

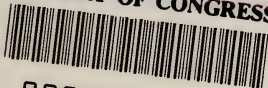
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HANDBOOK

OF

THE FEDERATED MALAY STATES.

COMPILED BY

H. CONWAY BELFIELD,

British Resident of Selangor.

LONDON :

EDWARD STANFORD, 12-14, LONG ACRE, W.C.

PRICE 2/6.





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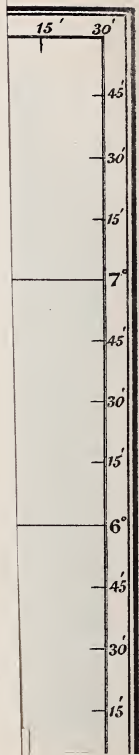
PRICE 2/6.

I desire to acknowledge my obligations to those friends and brother officers who have assisted me in the task of compilation by collecting and arranging material for my work. Their contributions have been of the greatest value to me, and have supplied the many interesting local details which form the most attractive features in the text of this Handbook.

H. C. B.

JUNIOR CARLTON CLUB, PALL MALL, S.W.,

May 1st, 1902.



PART I.

FEDERATED MALAY STATES.

THE Federated Malay States of the Malay Peninsula consist of the four States of Perak, Selangor, the Negri Sembilan, and Pahang.

An Agreement was signed in July, 1895, by which these States were confederated for administrative purposes and a Resident-General appointed, with an official residence at Kuala Lumpur, Selangor.

The following is the agreement :—

Agreement between the Governor of the Straits Settlements, acting on behalf of the Government of Her Majesty the Queen, Empress of India, and the Rulers of the following Malay States ;—that is to say, Perak, Selangor, Pahang, and the Negri Sembilan.

1. In confirmation of various previous Agreements, the Sultan of Perak, the Sultan of Selangor, the Sultan of Pahang, and the Chiefs of the States which form the territory known as the Negri Sembilan, hereby severally place themselves and their States under the protection of the British Government.

2. The above-named Rulers and Chiefs of the respective States hereby agree to constitute their countries a Federation, to be known as the Protected Malay States, to be administered under the advice of the British Government.

3. It is to be understood that the arrangement hereby agreed upon does not imply that any one Ruler or Chief shall exercise any power or authority in respect of any State other than that which he now possesses in the State of which he is the recognised Ruler or Chief.

4. The above-named Rulers agree to accept a British Officer, to be styled the Resident-General, as the agent and representative of the British Government under the Governor of the Straits Settlements. They undertake to provide him with suitable accommodation, with such salary as is determined by Her Majesty's Government, and to follow his advice in all matters of administration other than those touching the Muhammadan religion. The appointment of the Resident-General will not affect the obligations of the Malay rulers towards the British Residents now existing or to be hereafter appointed to offices in the above-mentioned Protected States.

5. The above-named Rulers also agree to give to those States in the Federation which require it such assistance in men, money, or other respects as the British Government, through its duly appointed officers, may advise; and they further undertake, should war break out between Her Majesty's Government and that of any other Power, to send, on the requisition of the Governor, a body of armed and equipped Indian troops for service in the Straits Settlements.

6. Nothing in this Agreement is intended to curtail any of the powers or authority now held by any of the above-named Rulers in their respective States, nor does it alter the relations now existing between any of the States named and the British Empire.

OFFICIAL ESTABLISHMENT

High Commissioner : SIR FRANK ATHELSTANE SWETTENHAM,
K.C.M.G. [SINGAPORE]

Secretary to the High Commissioner : FREDERICK J. WELD
[SINGAPORE]

HEADQUARTERS : KUALA LUMPUR, SELANGOR.

Resident General : WILLIAM HOOD TREACHER, C.M.G.

Secretary to the Resident General : DACRES H. WISE.

Assistant Secretary : OLIVER MARKS.

Judicial Commissioner : LAWRENCE COLVILLE JACKSON, K.C.

Legal Adviser : T. H. KERSHAW.

Commandant, Malay States Guides : LT.-COL. R. S. FROWD
WALKER, C.M.G.

Accountant and Auditor : ROBERT DOUGLAS HEWETT.

Commissioner of Lands and Mines : ARTHUR T. D. BERRINGTON.

Director Public Works : FRANCIS ST. GEORGE CAULFEILD.

Commissioner of Police : CAPTAIN H. L. TALBOT.

General Manager Railways : CHARLES EDWIN SPOONER.

Secretary for Chinese Affairs : G. T. HARE, C.M.G.

Inspector of Prisons : LT.-COL. R. S. FROWD WALKER, C.M.G.

Inspector of Schools : J. DRIVER.

Pathologist : DR. HAMILTON WRIGHT.

The Federated Malay States adjoin each other, and occupy an important portion of the peninsula, the three first-named States lying on the western side of the chain of mountains which forms the backbone of the peninsula, while Pahang is situated on the eastern side of the range, extending from thence to the shores of the China Sea.

The total area of the four States is estimated at about 27,000 square miles, extending from North Latitude 2.24 to 6.10, and from East Longitude 100.23 to 103.60. *Area*

The Malay Peninsula is a comparatively narrow strip of land lying between the Straits of Malacca on the west and the China Sea on the east, the Federated Malay States being situated in the central and broadest part of the peninsula. A range of mountains runs throughout almost *Physical Geography.*

its entire length, dividing the eastern from the western States. The height of the various points of the range varies from 3,000 to over 7,000 feet above sea-level.

From this central chain the land slopes away to the sea-coast on either side, the whole being clothed by Nature, from the mountain summits to the sea-shore, with dense and luxuriant tropical forest consisting of a variety of grand timber trees, the majority of which are considerably over 100 feet in height.

The whole of the peninsula is well watered by innumerable streams, having their sources in the hills, and combining to form rivers which flow into the sea at regular intervals on either side. Some of these rivers are navigable for steamers of light draught for more than 50 miles from the sea.

The combined coast line on the Straits of Malacca of the three western States of Perak, Selangor, and Negri Sembilan extends for 90 miles. That of the State of Pahang upon the China Sea is approximately 130 miles.

*Position and
Boundaries.*

Perak is the most northern of the Federated States upon the western side. On its southern boundary it meets Selangor, while the State of Negri Sembilan adjoins Selangor on the south. Pahang, on the eastern side, which is probably the largest of all the four States, adjoins all three of the western States on its inland boundary.

The Federated States are bounded on the north and north-east by that portion of the Colony of the Straits Settlements known as Province Wellesley, and by Kedah, Patani, Kelantan, and Trengganu.

On the south they are bounded by the Colonial territory of Malacca and by Johor.

On the east and west by the China Sea and the Straits of Malacca respectively.

Geology.

The geological features of the States vary to a certain extent in different localities, but the following four principal formations are generally present :—

- (i.) Granite — of which the mountain ranges of the peninsula are composed ;
- (ii.) Large series of beds of gneiss, quartzite, schist, and sandstone, overlaid with crystalline limestone. The foot-hills of the mountain ranges consist for the most part of this limestone, much of which is marble of fine quality.

These hills are generally cavernous, and in many instances the caves are of considerable size and beauty.

(iii.) Small sheets of Trap rock.

(iv.) River gravels and alluvial deposits, overlaid with patches of peat on the lowlands near the coast.

The following metals have been found in the different formations:—

In the Granite — Tin, lead, iron, arsenic, tungsten, titanium.

In the Laurentian—Gold, silver, tin, lead, iron, arsenic, copper, zinc, tungsten, manganese, bismuth.

In the Quaternary—Gold, tin, copper, tungsten, iron, titanium. Also other ores in smaller quantities.

In the Alluvial — All the above-mentioned ores in varying quantities, in the more workable form of alluvial deposits.

Numerous hot springs have been discovered in different parts of the States, with degrees of temperature varying from 90° to 180° F. *Hot Springs.*

The water usually gives off an odour of sulphuretted hydrogen and has a bitter taste.

Dissolved mineral matter is from one to four parts in ten thousand.

Some of these springs are used as baths, with beneficial effect.

The climate of the Federated Malay States, as of the neighbouring colony of the Straits Settlements, is tropical, but may be described as being oceanic rather than continental. *Climate.*

The distinguishing feature is the absence of local seasonal variations, or of any prolonged or marked epochs, whether of rain or drought, or of high or low temperatures.

Although near the Equator, the heat, which is of a moist nature, is not usually felt to be oppressive, and having regard to their geographical position, the climate of the Federated States, as a whole, notwithstanding the continuous heat and the excessive humidity of the air, has been proved to be healthy for Europeans of sound constitution who lead regular and temperate lives.

This is particularly the case in the larger towns. In low-lying and swampy parts, and on newly-opened lands, there

is of course more risk to health, but no part of the States can be said to be unfit for Europeans to live in.

Adult Europeans who take care of their health can, as a rule, remain in the States for at least four or five years without the necessity of a change, and children can, without prejudice to their health, be kept in the country until they are six years of age.

Temperature.

The temperature varies considerably according to locality and elevation.

In the lower and more populous parts of the States, with a height above the sea-level varying from fifty to five hundred feet, the shade temperature varies between 70° to 90° F.

It has been recorded below 70° and above 90°, but these occasions are rare.

The average mean temperature in the shade may be said to be from 80° to 85° F.

A great point about the temperature of the States is that the nights are always cool, and that it is therefore possible to obtain refreshing sleep without the assistance of punkahs or other auxiliaries.

The temperature at night is about 70° to 75° F.

There is little or no change in the above figures at different times of the year.

Rainfall.

The rainfall is large, and is on the whole fairly evenly distributed throughout the year. In those parts of the States where a difference is noticeable the wettest period of the year is from September to March. The rainfall is always considerably heavier in localities near the hills than on the flat lands near the coast.

The average rainfall in the hilly inland districts varies between 100 and 200 inches, while in the drier parts of the States it is usually recorded at from 70 to 100 inches per annum.

Population.

The population of the Federated Malay States, as recorded by the returns of the Census taken on March 1st, 1901, numbers approximately six hundred and sixty-five thousand persons. Of the various races, those native to the peninsula are the Malays, and the Sakei, or aboriginal tribes, the latter of whom lead a wild and roving life in the primeval mountain jungles.

The Malay is not industrious by nature, and does not compare favourably with other races in the capacity of a

workman. His efforts are usually limited to rather desultory cultivation, to the collection of forest produce, and to fishing and boating, in which he is most expert. He is always a sportsman, and will work harder and with more relish with that object in view than for the sake of enriching himself.

Of the immigrant races in the States, the Chinese take the first place. They practically monopolise the whole of the tin-mining industry, they are found engaged in every conceivable trade and business, and are the mainstay of the commerce of the country. They far outnumber any other race in the States.

Tamils from Southern India are also present in considerable numbers. A certain proportion of them are engaged in trade, but the large majority work as outdoor labourers on estates, roads, and railways.

Other races represented in the States are Europeans, Bengalis, Singhalese, Javanese, Sikhs, and Pathans, and Malays from the various islands of the Eastern Archipelago.

To those concerned with the advantages now offered, and with the conditions of life now obtaining in the Federated Malay States, the past history of the country is but of little account, and the merest outline of the events of former days will suffice for the purposes of this pamphlet. *History.*

It is now some twenty-five years since internal dissensions among the Malays of Perak and Selangor compelled the Sultans of those States to seek the assistance of the British Government in the neighbouring colony of the Straits Settlements in putting an end to increasing faction fights, and in inaugurating a system of efficient administration. The appeal of these chiefs was responded to by the appointment of a British Resident in Perak and Selangor respectively, with instruction to advise the Sultan in the government of his State, and to organise an efficient system of revenue collection, with the assistance of a small staff of European and Eurasian officers, the Resident himself being subject to the authority of the Governor of the Straits Settlements.

When initial difficulties had once been overcome, the new system resulted in unusual success. The States became peaceful, justice was everywhere obtainable at the hands of European Magistrates, the revenue, at first very small, rapidly increased, and countries which were but recently notorious for robbery on land and piracy at sea, became gradually known throughout the East as available centres for the development of profitable trade.

The example set by Perak and Selangor was followed a few years later by the adjoining State of Negri Sembilan, and last of all, some ten years ago, by Pahang.

Government.

Up to the year 1896 each of the four States was independently administered, on behalf of its native ruler, by a British Resident and the usual staff of Government Officers acting under the direction of the Governor of the Straits Settlements.

In that year the chiefs of the States agreed by treaty to a system of mutual assistance for administrative purposes, and to the coalescence of the establishments of the four Governments into one Civil Service. The system thus agreed upon was at once inaugurated, and the administration of the States is now settled in the following form: Subject to the directions of Her Majesty's Principal Secretary of State for the Colonies the Governor of the Straits Settlements also holds office as High Commissioner of the Federated Malay States. The principal Civil Officer resident in the States is the Resident-General, in whom is vested the direction of affairs in all the States. He is assisted by a staff of Federal Officers, to whose hands is entrusted the supervision of the principal departments of the four States, such as those of Finance, Lands, Mines, Public Works, Railways, Police, Prisons, and Education.

The Federal Staff also includes the Judicial Commissioner, in whom is vested the supreme judicial authority, the Legal Adviser, the Commandant of the Regiment of the Malay States Guides, the Protector of Chinese, the Pathologist, and the Superintendent of the Government Experimental Gardens.

Subject to the direction of the Resident-General and the supervision of the Federal Officers, each State continues, as heretofore, to be administered by its own Resident upon nearly the same lines as was formerly the case. The revenue of each State is separately collected, and the expenditure is met therefrom so far as is possible. Where the revenue of any State is not yet sufficiently large to enable it to entirely defray the cost of its own development, pecuniary assistance is rendered by those in more prosperous circumstances.

The ranks of the Civil Service are recruited by the appointment of Cadets after examinations in England, held annually about the month of August. These examinations are conducted by the Civil Service Commissioners, and are held conjointly with those for appointments in the Home, Indian and Eastern Colonial Services.

All Cadets are required to pass an examination in Malay, Chinese or Tamil, and also an examination in law, after a prescribed period of residence in the State. Those who are instructed to study Chinese or Tamil are sent for the purpose to China or to India as the case may be.

The selection of Officers possessed of professional qualifications rests with the Secretary of State for the Colonies.

Laws are passed in each State by the State Council, of which the ruler of the State is the President, and the members are the British Resident, the Secretary to Government, where such an appointment exists, the principal Malay Rajas, and one or more of the most influential Chinese traders. All legislative enactments are submitted to the High Commissioner and the Secretary of State. *Legislation.*

The Police Force is composed of Indians and Malays, and is officered by Englishmen. *Police.*

The Military Force of the States consists of a battalion of Sikhs and Pathans, known as the Malay States Guides, to which is attached an artillery corps armed with field guns. *Regiment of Guides.*

Appointments in the Guides are filled by officers generally seconded for that purpose from Her Majesty's regiments. A knowledge of Hindustani is considered essential.

The total revenue of the States in the year 1899 was \$14,733,001, and in 1900, \$15,609,808. *Revenue.*

The principal collections appear under the headings of Customs, Excise, Railways, and Land Revenue.

The expenditure for the same periods was \$11,521,977, and \$12,728,931. *Expenditure.*

The excess expenditure included expenditure on new Railways.

The following trade values were recorded in 1899 and 1900 :— *Trade.*

---		1899.	1900.
Imports	... ..	\$ 33,765,073	\$ 38,402,580
Exports	... ..	54,895,139	60,361,044

Customs duties. *Imports.*—The only import duties charged in the Federated States are those upon opium and spirituous liquors.

Exports.—The principal export is tin, the duty on which is fixed by a sliding scale varying with the current market price of the metal.

This scale ranges from \$10.50 per bhara of three pikuls when tin is at \$32 to \$15 per bhara when tin is at \$44 per pikul, and thereafter an additional fifty cents per bhara is added for each dollar per pikul that the metal increases in value above \$44.

The duty which varies from about 11 to 14 per cent. *ad valorem*, is reckoned on the price telegraphed daily from Singapore.

One pikul = $133\frac{1}{3}$ lbs.

One bhara = 400 lbs.

The duty on unsmelted tin ore is 68 per cent. of the duty on tin for the time being.

On gold and other minerals there is charged an export duty of 10 per cent. *ad valorem*.

The export duty upon other natural products, such as timber, rattans, gutta, and ivory, is also 10 per cent. *ad valorem*.

Upon cultivated products, such as coffee, pepper, copra, sugar, tapioca, and rubber, the maximum duty charged is $2\frac{1}{2}$ per cent. *ad valorem*. It is usually less than this figure.

No export duty is charged upon coffee when the market price is less than \$19 per pikul.

Currency.

The unit of currency in the Federated Malay States is the Mexican dollar (\$).

The following are legal tender to any amount.

- (i.) Currency notes issued by the Government of the Straits Settlements of the respective values of \$5, \$10, \$25, \$50, and \$100 ;
- (ii.) Notes issued by the local banks.
- (iii.) The Mexican and British silver dollar.

The following coins are also used :—

Silver coins subsidiary to the dollar, and of the respective values of 5, 10, 20, and 50 cents of a dollar, and copper coins, of the value of one cent of a dollar, and half cent of a dollar.

So many erroneous impressions are prevalent in England regarding the value of the dollar in English money, that the public are cautioned to satisfy themselves regarding this important matter before deciding to accept employment or to invest money in business in the Federated States. The rate of exchange, that is, the value of the dollar if exchanged for English money, varies daily according to the ruling market price of silver. The actual value at any given date can always be ascertained on inquiry at any London bank doing business with the far East, and is also published in the principal daily papers. The rate of exchange at the time of writing varies between 1s. 11*d.* and 2s. to the dollar. A sovereign is equal to about \$10.25. *Exchange*

It should, moreover, be borne in mind that when articles of European production or manufacture are purchased locally, the purchasing power of the dollar is seldom if ever equal to that of its equivalent in sterling for the time being. That is to say, that if the value of the dollar is two shillings according to exchange rates, an article which can be purchased for two shillings at home will, nevertheless, cost more than one dollar in the Malay Peninsula.

The Chartered Bank of India, Australia, and China, whose London office is in Hatton Court, E.C., has two branches in the Federated States, one in Perak and the other in Selangor. *Banks.*

The bank undertakes all kinds of banking and exchange business, grants drafts on its various branches, purchases and receives for collection bills of exchange, issues letters of credit, and discounts local bills.

In the colonial towns of Singapore and Penang, each of which is within one day's journey of some part of the Federated States, there are the following banks with which business may be done :—

The Chartered Bank of India, Australia, and China ;

The Hong Kong and Shanghai Bank ;

The Mercantile Bank.

Savings banks managed and guaranteed by the Government, have been established in the Federated States. Deposits of from one dollar to five hundred dollars are received, and interest is paid thereon at the rate of three per cent. *Savings banks.*

Passengers for the Federated Malay States book their passages either to Penang or Singapore, from which ports *Passengers and fares.*

they are conveyed to their destination by local steamers, which run almost daily.

A complete table of the lines of steamships which carry passengers to the Malay Peninsula, together with all particulars regarding dates of sailing, ports of departure, cost of passages, and other information useful to travellers, will be found in Appendix A.

Outfits.

As all articles of clothing can if necessary be procured in the Malay Peninsula, the new arrival will do well not to encumber himself with an extensive wardrobe until he has learnt by experience in the States what articles of clothing are best suited to his needs.

Tweeds and other suitings of the texture usually worn in England are too thick to be supportable in this climate, and must be discarded except for use on the voyage out and home. The most useful suitings are those of thin flannel and serge. A dress suit and a supply of white shirts should be taken, but neither frock coat nor morning coat will be required.

The most useful articles in the outfit will be a good supply of thin flannel underclothing and flannel shirts. These should be purchased at home, as the cost is half that for which they are obtainable locally.

The garments most usually worn in the daytime consist of a white drill suit for office work, and a khaki suit for outdoor duties. These should always be purchased locally, where they are cheap. The prices charged in England for such articles are prohibitive.

The following head-gear is recommended :—

A pith hat, with wide brim (not a helmet).

A soft felt hat with broad brim and a puggaree, of the description known as the "Double Terai."

A straw hat and a couple of caps.

Do not bring more boots than can be kept in use, as leather quickly goes to pieces in this climate, and do not bring boots with very heavy soles, nor "Field" boots. They will never be worn.

If addicted to outdoor exercise, do not forget white flannels, flannel coat, and half a dozen pairs of hand-knit knickerbocker stockings.

Choose steel trunks in preference to leather portmanteaus and bags. Leather goods soon deteriorate, and are moreover not always proof against a deluge of tropical rain.

Hints as to sporting requisites will be found later on under the heading of "Sports."

The best time to arrive is during the continuance of the north-eastern monsoon, when the weather is wetter and rather cooler than at other times. That is, between the months of September and the following April. During this period also the passage through the Indian Ocean is usually calm. October, November, and December are the best months to arrive in. March and April are the best months in which to start on the homeward voyage. *Time to arrive.*

Adult Europeans should not come out to the Federated States before they are twenty years of age, and should make up their minds to conform from the first to the cardinal rules for the preservation of health. *Hints to new arrivals.*

These may be shortly summed up as follows :—

Go to bed and get up early.

Avoid all excesses in eating and drinking.

Never go out between the hours of 8 a.m. and 4.30 p.m. without wearing a sun hat.

When possible, always wear flannel next to the skin.

Take exercise regularly and moderately, but not to excess, if avoidable.

Change clothes as soon as possible after exercise.

Avoid bathing in the middle of the day, or more than twice a day. In the evening, and after exercise, a warm bath is better than a cold one.

If doubtful about the purity of drinking water, always see for yourself that it is boiled, and do not take the servant's word for it. Filtering is often insufficient.

When travelling, drink as little as possible during the heat of the day, and always avoid roadside streams. The water of a young coconut is the best on these occasions, if obtainable.

With ordinary care the European may successfully avoid serious disease, and may live comfortably and healthily without inconvenient restraint. Malarial fever is not uncommon, but it is not usually of a severe type, and is amenable to timely treatment by simple remedies. *Diseases.*

Typhoid fever occurs occasionally, but other forms of serious fever are practically unknown. Bowel complaints, such as diarrhoea and dysentery, are of frequent occurrence,

but can usually be avoided by careful living. When such do occur they should be taken in hand at once by medicinal treatment, dieting, and rest.

Cholera among Europeans is hardly known, diseases of the kidneys are very rare, and for all sorts of rheumatic affections the climate is distinctly favourable.

Diseases of the lungs are rare as originating in the country, but the climate is very unfavourable for consumptive cases.

The diseases of childhood are rare.

Measles and chicken-pox are the only fevers that are at all frequently met with. Scarlet fever and whooping cough are unknown.

Postal.

There are inward and outward mails between Europe and Singapore once every week, carried alternately by the P. and O. and the Messageries Maritimes Steamship lines.

Mails are also sent and received once every fortnight by the North German Lloyd Steamship line, and by the Trans-Indian route.

The duration of transit of letters to and from England and the Federated States is about 25 days. The postage on letters addressed to countries within the Imperial Postal Union is 4 cents per half ounce. To other countries it is 8 cents per half ounce.

Letters addressed to places within the Federated States and the Colony of the Straits Settlements are received and delivered daily.

The time occupied in transit seldom exceeds two days. The postage on all such letters is 3 cents per half ounce.

Parcels by parcels post take as a rule from seven to fourteen days longer in transit than letters to and from Europe.

The parcels rates are :—

For British dependencies—

Under 3 lbs.	...	...	...	65 cents.
„ 7 lbs.	...	...	...	\$1.30
„ 11 lbs.	...	...	...	\$1.95

For other countries about double these rates.

For local transmission to places in the Colony of the Straits Settlements and the Federated Malay States the parcels rates are :—

Under 3 lbs.	...	...	...	20 cents.
„ 7 lbs.	...	...	...	40 „
„ 11 lbs.	...	...	...	60 „

The charge on post cards is one cent for local cards and three cents for cards to other countries.

Registration is undertaken at all the principal post offices of the Federated States. The charge for all countries is five cents.

Money orders are also issued at the principal post offices. Those for local transmission and for China, Japan, &c., are issued in local currency. Those for other countries are issued in sterling through Singapore.

Commission on money orders is as follows :—

Local	...	...	...	1 per cent of value.
East of Singapore	...	2½	„	„
India and Ceylon	...	2	„	„
Other countries	...	3	„	„

A complete and efficient system of telegraphic communication is maintained throughout the Federated Malay States, and between the States and the Colony of the Straits Settlements and other countries. All messages to other countries are transmitted over the cables of the Eastern Extension Telegraph Company, while local communication is effected by Government Telegraph lines. *Telegraphs.*

Telegraph rates are, per word :—

To Europe	...	...	...	\$2.28
To India	...	...	...	98 cents.
To Singapore	...	...	...	13 „
Local, ordinary	...	...	...	3 „
„ urgent	...	...	...	9 „
„ deferred	...	...	...	1½ „

A telephone exchange is maintained in Selangor—rate, \$3 *Telephones.* per month up to one mile, with varying rates beyond.

There is also telephonic communication with most of the police stations, and lines to different Government institutions, sanatoria, and offices.

The principal ports in the Federated States are Port Weld *Ports and* and Teluk Anson in Perak, Port Swettenham in Selangor, *Harbours.* Port Dickson in Negri Sembilan, and Pekan in Pahang.

With the exception of the last-named, all these ports are visited daily by steamers from Penang and Singapore, and are all furnished with efficient wharf accommodation and

connected by railway with the principal towns of the States in which they are situated.

Religion.

The Church of England, the Roman Catholic Church, and various denominations of the Methodist Church, principal among which is the Methodist Episcopal Mission, are all represented in the Federated States.

There is an English chaplain at headquarters in Perak and Selangor, and the States are annually visited by the Lord Bishop of the Diocese.

Roman Catholic churches in charge of the priests of the French mission are established in the principal towns in Perak, Selangor, and Negri Sembilan.

Education.

In addition to the numerous Government vernacular schools which are to be found in almost every town and village of the Federated States, English schools both for boys and girls are maintained in Perak, Selangor, and Negri Sembilan, in some of which, particularly the Victoria Institution in Selangor, the Central School at Taiping, Perak, and the Anglo-Chinese School at Ipoh, Perak, a staff of qualified English masters offers every opportunity for acquiring a sound education in all the subjects usually taught in English schools.

A comprehensive education code is in force in the States, and all schools are either entirely maintained by Government or assisted by grants-in-aid.

Hospitals.

The Government has devoted much care to the establishment of efficient hospitals in all districts, and to the engagement of a full staff of qualified medical men from the United Kingdom, all of whom are in Government employ and are also permitted to undertake private practice. Their number at present is fourteen.

Comfortable wards for the reception of European patients are attached to the hospitals in the larger towns. Patients are there attended by a resident medical officer and the Government nurse matron.

A nursing association has been established in Perak and Selangor, which employs qualified English nurses to attend on patients in their own homes.

Inland communications.

Means of inland communication throughout the three Western States is already very good, and it is being yet further improved. Travelling both by railway and road has been made as easy as the nature of the country and the



A ROADSIDE RAILWAY STATION.

climate will permit, by a large expenditure of Government money in bringing these works to a high standard.

All railways in the Federated Malay States are of metre *Railways* gauge. The first section of line was opened in Perak in 1884, since which time a large portion of the annually increasing revenue of the States has been regularly expended in further construction.

All railways have been constructed by, are the property of, and are managed by the Government, with the exception of the line in Negri Sembilan connecting the port with the principal town, which is the property of a private company.

A line 23 miles in length has been constructed by the Perak Railway Department, and is now open for traffic through the colonial territory of Province Wellesley from the Perak northern terminus on the boundary to a point on the mainland opposite the port of Penang, with which it is connected by a steam ferry service.

The mileage of railway now open to traffic is:—

In Perak and Province Wellesley	135½ miles.
„ Selangor	97¼ „
„ Negri Sembilan	25 „
	<hr/>
Total	257¾ „

Further construction is now being rapidly pushed on, with the object of connecting up the lines of the three States and forming one continuous trunk line.

The additional sections thus under construction are:—

- (i.) 34½ miles in two separate lengths of 15½ and 19 miles, to connect sections of line now open in Perak.
- (ii.) 45 miles, to connect the present Perak Railway system with the Selangor boundary.
- (iii.) 29 miles, to connect the southern terminus of the Selangor system with the chief town of Negri Sembilan and with the inland terminus of the existing Negri Sembilan Railway.

The first two sections, aggregating 79½ miles, are being constructed by the officers of the Perak Railway Department, and the last section, by the staff of the Selangor Railway.

Total mileage of construction in hand is 108½ miles.

It is expected that these works will be completed in about two years' time, when the railway system of the Federated Malay States will consist of a Trunk line about 292 miles in length, having its northern terminus on the mainland adjoining the harbour of Penang, and thence running south, through the principal towns of the Western States, to Port Dickson on the sea-coast, not far from the colonial territory of Malacca.

From the Trunk line three branches will diverge at intervals to harbours on the western coast, the first from Taiping in Perak to Port Weld, the second from Tapah to Teluk Anson in the southern portion of the same State, and the third from Kuala Lumpur to Port Swettenham in Selangor.

The main line can at any future time be carried further down the peninsula, proceeding southwards from Seremban, the chief town of Negri Sembilan. Should further extension be thus undertaken, the present line from that town to the harbour of Port Dickson will become a fourth branch line running from the Trunk route to the coast.

Up to the present time no railway construction has been taken in hand in the Eastern State of Pahang. Connection by railway between that State and its western neighbours will necessitate crossing the main range of the peninsula at an elevation of nearly three thousand feet, and though a rough survey of the proposed route has been made from Selangor into Pahang, it is improbable that anything more will be done until the extensions now in hand in the Western States have been completed.

Roads.

All the towns and principal mining centres of the States of Perak, Selangor, and Negri Sembilan are connected by metalled cart roads.

The road system throughout these States is very efficient. The roads are well bridged and very carefully upkept at considerable cost to the Government, and no toll is levied for their use. They are easily traversed by any description of wheeled traffic, and those in Perak in particular are of a high order of excellence, which is probably unsurpassed in the East.

A road of much importance has recently been completed by the Public Works Department of Selangor, running from that State over the main chain of mountains to Kuala Lipis, the capital of Pahang. It is about eighty-five miles in length, of which twenty-three miles are in Selangor and the rest in Pahang. The range is crossed at an elevation of 2,700 feet,

and the summit is reached from each side by a continuous gradient of one in thirty.

It is substantially metalled throughout its entire length, and is suitable for any description of wheeled traffic.

For all purposes other than that of mining, State land is *Land.* alienated by the issue of a grant in perpetuity, upon payment of premium or purchase money varying in amount according to the position and nature of the property alienated. An annual quit rent is also reserved in all cases, which rent may be periodically revised at intervals of thirty years.

No State land situated within the limits of any town may be alienated except by sale by public auction.

Country lands may be selected and applied for to the Local Land Office, and, if available, will be alienated to the applicant upon payment of the prescribed fees.

Full particulars regarding the acquisition and tenure of town and country lands, and the conditions and obligations imposed upon land-holders, will be found in the Federated Malay States Land Enactment, 1897, which can be seen in the Library of the Colonial Office.

Mining lands are alienated either by auction or by selection. The title issued in respect of such properties is a mining lease, the term of which will not usually exceed twenty-one years, except in the case of special concessions necessitating a large outlay of capital.

The continuance of the tenancy is in all cases dependent upon the regular compliance of the lessee with the conditions imposed by his lease; principal among which are those regarding continuous working and the employment of an adequate labour force.

Intending selectors of mining land can obtain prospecting licences over defined areas, by virtue of which such area is reserved for their exclusive examination for a stated period.

Full information regarding mining lands and mines can be obtained from the Federated Malay States Mining Enactment, 1898, which can be seen in the Library of the Colonial Office.

All manual labour is performed by Asiatics. The nation- *Labour.* alities so employed are Malays, Chinese, Tamils, Javanese, and Bengalis.

The Malay of the peninsula does not figure at all prominently among the labouring classes. He undertakes

little work for hire beyond the felling of jungle and the management of boats. He is mostly concerned about his own affairs and does not enter into competition with the immigrant labouring classes.

Chinese are the most numerous and the most important class of labourers. They will undertake almost any class of work, from the high grade-handiwork of the skilled artisan in wood and metal to the drudgery of the most menial offices. The labour force in the mines of the Federated States is almost exclusively composed of Chinese, but they seldom work as agricultural labourers, except on their own account as vegetable gardeners, or for employers of their own nationality. When engaged on road and railway work, the arrangement is usually made with the headman on behalf of his gang of coolies, and not with the men individually. Chinese labour is more satisfactorily utilised on piece-work or contract than on daily wages. Except in the case of domestic servants, it is usually difficult to persuade them to accept work otherwise than on those terms.

Tamils from Southern India rank next in importance to Chinese. They are more amenable to European control than Chinese, and, therefore, form the bulk of the labour force employed by the Government and by English planters and contractors. Their remuneration generally takes the form of daily wages payable monthly. They are the best coolies for road and estate work.

The Javanese are not numerous in comparison with the classes above mentioned. They are fairly reliable labourers when obtainable, and are useful as gardeners, for road earth work digging and clearing drains, jungle felling, and analogous duties. A gang of Javanese is not uncommonly found upon European estates as supplementary to the main body of Tamil labourers. They also receive daily wages at monthly intervals.

Bengalis are usually employed as cart-men. A few have recently been experimentally introduced into Perak as estate labourers.

Coming to the question of the cost of labour, coolies, of whatever nationality, are divisible into two classes—indentured labour and free labour. In the former class are included those who received from their employers the cost of their passages from India or China to the Federated States, and advances of money or clothing prior to or at the time of their arrival, in consideration of their entering into a contract to serve for a fixed period at certain rates of wages,

during which period the advances so made are repaid to the employer.

Labourers who are not bound by any such formal agreement come under the category of free labour.

The rates of wages paid to indentured labourers are usually lower than those given to free labourers, but experience has proved that free labour nevertheless suits European employers better than employment by formal contract.

The system of engagement by indenture is principally used by the Chinese in obtaining labour from China. The importation of Chinese by Europeans is not successful, and is not recommended. If Chinese are required, it is better to engage them locally by arrangement with their headman as above described.

The system of indenture as applied to the importation of Indian labour has also fallen into disuse, because employers find that free Tamil labour engaged in India, at an outlay sufficient to cover the passage money and a small advance, answers better than the more formal arrangement.

It is in this way that the planters in the Federated States obtain most of their coolies.

The outlay in respect of each coolie imported may be estimated at about twenty dollars a head, which is afterwards recovered from him.

Coolies are engaged in India by overseers in the service of the employer, who are sent to India for the purpose, whence the emigration of the coolies is supervised and assisted by an official stationed at Negapatam.

The voyage from Negapatam to Penang is completed in about six days.

The following are approximately the ruling rates of pay for coolie labour, in addition to house accommodation :—

Indentured Coolies :

Chinese	...	...	\$4 to \$5 per mensem.
Tamils	...	...	17 ,, 20 cents. per diem.

Free Coolies :

Chinese	...	...	30 to 40 cents per diem.
Tamils	...	...	23 ,, 35 ,, ,,

Skilled native labour, *e.g.*, carpenters, fitters, engine drivers, &c., commands rates ranging from 50 cents to \$2.50 per diem.

The wages of domestic servants are :—

House boy (indoor servant)	\$10 to \$15 per mensem.
Cook	\$10 ,, \$15 ,,
Water carrier	\$7 ,, \$10 ,,
Gardener	\$8 ,, \$10 ,,
Syce or groom (one for each horse kept)	\$9 ,, \$12 ,,

The first three are necessary, unless a bachelor living by himself can arrange to engage a servant who will act for him both as boy and cook. In that case he will have to pay him about \$15 per mensem.

Agriculture.

The Federated Malay States offer to the planter the following natural advantages :—

(i.) A fertile soil, varying in composition according to locality, but almost uniformly possessed of the component substances necessary to ensure a strong and rapid growth.

(ii.) A moist, forcing heat, varying but little throughout the year.

(iii.) An abundant and regular rainfall.

(iv.) An immense acreage of virgin soil, hitherto untouched, available for planting at any elevation up to five thousand feet.

The following products can be cultivated with success :—

Coffee, tea, sugar, pepper, gambier, sago, rice, rubber, cocoanuts, ramie grass, nutmegs, bananas, areca nuts, tapioca, and many varieties of native fruits which yield a profitable return.

Detailed information regarding the method and cost of opening estates will be found in Appendix B.

Mining.

Mining for alluvial tin ore in the Western States is the principal industry carried on in the country. As already stated, Chinese labour is almost universally employed in this work. The tin-bearing stratum is usually found at depths varying from five to fifty feet below the surface. The overburden is removed by excavation, and the metalliferous sand taken out and washed in sluices. The water is controlled by dams, races, and water wheels, and pumps and engines of English manufacture are used in almost every mine. The ordinary method of alluvial mining is not scientific, and is more profitable in the hands of Chinese than in those of Europeans.



A TYPICAL ALLUVIAL TIN MINE.

Mining for alluvial tin by hydraulic power has been introduced by Europeans and is very successful, but requires a large outlay of capital. The water is carried for some miles through iron pipes of about nine inches in diameter, and is forced through a monitor against the hillside, washing down the stanniferous earth in large quantities and with a minimum of labour.

Lode mining for tin and gold has been carried on in different parts of the Western States, but not so far with any marked success.

Pahang is considered to be the richest of the Federated Malay States in mineral wealth. Only very small and isolated portions of its area have yet been exploited by miners, but the results obtained have been generally satisfactory.

Up to the present time but little indication has been found on the eastern slope of the mountain range of the alluvial tin deposits which are spread so widely over the Western States. It is being worked only in one or two places close to the range. At the foot of the hills, at the points which correspond to those on the western side of the mountains where the richest alluvial deposits are found, the granite is intersected by a slate formation which carries no tin and cuts the granite off.

Both gold and tin are being successfully worked in the lode. The excellent results obtained by the Raub gold mine are an encouraging augury of what may be expected of Pahang when the State is more opened up and better known.

The forests of the Federated States produce a large assortment of excellent hard timbers, principal among which may be mentioned the following varieties:—*Daphniphyloopsis Capitata* (Malay Chengal), *Azelia* Sp. (Malay Mirabeau), *Scorodocarpus Borniensis* (Malay Kulim), *Slaetia Sideroxylon* (Malay Tampinis), *Fagraea Peregrina* (Malay Tembusu), *Strombosia Javanica* (Malay Petaling). *Economic products.*

The best qualities of these trees are found at elevations of from one to two thousand feet.

Other natural products of the forests are gutta-percha, rubber, rattans of many varieties, including that known as the Malacca cane, vegetable oils, resins, and the ataps or palm leaves so extensively used for thatching throughout the peninsula.

Fruits, indigenous and naturalised, include the durian, mangosteen, banana, duku, chiku, rambutan, pulâsan, pine-

apple, guava, lime, orange, custard apple, soursop, mango, papaya, langsat, rambei, and others.

Vegetables.

The vegetables, usually grown by Chinese gardeners, are neither numerous nor of high quality. They include lettuce, French beans, onions, leeks, pumpkins, marrows, and egg fruit. Potatoes are imported from India.

Most European vegetables can be successfully grown at elevations over 2,000 feet.

Live Stock.

Cattle are principally used for draught purposes, and are of three descriptions—buffaloes, Indian cattle, and native cattle.

The cost of a pair of Indian bulls may be anything between 100 and 200 dollars. That of a pair of the smaller native cattle varies from 80 to 150 dollars.

Buffaloes are seldom or never used by Europeans. Milch cows and buffaloes are kept by natives in the neighbourhood of the principal centres of population, and fresh milk of good quality is obtainable wherever there are a sufficient number of customers.

Alternatively, cows may be kept by Europeans for dairy purposes, but this necessitates the employment of a cattle man, at about 10 dollars a month, to look after them.

The cost of a good Indian cow is not less than 100 dollars.

Horses and ponies are all imported, mostly from Australia. Ponies are also brought from Burmah, Northern India, Java, and other islands of the Malay Archipelago.

Small ponies of from 12 to 13 hands may be purchased from 100 dollars upwards.

Australian horses for riding and driving cost from \$250 to \$600, the average price being about \$350 to \$400.

A large number of sheep and goats are imported for the butcher. Goats of an inferior quality are bred by the Malays, and sheep do fairly well in Pahang. The States, however, are not well adapted to the breeding of any stock.

Pigs are reared in large numbers by Chinese tapioca planters and vegetable gardeners, and do well. They always command a ready sale, as pork is a staple article of food among the Chinese community.

Fowls and ducks are reared extensively throughout the peninsula, but are as a rule poorly fed and of very inferior quality.

As they form a constant article of European diet they may advantageously be kept for household purposes and improved by crossing with imported stock.

The price of poultry varies widely according to locality, being lowest in remote country districts and highest in the towns.

The cost of eggs is from two to six cents each, but they are by no means always to be depended upon.

Both sea and river fish are obtainable in large quantities, and many varieties are excellent eating. It is difficult, however, to keep them fresh for a sufficient length of time to ensure a regular supply to the inhabitants of inland districts. *Fish and fisheries.*

Turtles, crabs, prawns, and shrimps are also procurable.

The fishing industry is pursued by a large number of Malays and Chinese on the coast, who secure their fish both by hook and line and by stake fish-traps set in the tide-way.

A large proportion of the sea-fish and shell-fish obtained are dried, and in that condition form a staple article of food for all classes of natives.

Fishing or fish-curing as an industry has not yet been attempted by any European, but there seems to be no reason why a trawl net should not be successfully and profitably used upon many parts of the coast, as fish always commands a ready sale.

A small charge is levied by Government upon fishing boats and upon various descriptions of fishing apparatus.

The principal towns of the Federated Malay States enjoy excellent supplies of water for all purposes drawn from reserved areas in the hills into impounding reservoirs, and carried thence into service reservoirs for local delivery. *Water supplies.*

The regular and abundant rainfall also enables any householder to collect rain water in tanks and to store a sufficient supply for domestic purposes.

It should be carefully borne in mind that even after taking into consideration the current market value and local purchasing power of the dollar, it will cost the new arrival more to live in the Federated States than in England. *Cost of living.*

It is usually the case that Europeans live at a more expensive rate than when at home, and it will not be safe for the newcomer to cut his estimate of annual expenses down to any lower figure than one which exceeds by half what he has found requisite in England.

Probably the smallest sum upon which a bachelor on an estate or in a country district could live with any approach to comfort, considering only the necessaries of life and making no allowances for luxuries, would be from \$80 to \$100 a month. If any margin is to be allowed for amusements and social diversions at least half as much again must be provided.

These figures represent the lowest possible limit in the case of gentlemen of education and refinement. Emigrants of the artizan class could probably manage, with care, on \$60 or \$70 a month, if not called upon to pay rent for the house they occupy.

Means of transport.

In addition to the railways, the following means of transport for passengers and goods are available:—

Gharis, or light two-wheeled pony carts, with a light overhead covering as a protection from sun and rain, are the form of passenger conveyance for hire in Selangor, Negri Sembilan and Pahang. Each ghari will accommodate one passenger and a box of moderate dimensions, in addition to the driver. Native passengers frequently travel two in a ghari, but this arrangement is not recommended, for the sake both of the passengers and the pony. A journey in one of these gharis not infrequently partakes of the nature of violent exercise, but in the absence of a private conveyance or of a bicycle, it is usually the only alternative.

In Perak the gharis are of larger build, are usually drawn by horses, and are more spacious than those above mentioned.

The jinricksha, pulled by Chinese coolies, is the conveyance usually hired for short runs in and around the neighbourhood of the towns. They are comfortable, and usually fairly clean, but as the coolie who pulls it seldom understands any language but his own dialect, and is as a rule supremely ignorant of the rule of the road, it is well to keep a wary eye on his movements.

Goods of all descriptions are conveyed over the roads in carts drawn by pairs of bullocks, the speed of which seldom exceeds two miles an hour.

The average rates of transport are as follows :

*Rates of
transport.*

For Passengers :—

By Railway—

1st class, 8 cents per mile.

2nd „ 5 „ „ „

3rd „ 3 „ „ „

By Ghari—

In Perak, 15 cents per mile.

In Pahang, 35 „ „ „

In other States, 20 „ „ „

By Jinricksha—

6 to 10 cents per mile.

For Goods :—

By Railway—

1st class goods, per pikul, $\frac{3}{4}$ cent per mile.

2nd „ „ „ $\frac{1}{2}$ „ „

3rd „ „ „ $\frac{1}{4}$ „ „

These rates do not include collection and delivery :—

By Bullock Cart—

15 cents per mile.

In Perak 10 cents per mile.

For Live Stock :—

By Railway—

Horses in boxes 15 cents per mile, including one syce for each horse.

Cattle 4 cents each per mile.

Sheep, 1 cent „ „

Boats for passengers and goods can be hired on the navigable rivers of the Federated States, but there is no fixed rate of hire. The charge is a matter of arrangement, depending on the number of the crew, the height of the river, and other conditions existing at the time of hire.

Travellers can obtain lodging and refreshment at the Government rest houses, which are situated in all the principal towns and at convenient intervals along the main roads. Each of these buildings is in charge of a Government *Accommodation for travellers.*

caretaker, and a cook and water-carrier is also kept on the premises.

All furniture, crockery, glass, and linen is supplied by the Government.

The charge for occupation and use of bedroom is one dollar per head per diem. The rest house keeper will board visitors at a rate of about two dollars per diem, or at proportionate rates for single meals.

A time limit is fixed for the occupation of a rest house by any visitor. Should a traveller desire to remain longer than the allotted number of days, he must obtain permission from the local Government Authority.

Stables are attached to rest houses and no additional charge is made for their use, but the visitor's horse must be attended to by his own syce.

Sanitaria.

The Government has erected bungalows on the hills of the Western States at elevations varying from 1,500 to 4,000 feet. They are fully furnished and can be hired by those in need of change of air for specified periods, and at rates which can be ascertained on application to the District Authorities.

The Government of Negri Sembilan also possesses an excellent sanatorium on a salubrious part of the coast, where good sea bathing is obtainable, in which suites of rooms can be hired by visitors.

There are also a few Government rest houses situated at considerable elevations on the hills, and at the seaside, where a beneficial change can be enjoyed at very moderate cost.

Openings for professional men.

As almost all matters in which the services of professional men are necessary are attended to by officers in Government employ, there is at present very little chance of a newcomer founding a profitable practice upon his own account.

The medical practice is entirely in the hands of the Government doctors. There are no others. The legal work is already divided among the barristers and solicitors now practising in the States, and a newcomer would have but little chance unless his attainments were exceptional. Even then it would be absolutely necessary that he should obtain some proficiency in the Malay language before he could attempt to practise.

There are no vacancies in the clerical appointments.

Civil Engineers and architects would find but little opportunity, because no important works or buildings are erected, except those which are projected by the Government and carried out by its own engineers.

A competent and hard-working engineer might in time obtain some profitable employment as a contractor for Government works, but in this case also he would have to spend some time in acquiring that local knowledge without which he would be working in the dark and to his own loss. It would also be necessary that he should have the command of some capital.

Surveyors who satisfy the Government of their competency by certificates or examination can obtain licences to practise their profession in the Federated States. Much land yet remains to be surveyed, and it is probable that a reliable man would obtain continuous work, which would enable him to live comfortably, but the authorised scale of survey fees limits the charges which may be made, and it is unlikely that any surveyor would make a fortune by his work. Moreover, the constant exposure to the climate, often in unhealthy localities, is very trying to the soundest constitution.

Apart from employment under Government, there is no opening for European skilled labour. Upon the occurrence of any such vacancy, either in a Government department or in a firm, it is filled by the engagement of a man by agents in England. *Openings for artizans.*

The management of engines and machinery in mines and workshops is entrusted to skilled natives under European supervision. Their work is satisfactory, and their remuneration much less than that which would be required by a European mechanic.

There are no openings for clerks. All this work is done by locally educated Eurasians and natives. *Clerks.*

European domestic servants are unknown in the Federated States. There is no chance of any such servant obtaining employment except in the case of nurses, for whom occasional enquiry is made by ladies. *Domestic servants.*

To the young man possessed of moderate capital planting affords the best opening. The first two years should be spent in diligently acquiring local experience and a knowledge of native languages by working as assistant upon the estate of an experienced planter. *Planters.*

It will be time enough for the newcomer to make up his mind as to the product to which he will devote his attention when he has made himself acquainted with the facts relating to different varieties of crops, such as the initial

outlay per acre until the time when a return may be expected; the period which must elapse before the return comes in; the cost of subsequent upkeep of the estate and of the preparation of the produce for the market; the future market prospects of different descriptions of produce, so far as it is possible to foresee them.

These and other analogous matters should be most carefully weighed by the young planter before he commits himself to the acquisition of a particular class of land or to the cultivation of a particular crop. He should estimate most carefully how far his capital will go, and limit his operations to a scale which will leave him a safe margin of funds up to the time that the crop begins to come in, when he can extend his estate in proportion to the prices he realises.

The few particulars regarding cultivation which are given in Appendix B, are intended to be considered as approximate guides only. The figures will always vary according to locality, ruling rates of labour, cost of materials, current market prices, and other uncertain data, and what is there set out is given only in order to furnish a very general idea of the expenditure which may probably be incurred.

Miners.

In the same way, the young investor is warned not to risk his money in mining adventure until practical experience gained in the country has taught him exactly what to expect, and he is in possession of reliable information regarding the cost of his scheme and the probable results to be obtained from the selected area.

Sports.

The Federated Malay States offer a varied amount of amusements to those who have the time and means to take advantage of them.

Cricket is played in every town, and is very popular. Inter-State matches are played annually, and there are regular fixtures against the Singapore and Penang clubs. The cricketers of the Federated Malay States include many excellent performers. Matches are played throughout the day, and the heat is not found at all unbearable.

Football has attracted much attention of late years, and is much appreciated, though the game is hardly suited to the climate. It is only played after 5 p.m.

Hockey has also been recently introduced. Golf is as dominant in the Federated States as in other parts of the world. There are links close to all the chief towns.

Lawn tennis can also be played everywhere, weather permitting. The courts are all grass.

The roads are for the most part excellent for cycling, and no one who appreciates this form of exercise should omit to bring a bicycle with him. To anybody whose duties require him to travel it will be an immense assistance. Ordinary repairs to bicycles can be effected locally.

Bring out a spare set of tyres and tubes sealed in a tin case. They can be purchased locally, but are not so good and are more expensive.

Riding can be indulged in all over the States, and driving in most places.

Bring out saddlery and harness from home. It will be more satisfactory and cost less than if bought in the peninsula.

Let the saddle be light and fitted with a thick felt numnah.

Horses are generally driven without breeching, but that is a matter of taste.

A saving collar will be useful, also a pair of rope traces.

Bring a set of stable brushes, scrapers, &c.

There are four race-courses in the Federated States, and meetings are held annually at each; also occasional gymkhana meetings.

To those fond of shooting the Federated States afford the following game:—

Elephant, bison, rhinoceros, tiger, sambhur and other deer, crocodile, and wild pig.

Snipe, teal, and many varieties of pigeons.

The weapon for large game should be a double 8 or 10-bore, capable of burning ten drams of black powder. Holland's 10-bore "Paradox" is as good a weapon for the purpose as can be procured.

For other shooting, a well-made double 12-bore, both barrels cylinder, is the best gun. It should not weigh less than seven pounds. Loaded with ball cartridge such a weapon is as effectual for deer and pig up to 40 yards as any rifle, and the density of the jungle seldom affords shots at longer range than that.

Shot cartridges should be loaded with 3 drams of black powder or 42 grains of nitrate, and 1 ounce of shot only. The usual English load of $1\frac{1}{8}$ ounce of shot will be found too heavy in this climate.

Any first-class nitrate powder may be safely used and kept in the Federated States. The writer has stored them for

three years without the least deterioration. They should be packed in soldered tins.

No. 7 is the best shot for general purposes. It is equally effectual for snipe and pigeons.

There is very little fishing to be had in the Federated States. Most of the rivers are polluted by the detritus washed out of the tin mines, and it is necessary to travel far in order to get beyond the influence of this discolouration. Even then, in the clear rivers near the hills, though an occasional fish may be taken by persistent spinning or live baiting, there is no certainty that any sport will be obtained, and a blank day is the rule rather than the exception.

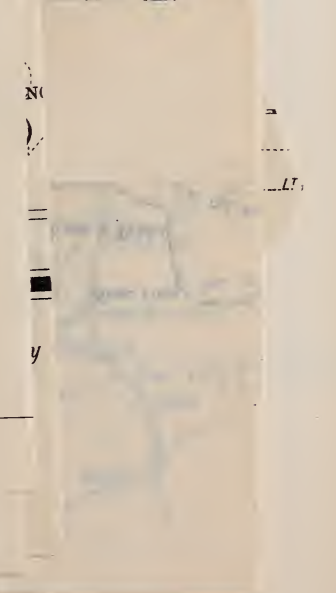
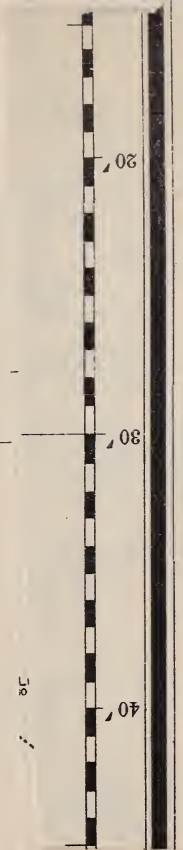
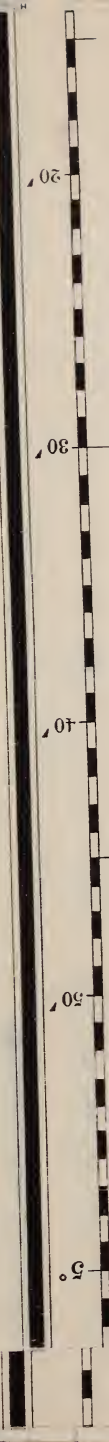
Fishing tackle rots and goes to pieces very quickly in this climate.

*Social
attractions.*

There are clubs in all the principal towns, centrally situated near the cricket grounds, tennis courts, &c. They are patronised in the cool of the evenings by ladies as well as by gentlemen. Billiards and bridge are regularly played.

At the headquarters of Perak and Selangor the State Band plays three times a week in the evenings.

Dances, concerts, and theatricals each have their turn, and art associations have been established for the encouragement of sketching and photography.





MAP OF PERAK

1901

Scale of 8 Miles to an Inch



KEY

- Cart Roads
- Bridle tracks
- Railways open
- do. under construction
- Rest Houses
- Light Houses

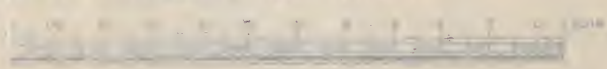
A. G. Young
Chief Surveyor
Perak

PERVA

OF

1900

Scale of 8 Miles to a



REY

- Out Roads
- Bridle Tracks
- Railways open
- do under construction
- Post Houses
- Light Houses

100 East Long

100 East Long

cial
tract

PART II.

PERAK.

His Highness the Sultan.

RAJA IDRIS MERSID-EL-AĀZAM SHAH, G.C.M.G.

<i>British Resident</i>	.	.	JOHN PICKERSGILL RODGER, C.M.G.
<i>Secretary to the Resident</i>	.	.	ALFRED REID VENNING.
<i>Senior Magistrate</i>	.	.	R. G. WATSON.
<i>State Auditor</i>	.	.	H. VANE.
<i>State Engineer</i>	.	.	J. TRUMP, A.M.I.C.E.

THE COUNCIL OF STATE.

His Highness IDRIS MERSID-EL AĀZAM SHAH, G.C.M.G., Sultan of Perak : *President.*

The British Resident : JOHN PICKERSGILL RODGER, C.M.G.

The Secretary to the Resident : ALFRED REID VENNING.

His Highness the Raja Muda : RAJA MUSA.

The Raja di Hilir : RAJA ABDUL JALIL.

The Orang Kaya Temenggong : HASSAN.

The Orang Kaya Mentri : WAN MUHAMMAD ISA.

The Orang Kaya Kaya Sri Adika Raja : WAN MUHAMMAD SALEH.

The Orang Kaya Kaya Laksamana : INCHE HUSIN.

The Orang Kaya Kaya Panglima Kinta : YUSUF.

The Datoh Sri Maharajah Lela : ABUBAKAR.

The Datoh Muda : ABDUL WAHAB.

Mr. LEONG FI.

Clerk of Council : The Assistant Secretary to the Resident.

BRITISH RESIDENTS.

1. JAMES WHEELER WOODFORD BIRCH October 4th, 1874, to
November 2nd, 1875.
2. JAMES GUTHRIE DAVIDSON ... April 11th, 1876, to
February 16th, 1877.
WILLIAM EDWARD MAXWELL February 17th, 1877, to
(acting) April 17th, 1877.
3. SIR HUGH LOW, G.C.M.G. ... April 1st, 1877, to May
31st 1889.
WILLIAM EDWARD MAXWELL August 13th, 1879 to
(acting) October 8th, 1879.
WILLIAM EDWARD MAXWELL September, 1881, to
(acting) January, 1882.
FRANK ATHELSTANE SWETTENHAM, March 22nd, 1884, to
(acting) January, 1886.
4. FRANK ATHELSTANE SWETTENHAM, June 1st, 1889, to June
C.M.G. 30th, 1896.
WILLIAM HOOD TREACHER, C.M.G. March 6th, 1890, to June
(acting) 28th, 1890.
WILLIAM HOOD TREACHER, C.M.G. October 23rd, 1891, to
(acting) January 8th, 1893.
ERNEST WOODFORD BIRCH (acting) September 21st, 1895, to
July 4th, 1896.
5. WILLIAM HOOD TREACHER, C.M.G. July 1st, 1896, to
December 12th, 1901.
JOHN PICKERSGILL RODGER October 5th, 1897, to
(acting) April 16th, 1898.
JOHN PICKERSGILL RODGER, April, 1899, to April,
C.M.G. (acting) 1900.
LT.-COL. R. S. FROWD WALKER, April, 1900, to April,
C.M.G. (acting) 1901.
JOHN PICKERSGILL RODGER, April, 1901, to December
C.M.G. (acting) 12th, 1901.
6. JOHN PICKERSGILL RODGER, December 13th, 1901.
C.M.G.

*Geographical
description.*

The State of Perak is situated between the parallels of $3^{\circ}37'$ and $6^{\circ}05'$ north latitude, and $100^{\circ}3'$ to $101^{\circ}51'$ east longitude, on the western side of the Malay Peninsula. It is bounded on the north by Province Wellesley and Kedah, on the south by Selangor, on the east by Patani, Kelantan and Pahang, and on the west by the Straits of Malacca. The coast line is about 90 miles in extent, the greatest length of the State, in a north and south direction, being 172 miles, and the breadth, in an east and west direction, 100 miles.



ON THE PERAK RIVER.

The area of the State has been calculated approximately as being 6,555 square miles, or 4,195,200 acres.

It has been estimated that there are upon the mountain ranges of the State 1,451,770 acres at an elevation of over 1,000 feet, available for the planting of those products which flourish upon high lands in the tropics, and that between 1,000 feet and the plains there are 588,000 acres suited to the cultivation of products at a lower level.

The State is well watered by numerous streams and rivers, of which the river Perak is the most important. This river runs nearly north and south, until it turns sharply to the westward and falls into the Straits of Malacca. It is navigable for about 40 miles from its mouth by vessels of from 300 to 400 tons burden, and for another 125 miles by cargo boats. The upper part of the river is rocky and abounds in rapids, and is consequently impassable, except for small boats and rafts. *Physical Geography.*

The rivers Kinta, Batang Padang and Plus are the three largest tributaries of the Perak river, and all are navigable by cargo boats. These rivers rise in the high mountain range, and flow west and south until they fall into the main stream.

Of the other rivers, the Bernam, Dinding, Bruas, Larut, Sa'petang, Kurau and Krian may be mentioned. The Bernam river, which forms the inter State boundary between Perak and Selangor, is two miles wide at the mouth, and is navigable for steamers to a greater distance (about 100 miles) than any other river in the Peninsula.

The mountain ranges, which occupy a great portion of the State, reach in some places altitudes of 7,000 feet and over, and run mainly in a north west and south easterly direction. They form two principal chains, besides a few detached groups.

The larger of these chains is a portion of the backbone range of the Peninsula, and forms the eastern boundary of the State.

The lesser (of which the highest peaks are Gunong Bubu in the south (5,450 feet) and Gunong Inas in the north) rises in the southern portion of Larut, and runs in a north easterly direction through the State to its northern boundary. Between these two ranges lie the valleys of the Perak and Kinta rivers, themselves divided by a still smaller range of hills, the highest point of which is Gunong Mera, about 3,500 feet.

Geology.

There are many interesting problems involved in the geology of the State which unfortunately remain at present unsolved on account of insufficient data, but leaving these debateable matters out of the question, the broad facts are very simple. There are in reality only four formations represented—firstly, the granitic rocks; secondly, a large series of beds of gneiss, quartzite, schist and sandstone, overlaid in many places by thick beds of crystalline limestone—thirdly, small sheets of trap rock, and fourthly, river gravels and quaternary deposits. The granites are of many varieties, and also, in all probability, of several different geological periods.

The series of quartzites, schists and limestones are of great age, but as no fossils have ever been found in any of them nothing definite can be stated as to their exact chronological position.

Their lithological characteristics, and the total absence of all organic remains, point to the Archæan period.

The failure to discover signs of life in them is of course merely negative evidence, and the finding of a single fossil would at once upset it. However, until this happens, they may be conveniently classed as Laurentian. It is at present impossible to form anything approaching an accurate estimate of the thickness of this extensive series, but it is probable that it approximates 4,000 to 5,000 feet. Unconformability has been noticed between the limestones and the beds beneath, but whether this is sufficient to separate them or not is a matter for future investigation. In some places, on the top of the limestone, are small patches of heavy black trap, often vesicular in texture. It is evidently now only a remnant of what it once was, and is represented in many places by only a few scattered fragments, but the time which has elapsed since the deposition of the limestone is so great as to allow of any amount of denudation having taken place. It is a question whether the crystalline character of the limestones is not due to their having been flooded by a thick layer of incandescent trap.

The quaternary beds consist of old valley gravels, newer clays, sands, peats and gravels, and near the coast, river and marine deposits. They are composed of the detritus of the granite and Laurentian formations, with of course a certain amount of organic matter, and, in Kinta, some slight admixture of decomposed trap rock.

The interval of time represented by the position of the ancient Archæan rocks and the modern alluvial beds lying

upon them is so immense that there naturally arises the question of what took place in Perak during those countless ages. This, however, can only be determined by a very much wider range of observations than have yet been made, extending over the Peninsula and some of the adjacent islands. The interval is so great that many thousands of feet of rock may have been deposited and slowly washed away again. However this may be, it is sufficient here to state that no traces of any such beds have yet been discovered in Perak, and so, from a practical point of view, their previous existence or non-existence is a matter of no moment.

The period at which the country assumed its present general configuration was, comparatively, quite recent. The eruption of the granite may very probably not have taken place at one time. There were, most likely, several successive eruptions, and between each the degradation of the granite itself and of the upturned edges of the beds of sedimentary rocks went on. All the present alluvial beds are of a date subsequent to the raising of the ranges of granite hills, and if the suggestion already put forward, that the limestone was indurated by the molten trap rock, is correct, then the eruption of the trap was anterior to the disturbance caused by the upheaval of the granite. The peculiar forms of the edges of the limestone formation, the isolated position of small portions in places many miles from any other trace of it, and its fissured and shattered appearance, all seem to point to the conclusion that it was indurated prior to its being broken through by the granite, and that the induration was uneven.

According to this view the existing remains of the formation are those portions which in former times were subjected to the hardening action of the trap rock, while all the unhardened parts have been washed away. Some of the outliers may have been indurated by direct contact with the granite—in the hill known as Gunong Pondok there are several granite dykes traversing the crystalline limestone of which the hill is composed, and at the end of the hill next to the granite range the two rocks are in contact. This action could only have taken place to a limited extent at the edges of the formation, as in other situations there are thick intervening beds of the non-calcareous members of the series, widely separating the limestone from the granite.

The taller hills are exclusively composed of granite, as are also some of the lower ones. The upturned Laurentian beds appear at the bases of the granite ranges as spurs or foot hills, the limestone in particular forming most curious

and picturesque hills, sometimes attaining a height of considerably over 2,000 feet.

A suitably chosen section across the Kinta Valley would give—starting from the Mera range—granite, gneissic and schistose beds, clay-slates and sandstones, limestone, remains of trap, alluvium, limestone, clay-slates and sandstones, schistose and gneissic beds, and lastly the granite of the Central range of the Peninsula. Sections in other valleys would not be so perfect, as the limestone in particular is very fragmentary.

The ores of the various metals mentioned in Part I. are found in Perak in the different formations under which they have been there tabulated. The list, however, is not to be accepted as complete, as small quantities of the ores of many other metals have also been found.

The metalliferous ores in the alluvial beds are naturally derived from the older formations, but are in many cases much more commercially important, because they are more accessible and easier to work. In the formation of these beds nature has done on a large scale what a miner does in a small way. She has crushed and ground to powder vast masses of rock, and by the action of water has sorted out and concentrated within restricted areas all the valuable constituents. The agents employed may be briefly summarised as water, air and heat. The surface of the rock having been softened by the combined action of these three powerful destroyers, the rain detaches fragments and carries them in the streams down the hillsides. In their descent, being thrown violently against the rocks in the bed of the stream, fragments are chipped off and become gradually disintegrated until, on arrival at the level of the plains, they are reduced to the state of sand and gravel. Here the heavier particles are deposited, and the lighter gradually find their way far out on to the plain. This simple process, continued for thousands of years, wears away the hills and distributes their materials over the plains and at the bottom of the seas into which the waters ultimately flow.

The alluvial deposits themselves are also subjected to a somewhat analogous process. The floor of a valley formed of a thick deposit of alluvial matter will in time be lowered by the action of the stream flowing through it, and thus the matter first deposited will be again shifted and sorted. Rivers and streams do not usually lower the level of the whole valley equally; thus it happens that portions of the old alluvium are frequently left at the sides of the valleys, forming what are known as river terraces. The



LIMESTONE CLIFFS, KINTA.

excessive rainfall of Perak does not favour the formation of these terraces, or, to speak more correctly, it rapidly rounds them off, and the numerous tributaries which come in at such short distances from the hills, on either side of the valleys, cut them up and destroy their distinctive character; but still in many localities they may be recognised. They have taken in the past a curious and interesting part in filling the caves of some of the limestone hills with tin-bearing drift. Some of these caves are now over four hundred feet above the present level of the valley. They are worked for the tin contained in them, and the remnants of the river terraces are also mined to a considerable extent.

From the foregoing it will be apparent that there are two distinct phases in the formation of alluvial valleys. Firstly, the filling in with the detritus of the hills, and secondly the sorting and partial carrying away of the deposit first formed. The two processes may be seen in operation sometimes in neighbouring valleys; and to a certain extent, in the same valley, at different seasons of the year. Flooding is an essential of the filling-in process and variations of rainfall therefore affect it; but the alteration of the level of the lower part or outlet of a valley is the important determining factor between the two phases. The falling of a few trees, or the accumulation of some driftwood, will bank up a stream, and may cause it in a short time to deposit several feet of earth above the obstruction; while the breaking down of such a barrier, the cutting of a new channel by the stream, or other circumstances tending to lower it and prevent it flooding, may, on the other hand, cause a lowering of the surface of a valley to set in.

Some years back the filling-in process was going on to a considerable extent in some of the valleys at the foot of the hills between Papan and Lahat, in Kinta, where large stretches of standing dead forest were to be seen. This was caused by the silting up of the valleys and the raising of the level of the earth above what is called the crown of the trees. A layer of from one foot to eighteen inches of earth is sufficient to kill most jungle trees. The trees having been killed, rotted away and fell down branch by branch and trunk by trunk, further blocking up and impeding the flow of the streams and so increasing the amount of deposit. As soon as the deposition moderated, a fresh crop of trees would spring up, at a higher level than their predecessors, and in the course of years the same thing would happen again. It was in this way that the layers of peat and tree stumps were formed which are such characteristic features of all alluvial beds.

One of the most important geological facts in regard to Perak which has come to light up to the present time is the evidence of a recent subsidence of the coast line to the extent of 105 ft. or more.

Sometime ago a boring was made to a depth of 105 feet at Matang, about eight miles up the Larut River, and a section was made from it, which shows that within quite recent times an important alteration of level has taken place. The ground at that place is 6 feet above the present high-water mark. Down to a depth of 17 feet from the surface, the formation is marine, but below that, beds of sand, clays, and gravels, with leaf bands and pieces of wood are met with, of the same nature as the drift near the hills, and containing a small quantity of fine tin-sand; these beds extend down to a depth of 105 feet and probably much further.

It therefore appears that there has been a subsidence of at least 105 feet since the deposition of the tin-bearing drift of Larut. An alteration of level of this extent must have made most important geographical changes in the configuration of the Straits of Malacca; and the fact may help to solve some of the problems connected with the distribution of the flora and fauna of this interesting locality.

In the first 17 feet of marine deposits there were found 16 species of molluscs, all identical with species now inhabiting the sea of the coast. In the remainder of the bore, no animal remains were discovered.

According to Malayan tradition, some small hills near the mouth of the Perak River, which are now some miles inland, were formerly islands. This points to the rapid formation of the sea-swamps subsequent to the depression of the land; and to the comparatively recent date of this change of level.

Hot springs.

There are several hot springs in the State, and one visited in upper Perak had a temperature of between 90 and 100° F., and smelt strongly of sulphuretted hydrogen, the water having a bitter taste. This spring rises through a greenish-grey compact translucent silicious rock, which has probably been deposited by the spring's own action. Similar rock has been found at hot springs in Kinta, and does not appear to have been met with where such springs do not exist. They are not due to volcanic action, but seem simply to result from water entering a rock crevice on the hills, and then flowing down through the fissure, under the action of gravity, to a great depth before it rises to the surface again and in its

passage under pressure through the heated rocks it acquires its high temperature and takes up its mineral and gaseous constituents. All the springs which have been examined rise through granite and are in the vicinity of granite hills.

A sample of the water not having been examined, no reliable idea can be formed of its properties; but the natives believe that its use will cure rheumatism and diseases of the skin. These springs are much frequented by elephants, rhinoceros, and other wild animals. It has been suggested that the waters of these hot springs would have medicinal uses, taken internally, but the connection between them and goitre, in Perak, is too constant to be merely a coincidence.

One remarkable hot spring occurs in the bed of the Perak River at Pulau Kamiri. The heat on the sand at the bottom of the river is 120° F., and if an egg is buried in the sand, the heat is sufficient to cook it. The water is about 5 feet deep over the spring which is about 40 feet from the eastern bank of the river.

The climate of Perak is good, the temperature ranging in the low country from 66° F. in the night to 96° F. in the shade in the heat of the day. The average mean is about 70° F. in the night and 87° F. in the day. The nights are uniformly cool. *Climate.*

At 3,000 feet the average is 60° F. at night and 73° F. in the day.

The rainfall varies considerably, as much as 200 inches in the year being occasionally registered at Taiping, but the average elsewhere is about 90 inches. There is no true rainy season, but the wettest months are March, April, May, October, November and December.

1. The total population of the State in 1891 and 1901 was *Population.* as follows:—

Population.	1891.	1901.
Males	156,408	239,556
Females	57,846	90,109
Total	<u>214,254</u>	<u>329,665</u>

2. The total increase since 1891 is 115,411, or 53·86 per cent. The increase in Males is 83,148, or 53·16 per cent., and in Females 32,263, or 55·77 per cent.

3. The total increases amongst Europeans, Americans and other nationalities are as follows:—

Europeans and Americans	...	...	306
Malays and other Natives of the Archipelago	...	...	38,176
Chinese	...	...	55,894
Tamils and other Natives of India	...	...	19,875
Eurasians	...	...	302
Other Nationalities	...	...	858

4. The following table gives the figures of comparison with the Census of 1891:—

Race.	1891	1901.	Increase per cent.
Europeans and Americans	366	672	83·60
Malays and other Natives of the Archipelago	103,992	142,168	36·71
Chinese	94,345	150,239	59·24
Tamils and other Natives of India	14,885	34,760	133·52
Eurasians	289	591	104·49
Other Nationalities	377	1,235	227·58

It will be seen from the above figures that all nationalities contribute to the total increase, the greatest increase, among the main races, being shown by the Chinese, and the highest percentage of increase by the Tamils and other Natives of India.

The large increase in the *Chinese* population, who now lead the Malays and other Natives of the Archipelago by 8,071, was almost a foregone conclusion and calls for little comment. It is, in a sense, at once the cause and the result of the general progress of the country and of the development of the great mining industry on which that progress so largely depends.

History.

According to local native tradition the district of Bruas, on the coast of Larut, was the place where a Kingdom and Raja were first established in Perak. Temong, a few miles above Kuala Kangsar, on the Perak River, was afterwards the seat of government.

Early in the sixteenth century, after the capture of Malacca by the Portuguese, and the flight of Sultan

Muhammad to Johor, a Prince of the Royal line of Malacca and Johor established himself in Perak as Sultan, and the members of the Royal Family now living claim to be descended from him. In subsequent years Perak was twice invaded by the Achinese, and rajas and chiefs were carried in captivity to Sumatra. One of these was a Perak Prince who was afterwards Sultan of Achin, and became famous under the name of Sultan Mansur Shah.

About the year 1650, the Dutch established, by virtue of a treaty with Achin, a trading station on the Perak River, and acquired a monopoly of the tin trade, which even then was of some importance.

In the following year their factory was attacked by the Malays, and the Dutch were cut off to a man.

The Dutch trading station, though again established, was abandoned several times, owing to the hostility of the Perak people.

The Island of Pangkor, or Dinding, was, about 1670, occupied by the Dutch, but was abandoned in 1690, and their fort, of which the ruins remain to the present day, was blown up in the last century.

The last Dutch station in Perak was on the Perak River, at Pengkalan Halban, some miles below the present town of Teluk Anson, but it was deserted in 1783, though resettled some years afterwards. The Dutch were finally ejected by the English, under Lord Camelford and Lieutenant Macalister, in the year 1795.

Perak was subdued by the Siamese in 1818, but by a treaty between the East India Company and Siam in 1824, its independence under British protection was secured. From that time until 1874 there was little political communication between Perak and the British settlement in the Straits of Malacca. In the latter year, internal disturbances and piracy on the coast of Perak, which injuriously affected the neighbouring settlement of Penang and the coasting trade in the Straits of Malacca, were put an end to by the intervention of Sir Andrew Clarke, R.E., G.C.M.G., then Governor of the Straits Settlements.

A British Resident and Assistant were, at the request of the Sultan of Perak, appointed to aid in establishing and maintaining a proper administration, while their powers and other matters were determined by a treaty concluded at Pangkor on the 20th January, 1874. The first British Resident, Mr. J. W. W. Birch, was murdered by the Malays while bathing at Pasir Salak, on the Perak River on the

2nd November, 1875. A force sent to apprehend the murderers was resisted, and it became necessary to bring troops from India and China to obtain redress and secure order in the State. All the murderers were arrested and punished; but, as it was found that many of the principal chiefs had instigated or been privy to the crime, it was found necessary to banish the Sultan (Abdullah); and three chiefs to the Seychelles, while the ex-Sultan (Ismail) was sent as a State prisoner to Johor.

Raja Muda Yusuf, son of a previous Sultan, was then created Regent of Perak, and in February, 1877, Mr. Hugh Low (now Sir Hugh Low, G.C.M.G.) was appointed British Resident of Perak, a post which he held until May, 1889, when he retired and was succeeded by Mr. F. A. Swettenham, C.M.G. (now Sir F. A. Swettenham, K.C.M.G.).

H.H. Raja Muda Yusof, was installed as Sultan of Perak in May, 1887, and died in July of the same year. He was succeeded by H. H. Raja Muda Idris, C.M.G., son of Raja Bendahara Iskandar, and was formally installed as Sultan of Perak on the 5th April, 1889.

His Royal Highness the Duke of Cornwall and York conferred upon the Sultan of Perak the honour of the G.C.M.G. upon the occasion of his visit to Singapore in April, 1901.

Native Races.

The Aborigines of Perak consist of two tribes known as Sakai and Semang.

The Sakais are short, but the men are strongly built, and in colouring they are rather lighter than the Malay. When not artificially coloured a yellowish brown their hair is black, rather long and wavy, and stands out from the head. They can hardly be said to wear any clothes, a strip of bark cloth and a few rude ornaments being all that they consider necessary.

The blow-pipe, or sumpitan, with its small poisoned darts and rude bamboo pointed spears constitute their weapons. They have considerable taste in decorating these and the few simple utensils that suffice for their wants. Even bamboos in which they cook rice, and which are only used once, are sometimes elaborately decorated with incised patterns. Nearly every tribe (and they are broken up in many) has a dialect of its own, showing that intertribal communication is rare.

In some parts of Perak the general appearance of the Sakais is not much unlike that of the Malays of the interior for the latter people had been, up to the time of the arrival

of the English in Perak, in the habit of making raids on these aborigines, and the captives taken became the slaves, and in the case of females the concubines, of their Malay captors. This custom carried on for a long series of years, introduced a large admixture of Sakai blood into the Malay population.

In consequence of the ill-treatment which these people have suffered from the Malays they are very shy, and avoid strangers with the instinct of wild animals. Malays are Muhammadans and it was not considered a crime to kill an unbelieving Sakai, any more than it was to kill a dog, or other animal; this state of things existed down to about the year 1874 or 1875.

The Semangs inhabit the country to the west of the Perak River, and are smaller than the Sakais, but are rather darker and more negroid in appearance, with close curly black hair. They use bows and arrows in addition to the blow-pipe. Many of them have no permanent abodes and do not plant any rice or other grain, but lead a purely nomadic life in the jungles, living on what they can kill with their weapons, and on wild fruits, leaves and roots. They chew the green leaves of tobacco, but prefer cured tobacco when they can get it. Neither Sakais or Semangs have any idea of a divinity, but they have a strong belief in good and evil spirits.

MALAYS.—Into the much contested question of the origin of Malays it is needless to enter, but it may be safely affirmed that they are only colonists, who, at no very remote period, settled along the shores of the Malay Peninsula, and on the banks of its rivers.

They are an indolent, contented, thriftless, unambitious, polite and peaceful race, mainly the reverse of the sullen revengeful, silent, and bloodthirsty Malay commonly portrayed in books of travel. That there are bad characters amongst them is not to be doubted, but that they are more frequent among Malays than other nations is certainly not a fact.

It seems to be doubtful whether the Malays as a race are susceptible of much improvement in their own country. Certain it is, that they have not taken a leading part in commercial and other pursuits, but have allowed, both here and in other parts of the Straits, the Chinese, Tamils, and other foreigners to become the leading shopkeepers, merchants, miners, and agriculturists. The lower classes are content with a bare subsistence, while the well-born Malay is too proud (and often, it must be confessed, too indolent) to work; he

has not the commercial astuteness of the Chinaman, but prefers to live by taxing his labour, while he despises the Tamils and mixed races.

At the census taken in 1901, there were only 73 Malay prisoners in the State, or one to every 1,794, while of Tamils there were one to every 476, of Chinese one to every 296, and of Bengalis one to every 281. The Malays occupied the same favourable position at the census of 1891, when the proportion of prisoners of that nationality was one to every 1,343. Taking the figures of the 1891 census, the proportion of prisoners to population in England and Wales works out at one to 1,585, which very closely approximates to the ratio found to exist amongst the Malays of Perak.

The Chinese, who now form nearly one-half of the entire population, are the real workers in the State. Nearly all the mining, and most of the trade, is in their hands. The customs, or, as they are called, the revenue farms, are also held by them.

Boat, cart, carriage and house building and most other trades are carried on almost exclusively by the Chinese. But it is a mistake to suppose that they are good workmen. If the climate would permit the employment of European artisans, there is no doubt that there would be a good field in the Straits for really skilled workmen.

Considering that the Chinese immigrants are, as a rule, of the lowest class, it is surprising with what ease they are kept in order, and what a small proportion of crime is committed. Life and property are as safe, perhaps safer, than in England.

A comparison of revenue and expenditure since 1875 is shown in the following table:—

*Revenue and
Expenditure.*

Year.	Revenue.		Expenditure.		Year.	Revenue.		Expenditure.	
	\$	c.	\$	c.		\$	c.	\$	c.
1875	226,333	00	256,831	00	1888	2,016,240	33	1,709,260	50
1876	273,043	00	289,476	00	1889	2,776,583	71	2,090,116	97
1877	312,872	43	292,711	64	1890	2,504,116	99	2,555,793	38
1878	328,608	80	291,473	59	1891	2,324,981	58	3,146,129	37
1879	388,372	84	369,707	33	1892	2,689,565	63	3,094,855	34
1880	582,496	18	521,995	70	1893	3,034,093	90	3,401,086	67
1881	692,861	41	652,938	35	1894	3,542,114	75	3,587,224	04
1882	905,385	92	918,914	50	1895	4,033,611	94	3,757,007	83
1883	1,474,330	11	1,350,610	69	1896	3,960,871	23	3,989,376	26
1884	1,532,497	22	1,481,470	10	1897	3,837,558	61	4,178,238	03
1885	1,522,084	84	1,316,625	86	1898	4,575,842	35	5,560,529	70
1886	1,688,276	22	1,465,325	08	1899	6,580,305	97	5,441,691	83
1887	1,827,476	80	1,550,489	29	1900	7,636,126	76	6,144,774	21

On the 1st January, 1900, the excess of assets over liabilities amounted to \$406,811, and on the 1st January, 1901, to \$1,898,164. The principal sources of revenue are an export duty on tin, the spirit, opium, and other forms, railway receipts, land rents, municipal taxes, forest fees, post and telegraph receipts, and fines and fees of court.

The imports for the year 1900 were valued at \$14,741,148, *Trade.* and the exports for the same year at \$29,190,663, giving a total trade of nearly forty-four millions of dollars.

The principal export is tin. The value of this exported in 1900 amounted to \$26,032,343.

Other important articles of trade are rice, opium, cotton goods, machinery, hardware, sugar, tobacco, live stock and poultry, firewood, fish, oils, and railway materials.

The whole of the trade of the State is carried between the ports of the State and Singapore, Penang, and Malacca.

Agriculture has not made any great progress in the State, and at the present time a comparatively small area of land only is under cultivation. This may be accounted for by the thinness of the population and the ease with which the natives can get the necessaries of life, either by working occasionally in the mines, or cultivating a small patch of garden and rice land. The cost of living to a Malay is only about three to four pence a day; and wages, which are governed in a great measure by the proximity to the chief mining districts, range from one to two shillings per diem. *Agriculture and vegetable products.*

Rice.—Rice is at present the staple agricultural product, and is planted in two ways; it is called either hill, or wet, padi, according to its situation. The growing of hill padi is now prohibited by the Government, because it leads to the destruction of large quantities of valuable timber and spoils the land for any other purpose for seven or more years afterwards. Only one crop is taken from the land, and then it is allowed to grow up in jungle again.

Wet padi is grown on the plains, and by means of artificial irrigation the fields are kept flooded with water while the rice is growing. The ground is prepared by cutting the weeds on it, letting them dry in the sun, and then burning them off; the ground is next turned by rude wooden ploughs drawn by buffaloes, and the young rice plants (which have been raised in a nursery) are planted out in the fields by women and children.

Manure is quite unknown in rice culture in Perak, and after several years' cultivation, fields have hitherto been

allowed to lie fallow for several seasons before they are planted up again.

A padi crop does not really take much out of the soil, because only the ears are cut, all the straw being left standing in the fields to rot and so manure the ground.

In 1901 \$3,521,287 worth of rice was imported into Perak, against an export of the same valued at \$541,668.

The State is therefore spending nearly three million dollars a year on rice, which ought to be grown on the thousands of acres of waste land now lying idle. The encouragement of the culture of rice is therefore one of the most important subjects to which attention can be drawn and is now occupying the earnest attention of Government.

Indian Corn.—This grain is grown in considerable quantities, but it does not flourish to the same extent as in colder climates. It is rarely that more than two cobs are borne by one plant, and very often only one is produced.

The corn is mostly eaten by the Malays before it is ripe, the whole cob being boiled for that purpose.

Root Crops and Vegetables.—The former comprise sweet potatoes, yams, caladium bulbs, cassava, and several others.,

They are only produced in sufficient quantity to supply the local demands. Potatoes will not grow, except on the mountains, but the market is well supplied by those imported from India and Australia. Other vegetables, such as onions, lettuce, beans, egg-fruit, cucumbers, vegetable-marrows, and pumpkins, grow freely, but cabbages, radishes, carrots, French beans, tomatoes, asparagus, and other European vegetables can only be raised with care from imported seeds, and usually at a considerable elevation.

The natives eat many leaves and plants that they find in the jungle, but Europeans, with the prejudices which they have to unknown and unfamiliar dishes, rarely taste these vegetables, and nothing has been done in the way of trying to improve by cultivation the most promising and delicate flavoured of the plants; but there seems to be a fair field for investigation in this line.

Fruits.—Owing to the highly coloured descriptions that travellers have given, tropical fruits are supposed by the great majority of English people to be far finer, richer and better in every way than those grown in colder climates; but such is not the case; and though Malayan fruits exceed English fruits in size and often in strength of flavour and odour, a strawberry, pear or peach is, in the judgment of Europeans, quite unequalled by anything grown in Malaya.

The two Malayan fruits that stand out prominently are the Mangosteen and the Durian. The latter has often been described, but its smell and taste are not be put into words. Many people can never bring themselves to taste it, but when once this repugnance, which is caused by the overpoweringly offensive odour, is overcome, a liking for it is almost sure to follow. Among Easterns of all nationalities, an insatiable craving for it seems to exist, and during the season those who own many trees live almost entirely upon the sale of durians. The owners build themselves little houses perched on high poles near the trees, and arrange strings with wooden clappers and other noise-producing instruments attached to them to drive away the various animals which would otherwise strip the trees.

Bears and squirrels are the chief thieves, but Malays say that tigers are also very fond of the fruit. Whether this is a fact or not remains to be proved, but certain it is that elephants, cattle, goats, horses, dogs and monkeys eat them whenever they get a chance.

The price of the durian varies from 1s. 6d., in Singapore, at the beginning of the season, to 2d. or 3d. each in the country. In Mandalay and Burmah, as much as two or three rupees is paid for a durian.

The mangosteen is a pleasant fruit, slightly acid, and with a delicate but characteristic flavour. When opened, the contrast, between the snow white of the fruit and the dark red or purple of the rind is striking and beautiful. The price is about a half-penny each.

Mangoes, langsat, machang, tampuni, rambei, shaddocks, rambutan, pulsâsan, papaya, guavas, pineapples, duku, tampoi, bananas and plaintains, water-melons, limes, oranges, jackfruit, custard apples, sweet and sour sops, are the principal remaining kinds of fruits that may be mentioned. The mangoes are not to be compared with those of Bombay, Siam, or Manila.

One great want is a fruit that will cook well, and make tarts and preserves. The pine, sour sop, banana, rambutan, the guava and the mango alone are available for this purpose, and Europeans have to fall back on tinned and bottled English fruits. The large sale of these last is a convincing proof of the inferiority of tropical fruit.

Bark used for Tanning.—Considerable quantities of bark are exported from the mangrove swamps that line the sea coast of Perak. The trees which produce it are species of the genus *rhizophora*. The mangrove forests which cover these sea swamps are called *bâkau* by the Malays.

There are many other barks which are used for the same purposes, but they are not exported at present.

Rattans.—Canes are collected and exported to a moderate extent; \$7,967 worth was exported in 1900. They grow wild, and no attempt has ever, as far as is known, been made to cultivate them, though there seems to be no reason why they should not be planted and give good returns.

Rotan Semambu (*calamus scipionum*) is known as the Malacca cane, and is exported in considerable quantity for the purpose of being made into walking sticks. It is used locally for the handles of the baskets used in tin mines, and the frames of rattan chairs. Many other kinds of rotan are used as walking sticks, among others *rotan manoh* and *rotan dudok* may be mentioned. For other purposes, such as baskets, mat and chair making, house building, and the thousand and one uses that the natives put this plant to, *rotan sega*, *rotan ayer*, *rotan batu*, *rotan sindek*, *rotan dahan*, *rotan tiga sagi*, and many others are used.

Rotan sega, before the introduction of matches, was in great request, from the comparative ease with which fire may be obtained from a strip of it by rapid friction round a piece of dry wood. The dye, "dragon's blood," is obtained from the fruit of *calamus draco*, called by the natives *rotan jerning*, and is used by them in staining articles, such as the rushes used in mat making of a bright red colour.

Bamboo.—This gigantic grass grows luxuriantly throughout the State. There are about twelve varieties cultivated, or rather planted, by the Malays, and about an equal number growing wild in the forests. Its uses, like those of the rattan, are so numerous that it is impossible to enumerate them all. They range from house-building materials to the principal ingredient in a bamboo curry, and the young tender shoots thus treated make an excellent dish.

Cotton.—The tree-cotton (*gossypium arboreum*) is grown to a limited extent in Perak, but nothing like systematic cultivation has ever yet been attempted here.

Silk-cotton, the produce of *eriodendron aufractuosum*, is also grown in Malaya, and is largely used for stuffing mattresses and pillows.

A species of the genus *bombax*, also yielding silk-cotton, grows wild in the jungles and attains vast dimensions. If produced in sufficient quantity, silk-cotton seems well adapted to form an ingredient in the better class paper, and the seeds, which contain a very large percentage of sweet, pleasant tasting oil, might be turned to some account.

Sugar.—Sugar to the value of \$1,315,974 was exported from the Krian district of Perak in 1900. Its cultivation is now being extended to the remainder of the State, but there is still a quantity of land suitable for its growth on the mangrove swamps bordering the sea, and on the slightly undulating lands adjoining.

The sugar is produced by the Chinese who, in some cases, employ European engineers in the works, but a European company has successfully opened a large estate on the Gula river, and several more are now opening land in Kurau and Lower Perak.

Palm sugar is made in small quantities from the *arenga saccharifera*, the coconut, and other palms.

Spirits.—The amount exported was 49,400 gallons, valued at \$22,880. This spirit is made from the refuse of the sugar mills and is mostly exported. That made for local consumption is distilled from a mixture of brown sugar or molasses and rice.

Coffee.—In the gardens of the Malays native coffee is produced, and on the experimental hill gardens, opened by the Government of Perak, and the estates opened by private enterprise, the cultivation of Liberian coffee is an assured success, but the present low price has induced some of the planters to turn their attention to other products.

Only \$82,446 worth of coffee was exported in 1900, but then the local market was also supplied, as none was imported.

The berry is not always used by the Malays, but a sort of tea made from the roasted leaves of the coffee bush is often preferred by them for their own drinking.

Tea.—This has only been grown experimentally as yet. There were about 50 acres of Assam Hybrid in the Government hill gardens, at elevations varying from 1,600 to 3,000 feet, and this was pronounced by competent authorities to be doing as well as any in Ceylon. The tea made from the leaves is also of good quality, and has been sold on the London market at satisfactory prices. There is fine land in the low country suited to tea cultivation, and what has been planted on the plains has grown most luxuriantly.

Coconuts and Betelnuts.—Many young plantations of coconuts will soon be coming into bearing in various parts of the State. Copra valued at \$30,513 was exported from Lower Perak in 1900.

Betelnuts (*areca catechu*) are not produced in sufficient quantity to supply the wants of the State, except in Krian and

Lower Perak, from which \$28,338 worth were exported in 1900, but they can be grown to any extent.

Indigo is cultivated and manufactured by the Chinese in Krian, and in 1900 \$5,990 worth was exported. It is used locally in dyeing the dark blue cloth that is almost universally worn by the labouring classes of Chinese.

Tobacco and Gambier.—These products are grown to a small extent by the natives and in sufficient quantities to show the suitability of the soil and climate to their cultivation.

Tapioca.—There is one large tapioca estate in the Trong district, and \$42,544 worth of tapioca was exported in 1900.

Pepper has of late years been planted to a considerable extent, and the gardens which have come into bearing look most promising, and the pepper produced is of excellent quality. The export for 1900 was valued at \$25,322.

Nutmegs, cardamoms, patchouli, citronella, khus-khus, and lemon grass, flourish wherever planted. Several kinds of nutmegs and cardamoms grow wild in the jungle and are collected by the natives for sale.

Incense, Camphor and Damar.—Incense trees are plentiful in some parts of the jungle. Large nurseries have been made of these trees, and many thousands of plants will soon be ready for planting out on the waste lands of Larut.

The camphor tree is also said still to grow in some parts of Perak. Formerly it was abundant but it has been almost exterminated by the collectors in the more accessible parts of the country.

Gharu, or Eagle Wood, is also occasionally met with.

Resin, known here and in the market as damar is produced by many kinds of trees. The principal are Damar mata kuching, D. Meranti, D. Laut, D. Degon, Damar Batu. The stone-resin is found in the beds of tidal rivers.

India-Rubber.—There are to be found growing in the forests of the State, besides the well-known *Ficus elastica*, a tree which attains immense dimensions, several creepers belonging to or nearly allied to the genus *Willoughbeia*, which produce india-rubber of excellent quality.

The South American Caoutchouc-producing trees, *Hevea Brasiliensis* and *Manihot Glazouvi*, were introduced into Perak many years ago and the former have grown into large trees. The latter, however, after attaining a size of 30 feet or so dies out from some unexplained cause. Large quantities of Para Rubber have recently been planted in several

districts and much more would have been put in but for the difficulty of obtaining seed.

Gutta-Percha.—The trees which produce this gum are to be found throughout the jungle; but nearly all those of a size to yield sufficient gutta to repay the trouble of felling, have been destroyed. The trees from which gutta is extracted are as follows, arranged in the order of the quality of the gum they produce:—Getah taban merah (*Dichopsis gutta*), getah taban sutra (*Dichopsis sp.*), Getah sundek (*Payena leerii*), Getah taban putih (*Dichopsis sp.*), Getah taban chaier (*Dichopsis pustulata*), Getah taban simpur (*Dichopsis maingayi*). The export of Gutta-percha for 1898 was valued at 33,809 dollars.

These are not important at the present time, the natives having little or no idea of raising or improving stock. The cattle are, as a consequence, few in number, of inferior quality, and for the most part imported. *Animal Products.*

Birds' Nests.—In the cases of the limestone hills, the swallow (*collocalia linchi*, Hors.) builds its much sought after edible nests. Up to the present time, however, these nests have not been collected in the State, except by the Semangs in Upper Perak, to a small extent. This neglect seems to be attributable to the apathetic indolence of the Malays, and possibly to the fact that the nests are but few in number and of inferior quality.

Bats' Guano (tahi klawer).—To the same caves, enormous hosts of bats resort in the day time to sleep and, as a consequence, the floors of these caverns are lined many feet thick with their excrement. As yet these stores of manure have been almost untouched; though the guano is rich in nutritive properties.

Bees' wax, Honey and Lac or Lak, are collected in small quantities. Bees have not yet been domesticated in Perak, nor has any attempt been made to cultivate the trees on which the lac insect is found in the jungle, though both subjects seem well worthy of attention.

Silk.—The rearing of silk worms was carried on for some time in Larut, and the results obtained seemed very encouraging, but disease shewed itself and, as in other places, caused the death of most of the worms.

Tin.—The principal product of Perak is tin, and it was the presence of this metal which first attracted Chinese to the State. Disputes with reference to the possession of mines ensued followed by bloodshed and failure of the Malay chief *Economic minerals.*

to preserve his authority. An appeal was then made to the British Government for assistance, and the present system of Protection established by treaty. Since that time (January, 1874) the revenue had increased twenty-fold: the export duty on tin contributing most largely to that result. The ore is found in the form of "stream tin."

Almost all the tin has been raised by Chinese miners with the most primitive appliances, and although, no doubt, much metal has been and is still lost by the imperfection of their methods of working, yet at the same time, owing to their inexpensive system, land which would not pay Europeans to work, has given Chinese a profitable return.

The tin fields of Larut, which may be taken as typical of those of the rest of Perak, form a strip of land of from two to three miles broad along the base of a range of granite mountains.

These alluvial flats are composed of layers of clays, sands, and gravels, with beds of peat, containing the stumps of trees and fallen tree trunks, marking former swamps and levels of the plain.

The tin-bearing stratum rests on a stiff grey or white clay bottom, and varies in thickness from a few inches to six or eight feet, and even more. Sometimes the stratum is divided by a layer of clay.

The whole of the plains are composed of the detritus of the granite and the plæozoic slates and sandstones which form, or have formed, the ranges of hills. The tin is not evenly distributed over the plains, but is found to follow the lowest parts of the clay bed or, in other words, the beds of the ancient rivers. The tin-sand is, as a rule coarse-grained near the hills and finer as it recedes from them.

The method of working the mines is to remove the earth covering the tin-bearing stratum. This is what is called the "over-burden" or "stripping," and varies from three or four to 30 feet in thickness.

The work is usually done by contract in the Chinese mines. The tin-bearing layer called the "wash dirt" is then raised to the surface and washed with a stream of water in long wooden coffin-shaped boxes. The tin-sand being more than twice as heavy as the clay and gravel with which it is mixed, stops in the upper part of the box, while the lighter parts are carried away by the stream of water.

The tin-sand is re-washed by hand in large wooden dishes, and is then sold to the smelters or exported.

The wash contains about one or two per cent. of ore as an average. There are portions of it which contain sometimes as much as twenty-five per cent. and on the other hand, very poor parts which hardly pay for the trouble of washing.

The shifting and raising of the earth in the mines is all done by digging with large hoes called *Changkols*, and the earth is then filled into baskets, two of which are carried by each man by means of a yoke or stick over his shoulder. The water is pumped from most of the mines by Chinese overshot water-wheels, and endless chain pumps. In the larger mines steam engines are used in conjunction with centrifugal pumps.

Mining by means of small vertical shafts is carried on to a considerable extent by the Chinese. It is only possible on dry hilly ground. A deep mine is at work at Tronoh with both vertical and inclined shafts, with steam pumps, winding apparatus and buddles, but it is doubtful if it is alluvium which is being mined.

In the year 1892 the first hydraulic mining plant was put up at Changkat Pari, but owing to there being an insufficient fall below the sluice the tailings could not get away and it was abandoned. The next installation was erected at Gopeng, in the same year, and has been in successful operation ever since. Other plants have been worked at Bruseh and Bentong in Batang Padang. At the present time a number of hydraulic sluices are being laid down. In this method a jet of water at high pressure is directed against the tin-bearing earth, which is washed down by it into a long sluice furnished with devices for retaining the tin sand; with a properly made sluice like those at Bruseh, about eight men at a shift are sufficient to work it and it does the work of about 200 to 250 men.

The Chinese mines are worked on the truck system, all food and other necessaries being supplied by the mine owners or money advancers. Some mines are carried on which could not pay if the profits from the sale of food to the coolies did not come into the advancers' hands. The commonest arrangement is called the co-operative system, where all the coolies have a share in whatever profit is made after repaying the advancers' loans, and settling with him for the value of food and other supplies.

The tin-sand after being re-washed, is smelted in rude blast furnaces, charcoal being used as fuel. The loss of tin is rather high in the poorer class of ores when treated in these Chinese furnaces, and the slag is several times re-smelted. A very large proportion of Perak tin is now

smelted at the Pulau Brani (Singapore) Smelting Works of the Straits Trading Company. The amount so treated in 1898 was 153,529 pikuls.

Two reverberatory smelting-houses have been built in Larut, one in Kinta, and another in Teluk Anson but none of them have succeeded in working so as to cover expenses. The difficulty of buying a sufficiency of ore at paying prices, to keep the furnaces going, and the refractory nature of the highly silicious slag produced, with consequent serious loss of tin, appear to have been the chief causes of these failures.

Tin lodes have been discovered, and prospecting work has been done on several of them; but it was not until October, 1889, that the first mine was started at Selama. This mine unfortunately proved unsuccessful, as the ore which was found in the first instance (and on the strength of which work on an extensive scale was undertaken) proved to be a mere patch in a piece of rock which had, in ages long past, shifted from its original position.

The rock in the upper part of the Kinta valley is mostly limestone, and about twenty lodes have, up to the present time, been reported to occur in it.

The Chinese are working in many places in Kinta the upper oxidized portions of lodes, in some cases using steam stamps to crush the ore. These mines are each worked by several small parties of men, each party with their own shaft independent of the others; the shafts are sometimes not more than 12 feet from each other. As soon, however, as they come to the undecomposed ore they abandon the work and, as usual with Chinese, cover it all up.

Gold.—Upper Perak, Batang Padang and Kuala Kangsar produce a limited quantity of gold. It is associated with the tin-sand in the alluvial drifts, as a rule, and the tin-sand is re-washed to separate it. There are no statistics to show the amount of gold that has been raised up to the present time; some of the tin-sand gives as much as 6 ozs. to the ton, and some “wash” recently examined gave 7 dwts. per ton. Some quartz leaders showed as much as 132 ozs. of gold per ton of rock, but nothing has been done to prove the extent of the lode.

Near Tapah, in Batang Padang, a gold quartz lode has been worked to a considerable extent. This mine, known as Bukit Mas, had an out-put for 1897 of 1,100 ozs. of gold from about 5,250 tons of ore but has since been abandoned, the lode on the higher levels proving too poor to work.

Lead.—Galena of very good quality has been found. Carbonate and phosphate of lead are also found in considerable quantities. The galena is said to carry a paying percentage of silver.

At Asam Kumbang, in Larut, a vein of this mineral has been brought to light; and quite recently it has also been found at Plang, at Lahat in Kinta, and Ulu Sa'petang in Larut.

Iron.—Ores of this metal are to be had in many parts of the State, but would not pay to work as there is no coal, notwithstanding what has been stated to the contrary by writers of books of travel.

Copper.—In the limestone of Kinta, ores of this metal have been discovered, as well as at Plang and Selama. In Batang Padang native copper occurs in the alluvium associated with tin and gold.

Bismuth.—Native bismuth has been met with in two places in Kinta and in Batang Padang.

Mercury has been found in small quantities in Upper Perak and Batang Padang. There is doubt, however, as to its origin at the latter place. Native amalgam, that is gold and mercury, has been found at Changkat Mamot. This place is also in Batang Padang.

Arsenic.—This metal also exists in Kinta and other places associated with tin and lead, and will doubtless pay to work as a secondary product.

Manganese has been found at Sorakai, Talang and Ayer Daun Sang, in Kinta.

Plumbago occurs in Batang Padang and Kinta, but is of inferior quality.

Silver.—All the lead ore is argentiferous, and that of Ulu Sa'petang contains from 100 to 200 ozs. of silver per ton.

Tungsten.—An ore of this metal, called wolfram, has been found in many parts of the State, and with the increasing demand for it, caused by its use in making the alloy known as tungsten-steel, employed for heavy ordnance and other purposes, it is possible that some of the deposits of wolfram might be worked at a profit. Scheelite, a tungstate of lime, has also been found in the Kuala Kangsar district and is reported to be plentiful. Wolfram is being exported in small quantities from Batang Padang.

Zinc.—Sulphide of zinc has been recognised in the Ulu Sa'petang ore, associated with sulphide of lead, tin and mundie, also in Kinta.

Sapphires, garnets, and topaz have been discovered in Batang Padang, Kinta, and Upper Perak.

Marble.—There is an abundance of fine marble scattered over the State, some of it very handsomely veined with grey, red, and black, some again is nearly black, veined with white, while other kinds are mottled with different shades of greys and olive greens, and in Kinta there is some pure white marble.

A company has been formed to work the marble at Gunong Cheroh near Ipoh in Kinta. Large works have been erected and steam machinery is being employed to cut it up and polish it. As far as can be seen now there seems to be every prospect of this industry being a success, as the marble is pronounced by the Italian foreman to be of excellent quality.

Granite.—The granitic ranges of which so large a portion of Perak consists afford an unlimited store of this useful stone. The granite that is worked near Taipeng and at Bukit Gantang is of a grey colour, and rather large grained. It is quarried for roadmaking, Blake's crusher being used to reduce it; blocks are also cut for building purposes, culverts and landmarks. The work is principally carried on by convicts, a quarry having been opened near the gaol at Taipeng with a tramway running into the gaol yard, where the rough blocks of stone are dressed. Some handsome red and green granite occurs in Batang Pedang.

China Clay.—In most of the tin fields of Perak the stratum underlying the "wash" or tin-bearing deposit, is pure white China clay or kaolin.

There must be many millions of tons of this material in Perak, but it is doubtful if it could be worked with profit, on account of the cost of transport to Europe. If Chinese potters could be induced to start works here, a large trade might be carried on with such fine material to work upon, and white firebricks could be made of the refuse.

Bricks are made from the same stuff in Cornwall, in the China clay works, and sell for a high price, being used both as fire and as ornamental building bricks.

Brick Earth.—Plenty of good brick clay is scattered over the country, and the material for making fire-bricks is also to be had in abundance, as mentioned above.

Very fair bricks are now made in Perak, and sell for about \$7 per 1,000; but they are small, and like everything of Chinese manufacture, they are susceptible of great improvement; and when the clay is weathered, well mixed, and

moulded, and the bricks are equally burned, they will be of excellent quality.

Tiles are now being made at Chenderiang in Batang Padang, and are of much better quality than the Malacca tiles, being harder, less absorbent, and of a better shape. Very good tiles are also being made at Batu Gajah, Kinta.

The railway contractors have been turning out excellent machine-made bricks in Batang Padang, Kinta, and Larut, and a Chinaman in Krian makes good machine-moulded tiles.

Pottery.—The manufacture of pottery is nearly confined to the Malays, and is only carried on in a small way in two or three districts. It is unglazed, or only glazed with damar on the lower part. Some of the shapes are very graceful. The patterns are pressed into the work by means of stamps, and tools are used to produce dots and lines. Raised work is also employed in decorating the ware, being put on in strips after the vessels are formed. Stamped raised work does not seem to be employed, and the potters wheel has not yet been introduced amongst the Malays.

Coarse earthenware cooking pots are made to a limited extent in Larut by Indian and Chinese potters.

Posts and Telegraphs.—The following return of the covers which passed through the post offices in Perak since 1881 show what rapid strides the country is making :—

1881	...	...	... 17,327
1883	...	...	102,963
1886	...	...	202,646
1891	...	...	536,115
1893	...	...	1,027,166
1895	...	...	2,057,023
1900	...	...	4,600,904

Nineteen thousand four hundred and sixty-five Money Orders were issued from Perak post offices, to the amount of \$583,743 in 1900, payable in Perak, India, Ceylon, the Straits, other Native States, China, Japan, etc., while 8,090 Money Orders, to the amount of \$174,312, were paid in the State. Postal orders are also issued for payment in England.

Until the year 1884 the only telegraph lines in existence in the State were those running between Matang, Taiping, and Kuala Kangsar, a total distance of 26 miles. Since then new lines have been erected, until now (1900) the total length of telegraph and telephone wires in use is 680 miles, exclusive of the railway lines, connection with the outside world being made through Penang on the north side and through

Selangor, Negri Sembilan, and Malacca to the south. There are 19 post and telegraph offices, and nine where ordinary postal work is transacted by railway station-masters and district office clerks. During 1900, over 800,000 telegrams were sent over the Perak lines.

Roads.

Roads.—There is a metalled cart-road from Selama, in the north of the State, to Sungkai in the south. It passes through Kamunting, Taiping, Kuala Kangsar, over the Enggor pontoon bridge, through Ipoh, Sungei Raia, Gopeng, Kuala Dipang, Kampar, and Tapah. The principal branches of this main road are that at Bukit Putus, which connects Krian and Province Wellesley, the old Matang road, the road from near Changkat Jering to Trong and the Dindings, from near Padang Rengas to Kota Tampan in Upper Perak, from Ipoh to Batu Gajah through Lahat, with a branch to Tronoh and Blanja; from Gopeng to Kota Bharu, from Tapah to Chanderiang, and another up the Cheroh valley, and lastly, one to connect the town of Tapah with the Kinta Valley Railway. There is also a metalled cart-road from Tanjong Malim to Slim. In all, there are 482 miles of metalled cart-roads, 104 miles of unmetalled cart-roads, and 548½ miles of bridle-paths, making a total mileage of 1,234½.

These roads are surfaced with granite or limestone, and are for the most part always in excellent order.

Buildings.

A large number of important public buildings have been constructed in the various district headquarters, but the principal buildings are erected at Taiping, the capital of the State, and Batu Gajah, the chief town of Kinta. Of these the following may be mentioned: the Prison (where permanent wards on the separate system have been constructed), Hospitals (with accommodation for 2,000 patients), Barracks, Markets, Police Stations, Court-house, Treasury, Post and other Government Offices. At Taiping there is a handsome and replete Museum of which the State is justly proud. Water-works supply the town of Taiping, the gaol, hospitals and other buildings with excellent water in ample quantity. Water-works have also been constructed in Lower Perak for the supply of the port of Teluk Anson, in Krian for the supply of Parit Buntar, and in Kinta for the supply of Ipoh.

Railways.

The line, which is of metre gauge, was commenced in 1881, when a trial trace was made between Port Weld (then known as Sa'petang) and Taiping, the chief town of Larut, where the headquarters are. The jungle was felled and the line was commenced in the following year. Owing to the unstable character of the ground, which is very swampy,



LIMESTONE CLIFFS, KINTA.

large quantities of earth had to be taken from Taiping to form the embankment. The line was opened for traffic on the 1st of June, 1885, the port being now only half-an-hour's distance from Taiping. A week-day service of steamer communication is kept between Port Weld and Penang, the journey occupying about six hours.

An extension from Taiping to Kamunting was opened in May, 1890, and to Ulu Sa'petang in June, 1892, a further section being opened for traffic in September, 1899, to Pondok Tanjong; construction is in progress towards Bagan Serai. From Bagan Serai the line was opened to the Krian river on the 1st November, 1899, a distance of 11 miles, passing Parit Buntar; north of Parit Buntar is the Province Wellesley Section, an extension of 23 miles, which has been constructed by the Perak Government: seven miles of this was opened for traffic in July, 1899, by His Excellency the late Governor, Sir Charles Bullen Hugh Mitchell, between Prai and Bukit Mertajam. The remaining portion of this section has since been completed.

A service of Railway Ferry Steamers plies between Penang and the railway terminus at Prai.

The lower portion of the Kinta Valley line between Teluk Anson and Batang Padang was opened by the Governor, Sir Cecil Smith, on the 18th of May, 1893, and was completed as far as Chemor in 1896, a further extension to Enggor being opened for traffic in 1898. This line starts from the port of Teluk Anson in Lower Perak and passes through Batang Padang to Batu Gajah, and thence to Ipoh, Chemor, Enggor, and Padang Rengas, the portion open for traffic being 87 miles in length. The survey has been completed between Tapah Road and Tanjong Malim, passing Bidor, Sungkai and Slim, the junction with the Selangor Government Railway being at Tanjong Malim; the construction of this line is in progress and is about 44 miles in length.

From Padang Rengas to Taiping the work of construction is in progress. The bridge over the Perak River, which was opened in 1900, has seven spans of 150 feet in length, at a height of 40 feet from the river bed; from thence the line passes to Kuala Kangsar, Padang Rengas, Bukit Gantang, Changkat Larut, and Ayer Kuning, to Taiping; the whole of this section is under construction. The section over the Gapis Pass is exceptionally heavy, it being necessary to make four tunnels; very hard granite has been met with throughout.

When the lines now under construction have been completed, there will be a trunk line running from the Prai terminus in Province Wellesley, through the entire length of the State, connecting with the Selangor Government Railway at Tanjong Malim on the Inter-State boundary. Connected with this line there will be two branches, namely, the present sections of line from Taiping to Port Weld and from Tapah Road to Teluk Anson. The two ports of the State will thus be in touch by railway with the main trunk line.

Education.

The Education both of European and native children is well cared for by the Government of Perak. At Taiping there is an excellent English school, under the charge of an English headmaster and a competent staff of assistants. Also a school for girls, maintained and managed by the members of the American Episcopal Mission.

Vernacular schools for Malay boys are established in every town and village of the State, and also at other country centres where it is possible to get together thirty or forty pupils from the neighbourhood. The Malays most readily avail themselves of these facilities for the education of their boys, but it is a matter of greater difficulty to obtain their consent to the attendance of their girls at school. Girls' schools have however been established at one or two centres, where sewing, weaving, and other feminine accomplishments are taught, but it is unlikely that the attendance of native girls at Government schools will ever become general.

Nor has the Government been unmindful of the needs of the children of immigrant nationalities, Chinese and Tamils, although they have no such claim upon the State as the children of the Malay. There are schools in which such children can obtain elementary education in their own language from a teacher of their own nationality.

Hospitals.

All the districts of the State have been furnished by the Government with very efficient hospitals in the charge of resident European surgeons and an adequate staff of Eurasian assistants. In these establishments all members of the community, of whatever nationality, are received and treated, and additionally there is in Taiping a hospital specially maintained for the accommodation of European patients. The surgeons on the hospital staff are well up in all the latest developments of medical science, and all patients receive most skilled and careful treatment, in most cases free of charge.

Sanitaria.

The State is well provided with the means of recruiting health by a change to cool air from the torrid atmosphere of

the plains. Upon the range of mountains which overlooks Taiping there are situated two bungalows known as "Maxwell's Hill" and "The Tea Gardens," at approximate elevations of 4,000 feet and 3,000 feet respectively. These buildings are the property of the Government and are maintained for the accommodation of Europeans for prescribed periods at reasonable charges. Accommodation of the same description is provided for the community of the southern portion of the State upon Gunong Kledang, one of the range of hills which divides the valleys of the Perak and Kinta rivers. These Sanitaria are all approached by good bridle paths, constructed at convenient gradients and very efficiently upkept, which permit of the use of riding horses, or of chairs carried by coolies for the benefit of those for whom active exercise is undesirable. In addition to the above-mentioned buildings, the Resident-General and the British Resident of Perak have private bungalows provided for their use by Government, upon the Taiping Hills, but these are, of course, not available for other persons.

The conservancy of the towns and villages in the State is entrusted to Sanitary Boards, the members of which are nominated by the Government. A certain number are Government officers, and the remainder are selected from among the principal members of the European and native communities. *Conservancy.*

The prisons of the State are constructed upon the most modern lines, with separate cell accommodation for a large number of convicts, and are administered in accordance with the most efficient rules of prison discipline by an experienced staff of European gaolers and warders, assisted by a body of native assistant warders. Many useful forms of industrial work are undertaken in the prisons. The articles manufactured are of uniformly excellent quality, and command a ready sale to the public at remunerative prices. *Prisons.*

Escapes from the prisons of the State are of comparatively rare occurrence.

All the principal industrial and social centres of the State are now approachable by good roads, and in most instances also by railway, and whether the traveller chooses to enter Perak by way of Penang from the north, Teluk Anson from the south, or Port Weld in the centre, he will find facilities for passing rapidly and easily to almost any part of the State which he may desire to visit. Communication between Penang and the Perak ports is maintained by daily trips of *Districts and Towns.*

local steamers, and the vessels of the Straits Steamship Company run between Teluk Anson and Singapore about three times a week, touching en route at the ports of the Southern States.

The commerce of the State is not centralised in any one principal town, but is distributed in different localities. Taiping, the capital, which is reached most easily by railway from Port Weld, is the headquarters of the Government, and is also the centre of what was once the most important mining district in the State, but is now in this respect of very secondary importance.

The town of Kuala Kangsar, which is situated upon a most picturesque stretch of the Perak River, is the place of residence of His Highness the Sultan, for whom an Astana or palace of imposing appearance and dimensions was erected there a few years ago at the cost of the State.

The district of Kinta is by far the most important in the State. It may be roughly described as being comprised in the valley of the Kinta River, a tributary of the Perak River. It includes within its limits the important mining and commercial towns of Ipoh, Batu Gajah and Kampar, besides others of less note, and it is here that the greater portion of the tin exported from the State is obtained.

It is quite possible that the stanniferous prosperity of Kinta may at no distant date be emulated by the adjoining district of Batang Padang, of which no such thorough exploitation has been made as has been accomplished in Kinta. These two districts, together with the more remote and untried area of Upper Perak, comprise the source from which the principal supplies of Perak tin are and will be drawn.

The seaboard districts of Lower Perak, Matang and Krian have few or no temptations to offer to the miner, and it is here that agriculture appears as the prominent industry.

The rice fields of Krian have been noted for many years, and are of very extensive area. The Malay cultivators have usually managed to obtain excellent crops in spite of their dependence upon atmospheric conditions. The Government have, however, now included a large portion of the rice-bearing area in a complete and comprehensive scheme of irrigation, and a proportionate improvement in the crops may be expected.

In addition to rice fields there are large sugar estates and coconut plantations in these coast districts. Some of the

most important of these are the results of recent enterprise, and may be expected to add materially to the prosperity of the State.

Perak presents opportunities of sport to the gunner, second *Sport.* only in the Federated States to those offered by the State of Pahang, and obtainable at the cost of less time, and probably of less money, than in the Eastern State.

The district of Krian has long been noted for its excellent snipe shooting, the season for which is usually from about the middle of September to the middle of December. It is true that in recent years the bags made have not attained the plethoric proportions of those made five or six years ago, but the number which can now be procured upon a favourable day will be sufficient to satisfy all but the most insatiable. The decline in numbers is probably attributable in part to the better drainage of the land, and in part to the increase in the number of sportsmen, for which the new railway is responsible.

In Matang and Lower Perak also very fair snipe shooting is to be had in favourable weather, but success depends in no small measure in all these districts upon an accurate knowledge of locality upon the part of the sportsman or his attendant. A stranger trusting to his own unaided intelligence will almost certainly return empty-handed.

Later in the year, about Christmas time, a very pretty mixed bag may be made in a trip down the Perak River from Kuala Kangsar to Teluk Anson. Shooting on the islands and river banks may result in a bag including snipe, teal, golden plover, and two or three varieties of pigeons.

Those who seek for elephants or bison must go further afield into the jungles of Batang Padang or Upper Perak, but the distances are usually not great, and a two days' journey will, as a rule, be ample to bring the sportsman within the neighbourhood of their haunts. As, however, these animals seldom remain for any length of time in the same place, it is essential that every trip should be preceded by enquiry from the most reliable native sources as to their present whereabouts.

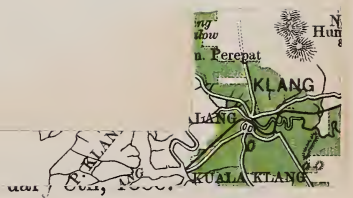
There are excellent cricket grounds at Taiping and Ipoh, which are periodically the scenes of most interesting local matches. Grounds of minor excellence, but of practical value, are to be found in most of the towns which form the headquarters of the various districts. The game is played with

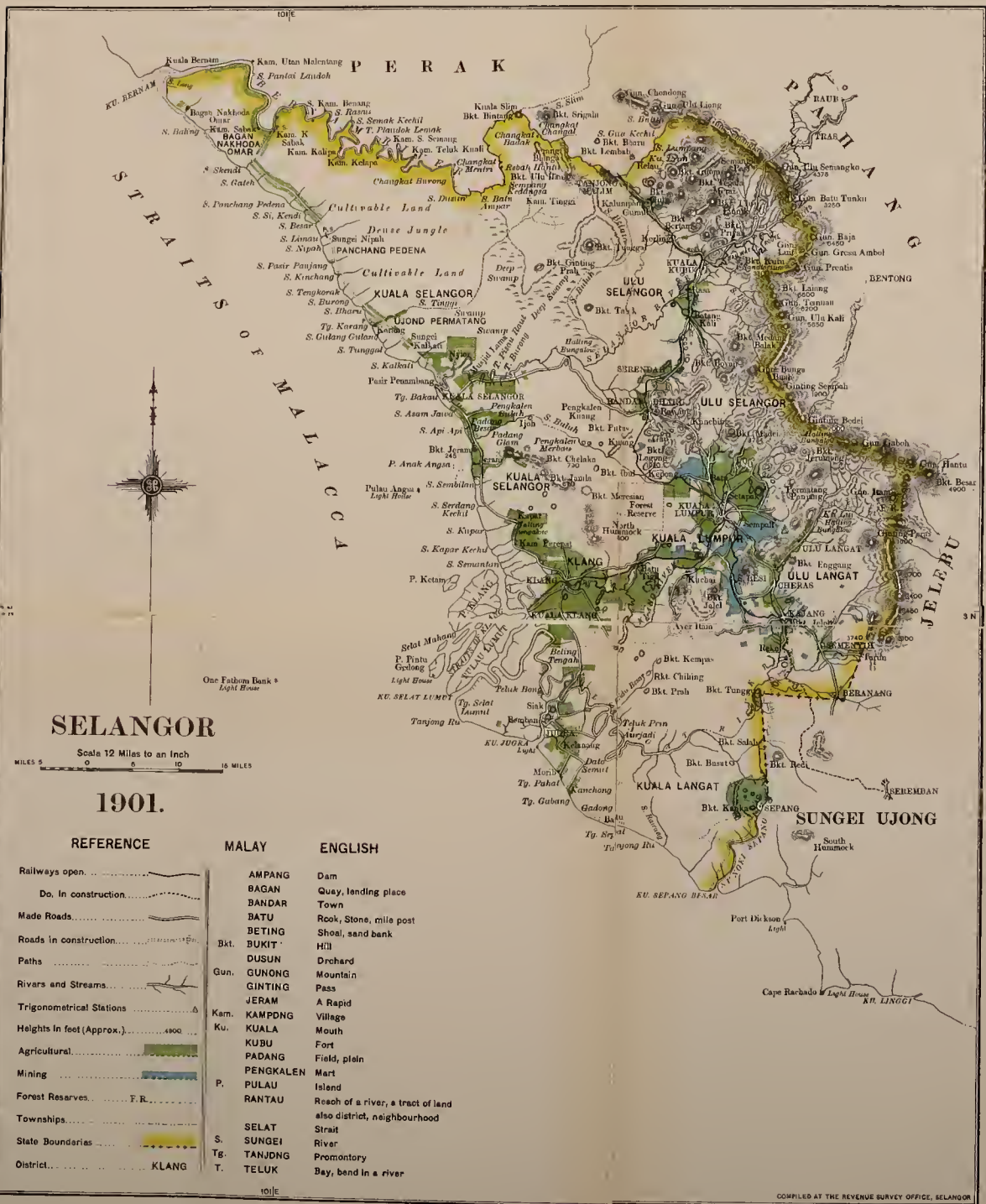
enthusiasm, in no way lessened by the heat of the mid-day sun.

Association football has taken very firm hold throughout the Peninsula, the natives being particularly enthusiastic about it, both as performers and spectators. There are very few stations in which the game may not be indulged in once or twice a week.

Golf and lawn tennis are played at most stations, and there is no part of the State in which the well-kept roads are not a temptation to the bicyclist.

Gentlemen whose inclinations do not tend towards active exercise will find the usual indoor games in the station clubs which are a general rendezvous from six to eight in the evenings.





SELANGOR

Scale 12 Miles to an Inch
 MILES 0 6 12 18

1901.

REFERENCE

- Railways open.....
- Do. In construction.....
- Made Roads.....
- Roads in construction.....
- Paths.....
- Rivers and Streams.....
- Trigonometrical Stations.....
- Heights in feet (Approx.)..... 4000
- Agricultural.....
- Mining.....
- Forest Reserves..... F. R.
- Townships.....
- State Boundaries.....
- District..... KLANG

MALAY

- AMPANG
- BAGAN
- BANDAR
- BATU
- BETING
- BUKIT
- DUSUN
- GUNUNG
- GINTING
- JERAM
- KAMPONG
- KUALA
- KUBU
- PADANG
- PENKALEN
- PULAU
- RANTAU
- SELAT
- SUNGEI
- TANJONG
- TELUK

ENGLISH

- Dam
- Quay, landing place
- Town
- Rock, Stone, mile post
- Shoal, sand bank
- Hill
- Orchard
- Mountain
- Pass
- A Rapid
- Village
- Mouth
- Fort
- Field, plain
- Mart
- Island
- Reach of a river, a tract of land also district, neighbourhood
- Strait
- River
- Premontory
- Bay, bend in a river

- | | |
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| 4. W. E. MAXWELL, C.M.G. | June 1st, 1889. |
| J. P. RODGER (acting) | April to December, 1891. |
| F. G. PENNEY (acting) | April 3rd, 1892. |
| 5. W. H. TREACHER, C.M.G. | March 17th, 1892. |
| E. W. BIRCH (acting) | May 9th, 1892, to January 10th, 1893. |
| 6. J. P. RODGER (acting) | October 7th, 1894; confirmed July, 1896. |
| H. CONWAY BELFIELD (acting) | April 5th to July 4th, 1897, and from October 4th, 1897, to April 21st, 1898. |
| J. P. RODGER (resumed appointment) | April 22nd, 1898. |
| H. CONWAY BELFIELD (acting) | April 5th, 1899, to September 28th, 1899. |
| LIEUT.-COL. F. R. S. WALKER, C.M.G. (acting) | September 29th, 1899, to January 1st, 1901. |
| H. CONWAY BELFIELD (acting) | January 2nd, 1900, to September 24th, 1901. |
| HUGH CLIFFORD, C.M.G. (acting) | September 25th, 1901. |
| 7. E. M. MEREWETHER | December 13th, 1901, to August 17th, 1902. |
| 8. H. CONWAY BELFIELD | August 18th, 1902. |

Geographical description.

Selangor, the second in importance of the four Federated Malay States, is situated on the western side of the Malay Peninsula, in the central and broadest part.

The total area is estimated at about 3,200 square miles, extending from north latitude $2^{\circ}33'52''$ to $3^{\circ}48'46''$, and from east longitude $100^{\circ}46'57''$ to $102^{\circ}0'53''$.

The coast line extends for about 125 miles along the Straits of Malacca.

Selangor is bounded on the north by Perak, on the east and south-east by Pahang and Negri Sembilan, and on the west and south-west by the Straits of Malacca.

Physical geography.

The rivers of the State are the Bernam River, which forms the boundary between Perak and Selangor, and the Selangor, Klang, and Langat Rivers. All these streams have their origin in the hilly country adjoining the main range of mountains, and pursue a westerly course until they fall into the Straits of Malacca. The mouths of all except the Klang River are rendered difficult of access from the sea by the

existence of sand bars, and entrance can only be effected by vessels of shallow draft handled by men of local experience. Once inside the bar, however, vessels can ascend for some miles. In the case of the Klang River, the islands situated at its mouth have kept the waterway clear, and vessels of ocean-going calibre can go alongside the wharves at Port Swettenham, which is situated at the mouth of the river. With the exception of the mountains on the backbone range of the Peninsula, which forms the eastern boundary of the State, there are no hills of great magnitude. The peaks on the range, however, attain in some instances an altitude of over 5,000 feet.

Geologically the surface of Selangor is made up of five *Geology.* distinct formations.

The most prominent of these is granite, which constitutes the main range of hills forming the eastern boundary of the State. This formation is also indicated by isolated outcrops, notably at Jugra and Kuala Selangor on the coast, where in each case a solitary granite hill stands out from the extended alluvial deposit. Occasional outcrops of granite also occur between the main range and the coast.

Moving westerly from the main granite hills this formation gives place to quartzite, the result of induration by the granite of older sandstones.

The remains of what was once an extensive limestone formation exist in a few limestone crags at the foot of the granite range, and in places in the inland districts beneath the alluvial granite drifts, at depths of from 1 to 100 feet, between the granite and quartzite belts. The limestone hills are generally cavernous, and in some instances the caves are of considerable size and beauty.

Lying above the quartzite are found clayslates and schists of great age, occurring extensively on low rolling hills throughout the middle third of the State.

Nearer the coast these give place to sandstones and clayslates.

The greater part of the coastal area consists of recent alluvial flats and swamps with overlying patches of peat of varying depth from 1 to 10 feet. When cleared of jungle and drained the peat is slowly converted into a rich loamy soil. In these alluvial deposits beds of crumbling bivalve shells, similar to those now occurring on the sea beach, have

been found, and also evidences of former mangrove swamps at a distance of several miles from the sea shore, and at a depth of from 3 to 10 feet, indicating former positions of the coast line.

In the tin-bearing drift in the inland districts a bed of black loamy clay is found at a depth of 10 to 20 feet, carrying fossils of leaves, twigs, and branches of trees, and appears to be of recent formation.

Other than these no fossil remains have been found in Selangor.

At the mouth of the Klang River, in sinking cylinder foundations for wharves, large pieces of well-preserved wood have been found at a depth of 100 feet.

Near the coast the banks of rivers are generally mangrove mud swamps, which at the mouth are being gradually extended seawards. At other parts the beach consists of a clean sand. In places there is evidence of an appreciable erosion of the above line where the beach is sandy.

The surface of the lower undulating country throughout the State is generally of a soft loamy nature, well adapted for agricultural purposes. Generally masses of ferruginous rock occur disseminated throughout the surface loam at a depth of about 5 to 30 feet, varying in size from gravel to masses of several tons weight. In composition it varies from coarse sandstone through argillaceous ironstone to almost pure limonite and hæmatite. In general it may be classed as laterite. It forms a very rich source of iron, but, owing to the entire absence of coal, could not be worked economically.

Climate.

What has been written on this subject in Part II., concerning Perak, may be taken as equally applicable to Selangor.

Population.

1. The total population of the State in 1891 and 1901 was as follows:—

Population.	1891.	1901.
Males... ..	67,051	136,823
Females	14,541	31,966
Total	<u>81,592</u>	<u>168,789</u>

2. The total increase in population since 1891 is 87,197 or 106·8%. This increase in males is 69,772 or 104% and in females 17,425 or 119%.

3. The increases amongst Europeans, Americans and other nationalities are as follows :—

Europeans and Americans	321
Malays and other Natives of the Archipelago	14,062
Chinese	58,754
Tamils and other Natives of India ...	13,255
Eurasians	413
Other Nationalities	392

4. The following table gives the figures of comparison with the Census of 1891 :—

Nationality.	1891.	1902.	Increase per cent.
Europeans and Americans ...	190	511	168·9
Malays and other Natives of the Archipelago ...	26,578	40,640	52·9
Chinese	50,844	109,598	115·5
Tamils and other Natives of India	3,592	16,847	369
Eurasians	167	580	247·3
Other Nationalities	221	613	177·3

The increases amongst the European and Eurasian population are worthy of comment in that they point to the great prosperity of the State in the last ten years, and in view of that prosperity they are by no means abnormal.

Amongst the two great immigrant races enormous increases are noticeable. Tamils have increased fourfold and the Chinese have doubled themselves, and this is, in each case, due to the balance of immigration over emigration, for the few children of these two races who have been born in the State are comparatively negligible.

During the past ten years the cultivation of coffee, rubber, etc., has greatly increased and caused an increased demand for Tamil labour and the extension of the railway system has also had a great influence on Tamil immigration.

Klang was one of the nine States, or Negri Sembilan, a confederation of little settlements formed by Sumatra Malays who intermarried with the aborigines. The Sakei element is, to this day, strong in this part of the Peninsula. The chief of Klang was called the To'Ungku Klang, and appears to have been independent until the Bugis established themselves at the mouth of the Selangor River in the beginning of the 18th century. Since then, Klang has gradually been absorbed in *History.*

the State of Selangor, under the Chiefs of Bugis origin who created a Sultanate there.

(Extract from Resident's Report for 1889.)

“It is related in native chronicles that Upu Tanderi Burong, a Bugis Raja in the Island of Celebes (the third son of the first Bugis Raja who embraced Mohammedanism) had five sons:—

“(1).—Daing Perani, from whom (by his marriage in Siantan) the reigning family of Siak in Sumatra are descended. He also married princesses of the reigning Malay families in Johore, Selangor, and Kedah.

“(2).—Daing Menimbun, from whom the Rajas of Pontianak, Matan and Brunei are descended.

“(3).—Kalana Faya Putra *alias* Daing Merewah, first Yan-di-per-Tuan Muda of Riouw. He married a daughter of Tumonggong Abdul Jalil, of Johore. His son, Klana Inche Unak, married in Selangor, and his daughter became the wife of her cousin Daing Kamoja, the son of Daing Perani (No. 1), and third Yang-di-per-Tuan Muda of Riouw.

“(4).—Daing Chela or Daing Palai second Yang-di-per-Tuan Muda of Riouw. He married a daughter of Sultan Abdul Jalil (sister of Sultan Suleiman Badr-alam Shah) of Johore, and from the female issue of this marriage, Sultan Hussein of Singapore (1819) was descended. One of the sons of Daing Chela, Raja Lumu, became the first Yang-di-per-Tuan of Selangor. From him the reigning family of Selangor is descended. Another, Raja Haji, was the fourth Yang-di-per-Tuan Muda of Riouw, and fell in battle at Malacca, fighting against the Dutch in 1784.

“(5).—Diang Kamasi married the sister of the Sultan of Sambas (Borneo), and his descendants have remained there.

“Of these five Chiefs, Nos. 1, 3, and 4, established themselves in Selangor about 1718, and Raja Lumu, the son of No. 4, was left there as ruler of the country. The principal head-quarters of the Bugis was Riouw, and about this time they made piratical raids upon all the Western Malay States, one after another. Raja Lumu of Selangor, on the occasion of a visit to Perak, about 1743, was formally invested by the Sultan of Perak (Mahmud Shah) with the dignity of Sultan,

and took the title of Sultan Salaeddin Shah. His successor Sultan Ibrahim (in 1783) joined with his brother Raja Haji, the Yang-di-per-Tuan Muda of Riouw, in an attack upon the Dutch in Malacca. They were repulsed, and Raja Haji was killed. The Dutch under Admiral Van Braam then attacked Selangor and the Sultan fled inland and escaped to Pahang.

“Ibrahim, aided by the Dato Bandahara of Pahang, reconquered his fort from the Dutch in 1785, but the latter immediately blockaded Kwala Selangor with two ships-of-war, and after this blockade had lasted more than a year, the Sultan accepted a treaty by which he acknowledged their sovereignty and agreed to hold his kingdom of them.

“British political relations with Selangor commenced in 1818, when a commercial treaty was concluded with this State by a British Commissioner, Mr. Cracroft, on behalf of the Governor of Penang, and this was followed by ‘an agreement of peace and friendship’ concluded with Sultan Ibrahim Shah, who was still reigning.

“Sultan Mohammed succeeded Sultan Ibrahim about the year 1826, and reigned until 1856. He was succeeded in the following year by Sultan Abdul Samad, the present Ruler.

“Sultan Abdul Samad, is the son of Raja Dolah, a younger brother of Sultan Mohammed, and, at the time of the death of the latter, held the rank and office of Tunku Panglima Besar (Commander-in-Chief). His election to the sovereignty was chiefly the work of Raja Juma’at, of Lukut, then a flourishing mining settlement, now decayed and abandoned, who feared the exactions of the late Sultan’s family. Sultan Mohammed had no less than 19 children, many of them illegitimate, and one of them, Raja Mahmud (now Penghulu of Ulu Semonieh, a village in Selangor), had been recognised as Raja Muda in his father’s lifetime. He was only eight years old when Sultan Mohammed died. There were other claimants in the persons of various nephews of the late Sultan, sons of Raja Usup and Raja Abdurrahman, who thought their rights stronger than those of the sons of Raja Dolah. But the influence of Raja Juma’at prevented a war of succession.

“The strong Bugis element in Selangor earned for the people of the State, in early days, the reputation of being the most daring and formidable of all the Malays on the West coast of the Peninsula. Their fleets were successful in Perak and Kedah (Alor Star in Kedah was taken and burned in

1770), and in a work published fifty years ago, Selangor is quaintly described as follows:—‘of all the Malayan States on the Peninsula, it labours under the heaviest *mala fama* on the score of piracy, man-stealing, manslaughter, and similar peccadilloes of the code of Malayan morals.’

“Of the Malay population of the State at the present date there is little to say, except to emphasize the contrast noted by an eminent authority between ‘the frank simplicity and humour, harmonising well with a certain grave dignified self-possession and genuine politeness, which characterise the manner of the Malays of Kedah, and the sinister and impudent bearing of the maritime and semi-piratical Malay of the South.’

“There is now a large population of settlers from Sumatra and Java, who are influencing materially the character of the Mohammedan population.”

The series of struggles between various native chiefs which brought the State under the more immediate notice of the British Government at Singapore, commenced in the year 1867, when Tunku Ziya-ed-Din, a brother of the Sultan of Kedah, married a daughter of the Sultan of Selangor, and was appointed by him to be his viceroy. The authority of Tunku Ziya-ed-Din was not recognised by Raja Mahdi, a grandson of the late Sultan of Selangor, and a fierce contest was waged between these two Chiefs from 1867 to 1873. The Sultan was powerless to put an end to this prolonged strife, in which not only Malay Rajas, but even Chinese miners took an active part, and the struggle was carried on, with varying success, until 1873, when the Bendahara of Pahang, at the instance of the Government of the Straits Settlements, sent assistance to Tunku Ziya-ed-Din, by means of which he was enabled to obtain a complete victory over the rebels, and at least a temporary cessation of hostilities.

The occurrence of an atrocious case of piracy off the Langat River in the following year led to the direct intervention of the British Government, and shortly afterwards, at the request of the Sultan, Sir Andrew Clarke, then Governor of the Straits Settlements, sent Mr. J. Guthrie Davidson, first Resident of Selangor, and Mr. F. A. Swettenham (the present Governor of the Straits Settlements and High Commissioner for the Federated Malay States), an officer of the Straits Settlements, to assist the Sultan in the administration of the Government, since which time (1874) the peace of the State has not been disturbed, and its prosperity has steadily increased.

The total revenue for the years 1899 and 1900 amounted to \$6,692,330 and \$6,303,165 respectively. The principal sources of revenue being Customs, Excise, Railways and Land. The expenditure for the same periods was \$3,414,551 and \$4,944,160, the principal items being Establishments, Public Works and Railways. *Revenue and expenditure*

The balance to the credit of the State on January 1st, 1901, amounted to \$6,663,316, including a loan of \$3,000,000 to the State of Pahang.

The following trade values were recorded in 1899 and 1900 :—

		1899.		1900.
		\$		\$
Exports	... ..	20,615,597		21,798,443
Imports	... ..	17,719,773		18,406,570

The chief exports in 1900, exclusive of tin, of which mention is made elsewhere, were :—

				\$
Coffee	... ..			689,309
Gambier	... ..			50,150
Pepper	... ..			89,468
Blachan and Salt Fish	... ..			154,887

The chief imports were :—

				\$
Opium	... ..			1,680,910
Rice	... ..			3,527,206
Live Stock	... ..			492,722
Salt Fish	... ..			282,138
Specie and Notes	... ..			4,833,830

The only import duties charged are those upon opium and spirituous liquors.

The export duty on tin varies from 10·94 per cent. when tin is at \$96 per bhara to 13·33 per cent. with tin at \$210 per bhara. This duty is payable on alluvial tin only, the duty on lode tin being fixed at half the above rates in consideration of the greater expense in working a lode.

The duty is reckoned on the price telegraphed daily from Singapore—

One pikul=100 catties=133½ lbs.
One bhara=3 pikuls=400 lbs.

Tin is usually exported from Selangor to the smelting works in Singapore in the form of unsmelted tin ore, and, for the purposes of calculating the duty, is considered to contain 68 per cent. of tin.

The export duty upon other natural products, such as timber, rattans, gutta, and ivory is fixed at 10 per cent. *ad valorem*. Upon cultivated products, such as coffee, pepper, copra, sugar, tapioca, and rubber, the maximum duty charged is $2\frac{1}{2}$ per cent. *ad valorem*.

It varies with the market price, and is usually less than this figure.

Every encouragement is offered to planters, and the greatest care is taken to prevent the export duty weighing too heavily. No duty is charged upon coffee when the market price is less than \$19 per pikul.

Agriculture.

As illustrating the increase in production of Liberian coffee during the last seven years, the following export returns may be of interest :—

1894.	2,588	pikul (1 pikul=133 lbs.)
1895.	4,532	”
1896.	7,046	”
1897.	12,491	”
1898.	22,948	”
1899.	26,407	”
1900.	34,295	”

Unhappily, however, this enormous increase in production does not mean in any way proportionate prosperity. The over production of the Brazils has brought down the price of coffee to a point which, except on a few favoured estates, renders its profitable cultivation almost an impossibility. Planters have, therefore, almost without exception, introduced at varying distances apart, coconuts and Para rubber, the cultivation of the former, however, being confined almost entirely to the rich alluvial flats of the coast district. Recognizing the difficulties under which planters are now labouring, the Government, who have the right to exact an export duty of $2\frac{1}{2}$ per cent. *ad valorem* on all cultivated produce, waive their claim in the case of coffee to this tribute, if the price be less than \$19 per pikul; in this and many kindred ways planters may always count upon the support and sympathy of the Government.

The systematic cultivation of coconuts by Europeans has only of recent years been taken up, and there is a growing feeling that with the care and attention which the white man bestows upon his estate, existing statistics will ere long be shown to be by no means illustrative of the capabilities of the Federated Malay States under the most favourable conditions. There are numbers of instances of coconuts commencing to blossom when about three years old, and of actually bearing fruit before they are four.

Para Rubber (Hevea Braziliensis).—Several millions of these trees have been planted in the States during the last three years, when the growing demand for rubber, and the success which had attended the planting of a few specimens some ten years ago, began to attract the attention of planters. Experimental tapping of these older trees has proved satisfactory in the extreme; as much as $12\frac{1}{2}$ lbs. of rubber, worth from 3s. 6d. to 4s. per lb., has been extracted in two years from a thirteen year old tree in the Penang gardens, without any injury resulting, although this particular tree is admittedly a poor specimen and growing on wretched soil.

Gutta Rambong (Ficus Elastica).—This rubber, which is indigenous to various parts of the Peninsula, though of slightly less value than Para, has also been largely planted, and a recent experiment in Perak showed that two 19 year old trees, upon which no particular attention had ever been bestowed, were capable of yielding 25 lbs. of dry marketable rubber each, at a single tapping, and without by any means exhausting the trees themselves.

So far it is to coconuts and the two varieties of rubber that planters look to reimburse them for their heavy outlay on coffee, but although statistics show that the world's stocks of coffee largely exceed demand at present, there are many who think that the largely increased sterling value of the milrai, in Brazil, must soon bring about a reaction, when the cycle of prosperity will again set in; coffee is therefore being for the most part as carefully cultivated still as it was in the days when the enterprise was full of promise.

As a means of reducing expenditure in opening coconut and rubber properties, planters are in many cases utilizing the land between their young trees by putting in various subsidiary cultivations such as bananas, the Chinese yam (for which there is always a great demand), vegetables, &c. The enterprise and industry of the Chinaman who is always ready to take up anything which promises to pay, is now of

great value to the planter who desires to make the most of his money, for he is able to sublet his land at prices ranging from \$3 to \$10 per acre per annum, whilst upon the Chinaman devolves the duty of keeping the estate free of weeds, and the drains in good working order. With the possibility of such an arrangement in view, the methodical planter will take care that as much of the dead wood remaining on his ground as possible after the burn is piled and burnt again before he commences to lay out his estate, the ashes of course greatly enriching the ground, and the chances of white ants and coconut beetles, which breed in rotting timber, and are the planters' most deadly enemies, being thus at the same time reduced to a minimum.

Mining.

Large quantities of tin continue to be exported annually from Selangor.

The mining revenue for 1900 amounted to \$2,806,928 as compared with \$2,556,765 for 1899.

There are now some 70,000 Chinese employed exclusively in tin mining, each of whom wins an average of 5 cwt. of tin per annum, of the gross value of \$292. After various deductions for taxation, commission, &c., the net earnings amount to \$160 per coolie per annum. The amount and value of tin exported during the last three years is as under:—

	1898.	1899.	1900.
Amount	16,350 tons	15,000 tons	15,900 tons
Value	\$11,916,418	\$17,950,866	\$19,434,562
Average value per Ton	\$724	\$1,178	\$1,246

The greatest amount exported was in the year 1896, amounting to 20,700 tons, valued at \$10,824,077, the average price of tin being then only \$555 per ton. The average tin duty for 1900 amounted to 13·47 per cent. *ad valorem*.

The tin-ore is found in the form of cassiterite, or oxide of tin.

It occurs in every conceivable formation, in the stiffest of clays to the lightest of sands, from the roots of the grass to depths of 250 feet, on the tops of mountains, and in the lowest valleys. There are two general methods employed for



THE GOVERNMENT OFFICES, KUALA LUMPUR.

the winning of the tin-ore. When the tin-bearing strata occur at any depth up to about 30 feet in the flat valleys it is worked open cast, the whole of the over-burden having to be removed before the wash dirt is reached.

At greater depths than 30 feet, except when the tin-bearing strata are very regular, the general method employed is to sink shafts, and block out the wash dirt.

There are twelve post offices in Selangor, distributed among the towns and principal villages of the State. At all of these ordinary postal business can be transacted, and money orders are obtainable at most of them. *Posts and Telegraphs.*

The telegraph system extends all over the State. There are 515 miles of wire.

Telephones are worked over 196 miles of line, and a telephone exchange is in operation in Kuala Lumpur, which is now to be extended to some of the more populous country districts.

Selangor possesses 570 miles of roads and bridle-paths, of which 257 miles are first-class metalled roads. The State is connected with the Capital towns of Pahang and the Negri Sembilan, and with the Perak boundary at Tanjong Malim, by roads respectively 120 miles, 57 miles, and 55 miles in length. The former of these roads passes over the main range of the Peninsula at a height of 2,700 feet. *Roads.*

The metalled roads have been constructed at an average cost of \$4,600 per mile, while the annual maintenance amounts to some \$800 per mile.

The principal public buildings of the State are situated in the Capital, Kuala Lumpur, and form striking features in the views of the town. The Government Offices are contained in an imposing building, erected in the style of the Arabesque Renaissance, with a frontage of 480 feet facing the public recreation ground. The Clock Tower in the centre is 130 feet high. Other important buildings are the Official Residence of the Resident-General, the Prison, and the Railway Station and Offices. *Buildings.*

The town of Kuala Lumpur is supplied with water from an impounding reservoir seven miles distant, and estimated to *Waterworks.*

be capable of supplying the wants of twenty-five thousand people. Another set of waterworks is being constructed for the purpose of supplying the town of Klang and the harbour at Port Swettenham.

Railways.

There are 97 miles of open railway line, and 29 miles under construction. The open system connects with Perak at Tanjong Malim on the Bernam River, and passing southwards through Kuala Lumpur, terminates at present at Kajang, whence 29 miles of extension are now being constructed to Seremban, the capital town of the Negri Sembilan.

A branch line 27 miles in length connects Kuala Lumpur with Port Swettenham.

The depot and goods sheds at Kuala Lumpur are large and commodious, and are lighted throughout with electric light.

Education.

Selangor possesses 41 vernacular schools and five English schools, the chief of which is the Victoria Institution at Kuala Lumpur with a daily attendance of 400 boys. The Institution, possessing a staff of qualified English Masters, offers every opportunity for acquiring a sound commercial education.

It is supported by an annual Government Grant and a contribution from the rates.

There are two English girls' schools in Kuala Lumpur founded by the enterprise of the Roman Catholic and Methodist Missions. No charge is made at the Vernacular Schools, but attendance is compulsory for any boy living within two miles. At the English Schools a small monthly fee is charged.

A Settlement exclusively for Malays has been started in Kuala Lumpur, with the object of collecting in one place an exclusively Malay population and to provide technical education in wood-carving, silver work, weaving, tailoring and agriculture.

There are now about 50 families, to each of which a free grant of half an acre has been given, but no other assistance.

The Settlement has a large recreation ground, a mosque, houses for the technical education classes and a boarding house for Malay boys attending the Victoria Institution.

Vernacular Schools for boys and girls are in course of construction within the grounds of the Settlement.



VIEW IN THE PUBLIC GARDENS, KUALA LUMPUR.

There are five surgeons with British qualifications, assisted *Hospitals.* by 53 apothecaries and dressers, in charge of the 17 hospitals, providing accommodation for 1,800 patients. All coolies of every nationality are treated free of charge, nearly two-thirds of the patients being Chinese mining coolies. 17,963 patients were treated during 1900, the death rate being 13·46 per cent., or approximately 46 per thousand of the total population.

There is a European ward in Kuala Lumpur, containing six beds in charge of two certificated nurses; a charge of \$3 per diem is made.

A Bungalow has been erected at Bukit Kutu, nine miles *Sanitaria.* from Kuala Kubu at an elevation of 3,200 feet.

It is fully furnished and can be hired for specified periods, at a moderate charge.

There is also a Rest House at the highest point of the pass on the road to Pahang (2,700 feet) and two furnished Bungalows at the hot springs at Dusun Tua, at all of which a beneficial change may be enjoyed at moderate cost.

Each district possesses a Sanitary Board, composed of *Conservancy.* official and non-official members, to whom the superintendence of waterworks, streets, lighting, scavenging, drainage, and collection of rates and taxes is entrusted; careful attention is paid to the sanitary arrangements of all the principal towns.

The State prison, situated at Kuala Lumpur, has been *Prisons.* constructed upon the most modern principles, and is supervised by a staff of experienced European officers.

Accommodation for 540 prisoners is provided in separate cells, and the hospital within the prison walls will contain 40 patients.

The town of Kuala Lumpur possesses a most picturesque *Public gardens* public garden, laid out with much taste. Its area exceeds 170 acres, and it is maintained by Government at a cost of about five thousand dollars per annum.

English flowers and shrubs, as well as the products of tropical and sub-tropical countries other than the Malay Peninsula, are to be seen in the gardens, in addition to a variety of indigenous plants.

Selangor is divided into six districts, as follows :—

(i.) Kuala Lumpur, with the town of the same name as its principal centre, and the capital of the State. This town is the largest in the Federated Malay States, and is the head-quarters of the Administration of the States as well as of that of Selangor. Practically, the whole of the commercial industry of this State is centralised in Kuala Lumpur, as most of the firms which do business in other districts have located their principal offices in the capital.

This district occupies a conveniently central position in the State, the other districts being grouped round it. It contains within its area a considerable number of the more important mining fields, and also of the agricultural estates opened by European planters.

The mining centre of Sungei Besi is the only other important town in the district.

(ii.) Klang, lying to the west of Kuala Lumpur, occupies the area between that district and the sea. Its head-quarters are situated at the town of the same name, which was, until recently, the principal port of the State. Its place as a harbour has now been taken by Port Swettenham, situated in the same district, but at the mouth of the river, where wharves have recently been erected at considerable cost, which are capable of accommodating ocean-going steamers. There is no mining in Klang worth mentioning, but a large proportion of the district is occupied by the coffee and rubber estates of European owners.

(iii.) Ulu Selangor, situated to the north of Kuala Lumpur, lies between that district and the Perak and Pahang boundaries. It ranks in importance next to the central district, and is the principal centre of the tin mining industry of the State. Its principal towns are Kuala Kubu, the head-quarters of the local administration, Serendah, Rasa and Rawang. These are all busy mining towns.

(iv.) Ulu Langat embraces the country to the south of the central district, and extends to the boundaries of the Negri Sembilan and Pahang. It is also a mining district of some importance. Local head-quarters are situated at the town of Kajang.

(v.) Kuala Langat is a coast district, occupying the southern portion of the coast line of the State. There is no mining done here, the principal industries being agriculture and fisheries. Head-quarters are at Jugra, on the

Langat River, which has been for many years past the place of residence of His Highness the Sultan.

(vi.) Kuala Selangor is an extensive district on the northern portion of the Selangor coast, lying between the district of Klang and the Bernam River. It is only being partially opened up at present, and local industry is, as in Kuala Langat, confined to agriculture and fishing. There are very extensive areas of swampy land, at present almost valueless, and capable of improvement only by drainage operations of considerable magnitude.

Headquarters are situated near the mouth of the Selangor river. A European company has a coconut oil mill established here, which is doing much to promote the planting of this excellent palm in this and the neighbouring districts.

From the town of Kuala Lumpur excellent roads radiate into all the districts, supplemented in most cases by the railway, so that the facilities for commercial intercourse between the capital and all parts of the country leave little to be desired.

The sports obtainable in Selangor are generally similar to those which have been described in Part II., but there is no snipe shooting here to compare with that obtainable in Perak. Other forms of recreation are, however, as eagerly and successfully pursued in Selangor as in the northern State. *Sport.*

PART IV.

NEGRI SEMBILAN.

His Highness The Yang-di-per-Tuan.

RAJA MOHAMED, C.M.G., BIN ALMERHOM YAM TUAN ARUTAH.

<i>British Resident</i>	. . .	W. EGERTON, C.M.G.
<i>Senior Magistrate</i>	. . .	F. DUBERLEY.
<i>State Auditor</i>	. . .	W. P. THORPE.
<i>Superintendent of Public Works</i>		H. CALDICOTT, A.M.I.C.E.

THE COUNCIL OF STATE.

His Highness the YANG-DI-PER-TUAN : *President.*

The British Resident : W. EGERTON, C.M.G.

Tunku Muda Chik :

The Datoh Klana of Sungei Ujong :

The Datoh Penghulu of Jelebu :

The Datoh Penghulu of Johol :

The Datoh Penghulu of Rembau :

The Datoh Bandar of Sungei Ujong :

Tunku Dewa, Tampin :

The Datoh Muda, Linggi :

Capitan China Lee Sam :

Towkay Lam Yong :

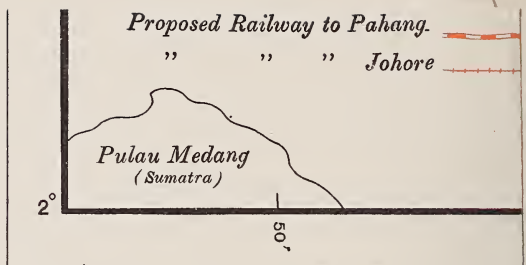
BRITISH RESIDENTS OF SUNGEI UJONG.

1. CAPTAIN P. J. MURRAY, R.N. ... 1874 to 1881.
2. W. F. B. PAUL... .. 1881 to 1893.

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rice fields in the valleys are



1. CAPTAIN F. J. MURRAY, R.N. ... 1874 to 1881.
2. W. F. B. PAUL... ... 1881 to 1893.

BRITISH RESIDENTS OF THE NEGRI SEMBILAN.

1. HON. MARTIN LISTER January 1st, 1895.
2. ERNEST WOODFORD BIRCH June 4th, 1897, to April 7th, 1901.
3. HENRY CONWAY BELFIELD April 8th, 1901, to August 17th, 1902.
4. WALTER EGERTON, C.M.G. August 1902.

The nine small States, which together form the territory known as the Negri Sembilan, comprise an area of about 2,600 square miles extending from longitude $101^{\circ} 50'$ E. to longitude $102^{\circ} 45'$ E., and from latitude $2^{\circ} 24'$ N. to latitude $3^{\circ} 11'$ N. *Geographical description.*

It is bounded on the north and north-west by the States of Selangor and Pahang, on the east by Johore, and on the south by the settlement of Malacca. On the south-west coast line on the straits of Malacca is thirty miles in length.

The country is generally undulating and broken by small hills. The principal mountain range starts in the Jelebu district and runs in a southerly direction for 20 miles to Gunong Angsi (3,200 feet), thence S.E., and ends in Gunong Tampin (1,800 feet) near the Malacca boundary. The highest point of the range is Gunong Resan, or Telapang Burok a little under 4,000 feet. *Physical Geography.*

The Muar River, which is augmented by the Jelei, Jempol, Johol, Gemencheh, and Gemas Rivers, flows through the town of Kwala Pilah, and thence through the territory of Muar into the Straits of Malacca. The distance from Kwala Pilah to the mouth is 120 miles, most of which is navigable for small boats.

There are several smaller rivers, *e.g.*, the Sungei Linggi, Sungei Sepang, and Sungei Lukut; these all flow into the Straits of Malacca and are navigable for a few miles for small vessels, as is also the Sungei Rembau, a confluent of the Sungei Linggi.

The watershed in the Jelebu district divides the State into two bases; the rivers rising on the South side flow into the Straits of Malacca, while the Sungei Triang rises on the North side, and after being augmented by several small streams (Kenaboi, Pertang, Jeram), flows into the Pahang River and so into the China Sea on the East side of the Peninsula. Besides these mentioned there are numerous small streams by which the rice fields in the valleys are irrigated.

Population.

1. The total population of the State in 1891 and 1901 was as follows :—

Population.			1891.	1901.
Males	...	...	40,561	64,565
Females	...	...	24,658	31,463
Total			65,219	96,028

2. The total increase since 1891 is 30,809 or 47·24 per cent. This increase in males is 24,004 or 59·18 per cent., and in females 6,805 or 27·6 per cent.

3. The total increases amongst Europeans, Americans and other nationalities are as follows :—

Europeans, Americans	...	...	81
Malays and other Natives of the Archipelago	...	...	8,455
Chinese	...	...	17,540
Tamils and other Natives of India	...	...	4,409
Eurasians	...	...	241
Other Nationalities...	...	...	83

4. The following table gives the figures of comparison with the Census of 1891 :—

Nationality.	1891.	1901.	Increase per cent.
Europeans and Americans	61	142	132·79
Malays and other Natives of the Archipelago	48,480	56,935	17·44
Chinese	15,391	32,931	113·96
Tamils and other Natives of India	1,117	5,526	394·72
Eurasians	68	309	354·41
Other Nationalities	102	185	81·38

History.

The territory now known as the Negri Sembilan was originally peopled by the descent of numbers of Sakais from the hills, and about the year 1773 a Prince of the true Menangkabau blood was obtained to rule over them with the title of Yang-di-per-Tuan of Sri Menanti. Each State still retained its own Datoh or hereditary Chief, but referred to the Yam Tuan in all matters of importance.

The nine States originally consisted of Klang, Sungei Ujong, Jelebu, Sri Menanti, Rembau, Johol, Jempol, Inas and Gemenchah.

Klang was the first to leave, being incorporated into the State of Selangor, and Sungei Ujong was (1874) separated from the others, Jelebu joining Sungei Ujong shortly afterwards.

In 1874 the first Resident was appointed to Sungei Ujong ; this appointment followed a series of disturbances.

At the close of 1875 there were further disturbances, during which the Residency was menaced, but since that date there has been no further attempt at a rising or inter-state fighting.

In 1883 British protection was extended to Rembau, a district lying along the Malacca boundary, to Johol in 1884, and to Sri Menanti in 1885. In 1886 a Superintendent was appointed to administer Rembau, Tampin, Johol and Sri Menanti, together with the small States which went with Johol. In 1889 this Officer's title was changed to Resident of the Negri Sembilan, in distinction to the Resident of Sungei Ujong, where a Residency had already been established. In 1895 the two Residencies were combined under an agreement of Confederation between the various States ; by this agreement the independence of the ruler of each State is guaranteed in respect of the others. The Yang-di-per-Tuan of Sri Menanti is, however, regarded as the head of the Confederation and was finally installed in this position in May, 1898.

The text of the Agreement of Confederation is as follows :—

“Agreement between the Governor of the Straits Settlements, acting on behalf of Her Majesty's Government, and the Rulers of certain Malay States hereinafter called the Negri Sembilan.

“ In confirmation of various previous written and unwritten agreements the Yam Tuan Besar of Sri Menanti, together with the Ruler of Johol, the Rulers of Sungei Ujong, Jelebu, Rembau and Tampin, hereby severally place themselves and their States under the protection of the British Government.

“ 2. The above-mentioned Rulers of the respective States hereby agree to constitute their countries into a Confederation of States to be known as the Negri Sembilan, and they desire that they may have the assistance of a British Resident in the administration of the Government of the said Confederation, and they undertake to follow his advice in all matters of administration other than those touching the Mohammedan religion.

“It is to be understood that such arrangement as is now agreed upon does not imply that any one Ruler shall exercise any other power or authority in respect of any State than that which he now possesses.

“In witness whereof the said Governor, Lieutenant-Colonel Sir CHARLES BULLEN HUGH MITCHELL, G.C.M.G., and the said Yam Tuan Besar of Sri Menanti, together with the Ruler of Johol and the Rulers of Sungei Ujong, Jelebu, Rembau and Tampin, have signed this Agreement dated the eighth day of August the year of Christ One thousand eight hundred and ninety-five, and answering to the sixteenth day of Safar the year of the Hedjira One thousand three hundred and twelve.”

Revenue and Expenditure.

The Revenue of the State in 1900 amounted to \$1,251,366, of this \$125,169 was derived from the various items included under Land Revenue, while \$803,451 represents customs. The latter item of Revenue is derived chiefly from the duty on export of tin and tin-ore.

The Revenue figures for 1900 compared with those for the previous three years, show a remarkable increase:—

1897	\$572,546.
1898	\$701,334.
1899	\$1,085,015.
1900	\$1,251,366.

The total expenditure for 1900 amounted to \$1,009,318, as compared with \$851,704 for 1899.

Trade.

Exports in 1900 amounted to \$7,048,988, of which tin and tin-ore accounts for \$5,338,424, and tapioca \$946,507.

Imports were of the value of \$4,281,457, foodstuffs amounting to \$1,346,623, (rice \$794,613), and opium \$411,184.

Agriculture.

The main agricultural product of the State is rice. The rice fields, especially in parts of the Kwala Pilah district and in Rembau in the Tampin district, are extensive and fertile. Rice cultivation is entirely in the hands of the Malays, who do not aim at anything beyond the supply of their own needs. There is little trade in home-grown rice, large quantities being imported to feed the Chinese and other foreigners. Simultaneous transplanting of the young padi from the nurseries to the fields is insisted on by Government, as a safeguard against the destructive attacks of rats and other vermin; breaches of the rules controlling padi

planting are punishable by fine. In the Kwala Pilah district alone it is estimated that there are 16,500 acres under padi cultivation.

Tapioca planting has during the last few years been a profitable industry, owing to the high prices ruling. In 1900 126,201 pikuls were exported, the value of which is estimated at \$946,507. The industry is in the hands of the Chinese and is carried on in Kwala Pilah, Tampin and Coast districts. Most of the planters hold their land under permits by which they are empowered to take three crops, paying duty on exportation in lieu of rent. New land, now given out, will carry a rent per acre and no duty will be charged on exportation. The soil is soon exhausted by tapioca, and after three crops have been taken is practically valueless for several years: it is then abandoned by owners of permits. To prevent this undesirable result in the future it is probable that Government will insist on some permanent form of cultivation being introduced simultaneously with the planting of the tapioca.

There is now a considerable acreage under coffee: most of the estates are in bearing. The large estates are all owned or managed by Europeans, and are situated in the Coast, Seremban and Tampin districts. The labour consists mainly of Tamils from Southern India, but Chinese, Malays and Javanese are also employed.

A coffee-curing factory, the property of a syndicate, has been put up at the Port Dickson terminus of the Sungei Ujong Railway. Here the all important process of curing is carefully carried out. The interests of the planters are watched by the Negeri Sembilan Planters Association, which meets periodically for the discussion of questions affecting the industry.

The export of coffee in 1900 was 6,207 pikuls; this amount is valued at \$117,944, from which it will be seen that the prices ruling during that year were very low.

The climate and soil are well suited for the cultivation of Para Rubber (*Hevea Braziliensis*). There are over 2,000 acres at present under cultivation, the age of the trees varying from 1 to 13 years. The oldest trees (12 to 13 years old) have given yields of from 10 to 15 lbs. per tree per annum of pure coagulated rubber: these trees are also giving large crops of seed annually.

Getah Rambong (*Ficus Elastica*) is also easily grown from cuttings and springs up quickly. There are about 200 acres

under cultivation in the State, age from 1 to 3 years. There are as yet no particulars to be had as to yields.

Gutta Percha (*Getah Taban*) the native name for the several varieties of *Dichopsis* from which Gutta is extracted, is the most valuable getah known here and is indigenous. The trees have been sadly wasted by Malays and Sakais whose method of obtaining the getah is by cutting down the whole tree. Most of the crop-yielding trees have been thus destroyed, but many young trees from 1 to 6 years old are growing up in their place. Measures are now being taken to prevent further waste of this valuable product.

Mining.

The export of tin-ore in 1900 amounted to pikuls 57,407, and of smelted tin to pikuls 14,844, the total value being estimated at \$5,338,424.

Mining land alienated in 1900 amounted to acres 3,670, the total extent of land alienated for mining in the State being acres 15,630.

The mining is almost entirely in the hands of the Chinese, but of recent years several European companies have commenced operations.

In Jelebu there are two European companies which have been established for some years. The Jelebu Mining and Trading Company are the owners of the Rhin lode mine near Kwala Klawang. This mine has been considerably developed during recent years, and crushing stamps and other machinery have been erected. The Jelebu Mining Company, with head-quarters also in Kwala Klawang, does an extensive business both in mining and in buying tin-ore from small mines. In Seremban there is a branch office of the Straits Trading Company, through which passes most of the ore produced in the State. There is also in this district one European company (The Seremban Tin Mining Company) working on the hydraulic system; two other companies will shortly start operations on the same system.

In Kwala Pilah district there has been of recent years great activity in mining, and a considerable area of new land has been exploited.

*Posts and
Telegraphs.*

Ample facilities for postal and telegraphic communication are provided throughout the State, offices being open for the dispatch of such business in every district town.

Roads.

The State is well provided with cart roads connecting the centres of each district with head-quarters and with each

other. These metalled roads are supplemented in the inland districts by good bridle-paths connecting the outlying portions of the districts.

Considerable extension of the road system is now being undertaken, and substantial improvement is being made to those portions of existing roads which are in need of amelioration.

The public buildings of the Negri Sembilan are of less ambitious proportions than those in the larger and more opulent States of the Federation. There are none which demand any special mention. *Buildings.*

There are at present only 25 miles of open railway in the State, viz.: the line between Seremban and Port Dickson opened in 1891. The railway is the property of the Sungei Ujong Railway Company Limited, and is worked by them under a guarantee from the Government. The station at Port Dickson adjoins the landing stage. Four passenger trains (two up, and two down), are run daily. *Railways.*

Between Seremban and Kajang (the present terminus of the Selangor Government Railway) a line is now in course of construction, which will shortly be open for traffic. When this extension is completed Seremban will be connected by rail with Selangor and later with Perak and Province Wellesley.

Education is carried on upon the same lines as in the other States. There are twenty-five vernacular schools, attendance at which is compulsory for boys residing within a certain radius from the school house. *Education.*

In Seremban an English school under the management of the Roman Catholic Mission receives a salary grant from the Government. The teaching at this school is purely secular.

Hospitals under the management of qualified Officers have been established at the head-quarters of each district. They are all controlled by the State Surgeon in Seremban. *Hospitals.*

Although there is not at present any hill resort at a high elevation in the Negri Sembilan, the Government has erected an excellent and commodious bungalow upon the Coast at Port Dickson, close to the sea beach, which is open to the *Sanitaria.*

European public upon much the same terms as those prescribed for the hill bungalows in Perak and Selangor.

The air at Port Dickson is peculiarly dry and salubrious, and the facilities for sea bathing are excellent. The place is therefore a very popular resort, and persons in delicate health usually derive much benefit from a period of residence there.

Advantage has been taken of the salubrity of the climate on this portion of the Coast to erect a Convalescent Hospital upon the sea beach in the neighbourhood of Port Dickson, for the accommodation of natives suffering from beri-beri.

Patients are removed there from the inland hospitals when in a fair condition to travel, and rapidly recover strength under the influence of the fine dry air and the sea bathing.

Conservancy.

The care and maintenance of the streets, markets and other public conveniences of the District Towns is confided by the Government to the hands of Sanitary Boards as in the neighbouring States.

Prisons.

There is not as yet in the Negri Sembilan a prison designed upon recognised modern principles, and long sentence prisoners have hitherto therefore been received in the gaol at Kuala Lumpur. A prison of modern design to meet the needs of the whole State is now being erected at Seremban.

Districts and Towns.

The Negri Sembilan is divided into five districts for administrative purposes, as follows:—

- (i.) The Coast District.
- (ii.) The Seremban District.
- (iii.) The Jelebu District.
- (iv.) The Kwala Pilah District.
- (v.) The Tampin District.

The three former comprise the State of Sungei Ujong, but the name Negri Sembilan formerly applied inaccurately to Nos. (iv.) and (v.) only, is now adopted for the whole group.

The town of Seremban is the capital of the State, the head-quarters of the British Resident and the heads of the various Government Departments. It is connected with the sea by railway.

Federated Malay States.

Seremban is a prosperous little town, it has grown considerably in the last few years with the rising prosperity of the country, and its importance as a centre will be increased upon the completion of the new railways which are now projected or in course of construction.

Port Dickson, the head-quarters of the Coast District is 25 miles by railway from Seremban, and is practically the only port in the State.

The district extends from the Sepang River, which is the boundary with Selangor, to the Linggi River, which forms the boundary with Malacca.

Jelebu, the head-quarters of which are at Kuala Klawang, is connected with Seremban by a cart road, twenty-four miles in length. The district adjoins the Pahang boundary and supplies a considerable portion of the tin exported from the State.

Kuala Pilah, which gives its name to the district lying to the South of Sungei Ujong, is the principal village of Ulu Muar. Within the area of this district are comprised the minor territories of Ulu Muar, Johol, Jempol, Terachi, Gunong Pasir, and Inas.

Tampin, 32 miles from Seremban, and adjoining the settlement of Malacca, contains within its district jurisdiction the territories of Rembau, Tampin, and Gemencheh. The tin producing area, is principally situated within the districts of Seremban and Jelebu, which were for some years the only portions of the State to export their mineral. Later exploitation in the Kuala Pilah district has resulted in the production of payable tin, and in this division also the important agricultural areas of the State are situated, in the districts of Kuala Pilah and Tampin, where the Malay population has for many years past been engaged in cultivation of a far more regular, systematic and successful description than is found elsewhere among the States of the Federation.

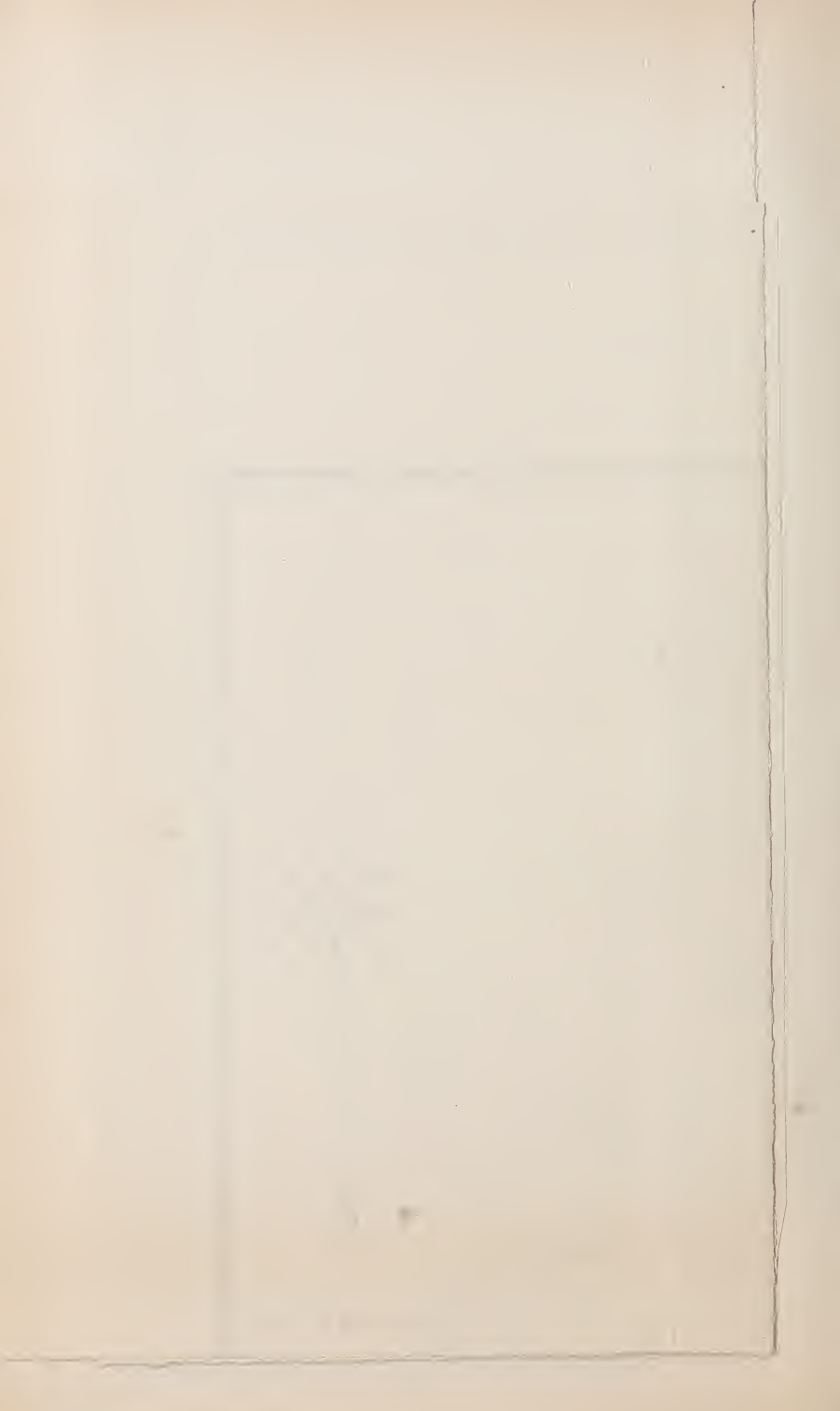
The estates owned and cultivated by Europeans are for the most part situated in the Seremban and Coast districts.

The Negri Sembilan has few attractions to offer to the *Sport.* sportsman in pursuit of game, large or small—certainly none which would tempt a visitor to proceed to the State for the purpose. Elephants and Seladang (Bison) are occasionally to

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be met with in the more inland portions of the State, and a few snipe and pigeons in the lower country, but the amount of shooting to be obtained is so small as to be hardly worth mentioning.

Other forms of recreation, which have been mentioned in those portions of this book which deal with Perak and Selangor, also have their place in the Negri Sembilan. The opportunities for indulging in the different forms of outdoor sport are less frequent here than in the States above mentioned, because the European community is smaller, and it is more difficult to get men together for the purpose.



PART V.

PAHANG.

His Highness The Sultan :

RAJA AHMAD MAATHAM SHAH BIN ALMERHOM RAJA ALI.

British Resident . . . HUGH CLIFFORD, C.M.G.

Senior Magistrate . . . WARREN D. BARNES.

State Auditor . . . C. B. MILLS.

State Engineer . . . E. R. STOKOE.

THE COUNCIL OF STATE.

His Highness AHMAD MAATHAM SHAH, SULTAN OF PAHANG,
President.

The British Resident : HUGH CLIFFORD, C.M.G.

The Tungku Besar :

The Ungku Muda :

The Tungku Muda :

The Datoh Bendahara :

The Shah Bandar :

The Datoh Maharaja Perba of Jelai :

Imam Prang Indera Stia Raja :

Imam Prang Indera Mahkota :

Tuan Mandak :

BRITISH RESIDENTS.

1. JOHN PICKERSGILL RODGER ... October, 1888, to September, 1890.

HUGH CLIFFORD (acting) ... October, 1890, to December, 1891.

JOHN PICKERSGILL RODGER	...	January, 1892, to February, 1893.
HUGH CLIFFORD (acting)	...	March, 1893, to May, 1894.
WALTER EGERTON (acting)	...	June, 1894.
HUGH CLIFFORD (acting)	...	July, 1894, to September, 1895.
D. H. WISE (acting)°	...	October, 1895, to June, 1896.
2. HUGH CLIFFORD...	...	July, 1896, to March, 1899.
ARTHUR BUTLER (acting)	...	April, 1899, to December, 1899.
3. ARTHUR BUTLER	...	January, 1900, to January, 1901.
D. H. WISE (acting)	...	February and March, 1901.
4. HUGH CLIFFORD, C.M.G.	...	April, 1901, to September, 1901.
F. DUBERLEY (acting)	...	October, 1901.

Geographical description.

Pahang occupies a large portion of that part of the Malay Peninsula which lies on the eastern side of the central mountain range. It is bounded on the north by the States of Kelantan and Trengganu, on the south by the territory of Johore, on the west and south-west by Perak, Selangor and the Negri Sembilan, and on the east by the China Sea. It is the largest of the States of the Federation, having an estimated area of some 14,000 square miles, and a line of greater length approaching 200 miles. Besides the territory on the mainland, Pahang includes two chains of islets running parallel to its coast, generally at a distance of about 25 miles. The chief of them is Pulau Tioman, ten miles by five, and attaining a height of about 3,500 feet. The State lies between latitudes $2^{\circ} 30''$ and $4^{\circ} 50''$, and longitudes $101^{\circ} 30''$ and $103^{\circ} 40''$, and has a coast line of about 130 miles in length.

Physical Geography.

Pahang contains several high mountains and fine waterways. Almost all the places in the State inhabited by Malays, and many of the more easily accessible Sakai districts, have, since the introduction of the Residential System, been visited by Europeans, and though there yet remain large tracts of uninhabited jungle which have not been penetrated, still the geography of Pahang may now be said to be comparatively well known.

Among the principal mountains of the State, Gunong Tahan, situated at the sources of the Kechau and Tahan Rivers, far up in the highlands near the Pahang—Kelantan boundary, easily ranks first, besides being believed to be the highest summit in the Peninsula. It has never yet been ascended by man, although its base was approached, some years ago, by a European scientific expedition to within ten miles. The mountain is isolated, and does not appear to be a portion of the range which divides Pahang from the northern States of Kelantan and Dungun. Its height is estimated at anything from 8 to 10,000 feet above the level of the sea.

With characteristic superstition, Malays invest this mountain with much mystery, and speak with awe of the stores of treasure said to be lying, from time immemorial, on the top of Gunong Tahan, jealously guarded by demons and other unearthly beings, whose common object would appear to be to prevent the wealth of the summit from falling into human hands. Rightly or wrongly, most Malays believe that Gunong Tahan will never be ascended by man. They attach a strange fatality to this wonderful mountain, and the fact that a European, while exploring that part of the country, met with an accident and was drowned in the Tahan river, tends but to confirm them in the belief that Gunong Tahan, which may be translated to mean "The Mountain of Opposition," can never be explored.

The next highest summit is to be found on the opposite side of the Pahang valley, in the neighbourhood of Gunong Raja, at the head of the Semantan River near the Selangor boundary. Then there are Gunong Benom (6,900 feet) near Raub, and Bukit Raka (2,050 feet), beyond Bentong, both these mountains being trigonometrical survey stations. Other high hills are found in the eastern chain from which flow the river Cherating (called the Sereting near its source), the Trengganu River Dungun and the Lebir, an important tributary of the Kelantan River. Further, a range of mountains, nearly as formidable as that which divides Pahang from Selangor, separates the districts of Temerloh in the centre and Kuantan on the east of the State. Then again, to the south of the River Pahang, there is Gunong Cheni, an isolated mountain, not, however, very remarkable for its size; while, still further south there rises Gunong Gayong, a high hill from which the River Rompin flows, and on the Pahang itself, a few days' journey from the coast, one meets Gunong Senyum ("The Hill of Smiles"), some 3,000 feet in height.

The State is well watered by numerous rivers and streams, of which the Pahang River is the most important. Curiously enough, this magnificent waterway, which, though of considerable size, is, however, inferior in volume, breadth, and length, to the Perak River, has its source, according to native ideas, in an insignificant ditch, almost in the centre of the State, into which the considerable waters of the Tembeling from the north-west, and of the Jelai from the north empty themselves, thus together forming, from that point downwards, the broad and picturesque river called the Pahang, which thenceforth becomes quite distinct as a main stream. This river drains a great length of country, and, in its course, receives numerous important feeders from the most opposite directions—from the mountains to the north, the south, and the west. In its lower reaches, below Kuala Bera, it flows for nearly 100 miles due east, through a country covered with low-lying hills and valleys, until it empties itself into the China Sea. This country, for the most part, is not marshy.

Of the other principal rivers, the Rompin, Endau, Kuantan, Semantan, Triang, Bera, Tembeling, Lipis, and Jelai, may be mentioned. Of these, the Rompin is a fine river, wider and longer than many of the others. In marked contrast to the Pahang, which is much shallower, it has about six feet of water on the bar at the lowest tide, and there is deep water for nearly a hundred miles up, whilst the Kuala, or mouth, lies in a wide bay, protected to some extent, from the north-east monsoon. The Endau forms the Pahang boundary with Johore; the Kuantan has its source in the hills of Kemaman, a district of Trengganu, and flows into the China Sea. The others mentioned above are inland rivers, by following one or another of which the other States of the Federation may be entered at their interior stations.

The shallowness of the principal river of the State renders it navigable for shallow-draught steamers only; but certain others, *e.g.*, the Rompin and the Kuantan, are free from this disadvantage. Unlike the Pahang, which, owing to its sandy bed and absence of rapids, is a safe river for boats of any description and for small steamers, the Tembeling, Lipis, and Jelai are rock infested streams, abounding in rapids, and are, therefore, impracticable, except for *sampans* (small native skiffs or "dug-outs" holding not more than three men), for more than a few miles from their mouths.

The rivers of the State are subject to annual floods during the months of December and January, and when these inundations occur certain portions of the country lie under

water for several days, sometimes for weeks, invariably causing damage to standing crops, and often loss of property.

The banks of most Pahang rivers are sandy, often high and, unlike those on the western slope of the Peninsula, are nearly always free from the mangrove which flourishes luxuriantly only in marshy surroundings.

The whole coast of Pahang is, like most of the east coast of the Peninsula, an almost uninhabited forest ; but it has the advantage of a fine sandy shore, fringed with numerous *Ru* trees (*Casuarina littorea*), so that it is possible, and, in the north-east monsoon, not uncommon, for long journeys to be undertaken along this natural road. Such a thing is nowhere possible on the west coast, with its matted jungle of mangrove, and its muddy foreshore.

Not much is as yet known about the geology of Pahang, *Geology.* such information as is available having reference only to particular localities where mining is, or has been, in progress, rather than to the whole State in general.

Geologists who have visited Pahang appear to agree in thinking that the geological formation on the eastern side of the main range is such as to render it improbable that large tracts of alluvial tin will be found in this State. The mountain range is largely composed of granite, which, all the world over, is the characteristic feature of stanniferous deposits, and, so far as the granite extends, the tin is also found. At the foot of the hills, however, at the points which correspond to those on the Selangor side of the range, where the richest alluvial tin fields are found, the granite is intersected by a slate formation which carries no tin and cuts the granite off. It is stated that, in Australia, it is at the junction of two similar formations that the best gold lodes are found, and it is possible that this may also prove to be the case in Pahang.

Of the "Mineral" States in the Peninsula, Pahang is placed first by the Malays ; Kelantan next to Pahang ; and then Patani ; all these have galena as well as gold and tin. Gold is found in Pahang almost exclusively in the central line of the State, at Pasoh on the Bera, at Luit, the Jelai, the Lipis, Raub, Penjum, Selensing, and Kechau. Whatever the explanation may be, it is worth noticing here, as it has been noticed before, that the principal gold workings of the Peninsula lie almost entirely along a not very wide line drawn from Mount Ophir and Segamat—(the southern

limit of the auriferous chain) through the very heart of the Peninsula, to the Klian Mas or gold diggings of Petani and Telepin in the north.

The best alluvial tin workings of Pahang lie near the Selangor hills on the River Bentong; at Sempam, Tras, and Liang; and near the gold workings of the Jelai. The deepest underground tin mines in the Peninsula are situated in the Kuantan District, where there are extensive and well defined lodes, and where also copper is found. Pahang tin is said to be the only tin on the East Coast which can rival that of Perak and Selangor in whiteness and pliancy. Some years ago, antimony was found near Selensing on the Jelai river, and lodes of that mineral are believed to exist in that part of the State.

At Penjum, gold is found in quartz leaders traversing masses of clay slate, of which the country rock is there mainly composed, and a good proportion of free gold is present in the ore which appears to be fairly tractable. It is said that the geological formations at Raub and Selensing, (which are two important gold localities), are similar to that at Penjum.

Generally speaking, the geological formation of Pahang hills consists, so far as is at present known, of granite, sandstone, shale, and clay. Some of the islands, such as Tioman and Tinggi, consist partly or entirely of trap rock.

Gold is found in the streams of the rivers and in quartz lodes in the slate. The rock in which tin is found in Kuantan, (the only place in which lodes have hitherto been discovered), is a species of laterite, and the alluvial tin mines in that and in others districts of the State, are similar to those in Selangor, but the tin-bearing stratum is met with at relatively shallower depths.

In the Tui river, a tributary of the Jelai, gold has been found in the limestone, which is said to be surprising as there is no record of gold having occurred in a limestone formation elsewhere. That part of Pahang consists mainly of highly-tilted beds of clay, slates, and shales; while interbedded with them, occasionally but rarely, conglomerates and limestones appear. The stratified rocks there are traversed by numerous intrusions of granites and greenstones, which take the form of lenses and dykes, the strike and dip of the latter being always parallel to those of the stratified rocks. All the known rich concentrations of gold in Pahang are said to be associated with intrusive rocks, and wherever streams are

found crossing the contact of the intrusive and stratified rocks, gold can always be detected.

In Pahang, tin seems to be confined to the granites of the central range and to the Kuantan granites. Generally, the central range has undergone much less denudation on its eastern than on its western side. For instance the slates still extend half way up the mountains at Tras and are not visible on the western side until Kuala Kubu, in Selangor, is approached. Consequently, much less stream tin has been shed into Pahang than into the Western States. There seem, however, to be some points where the granite ridge has weathered more quickly than usual on the eastern side and where tin is likely to be found, as also in the Kuantan line of country. The southern extension of this line, south of the Pahang River, seems to be but little known.

The climate of Pahang is, as a rule, warm, moist, and soft. *Climate.* It is cooler and more agreeable on the coast than in the interior stations.

The year is divided into two monsoon seasons—the dry and the wet. The former, the south-west, lasts from April to September, and the latter, the north-east, from October to March. Various localities differ in minor points, but malarious miasma, in a greater or less degree, is never absent, though it is, of course, present to a greater extent in unopened and more remote parts of the country than in the towns.

Pahang is, on the whole, generally supposed to be an unhealthy State, but this belief may safely be characterised as a somewhat biassed one, for there can be no doubt that the climate of Pahang is fairly healthy and not peculiarly prejudicial to the European constitution, while it certainly cannot be said with truth that the country is unfit for Europeans and others to live in.

Provided that the usual rules of hygiene in tropical countries are observed, and all excesses avoided in eating and drinking, Europeans can, as a rule, remain in Pahang for at least four or five years at a stretch before the necessity for a change of climate becomes apparent.

The stations in Pahang in which meteorological observations are taken are few in number, and the distances which divide one part of the State from another are so great that observations recorded at one place cannot serve as any indication of what may be expected even throughout the district of which that place is the head-quarters; and it may, there-

fore, be confidently asserted that it is only by chance that annual extremes of temperature for a given year are registered, as it is probable that these are also to be observed in some place or places within the State other than in the few in which meteorological stations have been established.

A mean annual temperature of between 75° F. and 80° F. is the rule. Great extremes are rare. A continuance of cloudy weather is practically unknown. There is not much difference between the temperatures of the seasons.

The rainfall is always large, and is fairly evenly distributed throughout the State. An average annual fall of from 150 to 175 inches may be depended upon. The average number of rainy days is high, *viz* :—about 200 a year, or about 17 wet days each month.

It must, however, be noted that a considerable difference always exists between the rainfalls of the seasons, that of the north-east monsoon being about twice as much as that of the south-west.

During the months of November to February the fall is comparatively much greater than in any other given four months. When the wet season is on, rain generally falls with violence and lasts long, while passing storms of wind and rain are frequent during the same period.

Heavy rain in Pahang is invariably the precursor of floods, which annually occur in this State with great regularity and which are caused by the enormous amount of rain that falls in the mountains of the upper country.

Population.

For a State of the size of Pahang, the population is very sparse. Since the introduction of the Residential system in 1899, the Census has been taken twice—in 1891 and in 1901. The returns of the former year were admittedly incomplete and are not, therefore, useful for purposes of comparison. The following were the figures returned on 1st March, 1901 :—

Malays and other natives of the Archipelago	...	...	...	...	73,462
Chinese	...	..	...	...	8,695
Tamils and other natives of India	...			...	1,227
Europeans and Eurasians...	...		...	...	180
Other Nationalities	...	...	...	...	549
				Total	...
					84,113

Taking the area of the State at an estimated 14,000 square miles, it will be seen that the average population to the square mile is only six, or one person to about every hundred acres, which serves to show how small a portion of the whole country is owned or occupied. In some parts of the State one can travel continuously for a week on end without seeing a single human habitation. Pahang is thus far from being a populous country, even according to the low standard of the Peninsula; but there are a good many prosperous Malay settlements, and not least in the extreme interior. The most thickly populated portions of the country are the Lipis Valley in the Ulu Pahang, the Pahang River banks near Temerloh, and the banks of the river from the mouth at Kuala Pahang to ten miles above Pekan.

In addition to the nationalities given above, large numbers of Sakai (which is the generic name for the Aborigines) inhabit the wilder and less accessible parts of the State. No accurate estimate of their numbers is at present possible, but they are certainly far more numerous than was formerly supposed, and 7,500 to 8,000 souls for all Pahang would not be above the mark.

Some years ago, Professor Vaughan Stevens travelled through the Endau and Rompin Districts, pursuing anthropological enquiries among the Sakai tribes of the coast, and later the same gentleman made a few short trips to the edges of some of the Ulu Pahang Sakai districts, the Jelai and the Telom, but he did not penetrate to those parts of the country which are inhabited by the Tem-be, or wild Sakai, the Semang, and the Pangan, or Negrit, tribes, mentioned by Baron Miklaho-Maklay as living on the Kelantan frontier.

The country on both sides of the mountain range, which forms the watershed of the Pahang rivers Jelai and Telom and of the Perak rivers Bidor and Kampar, is thickly inhabited by Sakai who, although a few large villages exist, live for the most part in groups of from two to three families. These Sakai are divided into two distinct tribes, called by themselves Sen-oi and Tem-be, respectively, the former being the more civilized and more accessible clan, while the latter are but little known to the Malays. It is worthy of note that the Sen-oi dialect is practically identical with that in use among the Sakai tribes of Kinta and the Lengkuas tribe near Blanja in Perak, while the Tem-be tribe speak a dialect equally similar to that in use among the Sakai tribes of Legap and Korbu in the Plus district of the same State. Both the Tem-be and Sen-oi dialects, however, resemble one another so closely that it would seem to be evident that they originally

sprang from the same source. Words to express any numerals higher than three are not found in either of these dialects.

The Sakai used not to love the Malay, and with good reason. Countless years of tyranny and ruthless oppression on the part of the Malays would seem to have entirely broken the spirit of the jungle-dwellers, who, in consequence of the ill-treatment which they been obliged to passively suffer, are still very shy, and avoid strangers with the instinct of wild animals. Of recent years, however, these people, hitherto enslaved and trampled upon to an extent that baffles description, are beginning to realise the fact that even a Sakai cannot, under the existing *régime*, be in any way ill-treated with impunity.

The real Sakais wear no clothes, a strip of bark being all that they consider necessary.

Their weapons are bows and arrow and blowpipes with poisoned darts. The bow used is about six feet long, made of "Penaga" wood, and strung with twisted strips of the same "Terap" bark as is used for their waist-cloths, whilst the arrows are about two feet six inches in length, made of bamboo, tipped with barbed iron, poisoned with "Ipoh," and feathered with the tailfeathers of the "Enggang," or larger horn-bill. Sakais are seldom or never seen in the vicinity of towns or villages and live entirely in the jungle. They are not Muhammadans and such religion as they possess is a rude kind of pantheism, but they believe in an after-life and in the power of good and evil spirits.

As regards the general condition of the Malays of Pahang, it has vastly improved and they are infinitely better off in every way now than they were under the Government of the Sultan and his Chiefs prior to 1889. They are, in fact, on the whole, so well-to-do that even the high rate of wages that now obtains in this State seldom serves as a sufficient inducement to them to accept any but temporary employment, and that only at intervals. The Pahang Malay does not differ to any marked degree from his fellows in the other States of the Federation, and all that has been written about the natives of the Peninsula in the First Part of this Handbook, can be held to apply to the natives of this State as well.

Of the 180 Europeans and Eurasians returned at the recent Census, 134 are Europeans and the remainder Eurasians. About a hundred of the former are in the employ of the mining companies in the State, the remainder being Government officers. Practically all the Eurasians are

subordinate members of the Government service. Of the Tamils and other Indians, about a thousand are road coolies, with a few petty shop-keepers and money-lenders. Included in "Other Nationalities," but not shown separately, are about 400 Arabs most of whom are traders in a small way. The remaining 149 are principally Japanese and Singhalese, and call for no special remark.

The history of Pahang is obscure, and was chiefly concerned in olden days with invasions and threats from Siam, and it is said, Malacca. To a great extent Pahang escaped the troubles which Johore suffered, directly and indirectly, through its European neighbours—the Portuguese and the Dutch. *History*

The first Ruler of Pahang, of whom there is any record, was a son of the Sultan Mahmud, who fled to Pahang from Malacca after the capture of that town by the Portuguese in 1511. A reputed descendant of his was Bendahara Ali, who died in the year 1850 or thereabouts. He had ten children, only two of whom are of any historical importance. The names of these two Rajas were Che' Wan Muhammad Tahir and Che' Wan Ahmad. The former, who was the elder of the twain, ascended the throne on his father's death and forced his brother to fly from the country. Che' Wan Ahmad then went to Singapore and took refuge in the Kota of Sultan Ali. Later, Che' Wan Muhammad Tahir died, and his eldest son, Che' Wan Korish, succeeded him.

Che' Wan Ahmad, meanwhile, made many attempts to seize the country, first from his brother, and subsequently from his nephew, Che' Wan Korish, who, thinking his position insecure, sought an alliance with the Tumenggong of Johore. In 1862, a treaty was signed between Bendahara Che' Wan Korish of Pahang and the Tumenggong Abubakar (afterwards Maharaja and subsequently Sultan) of Johore. This was an offensive and defensive alliance between the two States, and, in accordance with the provisions of this treaty, the Tumenggong of Johore aided Bendahara Korish with men and money when, in 1865, Che' Wan Ahmad made his final, and, as it proved, successful, invasion of Pahang. In return for the assistance promised in the treaty referred to, Pahang ceded to Johore certain tracts of territory in the interior of its coast districts. Che' Wan Korish died during the war which followed his uncle's invasion, and the former's brothers, Che' Wan Ahmad and Che' Wan Da, were driven into the sea in spite of the efforts of Johore to resist the invaders.

The Che' Wan Ahmad frequently referred to above is the present Ruler of Pahang—Sultan Ahmad Muatham Shah Ebini Al Merhum Ali.

When Che' Wan Ahmad seized the Pahang throne in 1865, he forthwith, as was but natural, repudiated the treaty into which his nephew, Bendahara Che' Wan Korish, had entered with the Tumenggong of Johore three years earlier. This repudiation, with its attendant rival claims to those portions of Pahang territory which Che' Wan Korish had ceded to Johore, caused considerable ill-feeling between the Courts of the two States. Three years later, however, that is, in 1868, a rectification of the boundaries between Pahang and Johore, at the River Endau, was settled by the arbitration of the then Governor of the Straits Settlements, Sir Harry Ord, K.C.B. There was thus created some dependence on the part of Pahang, and on the part of the Colony some obligation of protection and recognition.

For many years after the events narrated above, Pahang was left alone, and, as a result, the State gradually became notorious for cruel mis-government, even among other independent Malay States, and strong representations on this subject were made to the Sultan by Sir Frederick Weld, then Governor of the Straits Settlements, during the years 1885 and 1886.

It is difficult for those who are acquainted only with the Protected States on the western side of the Malay Peninsula, to realise the state of affairs which prevailed in Pahang prior to the appointment of the first British Resident in 1888.

A system of taxation under which every necessary as well as every luxury of life was heavily taxed; law courts in which the procedure was the merest mockery of justice, the decisions depending solely on the relative wealth or influence of the litigants, and where the punishments meted out were utterly barbarous; a system of debt-slavery under which not only the debtor but his wife and their most remote descendants were condemned to hopeless bondage; an unlimited *corvée*, or forced labour ("Krah" as it is termed by Malays), for indefinite periods, and entirely without remuneration; such were some of the more striking examples, although the list is by no means exhaustive, of administrative misrule in a State within less than twenty-four hours of Singapore, and immediately adjoining the two Protected States of Perak and Selangor. The condition of the Pahang *raiat*, or peasant, during the period in question, may be briefly expressed by stating that he had absolutely no rights,

whether of person or property, not merely in his relations with the Raja, but even in those with his immediate District Chief.

This most deplorable state of affairs has, as already mentioned, since been happily changed for the better.

In October, 1887, a Political and Commercial Treaty was concluded between Sir Frederick Weld and the Sultan of Pahang, similar to that entered into with the Sultan of Johore in December, 1895, and Mr. Hugh Clifford was appointed to act as the Governor's Agent at the Pahang Court, having functions similar to those of a Consular Officer.

In February, 1888, a Chinese British subject was murdered at Pekan, then the capital of Pahang, under very aggravated circumstances, and His Excellency Sir Cecil C. Smith, Governor of the Straits Settlements, called on the Sultan to make reparation for this murder.

For some time this was refused, but after protracted negotiations, the Sultan asked that the past might be condoned and that a British Resident might be appointed to assist him in the administration of his country, on the same system as that in force in the Protected Malay States. This request was complied with, and Mr. J. P. Rodger was appointed the first Resident in October, 1888.

The following is a copy of the correspondence which led to Pahang being brought under British protection :—

TRANSLATION

of a letter from HIS HIGHNESS THE SULTAN AHMAD MUATHAM, SHAH OF PAHANG, to HIS EXCELLENCY SIR CECIL CLEMENTI SMITH, K.C.M.G., GOVERNOR of the Straits Settlements.

(After compliments.)

We make known to our friend, with reference to the correspondence between ourself and our friend, that we have considered our friend's words, and all that our friend has written. We have also had time to consult with our relation, His Highness the Sultan of Johore. Our friend will remember that we have already acknowledged our responsibility for the murder of Jo Hui (Go Hui), a British subject. We hope that no more will be said about this matter, and that Her Majesty the Queen will be satisfied with our expression of regret for what has occurred, and with our giving a guarantee for the future, that is to say, that Her Majesty the Queen should send us a British Officer in order that he may assist us in matters relating to the Government of our country, on a similar system to that existing in the Malay States under English protection. We now ask for such an Officer. In asking this, we trust that the British Government will assure to us and our successors all our proper privileges and powers according to our system of government, and will

undertake that they will not interfere with the old customs of our country which have good and proper reasons, and also with all matters relating to our Religion. There is nothing more but our best respects to our friend.

Written on the 16th of Zil Hejah, 1305. (24th August, 1888.)

REPLY TO THE ABOVE.

His Excellency, Governor Sir CECIL C. SMITH, K.C.M.G., to His Highness the Sultan of Pahang.

(After Compliments.)

I inform my friend that the Sultan of Johore duly delivered to me my friend's letter of 24th August. The contents of this letter I forwarded by telegraph to England to be laid before the Great Queen, and I prayed that Her Majesty would accept the expression of my friend's deep regret at what had taken place in regard to the murder of British subjects, and would approve of the proposed request of my friend that a British Resident should be placed in Pahang, who would assist my friend in the administration of the Government of the country, which would be taken as a guarantee against all future similar and other troubles.

To-day I have received the commands of the Great Queen authorising me to carry out the arrangement which my friend has set out in his letter of the 24th ultimo, and I will therefore soon send a British Resident to my friend—an officer of experience, who knows Malay manners and customs, and who is well-intentioned towards my friend personally, and desirous of promoting the interests of my friend's country. I rely on my friend treating the British Resident with entire frankness, taking him into full confidence as regards all public matters, and loyally carrying out the arrangement which has now been finally made.

In conclusion, I send my best wishes for my friend's health and for the prosperity of my friend's country.

SINGAPORE, 8th September, 1888.

Though the first British Resident was, as already stated, appointed in 1888, full administration of the State was not taken over until July, 1889. Even then, however, having regard to the past history and peculiar circumstances of Pahang, it was not expected that the Sultan and his Chiefs would at the commencement give to the new Government the same cordial support and assistance which is rendered by the Native Rulers of the other protected States; but the Sultan has never failed to recognise his treaty obligations, and the provisions of the liberal Civil List have, in some measure, tended to compensate the Chiefs for the loss of their former oppressive powers.

The great territorial Chiefs have never viewed with favour the changes then and since introduced into the administration of Pahang—changes which have considerably diminished their former almost absolute authority in their respective districts. The relations of these Chiefs, whose titles were

hereditary, and who had the power of appointing subsidiary headmen to their followers, were very similar to those formerly existing between a Highland Chief and the members of his clan in Scotland, and the fiction of a blood relationship is still to some extent maintained among them, the followers of a Chief being called his "Anak Buah," *i.e.*, "the children of his loins." Time has, however, made the great Chiefs more or less reconciled to the new order of things.

On the other hand, the Penghulus and petty Headmen have, from the first, gladly accepted the new administration, since the advantages accruing to them from the introduction of the Residential system, under which they obtain fixed allowances, and complete protection of life and property are almost as important as the security and justice now enjoyed by the general body of native *raia*ts and Chinese and Malay settlers.

Any account of the history of the State would be somewhat incomplete if it omitted all reference to the Pahang disturbances of 1891-2 and 1894. These internal troubles may therefore be briefly alluded to here.

From the date of the declaration of British protection, one Chief, Bahman, the (ex) Orang Kaya Pahlawan of Semantan, was, more than all the rest, violently opposed to the new system, and until December 1891, when he broke out into open rebellion against the Government, he was never tired of proclaiming that he would not tamely submit to the British. The only thing which he said would ensure his loyalty and obedience to Government regulations, was a pension of \$6,000 a year, and permission to do as he liked within the borders of his own district. The Government declined to negotiate on this basis, and the Orang Kaya sullenly retreated into the jungles of the Semantan and commenced raising his own revenue in a fashion characteristic of independent Malay rule.

Affairs came to a crisis when one day he fired upon an European Officer in the Semantan district, killed sundry Sikhs, and, with his victorious band of about 200 followers, marched downstream and sacked the unprotected village of Temerloh, causing the Officer in charge to retreat to Pekan, the capital.

Sikh Police were afterwards brought in from the neighbouring States of Perak and Selangor, and also from the Colony, and a protracted guerilla warfare ensued. This continued till late in 1892, when the Orang Kaya was

forced to flee and take refuge in the northern States of Kelantan and Trengganu, where he was received with open arms. His followers had by that time considerably dwindled in numbers, and in his retreat he was attended by only a handful of faithful retainers. The result of the operations was the escape of the rebel and much misery among his people.

Bahman remained in Kelantan till June, 1894, when he re-entered Pahang by way of the Tembeling river. He had a following of about 150 men, chiefly Kelantanese bent on loot. The Police Station at Kuala Tembeling was cleverly surprised by the rebels, and out of the small garrison of eleven men, six were killed, the remainder succeeded in escaping, though one of them was wounded with knives and *kris* in more than thirty places. After looting all the trading boats in the vicinity, the rebels retreated up the Tembeling river and stockaded themselves at Jeram Ampai. They were victors for the moment. In due course, Sikh troops were again brought in and took the field under the command of Colonel R. S. Frowd Walker, C.M.G. An action was fought at Jeram Ampai and the rebels, utterly routed, fled in all directions leaving forty killed. Bahman again escaped into Kelantan, his unrivalled knowledge of Malay jungles again serving him in good stead. Our loss in this engagement was one European (Mr. E. A. Wise) and four Sikhs killed, and Captain H. L. Talbot, and four Sikhs wounded.

After Bahman made good his escape into Kelantan, negotiations were opened between the British and Siamese Governments, as a result of which the ex-Orang Kaya of Semantan and his more important assistants have been sentenced to perpetual banishment at Chieng Mai in Siam.

Since the disturbances of 1894, Pahang has enjoyed peace, and there is now, in the opinion of those best able to judge, no further likelihood of any internal troubles again breaking out. The moral lesson of the past rebellion has been to the Malays a most salutary one.

The State has now been under British protection for twelve years, and the record during this period is a sufficiently satisfactory one. The condition of the native population has been enormously improved; property, owing to the added security afforded by the Administration to all classes of the community, has greatly increased in value; a great deal of money has found its way into the country,

and the wealth of the Malays has been very materially increased. Above all, a just and humane rule has replaced that of the old *régime*, and the happiness of the bulk of the inhabitants of Pahang has in a great measure been secured. To adequately realise all that has been effected during the past decade, one must remember that Pahang was, prior to 1889, the wildest and most lawless of all the States in the Malay Peninsula.

In so far as cash balances are concerned, Pahang is the poorest State in the Federation, and is heavily in debt. The total liabilities on the 1st January, 1901, amounted to \$3,566,237, or £356,623 sterling, and, for some time to come, will have to be added to yearly. Fortunately, the State debt is only a paper one, the repayment of which depends upon the extent to which the future development of the country will be pushed. All money required by Pahang for expenses of administration is generously advanced by the State of Selangor, which does not, happily, lay down any hard-and-fast rules as to period of repayment.

*Revenue and
Expenditure.*

Since 1889 and up to the end of 1900, over half a million dollars has been debited against Pahang on account of interest on loans received. The disturbances of 1891-2 and 1894 accounted for over \$300,000. Towards this latter expenditure, however, the Sultan contributed \$57,600 out of his own pocket.

The Revenue of the State advanced from \$375,350 in 1899 to \$419,150 in 1900. The principal collections were made under the headings of Licenses, Customs, and Land and Forest Revenue. The first item is mainly derived from the Chinese population and includes duty on opium, spirits, and tobacco imported. "Customs," chiefly represents the export royalty paid on gold and tin won in and sent out of the State. Land and forest revenue is contributed principally by the Malays, the former item being on account of rent paid by them for their agricultural holdings, and the latter comprising export duty on jungle produce worked by them.

The expenditure of the State has always been greatly in excess of the revenue. In 1900 it amounted to \$630,678, the principal disbursements appearing under Personal Emoluments; Departmental Charges; Salaries and Allowances to Chiefs; Roads, Streets, Rivers, and Bridges; Works and Buildings; Interest on Loans; and Federal Charges.

The following table shows the Revenue and Expenditure of the State since the establishment of British protection:—

Year.	Revenue.	Expenditure.
1889 (half-year) ...	\$30,390	\$142,621
1890	\$62,077	\$297,702
1891	\$77,386	\$238,174
1892	\$50,044	\$271,393
1893	\$83,688	\$282,236
1894	\$100,220	\$249,121
1895	\$106,744	\$231,914
1896	\$160,947	\$462,619
1897	\$198,193	\$441,918
1898	\$224,856	\$372,719
1899	\$375,350	\$1,814,030
1900	\$419,150	\$630,678
Total ...	<u>\$1,889,045</u>	<u>\$5,435,125</u>

It will thus be seen that the expenditure has, during the past eleven and a half years, exceeded the revenue by over three and a half million dollars, that being, therefore, the amount of the State debt at the end of 1900.

Trade.

Almost the whole of the trade is carried on between the ports of the State and Singapore. The values for the past nine years are shown in the subjoined table:—

Year.	Imports.	Exports.
1892	\$341,673	\$331,196
1893	\$363,834	\$367,555
1894	\$787,859	\$659,653
1895	\$946,497	\$775,313
1896	\$1,180,188	\$865,280
1897	\$1,226,059	\$1,652,607
1898	\$1,147,054	\$1,559,349
1899	\$1,531,661	\$2,062,241
1900	\$973,405	\$2,322,950

The principal imports are opium, spirits, rice, tinned provisions and miscellaneous food stuffs, cotton goods, tobacco, machinery, kerosine and other oils, hardware, sugar. About \$200,000 worth of specie is brought into the State annually. The principal articles of export are tin, gold, salted fish, rattans, gutta and rubber, timber, buffalo hides, and various kinds of jungle produce, &c. During the past five years the export of gold, tin, and gutta and rubber has been:—105,475 ounces valued at \$4,219,000; 3,392 tons valued at \$3,200,793; and 156 tons valued at \$573,237, respectively.

The customs duties in force in Pahang vary to some extent as compared with the royalties levied in the other Federated States. In addition to the import duty on opium and spirits, all kinds of Asiatic tobaccos brought into the country pay a tax of \$10 a pikul (133 $\frac{1}{3}$ lbs.). The right to collect this is farmed out to a Chinese syndicate, as is also the opium and spirits monopoly. These are the only import duties at present in force.

In the other States the export duty on tin is calculated on a sliding scale, as explained in Part I. of this Hand-book, and the royalty on gold is there 10% of its value. In Pahang, tin pays a fixed duty of 10% (in a few special cases it is 8%) *ad valorem*, calculated on the daily market price of the metal; while the royalty on gold exported is fixed at 5%, or half of what it is elsewhere.

Passengers and Fares.—Passengers for Pahang from the West can book their passages either to Penang or Singapore. *Passengers and Fares.*

If entry into the State by way of any of the coast ports is desired, tickets should be procured for Singapore. Thence by local steamers to Kuala Pahang or Kuala Kuantan.

If, on the other hand, one wishes to enter the State by road, then book to Penang and thence tranship to Port Swettenham in Selangor. From Port Swettenham to Kuala Lumpur and then to Kuala Kubu, both by rail. From the latter town, one either travels by pony or bullock cart for 83 miles along a well-made road until Kuala Lipis, the present capital of Pahang, is reached.

Full information as to fares from England to Pahang and Singapore is given in Appendix A, in which are also included several details that it would be useful for travellers to know.

The cost of a first class passage from Singapore to Kuala Pahang by local steamer varies from \$10 to \$15 in the calm season to \$20 to \$25 in the rough season. A deck passage costs from \$2 to \$5.

Steamer communication between Singapore and Pahang is, however, somewhat uncertain and unreliable, the more so during the north-east monsoon (October to March). During these months vessels arrive and leave at fortnightly intervals. During the south-west monsoon (April to September), three or four steamers are usually on the run, but their movements are erratic.

There is a daily mail service by bullock cart between Kuala Lipis and Selangor, touching at Raub *en route*. *Posts and Telegraphs.*

Time in transit one day between Kuala Lipis and Raub, and four to five days between Selangor and Singapore and Kuala Lipis.

Mails from Europe arrive in Pahang about once a week or ten days. It takes about a month for a letter to reach Pahang from England.

There is also a regular postal service within the State, maintained by Government river boats which ply between Kuala Lipis, Temerloh, and Pekan, three times a month to and from.

Postal communication between Singapore and the coast ports of Pekan and Kuantan is by means of local steamers which, as already stated, are uncertain in their time-tables.

Between Pekan and Kuantan mails are sent by boat and runner, as may be most convenient at the time.

Postal charges are as follows :—

Postcards.—

Within the State	}	1 cent each.
To the other Federated Malay States		
To the Colony of the Straits Settlements and Johore		
To all other parts of the world ...		3 cents each.

Letters—

Within the State	}	per $\frac{1}{2}$ oz. 3 cents.
To the other Federated Malay States		
The Colony of the Straits Settlements and Johore		
To England and all other places which have accepted Imperial Penny Postage	}	4 cents.
To places other than those mentioned above		
		8 cents.

Parcel Rates—

For British Dependencies and for other countries the rates vary. Information can be obtained from the Postal Guide which can be seen at any Post Office. For the Straits Settlements, the Federated Malay States, and Johore—

Under 3 lbs.	25 cents.
„ 7 lbs.	45 cents.
„ 11 lbs.	65 cents.

The rates for books, patterns, and printed papers are very low.

Registration can be effected in all the Post Offices of the State at a uniform charge of five cents.

Stout cloth-lined envelopes can be purchased in large and small sizes for seven cents and six cents each, respectively. This includes the registration fee of five cents which is embossed on the cover.

Money orders in dollar currency are issued at Kuala Lipis and Pekan on the Federated Malay States, the Straits Settlements and Johore. Those for other countries are issued through Singapore in the respective currencies of the places on which they are drawn. British Postal Orders are also obtainable, the charges for sterling varying according to current rates of exchange.

Commission on Money Orders is as follows:—

Local ...	...	...	1 per cent. of value, with a minimum of 5 cents.
East of Singapore	...	...	3 per cent. of value, with a minimum of 15 cents.
India and Ceylon	...	...	2½ per cent. of value, with a minimum of 15 cents.
Great Britain	...	...	3 per cent. of value, with a minimum of 15 cents.
Other countries	...	...	3 per cent. of value, with a minimum of 15 cents.

British Postal Orders, 2 cents each, in addition to the cost price at Singapore.

The telegraph mileage in Pahang is 53, the line being an extension of the Selangor system. The stations are at Raub and Kuala Lipis.

Direct communication is always open to the Federated Malay States and the Straits Settlements over Government lines. All messages to other parts of the world are transmitted over the cables of the Eastern Extension, Australasia and China Telegraph Company.

The rates are, per word :—

To Europe ...	...	\$1·98 to \$2·58.
To India and Ceylon	...	98 cents to \$1·08.
To China and Japan	...	\$1·08 to \$2·83.
To America ...	...	\$2·78 to \$5·38.
To Australia...	...	\$2·18 to \$2·68.

To Singapore	...	13 cents to 28 cents.
Local, ordinary	...	3 cents, with a minimum of 21 cents.
,, deferred	...	1½ cents, with a minimum of 21 cents.
,, urgent	...	9 cents.

Ports and Harbours.

There are several ports along the Pahang coast, but only two of these are frequented by shipping—Kuala Pahang and Kuala Kuantan. The former is 18 to 20 hours' steam from Singapore, and the latter 20 to 24.

No vessel drawing over 10 feet of water can enter the mouths of the Pahang and Kuantan rivers, and even when these small ships come in they have to so time their arrival and departure as to take advantage of the high tide. Otherwise they run the risk of grounding, and, in rough weather, of possible destruction.

During the south-west monsoon, however, there is, provided ordinary care is exercised, practically no danger to be encountered at the bars of Pahang rivers that flow into the China Sea. On the other hand, the crossing of Pahang bars in the north-east monsoon is fraught with some danger, owing to the heavy surf and to the shifting nature of the channels.

Prior to 1889, the Pahang coast was entirely closed to sea traffic during the north-east monsoon—about six months. In that year, however, for the first time in the history of the State, the bars of the Pahang and Kuantan rivers were successfully crossed by a steamer brought in by the late Captain Habekost. Since then, until 1898, the Pahang river has been entered without disaster during what is known as the "close" season. In December of that year, a new ship, the "Perdana," the most comfortable of all the vessels that used to run to the east coast of the Peninsula, foundered at Kuala Pahang while trying to cross the bar in bad weather, and became a total wreck.

Excepting at Kuala Kuantan, there is no wharf accommodation at any Pahang port. Vessels unload into and load from boats that go alongside. For the present small volume of trade this system answers well. Accidents are rare.

Education.

There are twelve vernacular schools in Pahang, situated in the most populous villages. Malay reading and writing and arithmetic are taught, and the daily attendance averages

only about 250 boys for the whole State. All these schools are maintained entirely at Government expense.

Unlike the case in the more advanced States of the Federation, education in Pahang has many difficulties and prejudices to contend against. A couple of instances may be cited. At many villages there are local holy men who warn parents that schooling interferes with the boys' study of the *Koran*. Besides, most parents here prefer that their children should work in the padi fields instead of spending most of their time in school. The Malays of the State have, therefore, ever shown but slight disposition to send their children to school. This reluctance, however, is being gradually overcome through the influence of the District Officers.

There are no English schools nor are there any girls' schools in Pahang. An English class for Rajas used to be maintained a few years ago at Pekan, but proved a failure and had to be abolished. Only three pupils (the Sultan's sons) attended, but after a space the novelty wore off and they took no further interest in their studies. One of the difficulties in teaching English to Malays in a place such as Pahang is that they have no inducement and but few opportunities of speaking the language out of school hours.

As far as is possible, the health of the natives is well cared for by Government. The hospitals are practically free to all comers. Sulphate of quinine is dispensed freely and vaccination is carried out gratuitously on a fairly large scale. The bulk of the population is thus well protected against small-pox. The principles of modern sanitation are enforced in the towns as far as is practicable. *Hospitals.*

There are four well-equipped hospitals in the State, containing accommodation for 128 patients. The hospitals at Kuala Lipis and Pekan (42 beds and 18 beds respectively) are in charge of qualified European surgeons who are assisted by dressers. The hospital at Raub, the principal mining centre, contains 20 beds, and that at Bentong provides for 48 patients; both these hospitals are in charge of dressers. There are also Gaol hospitals at Kuala Lipis and Pekan. In addition to the above, there are private hospitals and dispensaries in the different mining centres, and these are supported by the mining companies immediately concerned.

One thousand one hundred and seventy two cases were admitted to the State hospitals in 1900, and 15,200 visits

were recorded at the out-patient departments. These figures show a great increase as compared to former years, and point to the fact that natives of all classes show an increasing disposition to profit by the European medical facilities which Government has placed within their reach.

Roads.

The principal road in the State is the Pahang Trunk Road, which has been constructed by the Public Works Department of Selangor at a cost of over a million and a quarter dollars. It is an excellent metalled cart road running from Kuala Kubu, on the Railway in Selangor, over the main chain of mountains to Kuala Lipis; it is 83 miles in length, of which 62 miles are in Pahang territory and the rest in Selangor; it passes through the principal mining centres of Ulu Pahang; and, since its completion, has been maintained in a high state of efficiency. The mountain range is crossed at an elevation of 2,700 feet, and the summit is reached from each side by a continuous gradient of one in thirty.

Another important metalled cart road in Pahang is one that connects Tras, a rising town seven miles from Raub and 47 from Kuala Lipis, with Bentong, where alluvial tin mining has recently been started on an extensive scale. Its length is 21 miles.

Among unmetalled earth roads, the chief is the one from Raub to Batu Talam in the Lipis valley, a distance of 16 miles. Another earth road is in course of construction from Kuala Lipis along the Jelai river to Kuala Tui, a gold-mining village. The old bridle path, which used to be the only means of communication between Pahang and Selangor prior to the completion of the Trunk Road, is still unkept for 27 miles between Penjum and Gali and for short lengths between Raub and the Selangor boundary. A bridle path is also maintained between Bentong and Ginting Bidai, the other junction with the boundary of Selangor, 29 miles in length. There are altogether about 75 miles of bridle paths in the State, and but a few miles of metalled town streets. Rivers and native paths, form the chief and only means of internal communication. The approximate length of waterways in Pahang navigable for ordinary river cargo boats is about 400 miles.

Land.

But an insignificant fraction of the total area of the State is either owned or occupied.

There has never been any great outside demand for land for permanent occupation in this State, except, perhaps, in

the immediate vicinity of a few of the more prosperous towns and mining centres.

As in the other States of the Federation, the alienation of mining and agricultural land is regulated by the Land and Mining Enactments, which can be either obtained locally or seen in the Library of the Colonial Office in London. In the case of large areas, the efficient working of which would necessitate a considerable outlay, special terms are usually granted to *bonâ fide* investors and settlers.

As in the other States, all manual labour in Pahang is performed by Asiatics, chiefly Chinese and Tamils. The Pahang Malay does not believe in working to the extent which is customary among most races. If what he earns in a week will keep him in food for a fortnight, as it usually does, he will not leave his village until his money is nearly over. Almost all the labour, therefore, has to be performed by alien immigrants. Labour

Compared with the ruling rates in the more advanced States of the Federation, wages in Pahang are high, and labour is as scarce on the spot here as it is abundant elsewhere.

In the tin and gold mines the coolies employed are almost exclusively Chinese. For road and earth work the labour force is composed almost entirely of Indian Tamils. Cart and carriage owners and drivers are chiefly Bengalis. The few Javanese in the State work as gardeners and syces, and sometimes make spasmodic attempts at mining or planting. Domestic servants are almost all Chinese, though a few Singhalese are also employed as such. The work on which the bulk of the Malays are engaged is planting and tending their rice fields, searching for jungle produce when money is scarce, boat-building, and acting as boatmen on Pahang rivers.

With the exception of the majority of Chinese working in mines, all labourers come under the category of free labour, *i.e.* men who have come into the State at their own expense in search of work. The imported Chinese coolie under indentures is called a *Sinkeh*. His transport is paid by the employer, and, including advances to the coolie, it costs, on the average, about \$60 to bring a *Sinkeh* to Pahang from Singapore. In the interior districts the cost is as high as \$75 a man. This initial outlay is generally repaid by the labourer by small monthly instalments, and he then becomes a *Laukeh*, free to work or not as he pleases. The *Sinkeh*

system has, in the past, unfortunately proved somewhat of a failure in some mines in this State, as the mortality among the coolies has, of recent years, been high. Care has therefore to be exercised in selecting coolies of good physique, so as to enable them to withstand the attacks of beri-beri, fever, dysentery, and other climatic diseases to which men working in hitherto unopened jungle country are liable to fall victims long before they have repaid the expense incurred in their importation.

The ruling rates of pay for coolie labour in Pahang vary in the different districts, being higher in the upper country than in the lower, as the following table will show :—

	Upper Pahang.	Lower Pahang.
Chinese Sinkehs ...	\$7 to \$9 per mensem. ...	\$5 to \$7 per mensem.
Chinese Laukehs ...	\$12 to \$15 per mensem. ...	\$10 to \$12 per mensem.
Free Tamils ...	45 to 65 cts. per diem. ...	30 to 40 cts. per diem.
Boatmen ...	40 to 50 cts. per diem. ...	30 to 40 cts. per diem.

In the case of Chinese and Tamils, these rates are usually paid in addition to house accommodation. The boatmen, who are all Malays, find their own quarters when ashore if they happen to be hired for a limited period or for any specified trip or work. When a boatman is paid a monthly salary, his employer provides him with free quarters. In the central districts of Pahang, Chinese and Tamil coolies are not available as there is no demand for them there. In case they are required, they have to be brought from other places and special terms have to be made as to wages.

Skilled native labour, such as carpenters, brick-layers and masons, boat-builders, fitters, engine-drivers, etc., is scarce, and commands rates of pay ranging from \$1 to \$3 a day. The material obtainable is inferior and is probably not worth the money demanded.

Agriculture.

The agricultural resources of the State have been very slightly developed. This is due partly to the thinness of the population (6 per square mile); partly to the ease with which natives can obtain profitable employment in the mines, on the roads, as boatmen, &c.; and partly to the natural indolence of the Malays, which prevents their turning their attention to the cultivation of any produce, other than what is actually sufficient for the supply of their own immediate wants.

On the establishment of British Protection in 1888, practically the whole of Pahang had been parcelled out by the Sultan in large concessions, almost all of which conferred exclusive mining as well as planting rights. The latter were never utilized to any appreciable extent, and the result is that no agricultural progress has to be recorded. Less than 56 square miles are under permanent cultivation in a State 14,000 square miles in area.

European planting enterprise, as it exists in Ceylon and India, is unknown on the east coast of the Malay Peninsula. In past years small areas of coffee were opened up by one or two Europeans in Pahang, but were soon abandoned. At the present time, the only European-owned plantation in this State is at Kuala Pahang, where 2,000 acres of land are being planted with coconuts.

In spite of the fact that but little is at present known of the suitability or otherwise of land in Pahang for the cultivation of products usually grown in the tropics, such as coffee, tea, sugar, pepper, gambier, rice, etc., there is no reason to suppose that the soil is not suitable for the cultivation of these and other tropical products. The obstacles to planting enterprise on a large scale in this State are at present numerous. Labour is scarce and expensive; transport facilities are few and transport expenses are high; means of communication are defective and slow; the country is practically unknown to the outside world; these are some of the drawbacks which have hindered progress in the past.

In the appendices to this handbook, full information, supplied by planters of experience, is given as to the method and cost of opening estates in the Malay Peninsula, and on kindred matters. It should, however, be noted that all this refers only to the States of Perak, Selangor and Negri Sembilan. In Pahang, conditions are different and adverse; and the estimates of expenditure supplied should be increased before they can be held to apply to this State under present circumstances.

The chief products of native cultivation in Pahang are rice, betel-nuts, coconuts, sugar-cane, maize, bananas and fruit of many kinds. Little of these products, with the exception of a small quantity of betel-nuts, is exported, and the State is largely dependent on imported rice for its annual food supply.

The natives only plant one crop of rice in twelve months, although each crop comes to maturity in little over half that time. It is the object of the Malay to obtain sufficient rice

for his own immediate requirements, and possibly a small quantity for sale, the proceeds of which will be sufficient to defray the small cost of his raiment and other personal expenses. When, as is often the case, the rice is insufficient, he ekes out a living by working rattan, gutta and other jungle produce. Never does it occur to him to grow sufficient to repay the trouble of export.

Roughly speaking, each adult male Malay consumes from four to five pikuls (532 to 665 lbs.) of rice per annum. An average Malay family will consume from 18 to 22 pikuls (2,400 to 3,000 lbs.) of rice per annum. In favourable seasons, which are unfortunately rare, the average rice planter in Pahang obtains from 800 to 1,000 gantangs (5,400 to 6,750 lbs.) of padi, or unhusked rice, yielding from 20 to 25 pikuls (2,660 to 3,325 lbs.) of husked rice, thus leaving a small margin for sale. During bad years, the average planter's crop sinks to between 250 and 400 gantangs (1,500 to 2,400 lbs.) of padi, yielding from six to ten pikuls (800 to 1,300 lbs.) of rice. The natives then have resort to maize, or to rice purchased from their more fortunate neighbours or from the Chinese traders who ply their boats on the rivers. From these figures it will be seen that even under favourable circumstances only a small margin remains over and above the requirements of the individual cultivator, and when it is remembered that a large portion of the population of the State are consumers, and not planters, of rice, it will at once be seen that under the present system Pahang cannot grow a supply of rice sufficient for its wants.

The continued poorness of the rice crops in Pahang is in a great measure due to the primitive modes of cultivation employed by the Malays, to the inefficient implements used, and to their persistent disregard of some of the first principles of agriculture. Various other causes also contribute to the same result.

There are three descriptions of rice or padi land in this State, *viz* :—

- (i.) Wet or swamp land, known locally as *bendang*, *paya*, or *sawah*.
- (ii.) Plough land, or *tanah tenggala*.
- (iii.) Hill land, known as *ladang*, *tanah tugal*, or *huma*.

Wet padi land, which alone of the three kinds can be planted annually without giving the fields a rest, is often

irrigated rudely by artificial means, a combination of local land owners being formed to defray the expenses of the undertaking, and it is curious to note that Malays from the neighbouring State of Kelantan are frequently hired by the natives of Pahang to do the necessary manual labour of digging trenches, the natural indolence of the latter rendering them disinclined to undertake this work. In several parts of Pahang, padi fields are situated in natural swamps, and these are, of course, much easier to plant in than irrigated areas.

Plough land consists chiefly of flat alluvial tracts, many of which are situated near the lower reaches of the Pahang river. This land is not irrigated, the crop being entirely dependent for such moisture as is provided by rain and dew.

Owing to the uncertainty of the seasons, this sometimes proves insufficient, while at others the crops are destroyed by floods. Plough land cannot be continuously cultivated year after year. It is usually planted for four or five seasons, and is then allowed to lie fallow for the same period before it is used again.

Hill padi is generally grown along the sides of low hills, but often on flat land above flood level. In former years this mode of planting entailed the destruction of valuable timber, but as *ladang* cultivation is discouraged by Government, new fields are now nearly always made in secondary jungle.

Hill or dry rice gives the smallest return, but as it requires little care after the padi is sown, it is therefore a favourite method of planting among Pahang Malays. Swamp rice yields the best crop, but it also entails the most labour and is proportionately unpopular. The yield of *tanah tenggala*, or plough land, is somewhat more than that obtained from *ladang*, or dry fields.

Manure is quite unknown in rice culture in Pahang, but owing to the large quantities of vegetable matter left to rot upon the land every year, the impoverishment of the soil is not so marked as might have been expected.

The implements employed in planting and harvesting are most primitive and inefficient. The plough used is a clumsy wooden instrument which barely succeeds in scratching the surface of the soil; no harrow is used; and the *tuei*, which is almost universally employed for the purposes of reaping, is a small semi-circular blade which is only capable of cutting one ear of ripe grain at a time, thus rendering the process

of gathering the padi peculiarly slow and painful. Half-a-dozen reapers with this instrument will only reap one *igu* of land in 15 days, (an *igu* is as much land as a single yoke of oxen can plough in a season), whereas with the *sabit*, a kind of reaping-hook, which, in some places, has been introduced by natives of Sumatra, the same amount of work can be done by two persons in three days. In some districts the use of the *sabit* is being adopted by the natives of Pahang, but, in most places, they, while admitting the superiority of the Rawa tool, are too true to their conservative instincts to be willing to accept the innovation.

The work of cultivation is shared by men and women, the latter planting out the young padi grown in the swamps and reaping the crop and preparing it for use.

The most serious obstacle to the cultivation of Pahang rice fields lies in the frequent attacks of rinderpest among buffaloes. The Pahang Malay, who does not believe in manual labour, is entirely dependent upon his cattle for the cultivation of both wet and plough land, and in districts which have been visited by the disease the crops have naturally suffered. Another reason exists for the paucity of the rice supply in this State. The crops are often very insecurely fenced in, the natives often being satisfied with a charm or *tangkal babi*, which consists of a line hung upon uprights, under which it is piously hoped that no pig will pass. Against rats, mice, and bats, noted enemies of the padi crops, no precautions are taken other than certain incantations and magic ceremonies which are supposed to protect the crops from the ravages of these vermin.

Legislation for regulating padi cultivation has recently been introduced and has already had a beneficial effect. Government has, by passing a law under which the dates for the various stages of planting are fixed by local authority, attempted to prevent, as far as possible, the destruction of crops by flood or drought, and the damage by pigs, rats, and mice is also reduced by this means owing to the fields being cleared and planted simultaneously. Efforts have also been made by the introduction of new seed from the Western States, to improve the crops and increase the production of rice. It is generally admitted, however, that the only way of largely increasing the area of land under padi cultivation in Pahang is by the introduction of foreign settlers, but the prospect of rice planters from other parts of the Peninsula coming to Pahang to settle permanently is unfortunately, owing to various reasons, remote.

The following table shows the quantity of rice imported into Pahang every year during the past eleven years:—

1890	...	...	...	33,461	pikuls.
1891	...	...	...	21,526	„
1892	...	...	...	26,249	„
1893	...	...	...	20,000	„
1894	...	...	...	43,418	„
1895	...	...	...	24,923	„
1896	...	...	...	31,984	„
1897	...	...	...	57,864	„
1898	...	...	...	32,300	„
1899	...	...	...	58,897	„
1900	...	...	...	48,226	„
Total				...	398,848	pikuls.

This gives an average of 36,259 pikuls, equivalent to 2,153 tons of rice brought into the State annually. The imported grain is considerably more than is required for the consumption of the non-agricultural classes of the population, and it is thus apparent that a large quantity of it goes to feed the Pahang rice planters themselves. The State is spending, on a moderate computation, about \$200,000 a year in rice, which ought to be grown on the hundreds of thousands of acres of waste land now lying idle. The encouragement of the culture of rice is, therefore, one of the most important subjects to which attention can be drawn.

In the Tembeling district gambier is planted on a small scale and appears to thrive. None of it is exported, but the quantity produced is sufficient to supply the planters with all necessaries. In Johore and other places, this product is generally grown in connection with pepper, because the refuse gambier is a good manure for the pepper vine; but in Pahang gambier is planted alone, and that solely by Malays. No expenditure is incurred in this State other than the actual labour—which is done, in his leisure hours, by the planter himself and by the members of his family—required for keeping the plantation fairly clean, picking the leaves, and preparing the article for use. The average profit earned by a gambier planter in Pahang is from \$25 to \$30 per year per acre.

Other products cultivated by natives in Pahang are tapioca and coconuts. Chinese have taken up comparatively large areas for the former in the Kuantan district, and a few small blocks of the latter are planted on the coast.

Mining.

Prior to 1888, Pahang mines, such as they were, had been developed solely by Malays and Chinese, working with the most primitive appliances, their pumping machinery consisting either of buckets attached to long poles, or of Chinese water-wheels, and their crushing apparatus of rice-stampers tipped with iron. All native mines are merely open workings, very ineffectively developed. As an instance of this may be mentioned the old Raub mine where the result of ten years' continuous working (1879 to 1888) was, in the latter year, a hole about 40 feet square at the surface, with a depth of about 20 feet.

On the introduction of the Residential system into Pahang in 1889, it was found that all the land in the country of any known value had already been parcelled out by the Sultan by means of "concessions" for mining and planting. There were thirty-nine of them in all, varying considerably in area, ranging from two to several hundred, or even thousand, square miles. They were very indefinite in terms, but, in all of them, a royalty of ten per cent. on minerals was reserved to the Sultan, and the import duty on opium was fixed at a nominal figure.

By virtue of a Proclamation which had been issued in 1885, these concessions were modified by the new Government, and were recognised on the following terms:—

- (a.) Five years were allowed for prospecting purposes, so as to enable the concessionaires to test the value of their properties. On the expiration of this period, leases were promised for such areas of land as the concession-holders could then show their ability of working, or causing to be worked, effectively and continuously, during the terms of their concessions.
- (b.) The preferential opium royalty was abolished, and duty was levied on the drug in accordance with the rate in force throughout the State. The royalty on minerals was reduced from 10% to 5% in the case of gold and from 10% to 8% in the case of tin.

These terms were intended to give every encouragement and assistance to *bonâ fide* enterprise; whilst, by providing for effective and continuous working, they would prevent rich mining districts from being unproductively locked up for indefinite periods. Much was naturally expected from these concessions, but, beyond a little prospecting and considerable

share-dealing, the results were exceedingly disappointing. Luckily, however, almost all of these concessions which had not been worked have since been cancelled, thus throwing open to the public the areas hitherto comprised in them.

Most of the European companies now working in Pahang are engaged in the development of mines originally opened by natives. The chief of these are Raub, Penjum, Selensing, Tui, and Kechau. Of these, the Selensing gold mine is perhaps the most curious. It is situated in a small valley surrounded by low hills, which in some forgotten period must have been the scene of very extensive mining operations. The surfaces of these hills are honeycombed with perpendicular shafts, circular in shape, which in some instances penetrate to the water level below the surface of the valley, a depth of considerably over 100 feet. Many of these pits are placed so close together that a wall of rock not more than two feet thick separates them one from another. The antiquity of these workings is attested by the apparently virgin forest which clothes the hills in which they are situated, large slow-growing trees being in some instances found with their roots centred in the sides of the shafts. Though more or less choked with *débris*, the pits are, for the most part, in a wonderful state of preservation. The operations of these ancient miners were not, however, wholly confined to the sinking of circular shafts, for levels and stopes, similar in character to those used by the European miner of to-day, also formed part of their scheme of excavation. The department of mining in which the chief weakness of these people would appear to have lain, was evidently that of their pumping appliances, since none of these excavations are found to extend far below the level of the valley where the miners would first have had to contend with any considerable influx of water.

No clue has as yet been obtained which might serve to indicate the race to which these miners belonged. The mode of mining employed by them differs radically from that in use among the Chinese, and the Malays possess no tradition on the subject, though they commonly speak of the miners as having been of Siamese origin. It must be remembered, however, that the Malays of the Peninsula are wont to attribute to Siam anything which is clearly neither the work of themselves nor of the Chinese. Whatever the race may have been, it is evident that it must have attained to a considerable degree of mechanical skill, and presumably to a fairly high state of civilisation; and yet, from an examination of the excavations, one is led to believe that the race

which mined them must have been of a somewhat more diminutive stature than either the modern Malay or Siamese. From the appearance of many portions of these workings, it would seem probable that the work of mining was suspended suddenly and never resumed, possibly on account of war, an epidemic, or some other public calamity. In many places rich stone had been broken down, stacked ready for transport, and then suddenly abandoned, and in some of the levels and stopes chutes of ore had been partially worked and left in a manner which can only be explained by the hypothesis of a sudden interruption.

Pahang admittedly possesses great internal resources and considerable mineral wealth, but the proper development of these is beset with many difficulties. Surrounded as the State is by some of the richest and most easily worked tin fields in the world, the mineral wealth of Pahang would need to be well nigh fabulous to enable her to compete successfully with her neighbours, so long as she continues to labour under the many and heavy disadvantages which at present cripple her.

The principal gold mines in Pahang are situated at Raub, Penjum, Selensing, Tui, and Kechau. In all these places gold had been profitably worked by natives, in a primitive fashion, long before the British entered the State. Since 1889, however, these localities have been worked by European companies. The average export of gold from Pahang between 1895 and 1900 has been about 20,000 ounces a year.

In Pahang the tin mining industry, which has played so prominent a part in the development of Perak and Selangor, is still in its infancy. The principal alluvial tin mines in the State are situated in Bentong, Tras, Batu Talam, and the Lipis valley. Nearly all the ore hitherto won in these places is from the alluvial washings, technically termed *lampan* workings as opposed to the *lombong*, or large alluvial mines, which are the most usual modes of mining among the Chinese. The average output between 1895 and 1900 has been about 10,000 pikuls per annum.

The principal lode tin mines in Pahang are those situated at the head-waters of the Kuantan River, which falls into the China Sea some miles to the north of the mouth of the Pahang River. These workings are the only extensive lode tin mines in the Peninsula. The results obtained from them have been satisfactory.

The expenses attendant on mining in Pahang are great, and this fact presents a marked contrast to conditions in the States on the West Coast. The vast alluvial deposits of tin which have been the source of the prosperity of Perak and Selangor are exactly suited to the requirements of Chinese capitalists. They can be worked with comparatively small quantities of machinery, and do not, therefore, call for the expenditure, as an initial step, of large capital sums. The working of gold and tin reefs, however, more especially in a country where the huge quantities of water with which the miner has to contend make heavy pumping appliances indispensable for even prospecting operations, entails the sinking of considerable sums before any return can be looked for, and this is a prospect which few Chinese capitalists are in a position to face. Pahang must therefore look principally to European capital for its development.

Prospecting and mining for gold and tin in this State should not be undertaken by poor men, but it certainly offers a good probability of a profitable result to individuals or corporations with sufficient means who will vigorously undertake it.

The following table shows the quantity of gold and tin exported from Pahang since 1800 :—

Year.			Gold. Ounces.	Tin. Pikuls.
1890	...	...	930	1,522
1891	...	...	1,227	2,451
1892	...	...	3,509	2,765
1893	...	...	9,616	3,026
1894	...	...	11,805	7,435
1895	...	...	15,099	8,348
1896	...	...	21,300	6,759
1897	...	...	26,420	6,597
1898	...	...	22,200	11,730
1899	...	...	18,507	13,465
1900	...	...	17,048	15,728
Total	...	...	<u>147,661</u>	<u>79,826</u>

The forests of Pahang are of vast extent, practically untouched, and both in the coast and interior districts *Economic products.*

abundant supplies of excellent timber are available. The best hard woods are Chengal, Merbau, Tembusu, Bilian, Giam, and Medang Tandok, all very valuable and commanding good prices in the market. Other good woods are Balau, Klat, Petaling, Meranti, Perawan, Kulim, and Penaga. A great many other kinds are to be had in abundance. Of the woods mentioned, Chengal (*Daphniphylopsis capitata*) is the most valuable and always finds a ready market. It is hard, heavy, dark and close grained, and resembles Teak. It is the most durable of all native woods. A pretty wood obtainable here is called Kamuning. It is a timber *de luxe*, resembles satin-wood, and is chiefly used for ornamental and fancy work, such as kris sheaths, sireh boxes, &c.

Pahang woods are most suitable and are much used for timbering mining shafts, buildings, bridges, and boats. All the timber required in the State for these purposes is cut locally. A few years ago the timber industry was in a flourishing condition and an export trade was carried on. Recently, however, the industry has declined.

Various kinds of jungle produce are to be had in great abundance all over the State. Among those most energetically worked may be mentioned gutta, rattans, gharu or eaglewood, and resins.

A considerable quantity of different kinds of gutta has in the past been exported from Pahang. There are several varieties obtainable, but the most valuable is called Taban (*Dichopsis Gutteri*), which is an essential material in the construction of submarine cables, and is only to be found in the southern part of the Malay Peninsula, Sumatra, and Borneo. It is a very slow-growing tree, and, when it has attained a girth of three feet in circumference, which it takes about thirty years to do, it yields about two catties, or $2\frac{2}{3}$ lbs. of gutta. Pure Pahang taban commands a high price in the Singapore market, and the inducement for its collection is consequently great. But gutta-hunters, especially in a densely wooded country like Pahang, do not, as a rule, scruple about the destruction of immature trees in order to obtain a few ounces of the gum from each, and their action in this respect has compelled the Government to endeavour to protect its rubber-bearing forests by prohibiting, under pain of heavy penalties, the collection of the taban variety of gutta.

The following kinds of gutta are at present being worked in Pahang:—percha, putch, grep, rambong, sondik,

jelelong, and palan. The first of these should not be confounded with taban, to which it is much inferior in quality. The prices obtained for these varieties are considerably smaller than that paid for taban.

Considerable quantities of rattans are exported annually, no less than a dozen different kinds being regularly collected. They grow wild and in great profusion throughout the State. No attempt has ever been made to cultivate them, though there seems to be no reason why they should not be planted and give good returns. In this connection it should be noted that "*Malacca canes*," which are made into walking sticks, is somewhat of a misnomer. This cane grows wild throughout the Peninsula, and is by no means, as its name would seem to imply, a product the growth of which is confined to Malacca. The local name for it is *rotan semambu*.

Appended is a table giving the approximate values of all kinds of jungle produce exported through the coast ports of Pahang during the past seven years:—

Year.	Timber and Firewood.	Gutta.	Rattans, Gharu or Eaglewood, Resins, &c., &c.
	\$	\$	\$
1894	11,884	112,732	66,621
1895	11,413	42,720	78,202
1896	12,622	17*	98,938
1897	75,592	73,041	133,945
1898	46,487	108,280	55,407
1899	33,051	196,229	61,069
1900	43,249	195,670	93,005
Total	234,298	728,689	587,187

* Gutta working prohibited.

Fruits that are indigenous to the Malay Peninsula are as abundant in Pahang as in the other States, and the variety is equally great. They are cheap. *Fruit.*

The two most prominent Malayan fruits are the Durian and the Mangosteen. The former is a large fruit about the size of a man's head, with a strong thorny

covering, and is a great favourite with all natives and with many Europeans. Its smell is offensive, but with this there is strangely associated a delicious flavour which gives it, notwithstanding the odour, a foremost place among tropical fruits. The durian is also much liked by other animals besides man. Bears, squirrels, tigers, elephants, cattle, horses, goats, monkeys, and dogs all eat it when they get the chance. The mangosteen is a delicious and wholesome fruit, about the size of an orange, and, in the opinion of many, is preferable to the durian. But natives much prefer the durian.

During the seasons owners of orchards live entirely upon the sale of their fruits. In many cases the produce of the gardens is farmed out, and this brings in an income to the owner without any trouble or labour on his part to collect the fruit for the market.

Vegetables.

Good vegetables are rarely obtainable in Pahang. A little gardening is done by Chinese in the vicinity of one or two towns, but the produce they sell is not of high quality. European vegetables are not grown, but they may be purchased in limited variety preserved in tins.

Live Stock.

The number of buffaloes in Pahang is small; 17,576 according to a cattle census taken at the end of 1900. Almost all these animals belong to Malays who use them during the planting season for ploughing their padi fields. When not so employed, that is, for about nine months in the year, the buffaloes are left to their own devices and spend most of their time in the jungle. A few of these animals belong to Chinese who use them for dragging timber from the jungle.

The number of bullocks in the State is returned at 388, while of horses there are probably not more than a score. Goats and sheep are almost as rare. Pigs are reared in the vicinity of towns by a few Chinese for the butcher, and poultry is as scarce as it is poorly fed and of inferior quality. This exhausts the list of live stock in Pahang, which is a country that is not well adapted to the breeding of any kind of stock.

Rinderpest frequently plays great havoc among cattle in Pahang. During 1900, over 5,000 buffaloes and many bullocks succumbed to the disease.

Fishing is an important source of livelihood to East Coast Malays in general. No restrictions in the shape of taxes are placed on river fisheries in Pahang, because the fish caught is primarily intended for the consumption of the peasants themselves, and, except in a few instances, is not meant for sale. In the interior villages, most of the fishing is done by women who are satisfied with sufficient for their own immediate requirements. The fishing class of natives in places such as Penang, Singapore, Ceylon, Burmah, and India, is notoriously a turbulent one, and disputes, often amounting to serious disturbances, are by no means uncommon among them. But, in Pahang, the reverse is the case, and there is no instance on record in river fisheries in this State in which any dispute or trouble has been caused over questions connected with fisheries. All Malays in Pahang have an equal right to fish in rivers, and each owner of a swamp or pond has the exclusive right of fishing in his property, and thus, by the observance of these simple and primitive rules, no trouble is ever caused.

Fish and Fisheries.

There are four modes of river fishing practised in Pahang:—

(i) nets, (ii) traps, (iii) stakes, (iv) lines. Of the first, there are five kinds of nets used, called, respectively, *anggo* or *doran*, *chendek*, *jala*, *jaring*, and *pukat*. These are all worked each in a different manner, but, in point of general acceptance and popularity, the *pukat* comes first and the *jaring* next, a considerably larger quantity of fish being caught by means of these two nets than is the case when any of the others are used. Of traps, there are no less than eleven kinds employed in different parts of the State, viz.:—*bubu* or *lukah*, *ranggas*, *singgit*, *sukap*, *tuar*, *setapu*, *temilan* or *pengilan*, *terubin*, *sibar*, *tanggok*, and *jut*. Most of these traps are made of rattan, or some specially light wood, such as *bembau* or *kerdau*, and those most fancied by the people who use them are *bubu* or *lukah*, *ranggas*, *setapu*, and *sukap*. There are four kinds of fishing stakes used, named, *blat*, *jeremal*, *langgai*, and *merian*, and of these *blat* finds most favour. With regard to line-fishing, the term *joran* is applied to the rods, and the reels are called variously, *pupal*, *kekili*, *pret*, and *ampoyan*. Hooks, in general, are termed *kail*, but *kail rendang* is applied to a hook baited with vegetable matter, and *kail pepas* is a hook used in the way in which a fly-fisher uses his rod.

River fish is obtainable in great variety, there being no fewer than 43 different kinds in Pahang waters. They are

not, however, wholesome eating. Several kinds of fish are also found in swamps and ponds, these being mostly caught for food by the poorer classes of Malays. Every one in Malaya has either seen or heard of the pugnacious little fish called *Karin*. Malays rear these tiny things and have sport out of them by matching them to fight each other, laying bets on the result, which always means the death of one of the tiny combatants if they are allowed to fight to a finish. The drugging of fish by means of the *tuba* root, and then spearing them as they floated stupefied on the surface of the water, used to be a common practice in Pahang, but is now seldom had recourse to. A *tuba* fish is a stock entertainment among Malay Rajas whenever they are visited by a Governor or other exalted official. The use of both *tuba* and dynamite for taking fish is now forbidden in this State.

The sea fisheries are, of course, more lucrative than the fresh water ones, but the industry is one that only a few Pahang Malays engage in. In fact, one can seldom see a boat going out to sea with a crew composed solely of natives of the country. The men employed in the sea fisheries are principally Kelantan and Trengganu Malays, numbers of whom enter Pahang at the beginning of the season, and who, in many cases, settle here permanently.

The sea fishery brings in a fair revenue to Government, as the boats are licensed, a sliding scale of dues being in force. There is also an export duty of 12½ cents per pikul payable on all fish sent out of the country. In cases where fishing stakes are used at sea, a small monthly charge is levied. A fairly large quantity of salted and dried fish is exported annually from the coast districts of Pahang, but this branch of the fishing industry has not yet reached such proportions as is the case in Trengganu and Kelantan, from which States a considerable business is done in this line.

The principal fishing settlements in Pahang are at Rompin, Kuala Pahang, Penoh, Berserah and Gebing—all on the coast. Of these the most important is Berserah, in the Kuantan district. The Kuala Pahang fishermen are almost entirely occupied in supplying fresh fish to Pekan, the former capital of the State and still the Sultan's Seat, and the rapidity with which boatloads of fish are there bought up for local consumption is remarkable. At Kuala Pahang, both nets and lines are the methods employed, the boats used being the *koleh*, a small boat with a crew of three, and, during rough weather, the *jalak*, a large seaworthy boat measuring about 30 feet long by 10 feet beam. There are

other kinds of boats used in the different settlements, and their Malay names are:—*pukat chang*, *pukat dalam*, *pukat tangkul* and *pukat tanggok*. The first named is an expensive boat, costing about \$250 with net complete, and the *pukat dalam* is also dear, as it costs about \$200 to buy one with all the tackle complete.

Sea fish is obtainable in large quantities and in great variety, there being nearly a hundred different kinds sold on the Pahang coast. It is, however, impossible to keep them fresh for more than a few hours. The inhabitants of inland districts, therefore, can never get a bit of sea fish unless they go to the coast. The price has risen enormously during the past few years, quite one hundred per cent. over and above the rates ruling in 1889. All along the Pahang coast, sea turtles abound, and their eggs, found in the sand in large quantities, are much prized by the natives for food.

The only diving fishery in Pahang is that carried on, on a small scale, at and near the Island of Tioman, and the various islets belonging to this State on that part of the coast. Diving is carried on entirely by the *Orang bersuku*, or *Sakai Laut*, who are natives of the Aor and Tinggi Islands, and who are capable of diving, without artificial means, to a considerable depth. They obtain a certain quantity of *beche-de-mer*, and also a shell known as *gewang*, from which the common pearl buttons are made. They are timid and inoffensive, and are now so far under control that they take out yearly licenses for fishing, returning, however, during the north-east monsoon, to their homes on the Aor and Tinggi Islands. During the calm weather these people live almost entirely in boats, and may then be frequently met with in the small bays and inlets of Tioman, Sri Buat, and the other neighbouring Islands. It is believed that these *Sakai Laut* occasionally bring up pearl oysters, and it is probable that there may be pearl beds round these Islands.

Fresh water fisheries in Pahang are of no account, but the sea fisheries, though still in their infancy, form an important industry. The people engaged in them are peaceful and law-abiding, and disputes among them are of very rare occurrence. In every fishing community in Pahang the fishermen elect a headman whom they obey and depend upon in all matters concerning their welfare. There have been cases on record in which, simply because they wish to follow their headmen, whole villages have removed from one part of the coast to another. Similarly, the reason for their

arrival in Pahang often given by new comers from Kelantan and Trengganu, is that their former headman has removed to this State, and they want to be with him. The fishing population along the Pahang coast is increasing.

Water supplies. Generally in Pahang it is not at all difficult to find abundant water, rivers being numerous, but in some towns, notably at Kuala Lipis, it is not always easy to obtain a sufficient supply.

At Raub, a scheme for a proper public water supply, brought in from hill springs, stored in reservoirs, and distributed by means of stand-pipes, has just been completed, and is a great boon.

A somewhat similar scheme for Kuala Lipis is now under consideration, but the water will be obtained from the Jelai River which is swift and not appreciably polluted by the few scattered villages up-stream.

At Pekan, Kuantan, and elsewhere in Pahang, water is obtained from rivers which answer present requirements. The use of surface wells is discouraged in the towns.

Cost of living. The cost of living in Pahang is heavy. In the coast districts of Pekan and Kuantan it is less expensive than in the upper country, but even in those places the general rise in the cost of everything in the east has made living more expensive than it used to be some years ago.

The domestic servants in Pahang are almost entirely Chinese, but it is often difficult to get satisfactory men.

The following are the ruling rates of monthly wages for native servants :—

Cooks	...	...	...	...	\$15 to \$20.
[It is impossible to get a man for less than \$15.]					
House Boys	...	...	...	...	\$12 to \$18.
Gardeners	...	...	...	...	\$12 to \$15.
Water Carriers	...	...	...	...	\$10 to \$12.
Ayahs	...	...	...	...	\$15 to \$20.

A bachelor living by himself can engage a man who will act both as boy and cook on the wages of a cook.

Means of transport are at present somewhat limited. *Means of transport.* From Selangor to Pahang the Trunk Road, 83 miles in length, is maintained in good condition and is suitable for gharries, bicycles, and bullock carts. These conveyances, with the exception of bicycles, can be hired at both ends of the road, but the gharries obtainable are of an inferior description. Rickshaws, which are plentiful in the other States, and which are convenient for short distances, are not available in Pahang.

At the time of writing, an English company is making arrangements to place motor cars on the Pahang Trunk Road. This means of conveyance will supply a long felt want, and will be much appreciated by the travelling public.

The journey from Singapore to Upper Pahang, by steamer to Pekan, and from there up river by boat to Kuala Lipis, at present occupies about a fortnight. The Pahang River is navigable for shallow-draft steam launches, but there are none at present in the State. Boats for the river journey can easily be hired at Pekan, where also crews can be engaged.

The average rates of transport, which are high, are as follows:— *Rates of transport*

For Passengers :

By gharry	...	...	35 cents a mile.
By bullock cart	...	...	20 " " "

In both these cases the passenger has the whole gharry or cart to himself. Except in the case of natives, however, it is seldom that more than one person travels in a cart or gharry. The charge for a single seat in a bullock 'bus is 5 cents a mile. If one engages the whole 'bus then 50 cents a mile is the fare usually paid.

Goods over the trunk road are transported for short distances by arrangement with the cart-owner. The fare is usually 50 cents a mile for a fully laden cart. If a cart is engaged for a long distance, the rate is the same as for passengers, *i.e.*, 20 cents a mile. Forwarding agents in Kuala Kubu charge at the rate of \$3 a pikul for goods sent from there to Kuala Lipis, a distance of 83 miles.

River freight from Pekan to Kuala Lipis costs about \$1.50 a pikul. As an alternative, boats can be hired, but there is no fixed rate of payment, though a fairly large boat

can always be hired for from \$20 to \$30 for the trip. In that case, a crew has to be specially engaged. A boatman can be hired for \$10 for the trip, with \$15 for the steersman. If time is of no moment, from six to eight polers will bring a large boat, fully laden, from Pekan to Kuala Lipis in anything between three weeks and a month. That would cost about a hundred dollars for a boat capable of holding about 125 pikuls of goods. If despatch is desired, the journey can be done in about five days by poling both night and day, but then the crew will have to be doubled, thus doubling the expense. It should be remembered that in hiring a whole boat for a specified trip, the hirer is responsible that the boat is safely returned to the owner within a given time.

*Accommodation
for
Travellers.*

There are Government rest-houses at Raub, Kuala Lipis, Pekan, and Kuala Pahang. These are furnished and are in charge of caretakers.

The charge for occupation and use of bedroom is one dollar per head per diem. The rest-house keepers at Raub and Kuala Lipis will board visitors at a charge of \$2.50 a day, or at proportionate rates for single meals. At Pekan and Kuala Pahang there is no fixed charge, but the cost of a day's board will not exceed \$1.50 a head.

Should travellers prefer it, they can board themselves at any of the rest-houses, but in that case their own servants will have to cook.

Liquor is provided at current local prices.

Government Officers on duty take precedence of ordinary travellers in the matter of accommodation at Government rest-houses. A time limit of occupation is fixed for visitors, but they may continue their stay, provided sanction is obtained from the local authorities.

Stables are attached to the rest-houses at Raub and Kuala Lipis, and no additional charge is made for their use, but the visitor's horse must be attended to by his own syce.

In addition to the rest-houses, halting bungalows, in charge of caretakers, are situated at convenient intervals along the trunk road. Passing travellers may use these bungalows without charge. Food and refreshment can be obtained by arrangement with the caretakers.

Compared with the Western States, people in Pahang *Sanitaria.* are in an unfortunate position in not having a place conveniently situated to which they can go for the sake of their health. At present, whenever a change is required, one has to go to one of the sanitarium in the other States or the Colony.

There are no openings in Pahang for professional men, *Openings for professional men.* nor are there any for European artisans. The only professions represented in the State are the Medical, the Surveying and the Engineering, and these are represented by only a few gentlemen, almost all of whom are in the Government Service.

The few mining companies working gold and tin in the State usually get their assistants from England, America, or Australia, or engage them in Singapore.

There are at present no clerical openings in Pahang for *Clerks.* Europeans.

European domestic servants, both male and female, are *Domestic servants.* unknown in this State.

There are not many inducements for individual planters *Planters and Miners.* or miners to start business in Pahang on their own account. It must not be forgotten that this State is not a country for persons with small capital. Planting or mining enterprise, to be eventually successful in Pahang, demands large sums as preliminary outlay.

It is strongly recommended that Europeans should not come to Pahang in search of employment.

Pahang is divided, for administrative purposes, into five *Districts and Towns.* districts (Pekan, Kuantan, Temerloh, Lipis, and Raub), under the charge of European officers who are directly subordinate to the Resident.

The present capital of the State is Kuala Lipis, at the mouth of the river of that name. It is situated in the most prosperous and populous district in Pahang; is about 200 miles by river from the port of Kuala Pahang; is connected with Kuala Kubu, in the adjoining State of Selangor, by an excellent metalled cart-road 83 miles in length, and is practically in the centre of the Malay Peninsula.

As a place of residence, however, Kuala Lipis has its drawbacks. It is at times unhealthy; it is expensive; it is an interior station; its climate is not so good as that of the coast: and, lastly, it does not present many attractions to those who live in it.

The former capital of Pahang was Pekan, about seven miles by river from the port of Kuala Pahang. It is healthy; it is cheap; it is near the sea; it is within easy reach of Singapore; it is the seat of the Sultan and his Court; its climate is good; and, therefore, it is a desirable place to live in.

Other chief places in Pahang are:—Raub, a thriving town, the centre of the gold and alluvial tin mining industry of the State; Kuantan on the coast, the head-quarters of the district of that name in which the principal deep lode tin mines of the Peninsula are worked; Chenor, Temerloh, Pulau Tawar, agricultural centres situated on the Pahang River; Tras, Tranum, Bentong, rising towns in Ulu Pahang; Selensing, Tui, and Kechau, important gold localities in the Jelai valley; Tembeling, as noted for its earthenware as Pekan is for its mats and silk *sarongs* (the latter the national garment), finally, Tanjong Besar and Budu in the Lipis, two of the largest native *kampongs*, or villages, in the interior.

Inland communications.

Means of inland communication throughout Pahang, which are at present defective, are confined chiefly to the wide spreading river system. Travelling from place to place in the State still involves delay and discomfort, though matters have improved of recent years.

In the interior there are numerous native paths threading the jungles in every direction, and there are also jungle tracks which form inland connections with Kelantan, Trengganu, Perak, Selangor, and the Negri Sembilan. In Ulu Pahang there are paths from Pulai, a Chinese gold-mining settlement of some importance in Ulu Kelantan, to the Serau, Tanom, and Kechau districts; also from the Lebir in Kelantan to Ulu Sat, and from Dungun to Janing in Ulu Tembeling. There is a way from Gelating to Budu on the Lipis, used by Malays passing between Perak and Pahang, and there are paths connecting Pekan and Kuantan, Rompin and Johore, and also numberless other tracks leading to comparatively little known villages.

The Pahang River is the principal one in the State. From Kuala Pahang on the coast to Kuala Lipis, the present

capital, the journey is done by boat and usually occupies about a fortnight. The distance is about 200 miles, and the boat is poled against the stream. Going down river, however, Pekan can easily be reached in five days. Other navigable rivers are the Lipis, the Jelai, the Semantan, and the Tembeling. The first named is rock-bound and impassable beyond 17 miles from its mouth; and so is the Jelai beyond Kuala Medang, three days' poling up river from Kuala Lipis. The Semantan leads to Raub through the Bilute, and the Tembeling is the interior route to Ulu Kelantan. These are main streams. There are several minor rivers navigable for small craft only.

Sport.—There are practically no amusements in Pahang, *Sport.* and social attractions are *nil*.

Pahang is well stocked with big game of almost every description to be met with in the East, but its pursuit can only be undertaken by men with plenty of means and an abundance of time. Under the heading of "Sports," Part I. of this Handbook gives useful information as to the arms and ammunition required for big and small game shooting. Some of the best snipe-shooting in the Peninsula is to be had in Pahang.

APPENDICES.

APPEN

ENGLAND TO PENANG

No.	PORTS OF ARRIVAL.		NAME OF COMPANY.	PORT AND DATE OF SAILING.
1	Penang ..	Singapore..	P. & O. S.S. Company	London, Marseilles, Every week, Mail and Intermediate boats alternately.
2	— ..	Singapore..	Compagnie des Messa- geries Maritimes.	Marseilles, connecting with London by rail. Every 28 days by direct, and every 28 days by indirect route.
3	Penang ..	Singapore..	North German Lloyd (Norddeutscher LOYDS).	Antwerp, Southampton, and Bremen. Every month.
4	— ..	Singapore..	Nippon Yusen Kaisha (Japan Mail Steam- ship Company).	London, Southampton, and Marseilles. Every fortnight.
5	Penang ..	Singapore..	Austrian Lloyds S.N.C.	Trieste and Brindisi. Once a month on the 20th.
6	Penang ..	Singapore..	Glen Line	London.
7	Penang ..	Singapore..	Shire Line	London.
8	Penang ..	Singapore..	Mutual S.S. Company..	London and Marseilles.
9	Penang ..	Singapore..	Ben Line .. ..	.. .. .
10	.. ..	Singapore..	Royal Danish Line, Det Ostasialiske Kompagni.	Copenhagen, Antwerp, Gothenburg, and Port Said.

DIX A.

AND SINGAPORE.

FARES.	DURATION OF VOYAGE.	REMARKS.
Mail— 1st class, £61. 2nd class, £38. Intermediate— 1st class, £50. 2nd class, £35. Local passage, Penang to Singapore, \$25.	Mail— 25 to 26 days. Intermediate— 30 to 35 days.	By Mail, Passengers change at Colombo, but come direct by Intermediate. Overland fares, London to Marseilles, 1st class, £5; 2nd class, £4; above fares from London.
From London (by Rail)— 1st class, £61. 2nd class, £41 4s. From Marseilles— 1st class, £56. 2nd class, £37 4s. 3rd class, £20 8s.	22 and 23 days.	Calling at Marseilles, Port Said, Suez, Aden, Bombay, and Colombo. Table wine and certain other privileges are included.
Singapore— 1st class, 1,420 marks. 2nd class, 700 marks. 3rd class, 320 marks.	About 1 month.	The mark is at 20½ to the £
Singapore— 1st class, £35. 2nd class, £25.	31 to 40 days.	Also sail from Antwerp. All direct to Singapore.
2nd class, £30, and deck with food, £13.	.. .. .	2nd class only, mostly cargo. Transshipping at Bombay. An accelerated service with 1st class is run as far as Bombay, leaving Trieste on the 3rd, and Brindisi on the 4th of each month.
1st class, £35. No second class.	About 34 days.	———
1st class, £35. No second class.	35 to 40 days.	———
1st class, £30.	.. .. .	Good accommodation, but sail irregularly.
.. .. .	.. .. .	No regular service, and special arrangements must be made.
.. .. .	.. .. .	Only three steamers on the line. Very good accommodation.

No.	LONDON AGENTS.	PENANG AGENTS.
	<i>(P. & O. S.S. Co.)</i>	
1	P. & O. Company, 122, Leadenhall Street, London, E.C.	Gilfillan, Wood & Co.
	<i>(Compagnie Messageries Maritimes.)</i>	
2	West End Branch, 51, Pall Mall, S.W. ; C. Bertrand, Agent-General ; also Gellatly, Hankey & Co., 33, Gordon Street, Glasgow ; and Fletcher & Co., Mersey Buildings, James Street, Liverpool.	Boustead & Co.
	<i>(North German Lloyd.)</i>	
3	Keller, Wallis & Co., 32, Cockspur Street, Charing Cross, S.W. Phillips & Graves, Botolph House, Eastcheap, E.C.	Behn, Meyer & Co.
	<i>(Japan Mail Steamship Co.)</i>	
4	Nippon Yusen Kaisha, 9 & 11, Fenchurch Avenue, E.C. ; also at Glasgow, A. R. Brown, 24, George Square.	E. Boustead & Co.
	<i>(Austrian Lloyds S.N. Co.)</i>	
5	Hickie, Borman & Co., Billiter Street and Waterloo Place ; and Thos. Cook & Son, Ludgate Circus.	Schmidt, Kusterman & Co.
	<i>(Glen Line.)</i>	
6	38, Leadenhall Street, London ; MacGregor, Gow & Co., 1, East India Avenue, E.C.	E. Boustead & Co.
	<i>(Shire Line.)</i>	
7	Messrs. Jenkins & Co., 38, Leadenhall Street, London.	Sandilands, Buttery & Co.
	<i>(Mutual S.S. Co.)</i>	
8		Behn, Meyer & Co.
	<i>(Ben Line.)</i>	
9		Sandilands, Buttery & Co.
	<i>(Royal Danish Line.)</i>	
10		

AND SINGAPORE.

SINGAPORE AGENTS.	VARIOUS.
<p>P. & O. Offices. Collyer Quay. New Harbour.</p>	<p>Full details in free P. & O. handbook. Luggage allowed, first class, 33½ lbs.; second class, 168 lbs. Children from 3 to 12 years of age, half fare; one under 3 years free. Steamers touch at Marseilles, Port Said, Aden, and Colombo. Similar fares and sailings on homeward voyage.</p>
<p>De Bure, Agent. . . .</p>	<p>There are two routes— 1st. Direct, without transhipment, via Colombo, Suez, Port Said, and Marseilles, takes 23 days. 2nd. Transhipment at Colombo to Australian Line, 20 days. Tickets from Marseilles to London are issued at:— first class, £5; second class, £4; if booked at London Office, 3 cwts. of baggage free and heavy luggage conveyed free from Marseilles to London by steamer every week.</p>
<p>Behn, Meyer & Co. . . .</p>	<p>Touching at Genoa, Naples, Port Said, Suez, Aden, and Colombo. The second class accommodation is particularly good on this line. Children under 3 years of age, free. 40 cubic feet of baggage, free.</p>
<p>Paterson, Simons & Co. . . .</p>	<p>No transhipment necessary for Singapore. First class allowed 40 cubic feet of baggage; second class, 30 cubic feet. Steamers call at Colombo, Suez, Port Said, and Marseilles. Reduction of £10 for embarking at Port Said. Children 4 to 12, half-fare; one under 4, free.</p>
<p>Austrian Lloyd's Agents. Rantenberg, Schmidt & Co.</p>	<p>Free handbook issued. Baggage, 3 cwt. for first class, and 2 cwt. for second class is conveyed free from London to Port Said. If passengers travel by the ordinary boat, they have to supply their own food and lodging during the stay at Bombay. Tickets are interchangeable with the Messageries Maritimes Company. Call at Port Said, Suez, Aden, Karachi, Bombay, and Colombo.</p>
<p>Boustead & Co., 13, Collyer Quay, Singapore.</p>	<p>No second class. Other regulations similar to (4).</p>
<p>Boustead & Co. . . .</p>	<p>No second class. Other regulations similar to (4).</p>
<p>Boustead & Co. . . .</p>	<p>No regular service is maintained.</p>
<p>Paterson, Simons & Co.</p>	
<p>Guthrie & Co., Singapore.</p>	

MOVE-
STRAITS STEAMSHIP CO.,
Out-

Steamers.	Leave Singapore.	Arrive Malacca.	Leave Malacca.	Arrive Port Dickson.	Leave Port Dickson.
S.S. "Penang"	Monday, 5 p.m.	Tuesday 6 a.m.	Tuesday, 6.15 a.m.	—	—
S.S. "HyeLeong"	Tuesday, 4 p.m.	—	—	—	—
S.S. "Malacca"	Wednesday, 5 p.m.	Thursday 5 a.m.	Thursday, 5.15 a.m.	Thursday 9 a.m.	Thursday, 10.30 a.m.
S.S. "Ban Whatt Hin."	Friday, 5 p.m.	Saturday, 6 a.m.	Saturday, 6.15 a.m.	—	—
S.S. "Sappho"	Saturday 5 p.m.	Sunday 5 a.m.	Sunday, 6 a.m.	Sunday 10 a.m.	Sunday, 10.30 a.m.

Home-

Steamers.	Leave Teluk Anson.	Arrive Port Swettenham.	Leave Port Swettenham.	Arrive Port Dickson.	Leave Port Dickson.
S.S. "Penang"	Thursday, 5.30 p.m.	Friday, 6 a.m.	Friday, 8.30 a.m.	Friday, 2 p.m.	Friday, 3.30 p.m.
S.S. "HyeLeong"	—	—	Friday, 5 p.m.	—	—
S.S. "Malacca"	Saturday,	Sunday, 6 a.m.	Sunday, 8.30 a.m.	Sunday, 2 p.m.	Sunday, 3.30 p.m.
S.S. "Ban Whatt Hin."	—	—	Monday, 5 p.m.	Tuesday, 5 a.m.	Tuesday
S.S. "Sappho"	—	—	Tuesday, 5 p.m.	—	—

"Lady Weld" leaves Teluk Anson on Wednesdays and Saturdays for Penang, the "Malacca."

Only the "Lady Weld" and "Hye Leong" carry second class passengers. Deck excess, 20 cents per cubic foot.

Extra boats are sometimes run.

S.S. "Sappho," 532 tons, 18 first class berths;
S.S. "Malacca," 653 tons, 24 first class berths;
S.S. "Hye Leong," 492 tons, 12 first class berths

MENTS.

LIMITED.—STEAMERS.

ward.

Arrive Port Swettenham.	Leave Port Swettenham.	Arrive Teluk Anson.	Remarks.
Tuesday, 4.15 p.m.	Tuesday, 4.30 p.m.	Wednesday, 7 a.m.	1st and 2nd class passages.
Tuesday, 3 p.m.	—	—	—
Thursday, 4.15 p.m.	Thursday, 4.30 p.m.	Friday, 7 a.m.	—
Saturday, 4.15 p.m.	Saturday, 4.30 p.m.	Sunday, 7 a.m.	—
Sunday, 4 p.m.	—	—	Port Dickson, mails and passengers only.

ward.

Arrive Malacca.	Leave Malacca.	Arrive Singapore.	Remarks.
Friday, 8 p.m.	Friday, 8.30 p.m.	Saturday, 8.30 a.m.	1st and 2nd Class passages.
Saturday	Saturday	Sunday	—
Sunday, 8 p.m.	Sunday, 8.30 p.m.	Monday, 8.30 a.m.	—
Tuesday, 5 a.m.	Tuesday, 5 p.m.	Wednesday, 7 a.m.	—
Wednesday, 5 a.m.	Wednesday, 6 a.m.	Wednesday, 5 p.m.	Malacca, mails and passengers only.

returning thence on Tuesdays and Fridays, connecting with the "Penang" and 1st January, 1899.

passages by "Sappho" only. First class passengers are allowed half a ton of luggage ;

passenger licence, 385.

passenger licence, 240.

and 4 second class ; passenger licence, 230.

STRAITS STEAMSHIP CO., LTD.—RATES OF PASSAGE
FOR 1898.

—	Singapore.	Malacca.	P. Dickson.	Klang.	T. Anson.	Penang.	Remarks
<i>1st Class.</i>							
Singapore to ...	—	8	12	15	16	20	
Malacca „ ...	8	—	6	10	12	18	
P. Dickson „ ...	12	6	—	8	11	16	
Port Swettenham to	15	10	8	—	10	15	
T. Anson to ...	16	12	11	10	—	6	
Penang „ ...	20	18	16	15	5	—	
<i>2nd Class.</i>							
Singapore to ...	—	4	6	7½	8	10	
Malacca „ ...	4	—	3	5	6	9	
P. Dickson „ ...	6	3	—	4	5½	8	
Port Swettenham to	7½	5	4	—	5	7½	
T. Anson „ ...	8	6	5½	5	—	3½	
Penang „ ...	10	9	8	7½	2½	—	
<i>Upper Deck.</i>							
Singapore to ...	—	2	3	4	—	—	
Malacca „ ...	2	—	1.50	2	—	—	
P. Dickson „ ...	—	1½	—	1½	—	—	
Port Swettenham to	4	2	1½	—	—	—	

Second Class passage per S.S. "Hye Leong" and "Lady Weld" only.

Upper Deck passage per S.S. "Sappho" only.

Leaving Singapore, S.S. "Penang" on Mondays, and S.S. "Malacca" on Wednesdays, connect with the S.S. "Lady Weld" for Penang, for passengers and cargo.

For further particulars, see time-table.

1st June, 1900.

APPENDIX B.

The following hints on planting, and estimates of cost of opening estates for different descriptions of produce, have been compiled for this handbook by English planters of experience now resident in the Federated Malay States. Estimate No. 2 provides money to meet the cost of survey fees, purchase money and rent, but it should be noted that in No. 1 nothing has been allowed for purchase of the land, and in No. 3 none of the expenses above mentioned have been included. These figures can, however, be gathered from estimate No. 2.

Hints on Planting.

The cultivation of such products as tea, coffee, cocoa, pepper, gambier, tapioca, sago, rice, rubber, ramie, sugar, coconuts, nutmegs, is well suited to the soil and climate of the Federated Malay States, and all of these have been successfully grown, some experimentally only. Both the initial expense and the cost of production will be found to vary materially according to the district and the style of land fixed on, for instance, the nearer to a town the greater inducements as a rule are there to your coolies who work on the estate, consequently labour all round is in all probability cheaper.

Granted that the land chosen is virgin jungle, the first thing to do is to fix upon a suitable time of the year for the felling and clearing of it. For this it is generally considered that there are two seasons, *i.e.*, November and December—and April and May, which as nearly as possible represent the close of the rainy season, so that following these, good dry weather for burning may, as a rule, be relied

on. Felling and clearing work is usually given out on contracts, the price varying from \$2 to \$10 according to the nature of the work, and the position of the land.

While this is going on it is usual to fix upon a site for the bungalow and coolie lines. The latter should be done very carefully, as so much depends upon the health of the coolies, to whom it is essential that there should be close at hand good water for both drinking and bathing.

Should dry weather set in after the block of jungle has been felled for, say, a month to six weeks, it will be advisable to take the opportunity of burning (should there have been no rain registered for three or four days).

This operation over, one should be enabled immediately to commence the work of lining and cutting holes.

The stumps and burnt logs are not removed, as these by their decay furnish a considerable amount of plant food.

If the product for which the land is being thus prepared happens to be coffee, coconuts, cocoa, pepper, nutmegs or rubber, it is necessary that a nursery full of young plants should now be ready to be taken out—thus it is taken for granted that the seed has been germinated some time previously with a view to the plants being ready and of a suitable age to stand the transplanting during the next favourable spell of rainy weather. (Pepper is planted from cuttings taken from young vines, and to commence with require the greatest care.)

Young plants of the above nature are considered to be hardy enough to stand the moving in about six months from the time the seed has commenced to germinate.

If it is decided to keep the clearing entirely clean from weeds, this should be commenced and the work carried on and repeated at least once a month, when the cost will be, comparatively speaking, small.

It is by no means considered always necessary to do this, and after planting many of the above products, attention is paid only to the weeding immediately round the tree, the rest being allowed to grow up in grass and cut down only when it has commenced to get to a troublesome height. All young plants require very careful shading.

In places where products such as rubber and nutmegs have been planted these have usually been tried in conjunction with some other plant, and it would appear desirable to follow this plan in view of the fact that by so utilising the land, returns from the other products may be expected for at least three or four years, during which time the larger trees are coming into bearing. Both the rubber and the nutmegs assume at their full height considerable proportions (the former, say, 60 feet at least), and are for this reason planted at a distance of 30 to 40 feet apart. In this manner 50 trees can be planted to each acre.

Results with regard to Para rubber have shown that a tree at six to seven years old can be tapped and a return at the rate of 10 oz. may be expected. This at the present price, viz., 3s. 6d. to 4s., would show an exceedingly good profit.

The return from nutmegs is most variable, and at least 50 per cent. more trees should be planted than those from which a return is estimated, as the proportion of male trees is very large as a rule, and these cannot be detected until nearly bearing time, when sometimes whole rows will be found useless as far as bearing fruit is concerned. A return, however, may be looked for in the sixth year.

Large areas are under pepper cultivation and doing very well. Great care should be taken to ascertain that the cuttings are taken from healthy vines.

Small holes only are necessary. These are usually cut about nine feet apart. The vine is trained to grow up a post, which should be made of hard jungle wood, well limed and tarred at the bottom to resist the ravages of white ants. These permanent posts should be about $11\frac{1}{2}$ feet long, thus giving about nine feet above ground. It is most important to ascertain whether the immediate neighbourhood can give a large enough supply of hard wood. If this be the case a good supply may be split and brought on to the clearing for four or five cents, whereas if they have to be carried any distance the cost may be increased to 15 cents, this making a difference of over \$50 per acre.

The vines should not be allowed to bear until they have reached the top of the posts, which, under favourable circumstances, should be in about $3\frac{1}{2}$ years after planting—4 years for backward trees. Pepper thrives well in a soil that contains a large proportion of laterite stone, more so

than on loose soil, but the working is more expensive on the former, on account of the extra cost of digging and cleaning the soil for turning down the vines. Good pepper on suitable soil should yield at least 8 pikuls per acre, or even 10, after the vines have come into bearing. The cost of curing is comparatively small. Expensive buildings and machinery are not necessary, and the cost of bringing the vines into bearing should be about \$180 per acre. This does not include bungalow and superintendence.

The Federated Malay States are in many ways more suitable even than Ceylon and Southern India for successful cultivation, the reasons being that:—

- 1st. There is a large area of forest land at favourable altitudes.
- 2nd. A more equally distributed rainfall, thus ensuring a greater regularity and certainty of blossom.
- 3rd. Better transport facilities by road, rail, and water.
- 4th. Better facilities for manuring with salt, lime, wood ashes, jungle soil, and cattle manure.
- 5th. The suitability of the country for growing valuable fodder grasses, and thus the possibility of keeping stock both for sale and manuring purposes. Heavily timbered forest land in either Ceylon or India suitable for cultivation is not now plentiful, and as it is a very important consideration in the selection of land that in the selected acreage there should be sufficient area of forest to allow of a timber reserve, the selector has in the Federated States the greatest advantage.

The rainfall in both Southern India and Ceylon is entirely regulated by the monsoons, and in consequence there is an annual drought which is prejudicial to successful blossoming. In the Federated States there are no regular monsoon influences, and the more regular rainfall is attributable to the close proximity of the high mountain ranges with the Straits of Malacca and the China Sea.

The general features of the States afford facilities for cheap transport. The sea to the eastward and westward forms the main highway, and the feeders thereto are the navigable rivers, the numerous backwaters, the railway, and the magnificent system of main roads which permeate the States.

In both Ceylon and India there is a heavy duty on salt, as a consequence both in Ceylon and India the cost of salt makes it prohibitory for manuring purposes.

In the Federated States there is no duty on salt, the supply is abundant and cheap, therefore this valuable fertiliser can be largely used.

The supply of limestone is practically inexhaustible, and as there is also a plentiful supply of firewood, lime can be easily and cheaply procured.

From the forest reserve, to which I have previously referred, an ample supply of jungle soil and wood ashes can be obtained, both of which are valuable as manures.

Lastly, the suitability of the country for the production of good fodder grasses is of the greatest importance. In Ceylon and India there are no such facilities.

In the Federated States a well organised and systematically conducted stock establishment should pay the planter in two ways: firstly, by profit on sale of stock; and secondly, by the large supply of cattle manure which can be obtained at a minimum cost.

No. 1.

ESTIMATE FOR OPENING 100 ACRES (COFFEE) TO
6TH YEAR.

	\$ cts.	\$ cts.
<i>Land—</i>		
Survey fees on 320 acres jungle, say ...	300 00	
Prospecting expenses	250 00	
Land rent at 50 cts. per acre	160 00	
		710 00
<i>Nurseries—</i>		
Estate to be planted 12'×10' = 363 plants to 1 acre = 36,300 plants + 20% for failures = 7,260. Say, total plants re- quired = 45,000. Includes felling, clearing, digging, cutting, attaps for shade, pricking out seeds 6"×6" ...	—	500 00
<i>Felling and clearing—</i>		
Felling and lopping at \$9, burning and clearing up at \$6 per acre = \$15... ..	—	1,500 00
<i>Lining—</i>		
36,000 pegs at \$1 per 1000	36 00	
Lining at 75cts. per acre	75 00	
		111 00
<i>Holing—</i>		
363 holes per acre, 18×18, at 1 ct. per hole	--	363 00
<i>Filling in—</i>		
363 holes with surface soil only at 1¼ cts. per hole, or, say, \$4 50 cts. per acre ...	—	450 00
Carried forward	—	\$3,634 00

Estimate for Opening 100 Acres (Coffee) to 6th Year.—*cont.*

	\$ cts.	\$ cts.
Brought forward	—	3,634 00
<i>Planting—</i>		
Includes transport from nursery, cutting, attaps for shading, planting and shading in clearing at 2 cts. per plant, or say, \$7 per acre... .. .	—	700 00
<i>Weeding—</i>		
Jungle cleared in August, September, planting in November, requires 2 months, at \$1 per acre	—	200 00
<i>Roads and Drains—</i>		
1 path, 3 feet wide all round, clearing includes clearing away fallen trees, 130 chains at \$1 50 cts., say	200 00	
Drains and roads where necessary, say	200 00	
		400 00
<i>Tools, &c.—</i>		
5 doz. chankols, 2 doz. axes, 2 doz. peng-kalis, 2 doz. billhooks, nursery tools	250 00	
1 bullock cart	30 00	
		280 00
<i>Buildings—</i>		
1 bungalow of hard wood posts, weather boarding walls. Nipah attap roof includes clearing site for same and kitchen attached	600 00	
A set of lines (temporary) for 50 coolies... .. .	120 00	
		720 00
arried forward	—	\$5,934 00

Estimate for Opening 100 Acres (Coffee) to 6th Year—*cont.*

	\$	cts.	\$	cts.
Brought forward	—		5,934	00
<i>Contingencies—</i>				
1 house coolie at \$9 per month	108	00		
Stationery, stamps, telegrams, &c.	150	00		
Medicines, &c., for coolies	100	00		
Unforeseen contingencies	100	00		
			458	00
<i>Transport—</i>				
1 Tapal coolie for fetching letters, &c., at \$9	—		108	00
<i>Superintendence—</i>				
1 European Superintendent at \$150	—		1,800	00
<i>Stock—</i>				
1 pair bullocks	—		170	00
TOTAL	—		\$8,470	00

2ND YEAR.

	\$	cts.	\$	cts.
<i>Land—</i>				
One year's rent at 50 cts. per acre... ..	—		160	00
<i>Superintendence—</i>				
European Superintendent at \$150	—		1,800	00
<i>Weeding—</i>				
100 acres at \$80 per month... ..	—		960	00
<i>Supplying—</i>				
Filling in any vacancies in clearing with surplus plants from nurseries at \$1 20 cts. per acre... ..	—		120	00
<i>Handling—</i>				
Clearing off surplus suckers where necessary	—		50	00
<i>Roads and Drains—</i>				
Upkeep of all roads and drains, say 75 cts. per acre	—		75	00
<i>Buildings—</i>				
Upkeep of bungalow and coolie lines	—		50	00
<i>Contingencies—</i>				
As in the first year	—		458	00
<i>Tools—</i>				
New mamolies and axes	—		50	00
<i>Transport—</i>				
Tapal coolies at \$9	—		108	00
<i>Stock—</i>				
One carman at \$9	108	00	—	
Shoeing bullocks and cattle meal	50	00	—	
			158	00
TOTAL	—		\$3,989	00

3RD YEAR.

	\$	cts.	\$	cts.
<i>Land—</i>				
Rent at 50 cts. per acre	—		160	00
<i>Superintendence—</i>				
Superintendent at \$150 per month ...	—		1,800	00
<i>Weeding—</i>				
100 acres at \$75 per month... ..	—		900	00
<i>Pruning and Handling—</i>				
100 acres at \$1.25	—		125	00
<i>Supplying—</i>				
Say	—		50	00
<i>Roads and Drains—</i>				
General upkeep	—		75	00
<i>Buildings—</i>				
General upkeep	—		75	00
<i>Contingencies—</i>				
As in the previous year	—		458	00
<i>Tools—</i>				
1 doz. pruning knives, \$10; extras, \$15 ...	—		25	00
<i>Transport—</i>				
1 Tapal coolie at \$9	—		108	00
<i>Stock—</i>				
1 Cartman at \$9	108	00	—	
Shoeing bullocks and cattle meal	50	00	158	00
TOTAL	—		\$3,934	00

4TH YEAR.

CURRENT EXPENDITURE.						
					\$	cts.
<i>Land—</i>					\$	cts.
Rent at 50 cts. per acre	...	...	...	...	—	160 00
<i>Superintendence—</i>						
As in previous year	...	...	...	...	—	1,800 00
<i>Weeding—</i>						
As in last year at \$75	...	...	...	...	—	900 00
<i>Pruning—</i>						
100 acres at \$4 per acre	...	...	...	...	—	400 00
<i>Roads and Drains—</i>						
Upkeeps	...	...	...	...	—	75 00
<i>Contingencies—</i>						
1 House coolie at \$9...	...	...	...	...	108	00
Stationery, &c.	...	...	...	...	150	00
Medicines, &c., for coolies	...	...	...	...	150	00
Unforeseen contingencies	...	...	...	...	150	00
						558 00
<i>Transport—</i>						
Tapal coolie at \$9	...	...	...	...	—	108 00
<i>Buildings—</i>						
1 Permanent set of lines for 75 coolies	...	...	...	...	350	00
1 Brick well	...	...	...	...	75	00
Upkeeps	...	...	...	...	50	00
						475 00
Carried forward	...	...	...	...	—	\$4,476 00

4TH YEAR—continued.

CURRENT EXPENDITURE—continued.		\$	cts.	\$	cts.
Brought forward		—		4,476	00
<i>Tools—</i>					
Tools for curing sacks for picking, &c. ...		—		150	00
<i>Picking—</i>					
200 pikuls at \$3 20 cts. per pikul		—		640	00
<i>Curing—</i>					
200 pikuls at \$2 per pikul		—		400	00
<i>Stock—</i>					
As last year		—		158	00
<i>Transport of Crop—</i>					
200 pikuls at \$1		200	00		
Duty, say 40 cts.		80	00		
Selling expenses, commission, &c., say 65 cts. per pikul		130	00		
				410	00
CAPITAL EXPENDITURE.					
1 Coffee store and pulping house, 30 feet by 30 ft.—Brick pillars and cisterns; galvanised iron roof; upper floor of 2 in. by 2 in. reepers; lower storey surrounded by trellis, upper storey weather boarding; includes excavation for site		2,000	00		
3,000 superficial feet of concrete barbecue at 15 cts. per foot		450	00		
1 Pulper		500	00		
1 Smout's peeler, 18 ft. barrel		300	00		
1-6 H.P. engine		1,500	00		
Belting, oil, shafting &c.		500	00		
				5,250	00
TOTAL		—		\$11,484	00

5TH YEAR.

	\$	cts.	\$	cts.
<i>Land</i> —Rent at 50 cts.	—		160	00
<i>Superintendence</i> , at \$150	—		1,800	00
<i>Weeding</i> , at \$70	—		840	00
<i>Pruning</i> , at \$6	—		600	00
<i>Roads and Drains</i> —Upkeeps	—		50	00
<i>Contingencies</i>	—		600	00
<i>Transport</i>	—		108	00
<i>Tools</i>	—		100	00
<i>Buildings</i> —Upkeeps	—		50	00
<i>Picking</i> —400 pikuls at \$3 per pikul	—		1,200	00
<i>Curing</i> —400 pikuls at \$1 75cts.	—		700	00
<i>Transport of Crop</i> — Commission, &c., at \$2 per pikul	—		800	00
<i>Stock</i> (as before)	—		158	00
<i>Manuring</i> where necessary, thatching, &c. ...	—		250	00
TOTAL	—		\$7,416	00

6TH YEAR.

	\$	cts.	\$	cts
<i>Land</i> —Rent at 50 cts.	—		160	00
<i>Superintendence</i>	—		1,800	00
<i>Weeding</i> , at \$65	—		780	00
<i>Pruning</i> , at \$6	—		600	00
<i>Roads and Drains</i>	—		50	00
<i>Contingencies</i>	—		600	00
<i>Transport</i> , say \$20... ..	—		240	00
<i>Tools</i>	—		75	00
<i>Buildings</i>	—		50	00
<i>Picking</i> —500 pikuls at \$3	—		1,500	00
<i>Curing</i> —500 pikuls at \$1 75cts.... ..	—		875	00
<i>Transport Crop</i> —Commission, &c.	—		1,000	00
<i>Stock</i>	—		158	00
<i>Manuring</i> all Estate, at a cost of \$10 per acre	—		1,000	00
TOTAL	—		\$8,888	00

SUMMARY.

EXPENDITURE—						\$	cts.	\$	cts.
1st Year	...	...	...	...	...	—		8,470	00
2nd „	...	..	...	...	...	—		3,989	00
3rd „	...	...	...	...	...	—		3,934	00
4th „	...	...	...	...	...	—		11,484	00
5th „	...	...	...	...	...	—		7,416	00
6th „	...	...	...	...	...	—		8,888	00
TOTAL						—		\$44,181	00
RECEIPTS—									
4th Year, 200 pkls. of Coffee at \$25 per pkl.						—		5,000	00
5th „	400	„	„	„	„	—		10,000	00
6th „	500	„	„	„	„	—		12,500	00
TOTAL						—		\$27,500	00

Notes on Estimate No. 1.

This estimate is based on the supposition that the nurseries will be commenced in January, when it is dry. The seasons are,—January, February, dry; March, April, May, wet; June, July, August and September, dry; October, November, and part December, wet.

The nurseries should be felled and burned off by middle of February, and all seedlings should be put out in nursery from the germinating beds before the 1st April. Felling jungle should commence in the middle of May and finished by beginning of July. Burn off in middle of September, and from then till beginning of November, lining, holing, and filling is carried on ready for planting, should all be finished by the end of December. It is important that the plants should be put out during wet weather. But still if put out with the transplanters and well shaded and well watered before being taken from the nursery it does not matter so much.

As the clearing is only holed and filled in October there are only two months' weeding in the first year. A great deal depends on the burn off. A good burn means clearing up costing only \$1 to \$1.50 per acre. Again, if Sakei (aboriginal) labour for felling can be procured, felling will only cost \$6 to \$7 an acre. The estimate is made out to allow for Malay labour and a bad burn, and the first year weeding at \$1 per acre per month is for the same reason. Holing is done by contract. Filling in is not, as only the top surface soil can be used. The road expenditure would consist of clearing a path and cutting a drain all round the clearing to prevent any seeds, &c., being carried into the clearing by heavy rain and becoming weeds.

The general labour would be Tamil; put the daily rate of pay at 30 cents.

Germinating beds should be made when the nurseries are felled, six weeks being the general time of seed to germinate

No. 2.

ESTIMATE FOR OPENING-UP and PLANTING 500 ACRES of
COCONUTS in SELANGOR (COAST DISTRICT).

	FIRST YEAR.	\$	cts.
Survey \$500, quit rent \$250, premium \$500		1,250	00
Felling and clearing		4,000	00
Lining and holing... ..		750	00
Cost of seed... ..		2,000	00
Planting and fencing		2,000	00
Weeding		3,000	00
Roads and drains		5,000	00
Coolie lines and tools		350	00
Bungalow		600	00
Superintendence		3,000	00
Doctor \$100, medicine and stationery \$100		200	00
Contingencies		150	00
Carried forward		\$22,300	00

No. 2—*continued.*

							\$	cts.		
	Brought forward	...	...	...	...	...	22,300	00
Second Year's	Expenditure	...	...	...	...	...	7,500	00
Third	" "	...	...	...	...	...	6,000	00
Fourth	" "	...	...	...	...	...	5,000	00
Fifth	" "	...	...	...	...	...	7,000	00
Sixth	" "	...	...	...	...	...	8,000	00
Seventh	" "	...	...	...	...	...	6,500	00
Eighth	" "	...	...	...	...	...	7,000	00
TOTAL							...	\$69,300	00	
In the Sixth Year a return of 20 nuts (at 2 cents) per tree may be looked for.										
In the Seventh Year a return of 30 nuts (at 2 cents) per tree may be looked for.										
In the Eighth Year a return of 50 nuts (at 2 cents) per tree may be looked for.										
Thus, Total Expenditure to end of Eighth Year							\$69,000	00
Crop Returns							\$64,000	00
									\$5,000	00

In some coast districts the natives count on a return during the fifth year from planting, but it is not generally considered safe to estimate anything until the sixth year.

No. 3.

ESTIMATE to OPEN 500 ACRES with PARA RUBBER, doing
250 ACRES PER ANNUM.

	\$	cts.
Felling and clearing 250 acres at \$10 per acre... ..	2,500	00
Lining 250 acres at \$2 per acre	500	00
Holing and filling 250 acres at \$5 per acre	1,250	00
Nurseries	400	00
Seed for same, planting 14" x 14"—222 per acre, say 250 per acre—187,500 seeds at 1 ct. each	1,875	00
Planting and shading at \$3 per acre	750	00
Roads and drains, 250 acres at \$10 per acre	2,500	00
Weeding 250 acres for 6 months at £1 per acre per month ...	1,500	00
Supervision at \$300 per month.	3,600	00
Buildings.—House for superintendent	\$1,000	
House for assistant	500	
House for overseer	100	
	<hr/>	1,600
Coolie Lines		500
Tools		500
Contingencies, Hospital, &c.		1,025
		<hr/>
		\$18,500 00
Second Year:—		
Opening 250 acres, as above	\$18,500	
Less buildings	\$1,500	
Coolie lines	500	
	<hr/>	2,000 = 16,500
Upkeep on first 250 acres at \$30	7,500	
		<hr/>
		24,000 00
Third year, upkeep on 500 acres at \$30 per acre		15,000 00
Fourth year , 500 , , \$30 , 		15,000 00
Fifth year , 500 , , \$30 , 		15,000 00
		<hr/>
TOTAL COST TO FIFTH YEAR		\$87,500 00

ESTIMATE of RETURNS from PARA RUBBER.

I believe a good return of at least $\frac{1}{2}$ lb. per tree could be got from five year old trees, but I do not calculate on anything until the sixth year, when I feel certain that rubber planted on good alluvial land will yield at least 1 lb. per tree. Planting 14" x 14", there should be 222 trees per acre, but calculate only on 200 trees per acre.

RETURNS.

SIXTH YEAR.						£	s.	d.
250 acres or 50,000 at 1 lb. per tree	...	...	...	...	...	—
50,000 lbs. at 3s. per lb.	...	...	...	...	Stg.	7,500	0	0
SEVENTH YEAR.								
250 acres at 1 lb. per tree	...	...	£ 7,500	0	0			
250 „ 2 lbs. „	...	...	15,000	0	0			
						22,500	0	0
EIGHTH YEAR.								
500 acres at 2 lbs. per tree	...	...	...	...	...	30,000	0	0
					Stg. £	60,000	0	0

This estimate of returns up to the eighth year may look too good, but if I were to calculate on returns given to me by most reliable men in Selangor and Sungei Ujong, these returns would still more astonish readers if I went on up to the twelfth year. I have given my estimate of all cost of opening up to the fifth year to be \$87,500.

AFTER the 5th YEAR the COST will be per ANNUM :—

6TH YEAR.				\$	cts.	\$	cts.
500 acres at \$30 per acre ...	...	...	...	—		15,000	00
Good house for Superintendent ...	...	...	...	—		3,500	00
„ „ „ Assistant... ..	...	...	...	—		1,500	00
„ „ „ Overseer... ..	...	...	...	—		500	00
New coolie lines ... ..	...	...	...	—		1,000	00
Store and sheds ... ..	...	...	...	—		5,000	00
Collecting and curing 50,000 lbs. of rubber at 20 cts. per lb. ... ..	...	...	...	—		10,000	00
						<hr/>	
7TH YEAR.						36,500 00	
500 acres at \$30 per acre... ..	...	...	...	15,000	00		
Collecting and curing 150,000 lbs. rubber at 20 cts. per lb..... ..	...	...	...	30,000	00		
						<hr/>	
8TH YEAR.						45,000 00	
500 acres at \$30 per acre ... ..	...	...	..	15,000	00		
Collecting and curing 200,000 lbs. of rubber at 20 cts. per lb. ... ..	...	...	..	40,000	00		
						<hr/>	
TOTAL						\$136,500 00	
OR £ STERLING						£13,650	



