugloko	Mountain	Ifugao Subprovince	206	16	17	120	53
Palui	Sitio	Zamboanga	278	7	45	123	10
Palumbanes	Islands	Albay	86	14	02	124	02
Palusapis	Barrio	Nueva Ecija	212	15	41	120	52
Palutan	Sitio	Isabela	170	16	55	122	00
Paly	Island	Palawan (N)	228	10	40	119	40
Pamabaran	Barrio	Nueva Ecija	212	15	13	120	47
Pamacapacan	Barrio	Nueva Ecija	212	15	24	120	50
Pamalican	Island	Palawan (N)	228	11	20	120	40
Pamatawan	Barrio	Zambales	274	14	55	120	13
Pambuhan	Municipality	Samar	248	12	35	124	55
Pambuhan	Barrio	Camarines Sur	126	13	53	123	42
Pambuhan Sur	Barrio	Samar	248	11	15	125	30
Pamiga	Barrio	Batangas	102	13	56	120	55
Pamilican	Island	Bohol	106	9	30	123	55
Pamintan	Barrio	Camarines Sur	126	14	01	123	16
Pamloran	Barrio	Zambales	274	15	48	119	54
Pamosaingan	Barrio	Surigao	262	9	40	125	55
Pampang	Barrio	Nueva Vizcaya	216	16	22	120	53
PAMPANGA	Province	Pampanga	232	15	00	120	40
Pampanga	Province	Philippine Islands	72	15		121	
Pampanga	River	Nueva Ecija	212	15	34	121	05
Pampanga	River	Pampanga	232	15	13	120	48
Pampanga	River	Pampanga	232	14	50	120	41
Pamploma	Municipality	Cagayan	118	18	30	121	20
Pamploma	Municipality	Camarines Sur	126	13	35	123	04
Pamploma	Barrio	Oriental Negros	224	9	30	123	05
Pamploma	Barrio	Rizal	240	14	28	120	58
Pamploma	Sitio	Bukidnon	110	8	30	124	55
Pamutic	Barrio	Abra	78	17	34	120	34
Pamutusin	Barrio	Mindoro	190	13	25	120	25

Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
				° ' "	° ' "
Parabongen	Sitio	Lepanto Subprovince	210	17 05	120 43
Panabutan	Pay	Zamboanga	278	7 35	122 05
Panabutan	Sitio	Zamboanga	278	7 35	122 10
Panacan	Barrio	Palawan (S)	228	9 20	118 30
Panag	Sitio	Bontoc Subprovince	204	17 07	121 17
Panagatan	Cays	Antique	90	11 50	121 20
Panagon	Sitio	Tayabas (S)	270	13 40	122 30
Panagtaran	Point	Palawan (S)	228	9 40	118 40
Panaitan	Barrio	Nueva Vizcaya	216	16 25	121 00
Panal	Barrio	Albay	86	13 21	123 41
Panalipan	Barrio	Cebu	138	10 40	124 00
Panalsagon	Barrio	Occidental Negros	220	10 55	123 30
Panamalon	Barrio	Bukidnon	110	8 25	124 20
Panamau	Municipal district	Sulu	258	5 55	121 15
Panampawan	Barrio	Bukidnon	110	8 45	124 50
Panampulan	Point	Tayabas (N)	270	15 05	121 50
Panan	Barrio	Zambales	274	15 13	120 02
Pananag	Sitio	Cotabato	150	5 55	124 50
Panangcalan	Barrio	Romblon	244	12 20	122 35
Panangiran	Peak	Mindoro	190	12 25	121 15
Panaogan	Sitio	Samar	248	12 05	125 15
Panaon	Island	Leyte	186	10 05	125 10
Panaon	Barrio	Tayabas (S)	270	13 55	122 00
Panapaan	Barrio	Cavite	134	14 27	120 58
Panapias	Sitio	Camarines Sur	126	13 51	122 51
Panay	Island	Philippine Islands	72	11	122
Panay	Island	Albay	86	13 58	124 20
Panay	Gulf	Philippine Islands	72	10	122
Panay	River	Capiz	130	11 13	122 25
Panay	Municipality	Capiz	130	11 34	122 48
Panay	Barrio	Ilocos Sur	162	17 39	120 23
Panayacan	Barrio	Capiz	130	11 46	122 13
Panaytay	Barrio	Camarines Sur	126	13 48	122 45
Panbuhán	Barrio	Camarines Norte	122	13 58	123 05
Pance	Barrio	Tarlac	266	15 41	120 38
Pancel	Barrio	Palawan (N)	228	10 50	119 20
Pandacan	District	City of Manila	146	14 36	121 00
Pandacopan	Sitio	Palawan (N)	228	10 30	119 50
Pandag	Sitio	Cotabato	150	6 45	124 45
Pandan	Islands	Mindoro	190	12 50	120 45
Pandan	Bay	Albay	86	14 05	124 09
Pandan	Municipality	Albay	86	14 03	124 10
Pandan	Municipality	Antique	90	11 45	122 05
Pandan	Barrio	Albay	86	13 13	123 32
Pandan	Barrio	Bataan	94	14 36	120 35
Pandan	Barrio	Ilocos Sur	162	17 32	120 22
Pandan	Barrio	La Union	182	16 44	120 21
Pandan	Barrio	Pampanga	232	15 09	120 36
Pandan	Sitio	Sorsogon (N)	252	12 38	123 36
Pandan	Point	Mindoro	190	12 20	121 25
Pandanán	Island	Palawan (S)	228	8 20	117 10
Pandanán	Barrio	Antique	90	11 10	122 10
Pandanán	Sitio	Tayabas (S)	270	13 15	122 40
Pandanón	Island	Bohol	106	10 11	124 05
Pandanón	Barrio	Occidental Negros	220	10 35	123 10
Pandarochan	Bay	Mindoro	190	12 10	121 10
Pandayan	Barrio	Lepanto Subprovince	210	16 56	120 51
Pandayan	Barrio	Amburayan Subprovince	198	16 53	120 36
Pan de Azucar	Islet	Cagayan	118	19 25	121 55
Pan de Azucar	Island	Iloilo	166	11 15	123 10
Panci	Barrio	Bulacan	114	14 52	120 58
Pandipatan	Sitio	Lanao	178	7 50	124 10
Pandiupon	Sitio	Davao	154	7 20	125 50
Panducan	Island	Sulu	258	6 15	120 40
Pandungán	Sitio	Ilocos Norte	158	18 03	120 45
Pangahoy	Barrio	Tayabas (S)	270	14 10	122 10
Pangal	Barrio	Isabela	170	16 35	121 40
Pangalapan	Sitio	Lanao	178	8 10	124 30
Pangalasian	Sitio	Palawan (N)	228	10 30	119 40
Panganán	Island	Cebu	138	10 15	124 00
Panganán	Island	Bohol	106	9 54	123 50
Panganiran	Barrio	Albay	86	13 01	123 20
Pangantukan	Barrio	Bukidnon	110	7 45	124 50
Panganuran	Municipal district	Zamboanga	278	8 00	122 20
Panganuran	Sitio	Zamboanga	278	7 25	122 05
Pangao	Barrio	Batangas	102	13 50	121 09
Pangao	Barrio	Batangas	102	13 55	121 08
Pangap	Island	Bohol	106	10 00	123 57
PANGASINAN	Province	Pangasinan	236	16 00	120 20

Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
Pangasinan	Province	Philippine Islands	72	16	120
Pangasinan	Island	Sulu	258	6 10	121 00
Pangatlan	Barrio	Pampanga	232	15 06	120 41
Pangawilan	Sitio	Leyte	186	10 35	125 10
Pangayan	Sitio	Davao	154	7 20	125 30
Pangayauan	Sitio	Misamis	194	8 35	124 20
Pangdan	Barrio	Cebu	138	10 15	123 45
Pangdan	Barrio	Iloilo	166	11 00	122 40
Pangdan	Barrio	Occidental Negros	220	10 20	123 00
Pangdan	Barrio	Samar	248	11 45	124 55
Panghayaan	Barrio	Batangas	102	13 46	121 10
Panghiauan	Barrio	Misamis	194	9 10	124 40
Pangli	Barrio	Tayabas (S)	270	13 20	121 50
Panglian	Sitio	Zamboanga	278	7 15	122 00
Pangil	Bay	Lanao	178	8 00	123 40
Pangil	Municipality	Laguna	174	14 24	121 25
Pangil	Barrio	Cavite	134	14 12	120 54
Pangil	Barrio	Ilocos Norte	158	18 03	120 29
Pangil	Barrio	Laguna	174	14 08	121 28
Pangko	Sitio	Davao	154	7 40	125 30
Panglao	Island	Bohol	106	9 35	123 48
Panglao	Municipality	Bohol	106	9 35	123 45
Pangol	Barrio	Kalinga Subprovince	208	17 19	121 19
Pangot	Barrio	Abra	78	17 45	120 46
Pangot	Sitio	Abra	78	17 20	120 34
Pangpang	Barrio	Pampanga	232	15 09	120 34
Pangpang	Barrio	Zamboanga	278	7 35	123 10
Pangpang	Sitio	Bohol	106	10 06	124 25
Panguan	Island	Sulu	258	4 40	119 00
Panguan	Island	Philippine Islands	72	5	119
Panguian	Point	Cebu	138	10 20	124 05
Panguil	Bay	Zamboanga	278	8 00	123 40
Panguil	Bay	Misamis	194	8 05	123 45
Pangul	Barrio	Cagayan	118	17 30	121 40
Pangutaran	Island	Sulu	258	6 20	120 35
Pangutaran	Passage	Sulu	258	6 10	120 30
Pangutaran	Municipal district	Sulu	258	6 25	120 30
Pangyan	Barrio	Cotabato	150	5 40	125 20
Panibungan	Sitio	Nueva Ecija	212	15 22	120 46
Panicuan	Barrio	Camarines Sur	126	13 43	123 38
Panicuan	Sitio	Cotabato	150	7 05	124 35
Pangayan	Barrio	Zamboanga	278	6 45	121 55
Paniki	Barrio	Ifugao Subprovince	206	16 54	121 01
Paniman	Sitio	Cavite	134	14 17	120 40
Paningayan	Barrio	Antique	90	11 30	122 05
Panipuan	Barrio	Pampanga	232	15 06	120 40
Paniqui	Island	Camarines Sur	126	13 59	123 31
Paniqui	Municipality	Tarlac	266	15 40	120 35
Paniqui	Barrio	Nueva Vizcaya	216	16 38	121 12
Paniqui	Barrio	Sorsogon (S)	252	12 14	123 45
Paniqui	Sitio	Albay	86	13 54	124 08
Paniqui	Sitio	Nueva Ecija	212	15 18	121 09
Paniquian	Island	Zamboanga	278	7 20	123 20
Paniqui	Barrio	Romblon	244	12 30	122 00
Paniran	Barrio	Zamboanga	278	7 15	122 00
Panirungan	Sitio	Surigao	262	8 35	126 05
Panitan	Municipality	Capiz	130	11 28	122 46
Panitugan	Island	Cebu	138	11 10	123 40
Pankol	Sitio	Bataan	94	14 40	120 28
Panlabaron	Mountain	Nueva Ecija	212	15 51	121 06
Panlatuan	Barrio	Sorsogon (N)	252	12 52	123 42
Panongon	Sitio	Cotabato	150	6 55	125 10
Panonotan	Mountain	Ifugao Subprovince	206	16 39	120 53
Panoolan	Barrio	Occidental Negros	220	10 25	123 20
Panpanaoil	Sitio	Lepanto Subprovince	210	17 14	120 36
Panquican	Sitio	Lepanto Subprovince	210	16 53	120 50
Pansinao	Barrio	Pampanga	332	15 08	120 49
Pansol	Barrio	Laguna	174	14 11	121 11
Pansul	Municipal district	Sulu	258	6 00	121 00
Pantabangan	Municipality	Nueva Ecija	212	15 50	121 09
Pantadon	Mountain	Agusan	32	8 00	125 20
Pantadon	Mountain	Bukidnon	110	8 10	125 15
Pantalan	Barrio	Bukidnon	110	8 05	124 45
Pantao	Barrio	Albay	86	13 12	123 20
Pantao	Sitio	Lanao	178	7 50	123 55
Pantar	Municipal district	Lanao	178	8 05	124 15
Pantauan	Sitio	Cotabato	150	7 30	124 25
Pantau Ragat	Municipal district	Lanao	178	8 05	124 05
Pantay	Barrio	Ilocos Sur	162	17 31	120 24
Pantay	Barrio	Rizal	240	14 37	121 13

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Pantay Laud	Barrio	Ilocos Sur	162	17	34	120	21
Pantijan	Barrio	Cavite	134	14	14	120	48
Pantocomi	Point	Mindoro	190	13	20	120	25
Pantocunan	Island	Sulu	258	6	10	120	50
Pantubig	Barrio	Bulacan	114	14	58	120	57
Pantukan	Municipal district.	Davao	154	7	10	125	50
Panubigan	Municipal district.	Zamboanga	278	7	05	122	15
Panubulon	Island	Iloilo	166	10	25	122	35
Panuitan	Island	Cagayan	118	19	20	121	30
Panungo	Sitio	Cotabato	150	7	00	124	45
Panungyan	Barrio	Cavite	134	14	08	120	54
Panusputin	Sitio	Benguet Subprovince	202	16	16	120	44
Pao	Barrio	Pangasinan	236	16	03	120	30
Pao	Mountain	Ilocos Norte	158	18	26	120	52
Paoyay	Municipality	Ilocos Norte	158	18	04	120	31
Paoy	Lake	Ilocos Norte	158	18	07	120	32
Paobong	Municipality	Bulacan	114	14	50	120	47
Pao Norte	Barrio	La Union	182	16	37	120	24
Paor Patoc	Barrio	Ilocos Norte	158	17	56	120	41
Pao Sur	Barrio	La Union	182	16	36	120	24
Papallasen	Barrio	Pangasinan	236	16	02	119	52
Papandayan	Barrio	Mindoro	190	13	00	121	30
Pappa	Barrio	Benguet Subprovince	202	16	32	120	31
Papaya	Barrio	Nueva Ecija	212	15	20	120	50
Papaya	Barrio	Nueva Ecija	212	15	21	121	03
Paquil	Barrio	Laguna	174	14	23	121	29
Paquita	Island	Camarines Norte	122	14	23	123	03
Paracale	Municipality	Camarines Norte	122	14	17	122	47
Parada	Barrio	Bulacan	114	14	48	120	59
Paradahan	Sitio	Nueva Ecija	212	15	27	121	06
Parañaque	Municipality	Rizal	240	14	30	121	00
Parang	Municipality	Cotabato	150	7	20	124	15
Parang	Municipal district.	Sulu	258	5	50	120	50
Parang	Barrio	Bataan	94	14	47	120	32
Parang	Barrio	Camarines Norte	122	14	18	122	47
Parang	Barrio	Ilocos Norte	158	17	57	120	31
Parang	Barrio	Sulu	258	5	55	120	55
Parang	Sitio	Bataan	94	14	27	120	31
Parang	Sitio	Bataan	94	14	29	120	34
Parang	Sitio	Nueva Vizcaya	216	16	16	122	14
Parang	Sitio	Zamboanga	278	7	35	122	25
Parangparang	Barrio	Zamboanga	278	7	10	122	15
Paranum	Barrio	Cagayan	118	18	10	121	40
Paraoir	Barrio	La Union	182	16	49	120	20
Paras	Sitio	Ilocos Sur	162	17	12	120	25
Parasali	Sitio	Bontoc Subprovince	204	17	16	121	30
Parasan	Barrio	Samar	248	11	45	124	45
Paratong	Barrio	Ilocos Sur	162	17	25	120	28
Paratong	Barrio	La Union	182	16	54	120	24
Paratong	Sitio	Ilocos Sur	162	17	51	120	27
Pardo	Barrio	Cebu	138	9	40	123	30
Parian	Barrio	Albay	86	13	07	123	36
Parian	Barrio	La Union	182	16	31	120	19
Paringao	Barrio	La Union	182	16	35	120	19
Parioc	Barrio	Ilocos Sur	162	17	10	120	28
Parol	Island	Sulu	258	6	05	121	45
Parsulingan	Barrio	Tarlac	266	15	34	120	36
Partida	Barrio	Nueva Ecija	212	15	39	120	43
Parubcan	Barrio	Camarines Sur	126	13	43	123	45
Paruddun Norte	Barrio	Cagayan	118	18	20	121	35
Paruddun Sur	Barrio	Cagayan	118	18	20	121	40
Parulan	Barrio	Bulacan	114	14	54	120	53
Pasacao	Municipality	Camarines Sur	126	13	31	123	03
Pasag	River	Pampanga	232	14	50	120	38
Pasaking	Sitio	Bontoc Subprovince	204	17	16	121	24
Pasaleng	Bay	Ilocos Norte	158	18	37	120	55
Pasaleng	Barrio	Ilocos Norte	158	18	33	120	55
Pasay	Municipality	Rizal	240	14	33	121	00
Pasayoboy	Sitio	Nueva Vizcaya	216	16	13	122	10
Pasbul Bulu	Barrio	Pampanga	232	15	09	120	31
Pasco	Barrio	Benguet Subprovince	202	16	40	120	50
Pasibe	Barrio	Pangasinan	236	15	51	120	23
Pasig	Capital	Rizal	240	14	34	121	05
Pasig	Capital, Rizal	Philippine Islands	72	15		121	
Pasig	Sitio	Bataan	94	14	54	120	26
Pasig	River	City of Manila	146	14	36	120	59
Pasigay	Barrio	Samar	248	11	40	125	00
Pasil	Barrio	Cebu	138	9	25	123	20
Pasil	Sitio	Kalinga Subprovince	208	17	24	121	14
Paslnay	Barrio	Bataan	94	14	35	120	24

Name.	Feature.	Map.	Fac- ing page.	Lati- tude.	Longi- tude.
Pasingan	Sitio	Kalinga Subprovince	208	17 30	121 21
Paso de Blas	Barrio	Bulacan	114	14 42	121 00
Pasol	Barrio	Cebu	138	9 45	123 30
Pasolo	Barrio	Bulacan	114	14 42	120 57
Pasong	Barrio	Rohol	106	9 42	124 15
Pasong Bangkal	Sitio	Bulacan	114	15 00	121 01
Pasong Callos	Sitio	Bulacan	114	15 01	121 00
Pasong Camachile	Barrio	Cavite	134	14 22	120 54
Pasong Kawayan	Barrio	Cavite	134	14 20	120 53
Passi	Municipality	Iloilo	166	11 05	122 40
Pastor	Sitio	Bontoc Subprovince	204	17 05	121 20
Pastrana	Municipality	Leyte	186	11 10	124 55
Pasungol	Sitio	Ilocos Sur	162	17 29	120 26
Pasuguin	Municipality	Ilocos Norte	158	18 20	120 37
Paswoy	Barrio	Kalinga Subprovince	208	17 32	121 17
Pata	Island	Sulu	258	5 50	121 10
Pata	Municipal district	Sulu	258	5 50	121 00
Pata	Barrio	Cagayan	118	18 40	121 10
Pata	Barrio	Cagayan	118	17 45	121 30
Patac	Barrio	Ilocos Sur	162	17 18	120 31
Patad	Barrio	Pangasinan	236	16 10	119 47
Patag	Barrio	Camarines Sur	126	13 20	123 19
Patag	Barrio	Sorsogon (N)	252	12 44	124 04
Patalac	Sitio	Nueva Vizcaya	216	16 20	120 56
Patalun	Sitio	Zamboanga	278	7 05	121 55
Patau	Point	Zamboanga	278	7 35	122 45
Pataw	Barrio	Cebu	138	11 15	123 40
Patawag	Bay	Zamboanga	278	8 10	122 35
Patawag	Sitio	Zamboanga	278	8 05	122 40
Patay	Barrio	Batangas	102	13 56	121 11
Pateros	Municipality	Rizal	240	14 33	121 04
Patiacang	Barrio	Lepanto Subprovince	210	17 07	120 45
Patian	Island	Sulu	258	5 50	121 05
Patic	Sitio	Kalinga Subprovince	208	17 31	121 21
Paticui	Barrio	Occidental Negros	220	10 15	122 55
Patigan	Sitio	Agusan	82	9 05	125 40
Patiis	Barrio	Rizal	240	14 42	121 09
Paticul	Municipal district	Sulu	258	6 05	121 05
Patimbao	Barrio	Laguna	174	14 16	121 25
Patiquian	Sitio	Kalinga Subprovince	208	17 30	121 10
Patitinan	Barrio	Camarines Sur	126	13 34	123 32
Patnanongan	Island	Tayabas (N)	270	14 50	122 10
Patnongon	Municipality	Antique	90	10 55	122 00
Patoc	Mountain	Bontoc Subprovince	204	17 09	120 59
Patocotoc	Barrio	Nueva Vizcaya	216	16 14	120 56
Patong	Barrio	Abra	78	17 28	120 42
Patong	Barrio	Camarines Sur	126	13 37	123 06
Patong	Barrio	Ilocos Sur	162	17 40	120 28
Patpata	Barrio	Ilocos Sur	162	17 11	120 26
Patpata	Barrio	La Union	182	16 49	120 25
Patria	Barrio	Antique	90	11 45	122 00
Patrocinio	Municipal district	Agusan	82	8 00	126 00
Patrocinio	Barrio	Bukidnon	110	8 40	124 50
Patrocinio	Sitio	Davao	154	8 00	126 00
Pattao	Barrio	Cagayan	118	18 15	121 50
Patucannay	Barrio	Abra	78	17 36	120 39
Patugo	Mountain	Zambales	274	15 22	120 03
Patunga	Island	Palawan (N)	223	11 00	120 50
Patupat	Barrio	Cebu	138	10 10	123 30
Pauadan	Mountain	Benguet Subprovince	202	16 30	120 53
Pauadan	Mountain	Nueva Vizcaya	216	16 30	120 53
Pauak	Sitio	Lanao	178	7 55	123 50
Paula	Barrio	Sorsogon (N)	252	13 00	123 33
Paudpud	Sitio	Zambales	274	15 05	120 13
Pauwin	Barrio	Laguna	174	14 16	121 33
Pawa	Barrio	Capiz	130	11 35	122 50
Pawa	Barrio	Sorsogon (S)	252	12 22	123 34
Pawli	Barrio	Camarines Sur	126	13 32	123 17
Pawing	Barrio	Leyte	186	11 10	125 00
Payabon	Barrio	Oriental Negros	224	9 45	123 10
Payac	Barrio	Ilocos Norte	158	18 30	120 43
Payac	Barrio	Isabela	170	16 35	121 40
Payao	Rancheria	Apayao Subprovince	200	17 57	121 06
Payapa	Barrio	Batangas	102	14 02	121 10
Payapayan	Barrio	Misamis	194	8 30	123 40
Payas	Barrio	Ilocos Norte	258	18 09	120 34
Payasan	Barrio	Surigao	262	8 35	126 05
Payatan	Barrio	Camarines Sur	126	13 44	123 24
Payatas	Barrio	Rizal	240	14 42	121 07
Payau	Sitio	Zamboanga	278	7 50	123 05

Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
Payawan	Barrio	Ifugao Subprovince.	206	16 41	121 11
Payeo	Barrio	Lepanto Subprovince.	210	17 06	120 52
Payo	Barrio	Albay	86	13 55	124 18
Payocpoc Norte	Barrio	La Union	182	16 30	120 20
Payocpoc Sur	Barrio	La Union	182	16 30	120 20
Payompon	Barrio	Mindoro	190	13 15	120 35
Paypay	Barrio	Cebu	138	11 15	124 00
Paypayad	Barrio	Ilocos Sur	162	17 11	120 25
Payquec	Barrio	Benguet Subprovince.	202	16 36	120 37
Paysawan	Sitio	Bataan	94	14 32	120 23
Payupay	Rancheria	Nueva Vizcaya	216	16 23	121 20
Paz	Barrio	Cebu	138	10 45	124 30
Peagkalan	Sitio	Davao	154	7 30	125 40
Peaked	Island	Palawan (S)	228	9 30	118 10
Pearl	Bank	Sulu	258	5 50	119 40
Peio Loro	Mountain	Ilocos Norte	158	18 31	120 53
Peio Loro	Mountain	Relief	72	18	121
Pejepe	Barrio	Ifugo Subprovince.	206	16 48	121 10
Pelotes	Point	Surigao	267	10 10	125 30
Pena	Barrio	Samar	248	12 10	124 25
Penablanca	Municipality.	Cagayan	118	17 35	121 45
Penaplata	Barrio	Davao	154	7 00	125 40
Penaplata	Barrio	Zamboanga	278	8 00	122 15
Peñaranda	Municipality.	Nueva Ecija	212	15 21	121 00
Peñarrubia	Municipality.	Abra	78	17 34	120 39
Penas	Sitio	Cotabato	150	6 35	124 30
Peninsula	Point	Surigao	262	10 10	125 40
Perez	Barrio	Bulacan	114	14 46	121 00
Pescador	Island	Cebu	138	9 55	123 20
Philippine Deep	Submarine Valley	Relief	72	10	127
PHILIPPINE ISLANDS	Archipelago	Philippine Islands	72	13	122
Piakan	Sitio	Zamboanga	278	7 30	122 05
Piapayungan	Mountain	Cotabato	150	7 40	124 35
Piapayungan	Mountain	Lanao	178	7 40	124 35
Piapi	Barrio	Oriental Negros	224	9 20	123 20
Pias	Barrio	Abra	78	17 36	120 40
Pias	Barrio	Ilocos Norte	158	18 00	120 30
Pias	Barrio	Ilocos Sur	162	17 08	120 31
Pias	Barrio	Nueva Ecija	212	15 21	121 05
Pias	Barrio	Pampanga	232	15 01	120 34
Pias	Barrio	Pangasinan	236	15 57	120 37
Piat	Municipality.	Cagayan	118	17 50	121 30
Piblisán	Barrio	Nueva Ecija	212	15 46	120 38
Pico	Barrio	Benguet Subprovince.	202	16 27	120 35
Pico de Loro	Mountain	Batangas	102	14 13	120 39
Pico de Loro	Mountain	Cavite	134	14 13	120 39
Piddig	Municipality.	Ilocos Norte	158	18 10	120 43
Pide	Sitio	Bontoc Subprovince	204	17 09	120 54
Pideg	Sitio	La Union	182	16 20	120 25
Pidigan	Municipality.	Abra	78	17 34	120 35
Pidpid	Municipality.	Ilocos Sur	162	17 03	120 29
Pidpid	Sitio	Amburayan Subprovince.	298	16 52	120 36
Pidpid	Sitio	La Union	182	16 24	120 24
Piedra	Point	Pangasinan	236	16 19	119 47
Piedra Blanca	Islet	Palawan (N)	228	10 20	121 00
Piedras	Point	Palawan (S)	228	10 10	118 50
Pigot	Barrio	Bohol	106	9 46	123 47
Pigsalohan	Barrio	Bukidnon	110	8 50	125 00
Pihan	Island	Rizal	240	14 18	121 15
Pikag	Barrio	Tayabas (S)	270	14 10	121 35
Pikag	Sitio	Lanao	178	7 55	123 55
Pikit-Pagalungan	Municipal district	Cotabato	150	7 05	124 40
Pila	Municipality.	Laguna	174	14 14	121 22
Pila	Barrio	Ilocos Sur	162	17 47	120 26
Pila	Barrio	Ilocos Sur	162	17 08	120 27
Pila	Barrio	La Union	182	16 50	120 21
Pilapila	Barrio	Rizal	240	14 27	121 12
Pilauay	Sitio	Camarines Norte	122	14 10	122 36
Pilar	Bay	Capiz	130	11 34	122 58
Pilar	Port	Sorsogon (N)	252	12 53	123 40
Pilar	Municipality.	Abra	78	17 24	120 37
Pilar	Municipality.	Bataan	94	14 40	120 33
Pilar	Municipality.	Capiz	130	11 29	123 00
Pilar	Municipality.	Cebu	138	10 50	124 35
Pilar	Municipality.	Sorsogon (N)	252	12 56	123 40
Pilar	Barrio	Samar	248	12 15	124 30
Pilar	Barrio	Surigao	262	9 50	126 05
Pilar	Sitio	Davao	154	6 30	126 10
Pilar	Sitio	Davao	154	7 40	126 00
Pilas	Island	Zamboanga	278	6 40	121 35

Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
				° /	° /
Pildira	Barrio	Rizal	240	14 31	121 00
Pili	Municipality	Camarines Sur	126	13 33	123 16
Pili	Barrio	Camarines Sur	126	13 43	123 45
Pili	Barrio	Iloilo	166	11 10	123 00
Pili	Barrio	Romblon	244	12 20	122 35
Pilig	Sitio	Apayao Subprovince	200	18 16	121 25
Pililla	Municipality	Rizal	240	14 29	121 18
Pilingan	Creek	Amburayan Subprovince	198	16 54	120 35
Pilipil	Barrio	Lepanto Subprovince	210	16 57	120 46
Pilitan	Barrio	Isabela	170	17 15	121 50
Piluro	Sitio	Leyte	186	11 15	124 45
Pimurutan	Sitio	Samar	248	12 10	124 50
Piña	Island	Sorsogon (S)	252	12 01	123 38
Piña	Barrio	Capiz	130	11 22	122 46
Piña	Barrio	Batangas	102	13 43	121 13
Piña	Barrio	Iloilo	166	10 40	122 40
Pinac	Lake	Tarlac	266	15 36	120 42
Pinacuapan	Islands	Camarines Norte	122	14 30	122 54
Pinagbayanan	Barrio	Batangas	102	13 48	121 26
Pinagbayanan	Barrio	Batangas	102	13 45	121 15
Pinagbirayan	Barrio	Camarines Norte	122	14 15	122 48
Pinagbuhatan	Barrio	Rizal	240	14 34	121 05
Pinaglapatan	Barrio	Tayabas (N)	270	14 45	121 40
Pinagpanaan	Barrio	Nueva Ecija	212	15 33	120 56
Pinagpatian	Sitio	Nueva Vizcaya	216	15 48	121 32
Pinagsabangan	Barrio	Mindoro	190	13 15	121 15
Pinagsanghan	Barrio	Cavite	134	14 17	120 43
Pinagtacdan	Barrio	Camarines Norte	122	14 05	123 03
Pinagtambangan	Sitio	Camarines Norte	122	14 10	122 46
Pinalaccan	Barrio	Cagayan	118	17 50	121 30
Pinamalay	Lake	Bukidnon	110	7 35	125 00
Pinamalayan	Township	Mindoro	190	13 05	121 30
Pinamalu	Mountain	Bukidnon	110	7 35	125 10
Pinambaran	Barrio	Bulacan	114	15 12	120 59
Pinamihagan	Barrio	Camarines Sur	126	13 47	123 27
Pinamopoan	Barrio	Leyte	186	11 20	124 35
Pinamucan	Barrio	Batangas	102	13 41	121 03
Pinamughaan	Barrio	Leyte	186	10 00	125 10
Pinamulu	Mountain	Cotabato	150	7 35	125 10
Pinamungajan	Municipality	Cebu	138	10 15	123 35
Pinamuntangan	Point	Tayabas (S)	270	13 15	122 30
Pinarpat	Sitio	Nueva Vizcaya	216	16 26	121 39
Pinatubo	Mountain	Pampanga	232	15 08	120 21
Pinatubo	Mountain	Zambales	274	15 08	120 21
Pinatubo	Mountain	Relief	72	15	120
Pinavisagan	Bay	Tayabas (N)	270	15 00	122 00
Pinayagan	Barrio	Bohol	106	9 56	123 57
Pindalunan	Sitio	Cotabato	150	7 25	124 15
Pindalunan	Sitio	Lanao	178	8 00	124 05
Pindangan	Barrio	Pangasinan	236	15 52	120 33
Pindungan	Barrio	Ifugao Subprovince	206	16 47	121 06
Pineda	Barrio	Sorsogon (N)	252	12 56	123 44
Pingad	Barrio	Lepanto Subprovince	210	16 58	120 55
Pingaping	Sitio	Abra	78	17 43	120 43
Pinget	Island	Ilocos Sur	162	17 41	120 21
Pinis	Barrio	Misamis	194	8 25	123 50
Pinocauan	Barrio	Leyte	186	10 50	125 00
Pinotpandian	Sitio	Tayabas (N)	270	15 10	121 30
Pintican	Sitio	Benguet Subprovince	202	16 21	120 44
Pintuyan	Municipality	Leyte	186	9 55	125 15
Pinucutan	Barrio	Occidental Negros	220	10 40	123 30
Pinugay	Sitio	Rizal	240	14 37	121 15
Pinukpuk	Township	Kalinga Subprovince	208	17 37	121 25
Pinukpuk	Township	Mountain Province	196	17 85	121 25
Pio	Barrio	Pampanga	232	15 03	120 31
Pipindan	Barrio	Rizal	240	14 25	121 13
Piris	Bay	Tayabas (S)	270	13 45	122 30
Piris	Barrio	Tayabas (S)	270	13 45	122 30
Pisa	Barrio	Batangas	102	13 38	120 56
Piso	Barrio	Davao	154	7 00	126 00
Pistola	Barrio	Albay	86	13 13	123 28
Pitalo	Barrio	Cebu	138	10 10	123 45
Pitao	Barrio	Tarlac	266	15 44	120 22
Pitogo	Municipality	Tayabas (S)	270	13 45	122 05
Pitogo	Barrio	Albay	86	13 11	124 06
Pitogo	Barrio	Bohol	106	10 08	124 33
Pitogo	Barrio	Iloilo	166	10 35	122 05
Pitogo	Sitio	Agusan	82	9 15	125 30
Pitogo	Sitio	Sulu	258	5 55	121 20
Pitombayog	Barrio	Tarlac	266	15 34	120 24

Name.	Feature.	Map.	Fac- ing page.	Lat- tude.	Longi- tude.
Pitpitan	Barrio	Bulacan	114	14 49	120 51
Placer	Municipality	Surigao	262	9 40	125 35
Placer	Barrio	Sorsogon (S)	252	11 52	123 55
Planas	Sitio	Pampanga	232	15 02	120 31
Plaridel	Municipality	Misamis	194	8 35	123 45
Plaridel	Barrio	Leyte	186	10 35	124 45
Plastado	Barrio	Tarlac	266	15 38	120 37
Poctol	Barrio	Batangas	102	13 49	121 26
Poctol	Barrio	Tayabas (S)	270	13 50	122 05
Poctoy	Barrio	Romblon	244	12 25	122 00
Poctoy	Barrio	Tayabas (S)	270	13 20	122 05
Podig	Sitio	Apayao Subprovince	200	18 15	120 57
Podsoj	Sitio	Batanes	98	20 22	121 52
Poduca	Sitio	Amburayan Subprovince	198	16 50	120 31
Pogsagnahan	Barrio	Albay	86	14 00	124 11
Pola	Township	Mindoro	190	13 10	121 25
Pola	Bay	Mindoro	190	13 10	121 25
Polanco	Barrio	Zamboanga	278	8 30	125 25
Polangui	Municipality	Albay	86	13 18	123 29
Polangui	Barrio	Samar	248	12 25	124 40
Polantona	Barrio	Camarines Sur	126	13 56	122 55
Polarican	Barrio	Palawan (N)	228	11 00	119 30
Polillo	Island	Tayabas (N)	270	14 55	121 55
Polillo	Island	Philippine Islands	72	15	122
Polillo	Strait	Tayabas (N)	270	14 50	121 45
Polillo	Municipality	Tayabas (N)	270	14 45	121 55
Poliqui	Bay	Albay	86	13 05	123 48
Polis	Pass	Ifugao Subprovince	206	16 58	121 01
Polloc	Harbor	Cotabato	150	7 20	124 10
Polloc	Sitio	Cotabato	150	7 20	124 15
Polo	Municipality	Bulacan	114	14 43	120 57
Polo	Barrio	Bulacan	114	14 58	121 01
Polo	Barrio	Pangasinan	236	16 12	119 57
Polo	Barrio	Tayabas (S)	270	14 10	121 45
Polo	Point	Misamis	194	8 35	123 45
Poloan	Barrio	Camarines Sur	126	13 47	123 48
Polong	Barrio	Pangasinan	236	15 59	120 12
Polot	Barrio	Abra	78	17 44	120 42
Pomelikan	Island	Sulu	258	7 05	118 30
Pondol	Barrio	Cebu	138	10 30	123 45
Pondol	Sitio	Leyte	186	10 25	125 10
Pongko	Barrio	Albay	86	13 20	123 55
Poniente	Barrio	Surigao	262	9 35	125 40
Ponong	Barrio	Camarines Sur	126	13 41	123 08
Ponso	Barrio	Albay	86	13 18	123 31
Ponson	Island	Cebu	138	10 45	124 30
Pontevedra	Municipality	Capiz	130	11 29	122 50
Pontevedra	Municipality	Occidental Negros	220	10 25	122 50
Pontian	Barrio	Bukidnon	110	8 15	124 55
Poo	Barrio	Oriental Negros	224	9 10	123 35
Pooc	Barrio	Batangas	102	13 59	120 45
Pooc	Barrio	Capiz	130	11 42	122 23
Pooc	Barrio	Laguna	174	14 18	121 07
Pooc	Barrio	Laguna	174	14 07	121 24
Popoka	Peak	Lanao	178	7 45	124 35
Poponto	Railroad Station	Pangasinan	236	15 47	120 33
Porac	Municipality	Pampanga	232	15 05	120 32
Porac	Barrio	Zambales	274	15 15	120 01
Poro	Island	Cebu	138	10 40	124 25
Poro	Municipality	Cebu	138	10 40	124 25
Poro	Barrio	Camarines Sur	126	13 39	123 09
Poro	Barrio	La Union	182	16 37	120 17
Portolin	Barrio	Misamis	194	9 55	125 00
Portuguese	Point	Pangasinan	236	16 05	120 06
Posooy	Mountain	Abra	78	17 21	120 48
Potoc	Sitio	Bataan	94	14 35	120 32
Potod	Sitio	Camarines Norte	122	14 10	122 45
Pototan	Municipality	Iloilo	166	10 55	122 40
Potrero	Barrio	Rizal	240	14 40	121 00
Powoi	Mountain	Benguet Subprovince	202	16 38	120 45
Pozorrubio	Municipality	Pangasinan	236	16 07	120 33
Prado	Barrio	Pampanga	232	14 52	120 31
Pratas	Reef	Philippine Islands	72	21	117
Pratas	Reef	Relief	72	21	117
Prensa	Barrio	Bulacan	114	14 47	120 59
Prieto Diaz	Municipality	Sorsogon (N)	252	13 02	124 11
Pritil	Barrio	Bulacan	114	14 51	120 53
Progreso	Barrio	Romblon	244	12 20	122 00
Prospect Point	Gate	City of Baguio	140	16 23	120 36
Prospect Point	Gate	Benguet Subprovince	202	16 23	120 36

Name.	Feature.	Map.	Fac- ing page.	Lat- tude.	Longi- tude.
Prosperidad	Municipal district.	Agusan	82	8 35	125 55
Prueba	Point	Tayabas (N)	270	15 00	121 35
Puac	Point	Apayao Subprovince.	200	18 36	120 59
Pucio	Point	Antique.	90	11 45	121 50
Pucio	Point	Capiz	130	11 46	121 51
Puctol	Point	Camarines Norte.	122	14 15	122 22
Pudao	Barrio	Abra	78	17 38	120 42
Pudoc	Barrio	Amburayan Subprovince.	198	16 56	120 25
Pudoc Norte	Barrio	Ilocos Sur	162	17 36	120 22
Puerta Rivas	Barrio	Bataan	94	14 42	120 34
Puerto Bello	Barrio	Cebu	138	10 40	124 30
Puerto Galera	Barrio	Mindoro	190	13 30	120 55
Puerto Princesa	Capital, Palawan.	Philippine Islands.	72	10	119
Puerto Princesa	Capital, Palawan.	Palawan (S)	228	9 40	118 40
Puerto Princesa	Barrio	Surigao	262	10 05	125 30
Pugad Babuy	Barrio	Bulacan	114	14 41	121 00
Pugawan	Barrio	Ilocos Norte	153	17 56	120 31
Pugo	Township	Benguet Subprovince.	202	16 19	120 28
Pugo	Township	Mountain Province.	196	16 20	120 30
Pugo	Rancheria	Nueva Vizcaya	216	16 08	121 32
Pugo	Barrio	Ifugao Subprovince.	206	16 54	121 04
Pugos	Barrio	Ilocos Sur	252	17 50	120 27
Puguan	River	Bukidnon	110	8 35	124 50
Puguil	Barrio	Amburayan Subprovince.	198	16 48	120 30
Puhagan	Barrio	Oriental Negros	224	9 15	123 10
Pujada	Island	Davao	154	6 50	126 20
Pujada	Bay	Davao	154	6 50	126 10
Pula	Barrio	Ifugao Subprovince.	206	17 00	121 05
Pula	Barrio	Mindoro	190	13 05	121 25
Pula	Sitio	Bontoc Subprovince.	204	17 05	121 14
Pulagon	Mountain	Apayao Subprovince.	200	17 41	121 07
Pulahan	Sitio	Capiz	130	11 32	122 21
Pulandaga	Point	Camarines Norte	122	14 19	122 48
Pulandaga	Sitio	Camarines Norte	122	14 19	122 46
Pulanduta	Barrio	Sorsogon (S)	252	11 55	123 09
Pulanduta	Point	Sorsogon (S)	252	11 54	123 10
Pulangduta	Barrio	Sorsogon (N)	252	12 52	123 57
Pulangt	River	Bukidnon	110	8 05	125 15
Pulangt	River	Cotabato	150	7 20	125 00
Pulao	Sitio	Ifugao Subprovince.	206	16 46	121 17
Pulgason	Sitio	Cebu	138	10 30	123 55
Puliasapas	Sitio	Pampanga	232	15 10	120 30
Puilan	Municipality.	Bulacan	114	14 54	120 51
Pulipo	Island	Zambales	274	15 40	119 55
Puljudan	Sitio	Ifugao Subprovince.	206	16 40	121 08
Pulo	Barrio	Laguna	174	14 15	121 08
Pulo	Barrio	Nueva Ecija	212	15 15	120 56
Pulo	Sitio	Bulacan	114	14 46	120 57
Pulog	Mountain	Benguet Subprovince.	202	16 36	120 54
Pulog	Mountain	Ifugao Subprovince.	206	16 36	120 54
Pulog	Mountain	Mountain Province.	196	16 35	120 55
Pulog	Mountain	Nueva Vizcaya	216	16 36	120 54
Pulog	Mountain	Relief	72	17	121
Pulongbuhangin	Barrio	Bulacan	114	14 52	121 00
Pulong Mabilog	Mountain	Nueva Ecija	212	15 55	121 09
Pulong Sampaloc	Barrio	Bulacan	114	14 58	121 04
Pulong (Santa Cruz)	Barrio	Laguna	174	14 16	121 05
Pulongbat	Barrio	Bulacan	114	14 52	120 54
Pulpo	Sitio	Ifugao Subprovince.	206	16 41	121 03
Puloc	Mountain	Abra	78	17 34	120 56
Pulupandan	Municipality.	Occidental Negros.	220	10 30	122 50
Punas	Point	Batangas.	102	13 36	121 18
Punay	Barrio	Cebu	138	10 15	123 35
Puncan	Barrio	Nueva Ecija	212	15 55	120 59
Pungugupanunga	Mountain	Nueva Vizcaya	216	15 55	121 30
Pungugupanunga	Mountain	Relief	72	16	121
Punpunan	Barrio	Leyte	186	10 40	124 50
Punso	Sitio	Camarines Norte	122	14 16	122 38
Punta	Barrio	Laguna	174	14 11	121 07
Punta	Barrio	Leyte	186	10 40	124 45
Punta	Barrio	Rizal	240	14 18	121 18
Punta	Barrio	Tayabas (S)	270	13 50	122 00
Punta	Barrio	Tayabas (S)	270	13 30	122 40
Punta	Sitio	Camarines Norte	122	13 55	123 05
Punta Cruz	Barrio	Bohol	106	9 44	123 48
Punta Maria	Barrio	Samar	248	11 40	125 30
Puquis	Mountain	Bontoc Subprovince.	204	17 04	121 05
Puquis	Sitio	Bontoc Subprovince.	204	17 03	121 04
Pura	Municipality.	Tarlac	286	15 37	120 39
Purag	Rancheria	Apayao Subprovince.	200	17 50	121 16

Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
Puro	Barrio	Albay	86	13 08	123 45
Purro	Mountain	Rizal	240	14 42	121 14
Pury	Barrio	Tayabas (S)	270	13 55	121 20
Pusgo	Fort	Tayabas (S)	270	13 30	122 40
Pusliak	Sitio	Bataan	94	14 52	120 30
Puspus	Barrio	Ilocos Sur	162	17 35	120 24
Putagon	Mountain	Abra	78	17 41	121 07
Putat	Barrio	Cebu	138	10 50	123 50
Putian	River	Lanao	178	7 50	124 30
Putiao	Barrio	Sorsogon (N)	252	13 01	123 43
Puttingbato	Barrio	Sorsogon (S)	252	11 46	124 01
Puttingbuhangin	Barrio	Batangas	102	13 47	121 25
Puttingbuhangin	Sitio	Bataan	94	14 35	120 35
Putting Kahoy	Barrio	Cavite	134	14 13	121 02
Putol	Barrio	Laguna	174	14 11	121 04
Puttao	Barrio	Ilocos Norte	158	18 05	120 45
Puypuy	Barrio	Laguna	174	14 10	121 16
P. Zamora	Barrio	Oriental Negros	224	10 05	123 15
Q.					
Quadrant	Mountain	Bataan	94	14 55	120 22
Quebrada	Mountain	Ilocos Norte	158	18 29	120 48
Quebrado	Mountain	Zambales	274	15 02	120 21
Quesada	Railroad station	Pangasinan	236	15 52	120 26
Quesin	Sitio	Cotabato	150	7 10	124 05
Quetegan	Barrio	Pangasinan	236	15 50	120 17
Quezon	Municipality	Nueva Ecija	212	15 33	120 49
Quezon	Municipality	Tayabas (S)	270	14 00	122 10
Quiapo	District	City of Manila	146	14 36	120 59
Quiasan	Barrio	Iloilo	166	11 25	123 05
Quibadia	Barrio	Bulacan	114	14 43	120 56
Quibal	Barrio	Isabela	170	17 20	121 45
Quibitquibit	Sitio	Ilocos Sur	162	17 51	120 30
Quidem	Barrio	La Union	182	16 42	120 22
Quidolog	Barrio	Sorsogon (N)	252	13 03	124 11
Quillaman	Sitio	Lepanto Subprovince	210	17 13	120 41
Quilib	Barrio	Tayabas (S)	270	14 10	121 35
Quiling	Barrio	Ilocos Norte	158	18 05	120 33
Quimalagon	Mountain	Nueva Ecija	212	15 50	120 48
Quiminatin	Island	Palawan (N)	228	10 40	120 50
Quimloong	Sitio	Abra	78	17 30	120 43
Quimmarayan	Barrio	Ilocos Sur	162	17 39	120 26
Quimpal	Barrio	Abra	78	17 34	120 45
Quinabigan	Barrio	Mindoro	190	13 00	121 30
Quinalabaza	Barrio	Isabela	170	16 30	121 45
Quinalasag	Island	Camarines Sur	126	13 57	123 38
Quinali	Barrio	Albay	86	13 20	123 25
Quinali	Mountain	Lepanto Subprovince	210	17 06	120 45
Quinamanuca	Island	Camarines Norte	122	14 12	122 57
Quinapagyan	Island	Camarines Norte	122	14 04	123 04
Quinapundan	Bay	Samar	248	11 05	125 30
Quinasacatan	Sitio	Tayabas (N)	270	15 05	121 30
Quinasupan	Barrio	Iloilo	166	11 20	123 00
Quinaua	Point	Bataan	84	14 28	120 23
Quinawan	Sitio	Palawan (N)	228	11 20	119 20
Quingua	Municipality	Bulacan	114	14 53	120 52
Quinguitan	Barrio	Misamis	194	9 00	124 45
Quiniluban	Islands	Palawan (N)	228	11 30	120 50
Quintana	Barrio	Cavite	134	14 18	120 52
Quinyuctut	Sitio	Amburayan Subprovince	198	17 02	120 33
Quiot	Barrio	Leyte	186	10 55	124 25
Quisao	Barrio	Rizal	240	14 26	121 20
Quitago	Mountain	Rizal	240	14 36	121 16
Quitang	Sitio	Bataan	94	14 33	120 36
R.					
Rabon	Barrio	La Union	182	16 13	120 25
Radio Station	U. S. Navy Wireless	Cavite	134	14 29	120 54
Ragang	Volcano	Cotabato	150	7 40	124 30
Ragang	Volcano	Lanao	178	7 40	124 30
Ragang	Volcano, active	Relief	72	8	124
Ragay	Gulf	Camarines Sur	126	13 45	122 37
Ragay	Gulf	Tayabas (S)	270	13 40	122 40
Ragay	Gulf	Philippine Islands	72	13	123
Ragay	Municipality	Camarines Sur	126	13 49	122 45
Rahamon	Sitio	Lanao	178	8 00	123 50
Ramirez	Barrio	Cavite	134	14 11	120 52
Ramos	Island	Palawan (S)	228	8 10	117 00
Rancho	Sitio	Ilocos Sur	162	17 30	120 25

Name.	Feature.	Map.	Fac- ing page.	Lat- tude.	Longi- tude.
				° /	° /
Rapu-Rapu	Municipality	Albay	86	13 11	124 08
Rapu-Rapu	Island	Albay	86	13 12	124 09
Rapu-Rapu	Strait	Albay	86	13 15	124 06
Raputdaput	Sitio	Samar	248	12 25	124 25
Rasa	Island	Palawan (S)	228	9 10	118 30
Raton	Island	Zambales	274	15 49	119 52
Rauis	Barrio	Sorsogon (N)	252	12 54	123 37
Rauis	Sitio	Albay	86	13 04	123 30
Rawis	Barrio	Albay	86	13 19	123 23
Rawis	Barrio	Albay	86	13 11	123 45
Rawis	Barrio	Ilocos Sur	162	17 34	120 26
Rawis	Barrio	Leyte	186	11 00	125 00
Rayli	Barrio	Batanes	98	20 43	121 50
Razor Back	Mountain	Oriental Negros	224	10 10	123 10
Real	Barrio	Laguna	174	14 12	121 09
Real	Barrio	Tayabas (N)	270	14 40	121 35
Recodo	Barrio	Zamboanga	278	7 00	122 00
Refaro	Barrio	Ilocos Sur	162	17 46	120 26
Refugio	Island	Camarines Sur	126	13 29	123 03
Refugio	Island	Occidental Negros	220	10 30	123 25
Reina Mercedes	Municipality	Isabela	170	17 00	121 50
Reina Mercedes	Barrio	Isabela	170	17 00	121 45
Reina Regente	Municipal district	Cotabato	150	7 00	124 30
Reina Regente	Barrio	La Union	182	16 53	120 26
Remedios	Barrio	Samar	248	11 45	125 25
Remedios	Municipal district	Agusan	82	8 40	125 35
Remedios	Barrio	Tayabas (S)	270	14 15	121 40
Rena	Point	Pangasinan	236	16 10	119 45
Respac	Barrio	Ilocos Sur	162	17 49	120 28
Resa	Barrio	Cotabato	150	6 50	124 00
Reservation	Manila Water Supply	Rizal	240	14 40	121 15
Reservation	Water Supply	Zamboanga	278	7 05	122 05
Rest house	Lodging	Benguet Subprovince	202	16 38	120 46
Rest house	Lodging	Bontoc Subprovince	204	17 16	121 09
Rest house	Lodging	Bontoc Subprovince	204	17 03	121 06
Rest house	Lodging	Bontoc Subprovince	204	17 03	121 11
Rest house	Lodging	Ifugao Subprovince	206	16 40	121 06
Rest house, Awa	Lodging	Ifugao Subprovince	206	16 48	120 59
Rest house, Dalalu	Lodging	Ifugao Subprovince	206	16 56	121 23
Rest house, Ducligan	Lodging	Ifugao Subprovince	206	16 55	121 10
Rest house, Opul	Lodging	Ifugao Subprovince	206	16 55	121 26
Rest house, Payawan	Lodging	Ifugao Subprovince	206	16 41	121 12
Rest house, Camp 30	Lodging	Benguet Subprovince	202	16 32	120 42
Rest house, Camp 59	Lodging	Benguet Subprovince	202	16 39	120 46
Rest house, Camp 88	Lodging	Benguet Subprovince	202	16 46	120 48
Rest house, Mt. Sto. Tomas	Lodging	Benguet Subprovince	202	16 20	120 34
Restinga	Point	Cavite	134	14 17	120 39
Resurreccion	Barrio	Sorsogon (N)	252	12 28	123 46
Resurreccion	Barrio	Sorsogon (S)	252	12 28	123 46
Ribsan	Barrio	La Union	182	16 31	120 26
Rimus	Barrio	La Union	182	16 53	120 24
Rio Chico	Barrio	Nueva Ecija	212	15 22	121 04
Ripang	Rancheria	Apayao Subprovince	200	17 48	121 19
Ripsuan	Barrio	Benguet Subprovince	202	16 31	120 27
Rissing	Barrio	La Union	182	16 51	120 26
Rivera	Barrio	Capiz	130	11 25	122 17
RIZAL	Province	Rizal	240	14 40	121 10
Rizal	Province	Philippine Islands	72	15	121
Rizal	Municipality	Cagayan	118	17 50	121 20
Rizal	Municipality	Laguna	174	14 07	121 24
Rizal	Municipality	Nueva Ecija	212	15 43	121 06
Rizal	Barrio	Ilocos Sur	162	17 33	120 27
Rizal	Barrio	Ilocos Sur	162	17 27	120 31
Rizal	Barrio	La Union	182	16 22	120 25
Rizal	Barrio	Leyte	186	11 25	124 55
Rizal	Barrio	Leyte	186	11 00	124 25
Rizal	Barrio	Leyte	186	10 55	125 00
Rizal	Barrio	Leyte	186	10 05	124 55
Rizal	Barrio	Nueva Ecija	212	15 45	120 55
Rizal	Barrio	Occidental Negros	220	10 45	123 35
Rizal	Barrio	Pampanga	232	14 59	120 34
Rizal	Barrio	Romblon	244	12 20	122 00
Rizal	Barrio	Samar	248	12 30	124 35
Rizal	Barrio	Sorsogon (N)	252	12 53	124 08
Rizal	Barrio	Sorsogon (N)	252	12 37	123 43
Rizal	Barrio	Surigao	262	10 25	125 35
Rizal	Barrio	Surigao	262	10 00	126 00
Rizal	Barrio	Surigao	262	9 50	125 25

Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
Rizal	Barrio	Surigao	262	8 30	126 10
Rizal	Barrio	Tarlac	266	15 45	120 34
Rizal	Barrio	Tayabas (S)	270	14 10	121 55
Rizal	Barrio	Tayabas (S)	270	13 50	122 25
Rizal	Barrio	Tayabas (S)	270	13 35	122 35
Rizal Park	Barrio	City of Manila	146	14 37	120 59
Rock Dome	Mountain	Sorsogon (N)	252	13 02	123 54
Roma	Barrio	Iloilo	166	10 40	122 10
Rombang	Barrio	Antique	90	10 50	122 00
ROMBLON	Province	Romblon	244	12 30	122 20
Romblon	Province	Philippine Islands	72	13	122
Romblon	Island	Romblon	244	12 35	122 15
Romblon	Capital	Romblon	244	12 35	122 15
Romblon	Capital, Romblon	Philippine Islands	72	13	122
Ronda	Municipality	Cebu	138	10 00	123 25
Ronda	Sitio	Ilocos Sur	162	17 06	120 27
Roosevelt	Barrio	Leyte	186	11 15	124 45
Roosevelt	Barrio	Sorsogon (N)	252	12 35	123 41
Roosevelt	Barrio	Sorsogon (S)	252	12 35	123 41
Roro	Barrio	Sorsogon (N)	252	13 00	123 59
Rosa	Island	Camarines Sur	126	13 42	123 40
Rosales	Municipality	Pangasinan	236	15 54	120 38
Rosario	Municipality	Batangas	102	13 51	121 12
Rosario	Municipality	Cavite	134	14 25	120 51
Rosario	Municipality	La Union	182	16 14	120 29
Rosario	Municipal district	Agusan	82	8 25	126 00
Rosario	Barrio	Bukidnon	110	8 50	124 50
Rosario	Barrio	Capiz	130	11 35	122 17
Rosario	Barrio	Laguna	174	14 00	121 18
Rosario	Barrio	Pangasinan	236	16 06	120 35
Rosario	Barrio	Rizal	240	14 35	121 05
Rosario	Barrio	Tayabas (S)	270	14 05	121 50
Rosariohan	Barrio	Bohol	106	9 47	124 07
Ross	Cape	Palawan (N)	228	11 00	119 10
Roun	Sitio	Lanao	178	8 05	123 50
Round	Island	Palawan (N)	228	10 50	120 40
S.					
Saae	Island	Bohol	106	10 13	124 21
Saavedra	Barrio	Cebu	138	10 00	123 25
Saavedra	Sitio	Davao	154	5 20	125 30
Saba	Barrio	Bataan	94	14 52	120 31
Sabang	Barrio	Camarines Sur	126	13 43	123 35
Sabang	Barrio	Cavite	134	14 21	120 56
Sabang	Barrio	Cebu	138	10 30	124 00
Sabang	Barrio	Ilocos Sur	162	17 49	120 29
Sabang	Barrio	Leyte	186	11 05	124 25
Sabang	Barrio	Tayabas (S)	270	14 05	122 05
Sabang	Sitio	Antique	90	11 55	121 30
Sabang	Sitio	Batangas	102	14 04	120 43
Sabang	Sitio	Capiz	130	11 50	121 53
Sabang	Sitio	Tayabas (N)	270	14 40	121 55
Sabangan	Township	Lepanto Subprovince	210	17 00	120 56
Sabangan	Township	Mountain Province	196	17 00	120 55
Sabanilla	Barrio	Pampanga	232	15 04	120 42
Sabidug	Barrio	Batanes	98	20 19	121 54
Sabit	Barrio	Nueva Ecija	212	15 50	120 40
Sablan	Barrio	Benguet Subprovince	202	16 30	120 29
Sablayan	Township	Mindoro	190	12 50	120 45
Sablayan	Barrio	Romblon	244	12 30	122 20
Sablig	Barrio	Pangasinan	236	16 16	119 59
Sabnangan	Barrio	Abra	78	17 19	120 42
Sabtang	Island	Batanes	98	20 20	121 53
Sabtang	Township	Batanes	98	20 21	121 53
Sabuanan	Barrio	Ilocos Sur	162	17 09	120 26
Sabud	River	Davao	154	8 00	125 40
Sabung	Barrio	Zamboanga	278	6 35	122 10
Sacratamila	Barrio	Albay	86	13 35	124 10
Sacramento	Sitio	Camarines Sur	126	13 38	122 51
Sacripante	Mountain	Leyte	186	10 30	124 50
Sadanga	Township	Bontoc Subprovince	204	17 09	121 02
Sadanga	Township	Mountain Province	196	17 10	121 05
Sadanga	Barrio	Bontoc Subprovince	204	17 10	121 02
Saddle Peaks	Mountain (vol.)	Cotabato	150	5 40	125 20
Saddle Peaks	Mountain (vol.)	Davao	154	5 40	125 20
Sadsadan	Volcano, dormant	Relief	72	6	125
Sagada	Barrio	Lepanto Subprovince	210	16 56	120 52
Sagada	Township	Bontoc Subprovince	204	17 05	120 54
Sagada	Township	Mountain Province	196	17 05	120 55

Name.	Feature.	Map.	Fac- ing page.	Lati- tude.		Longi- tude.	
				°	'	°	'
Sagang	Mountain	Abra	78	17	48	120	45
Sagap	Sitio	Abra	78	17	38	120	33
Sagasa	Barrio	Sorsogon (N)	252	12	56	123	52
Sagasay	Island	Bohol	106	10	12	124	25
Sagat	Barrio	Ilocos Sur	162	17	03	120	27
Sagay	Municipality	Misamis	194	9	05	124	45
Sagay	Municipality	Occidental Negros	220	10	55	123	25
Sagayaden	Barrio	Ilocos Sur	162	17	47	120	27
Sagayan	Barrio	Bukidnon	110	8	00	124	50
Sagayaran	Island	Zamboanga	273	7	35	123	30
Sagayon	Sitio	Davao	154	7	40	125	50
Sagbungon	Point	Camarines Norte	122	14	17	122	23
Sagiaran	Municipal district	Lanao	178	8	00	124	15
Sagkahan	Barrio	Leyte	186	11	15	124	45
Sagnay	Municipality	Camarines Sur	126	13	37	123	31
Sagpat	Barrio	Benguet Subprovince	202	16	41	120	40
Sagrada Familia	Barrio	Camarines Sur	126	13	24	123	30
Sagsag	Sitio	Kalinga Subprovince	208	17	36	121	22
Sagsagacat	Sitio	Abra	78	17	28	120	39
Saguin	Barrio	Pampanga	232	15	05	120	37
Saguino	Barrio	Batangas	102	13	44	120	55
Sagunto	Municipal district	Agusan	82	8	15	125	45
Sail Rock	Islet	Albay	86	14	00	124	03
Saimsim	Barrio	Batangas	102	13	54	120	58
Saimsim	Sitio	Laguna	174	14	11	121	22
Saint Paul	Bay	Palawan (S)	223	10	20	118	50
Sakasakan	Barrio	Bontoc Subprovince	204	17	09	121	02
Sakpil	Barrio	Kalinga Subprovince	208	17	38	121	22
Sakul	Island	Zamboanga	278	6	55	122	15
Sakup	Sitio	Lanao	178	7	45	123	50
Sala	Barrio	Batangas	102	14	06	121	07
Salaan	Sitio	Mindoro	190	13	00	120	50
Salaban	Barrio	Cavite	184	14	08	120	56
Salacot	Barrio	Bulacan	114	15	12	120	57
Salacsac	Barrio	Nueva Vizcaya	216	16	10	120	52
Salagabanog	Peak	Cotabato	150	7	35	124	40
Salagabanog	Peak	Lanao	178	7	35	124	40
Salamanca	Barrio	Occidental Negros	220	10	45	123	30
Salangang	Sitio	Occidental Negros	220	10	30	123	00
Salapasap	Sitio	Abra	78	17	20	120	47
Salapi	Barrio	Ilocos Sur	162	17	49	120	26
Salapungan	Sitio	Kalinga Subprovince	208	17	33	121	09
Salasa	Barrio	Pampanga	232	15	08	120	56
Salasa	Municipality	Pangasinan	236	15	57	120	13
Salauan	Barrio	Zambales	274	15	27	119	57
Salaw	Point	Lanao	178	7	35	124	05
Salawagan	Barrio	Batangas	102	13	51	121	21
Salay	Barrio	Bukidnon	110	7	45	125	10
Salay	Barrio	Isabela	170	16	45	121	45
Salcedo	Barrio	Misamis	194	8	50	124	45
Salcedo	Municipality	Samar	248	11	10	125	40
Salde	Barrio	Tarlac	266	15	51	120	36
Saldegseg	Barrio	Antique	90	11	30	122	05
Salgan	Barrio	Kalinga Subprovince	208	17	30	121	13
Sahan	Barrio	Capiz	130	11	21	122	47
Sahit	Barrio	Bataan	194	14	43	120	31
Salimpono	Mountain	Rizal	240	14	40	121	20
Salinas	Barrio	Misamis	194	8	20	123	50
Salinas	Barrio	Cavite	134	14	26	120	56
Salinas	Barrio	Nueva Vizcaya	216	16	22	121	01
Salincub	Barrio	Tayabas (S)	270	13	55	121	35
Salincub	Barrio	Ilocos Sur	162	17	17	120	28
Saling	Barrio	La Union	182	16	44	120	23
Saliok	Barrio	Bohol	106	9	47	123	57
Salitran	Sitio	Bontoc Subprovince	204	17	10	121	19
Sallacong	Barrio	Cavite	134	14	21	120	56
Sallapadan	Barrio	Ilocos Sur	162	17	35	120	30
Salmag	Municipality	Abra	78	17	28	120	50
Salnec	Sitio	Nueva Ecija	212	15	25	121	11
Salog	Sitio	Abra	78	17	29	120	42
Salog	Barrio	Bohol	106	10	09	124	12
Salomague	Island	Camarines Sur	126	13	44	123	25
Salomague	Island	Tayabas (S)	270	13	25	122	10
Salomagui	Point	Tayabas (S)	270	13	20	122	10
Salomagui	Island	Ilocos Sur	162	17	47	120	23
Salomagui	Barrio	Ilocos Sur	162	17	47	120	25
Salomagui	Barrio	Pangasinan	236	15	55	120	14
Salomad	Barrio	Tarlac	266	15	40	120	34
Salpad	Barrio	Ilocos Norte	158	18	15	120	39
Saltan	River	Kalinga Subprovince	208	17	33	121	20

Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
				° /	° /
Saltan	River	Mountain Province	196	17 30	121 15
Salu	Barrio	Pampanga	232	15 01	120 32
Saluag	Island	Sulu	258	4 35	119 30
Salug	Barrio	Leyte	186	10 45	125 00
Salug	Sitio	Zamboanga	278	8 10	122 45
Salug	River	Zamboanga	278	8 00	123 30
Salugan	Barrio	Albay	86	13 12	123 40
Saluping	Island	Zamboanga	278	6 20	122 00
Salvacion	Municipal district	Agusan	82	8 00	126 05
Salvacion	Barrio	Albay	86	13 14	123 49
Salvacion	Barrio	Albay	86	13 13	123 22
Salvacion	Barrio	Camarines Sur	126	13 49	122 54
Salvacion	Barrio	Camarines Sur	126	13 23	123 24
Salvacion	Barrio	Iloilo	166	10 25	122 30
Salvacion	Barrio	Nueva Ecija	212	15 51	120 55
Salvacion	Barrio	Sorsogon (N)	252	13 00	124 04
Salvacion	Barrio	Sorsogon (N)	252	12 39	124 02
Salvacion	Barrio	Surigao	262	8 40	126 10
Salvador	Island	Zambales	274	15 31	119 55
Samal	Island	Davao	154	7 00	125 40
Samal	Municipality	Bataan	94	14 46	120 32
Samal	Municipal district	Davao	154	7 00	125 40
Samalague	Barrio	Antique	90	11 00	122 05
Samales	Islands Group	Sulu	258	6 00	121 45
SAMAR	Province	Samar	248	12 00	125 00
Samar	Island	Philippine Island	72	12	125
Samar	Sea	Leyte	186	11 40	124 40
Samar	Sea	Samar	248	11 45	124 30
Samat	Mountain	Bataan	94	14 36	120 30
Sambat	Sitio	Batangas	102	14 05	121 08
Sambat	Sitio	Tayabas (S)	270	14 00	121 30
Samboan	Municipality	Cebu	138	9 30	123 20
Sambulaua	Harbor	Zamboanga	278	7 35	123 20
Sambulawan	Sitio	Leyte	186	11 10	124 30
Sambuluau	Sitio	Cotabato	150	6 55	124 40
Samoki	Barrio	Bontoc Subprovince	204	17 05	120 59
Sampad	Sitio	Rizal	240	14 27	121 13
Sampaloc	Municipality	Tayabas (S)	270	14 10	121 35
Sampaloc	District	City of Manila	146	14 36	121 00
Sampaloc	Barrio	Camarines Sur	126	13 35	123 08
Sampaloc	Barrio	Cavite	134	14 18	120 57
Sampaloc	Barrio	Rizal	240	14 33	121 22
Sampaloc	Point	Zambales	274	14 44	120 10
Sampiro	Barrio	Batangas	102	13 55	120 42
Sampiro	Barrio	Batangas	102	13 47	121 23
Sampot	Barrio	Tarlac	266	15 40	120 35
Samputan	Barrio	Leyte	186	11 25	124 55
Samuki	Barrio	Bontoc Subprovince	204	17 11	121 16
Samur	Island	Camarines Norte	122	14 29	122 50
San Agapito	Barrio	Batangas	102	13 32	121 06
San Agustin	Cape	Davao	154	6 20	126 10
San Agustin	Cape	Philippine Islands	72	6	126
San Agustin	Barrio	Batangas	102	14 04	121 12
San Agustin	Barrio	Batangas	102	13 34	121 03
San Agustin	Barrio	Bulacan	114	15 09	120 57
San Agustin	Barrio	Capiz	130	11 20	122 36
San Agustin	Barrio	Cavite	134	14 19	120 57
San Agustin	Barrio	Ilocos Sur	162	17 13	120 27
San Agustin	Barrio	Laguna	174	14 05	121 12
San Agustin	Barrio	Laguna	174	14 04	121 15
San Agustin	Barrio	Leyte	186	10 45	124 45
San Agustin	Barrio	Mindoro	190	13 15	121 20
San Agustin	Barrio	Nueva Ecija	212	15 59	121 04
San Agustin	Barrio	Nueva Ecija	212	15 48	121 01
San Agustin	Barrio	Nueva Ecija	212	15 40	120 42
San Agustin	Barrio	Pampanga	232	15 14	120 40
San Agustin	Barrio	Pampanga	232	15 14	120 41
San Agustin	Barrio	Pampanga	232	15 10	120 47
San Agustin	Barrio	Pampanga	232	15 03	120 36
San Agustin	Barrio	Pampanga	232	15 08	120 40
San Agustin	Barrio	Sorsogon (N)	252	12 27	123 19
San Agustin	Barrio	Sorsogon (S)	252	12 27	123 19
San Agustin	Barrio	Tarlac	266	15 50	120 36
San Agustin	Barrio	Tarlac	266	15 23	120 37
San Agustin	Barrio	Zambales	274	15 23	119 56
San Alfonso	Barrio	Davao	154	7 50	126 20
San Alfonso	Sitio	Davao	154	6 30	126 10
San Anastacio	Barrio	Amburayan Subprovince	198	16 53	120 29
San Andres	Barrio	Ilocos Sur	162	17 10	120 30
San Andres	Barrio	Laguna	174	14 03	121 13

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
San Andres	Barrio	Tarlac	266	15	35	120	39
San Andres	Barrio	Tayabas (S)	270	13	20	122	40
San Andres	Sitio	Rizal	240	14	38	121	21
San Andres	Point	Tayabas (S)	270	13	35	121	50
San Anton	Barrio	Nueva Ecija	212	15	21	120	55
San Antonio	Bay	Palawan (S)	228	8	40	117	40
San Antonio	Municipality	Nueva Ecija	212	15	18	120	51
San Antonio	Municipality	Samar	248	12	25	124	15
San Antonio	Municipality	Zambales	274	14	57	120	05
San Antonio	Barrio	Abra	78	17	38	120	35
San Antonio	Barrio	Albay	86	13	21	123	40
San Antonio	Barrio	Albay	86	13	21	123	50
San Antonio	Barrio	Antique	90	11	25	122	05
San Antonio	Barrio	Bulacan	114	14	53	120	46
San Antonio	Barrio	Camarines Sur	126	13	23	123	25
San Antonio	Barrio	Capiz	130	11	19	122	50
San Antonio	Barrio	Davao	154	7	40	126	30
San Antonio	Barrio	Ilocos Norte	158	18	15	120	35
San Antonio	Barrio	Ilocos Sur	162	17	25	120	28
San Antonio	Barrio	Isabela	170	17	05	121	55
San Antonio	Barrio	Laguna	174	14	21	121	30
San Antonio	Barrio	Laguna	174	14	19	121	05
San Antonio	Barrio	Laguna	174	14	13	121	21
San Antonio	Barrio	Laguna	174	14	12	121	18
San Antonio	Barrio	Laguna	174	14	11	121	15
San Antonio	Barrio	Laguna	174	14	00	121	19
San Antonio	Barrio	La Union	182	16	24	120	24
San Antonio	Barrio	Leyte	196	11	00	124	40
San Antonio	Barrio	Nueva Ecija	212	15	41	120	51
San Antonio	Barrio	Nueva Vizcaya	216	16	20	121	07
San Antonio	Barrio	Oriental Negros	224	9	10	123	30
San Antonio	Barrio	Pampanga	232	15	04	120	43
San Antonio	Barrio	Pampanga	232	15	02	120	38
San Antonio	Barrio	Pampanga	232	14	58	120	35
San Antonio	Barrio	Samar	248	12	05	124	50
San Antonio	Barrio	Samar	248	11	15	125	00
San Antonio	Barrio	Sorsogon (N)	252	12	55	124	02
San Antonio	Barrio	Sorsogon (N)	252	12	53	123	38
San Antonio	Barrio	Sorsogon (N)	252	12	42	124	07
San Antonio	Barrio	Tarlac	266	15	18	120	40
San Antonio	Barrio	Tayabas (S)	270	13	25	122	00
San Aurelio	Barrio	Pangasinan	236	15	54	120	41
San Bartolome	Barrio	Laguna	174	14	02	121	17
San Bartolome	Barrio	Sorsogon (N)	252	12	41	124	07
San Bartolome	Barrio	Tarlac	266	15	17	120	40
San Benito	Barrio	Laguna	174	14	04	121	16
San Benito	Barrio	La Union	182	16	25	120	21
San Benito	Barrio	Surigao	262	10	00	126	00
San Bernardino	Strait	Philippine Islands	72	13		124	10
San Bernardino	Strait	Samar	248	12	35	124	10
San Bernardino	Strait	Sorsogon (N)	252	12	31	124	08
San Bernardino	Strait	Sorsogon (S)	252	12	31	124	08
San Bernardino	Islands	Sorsogon (N)	252	12	45	124	17
San Bernardo	Sitio	Leyte	186	9	55	125	05
San Bruno	Barrio	Pangasinan	236	16	06	119	48
San Buenaventura	Barrio	Samar	248	11	30	125	30
San Carlos	Municipality	Occidental Negros	220	10	30	123	25
San Carlos	Municipality	Pangasinan	236	15	56	120	21
San Carlos	Barrio	Batangas	102	13	50	121	15
San Carlos	Barrio	La Union	182	16	27	120	20
San Carlos	Barrio	Nueva Ecija	212	15	33	120	53
San Carlos	Barrio	Tarlac	266	15	25	120	34
San Celestino	Barrio	Batangas	102	13	55	121	14
San Clemente	Municipality	Tarlac	266	15	43	120	21
San Crispin	Barrio	Laguna	174	14	05	121	17
San Cristobal	Barrio	Ilocos Norte	158	18	10	120	40
San Cristobal	Barrio	Laguna	174	14	02	121	22
San Cristobal	Mountain	Laguna	174	14	04	121	26
San Cristobal	Mountain	Tayabas (S)	270	14	05	121	25
San Cristobal	Sitio	Amburayan Subprovince	198	16	53	120	28
San Diego	Barrio	Laguna	174	14	11	121	29
San Diego	Sitio	Rizal	240	14	24	121	20
San Diego	Point	Batangas	102	14	02	120	37
San Dionisio	Barrio	Hiloilo	166	11	15	123	05
San Dionisio	Sitio	Cagayan	118	19	30	121	55
San Eduardo	Barrio	Samar	248	11	30	125	05
San Emilio	Township	Lepanto Subprovince	210	17	14	120	37
San Emilio	Township	Mountain Province	196	17	15	120	35
San Enrique	Municipality	Occidental Negros	220	10	25	122	50

Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
San Enrique	Sitio	Camarines Norte	122	14 11	122 35
San Esteban	Municipality	Ilocos Sur	162	17 20	120 27
San Esteban	Barrio	Leyte	186	10 55	124 55
San Esteban	Sitio	Pampanga	232	14 51	120 39
San Eugenio	Barrio	Pangasinan	236	16 03	120 47
San Eustacio	Barrio	Nueva Ecija	212	15 30	120 49
San Fabian	Municipality	Pangasinan	236	16 08	120 24
San Felipe	Municipality	Zambales	274	15 04	120 04
San Felipe	Barrio	Batangas	102	13 53	121 02
San Felipe	Barrio	Batangas	102	13 53	121 12
San Felipe	Barrio	La Union	182	16 24	120 24
San Felipe	Barrio	Pampanga	232	15 02	120 43
San Felipe	Barrio	Tarlac	266	15 49	120 36
San Felipe Neri	Municipality	Rizal	240	14 35	121 02
San Fermin	Barrio	Davao	154	7 10	126 20
San Fermin	Barrio	La Union	182	16 28	120 23
San Fernando	Capital	La Union	182	16 37	120 19
San Fernando	Capital, La Union	Philippine Islands	72	17	120
San Fernando	Capital	Pampanga	232	15 02	120 42
San Fernando	Capital, Pampanga	Philippine Islands	72	15	121
San Fernando	Municipality	Camarines Sur	126	13 33	123 08
San Fernando	Municipality	Cebu	138	10 10	123 40
San Fernando	Municipality	Romblon	244	12 20	122 35
San Fernando	Municipality	Sorsogon (N)	252	12 29	123 46
San Fernando	Municipality	Sorsogon (S)	252	12 29	123 46
San Fernando	Barrio	Antique	90	10 45	121 55
San Fernando	Barrio	Nueva Ecija	212	15 16	120 52
San Fernando	Barrio	Occidental Negros	220	10 40	123 05
San Fernando	Barrio	Surigao	262	9 50	126 00
San Fernando	Barrio	Tayabas (S)	270	13 55	122 10
San Fernando	Point	La Union	182	16 38	120 17
San Francisco	Municipality	Cebu	138	10 40	124 20
San Francisco	Barrio	Amburayan Subprovince	198	16 50	120 27
San Francisco	Barrio	Antique	90	11 20	122 00
San Francisco	Barrio	Antique	90	10 30	122 00
San Francisco	Barrio	Batangas	102	14 02	121 12
San Francisco	Barrio	Batangas	102	13 54	121 15
San Francisco	Barrio	Bohol	106	10 10	124 18
San Francisco	Barrio	Leyte	186	11 15	124 50
San Francisco	Barrio	Leyte	186	10 05	125 10
San Francisco	Barrio	Nueva Ecija	212	15 52	120 52
San Francisco	Barrio	Nueva Ecija	212	15 28	120 50
San Francisco	Barrio	Nueva Ecija	212	15 21	120 50
San Francisco	Barrio	Nueva Vizcaya	216	16 16	121 04
San Francisco	Barrio	Pampanga	232	15 12	120 39
San Francisco	Barrio	Pampanga	232	14 58	120 33
San Francisco	Barrio	Pampanga	232	14 57	120 40
San Francisco	Barrio	Sorsogon (N)	252	12 44	123 54
San Francisco	Barrio	Tarlac	266	15 43	120 36
San Francisco	Barrio	Tarlac	266	15 19	120 38
San Francisco	Sitio	Leyte	186	10 55	124 50
San Francisco del Monte	Barrio	Rizal	240	14 38	121 01
San Gabriel	Township	Amburayan Subprovince	198	16 40	120 24
San Gabriel	Township	Mountain Province	196	16 40	120 25
San Gabriel	Barrio	Camarines Sur	126	13 33	123 06
San Gabriel	Barrio	Laguna	174	14 03	121 19
San Gabriel	Barrio	Pampanga	232	14 55	120 43
San Gregorio	Barrio	Abra	78	17 39	120 38
San Gregorio	Barrio	Antique	90	11 20	122 05
San Gregorio	Barrio	Laguna	174	14 02	121 16
San Gregorio	Barrio	La Union	182	16 27	120 22
San Guillermo	Barrio	Abra	78	17 27	120 45
San Guillermo	Barrio	Rizal	240	14 30	121 13
San Ignacio	Municipal district	Agusan	82	8 00	126 10
San Ignacio	Barrio	Leyte	186	11 00	124 55
San Ildefonso	Peninsula	Nueva Vizcaya	216	16 05	122 05
San Ildefonso	Cape	Nueva Vizcaya	216	16 01	122 01
San Ildefonso	Cape	Philippine Islands	72	16	122
San Ildefonso	Municipality	Bulacan	114	15 05	120 57
San Ildefonso	Barrio	Ilocos Sur	162	17 38	120 24
San Ildefonso	Barrio	Pampanga	232	15 15	120 41
San Isidro	Municipality	Leyte	186	11 25	124 20
San Isidro	Municipality	Nueva Ecija	212	15 19	120 55
San Isidro	Municipal district	Agusan	82	8 05	126 10
San Isidro	Barrio	Albay	86	13 13	123 45
San Isidro	Barrio	Albay	86	13 03	123 37
San Isidro	Barrio	Batangas	102	13 46	121 14
San Isidro	Barrio	Bulacan	114	14 52	120 44
San Isidro	Barrio	Bulacan	114	14 50	120 47
San Isidro	Barrio	Camarines Norte	122	14 15	122 41

LIST OF GEOGRAPHIC NAMES.

Nmea.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
San Isidro	Barrio	Camarines Norte	122	14	10	122	53
San Isidro	Barrio	Camarines Sur	126	13	41	123	01
San Isidro	Barrio	Camarines Sur	126	13	28	123	21
San Isidro	Barrio	Camarines Sur	126	13	23	123	31
San Isidro	Barrio	Cavite	134	14	24	120	53
San Isidro	Barrio	Cebu	138	10	35	124	20
San Isidro	Barrio	Isabela	170	17	30	121	45
San Isidro	Barrio	Leyte	186	11	20	124	30
San Isidro	Barrio	Leyte	186	10	15	125	00
San Isidro	Barrio	Occidental Negros	220	10	35	123	30
San Isidro	Barrio	Pampanga	232	15	14	120	38
San Isidro	Barrio	Pampanga	232	15	01	120	37
San Isidro	Barrio	Pampanga	232	15	01	120	49
San Isidro	Barrio	Pangasinan	236	16	06	120	45
San Isidro	Barrio	Rizal	240	14	45	121	09
San Isidro	Barrio	Sorsogon (N)	252	12	58	123	36
San Isidro	Barrio	Sorsogon (N)	252	12	47	124	07
San Isidro	Barrio	Sorsogon (N)	252	12	28	123	16
San Isidro	Barrio	Sorsogon (S)	252	12	28	123	16
San Isidro	Barrio	Surigao	262	9	55	126	05
San Isidro	Barrio	Surigao	262	8	50	126	10
San Isidro	Barrio	Tarlac	266	15	30	120	35
San Isidro	Barrio	Tarlac	266	15	17	120	41
San Isidro	Barrio	Tayabas (S)	270	13	50	121	25
San Isidro	Barrio	Tayabas (S)	270	13	30	122	25
San Isidro	Sitio	Pampanga	232	14	55	120	31
San Isidro	Mountain	Pangasinan	236	16	00	120	07
San Isidro Malapit	Barrio	Nueva Ecija	212	15	18	120	55
San Jacinto	Municipality	Pangasinan	236	16	05	120	26
San Jacinto	Municipality	Sorsogon (N)	252	12	34	123	44
San Jacinto	Municipality	Sorsogon (S)	252	12	34	123	44
San Joaquin	Municipality	Iloilo	166	10	35	122	10
San Joaquin	Barrio	Cavite	134	14	18	120	52
San Joaquin	Barrio	Laguna	174	14	02	121	20
San Joaquin	Barrio	Leyte	186	11	10	125	00
San Joaquin	Barrio	Pampanga	232	15	13	120	33
San Joaquin	Barrio	Samar	248	12	10	124	25
San Joaquin	Sitio	Iloilo	166	11	05	122	50
San Jose	Municipality	Batangas	102	13	53	121	06
San Jose	Municipality	Camarines Sur	126	13	42	123	31
San Jose	Municipality	Nueva Ecija	212	15	48	121	00
San Jose	Township	Mindoro	190	12	20	121	05
San Jose	Barrio	Albay	86	13	35	124	08
San Jose	Barrio	Albay	86	13	18	123	45
San Jose	Barrio	Albay	86	13	15	123	22
San Jose	Barrio	Amburayan Subprovince	198	16	51	120	28
San Jose	Barrio	Bataan	94	14	53	120	27
San Jose	Barrio	Bataan	94	14	26	120	34
San Jose	Barrio	Batangas	102	13	45	121	10
San Jose	Barrio	Bohol	106	10	09	124	18
San Jose	Barrio	Bulacan	114	15	10	120	58
San Jose	Barrio	Bulacan	114	14	57	120	54
San Jose	Barrio	Bulacan	114	14	49	120	59
San Jose	Barrio	Camarines Norte	122	14	17	122	36
San Jose	Barrio	Camarines Norte	122	14	10	122	57
San Jose	Barrio	Camarines Sur	126	13	35	123	16
San Jose	Barrio	Cavite	134	14	27	120	52
San Jose	Barrio	Cavite	134	14	23	120	35
San Jose	Barrio	Cavite	134	14	18	120	43
San Jose	Barrio	Davao	154	7	20	126	30
San Jose	Barrio	Ilocos Sur	162	17	05	120	30
San Jose	Barrio	Iloilo	166	11	10	122	55
San Jose	Barrio	Isabela	170	16	50	121	45
San Jose	Barrio	Laguna	174	14	13	121	31
San Jose	Barrio	Laguna	154	14	05	121	21
San Jose	Barrio	La Union	182	16	26	120	23
San Jose	Barrio	La Union	182	16	19	120	22
San Jose	Barrio	Leyte	186	11	15	125	00
San Jose	Barrio	Leyte	186	11	00	125	05
San Jose	Barrio	Leyte	186	10	10	125	00
San Jose	Barrio	Mindoro	190	13	15	121	20
San Jose	Barrio	Mindoro	190	13	05	120	45
San Jose	Barrio	Nueva Ecija	212	15	28	120	57
San Jose	Barrio	Occidental Negros	220	10	35	123	00
San Jose	Barrio	Oriental Negros	224	10	00	123	15
San Jose	Barrio	Pampanga	232	15	12	120	38
San Jose	Barrio	Pampanga	232	15	08	120	37
San Jose	Barrio	Pampanga	232	15	02	120	42
San Jose	Barrio	Pampanga	232	14	59	120	30
San Jose	Barrio	Pampanga	232	14	59	120	37

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
San Jose	Barrio	Pampanga	232	14	59	120	47
San Jose	Barrio	Pampanga	232	14	56	120	42
San Jose	Barrio	Pangasinan	236	15	59	120	31
San Jose	Barrio	Rizal	240	14	44	121	08
San Jose	Barrio	Sorosogn (N)	252	12	58	123	35
San Jose	Barrio	Sorosogn (N)	252	12	33	124	04
San Jose	Barrio	Sorosogn (S)	252	12	33	124	04
San Jose	Barrio	Surigao	262	10	10	125	35
San Jose	Barrio	Surigao	262	9	45	125	40
San Jose	Barrio	Surigao	262	8	05	126	20
San Jose	Barrio	Tarlac	266	15	34	120	34
San Jose	Barrio	Tayabas (N)	270	15	50	121	30
San Jose	Sitio	Abra	78	17	27	120	42
San Jose	Sitio	Samar	284	11	40	124	45
San Jose de Buenavista	Capital.	Antique	90	10	45	121	55
San Jose de Buenavista	Capital, Antique.	Philippine Islands	72	11		122	
San Jose del Monte	Municipality	Bulacan	114	14	48	121	03
San Juan	Municipality	La Union	182	16	40	120	20
San Juan	Municipality	Oriental Negros	224	9	10	123	30
San Juan	Barrio	Abra	78	17	41	120	44
San Juan	Barrio	Abra	78	17	24	120	37
San Juan	Barrio	Bukidnon	110	8	45	124	55
San Juan	Barrio	Bulacan	114	14	52	120	45
San Juan	Barrio	Cagayan	118	18	30	121	20
San Juan	Barrio	Camarines Sur	126	13	39	123	05
San Juan	Barrio	Capiz	130	11	23	122	24
San Juan	Barrio	Cavite	134	14	13	120	42
San Juan	Barrio	Cebu	138	10	50	124	35
San Juan	Barrio	Isabela	170	17	25	121	45
San Juan	Barrio	Isabela	170	17	15	121	55
San Juan	Barrio	Laguna	174	14	20	121	29
San Juan	Barrio	La Union	182	16	25	120	23
San Juan	Barrio	Leyte	186	10	05	125	00
San Juan	Barrio	Nueva Ecija	212	15	48	121	14
San Juan	Barrio	Occidental Negros	220	10	25	122	50
San Juan	Barrio	Pampanga	232	15	07	120	42
San Juan	Barrio	Pangasinan	236	16	05	119	50
San Juan	Barrio	Samar	248	12	35	124	25
San Juan	Barrio	Samar	248	11	20	125	00
San Juan	Barrio	Sorosogn (N)	252	13	04	124	00
San Juan	Barrio	Sorosogn (N)	252	12	49	124	02
San Juan	Barrio	Sorosogn (N)	252	12	40	123	54
San Juan	Barrio	Surigao	262	8	25	126	20
San Juan	Barrio	Zambales	274	15	17	120	04
San Juan	Sitio	Abra	78	17	25	120	42
San Juan	Sitio	Bataan	94	14	47	120	30
San Juan	Sitio	Tarlac	266	15	20	120	37
San Juan	Point	Iloilo	166	11	00	122	50
San Juan Bautista	Barrio	Nueva Ecija	212	15	30	120	53
San Juan del Monte	Municipality	Rizal	240	14	36	121	02
San Juan de Milla	Barrio	Tarlac	266	15	33	120	31
San Juanico	Strait	Leyte	186	11	20	125	00
San Juanico	Strait	Samar	248	11	20	125	00
San Julian	Municipality	Samar	248	11	45	125	30
San Julian	Barrio	Nueva Ecija	212	15	15	120	51
San Julian	Barrio	Tarlac	266	15	43	120	35
San Leon	Barrio	Pangasinan	238	15	55	120	43
San Leonardo	Municipality	Nueva Ecija	212	15	22	120	58
San Lorenzo	Barrio	Sorosogn (N)	252	13	01	124	00
San Lorenzo	Barrio	Zambales	274	15	29	119	57
San Lucas	Barrio	Laguna	174	14	05	121	19
San Luis	Municipality	Batangas	102	13	51	120	55
San Luis	Municipality	Pampanga	232	15	03	120	47
San Luis	Municipal district.	Agusan	82	8	35	125	40
San Luis	Barrio	Benguet Subprovince	202	16	16	120	29
San Luis	Barrio	Bukidnon	110	8	30	125	00
San Luis	Barrio	Davao	154	7	30	126	30
San Luis	Barrio	Isabela	170	16	40	121	25
San Luis	Barrio	Mindoro	190	16	15	120	40
San Luis	Barrio	Nueva Vizcaya	216	16	39	121	23
San Luis	Barrio	Samar	248	11	50	124	45
San Luis	Barrio	Samar	248	11	55	125	45
San Luis	Barrio	Tayabas (N)	270	15	45	121	30
San Manuel	Municipality	Pangasinan	236	16	04	120	40
San Manuel	Municipality	Tarlac	266	15	48	120	36
San Manuel	Barrio	Ilocos Norte	158	18	17	120	34
San Manuel	Barrio	Nueva Ecija	212	15	36	120	51
San Marcelino	Municipality	Zambales	274	14	59	120	09

Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
San Marcos	Barrio	Bulacan	114	14 54	120 47
San Marcos	Barrio	Laguna	174	17 00	121 18
San Mariano	Township	Isabela	170	17 00	122 00
San Mariano	Barrio	Batangas	102	13 15	121 03
San Martin	Barrio	Capiz	130	11 19	122 34
San Martin	Barrio	Misamis	194	8 35	124 45
San Mateo	Municipality.	Rizal	240	14 42	121 07
San Mateo	Municipal district.	Agusan	82	8 50	125 35
San Mateo	Barrio	Ilocos Norte	158	18 03	120 36
San Mateo	Barrio	Pampanga	232	15 13	120 48
San Mateo	Barrio	Samar	248	11 40	125 25
San Matias	Barrio	Pampanga	232	15 01	120 42
San Mauricio	Barrio	Samar	248	11 35	125 05
San Miguel	Bay	Camarines Norte	122	13 55	123 10
San Miguel	Bay	Camarines Sur	126	13 53	123 10
San Miguel	Port	Sorsogon (N)	252	12 40	123 35
San Miguel	Island	Albay	86	13 23	123 48
San Miguel	Islands	Palawan (S)	228	7 40	118 30
San Miguel	Islands	Philippine Islands	72	8	119
San Miguel	Island	Sorsogon (N)	252	12 43	123 36
San Miguel	Municipality.	Bulacan	114	15 09	120 59
San Miguel	Municipality.	Iloilo	166	10 45	122 25
San Miguel	Municipality.	Leyte	186	11 15	124 50
San Miguel	District.	City of Manila	146	14 36	121 00
San Miguel	Barrio	Albay	86	13 38	124 18
San Miguel	Barrio	Albay	86	13 23	123 48
San Miguel	Barrio	Amburayan Subprovince	198	16 56	120 27
San Miguel	Barrio	Batangas	102	13 42	121 07
San Miguel	Barrio	Bulacan	114	14 55	120 45
San Miguel	Barrio	Capiz	130	11 13	122 32
San Miguel	Barrio	Iloilo	166	11 05	122 50
San Miguel	Barrio	Laguna	174	14 02	121 15
San Miguel	Barrio	Laguna	174	14 02	121 18
San Miguel	Barrio	Leyte	186	9 55	125 05
San Miguel	Barrio	Palawan (N)	228	11 30	119 50
San Miguel	Barrio	Pampanga	232	15 14	120 40
San Miguel	Barrio	Pampanga	232	15 10	120 42
San Miguel	Barrio	Pampanga	232	15 00	120 47
San Miguel	Barrio	Pampanga	232	12 20	120 47
San Miguel	Barrio	Samar	248	11 25	125 05
San Miguel	Barrio	Samar	248	8 55	125 35
San Miguel	Barrio	Surigao	262	15 25	126 00
San Miguel	Barrio	Tarlac	266	15 21	120 36
San Miguel	Barrio	Tarlac	266	15 21	120 40
San Miguel	Barrio	Tayabas (S)	270	14 10	121 40
San Miguel	Barrio	Zambales	274	14 57	120 03
San Miguel	Sitio	Nueva Vizcaya	246	16 20	121 05
San Miguel	Sitio	Samar	248	11 35	125 20
San Miguel de Puro	Barrio	Ilocos Sur	162	17 31	120 23
San Narciso	Municipality.	Tayabas (S)	270	13 35	122 35
San Narciso	Municipality.	Zambales	274	15 01	120 05
San Nicolas	Municipality.	Ilocos Norte	153	18 11	120 35
San Nicolas	Municipality.	Pangasinan	236	16 05	120 46
San Nicolas	District.	City of Manila	146	14 36	120 58
San Nicolas	Barrio	Batangas	102	13 56	120 57
San Nicolas	Barrio	Camarines Sur	126	13 26	123 25
San Nicolas	Barrio	Capiz	130	11 19	122 31
San Nicolas	Barrio	Cavite	134	14 26	120 59
San Nicolas	Barrio	Ilocos Sur	162	17 11	120 27
San Nicolas	Barrio	Ilocos Sur	162	17 11	120 26
San Nicolas	Barrio	Laguna	174	14 04	121 17
San Nicolas	Barrio	La Union	182	16 19	120 20
San Nicolas	Barrio	Nueva Ecija	212	15 18	120 56
San Nicolas	Barrio	Palawan (N)	228	12 00	120 10
San Nicolas	Barrio	Pampanga	232	15 13	120 40
San Nicolas	Barrio	Pampanga	232	15 07	120 47
San Nicolas	Barrio	Pampanga	232	14 58	120 30
San Nicolas	Barrio	Pampanga	232	14 56	120 35
San Nicolas	Sitio	Palawan (N)	228	11 30	119 50
San Pablo	Municipality.	Isabela	170	17 80	121 50
San Pablo	Municipality.	Laguna	174	14 04	121 19
San Pablo	Barrio	Agusan	82	9 25	125 30
San Pablo	Barrio	Ilocos Sur	162	17 25	120 31
San Pablo	Barrio	Ilocos Sur	162	17 20	120 27
San Pablo	Barrio	Laguna	174	14 11	121 31
San Pablo	Barrio	Leyte	186	11 00	124 55
San Pablo	Barrio	Nueva Ecija	212	15 39	121 09
San Pablo	Barrio	Nueva Ecija	212	15 29	120 52
San Pablo	Barrio	Nueva Ecija	212	15 22	120 55
San Pablo	Barrio	Occidental Negros	220	10 55	123 10
San Pablo	Barrio	Pampanga	232	15 02	120 44

Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
San Pablo	Barrio	Pampanga	232	15 01	120 45
San Pablo	Barrio	Pampanga	232	14 55	120 31
San Pascual	Municipality	Sorsogon (N)	252	13 08	122 59
San Pascual	Barrio	Benguet Subprovince	202	16 22	120 29
San Pascual	Barrio	Bohol	106	9 58	124 25
San Pascual	Barrio	Zambales	274	15 01	120 05
San Patricio	Barrio	Pampanga	232	15 06	120 44
San Pedrino	Point	Batangas	102	13 51	120 43
San Pedro	Bay	Leyte	186	11 10	125 05
San Pedro	Bay	Samar	248	11 10	125 05
San Pedro	Municipality	Laguna	174	14 22	121 04
San Pedro	Barrio	Antique	90	10 50	121 55
San Pedro	Barrio	Batangas	102	14 05	121 11
San Pedro	Barrio	Bulacan	114	14 56	120 55
San Pedro	Barrio	Ilocos Norte	158	18 22	120 38
San Pedro	Barrio	Ilocos Sur	162	17 24	120 27
San Pedro	Barrio	Ilocos Sur	162	17 04	120 30
San Pedro	Barrio	Leyte	186	11 00	124 25
San Pedro	Barrio	Leyte	186	11 00	124 50
San Pedro	Barrio	Pampanga	232	15 07	120 40
San Pedro	Barrio	Pampanga	232	15 01	120 47
San Pedro	Barrio	Pangasinan	236	15 58	120 48
San Pedro	Barrio	Sorsogon (N)	252	13 05	123 58
San Pedro	Sitio	Ilocos Norte	158	17 59	120 43
San Policarpo	Barrio	Samar	248	12 10	125 30
San Policarpo	Barrio	Samar	248	12 05	124 35
San Quintin	Municipality	Abra	78	17 33	120 31
San Quintin	Municipality	Pangasinan	236	15 59	120 49
San Rafael	Bay	Zamboanga	278	6 40	121 55
San Rafael	Municipality	Bulacan	114	14 58	120 58
San Rafael	Barrio	Amburayan Subprovince	198	16 55	120 28
San Rafael	Barrio	Antique	90	10 55	122 10
San Rafael	Barrio	Camarines Norte	122	14 15	122 42
San Rafael	Barrio	Camarines Sur	126	13 48	122 54
San Rafael	Barrio	Camarines Sur	126	13 40	123 30
San Rafael	Barrio	Ilocos Norte	158	18 18	120 38
San Rafael	Barrio	Iloilo	166	11 10	122 50
San Rafael	Barrio	Laguna	174	14 10	121 31
San Rafael	Barrio	Rizal	240	14 44	121 09
San Rafael	Barrio	Sorsogon (N)	252	12 40	124 07
San Rafael	Barrio	Sorsogon (S)	252	12 21	123 47
San Rafael	Barrio	Tarlac	266	15 28	120 36
San Rafael	Barrio	Tayabas (S)	270	13 55	122 00
San Rafael	Sitio	Iloilo	166	10 40	122 10
San Rafael	Sitio	Sorsogon (N)	252	12 58	123 30
San Ramon	Barrio	Abra	78	17 25	120 42
San Ramon	Barrio	Albay	86	13 17	123 32
San Ramon	Barrio	Samar	248	12 15	125 20
San Ramon	Barrio	Sorsogon (N)	252	12 59	123 58
San Ramon	Barrio	Sorsogon (N)	252	12 40	123 56
San Ramon	Penal Colony	Zamboanga	278	7 00	121 55
San Remigio	Municipality	Antique	90	10 50	122 05
San Remigio	Municipality	Cebu	138	11 05	123 55
San Ricardo	Barrio	Leyte	186	9 55	125 15
San Ricardo	Barrio	Nueva Ecija	212	15 35	120 58
San Roque	Barrio	Agusan	82	9 25	125 35
San Roque	Barrio	Albay	86	13 37	124 19
San Roque	Barrio	Antique	90	11 45	122 00
San Roque	Barrio	Batangas	102	13 52	121 12
San Roque	Barrio	Bulacan	114	15 01	120 56
San Roque	Barrio	Camarines Sur	126	13 48	123 20
San Roque	Barrio	Camarines Sur	126	13 44	123 30
San Roque	Barrio	Camarines Sur	126	13 33	123 17
San Roque	Barrio	Cavite	134	14 29	120 54
San Roque	Barrio	Cavite	134	14 18	120 47
San Roque	Barrio	Cebu	138	10 35	123 45
San Roque	Barrio	Davao	154	8 00	126 20
San Roque	Barrio	Ilocos Sur	162	17 17	120 25
San Roque	Barrio	Laguna	174	14 10	121 30
San Roque	Barrio	Laguna	174	14 07	121 28
San Roque	Barrio	Laguna	174	14 04	121 18
San Roque	Barrio	Laguna	174	14 03	121 16
San Roque	Barrio	Leyte	186	11 00	125 05
San Roque	Barrio	Leyte	186	10 40	125 10
San Roque	Barrio	Leyte	186	10 00	125 00
San Roque	Barrio	Nueva Ecija	212	15 54	120 53
San Roque	Barrio	Nueva Ecija	212	15 25	120 57
San Roque	Barrio	Pampanga	232	15 12	120 37
San Roque	Barrio	Pampanga	232	15 01	120 51
San Roque	Barrio	Pampanga	232	14 54	120 32

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
San Roque	Barrio	Pangasinan	236	16	06	120	41
San Roque	Barrio	Rizal	240	14	38	121	06
San Roque	Barrio	Samar	248	11	25	125	35
San Roque	Barrio	Sorsogon (N)	252	13	00	124	01
San Roque	Barrio	Sorsogon (N)	252	12	44	124	05
San Roque	Barrio	Tayabas (S)	270	14	15	121	40
San Roque	Barrio	Tayabas (S)	270	13	55	122	20
San Roque	Sitio	Camarines Sur	126	13	21	123	19
San Roque	Sitio	Leyte	186	10	10	125	10
San Roque	Sitio	Pampanga	232	15	16	120	39
San Roque	Sitio	Pampanga	232	15	09	120	43
San Salvador	Barrio	Laguna	174	14	13	121	29
San Sebastian	Barrio	Camarines Sur	126	13	44	123	36
San Sebastian	Barrio	Ilocos Sur	162	17	38	120	21
San Sebastian	Barrio	Pampanga	232	15	03	120	48
San Sebastian	Barrio	Samar	248	11	45	125	05
San Sebastian	Barrio	Sorsogon (N)	252	12	38	124	04
San Simon	Municipality	Pampanga	232	15	00	120	47
San Teodoro	Barrio	Mindoro	190	13	25	121	00
San Vicente	Port	Cagayan	118	18	30	122	10
San Vicente	Municipality	Camarines Norte	122	14	06	122	52
San Vicente	Municipality	Ilocos Sur	162	17	36	120	22
San Vicente	Municipal district	Agusan	82	8	55	125	30
San Vicente	Barrio	Albay	86	13	16	123	26
San Vicente	Barrio	Bulacan	114	14	48	121	01
San Vicente	Barrio	Camarines Sur	126	14	00	123	20
San Vicente	Barrio	Ilocos Sur	162	17	16	120	32
San Vicente	Barrio	Ilocos Sur	162	17	12	120	32
San Vicente	Barrio	Laguna	174	14	02	121	21
San Vicente	Barrio	Leyte	186	10	10	125	00
San Vicente	Barrio	Mindoro	190	13	25	121	10
San Vicente	Barrio	Misamis	194	8	30	123	50
San Vicente	Barrio	Nueva Ecija	212	15	13	120	50
San Vicente	Barrio	Pampanga	232	15	10	120	48
San Vicente	Barrio	Pampanga	232	15	05	120	42
San Vicente	Barrio	Pampanga	232	15	00	120	34
San Vicente	Barrio	Pampanga	232	14	57	120	46
San Vicente	Barrio	Pangasinan	236	16	06	119	50
San Vicente	Barrio	Pangasinan	236	16	04	120	42
San Vicente	Barrio	Pangasinan	236	16	02	120	40
San Vicente	Barrio	Samar	248	12	20	125	05
San Vicente	Barrio	Sorsogon (N)	252	13	00	123	38
San Vicente	Barrio	Sorsogon (N)	252	12	59	123	49
San Vicente	Barrio	Tarlac	266	15	47	120	36
San Victor	Barrio	Davao	154	7	40	126	30
Sanasal	River	Benguet Subprovince	202	16	27	120	49
Sanches Mira	Municipality	Cagayan	118	18	35	121	15
Sandakan	British Port	Philippine Islands	72	6		118	
Sandalan	Sitio	Rizal	240	14	39	121	29
Sandig	Mountain	Abra	78	17	47	121	06
Sandugan	Point	Oriental Negros	224	9	20	123	35
Sandy	Point	Nueva Vizcaya	216	16	11	122	06
Sangaan	Barrio	Agusan	82	9	05	125	35
Sanga Sanga	Island	Sulu	258	5	05	119	40
Sangat	Barrio	Cebu	138	10	10	123	45
Sangbai	Islands	Zamboanga	278	6	50	121	30
Sangirin	Barrio	Tayabas (S)	270	14	10	121	55
Sangitan	Barrio	Nueva Ecija	212	15	30	120	59
Sangley	Point	Cavite	134	14	30	120	55
Sanakanan	Barrio	Bukidnon	110	8	15	124	50
Santa	Municipality	Ilocos Sur	162	17	29	120	26
Santa Ana	Municipality	Pampanga	232	15	06	120	46
Santa Ana	District	City of Manila	146	14	35	121	00
Santa Ana	Barrio	Antique	90	11	45	122	10
Santa Ana	Barrio	Bulacan	114	14	48	120	53
Santa Ana	Barrio	Ilocos Norte	158	18	04	120	47
Santa Ana	Barrio	Iloilo	166	10	30	122	30
Santa Ana	Barrio	Laguna	174	14	22	121	30
Santa Ana	Barrio	Laguna	174	14	01	121	20
Santa Ana	Barrio	La Union	182	16	22	120	21
Santa Ana	Barrio	Misamis	194	8	35	124	50
Santa Anastasia	Barrio	Batangas	102	14	08	121	08
Santa Barbara	Municipality	Iloilo	166	10	50	122	30
Santa Barbara	Municipality	Pangasinan	236	16	00	120	24
Santa Barbara	Barrio	Bulacan	114	14	57	120	53
Santa Barbara	Barrio	La Union	182	16	19	120	20
Santa Barbara	Barrio	Nueva Ecija	212	15	43	121	00
Santa Barbara	Barrio	Nueva Ecija	212	15	23	120	35
Santa Barbara	Barrio	Pampanga	232	14	55	120	00
Santa Barbara	Barrio	Zambales	274	15	20	120	48

Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
				° /	° /
Santa Catalina	Municipality	Ilocos Sur	162	17 35	120 22
Santa Catalina	Barrio	Laguna	174	14 08	121 20
Santa Catalina	Barrio	Pampanga	232	15 04	120 48
Santa Catalina	Barrio	Tayabas (S)	270	13 50	121 25
Santa Cecilia	Barrio	La Union	182	16 23	120 24
Santa Clara	Barrio	Batangas	102	13 46	121 03
Santa Clara	Barrio	Bulacan	114	14 50	120 47
Santa Clara	Barrio	Nueva Ecija	212	15 35	120 58
Santa Cruz	Capital	Laguna	174	14 17	121 25
Santa Cruz	Capital, Laguna.	Philippine Islands	72	14	
Santa Cruz	Municipality	Davao	154	6 50	125 30
Santa Cruz	Municipality	Ilocos Sur	162	17 05	120 27
Santa Cruz	Municipality	Tayabas (S)	270	13 30	122 00
Santa Cruz	Municipality	Zambales	274	15 46	119 54
Santa Cruz	Township	Nueva Vizcaya	216	16 19	120 58
Santa Cruz	District	City of Manila	146	14 37	120 59
Santa Cruz	Barrio	Albay	86	13 20	123 43
Santa Cruz	Barrio	Cohol	106	9 51	124 06
Santa Cruz	Barrio	Camarines Norte	122	14 14	122 41
Santa Cruz	Barrio	Cebu	138	10 00	123 25
Santa Cruz	Barrio	Davao	154	7 10	126 30
Santa Cruz	Barrio	Ilocos Sur	162	17 53	120 28
Santa Cruz	Barrio	Laguna	174	14 01	121 21
Santa Cruz	Barrio	Leyte	186	11 25	124 45
Santa Cruz	Barrio	Leyte	186	11 20	124 30
Santa Cruz	Barrio	Leyte	186	10 25	124 55
Santa Cruz	Barrio	Leyte	186	10 15	125 00
Santa Cruz	Barrio	Mindoro	190	13 05	120 45
Santa Cruz	Barrio	Nueva Ecija	212	15 37	120 45
Santa Cruz	Barrio	Nueva Ecija	212	15 27	120 49
Santa Cruz	Barrio	Oriental Negros	224	9 35	123 05
Santa Cruz	Barrio	Pampanga	232	15 13	120 40
Santa Cruz	Barrio	Pangasinan	236	15 57	120 43
Santa Cruz	Barrio	Samar	248	11 55	124 50
Santa Cruz	Barrio	Sorsogon (N)	252	12 59	123 30
Santa Cruz	Barrio	Sorsogon (N)	252	12 54	124 02
Santa Cruz	Barrio	Sorsogon (S)	252	12 09	123 52
Santa Cruz	Barrio	Surigao	262	8 50	126 20
Santa Cruz	Barrio	Tarlac	266	15 20	120 41
Santa Cruz	Sitio	Leyte	286	10 10	125 10
Santa Cruz	Island	Tayabas (S)	270	13 30	122 05
Santa Cruz	Island	Zamboanga	278	6 50	122 05
Santa Cruz	Point	Zambales	274	15 44	119 52
Santa Elena	Barrio	Bulacan	114	14 49	120 44
Santa Elena	Barrio	Camarines Norte	122	14 15	122 40
Santa Elena	Barrio	Rizal	240	14 39	121 06
Santa Elena	Barrio	Samar	248	11 20	125 00
Santa Fe	Municipality	Cebu	138	11 10	123 50
Santa Fe	Barrio	Antique	90	11 45	122 05
Santa Fe	Barrio	Bukidnon	110	8 20	124 45
Santa Fe	Barrio	Davao	154	7 20	126 30
Santa Fe	Barrio	Leyte	186	10 15	124 45
Santa Fe	Barrio	Romblon	234	12 10	122 00
Santa Fe	Barrio	Zambales	274	15 01	120 13
Santa Fe	Sitio	Agusan	82	8 40	125 40
Santa Fe	Sitio	Nueva Vizcaya	216	16 09	120 57
Santa Felicitas	Barrio	Agayan	118	17 55	121 35
Santa Filomena	Rancheria	Apayao Subprovince	200	18 32	121 05
Santa Filomena	Barrio	Cebu	138	9 45	123 20
Santa Filomena	Barrio	Laguna	174	14 05	121 17
Santa Filomena	Sitio	Davao	154	7 50	126 20
Santa Ignacia	Municipality	Tarlac	266	15 37	120 26
Sanat Ines	Municipal district	Agusan	82	8 35	125 40
Santa Ines	Barrio	Bukidnon	110	8 30	124 50
Santa Ines	Barrio	Bulacan	114	14 47	120 50
Santa Ines	Barrio	Misamis	194	9 00	124 55
Santa Ines	Barrio	Pampanga	232	15 15	120 35
Santa Ines	Barrio	Rizal	240	14 44	121 20
Santa Ines	Barrio	Tarlac	266	15 42	120 37
Santa Ines	Sitio	Batanes	98	20 20	121 52
Santa Ines	Barrio	Isabela	170	17 10	121 50
Santa Isabel	Sitio	Bulacan	114	14 51	120 50
Santa Josefa	Municipal district	Agusan	82	8 00	126 00
Santa Justina	Barrio	Camarines Sur	126	13 23	123 29
Santa Lucia	Municipality	Ilocos Sur	162	17 07	120 27
Santa Lucia	Barrio	Bulacan	114	15 14	121 03
Santa Lucia	Barrio	Bulacan	114	14 56	121 02
Santa Lucia	Barrio	Bulacan	114	14 54	120 44
Santa Lucia	Barrio	Cebu	138	10 40	123 45
Santa Lucia	Barrio	La Union	182	16 24	120 20

LIST OF GEOGRAPHIC NAMES.

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Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
				° /	° /
Santa Lucia	Barrio	Tayabas (S)	270	14 05	121 25
Santa Lucia	Sitio	Tarlac	266	15 22	120 29
Santa Lucia	Barrio	Pampanga	232	15 08	120 48
Santa Magdalena	Municipality	Sorsogon (N)	252	12 39	124 06
Santa Margarita	Municipality	Samar	248	12 05	124 40
Santa Maria	Port	Zamboanga	278	7 45	122 05
Santa Maria	Municipality	Bulacan	114	14 49	120 58
Santa Maria	Municipality	Ilocos Sur	162	17 22	120 29
Santa Maria	Municipality	Isabela	170	17 30	121 45
Santa Maria	Municipality	Laguna	174	14 28	121 25
Santa Maria	Municipality	Pangasinan	236	15 59	120 42
Santa Maria	Barrio	Batangas	102	13 47	120 58
Santa Maria	Barrio	Nueva Ecija	212	15 31	120 48
Santa Maria	Barrio	Nueva Vizcaya	216	16 17	121 05
Santa Maria	Barrio	Pampanga	232	15 15	120 40
Santa Maria	Barrio	Pampanga	232	15 14	120 35
Santa Maria	Barrio	Pampanga	232	14 55	120 34
Santa Maria	Barrio	Zamboanga	278	6 55	122 05
Santa Maria	Sitio	Zamboanga	278	7 45	122 05
Santa Mesa	Barrio	City of Manila	146	14 36	121 01
Santa Monica	Barrio	Bulacan	114	14 51	120 44
Santa Monica	Barrio	Ilocos Sur	162	17 41	120 25
Santa Monica	Barrio	Nueva Ecija	212	15 30	120 48
Santa Monica	Barrio	Pampanga	232	15 02	120 47
Santa Monica	Barrio	Pampanga	232	14 59	120 45
Santa Monica	Barrio	Tarlac	266	15 49	120 34
Santa Monica	Sitio	Palawan (N)	228	11 10	119 30
Santa Paz	Barrio	Leyte	186	10 05	125 05
Santa Rita	Municipality	Pampanga	232	15 00	120 37
Santa Rita	Municipality	Samar	248	11 30	124 55
Santa Rita	Barrio	Bulacan	114	15 08	120 58
Santa Rita	Barrio	Bulacan	114	14 52	120 52
Santa Rita	Barrio	La Union	182	16 45	120 22
Santa Rita	Barrio	La Union	182	16 23	120 21
Santa Rita	Barrio	La Union	182	16 21	120 22
Santa Rita	Barrio	Pampanga	232	15 02	120 47
Santa Rita	Barrio	Pampanga	232	14 54	120 43
Santa Rita	Mountain	Bataan	94	14 50	120 22
Santa Rosa	Municipality	Laguna	174	14 19	121 07
Santa Rosa	Municipality	Nueva Ecija	212	15 25	120 56
Santa Rosa	Barrio	Abra	72	17 31	120 41
Santa Rosa	Barrio	Bataan	94	14 41	120 33
Santa Rosa	Barrio	Camarines Norte	122	14 16	122 43
Santa Rosa	Barrio	Camarines Sur	126	13 44	123 15
Santa Rosa	Barrio	Ilocos Norte	158	18 07	120 38
Santa Rosa	Barrio	Laguna	174	14 03	121 15
Santa Rosa	Barrio	Leyte	186	11 20	124 20
Santa Rosa	Barrio	Leyte	186	11 05	124 25
Santa Rosa	Barrio	Nueva Vizcaya	216	16 21	120 59
Santa Rosa	Barrio	Occidental Negros	220	10 35	123 05
Santa Rosa	Barrio	Tarlac	266	15 22	120 37
Santa Rosa	Mountain	Bataan	94	14 45	120 23
Santa Teresa	Barrio	Iloilo	166	10 35	122 35
Santa Teresa	Barrio	Mindoro	190	12 15	121 05
Santa Teresa	Barrio	Pampanga	232	14 53	120 34
Santander	Municipality	Cebu	138	9 25	123 20
Santander	Barrio	Capiz	130	11 47	121 52
Santiago	Island	Pangasinan	236	16 24	119 56
Santiago	Cape	Batangas	102	13 46	120 40
Santiago	Municipality	Ilocos Sur	162	17 18	120 27
Santiago	Municipality	Isabela	170	16 40	121 35
Santiago	Barrio	Agusan	82	9 15	125 35
Santiago	Barrio	Batangas	102	14 08	121 08
Santiago	Barrio	Batangas	102	13 51	120 39
Santiago	Barrio	Cagayan	118	18 35	121 10
Santiago	Barrio	Cagayan	118	17 45	121 45
Santiago	Barrio	Cavite	134	14 21	120 54
Santiago	Barrio	Cebu	138	10 35	124 20
Santiago	Barrio	Davao	154	7 20	126 30
Santiago	Barrio	Laguna	174	14 01	121 17
Santiago	Barrio	La Union	182	16 29	120 20
Santiago	Barrio	La Union	182	16 26	120 20
Santiago	Barrio	Nueva Ecija	212	15 29	120 50
Santiago	Barrio	Pampanga	232	15 06	120 46
Santiago	Barrio	Pampanga	232	14 54	120 31
Santiago	Sitio	Surigao	262	10 20	125 35
Santisima Trinidad	Barrio	Bulacan	114	14 53	120 50
Santisima Trinidad	Barrio	Mindoro	190	12 15	121 00
Santo Angel	Barrio	Laguna	174	14 06	121 22
Santo Cristo	Barrio	Bulacan	114	14 48	121 06

Name.	Feature.	Map.	Fac. ing page.	Latitude.	Longitude.
				° /	° /
Santo Cristo	Barrio	Nueva Ecija	212	15 18	120 51
Santo Cristo	Barrio	Nueva Ecija	212	15 16	120 56
Santo Domingo	Municipality	Ilocos Sur	162	17 38	120 25
Santo Domingo	Municipality	Nueva Ecija	212	15 35	120 53
Santo Domingo	Barrio	Bataan	94	14 38	120 35
Santo Domingo	Barrio	Ilocos Norte	158	18 22	120 36
Santo Domingo	Barrio	Laguna	174	14 14	121 03
Santo Domingo	Barrio	Laguna	174	14 12	121 33
Santo Domingo	Barrio	La Union	182	16 52	120 23
Santo Domingo	Barrio	Pampanga	232	15 07	120 36
Santo Domingo	Barrio	Pampanga	232	15 05	120 46
Santo Domingo	Mountain	Ifugao Subprovince	206	16 45	121 07
Santo Niño	Island	Samar	248	11 55	124 30
Santo Niño	Municipality	Samar	248	11 55	124 30
Santo Niño	Barrio	Albay	86	13 36	124 14
Santo Niño	Barrio	Batangas	102	13 51	121 08
Santo Niño	Barrio	Batangas	102	13 41	121 07
Santo Niño	Barrio	Camarines Sur	126	13 28	123 14
Santo Niño	Barrio	Camarines Sur	126	13 24	123 25
Santo Niño	Barrio	Cebu	138	10 40	123 45
Santo Niño	Barrio	Ilocos Norte	158	18 00	120 42
Santo Niño	Barrio	Laguna	174	14 03	121 21
Santo Niño	Barrio	Leyte	186	11 25	124 30
Santo Niño	Barrio	Mindoro	190	12 15	121 00
Santo Niño	Barrio	Nueva Ecija	212	15 49	120 58
Santo Niño	Barrio	Sorsogon (N)	252	13 06	123 56
Santo Niño	Barrio	Surigao	262	8 45	126 15
Santo Niño	Barrio	Tarlac	266	15 33	120 35
Santo Niño	Barrio	Tayabas (S)	270	13 50	122 20
Santo Niño	Barrio	Zambales	274	15 38	119 57
Santo Rosario	Barrio	Bulacan	114	14 51	120 47
Santo Rosario	Barrio	Bulacan	114	14 49	120 43
Santo Rosario	Barrio	La Union	182	16 23	120 20
Santo Rosario	Barrio	Nueva Ecija	212	15 39	120 52
Santo Rosario	Barrio	Pampanga	232	15 15	120 38
Santo Rosario	Barrio	Pampanga	232	15 07	120 44
Santo Rosario	Barrio	Tarlac	266	15 20	120 34
Santo Tomas	Municipality	Batangas	102	14 06	121 03
Santo Tomas	Municipality	La Union	182	16 17	120 29
Santo Tomas	Municipality	Pangasinan	236	15 53	120 35
Santo Tomas	Municipal district	Agusan	82	8 10	125 40
Santo Tomas	Barrio	Ilocos Norte	158	18 19	120 36
Santo Tomas	Barrio	Nueva Ecija	212	15 45	120 57
Santo Tomas	Barrio	Pampanga	232	15 00	120 43
Santo Tomas	Barrio	Zambales	274	15 25	119 54
Santo Tomas	Sitio	Abra	78	17 27	120 41
Santo Tomas	Sitio	Iloilo	166	10 40	122 05
Santo Tomas	Mountain	Benguet Subprovince	202	16 20	120 34
Santo Tomas	Mountain	Mountain Province	196	16 20	120 35
Santo Tomas	Mountain	Relief	72	16	121
Santo Toribio	Barrio	Batangas	102	13 58	121 09
Santol	Township	Amburayan Subprovince	198	16 47	120 27
Santol	Township	Mountain Province	196	16 45	120 25
Santol	Barrio	Amburayan Subprovince	198	16 45	120 29
Santol	Barrio	Batangas	102	14 09	121 05
Santol	Barrio	Bulacan	114	14 51	120 55
Santol	Barrio	Cavite	134	14 22	120 52
Santol	Barrio	Pampanga	232	15 10	120 34
Santol	Sitio	Pampanga	232	15 12	120 47
Santolan	Barrio	Rizal	240	14 37	121 05
Santor	Barrio	Batangas	102	14 06	121 07
Santor	Barrio	Isabela	170	17 00	121 40
Santor	Barrio	Nueva Ecija	212	15 37	121 10
Santor	River	Nueva Ecija	212	15 33	121 14
Saang	Barrio	Ilocos Sur	162	17 44	120 26
Sapac	Barrio	Batangas	102	13 57	121 12
Sapaka	Sitio	Cotabato	150	6 25	124 40
Sapakan	Sitio	Cotabato	150	6 55	124 35
Sapa Libutad	Barrio	Pampanga	232	15 09	120 38
Sapang	Barrio	Isabela	170	16 40	121 30
Sapang	Barrio	Tarlac	266	15 42	120 31
Sapang	Sitio	Nueva Ecija	212	15 32	120 58
Sapang Balen	Barrio	Pampanga	232	15 15	120 36
Sapang Palay	Barrio	Bulacan	114	14 51	121 03
Sapang Vaca	Sitio	Nueva Ecija	212	15 38	121 01
Sapao	Barrio	Samar	248	11 00	125 45
Sapao	Barrio	Surigao	262	10 00	126 00
Sapao	River	Ifugao Subprovince	206	16 57	121 02
Sapday	Sitio	Abra	78	17 40	120 39
Sapi	Point	Zamboanga	278	7 15	122 50
Sapian	Municipality	Capiz	130	11 30	122 36

Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
Sapid.	Sitio.	Abra	78	17 26	120 49
Sapinit.	Barrio.	Bukidnon	110	8 50	125 10
Sapit.	Sitio.	Benguet Subprovince.	202	16 15	120 39
Saplayan.	Sitio.	Cotabato	150	7 20	124 45
Sapnit.	Sitio.	Lepanto Subprovince.	210	16 52	120 45
Sapocoy.	Mountain.	Kalinga Subprovince.	208	17 23	121 00
Sapotia.	Sitio.	Misamis.	194	9 00	125 10
Sappaac.	Barrio.	Abra	78	17 31	120 38
Sapu.	Barrio.	Cotabato	150	5 50	125 15
Saquet.	River.	Abra	78	17 46	120 37
Sara.	Municipality.	Iloilo	166	11 15	123 00
Sarangani.	Bay.	Cotabato	150	5 50	125 10
Sarangani.	Islands.	Davao	154	5 20	125 20
Sarangani.	Islands.	Philippine Islands.	72	5	125
Sarangani.	Island.	Davao	154	5 30	125 30
Sarangani.	Volcano, Active.	Relief.	72	5	125
Saravia.	Municipality.	Occidental Negros.	220	10 55	123 00
Sariaya.	Municipality.	Tayabas (S)	270	14 00	121 30
Sarmingan.	Barrio.	Ilocos Sur	162	17 23	120 32
Sarnap.	Barrio.	Ilocos Norte.	158	18 05	120 34
Sarrat.	Municipality.	Ilocos Norte.	158	18 10	120 39
Sasay.	Mountain.	Amburayan Subprovince.	198	16 38	120 30
Sasecan.	Sitio.	Kalinga Subprovince.	208	17 30	121 09
Saub.	Sitio.	Cotabato	150	6 00	124 35
Saub.	Sitio.	Leyte	186	10 05	125 15
Saug.	Municipal district.	Davao	154	7 30	125 50
Saug.	River.	Davao	154	7 50	125 40
Sawang.	Barrio.	Batangas	102	13 38	121 14
Sawang.	Barrio.	Romblon	244	12 35	122 15
Sawang.	Barrio.	Zamboanga	278	8 40	123 30
Sawanga.	Barrio.	Sorsogon (N)	252	13 04	124 08
Sawigan.	Point.	Zamboanga	278	8 05	122 30
Saw Tooth.	Mountain.	Tarlac	266	15 27	120 10
Saw Tooth.	Mountain.	Zambales	274	15 27	120 10
Sayangan.	Sitio.	Benguet Subprovince.	202	16 31	120 35
Sayao.	Barrio.	Tayabas (S)	270	13 30	121 55
Saysain.	Barrio.	Bataan	94	14 34	120 23
Saysain.	River.	Bataan	94	14 34	120 25
Saytan.	Barrio.	Benguet Subprovince.	202	16 14	120 30
Scarborough.	Reef.	Philippine Islands.	72	15	118
Scarborough.	Reef.	Relief.	72	15	118
Sebaste.	Barrio.	Antique.	90	11 35	122 05
Sebaste.	Barrio.	Iloilo	166	10 30	122 40
Sebu.	Lake.	Cotabato	150	6 15	124 45
Secubun.	Island.	Sulu	258	5 05	120 20
Seguinon.	Barrio.	Leyte	186	10 55	124 40
Seit.	Barrio.	Sulu	258	6 00	121 15
Semaruga.	Point.	Lanao	178	7 45	123 45
Sembrano.	Mountain.	Rizal	240	14 23	121 22
Semeneblen.	Mountain.	Abra	78	17 55	120 44
Semeneblen.	Mountain.	Ilocos Norte.	158	17 53	120 44
Semirara.	Island.	Antique.	90	12 05	121 25
Semirara.	Islands.	Antique.	90	12 00	121 30
Semirara.	Islands.	Philippine Islands.	72	12	121
Semirara.	Barrio.	Antique.	90	12 05	121 25
Semut.	Barrio.	Zamboanga	278	6 40	122 15
Senggat.	Barrio.	Amburayan Subprovince.	198	16 53	120 28
Separation Point.	Barrio.	Palawan (S)	228	9 10	118 10
Sepoc.	Point.	Batangas	102	13 41	120 50
Seranaya.	Sitio.	Cotabato	150	7 10	124 30
Seselanguen.	Barrio.	Pangasinan	236	16 06	120 00
Sevilla.	Municipality.	Bohol	106	9 44	124 02
Sevilla.	Barrio.	Ilocos Sur	162	17 00	120 27
Sexmoan.	Municipality.	Pampanga	232	14 56	120 37
Sia.	Mountain.	Rizal	240	14 50	121 12
Siale.	Point.	Palawan (S)	228	8 40	117 20
Sialat.	Point.	Albay	86	13 40	124 01
Siam Bundoc.	Mountain.	Bulacan	114	14 50	121 15
Sianib.	Sitio.	Zamboanga	278	8 20	123 30
Siapar.	Island.	Pangasinan	236	16 22	119 57
Siargao.	Island.	Surigao	262	9 55	126 00
Siargao.	Island.	Philippine Islands.	72	10	126
Siari.	Sitio.	Zamboanga	278	8 20	123 00
Siasi.	Island.	Sulu	258	5 30	120 50
Siasi.	Municipal district.	Sulu	258	5 30	120 40
Siasi.	Barrio.	Sulu	258	5 30	120 50
Siaton.	Municipality.	Oriental Negros	224	9 05	123 05
Siaton.	Point.	Oriental Negros	224	9 05	123 00
Siaton.	River.	Oriental Negros	224	9 05	123 05
Siayan.	Island.	Batanes	98	20 53	121 56

Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
Sibagat	Sitio	Agusan	82	8 50	125 40
Sibago	Island	Zamboanga	278	6 45	122 25
Sibaguan	Barrio	Capiz	130	11 34	122 43
Sibalom	Municipality	Antique	90	10 45	122 00
Sibalom	River	Antique	90	10 50	122 05
Sibaltan	Barrio	Palawan (N)	228	11 20	119 30
Sibamtang	Barrio	Bukidnon	110	8 55	124 55
Sibanoc	Island	Surigao	262	10 00	125 30
Sibata	Sitio	Davao	154	6 10	125 40
Sibato	Island	Antique	90	12 00	121 35
Sibay	Island	Antique	90	11 50	121 30
Sibay	Barrio	Antique	90	11 50	121 30
Sibay	Barrio	Romblon	244	13 00	122 05
Sibaywan	Sitio	Mindoro	190	13 15	120 45
Sibolon	Island	Antique	90	12 05	121 35
Sibonga	Municipality	Cebu	138	10 00	123 35
Sibsibu	Barrio	Lepanto Subprovince	210	17 18	120 35
Sibucao	Barrio	Occidental Negros	220	10 45	123 00
Sibugon	Barrio	Misamis	194	8 35	123 45
Sibuguey	Bay	Zamboanga	278	7 20	122 35
Sibukin	Point	Batangas	102	13 43	121 27
Sibuko	Bay	Zamboanga	278	7 20	122 00
Sibuko	Municipal district	Zamboanga	278	7 20	122 05
Sibuko	Point	Zamboanga	278	7 20	122 00
Sibul	Sitio	Bulacan	114	14 56	121 05
Sibulan	Port	Zamboanga	278	7 25	122 55
Sibulan	Municipality	Oriental Negros	224	9 20	123 20
Sibul Sprins	Barrio	Bulacan	114	15 10	121 03
Sibutad	Barrio	Zamboanga	278	8 35	123 30
Sibutu	Passage	Sulu	258	4 45	119 40
Siburu	Island	Sulu	258	4 45	119 30
Sibutu	Island	Philippine Islands	72	5	120
Sibuyan	Sea	Romblon	244	12 50	122 30
Sibuyan	Sea	Philippine Islands	72	13	123
Sibuyan	Island	Romblon	244	12 25	122 35
Sibuyan	Mountain	Romblon	244	12 25	122 35
Sicaba	Barrio	Occidental Negros	220	11 00	123 15
Sicalao	Sitio	Apayao Subprovince	200	18 02	121 28
Sicapoo	Mountain	Apayao Subprovince	200	18 01	120 56
Sicapoo	Mountain	Ilocos Norte	158	18 01	120 56
Sicapoo	Mountain	Mountain Province	196	18 00	121 00
Sicapoo	Mountain	Relief	72	18	121
Sicayab	Barrio	Zamboanga	278	8 40	123 20
Sicmil	Bay	Albay	86	13 50	124 25
Sicmil	Sitio	Albay	86	13 50	124 24
Sico	Sitio	Camarines Norte	122	14 10	122 36
Sico 1.º	Barrio	Batangas	102	13 50	121 23
Sicogon	Bay	Zamboanga	278	7 40	122 05
Sicogon	Island	Iloilo	166	11 25	123 15
Sidég	Barrio	Abra	78	17 34	120 32
Sidsiran	Sitio	Bulacan	114	15 09	121 05
Sierra Bullones	Municipality	Bohol	106	9 51	124 20
Sierra de Culasi	Mountains	Camarines Norte	122	13 56	123 01
Sierra Madre	Mountain range	Cagayan	118	18 00	122 00
Sierra Madre	Mountain range	Isabela	170	17 00	122 15
Sierra Madre	Mountain range	Nueva Vizcaya	216	16 15	121 55
Sierra Madre	Mountain range	Relief	72	17	122
Siete Pecados	Islands	Iloilo	166	10 45	122 40
Sifu	River	Bontoc Subprovince	204	17 06	121 25
Sifu	River	Isabela	170	17 10	121 40
Sifu	River	Mountain Province	196	17 05	121 30
Sigaboy	Island	Davao	154	6 40	126 00
Sigaboy	Municipal district	Davao	154	6 40	126 00
Sigaras	Barrio	Laguna	174	14 14	121 26
Sigay	Township	Amburayan Subprovince	198	17 03	120 34
Sigay	Township	Mountain Province	196	17 05	120 35
Sigay	Barrio	Amburayan Subprovince	198	17 05	120 36
Sigayan	Bay	Lanao	178	7 45	123 45
Sigayan	Sitio	Lanao	178	7 45	123 45
Sigboye	Island	Sulu	258	5 25	120 25
Siggug	Sitio	Isabela	170	17 30	121 50
Sigl	River	Cotabato	150	5 55	125 00
Sigl	Sitio	Cotabato	150	5 55	125 05
Sigma	Municipality	Capiz	130	11 25	122 39
Sigo	Barrio	Samar	248	12 15	124 30
Sigota	Sitio	Palawan (S)	228	9 50	113 40
Siha	Barrio	Samar	248	11 35	125 25
Silit	Barrio	Oriental Negros	224	9 05	123 10
Sikatuna	Municipality	Bohol	106	9 41	123 59
Sila	Point	Samar	248	12 25	125 20

Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
Silab	Barrio	Oriental Negros	224	9 25	123 10
Silago	Barrio	Leyte	186	10 30	125 10
Silat	Barrio	Bukidnon	110	8 00	125 15
Silang	Municipality.	Cavite	134	14 14	120 58
Silanga	Barrio	Palawan (N)	223	11 00	119 30
Silanga	Barrio	Samar	243	11 50	124 50
Silangan	Sitio	Sulu	258	5 10	120 20
Silanganan	Mountain	Bataan	94	14 41	120 21
Silangkan	Municipal district.	Sulu	253	5 55	120 40
Silangkan	Barrio	Sulu	253	6 00	120 55
Silanguin	Port	Zambales	274	14 46	120 05
Silanguin	Island	Zambales	274	14 46	120 06
Silao	Barrio	Nueva Vizcaya	216	16 13	120 55
Silao	Mountain	Bulacan	114	15 06	121 10
Silao	Mountain	Relief	72	15	121
Silaqui	Island	Pangasinan	236	16 26	119 55
Silat	Island	Mindoro	190	12 15	121 15
Silay	Municipality.	Occidental Negros	220	10 50	123 00
Silay	Barrio	Zamboanga	273	7 40	122 50
Silay	Mountain	Occidental Negros	220	10 45	123 15
Silay	Mountain	Relief	72	11	123
Sileng Matanda	Barrio	Bulacan	114	14 55	120 59
Silhagon	Barrio	Samar	243	12 25	125 15
Sili	Settlement.	Isabela	170	17 00	121 40
Sili	Sitio	Camarines Sur	126	13 55	122 37
Silid	Mountain	Bulacan	114	15 07	121 06
Silik	Municipal district.	Cotabato	150	7 05	124 35
Silinan	Sitio	Kalinga Subprovince.	203	17 22	121 27
Siling	Sitio	Cotabato	150	6 45	124 50
Silino	Island	Zamboanga	273	8 50	123 25
Silion	Island	Cebu	138	11 15	123 45
Silion	Barrio	Cebu	138	11 15	123 45
Silom	Barrio	Romblon	244	12 30	122 35
Silonay	Island	Mindoro	190	13 25	121 15
Silonay	Barrio	Mindoro	190	13 25	121 15
Silong	Bay	Mindoro	190	12 10	121 05
Silong	Barrio	Cagayan	118	18 30	121 25
Silongin	Barrio	Tayabas (S)	260	13 20	122 30
Siloo	Barrio	Bukidnon	110	8 30	125 00
Siloo	River	Bukidnon	110	8 25	124 55
Siluay	River	Cotabato	150	6 15	125 05
Simagup	Sitio	Palawan (S)	223	8 40	117 20
Simala	Barrio	Cebu	138	10 00	123 35
Simaluc	Island	Sulu	258	5 25	120 15
Simamla	Barrio	Albay	86	13 36	124 10
Simara	Island	Romblon	244	12 50	122 05
Simayung	Barrio	Cagayan	118	18 25	121 25
Simbahan	Sitio	Sulu	258	6 15	120 35
Simiguig	Barrio	Cagayan	118	18 25	121 20
Simisa	Island	Sulu	258	5 55	121 35
Simonor	Island	Sulu	258	4 55	119 50
Simpetan	Sitio	Cotabato	150	6 55	124 50
Simuai	Barrio	Cotabato	150	7 20	124 15
Simuai	River	Cotabato	150	7 20	124 20
Simud	Rancheria	Apayao Subprovince	200	18 07	121 22
Simulao	River	Agusan	82	8 05	126 00
Simunal	Municipal district.	Sulu	258	4 50	119 45
Sinacbat	Barrio	Amburayan Subprovince	198	16 50	120 40
Sinadca	Sitio	Lepanto Subprovince	210	16 51	120 44
Sinadipan	Sitio	Nueva Vizcaya	216	16 18	121 42
Sinahoag	Sitio	Bukidnon	110	7 35	125 05
Sinait	Municipality.	Ilocos Sur	162	17 52	120 27
Sinako	Mountain	Cotabato	150	7 30	125 15
Sinako	Mountain	Davao	154	7 30	125 15
Sinal	Sitio	Nueva Vizcaya	216	16 00	121 16
Sinala	Barrio	Batangas	102	13 48	120 58
Sinalagas	Mountain	Bukidnon	110	8 35	125 00
Sinalhan	Barrio	Laguna	174	14 20	121 07
Sinaliw	Barrio	Cavite	134	14 08	120 50
Sinalugan	Barrio	Isabela	170	16 50	121 50
Sinalugan	River	Isabela	170	16 40	121 55
Sinanbalan	River	Mindoro	190	13 20	120 40
Sinantan	Barrio	Samar	243	12 05	124 40
Sinapauan	Barrio	Nueva Vizcaya	216	16 11	121 00
Sinasajan	Barrio	Nueva Ecija	212	15 21	121 01
Sinauilan	Sitio	Davao	154	6 50	125 20
Sinawangan	Sitio	Isabela	170	16 30	121 45
Sindangan	Bay	Zamboanga	273	8 10	122 55
Sindangan	Point	Zamboanga	273	8 10	122 40
Sindangan	Municipal district.	Zamboanga	273	8 10	123 00

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Sindol	Sitio	Zambales	274	15	05	120	03
Singakalsa	Mountain	Benguet Subprovince	202	16	40	120	47
Singay	Sitio	Zamboanga	278	6	40	122	20
Singlan	Sitio	Amburayan Subprovince	198	17	02	120	34
Singsing	Barrio	Cebu	138	10	30	123	45
Sinian	Barrio	Misamis	194	8	35	123	40
Sinicuing	Barrio	Cagayan	118	17	50	121	20
Sinigpit	Barrio	Tarlac	266	15	39	120	31
Sinilian	Barrio	Tarlac	266	15	42	120	27
Siniloan	Municipality	Laguna	174	14	25	121	27
Sinipit	Barrio	Nueva Ecija	212	15	13	120	52
Sinippil	Barrio	Isabela	170	17	20	121	50
Sinisian	Barrio	Batangas	102	13	55	120	51
Sinogbujan	Barrio	Iloilo	166	10	30	122	00
Sinonoc	Barrio	Misamis	194	8	20	123	50
Sinulung	Rancheria	Apayao Subprovince	200	18	11	121	17
Sinundungan	River	Apayao Subprovince	200	17	59	121	27
Sinundungan	River	Mountain Province	196	18	00	121	25
Sinunug	Island	Zamboanga	278	6	55	122	20
Sioasio	Barrio	Pangasinan	236	16	03	120	02
Sioron	Sitio	Albay	86	13	48	124	24
Sipaco	Barrio	Camarines Sur	126	13	53	123	33
Sipalay	Barrio	Occidental Negros	220	9	45	122	25
Sipalay	River	Occidental Negros	220	9	45	122	30
Sipanag	Mountain	Capiz	130	11	20	122	11
Sipang	Mountain	Antique	90	11	20	122	10
Sipaway	Island	Occidental Negros	220	10	30	123	25
Sipitan	Mountain	Bontoc Subprovince	204	17	10	120	53
Sipitan	Mountain	Lepanto Subprovince	210	17	10	120	53
Sipoad	Sitio	Lepanto Subprovince	210	17	16	120	40
Sipocot	Municipality	Camarines Sur	126	13	46	122	59
Siquijor	Island	Oriental Negros	224	9	10	123	35
Siquijor	Island	Philippine Islands	72	9		124	
Siquijor	Municipality	Oriental Negros	224	9	15	123	30
Siramag	Sitio	Camarines Sur	126	13	21	123	13
Sirauan	Barrio	Davao	154	7	00	125	30
Sirib	Sitio	Davao	154	7	10	125	20
Sir J. Brooke	Point	Palawan (S)	228	8	50	117	50
Sirucu	Barrio	Iloilo	166	11	15	123	00
Siruma	Municipality	Camarines Sur	126	14	00	123	15
Sirum	Island	Sulu	258	5	35	120	45
Siruwai	Municipal district	Zamboanga	278	7	35	122	10
Sisim	Barrio	Ilocos Sur	162	17	43	120	30
Sisiman	Barrio	Bataan	94	14	26	120	31
Sisiran	Bay	Camarines Sur	126	13	55	123	40
Sison	Municipality	Pangasinan	236	16	10	120	29
Sison	Barrio	Surigao	262	9	40	125	30
Sitanki	Island	Sulu	258	4	40	119	25
Sitanki	Municipal district	Sulu	258	4	35	119	15
Siukun	Sitio	Zamboanga	278	7	40	122	10
Siuton	Barrio	Sorsogon (N)	252	12	48	123	53
S. M. Tanglad	Barrio	Samar	248	11	15	125	35
Soate	Point	Tayabas	270	15	20	121	25
Soboc	Sitio	Albay	86	13	52	124	23
Sobredillo	Barrio	La Union	182	16	26	120	22
Socorro	Barrio	Surigao	262	9	35	126	00
Sogod	Bay	Leyte	186	10	20	125	00
Sogod	Municipality	Leyte	186	10	25	125	00
Sogod	Barrio	Romblon	244	12	40	122	10
Sogod	Barrio	Romblon	244	12	25	122	40
Soguicay	Island	Mindoro	190	12	20	121	25
Sohoton	Cave	Samar	248	11	25	125	10
Solana	Municipality	Cagayan	118	17	40	121	40
Solana	Barrio	Bukidnon	110	8	45	124	50
Solano	Township	Nueva Vizcaya	216	16	31	121	11
Soldab	Mountain	Bukidnon	110	8	20	125	10
Soledad	Barrio	Laguna	174	14	02	121	19
Soledad	Barrio	Nueva Ecija	212	15	25	120	58
Soledad	Barrio	Occidental Negros	220	10	10	122	55
Solitario	Rock	Palawan (N)	228	11	20	120	20
Solo	Barrio	Batangas	102	13	45	120	54
Soloc	Barrio	Batangas	102	13	37	121	15
Solotsolot	Barrio	Ilocos Sur	162	17	45	120	26
Solsona	Municipality	Ilocos Norte	158	18	06	120	46
Solvec	Cove	Ilocos Sur	162	17	26	120	26
Sombrero	Island	Sorsogon (N)	252	13	09	122	50
Sombrero	Rocks	Antique	90	10	40	121	30
Sondara	Barrio	Samar	248	12	00	124	40
Soribao	Barrio	Samar	248	11	35	125	30
SORSOGON (N)	Province	Sorsogon (N)	252	12	50	124	00

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
SORSOGON (S)	Province	Sorsogon (N)	252	12	12	123	40
Sorsogon	Province	Philippine Islands	72	13		124	
Sorsogon	Capital.	Sorsogon (N)	252	12	58	124	00
Sorsogon	Capital, Sorsogon.	Philippine Islands	72	13		124	
South	Islet	Palawan (N)	228	8	50	119	50
South	Lagoon	Sulu	258	4	30	119	25
South	Point	Iloilo	166	10	25	122	30
South Bais	Bay	Oriental Negros	224	9	35	123	05
South Channel	Strait	Cavite	134	14	20	120	38
South Ubian	Island	Sulu	258	5	10	120	30
South Ubian	Municipal district.	Sulu	258	5	15	120	35
Spring	Carmen Mineral.	Camarines Norte	122	14	12	122	33
Spring, Mineral	Mineral water.	Camarines Norte	122	14	07	122	33
Stripe	Peak	Palawan (S)	228	10	10	119	00
Sua	Sitio	Albay	86	13	48	124	15
Sua	Sitio	Samar	248	11	35	124	50
Sua	Mountain	Leyte	186	11	40	124	25
Suaco	Barrio	Pangasinan	236	15	45	120	18
Suaga	River	Bukidnon	110	8	00	125	10
Sual	Municipality.	Pangasinan	236	16	04	120	05
Suay	Barrio	Occidental Negros	220	10	05	122	50
Suba	Barrio	Cebu	138	9	30	123	20
Suba	Barrio	Laguna	174	14	10	121	27
Suba	Barrio	Leyte	186	10	25	125	00
Suba	Barrio	Samar	248	12	15	124	50
Subic	Bay	Zambales	274	14	49	120	14
Subic	Municipality.	Zambales	274	14	53	120	14
Subic	Barrio	Batangas	102	13	57	120	56
Subterranean River	River	Palawan (S)	228	10	10	119	00
Subsub	Barrio	Abra	78	17	27	120	46
Sucao	Mountain	Kalinga Subprovince.	208	17	27	121	05
Sucat	Barrio	Rizal	240	14	27	121	03
Suclaran	Barrio	Iloilo	166	10	35	122	45
Sucoc	Barrio	Ilocos Sur	162	17	24	120	32
Sudipen	Township	Amburayan Subprovince.	198	16	54	120	29
Sudipen	Township	Mountain Province.	196	16	55	120	30
Sugag	Sitio	Nueva Vizcaya	216	16	05	121	21
Sugal	Sitio	Davao	154	5	40	125	30
Sugan	Sitio	Zamboanga	278	8	00	123	35
Sugbay	Sitio	Zamboanga	278	7	25	123	20
Sugcong	Barrio	Pangasinan	236	16	08	120	34
Sugi	Barrio	Leyte	186	11	15	124	40
Sugod	Barrio	Sorsogon (N)	252	13	00	124	05
Sugpon	Township	Amburayan Subprovince.	198	16	51	120	31
Sugpon	Township	Mountain Province.	196	16	50	120	30
Sugud	Barrio	Lanao	178	7	55	124	10
Sugud	Barrio	Leyte	186	11	15	124	40
Suizo	Barrio	Tarlac	266	15	28	120	36
Sujac	Sitio	Sorsogon (N)	252	12	33	124	00
Sujac	Sitio	Sorsogon (S)	252	12	33	124	00
Sula	Barrio	Albay	86	13	14	123	52
Sula	Barrio	Tarlac	266	15	27	120	23
Sulade	Island	Sulu	258	5	50	120	45
Sulangan	Barrio	Samar	248	10	55	125	50
Sulat	Municipality.	Samar	248	11	50	125	30
Sulauan	Point	Misamis	194	8	35	124	25
Sulay	Barrio	Abra	78	17	33	120	38
Sulibao	River	Agusan	82	8	20	125	55
Sulipa	Barrio	Tarlac	266	15	36	120	32
Sulipan	Barrio	Pampanga	232	14	56	120	46
Sulop	Sitio	Davao	154	6	40	125	20
Sulpa	Barrio	Camarines Sur	126	13	57	123	17
Sulphur Spring, Hot.	Mineral Spring.	Ifugao Subprovince.	206	16	45	120	53
Sulpok	Barrio	Batangas	102	14	08	121	04
Sulu	Sea	Philippine Islands	72	3		120	
SULU	Province.	Sulu	258	6	00	121	00
Sulu	Province.	Philippine Islands	72	6		121	
Suluan	Island	Samar	248	10	45	125	55
Suluan	Island	Philippine Islands	72	11		126	
Sulvec	Barrio	Ilocos Sur	162	17	27	120	27
Sumacab	Barrio	Nueva Ecija	212	15	28	120	56
Sumacbao	Mountain	Bulacan	114	15	14	121	11
Sumadel	Barrio	Kalinga Subprovince.	208	17	18	121	07
Sumadel	Barrio	Lepanto Subprovince.	210	17	03	120	50
Sumader	Barrio	Ilocos Norte	158	18	02	120	35
Sumag	Barrio	Occidental Negros	220	10	35	122	55
Sumag	Barrio	Tayabas (S)	270	13	45	122	05
Sumag	Mountain	Bulacan	114	15	03	121	13
Sumagui	Sitio	Mindoro	190	12	05	121	30
Sumarangay	Mountain	Lanao	178	8	05	124	20

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Sumaray	Barrio	Antique	90	10	55	122	01
Sumban	Point	Cotabato	150	5	45	125	10
Sumbao	Sitio	Palawan (S)	228	9	10	118	10
Sumilang	Barrio	Taybaas (S)	270	13	45	122	15
Sumilau	Municipal district.	Bukidnon	110	8	15	125	00
Sumilon	Island	Cebu	138	9	25	123	25
Sumilon	Island	Surigao	262	9	55	125	25
Sumlug	River	Davao	154	7	00	126	10
Sumlug	Sitio	Davao	154	6	50	126	00
Summanga	Barrio	Batanes	98	20	19	121	52
Sumucab	Barrio	Laguna	174	14	13	121	34
Sungai	Barrio	Bukidnon	110	8	30	124	25
Sungay	Mountain	Batangas	102	14	09	121	01
Sungay	Mountain	Cavite	134	14	09	121	01
Sungay	Mountain	Laguna	174	14	09	121	01
Sungi	Point	Samar	248	10	55	125	50
Supang	Sitio	Lepanto Subprovince	210	17	01	120	54
Supe	Sitio	Cotabato	150	5	55	125	05
Supo	Sitio	Lepanto Subprovince	210	17	15	120	41
Supu	Sitio	Cotabato	150	6	10	124	30
Surigao	Strait	Philippine Islands	72	10	10	126	00
SURIGAO	Province	Surigao	262	9	00	126	00
Surigao	Province	Philippine Islands	72	9	00	126	00
Surigao	Capital	Surigao	262	9	45	125	30
Surigao	Capital, Surigao.	Philippine Islands	72	10	10	126	00
Surog	Barrio	Samar	248	11	00	125	50
Surong	Sitio	Ilocos Norte	158	18	21	120	39
Surup	Barrio	Davao	154	6	20	126	10
Suso	Barrio	Ilocos Sur	162	17	22	120	27
Susong Dalaga	Mountain	Bulacan	114	14	55	121	08
Susongdalaga	Mountain	Bataan	94	14	53	120	21
Susongdalaga	Mountain	Zambales	274	14	53	120	21
Susundalaga	Mountain	Rizal	240	14	20	121	14
Susundalaga	Mountain	Rizal	240	14	38	121	19
Suyac	Island	Occidental Negros	220	10	55	123	25
Suyac	Sitio	Kalinga Subprovince	208	17	28	121	19
Suyo	Township	Amburayan Subprovince	198	16	59	120	32
Suyo	Township	Mountain Province	196	17	00	120	30
Suyo	Barrio	Amburayan Subprovince	198	16	58	120	33
Suyo	Barrio	Benguet Subprovince	202	16	36	120	29
Suyo	Barrio	Ilocos Sur	162	17	05	120	27
Suyo	Sitio	Ilocos Norte	158	18	32	120	41
Suyoc	River	Lepanto Subprovince	210	16	50	120	45
Suyoc	Sitio	Lepanto Subprovince	210	16	49	120	48
Syniop	Mountain	Cotabato	150	6	30	124	05
T.							
Taal	Lake	Batangas	102	13	59	121	01
Taal	Volcano	Batangas	102	14	01	121	00
Taal	Volcano, active.	Relief	72	14	11	121	00
Taal	Municipality	Batangas	102	13	53	120	55
Taancan	Point	Leyte	186	10	00	125	00
Taba	Bay	Zamboanga	278	7	35	122	45
Tabaao	Barrio	Benguet Subprovince	202	16	38	120	38
Tabaco	Bay	Albay	86	13	20	123	46
Tabaco	Municipality	Albay	86	13	22	123	44
Tabalong	Barrio	Bohol	106	9	37	123	49
Tabangao	Barrio	Batangas	102	13	43	121	04
Tabango	Barrio	Leyte	186	11	20	124	20
Tabas	Barrio	Camarines Norte	122	14	15	122	51
Tabawan	Island	Sulu	258	5	10	120	35
Tabayoc	Mountain	Benguet Subprovince	202	16	41	120	53
Tabayoc	Mountain	Ifugao Subprovince	106	16	41	120	53
Tabayong	River	Nueva Vizcaya	216	15	58	121	30
Tabernaculo	Mountain	Bulacan	114	15	00	121	10
Tabgon	Barrio	Camarines Sur	126	13	50	123	48
Tabigian	Barrio	Albay	86	13	19	123	38
Tabigui	Barrio	Bohol	106	10	09	124	22
Tabio	Barrio	Lepanto Subprovince	210	16	51	120	48
Tabio	Sitio	Benguet Subprovince	202	16	31	120	41
Tabiog	Sitio	Abra	78	17	33	120	44
Tablac	Barrio	Abra	78	17	33	120	37
Tablangan	Sitio	Apayao Subprovince	200	18	10	121	08
Tablante	Railroad Station	Pampanga	232	15	07	120	37
Tablas	Island	Romblon	244	12	25	122	05
Tablas	Strait	Romblon	244	12	30	121	45
Table	Point	Palawan (S)	228	10	00	118	40
Tabo	Sitio	Benguet Subprovince	202	16	17	120	45
Taboboan	Barrio	Romblon	244	12	20	122	00
Tabogoc	Barrio	Albay	86	14	03	124	14

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Tabogon	Municipality	Cebu	138	10	55	124	00
Tabok	Barrio	Bulacan	114	14	57	120	59
Tabok	Barrio	La Union	182	16	42	120	20
Tabok	Barrio	Sorsogon (N)	252	12	50	123	59
Tabon	Barrio	Nueva Ecija	212	15	16	120	55
Tabon	Barrio	Oriental Negros	224	10	20	123	20
Tabon	Sitio	Rizal	240	14	19	121	14
Tabones	Island	Zambales	274	14	49	120	03
Tabontabon	Barrio	Leyte	186	11	00	125	00
Tabora	Barrio	Capite	134	14	14	120	47
Tabtabagan	Barrio	Ilocos Norte	158	18	00	120	41
Tabu	Sitio	Kalinga Subprovince	208	17	37	121	21
Tabuan	Barrio	Bohol	106	9	40	124	17
Tabuan	Sitio	Oriental Negros	224	9	30	122	50
Tabucan	Barrio	Iloilo	166	10	50	122	40
Tabuelan	Barrio	Cebu	138	10	50	123	50
Tabuk	Township	Kalinga Subprovince	208	17	24	121	25
Tabuk	Township	Mountain Province	196	17	25	121	25
Tabun	Barrio	Pampanga	232	15	09	120	37
Tabun	Sitio	Pampanga	232	15	08	120	33
Tabunan	Barrio	Leyte	186	11	40	124	20
Tabung	Point	Capiz	130	11	56	121	57
Tabungau	Barrio	Cotabato	150	6	55	124	35
Tabunoc	Barrio	Cebu	138	10	15	123	50
Tabunok	Barrio	Cebu	138	10	45	124	00
Tabuo	Barrio	Misamis	194	8	15	123	50
Tabuong	Barrio	Nueva Vizcaya	216	16	16	121	02
Taburub	Mountain	Apayao Subprovince	200	18	01	121	13
Tacad	Barrio	Camarines Norte	122	14	05	123	00
Tacas	Barrio	Iloilo	166	10	45	122	35
Tacasan	Barrio	Pampanga	232	14	56	120	43
Tacho	Sitio	Amburayan Subprovince	198	16	57	120	39
Tacholubu	Sitio	Palawan (S)	228	8	40	117	40
Taccuen	Sitio	Apayao Subprovince	200	18	30	121	15
Tacligan	Sitio	Mindoro	190	13	25	121	05
Tacloban	Capital	Leyte	186	11	15	125	00
Tacloban	Capital, Leyte	Philippine Islands	72	11		125	
Taclobo	Barrio	Romblon	244	12	20	122	35
Tactac	Barrio	Nueva Vizcaya	216	16	09	120	59
Tadao	Sitio	Ilocos Norte	158	18	23	120	42
Tadian	Barrio	Lepanto Subprovince	210	17	00	120	49
Taft	Municipality	Samar	248	11	55	125	25
Taft	Barrio	Ilocos Sur	162	17	15	120	32
Taft	Sitio	Romblon	244	12	05	122	00
Taga	Barrio	Kalinga Subprovince	208	17	35	121	22
Tagabakid	Sitio	Davao	154	7	00	126	20
Tagabiran	Barrio	Samar	248	12	15	125	00
Tagalinog	Island	Palawan (S)	228	8	50	118	20
Tagalotok	Sitio	Davao	154	6	20	125	40
Taganaan	Barrio	Surigao	262	9	40	125	35
Taganak	Island	Philippine Islands	72	6		118	
Taganito	Barrio	Surigao	262	9	30	125	50
Tagao	Island	Sulu	258	5	15	120	35
Tagaporo	Island	Pangasinan	236	16	24	119	57
Tagapula	Island	Samar	248	12	05	124	10
Tagas	Barrio	Camarines Sur	126	13	39	123	33
Tagaslian	Municipal district	Samar	248	11	30	125	25
Tagatto	Barrio	Davao	154	7	10	125	30
Tagauayan	Island	Palawan (N)	228	11	00	121	10
Tagaytay	Barrio	Leyte	186	10	20	124	50
Tagbabas	Islands	Sulu	258	5	45	120	10
Tagbac	Barrio	Mindoro	190	13	50	120	05
Tagbac	Sitio	Albay	86	13	46	124	18
Tagbaquin	Barrio	Tayabas (S)	270	14	00	121	55
Tagbayog	Sitio	Palawan (S)	228	9	20	118	00
Tagbilaran	Capital	Bohol	106	9	39	123	52
Tagbilaran	Capital, Bohol	Philippine Islands	72	10		124	
Tagbiriri	Sitio	Palawan (S)	228	9	20	118	30
Tagboeboc	Barrio	Misamis	194	9	00	124	55
Tagburos	Barrio	Palawan (S)	228	9	50	118	50
Tagbuyawan	Sitio	Surigao	262	9	35	125	25
Tagcauayan	Barrio	Tayabas (S)	270	14	00	122	35
Tagdon	Barrio	Sorsogon (N)	252	12	51	124	08
Tagig	Municipality	Rizal	240	14	32	121	04
Tagiti	Bay	Zamboanga	278	7	20	122	20
Tagiti	Barrio	Zamboanga	278	7	20	122	15
Taglawigan	Barrio	Leyte	186	11	30	124	15
Taglibi	Barrio	Sulu	258	6	05	121	05
Tagnukan	Barrio	Cebu	138	10	55	124	00
Tago	Municipality	Surigao	262	9	00	126	15

Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
Tago	River	Surigao	262	8 55	126 05
Tago	Mountain	Bukidnon	110	8 25	125 00
Tagolo	Point	Zamboanga	278	8 45	123 20
Tagoloan	Municipality	Misamis	194	8 30	124 45
Tagoloan	River	Bukidnon	110	8 25	124 50
Tagpen	Sitio	Amburayan Subprovince	198	16 57	120 36
Tagubanhán	Island	Iloilo	166	11 10	123 10
Tagubud	Mountain	Davao	154	7 20	126 10
Tagudin	Capital	Amburayan Subprovince	198	16 56	120 27
Tagudin	Municipality	Mountain Province	196	16 55	120 25
Tagudtud	Barrio	Antique	90	11 05	122 05
Tagudtud	Barrio	Benguet Subprovince	202	16 38	120 27
Taguilos	Barrio	Romblon	244	12 25	122 40
Taguin	Barrio	Tayabas (S)	270	13 45	122 10
Taguimtim	Barrio	Antique	90	10 30	121 55
Tagum	Municipal district	Davao	154	7 20	125 40
Tagum	Barrio	Tayabas (S)	270	13 30	122 05
Tagumbao	Barrio	Tarlac	266	15 36	120 33
Tagun	Bay	Camarines Sur	126	13 55	123 47
Taisan	Barrio	Camarines Sur	126	13 47	123 01
Taja	Island	Sulu	258	5 50	119 40
Takabun	Rancheria	Nueva Vizcaya	216	15 51	121 32
Takela	Island	Zamboanga	278	6 35	121 50
Talikan	Barrio	Benguet Subprovince	202	16 28	120 37
Takkon	Barrio	Bontoc Subprovince	204	17 02	120 55
Takub	Sitio	Davao	154	6 50	125 30
Talaba	Barrio	Cavite	134	14 28	120 58
Talaban	Island	Bohol	106	10 14	124 23
Talaban	Barrio	Occidental Negros	220	10 05	122 50
Talacag	Municipality	Bukidnon	110	8 15	124 35
Talacagon	Municipality	Agusan	82	8 30	125 40
Talacsan	Barrio	Bulacan	114	14 58	120 59
Talag	Sitio	Zamboanga	278	8 25	123 35
Talaga	Barrio	Batangas	102	14 06	121 06
Talaga	Barrio	Batangas	102	13 44	120 56
Talaga	Sitio	Zamboanga	278	7 30	122 20
Talahib	Barrio	Batangas	102	13 39	120 54
Talahib	Barrio	Batangas	102	13 38	121 08
Talahiban	Barrio	Batangas	102	13 48	121 37
Talaib	Barrio	Benguet Subprovince	202	16 30	120 37
Talaibon	Barrio	Batangas	102	13 51	121 09
Talaid	Point	Zamboanga	278	17 30	122 45
Talalang	Sitio	Kalinga Subprovince	208	17 30	121 06
Talamasig	Barrio	Cotabato	150	6 35	124 05
Talampac	Mountain	Abra	78	17 49	120 53
Talang	Barrio	Pampanga	232	15 03	120 54
Talao	Lake	Lanao	178	8 00	124 05
Talao	Sitio	Lanao	178	8 00	124 10
Talaotao	Sitio	Mindoro	190	13 40	120 25
Talave	Barrio	Occidental Negros	220	10 30	123 25
Talavera	Municipality	Nueva Ecija	212	15 35	120 55
Talavera	Barrio	Surigao	262	9 45	125 40
Talayan	Municipal district	Cotabato	150	6 55	124 25
Talayan	Mountain	Cotabato	150	6 55	124 15
Talaytay	Barrio	Abra	78	17 33	120 32
Talba	Barrio	Pampanga	232	14 59	120 40
Talbac	Barrio	Iligao Subprovince	206	16 57	121 11
Taleb	Barrio	Ilocos Sur	162	17 35	120 27
Talgaon	Sitio	Kalinga Subprovince	208	17 20	121 18
Talibon	Municipality	Bohol	106	10 09	124 20
Talibong	Barrio	Iloilo	166	10 50	122 35
Talibong	Barrio	Leyte	186	11 30	124 35
Talibubu	Sitio	Apayao Subprovince	200	18 11	121 07
Talictic	Sitio	Ifugao Subprovince	206	16 47	121 18
Talicut	Island	Davao	154	7 00	125 40
Talifugu	Rancheria	Apayao Subprovince	200	17 50	121 12
Talik	Sitio	Cotabato	150	6 30	124 50
Talim	Island	Rizal	240	14 21	121 13
Talim	Barrio	Rizal	240	14 18	121 14
Talim	Point	Rizal	240	14 17	121 14
Talimunduc	Barrio	Pampanga	232	15 13	120 41
Talin	Bay	Batangas	102	13 59	120 37
Talin	Point	Batangas	102	13 59	120 36
Talinas	Island	Mindoro	190	13 40	120 20
Talinga	Sitio	Zamboanga	278	8 10	123 00
Talingan	Sitio	Bataan	94	14 50	120 24
Talingan	Barrio	Leyte	186	10 50	124 30
Talingting	Barrio	Oriental Negros	224	9 15	123 40
Talintalin	Sitio	Albay	86	13 10	123 19
Talipau	Municipal district	Sulu	258	5 55	121 05

Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
				° /	° /
Talisay	Municipality	Batangas	102	14 06	121 01
Talisay	Municipality	Camarines Norte	122	14 08	122 55
Talisay	Municipality	Occidental Negros	220	10 45	123 00
Talissay	Municipality	Cebu	138	10 15	123 50
Talisay	Barrio	Albay	86	13 35	124 19
Talisay	Barrio	Albay	86	13 31	124 11
Talisay	Barrio	Albay	86	13 09	123 25
Talisay	Barrio	Batangas	102	13 55	120 38
Talisay	Barrio	Bohol	106	9 46	124 35
Talisay	Barrio	Loilo	166	10 55	122 45
Talisay	Sitio	Romblon	244	12 40	122 05
Talisay	Sitio	Sorsogon (N)	252	12 29	123 41
Talisay	Sitio	Sorsogon (S)	252	12 29	123 41
Talisay	River	Bataan	94	14 36	120 28
Talisay	Point	Sorsogon (S)	252	12 08	123 13
Talisanan	Municipality	Misamis	194	9 00	124 55
Talaaen	Barrio	La Union	182	16 50	120 23
Tallungan	Barrio	Cagayan	118	18 20	121 40
Talo	Sitio	Lanao	178	7 45	123 50
Taloc	Barrio	Occidental Negros	220	10 35	122 55
Talotog	Barrio	La Union	182	16 41	120 20
Talohognon	Barrio	Camarines Sur	126	13 38	123 30
Taloktok	Barrio	Kalinga Subprovince	208	17 21	121 15
Talomo	Barrio	Davao	154	7 00	125 30
Talon	Barrio	Batangas	102	14 02	120 43
Talon	Barrio	Cavite	134	14 09	120 56
Talong	Island	Cebu	138	10 45	124 20
Talooing	Sitio	Tayabas (N)	270	14 50	121 50
Talop	Barrio	Ifugao Subprovince	206	16 56	121 06
Taloto	Barrio	Bohol	106	9 40	123 51
Talotog	Barrio	Occidental Negros	220	10 35	122 55
Taloy	Barrio	Benguet Subprovince	202	16 20	120 30
Taltal	Barrio	Zambales	274	15 35	119 56
Talub	Barrio	Lanao	178	7 50	124 20
Talubin	Township	Bontoc Subprovince	204	17 03	121 00
Talubin	Township	Mountain Province	196	17 05	121 00
Taluc	Island	Sulu	258	5 45	121 00
Taluksangay	Municipal district	Zamboanga	278	7 00	122 10
Talumoc	Barrio	Batangas	102	13 43	121 09
Talumpong	Mountain	Cotabato	150	6 05	124 50
Talumpong	Mountain	Relief	72	6	125
Tama	Sitio	Bataan	94	14 50	120 28
Tamantaka	Barrio	Cotabato	154	7 10	124 15
Tambac	Barrio	Romblon	244	12 30	122 15
Tambagaan	Island	Sulu	258	5 20	120 20
Tambagoko	River	Agusan	82	8 55	125 45
Tambang	Port	Camarines Sur	126	13 57	123 26
Tambaron	Island	Mindoro	190	12 15	121 25
Tambilagao	Barrio	Occidental Negros	220	10 25	123 20
Tambis	Barrio	Leyte	186	10 25	124 50
Tambisan	Barrio	Oriental Negros	224	9 10	123 25
Tambo	Barrio	Camarines Sur	126	13 27	123 29
Tambo	Sitio	Camarines Norte	122	14 04	123 02
Tambo	Sitio	Tayabas (S)	270	13 50	122 15
Tambobong	Barrio	Pangasinan	236	15 56	119 47
Tambog	Point	Surigao	262	8 05	126 25
Tambugno	Barrio	Albay	86	13 54	124 22
Tambul Sagumba	Sitio	Sulu	258	6 05	121 50
Tamcang	Sitio	Amburayan Subprovince	198	17 05	120 37
Tamdagan	Sitio	Ilocos Norte	158	18 20	120 44
Tamlang	Barrio	Occidental Negros	220	10 50	123 25
Tamnaw	Sitio	Tayabas (S)	270	13 25	122 40
Tamorong	River	Amburayan Subprovince	198	16 50	120 34
Tamorong	Sitio	Amburayan Subprovince	198	16 50	120 34
Tamoyawas	Sitio	Surigao	262	9 25	126 00
Tampacan	Sitio	Sulu	258	4 55	119 50
Tamparan	Municipal district	Lanao	178	7 55	124 20
Tampayan	Sitio	Romblon	244	12 30	122 30
Tampogo	Barrio	Amburayan Subprovince	198	16 59	120 27
Tamsi	Rancheria	Nueva Vizcaya	16	17	121 41
Tamuk	Island	Zamboanga	278	6 30	121 50
Tamurong	Barrio	Ilocos Sur	162	17 13	120 25
Tanablan	Barrio	Leyte	186	11 05	124 25
Tanag	Barrio	Romblon	244	12 55	122 05
Tanagan	Barrio	Albay	86	13 19	123 51
Tanagan	Barrio	Romblon	244	12 30	122 00
Tanao	Islands	Camarines Norte	122	14 25	122 40
Tanao	Sitio	Ifugao Subprovince	206	16 53	121 12
Tanao Pass	Strait	Camarines Norte	122	14 24	122 40
Tanap	Barrio	Ilocos Norte	158	18 30	120 41

Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
				° /	° /
Tanauan	Municipality	Batangas	102	14 05	121 09
Tanauan	Municipality	Leyte	186	11 05	125 00
Tanauan	Mountain	Rizal	240	14 37	121 14
Tanawan	Barrio	Bulacan	114	14 57	120 55
Tanawan	Barrio	Cebu	138	9 25	123 20
Tanawan	Barrio	Laguna	174	14 11	121 27
Tanay	Municipality	Rizal	240	14 30	121 17
Tandag	Municipality	Surigao	262	9 05	126 10
Tandag	River	Surigao	262	9 00	126 05
Tandayag	Barrio	Oriental Negros	224	9 25	123 15
Tandey	Barrio	Bohol	106	9 39	123 55
Tandog	Island	Iloilo	166	10 25	122 30
Tandu	Municipal district	Sulu	258	6 00	121 25
Tandu	Barrio	Sulu	258	6 00	121 20
Tandubas	Island	Sulu	258	5 10	120 20
Tandubas	Municipal district	Sulu	258	5 05	120 15
Tandubaud	Barrio	Zamboanga	278	7 45	122 45
Tandul	Barrio	Isabela	170	16 55	121 35
Tangadan	Sitio	Amburayan Subprovince	198	17 04	120 37
Tangalan	Barrio	Capiz	130	11 47	122 16
Tanganan	Barrio	Davao	154	7 20	125 50
Tangao	Sitio	Nueva Vizcaya	216	16 29	121 40
Tangaosan	Barrio	Ilocos Norte	158	18 11	120 41
Tangaosan	Barrio	Ilocos Sur	162	17 20	120 29
Tangaro	Barrio	Misamis	194	9 05	124 40
Tangbo	Barrio	Cebu	138	9 30	123 20
Tanghas	Barrio	Leyte	186	11 05	125 05
Tangilig	Sitio	Kalinga Subprovince	208	17 17	121 09
Tangkulan	Barrio	Bukidnon	110	8 20	124 50
Tanglag	Barrio	Kalinga Subprovince	208	17 23	121 13
Tanglagan	Rancheria	Apayao Subprovince	200	18 22	120 59
Tanglay	Barrio	Pampanga	232	15 10	120 40
Tanganan	Barrio	Bohol	106	9 37	123 47
Tangob	Barrio	Misamis	194	8 05	123 45
Tangob	Mountain	Kalinga Subprovince	208	17 15	121 15
Tangoon	Mountain	Bukidnon	110	7 45	124 50
Tangub	Sitio	Occidental Negros	220	10 40	122 55
Tanguingui	Island	Cebu	138	11 30	123 45
Tanguingui	Island	Sorsogon (N)	252	13 11	122 56
Tanjay	Municipality	Oriental Negros	224	9 30	123 10
Tankey	Caves	Bulacan	114	15 04	121 05
Tankulang	Mountain	Bukidnon	110	7 50	125 10
Tanoban	Point	Camarines Norte	122	14 17	122 51
Tanodan	River	Bontoc Subprovince	204	17 07	121 11
Tanodan	River	Kalinga Subprovince	208	17 15	121 13
Tañon	Strait	Cebu	138	10 30	123 30
Tañon	Strait	Oriental Negros	224	10 90	123 20
Tañon	Strait	Philippine Islands	72	10	123
Tanque	Barrio	Cebu	138	10 15	123 50
Tantauayan	Mountain	Occidental Negros	220	9 55	122 35
Tantawan	Barrio	Zamboanga	278	7 30	122 50
Tanulon	Barrio	Bontoc Subprovince	204	17 07	120 55
Tanza	Municipality	Cavite	134	14 24	120 51
Tanza	Barrio	Rizal	240	14 41	120 56
Taoang	Sitio	Davao	154	7 10	125 40
Tapa	Sitio	Kalinga Subprovince	208	17 40	121 22
Tapaan	Island	Sulu	258	5 25	120 45
Tapaan	Passage	Sulu	258	5 25	120 40
Tapal	Barrio	Bohol	106	10 04	124 30
Tapanayan	Sitio	Zamboanga	278	7 35	122 10
Tapao	Barrio	Ilocos Norte	158	17 54	120 28
Tapas	Municipality	Capiz	130	11 15	122 32
Tapi	Mountain	Bukidnon	110	8 09	124 35
Tapi	Mountain	Lanao	178	8 00	124 35
Tapiantana	Island	Zamboanga	278	6 20	121 55
Tapilon	Barrio	Cebu	138	11 15	124 00
Tapian	Sitio	Kalinga Subprovince	208	17 35	121 12
Tapituan	Island	Palawan (N)	228	11 10	119 20
Taplao	Barrio	Nueva Vizcaya	216	16 19	120 57
Tappa	Sitio	Isabela	170	16 50	122 05
Tappo	Sitio	Bontoc Subprovince	204	17 07	121 20
Tappo	Sitio	Kalinga Subprovince	208	17 33	121 21
Tapsao	Sitio	Oriental Negros	224	9 30	122 40
Tapu	Sitio	Apayao Subprovince	200	18 12	121 12
Tapuac	Barrio	Zambales	274	15 33	119 57
Tapul	Island Group	Sulu	258	5 35	120 50
Tapul	Island	Sulu	258	5 45	120 55
Tapul	Municipal district	Sulu	258	5 40	120 55
Tapul	Sitio	Palawan (S)	228	10 00	118 50
Tapulaw	Barrio	Bataan	94	14 49	120 31
Tapundo	Point	Davao	154	5 20	125 30

LIST OF GEOGRAPHIC NAMES.

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Name.	Feature.	Map.	Fac- ing page.	Lat- tude.	Longi- tude.
Taquico	Barrio	Tayabas (S)	270	14 10	121 40
Tara	Island	Palawan (N)	228	12 20	120 20
Taradungan	Barrio	Palawan (N)	228	10 20	119 30
Taraka	Municipal district	Lanao	178	7 55	124 20
Tarangnan	Municipality	Samar	248	11 55	124 45
Tardi	River	Kalinga Subprovince.	208	17 15	121 33
Tardi or Mallig	River	Mountain Province	196	17 20	121 35
Taretic	River	Isabela	170	16 50	122 00
Tarigtig	Point	Nueva Vizcaya	216	16 20	122 16
Tariwara	Barrio	Albay	86	14 03	124 12
TARLAC	Province	Tarlac	266	15 30	120 30
Tarlac	Province	Philippine Islands	72	15	120
Tarlac	Capital	Tarlac	266	15 29	120 35
Tarlac	Capital, Tarlac.	Philippine Islands	72	15	120
Tarococ	Barrio	Laguna	174	14 11	121 12
Tarom	Sitio	Zambales	274	15 10	120 13
Tarragona	Point	Camarines Norte.	122	13 57	123 05
Tarragona	Barrio	Leyte	186	10 50	125 00
Tartaro	Sitio	Davao	154	7 00	126 30
Taslan	Barrio	Bulacan	114	15 10	121 02
Tatalan	Barrio	Capiz	130	11 14	122 40
Taul	Island	Sulu	258	6 15	121 50
Tauala	Sitio	Ifugao Subprovince.	206	16 55	121 01
Tauayan	Barrio	Bohol	106	9 34	123 46
Taug	Sitio	Nueva Vizcaya	216	16 07	121 22
Tautit	Barrio	Bohol	106	9 36	124 04
Tautit	Township	Apayao Subprovince.	200	18 06	121 20
Tautit	Township	Mountain Province.	196	18 05	121 20
Taupun	River	Apayao Subprovince.	200	18 00	121 18
Tawang	Sitio	Lanao	178	7 35	124 40
Tawini	Barrio	Kalinga Subprovince.	208	17 36	121 13
Tawiran	Rancheria	Apayao Subprovince.	200	17 49	121 15
Tawitawi	Barrio	Cotabato	150	7 10	124 20
Tawitawi	Island	Sulu	258	5 10	120 00
TAYABAS (N)	Island	Philippine Islands	72	5	120
TAYABAS (S)	Province	Tayabas (N)	270	15 00	121 30
Tayabas	Province	Tayabas (S)	270	13 45	122 10
Tayabas	Province	Philippine Islands	72	14	122
Tayabas	Bay	Batangas	102	13 45	121 30
Tayabas	Bay	Tayabas (S)	270	13 45	121 40
Tayac Norte	Municipality	Tayabas (S)	270	14 00	121 35
Tayasan	Barrio	Ilocos Sur	162	17 37	120 27
Taysan	Municipality	Oriental Negros	224	9 55	123 10
Taysan	Municipality	Batangas	102	13 48	121 11
Taytay	Barrio	Albay	86	13 07	123 44
Taytay	Municipality	Rizal	240	14 34	121 08
Taytay	Township	Palawan (N)	228	10 50	119 30
Taytay	Barrio	Cebu	138	9 50	123 25
Taytay	Barrio	Laguna	174	14 07	121 25
Taytay	Barrio	Laguna	174	14 07	121 30
Tayud	Point	Leyte	186	10 40	125 05
Tayug	Barrio	Cebu	138	10 25	124 00
Tayug	Municipality	Pangasinan	236	16 02	120 45
Tayum	Barrio	Nueva Vizcaya	216	16 08	120 58
Tayuman	Municipality	Abra	78	17 37	120 39
Tayuman	Barrio	Batangas	102	13 39	121 13
Taywanak	Barrio	Rizal	240	14 31	121 10
Teachers Camp	Barrio	Cavite	134	14 10	120 51
Teinga	Vacation quarters.	City of Baguio	140	16 25	120 36
Tejero	Island	Zamboanga	278	6 55	121 35
Tejero	Barrio	Cavite	134	14 24	120 52
Telabanca	Barrio	Leyte	186	10 20	124 45
Telabastagan	Barrio	Tarlac	266	15 17	120 37
Telbang	Barrio	Pampanga	232	15 07	120 37
Telegrafo	Barrio	Pangasinan	236	16 10	120 03
Templanza	Barrio	Leyte	186	11 00	125 05
Templo	Barrio	Leyte	186	10 15	124 55
Teomabal	Island	Sorsogon (N)	252	13 09	122 52
Teresa	Island	Sulu	258	6 20	120 50
Ternate	Municipality	Rizal	240	14 33	121 12
Tetas de Cataingan	Municipality	Cavite	134	14 17	120 43
Tetas de Santa	Twin Peaks	Sorsogon (S)	252	12 03	123 55
Tetay	Mountain	Ilocos Sur	162	17 31	120 28
Tetepan	Barrio	Cagayan	118	17 55	121 50
Tetuan	Barrio	Bontoc Subprovince	204	17 05	120 55
Thurston Rock	Barrio	Zamboanga	278	6 55	122 05
Tiagan	Islet	Camarines Norte.	122	14 32	122 47
Tiang	Barrio	Lepanto Subprovince	210	17 14	120 37
Tibaao	Municipality	Tayabas (S)	270	14 00	121 20
Tibag	Sitio	Occidental Negros	220	10 55	123 25
	Barrio	Mindoro	190	13 30	120 45

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Tibagan	Barrio	Bulacan	114	14	57	120	57
Tibang	Sitio	Albay	86	13	42	124	05
Tibangran	Barrio	Ilocos Norte	158	17	51	120	34
Tibiao	Municipality	Antique	90	11	15	122	00
Tibo	Sitio	Pampanga	232	15	12	120	31
Tibuan	Sitio	Cotabato	150	7	15	124	30
Tibunec	Barrio	Amburayan Subprovince	198	16	53	120	32
Ticalan	Barrio	Batangas	102	13	48	121	26
Ticao	Island	Sorsogon (N)	252	12	32	123	42
Ticao	Island	Sorsogon (S)	252	12	32	123	42
Ticao	Pass	Sorsogon (N)	252	12	40	123	46
Tielin	Island	Sorsogon (N)	252	12	35	124	07
Tielin	Island	Sorsogon (S)	252	12	35	124	07
Tiemo	Mountain	Abra	78	17	30	120	59
Ticungan	Mountain	Bulacan	114	14	59	121	10
Tidman	Barrio	Surigao	262	8	20	126	20
Tiempo	Municipal district	Abra	78	17	19	120	45
Tigala	Sitio	Davao	154	7	00	125	40
Tigao	Barrio	Surigao	262	9	10	126	10
Tigaon	Municipality	Camarines Sur	126	13	38	123	30
Tigbalaoy	River	Cotabato	150	7	00	125	00
Tigbao	Barrio	Cebu	138	9	50	123	25
Tigbao	Barrio	Occidental Negros	220	10	40	123	30
Tigbao	Sitio	Sorsogon (S)	252	12	10	123	35
Tigbao	Sitio	Surigao	262	9	40	125	25
Tigbaon	Islands	Zamboanga	278	7	20	122	25
Tigbaruku	Barrio	Zamboanga	278	7	35	123	10
Tigbauan	Municipality	Iloilo	166	10	40	122	20
Tigbi	Barrio	Bulacan	114	14	52	121	02
Tigbi	Sitio	Camarines Norte	122	14	15	122	42
Tiglaugan	Barrio	Occidental Negros	220	10	55	123	20
Tiguihan	Barrio	Mindoro	190	13	10	121	25
Tiguisan	Sitio	Mindoro	190	12	50	121	30
Tigurán	Mountain	Antique	90	10	55	122	15
Tigurán	Mountain	Relief	72	11		122	
Tiis	River	Bataan	94	14	36	120	25
Tikalaan	River	Bukidnon	110	8	05	124	40
Tikalaan	Barrio	Bukidnon	110	8	00	124	40
Tiko	Sitio	Bontoc Subprovince	204	17	10	121	18
Tiktaban	Island	Zamboanga	278	6	55	122	10
Tiktik	Sitio	Bataan	94	14	26	120	30
Tilago	Sitio	Mindoro	190	13	10	120	50
Tilambo	Barrio	Batangas	102	13	48	121	14
Tilic	Barrio	Mindoro	190	13	50	120	10
Timago	Barrio	Bukidnon	110	7	55	124	55
Timalan	Barrio	Cavite	134	14	21	120	47
Timamana	Barrio	Surigao	262	9	35	125	35
Timbao	Barrio	Laguna	174	14	17	121	03
Timbungan	Island	Zamboanga	278	6	20	122	05
Timpagon	Barrio	Bukidnon	110	8	20	124	30
Tina	Barrio	Capiz	130	11	14	122	52
Tinaan	Barrio	Cebu	138	10	10	123	45
Tinabag	Barrio	Palawan (S)	228	10	00	119	00
Tinabooc	Sitio	Antique	90	12	00	121	25
Tinabusan	Barrio	Antique	90	11	25	122	05
Tinaca	Point	Davao	154	5	30	125	20
Tinaga	Island	Camarines Norte	122	14	28	122	56
Tinago	Barrio	Albay	86	13	52	124	23
Tinago	Barrio	Leyte	186	11	25	124	20
Tinago	Barrio	Leyte	186	11	05	124	25
Tinajeros	Barrio	Bataan	94	14	41	120	32
Tinajeros	Barrio	Pampanga	232	15	00	120	40
Tinajeros	Barrio	Rizal	240	14	41	120	58
Tinalmud	Barrio	Camarines Sur	126	13	36	122	53
Tinambac	Municipality	Camarines Sur	126	13	49	123	20
Tinambacan	Municipality	Samar	248	12	05	124	30
Tinambulan	Sitio	Cotabato	150	6	40	124	45
Tinamnan	Barrio	Tayabas (S)	270	14	05	121	35
Tinampaan	Barrio	Occidental Negros	220	10	55	123	20
Tinamparan	Sitio	Bukidnon	110	8	25	124	25
Tinangdan	Mountain	Lepanto Subprovince	210	17	04	120	51
Tinanon	Mountain	Cotabato	150	7	25	125	15
Tinanon	Mountain	Relief	72	7		125	
Tinaogan	Barrio	Oriental Negros	224	9	45	123	10
Tinapian	Barrio	Albay	86	13	06	123	51
Tinapian	Barrio	Sorsogon (N)	252	12	29	123	28
Tinapian	Barrio	Sorsogon (S)	252	12	39	123	28
Tinapuay	Barrio	Capiz	130	11	33	122	18
Tinawan	Island	Zamboanga	278	6	20	121	55
Tinayunan	Barrio	Oriental Negros	224	10	05	123	15

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Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
				°	'
Tinayunga	Mountain	Antique	90	11 50	122 00
Tinayunga	Mountain	Capiz	130	11 50	122 00
Tinayunga	Mountain	Relief	72	12	122
Tindog	Barrio	Cebu	138	11 10	124 00
Tineg	Municipal district.	Abra	78	17 46	120 57
Tineg	River	Abra	78	17 49	120 48
Tineg	River	Abra	78	17 47	120 54
Tinga	Barrio	Batangas	102	13 48	121 05
Tingali	Sitio	Davao	154	7 30	126 10
Tingib	Barrio	Antique	90	11 45	122 00
Tingib	Barrio	Leyte	186	11 05	124 50
Tinglayan	Township	Bontoc Subprovince	204	17 15	121 08
Tinglayan	Township	Mountain Province	196	17 15	121 10
Tingloy	Barrio	Batangas	102	13 40	120 52
Tinib	Barrio	Tayabas (N)	270	16 15	122 05
Tinigban	Barrio	Capiz	130	11 26	122 47
Tiniguiban	Barrio	Palawan (N)	228	11 20	119 30
Tinimbuan	Sitio	Romblon	244	12 20	122 40
Tinitian	Barrio	Palawan (N)	228	10 00	119 10
Tinoc	Barrio	Ifugao Subprovince	206	16 42	120 54
Tinococan	Barrio	Iloilo	166	11 00	122 40
Tinorian	Barrio	Iloilo	166	10 55	122 45
Tinorian	River	Iloilo	166	10 55	122 45
Tinorognan	Barrio	Camarines Sur	126	13 35	123 29
Tinoto	Sitio	Cotabato	150	5 50	125 05
Tintiman	Island	Bohol	106	9 58	124 34
Tinuibo	Island	Bohol	106	10 07	124 39
Tipacan	Barrio	Batangas	102	13 55	121 12
Tipao	Point	Rizal	240	14 25	121 13
Tipas	Barrio	Batangas	102	13 50	121 25
Tipas	Barrio	Rizal	240	14 32	121 05
Tipolo	Barrio	Bohol	106	10 02	124 30
Tiptip	Barrio	Bohol	106	9 42	123 53
Tiquem	Sitio	Abra	78	17 23	120 47
Tiquey	Barrio	Benguet Subprovince	202	16 33	120 50
Tiquitic	Sitio	Abra	78	17 24	120 35
Tiring	Barrio	Iloilo	166	10 50	122 30
Tition	Barrio	Zambales	274	15 27	119 56
Tiwi	Municipality	Albay	86	13 27	123 41
Tobgon	Barrio	Albay	86	13 12	123 25
Tobigon	Barrie	Romblon	244	12 20	121 55
Toboso	Barrio	Occidental Negros	220	10 45	123 30
Toboy	Barrio	Pangasinan	236	16 02	120 39
Toedog	Barrio	Bohol	106	9 36	124 03
Tococ	Barrio	Pangasinan	236	15 50	120 25
Toctocan	Mountain	Capiz	130	11 29	122 08
Toding	Barrio	Benguet Subprovince	202	16 25	120 38
Togong	Barrio	Romblon	244	12 55	122 05
Togos	Barrio	Sorsogon (N)	252	12 41	123 59
Tola	Sitio	Samar	248	11 55	125 15
Tolag	Sitio	Bontoc Subprovince	204	17 04	121 12
Tolagan	Sitio	Davao	154	6 40	125 20
Tolatolaan	Barrio	Iloilo	166	11 05	122 40
Tolay	Barrio	Romblon	244	12 25	122 00
Toledo	Municipality	Cebu	138	10 25	123 40
Tolitul	Sitio	Nueva Vizcaya	216	16 17	120 57
Tolong	Bay	Oriental Negros	224	9 20	122 50
Tolong	Municipality	Oriental Negros	224	9 20	122 50
Tolong Viejo	Barrio	Oriental Negros	224	9 20	122 50
Tolonpisa	Island	Zamboanga	278	6 15	122 00
Tolosa	Municipality	Leyte	186	11 05	125 05
Tolosa	Barrio	Cebu	138	9 40	123 20
Tomalaytay	Barrio	Sorsogon (N)	252	12 53	123 48
Tomandoc	Sitio	Camarines Norte	122	14 06	123 02
Tombac	Bay	Pangasinan	236	16 15	119 57
Tomingad	Barrio	Romblon	244	12 30	122 00
Tomonton	Point	Occidental Negros	220	10 55	122 55
Tondo	District	City of Manila	146	14 37	120 58
Tondol	Barrio	Pangasinan	236	16 19	120 00
Tonga	Point	Oriental Negros	224	9 15	123 25
Tonkil	Island	Sulu	258	6 00	121 50
Tonkil	Municipal district.	Sulu	258	6 00	121 35
Tono	Barrio	Iloilo	166	11 00	122 20
Tono	Sitio	Antique	90	11 20	122 05
Toocan	Barrio	Zamboanga	278	8 30	123 20
Tood	Islands	Bohol	106	10 15	124 39
Toog	Barrio	Bohol	106	9 44	124 05
Toong	Sitio	Nueva Vizcaya	216	16 06	121 23
Toos	Cove	Sorsogon (S)	252	12 15	123 14
Toplao	Barrio	Lepanto Subprovince	210	16 47	120 45
Torrijos	Municipality	Tayabas (S)	270	13 20	122 05

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Tortosa	Barrio	Occidental Negros	220	10	55	123	05
Toyangan	Mountain	Benguet Subprovince	202	16	34	120	45
Toytoy	Barrio	Camarines Sur	126	13	52	123	43
Tran	Barrio	Cotabato	150	6	45	124	00
Tranca	Barrio	Laguna	174	14	08	121	16
Trento	Municipal district.	Agusan	82	8	00	126	00
Tres Cruces	Irrigation Dam.	Cavite	134	14	20	120	50
Tres Reyes	Islands	Palawan (N)	228	11	30	120	10
Tres Reyes	Islands	Tayabas (S)	270	13	15	121	50
Triana	Barrio	Leyte	186	9	55	125	05
Triboad	Bay	Bataan	94	14	47	120	16
Trinidad	Barrio	Occidental Negros	220	10	20	122	55
Trinidad	Barrio	Samar	248	12	05	124	30
Truro	Bank	Relief	72	16		117	
Tuao	Municipality.	Cagayan	118	17	45	121	25
Tuao	Barrio	Nueva Vizcaya	216	16	34	121	15
Tuawan	Barrio	Surigao	262	8	05	126	25
Tuba	Township	Benguet Subprovince	202	16	24	120	32
Tuba	Township	Mountain Province	196	16	25	120	30
Tuba	Sitio	Camarines Norte	122	14	09	122	33
Tuba	Mountain	Camarines Norte	122	14	05	122	31
Tubabao	Island	Samar	248	11	00	125	40
Tubaday	Barrio	Amburayan Subprovince.	198	16	47	120	31
Tubajon	Sitio	Surigao	262	10	20	125	35
Tubalan	Sitio	Davao	154	6	30	125	30
Tubalan Head	Point	Davao	154	6	30	125	30
Tubalina	Barrio	Lepanto Subprovince	210	17	10	120	39
Tubalina	Pass	Lepanto Subprovince	210	17	11	120	39
Tubalubac	Island	Sulu	258	5	55	120	25
Tubao	Municipality.	La Union	182	16	21	120	25
Tubaran	Municipal district.	Lanao	178	7	45	124	15
Tubay	Barrio	Agusan	82	9	10	125	30
Tubay	Sitio	Davao	154	5	20	125	20
Tubayon	Sitio	Davao	154	5	50	125	30
Tubbataha	Reef	Palawan (N)	228	8	50	119	50
Tubbataha	Reef	Philippine Islands	72	9		120	
Tubectubang	Barrio	Tarlac	266	15	46	120	34
Tubigagmanoc	Barrio	Cebu	138	10	40	123	45
Tubigan	Barrio	Mindoro	190	13	25	120	30
Tubigan	Sitio	Camarines Sur	126	13	29	123	27
Tubigan	Island	Sulu	258	6	25	120	50
Tubigan	Sitio	Ilocos Sur	162	17	50	120	30
Tubigon	Municipality.	Bohol	106	9	57	123	58
Tubili	Barrio	Mindoro	190	13	20	120	30
Tubili	Point	Mindoro	190	13	15	120	30
Tubiao	Sitio	Ifugao Subprovince.	206	16	39	121	06
Tubiyay	Township	Benguet Subprovince	202	16	31	120	37
Tublay	Township	Mountain Province	196	16	30	120	35
Tubli	Barrio	Albay	86	13	56	124	09
Tubo	Municipal district.	Abra	78	17	18	120	45
Tubo	Barrio	Amburayan Subprovince.	198	16	55	120	35
Tubo	River	Nueva Vizcaya	216	16	20	121	35
Tubod	Point	Bohol	106	9	39	124	24
Tubodmonte	Barrio	Bohol	106	9	42	124	21
Tubog	Barrio	Albay	86	13	17	123	31
Tubong	Sitio	Bataan	94	14	30	120	36
Tubotubo	Barrio	Zambales	274	15	45	119	56
Tubud	Barrio	Cebu	138	10	00	123	35
Tubud	Barrio	Cebu	138	9	50	123	20
Tubunan	Barrio	Zamboanga	278	6	35	122	15
Tubungan	Sitio	Apayao Subprovince.	200	18	04	121	33
Tuburan	Municipality.	Cebu	138	10	45	123	50
Tuburan	Barrio	Albay	86	13	15	123	33
Tuburan	Barrio	Bukidnon	110	8	25	124	30
Tuburan	Barrio	Capiz	130	11	22	122	53
Tuburan	Barrio	Iloilo	166	11	00	122	30
Tuburan	Barrio	Leyte	186	10	50	124	25
Tuburan	Barrio	Occidental Negros	220	10	55	123	00
Tubutub	Barrio	Amburayan Subprovince.	198	16	50	120	32
Tucac	Sitio	Ifugao Subprovince.	206	16	40	121	00
Tucal	Sitio	Nueva Vizcaya	216	16	34	121	11
Tucapanga	Point	Cotabato	150	5	35	125	20
Tucdaw	Barrio	Leyte	186	11	40	124	30
Tuddingan	Barrio	La Union	182	16	35	120	25
Tudela	Municipal district.	Agusan	82	8	05	126	05
Tudela	Municipality.	Cebu	138	10	40	124	30
Tudela	Barrio	Misamis	194	8	15	123	50
Tudela	Sitio	Surigao	262	8	10	126	10
Tuduk	Mountain.	Cotabato	150	5	55	125	25
Tue	Barrio	Abra	78	17	27	120	55
Tue	Barrio	Lepanto Subprovince.	210	16	58	120	49

Name.	Feature.	Map.	Facing page.	Latitude.	Longitude.
				° ' "	° ' "
Tuel	Barrio	Benguet Subprovince	202	16 31	120 35
Tugabi	Sitio	Amburayan Subprovince	198	16 45	120 31
Tugal	Sitio	Cotabato	150	6 40	124 50
Tugapangan	Point	Cotabato	150	7 25	124 10
Tugapangan	Point	Ianao	178	7 25	124 10
Tugas	Barrio	Albay	86	13 10	123 44
Tugas	Barrio	Bohol	106	10 09	124 37
Tugas	Barrio	Bohol	106	9 48	124 30
Tugas	Barrio	Leyte	186	10 20	124 50
Tugas	Barrio	Misamis	194	8 40	123 35
Tugas	Point	Surigao	262	9 30	126 00
Tugaya	Municipal district	Lanao	178	7 55	124 10
Tugbu	Barrio	Sorsogon (S)	252	12 21	123 38
Tugbungan	Barrio	Romblon	244	13 00	122 05
Tugdán	Barrio	Romblon	244	12 20	122 05
Tugis	Barrio	Cotabato	150	6 00	124 40
Tugnug	Point	Samar	248	11 20	125 40
Tugpan	Barrio	Tayabas (N)	270	14 45	121 55
Tugubun	Point	Davao	154	7 00	126 30
Tuguegarao	Capital	Cagayan	118	17 35	121 45
Tuguegarao	Capital, Cagayan	Philippine Islands	72	18	122
Tugui	Sitio	Pampanga	232	15 16	120 43
Tuguilan	Barrio	Mindoro	190	13 15	120 35
Tuguis	Barrio	Iloilo	166	11 15	122 55
Tuguis	Barrio	Occidental Negros	220	10 20	122 55
Tukanabago	Barrio	Cotabato	150	6 40	124 50
Tukukan	Barrio	Bortoc Subprovince	204	17 07	121 01
Tukukan	Barrie	Ifugao Subprovince	206	16 44	120 53
Tukurán	Municipal district	Zamboanga	278	7 50	123 35
Tula	Barrio	Samar	248	12 20	125 00
Tulaid	Barrio	Ifugao Subprovince	206	16 56	121 11
Tulang	Barrio	Bohol	106	10 06	124 12
Tulaong	Barrio	Mindoro	190	12 50	120 45
Tularicuín	Sitio	Palawan (N)	228	10 10	119 10
Tulgeo	Barrio	Rontoc Subprovince	204	17 16	121 06
Tuliyaban	Barrio	Rizal	240	14 41	121 00
Tulnalutan	Island	Zamboanga	278	7 00	122 20
Tulo	Barrio	Laguna	174	14 10	121 08
Tuhung	Sitio	Apayao Subprovince	200	18 01	121 28
Tuhuran	Island	Palawan (N)	228	11 00	119 20
Tumagboc	Barrio	Iloilo	166	10 40	122 10
Tumalaytay	Island	Sorsogon (S)	252	12 17	123 13
Tumalim	Barrio	Batangas	102	14 05	120 44
Tumalpuć	Mountain	Abra	78	17 42	120 55
Tumalum	Barrio	Romblon	244	12 55	122 05
Tumalum	Point	Romblon	244	12 55	122 05
Tumanao	Sitio	Davao	154	5 30	125 30
Tumarbong	Barrio	Palawan (N)	228	10 20	119 30
Tumarog	Sitio	Samar	248	11 40	125 20
Tumau	Barrio	Zamboanga	278	7 55	122 10
Tumauni	Municipality	Isabela	170	17 15	121 50
Tumbal	Sitio	Abra	78	17 22	120 43
Tumbau	Municipal district	Cotabato	150	7 05	124 25
Tumindao	Island	Sulu	258	4 40	119 25
Tumitus	Barrio	Zamboanga	278	7 25	122 25
Tumoc	Rancheria	Apayao Subprovince	200	18 19	121 24
Tuna	Bay	Cotabato	150	6 20	124 05
Tuna	Barrio	Rizal	240	14 20	121 14
Tunga	Barrio	Cebu	138	9 55	123 25
Tunga	Barrio	Leyte	186	11 15	124 45
Tungal	Sitio	Cotabato	150	7 05	124 45
Tungawan	Bay	Zamboanga	278	7 25	122 25
Tungel	Sitio	Ilocos Norte	158	18 24	120 46
Tunglugun	Barrio	Zamboanga	278	7 20	122 20
Tungtayan	Mountain	Amburayan Subprovince	198	16 50	120 38
Tungungan	Mountain	Lepanto Subprovince	210	16 53	120 44
Tunhak	Barrio	Laguna	174	14 27	121 28
Tuskođ	Sitio	Laguna	174	14 31	121 24
Tuntunan	Barrio	Bohol	106	9 56	124 02
Tupa	Barrio	Pangasinan	236	16 05	119 46
Tupac	Sitio	Kalinga Subprovince	208	17 18	121 25
Tupak	Sitio	Kalinga Subprovince	208	17 34	121 18
Tupas	Barrio	Iloilo	166	11 30	123 10
Tupas	Barrio	Isabela	170	16 30	121 40
Tuplac	Barrio	Ifugao Subprovince	206	16 46	121 05
Tupsan	Barrio	Misamis	194	9 10	124 45
Tuquib	Barrio	Abra	78	17 24	120 37
Turag	Barrio	Samar	248	12 20	124 55
Turatoc	Sitio	Apayao Subprovince	200	18 19	121 15
Turo	Barrio	Bulacan	114	14 49	120 56
Turođ	Barrio	Ilocos Sur	162	17 47	120 26

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Tusk	Peak	Mindoro	190	12	45	121	00
Tutun	Mountain	Nueva Vizcaya	216	16	29	121	21
Tutunod	Barrio	Lanao	178	8	05	123	55
Tuy	Municipality	Batangas	102	14	01	120	44
Tuyan	Barrio	Cebu	138	10	15	123	45
Tuyan	Sitio	Cotabato	150	5	55	125	20
Tuyangan	Rancheria	Apayao Subprovince	200	18	07	121	06
Tuyo	Barrio	Bataan	94	14	42	120	32
Tuyom	Sitio	Occidental Negros	220	10	00	122	30
U.							
Uac	Mountain	Sorsogon (S)	252	12	12	123	39
Uac	Mountain	Relief	72	12		124	
Uacon	Sitio	Zambales	274	15	41	119	56
Uaguaguen	Sitio	Ifugao Subprovince	206	16	53	121	06
Uala	Islands	Tayabas (N)	270	14	55	122	15
Uao	Sitio	Lanao	178	7	40	124	45
Uatu	Municipal district	Lanao	178	7	55	124	10
Uban	Sitio	Lanao	178	7	40	124	00
Ubang	Barrio	Camarines Norte	122	14	20	122	29
Ubay	Municipality	Bohol	106	10	03	124	28
Ubbog	Sitio	Ilocos Sur	162	17	53	120	30
Ubbug	Barrio	Ilocos Sur	162	17	16	120	28
Ubbug	Barrio	La Union	182	16	47	120	21
Ubihar	Barrio	Bulacan	114	14	45	120	56
Ubuhan	Barrio	Bohol	106	9	41	123	51
Ubuol	Barrio	Ifugao Subprovince	206	16	45	121	02
Ucab	Sitio	Abra	78	17	26	120	41
Udino	Sitio	La Union	182	16	14	120	30
Ududiaw	Barrio	Abra	78	17	28	120	52
Ugac	Barrio	Cagayan	118	17	45	121	45
Ugpong	Barrio	Bohol	106	9	38	124	00
Ugu	Mountain	Benguet Subprovince	202	16	19	120	48
Uguis	Barrio	Ilocos Norte	158	17	54	120	35
Uines	Sitio	Davao	154	7	10	125	20
Uja	Barrio	Ifugao Subprovince	206	16	55	121	03
Ujot	River	Agusan	82	8	40	125	25
Ulalikan	Point	Tayabas (N)	270	15	05	121	30
Ulango	Barrio	Batangas	102	14	08	121	06
Uli	Barrio	Pangasinan	236	15	58	119	49
Ulip	River	Abra	78	17	15	120	46
Ulugan	Bay	Palawan (S)	228	10	10	118	40
Ululingen	Barrio	Abra	71	17	27	120	88
Ulut	River	Samar	248	12	00	125	25
Ulu-Ugaga	Sitio	Cotabato	150	7	35	125	15
Uma	Barrio	Kalinga Subprovince	208	17	21	121	06
Umabay	Barrio	Sorsogon (S)	252	12	16	123	44
Umingan	Municipality	Pangasinan	236	15	56	120	50
Umirey	River	Tayabas (N)	270	15	05	121	25
Umirey	Sitio	Tayabas (N)	270	15	15	121	25
Umpucan	Barrio	Bulacan	114	15	04	121	01
Umubi	Sitio	Nueva Vizcaya	216	16	01	121	19
Unapan	Sitio	Davao	154	7	10	125	20
Ungab	Barrio	Nueva Ecija	212	15	48	120	38
Ungalu	Rancheria	Apayao Subprovince	200	18	19	121	18
Ungay	Point	Albay	86	13	11	124	13
Ungol	Sitio	Ifugao Subprovince	206	16	41	121	05
Ungot	Barrio	Tarlac	266	15	28	120	38
Unidos	Barrio	Capiz	130	11	55	122	00
Unidos	Barrio	Surigao	262	9	00	126	10
Union	Barrio	Camarines Sur	126	13	51	123	19
Union	Barrio	Cebu	138	10	40	124	20
Union	Barrio	Leyte	186	10	40	124	55
Union	Barrio	Surigao	262	9	45	126	10
Unisan	Municipality	Tayabas (S)	270	13	50	122	00
Unisan	Island	Iloilo	166	10	20	122	35
Unot, Dato	Sitio	Cotabato	150	7	10	125	05
Unzad	Barrio	Pangasinan	236	15	56	120	32
Uog	Barrio	Bohol	106	9	59	124	04
Upao	Mountain	Capiz	130	11	40	122	09
Upeg	Barrio	Bulacan	114	15	02	120	59
Upi	Barrio	Isabela	170	17	05	121	50
Uopian	Sitio	Davao	154	7	20	125	20
Upupas	Barrio	Amburayan Subprovince	198	16	52	120	30
Urayong	Barrio	La Union	182	16	28	120	20
Urbizondo	Municipality	Pangasinan	236	15	50	120	20
Urbizondo	Barrio	La Union	182	16	40	120	20
Urdaneta	Municipality	Pangasinan	236	15	59	120	34
Urdaneta	Barrio	Cavite	134	14	11	120	45
Ursula	Island	Palawan (S)	228	8	20	117	30
Ururulong (See Irurulong)							

LIST OF GEOGRAPHIC NAMES.

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Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Urzadan	Barrio	Amburayan Subprovince	198	16	59	120	32
Urzadan	Barrio	Lepanto Subprovince	210	17	08	120	40
Usada	Island	Sulu	253	6	05	120	35
Uso	Barrio	Amburayan Subprovince	198	16	59	120	33
Usok	Island	Tayabas (N)	270	14	55	122	10
Uson	Barrio	Leyte	186	11	30	124	35
Uson	Barrio	Sorsogon (S)	252	12	13	123	47
Utabi	Barrio	Sorsogon (N)	252	12	39	123	55
Utud	Barrio	Batangas	102	14	07	120	38
Uyugan	Township	Batanes	58	20	22	121	58
Uyan	Stio	Lanao	178	7	55	124	05
V.							
Valdefuente	Barrio	Nueva Ecija	212	15	31	120	58
Valderrama	Municipality	Antique	90	11	00	122	10
Valencia	Municipality	Bohol	106	9	37	124	13
Valencia	Barrio	Bukidnon	110	7	50	125	05
Valencia	Barrio	Cebu	133	10	10	123	35
Valencia	Barrio	Iloilo	166	10	40	122	45
Valencia	Barrio	Leyte	186	11	05	124	35
Valencia	Barrio	Tayabas (S)	270	14	05	121	40
Valencia	Stio	Cotabato	150	6	10	124	15
Valladolid	Municipality	Occidental Negros	220	10	30	122	50
Valle	Stio	Nueva Ecija	212	15	39	120	57
Vallehermoso	Municipality	Oriental Negros	224	10	20	123	20
Valverde	Stio	Iloilo	166	10	30	122	05
Vanrell	Barrio	Ilocos Sur	162	17	25	120	31
Varadero	Bay	Mindoro	190	13	30	121	00
Vega Grande	Barrio	Nueva Ecija	212	15	39	121	08
Verde	Island	Batangas	102	13	33	121	05
Verde	Mountain	Pangasinan	236	16	03	120	04
Verde Island	Passage	Batangas	102	13	35	120	50
Verde Island	Passage	Mindoro	190	13	35	120	50
Verdu	Municipal district	Agusan	82	8	45	125	40
Vereker	Bank	Relief	72	21		116	
Veronica	Barrio	Ilocos Norte	153	18	05	120	36
Veruela	Municipal district	Agusan	82	8	05	125	55
Vica	Barrio	Abra	78	17	32	120	31
Victoria	Municipality	Tarlac	266	15	35	120	41
Victoria	Barrio	Cebu	133	11	00	123	55
Victoria	Barrio	La Union	132	16	52	120	23
Victoria	Peaks	Palawan (S)	228	9	30	118	20
Victoria	Peaks	Relief	72	9		113	
Victorias	Municipality	Occidental Negros	220	10	55	123	05
Viga	Municipality	Albay	86	13	52	124	17
Viga	Barrio	Batangas	102	13	54	120	39
Viga	Barrio	Bohol	106	9	48	123	55
Viga	Barrio	Isabela	170	16	50	121	45
Viga	Barrio	Leyte	186	11	50	124	20
Viga	Stio	Kalinga Subprovince	208	17	20	121	21
Viga	River	Kalinga Subprovince	208	17	20	121	20
Vigan	Capital	Ilocos Sur	162	17	35	120	23
Vigan	Capital, Ilocos Sur	Philippine Islands	72	18		120	
Vigia	Point	Bataan	94	14	27	120	25
Vigia	Mountain	Sorsogon (S)	252	11	57	123	44
Vigo	Barrio	Mindoro	190	13	50	120	10
Vigo	Barrio	Samar	248	12	30	125	05
Vigviga	Barrio	Amburayan Subprovince	198	16	49	120	28
Vila	Barrio	Lepanto Subprovince	210	17	00	120	53
Villa	Barrio	Nueva Ecija	212	15	36	121	12
Villa	Barrio	Tayabas (S)	270	14	05	121	50
Villaba	Municipality	Leyte	186	11	15	124	25
Villaflor	Barrio	Misamis	194	8	30	123	45
Villaflora	Barrio	Capiz	130	11	20	122	49
Villahermosa	Barrio	Leyte	186	11	30	124	20
Villajesus	Barrio	Tayabas (S)	270	14	05	122	00
Villalimpia	Barrio	Bohol	106	9	37	124	00
Villalon	Barrio	Leyte	186	11	30	124	20
Villanueva	Barrio	Misamis	194	8	35	124	45
Villanueva	Barrio	Pangasinan	236	15	47	120	33
Villar	Barrio	Antique	90	10	50	122	00
Villar	Barrio	Zambales	274	15	11	120	15
Villarcayo	Barrio	Bohol	106	9	51	124	09
Villareal	Municipality	Samar	248	11	35	124	55
Villasia	Municipality	Pangasinan	236	15	54	120	35
Villavieja	Municipality	Abra	78	17	26	120	38
Villavieja	Stio	Abra	78	17	21	120	36
Villegas	Barrio	Oriental Negros	224	10	10	123	10
Villegas	Barrio	Pangasinan	236	16	08	120	34
Vintar	Municipality	Ilocos Norte	158	18	14	120	39

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Violanta	Municipal district.	Agusan	82	8 15	125	45	
Vira	Sitio	Isabela	170	17 10	121	35	
Virac	Municipality.	Albay	86	13 35	124	14	
Virac	Point	Albay	86	13 31	124	13	
Viriato	Barrio	Samar	248	12 15	124	20	
Visal	Barrio	Pampanga	232	15 03	120	55	
Visayan	Sea	Philippine Islands	72	11	124	30	
Visayan	Sea	Cebu	138	11 30	123	30	
Visayan	Sea	Sorsogon (S)	252	11 48	123	30	
Vista Alegre	Sitio	Occidental Negros	220	10 40	123	00	
Vitali	Sitio	Zamboanga	278	7 20	122	15	
Vito	Barrio	Occidental Negros	220	10 55	123	30	
Vitong	Barrio	Ilocos Sur	162	17 11	120	32	
Vive	Barrio	Cebu	138	10 00	123	25	
Volcano	Island	Batangas	102	14 01	122	00	
Volcano	Islet	Cagayan	118	19 05	122	10	
Volcano	Mountain	Cagayan	118	18 50	121	50	
W.							
Wacnihan	Barrio	Ifugao Subprovince.	206	16 51	121	15	
Waga	Rancheria	Apayao Subprovince	200	18 04	121	15	
Wagad	Barrio	Abra	78	17 45	121	05	
Wagas	Sitio	Comarines Sur.	126	13 36	122	52	
Wagud	Barrio	Kalinga Subprovince	208	17 37	121	20	
Wala	Mountain	Apayao Subprovince.	200	17 50	121	05	
Wala	Mountain	Mountain Province.	196	17 50	121	05	
Waloe	Municipal district.	Agusan	82	8 15	125	40	
Wangal	Barrio	Benguet Subprovince	202	16 29	120	34	
Wangonhan	Barrio	Bohol	106	9 46	124	22	
Washington	Barrio	Samar	248	12 25	124	40	
Washington	Barrio	Sorsogon (N)	252	12 32	123	44	
Washington	Barrio	Sorsogon (S)	252	12 32	123	44	
Wasig	Barrio	Mindoro	190	12 35	121	30	
Wawa	River	Agusan	82	9 00	125	45	
Wawa	Barrio	Bataan	94	14 41	120	34	
Wawa	Barrio	Batangas	102	14 05	120	38	
Wawa	Barrio	Cavite	134	14 25	120	51	
Wawa	Barrio	Laguna	174	14 20	121	27	
Wawa	Barrio	Mindoro	190	13 30	120	45	
Wawa	Sitio	Rizal	240	14 44	121	11	
Wawang Carullo	Sitio	Nueva Ecija	212	15 24	121	05	
Wawang Maputat	Sitio	Nueva Ecija	212	15 21	121	12	
Wayan	Mountain	Apayao Subprovince.	200	17 53	121	09	
West Nalaut	Island	Palawan (N)	228	12 00	119	50	
Whale Rock	Islet	Surigao	262	9 30	126	05	
Wright	Municipality.	Samar	248	11 45	125	00	
Wyllie Rocks	Islets	Cagayan	118	19 30	121	40	
Y.							
Yabang	Mountain	Rizal	240	14 39	121	13	
Yabuan	Sitio	Benguet Subprovince	202	16 16	120	37	
Yaegen	Mountain	Samar	248	11 45	125	20	
Yaco	Point	Davao	154	7 00	126	30	
Y'Ami	Island	Batanes	98	21 05	121	59	
Y'Ami	Island	Philippine Islands	72	21	122		
Yao	Island	Cebu	138	11 00	123	35	
Yapad	Barrio	Leyte	186	11 05	124	55	
Yasip	Sitio	Lepanto Subprovince	210	17 13	120	39	
Yati	Barrio	Cebu	138	10 25	124	00	
Yaul	Barrio	Tayabas (S)	270	13 55	121	55	
Yawa	Sitio	Samar	248	12 05	125	00	
Yeban	Barrio	Isabela	170	17 00	121	55	
Yog	Point	Albay	86	14 06	124	12	
Yunot	Barrio	Laguna	174	14 21	121	30	
Z.							
Zabala	Barrio	Leyte	186	11 10	124	45	
ZAMBALES	Province	Zambales	274	15 20	120	00	
Zambales	Province	Philippine Islands	72	15	120		
ZAMBOANGA	Province	Zamboanga	278	8 00	123	00	
Zamboanga	Province	Philippine Islands	72	8	123		
Zamboanga	Capital	Zamboanga	278	6 55	122	05	
Zamboanga	Capital, Zamboan-	Philippine Islands	72	7	122		
Zamboanguita	Municipality.	Occidental Negros	224	9 05	123	10	
Zanja Mayor	Barrio	Cavite	134	14 22	120	51	
Zapang	Barrio	Cavite	134	14 17	120	43	
Zapat	Barrio	Ilocos Sur	162	17 50	120	29	
Zapato Mayor	Island	Capiz	130	11 45	123	02	
Zapato Menor	Island	Capiz	130	11 48	122	59	

Name.	Feature.	Map.	Facing page.	Latitude.		Longitude.	
				°	'	°	'
Zapote.....	Barrio.....	Laguna.....	174	14	18	121	04
Zapote.....	River.....	Rizal.....	240	14	26	120	59
Zaragoza.....	Municipality.....	Nueva Ecija.....	212	15	27	120	47
Zaragoza.....	Barrio.....	Antique.....	90	11	00	122	00
Zaragoza.....	Barrio.....	Cebu.....	138	10	10	123	35
Zaragoza.....	Barrio.....	Davao.....	154	7	10	126	30
Zaragoza.....	Barrio.....	La Union.....	182	16	43	120	22
Zaragoza.....	Barrio.....	Leyte.....	186	10	20	124	45
Zaragoza.....	Barrio.....	Pangasinan.....	236	16	16	119	52
Zaragoza.....	Barrio.....	Surigao.....	262	9	55	125	35
Zaragoza.....	Sitio.....	Romblon.....	244	12	15	122	00
Zarraga.....	Barrio.....	Iloilo.....	166	10	50	122	35
Zau.....	Island.....	Sulu.....	258	5	50	119	45
Zig-Zag.....	Gate.....	City of Baguio.....	140	16	22	120	36
Zig-Zag.....	Gate.....	Benguet Subprovince.....	202	16	22	120	36
Zimigui.....	Rancheria.....	Apayao Subprovince.....	200	18	25	121	19
Zimigui.....	River.....	Apayao Subprovince.....	200	18	21	121	17
Zimigui.....	River.....	Mountain Province.....	196	18	20	121	15
Zitangnga.....	Barrio.....	Cagayan.....	118	18	20	121	30
Ziuanan.....	River.....	Apayao Subprovince.....	200	18	26	121	13
Zumarraga.....	Municipality.....	Samar.....	248	11	40	124	50

LIST OF MINERAL RESOURCES, BY PROVINCES AND LOCALITIES.

Mineral resources and province.	Facing page.	Latitude.	Longitude.	Mineral resources and province.	Facing page.	Latitude.	Longitude.
ASBESTOS.				GOLD.			
Ilocos Norte.....	158	18 29	120 37	Agusan.....	82	9 10	125 40
ASPHALT.				Do.....	82	9 05	125 40
Leyte.....	186	11 25	124 20	Do.....	82	8 55	125 45
COAL.				Do.....	82	8 45	125 40
Albay.....	86	13 39	124 05	Do.....	82	8 35	125 55
Do.....	86	13 37	124 15	Do.....	82	8 30	125 50
Do.....	86	13 18	123 53	Benguet Subprovince	202	16 37	120 49
Do.....	86	13 17	123 55	Do.....	202	16 24	120 40
Do.....	86	13 16	124 01	Do.....	202	16 31	120 89
Do.....	86	13 15	124 02	Do.....	202	16 31	120 41
Antique.....	90	12 00	121 20	Do.....	202	16 31	120 42
Benguet Subprovince	202	16 36	120 35	Do.....	202	16 29	120 44
Bukidnon.....	110	8 30	124 20	Bukidnon.....	110	8 25	124 25
Bulacan.....	114	15 05	121 09	Do.....	110	8 25	124 40
Do.....	114	14 49	121 05	Do.....	110	8 15	124 35
Camarines Sur.....	126	13 43	123 48	Bulacan.....	114	15 15	121 07
Capiz.....	130	11 53	121 56	Do.....	114	15 11	121 04
Do.....	130	11 31	122 20	Do.....	114	14 54	121 04
Cebu.....	138	10 35	123 45	Camarines Norte.....	122	14 19	122 41
Do.....	138	10 30	123 55	Do.....	122	14 18	122 43
Do.....	138	10 25	123 50	Do.....	122	14 18	122 46
Do.....	138	10 10	123 40	Do.....	122	14 17	122 27
Do.....	138	9 50	123 25	Do.....	122	14 14	122 50
Davao.....	154	7 00	126 20	Do.....	122	14 13	122 36
Mindoro.....	190	12 45	121 20	Do.....	122	14 11	122 53
Do.....	190	12 25	121 20	Do.....	122	14 09	122 30
Misamis.....	194	8 30	124 25	Do.....	122	14 07	122 51
Occidental Negros.....	220	10 40	123 20	Do.....	122	14 06	122 35
Do.....	220	10 35	123 20	Do.....	122	14 01	122 47
Samar.....	248	11 40	125 15	Do.....	122	14 01	122 54
Sorsogon (N).....	252	12 58	124 07	Cebu.....	138	10 20	125 45
Sorsogon (S).....	252	12 10	123 51	Iloilo.....	166	11 10	122 35
Do.....	252	12 05	123 56	Do.....	166	11 10	122 46
Surigao.....	262	9 30	125 55	Lepanto Subprovince	210	16 49	120 47
Do.....	262	8 30	126 10	Do.....	190	16 43	120 43
Do.....	262	8 15	126 15	Mindoro.....	190	13 20	121 00
Tayabas (N).....	270	14 50	121 55	Do.....	190	12 55	120 50
Tayabas (S).....	270	14 05	122 05	Do.....	190	12 40	121 30
Zambales.....	274	15 42	120 01	Misamis.....	194	8 25	124 45
Do.....	274	14 55	120 05	Nueva Ecija.....	212	15 33	121 18
Zamboanga.....	278	7 40	122 50	Do.....	212	15 28	121 07
Do.....	278	7 40	123 00	Do.....	212	15 26	121 00
COPPER.				Do.....	212	15 25	121 18
Batangas.....	102	13 41	121 17	Do.....	212	15 25	121 18
Benguet Subprovince	202	16 50	120 51	Do.....	212	15 22	121 03
Bukidnon.....	110	8 25	124 35	Do.....	212	15 17	121 08
Lepanto Subprovince	210	16 52	120 47	Do.....	212	15 14	120 59
Do.....	210	16 51	120 50	Nueva Vizcaya.....	216	16 13	121 58
Do.....	210	16 50	120 48	Do.....	216	16 00	121 36
Do.....	210	16 43	120 44	Pangasinan.....	236	16 10	120 32
Do.....	210	16 47	120 48	Do.....	236	16 01	120 33
Mindoro.....	190	13 30	120 35	Do.....	236	15 54	120 31
Palawan (S).....	228	9 30	118 30	Romblon.....	244	12 25	122 35
Pangasinan.....	236	15 58	120 03	Sorsogon (N).....	252	12 30	123 24
Sorsogon (S).....	252	12 11	123 39	Sorsogon (S).....	252	12 30	123 24
Surigao.....	262	9 30	125 50	Do.....	252	12 17	123 38
Tayabas (S).....	270	13 20	122 00	Do.....	252	11 58	123 48
Zambales.....	274	15 31	120 04	Do.....	262	10 20	125 35
Do.....	274	14 59	120 13	Do.....	262	9 45	125 80
GAS.				Do.....	262	9 40	125 25
Iloilo.....	166	11 00	122 30	Do.....	262	9 30	125 40
				Do.....	262	8 35	126 00
				Tayabas (N).....	270	15 25	121 25
				Do.....	270	15 15	121 20
				Do.....	270	15 10	121 20
				Do.....	270	14 50	121 25
				Tayabas (S).....	270	14 10	122 00
				Do.....	270	14 00	122 45
				Do.....	270	13 55	122 20
				Do.....	270	13 55	122 10
				Do.....	270	13 50	122 25

Mineral resources and province.	Facing page.	Latitude.	Longitude.	Mineral resources and province.	Facing page.	Latitude.	Longitude.
GOLD—Contd.				OIL.			
Tayabas (S)—Contd.		° /	° /	Cebu	138	10 25	123 45
Do	270	13 25	122 05	Lanao	178	7 45	124 15
Do	270	13 15	122 00	Mindoro	190	12 45	121 20
Zamboanga	278	7 00	122 05	Do	190	12 25	121 10
IRON.				Tayabas (S)	270	13 35	122 25
Bulacan	114	15 12	121 09	Do	270	13 35	122 30
Do	114	15 02	121 07	Do	270	13 30	122 30
Do	114	14 58	121 07	Do	270	13 25	122 40
Do	114	14 57	121 10	Do	270	13 25	122 35
Camarines Norte	122	14 19	122 39	Do	270	13 20	122 35
Do	122	14 16	122 47	Do	270	13 20	122 40
La Union	182	16 19	120 27	Do	270	13 15	122 35
Pangasinan	236	16 05	120 34	Do	270	13 15	122 40
Rizal	240	14 35	121 12	SULPHUR.			
Surigao	262	9 25	125 50	Albay	86	13 02	123 51
LEAD.				Batangas	102	14 00	121 00
Tayabas (S)	270	13 20	121 50	Cotabato	150	7 00	125 15
MANGANESE.				Davao	154	7 00	125 10
Ilocos Norte	158	18 29	120 37	Misamis	194	9 10	124 40
Pangasinan	236	16 01	120 03	Sorsogon (N)	252	13 02	123 53
Sorsogon (S)	252	12 18	123 24	ZINC.			
Sulu	258	5 15	120 10	Tayabas (S)	270	13 25	121 50
				Zambales	274	15 05	120 11

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