

*Cfate*  
*F. de Gutterie*

U. S. NAVAL BASE HOSPITAL # 2,  
NAVY 156, FLEET POST OFFICE,  
SAN FRANCISCO, CALIFORNIA.

~~SECRET~~  
~~CLASSIFIED~~  
APR 23 1947  
AUTHORITY BUMED  
DECLASSIFICATION BOARD

Subject: Annual Sanitary Report 1943, Contd.  
R-1636--Historical Data.  
(A)  
General.-

During the last week in March 1942, the following Medical, Dental and Hospital Corps Officers reported to the Commandant, 12th Naval District; 33 Medical Officers, 2 Dental Officers, and 4 Pharmacists, for F.F.T. project "Roses".

Included in this group were the United States Naval Specialist Unit from Dayton, Ohio, a United States Naval Reserve Specialist Unit from St. Louis, Mo., other physicians from Los Angeles, California, and from many other cities throughout the country. The original roster follows:

- Capt. John E. Porter (MC) U. S. N., Commanding Officer.
- Capt. Frederick W. Muller (MC) U. S. N., Executive Officer.
- Capt. Walter M. Simpson (MC) U. S. N. R., Chief of Medicine.
- Capt. John M. Schmoele (MC) U. S. N. R., Chief of Surgery.
- Commander Oliver W. Butler (MC) U. S. N. R.
- Commander William H. Leake (MC) U. S. N. R.
- Commander Alphonse McMahon (MC) U. S. N. R.
- Commander Harry R. Huston (MC) U. S. N. R.
- Commander Marion W. Coleman (MC) U. S. N. R.
- Commander Arthur M. Culler (MC) U. S. N. R.
- Commander Lawrence F. Patterson (DC) U. S. N. R.
- Commander Eugene P. Owen (MC) U. S. N. R.
- Commander Jerome Hartman (MC) U. S. N. R.
- Lt. Comdr. Le Val Lund (MC) U. S. N. R.
- Lt. Comdr. James L. Sagebiel (MC) U. S. N. R.
- Lt. Comdr. Thomas V. Gudex (MC) U. S. N. R.
- Lt. Comdr. Norman J. Birkbeck (MC) U. S. N. R.
- Lt. Comdr. Jerome I. Simon (MC) U. S. N. R.
- Lt. Comdr. Charles B. Beymer (MC) U. S. N. R.
- Lt. Comdr. Thomas P. Sharkey (MC) U. S. N. R.
- Lt. Comdr. Lee C. Bird (MC) U. S. N. R.
- Lt. Comdr. William L. Powers (MC) U. S. N. R.
- Lt. Comdr. James M. Macnish (MC) U. S. N. R.
- Lt. Comdr. Elmer F. Hartwig (DC) U. S. N. R.
- Lt. Comdr. Elmer M. Bingham (MC) U. S. N. R.
- Lt. Comdr. Manley B. Shaw (MC) U. S. N. R.
- Lt. Donald F. Coburn (MC) U. S. N. R.
- Lt. Frank W. Blatchford, Jr. (MC) U. S. N. R.
- Lt. Clarence E. Gillespie (MC) U. S. N. R.
- Lt. Peter J. Keenan (MC) U. S. N. R.
- Lt. Henry C. Allen (MC) U. S. N. R.
- Lt. Donald J. Cronin (MC) U. S. N. R.
- Lt. Emit L. McCafferty (MC) U. S. N. R.
- Lt. George M. Casan (MC) U. S. N. R.

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Lt. Elmer Ridgeway, Jr. (MC) U. S. N. R.  
Lt. (junior grade) Noel A. Deal (HC) U. S. N.  
Lt. (junior grade) Ronald Osborn (HC) U. S. N.  
Lt. (junior grade) George F. Bradford (HC) U. S. N.  
Lt. (junior grade) Robert M. Drowne (HC) U. S. N.

Three of the above mentioned officers subsequently were returned to the United States because of physical disabilities. During later months, the following named officers reported for duty at this hospital:

Commander Henry H. Kessler (MC) U. S. N. R.  
Lt. Comdr. Philip W. McKenney (MC) U. S. N. R.  
Lt. John D. Charles (MC) U. S. N. R.  
Lt. Comdr. Fred A. Butler (MC) U. S. N.  
Lt. Robert G. Lehman (MC) U. S. N.  
Lt. Marvin C. Becker (MC) U. S. N. R.  
Lt. Francis O. Fry (MC) U. S. N. R.  
Lt. Ray R. Rueckert (MC) U. S. N. R.  
Lt. Jacob I. Essig (DC) U. S. N. R.  
Lt. James W. Fulton, Jr. (ChC) U. S. N. R.  
Lt. (junior grade) Willis H. Taylor (MC) U. S. N.  
Lt. (junior grade) Robert L. Endsley U. S. N.  
Pharmacist Millard E. Pate U. S. N. R.  
Boatswain John A. Cooke U. S. N.  
Pharmacist Albert H. Nelson U. S. N.  
Ensign George E. Harris (HC) U. S. N.  
Pharmacist Wayne B. Hewitt U. S. N.

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On December 31, 1942, the following members of the Navy Nurse Corps reported for duty at this hospital:

Lt. (junior grade) Ida M. Iltad (NC) U. S. N.  
Lt. (junior grade) Thelma F. Laird (NC) U. S. N. R.  
Lt. (junior grade) Thora L. Wellman (NC) U. S. N. R.  
Lt. (junior grade) Mary E. Carter (NC) U. S. N.  
Lt. (junior grade) Thelma R. Bare (NC) U. S. N.  
Lt. (junior grade) Ellen L. Lechner (NC) U. S. N. R.  
Lt. (junior grade) Teresa M. Hayes (NC) U. S. N. R.  
Ensign Theda A. McKim (NC) U. S. N. R.  
Ensign Blanche A. Green (NC) U. S. N.  
Ensign Mary G. Dudley (NC) U. S. N.  
Ensign Aileen J. Maguire (NC) U. S. N.  
Ensign Mercedes Hall (NC) U. S. N. R.  
Ensign Caroline M. Hunter (NC) U. S. N. R.  
Ensign Jessie V. Boling (NC) U. S. N. R.  
Ensign Dorothy J. Davis (NC) U. S. N. R.  
Ensign Kathryn P. Hawkins (NC) U. S. N. R.  
Ensign Anna M. Spiekerman (NC) U. S. N. R.  
Ensign Martha L. Heilman (NC) U. S. N. R.  
Ensign Ruth W. Johnson (NC) U. S. N. R.  
Ensign Ila M. Pederson (NC) U. S. N. R.  
Ensign Barbara L. Norris (NC) U. S. N. R.  
Ensign Mary A. Vaughn (NC) U. S. N. R.

Ensign Anne E. Bayh (NC) U. S. N.  
Ensign Sarah P. Gray (NC) U. S. N. R.  
Ensign Alice M. Rothermel (NC) U. S. N. R.

On March 15, 1943, the following additional members of the Navy Nurse Corps reported for duty at this hospital:

Lt. (junior grade) Carol M. Perry (NC) U. S. N.  
Lt. (junior grade) Rita V. O'Neill (NC) U. S. N.  
Lt. (junior grade) Evelyn D. Glancy (NC) U. S. N. R.  
Lt. (junior grade) Alma C. Ballantyne (NC) U. S. N.  
Lt. (junior grade) Mary L. Guderian (NC) U. S. N.  
Lt. (junior grade) Clara G. Hemme (NC) U. S. N. R.  
Lt. (junior grade) Alma A. Schumacher (NC) U. S. N. R.  
Ensign Dora S. Brooks (NC) U. S. N.  
Ensign Edith M. Williams (NC) U. S. N.  
Ensign Martha A. Hunter (NC) U. S. N. R.  
Ensign Berniece C. Sigmund (NC) U. S. N. R.  
Ensign Wilna O. Wixom (NC) U. S. N. R.  
Ensign Lorita B. Swift (NC) U. S. N.  
Ensign Hester M. Jones (NC) U. S. N. R.  
Ensign Dorothy M. Bacon (NC) U. S. N.  
Ensign Frances M. Aue (NC) U. S. N.  
Ensign Dorothy G. Baker (NC) U. S. N. R.  
Ensign Marie B. Goldthwaite (NC) U. S. N. R.  
Ensign Irene O. Carlson (NC) U. S. N.  
Ensign Katherine E. Jones (NC) U. S. N. R.  
Ensign El Dula Dean Wixom (NC) U. S. N. R.  
Ensign Margrethe H. Soalberg (NC) U. S. N. R.  
Ensign Annette L. Morris (NC) U. S. N. R.  
Ensign Dorothy W. Coutant (NC) U. S. N. R.  
Ensign Marian E. Murphy (NC) U. S. N. R.

After 6 days' preparation time, the convoy departed from a westcoast port. During the voyage the 239 hospital corpsmen were interviewed and classified in respect to their future assignments, and in small groups received instructions daily in professional subjects. An intensive refresher course in tropical medicine and war medicine, consisting of 2 lectures daily, was conducted for the medical officers.

On May 4, 1942, the convoy reached its destination in the South Pacific. The urgency of the military situation at this advance base, the first to be established in the South Pacific, demanded that all medical officers, hospital corpsmen, and members of the naval construction battalion disembark and commence unloading operations immediately. Medical officers were assigned the duties of deck officers, supervising the removal of cargo from the holds, lighterage, and the unloading and trucking operations ashore. Hospital corpsmen acted as stevedores, winchmen, truck drivers, and boat crews. The remarkable features of these day and night unloading operations by inexperienced personnel were the rapidity with which more than 40,000 tons of cargo were discharged and the fact that not a single person so engaged sustained any injury.

While unloading operations were progressing, a survey was made of conditions ashore relative to the establishment of temporary hospital facilities and living quarters for personnel. From the few buildings suitable for such purposes, a small civilian hospital, a court building, a church, and 8 residences were selected. This provided for the hospitalization of 450 patients and the housing of medical officers and hospital corpsmen. This temporary hospital was in operation from May 5, 1942, to September 18, 1942.

A major share of the construction was accomplished by the hospital corpsmen under supervision of officers of a naval construction battalion and of medical officers assigned to this duty.

The new hospital was commissioned on September 19, 1942, at which time 387 patients were moved from the temporary hospital buildings in the small town.

The island on which this hospital is located is of medium size. The basic formation consists of a lava understratum covered with coral and a top soil of rich humus. The vegetation is tropical and a large portion of the island is covered with dense jungle. There are several mountain ranges reaching an elevation of approximately 2,200 feet. Nearly one-half of the population resides in or near the small town.

129 Scattered over the island, particularly along the shore, are numerous large plantations, owned by foreign nationals. The chief products are copra, cacao, and coffee. Most of the laborers on the plantations are Tonkinese (Indo-Chinese), brought here on a contract-labor basis.

The naval hospital occupies 60 acres of a coconut plantation at an elevation of approximately 500 feet, located  $2\frac{1}{2}$  miles from the principal town and harbor. The terrain is rolling and the top soil of clay and humus is several feet in depth. This formation does not provide natural drainage and makes the construction and maintenance of roads and drainage ditches a difficult and continuous problem. The principal roads have been constructed of coral, the only road-building material available. This type of construction requires constant upkeep. Suitable drainage ditches for handling the surface water, resulting from the torrential rains peculiar to this locality, had to be constructed.

(B)  
Administration.-

Since the original group was assembled at the 12th Naval District about 1 April 1942, Captain John E. Porter, (MC) U.S.N., has been in Command and still serves in that capacity.

Captain Frederick W. Muller (MC) U.S.N., was Executive Officer from 1 April, 1942 to 8 May 1943, at which time he was relieved by Captain Walter M. Simpson, (MC) U.S.N., who served until 1 November 1943, and was in turn relieved by Captain Edward P. Kunkel, (MC) U.S.N., on that date and is still serving as Executive Officer.

The Commanding Officer also serves as Base Medical Officer with jurisdiction over all Naval Medical Department Activities on the island.

The Personnel and Record Office was set up in accordance with the general accepted standard for naval hospitals, with a senior Hospital Corps Officer in charge.

A shortage of typewriters and the absence of a Navy Filing Manual were the first difficulties encountered. The shortage of typewriters was overcome by placing a night crew in the record office and by borrowing typewriters from other departments which only functioned during the day.

This procedure enabled us to keep up on the routine admissions and discharges but the office was still handicapped when evacuation day arrived. Originally evacuations occurred every ten days to two weeks and averaged about five hundred patients each. Even by keeping the medical history write-up up to date, difficulties were encountered when only a few hours advance notice was received.

An Army Liaison Officer and a Marine Liaison Officer are on temporary duty at this hospital and have been since 25 May 1942.

The Liaison Officer's administer to their own branch of service. They handle all correspondence, clothing issues, pay, and record books of their men.

Office Administration has been satisfactory except for the above mentioned difficulties.

130 The Property and Accounting Office is under the supervision of a Senior Hospital Corps Officer. Medical Supplies have been adequate except for short periods when requisitions were slow in coming through.

The Commissary Department is under the supervision of a Hospital Corps Officer.

The Army ration is used and drawn from the Army Quartermaster, as needed, this is supplemented by fresh vegetables from our own gardens, farmed on contract, and by some units of fresh frozen foods from the Navy.

This simplifys the keeping of accounting records.

(C)  
Summary of Events.-

This hospital was the first Base Hospital to be established in the South Pacific Area.

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34 Battle casualties were received by aeroplane ambulance from the combat area from the beginning of the Guadalcanal landing on August 7, 1942 until September, 1943, when the last aeroplane ambulance containing eight casualties from the forward area arrived here. Since September casualties from the forward area have by-passed this hospital for other hospitals farther South.

The U. S. Army's 48th Station Hospital of 500 bed capacity, which was stationed on this island was decommissioned on December 19, 1943, and moved to another base leaving this hospital to care for all the personnel remaining on this island and all fleet activities in this area.

(D)  
Battle and Crises Experiences.-

No actual combat experiences were encountered by this hospital. The staff was overworked during the period in which battle casualties were received daily.

(E)  
Clinical and Professional Notes.-

(1) Preventive Medicine.

This island has been traditionally classified in the past as an unhealthy island. The island has a rainy and dry season. The rainy season extends from November to May with a mean rainfall of approximately 90 inches with a uniformly warm climate.

The chief disease is Malaria and the whole population is invariably malarious. No malarial control had been attempted prior to the arrival of United States Forces.

The only vector of malaria present on the island is *Anopheles punctulatus* var. *molluccensis* Swell, (1921).

Pest Mosquitoes abound, both *Culex* and *Aedes*. No actual cases of filariasis have originated on this island and dengue is a very rare occurrence.

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Malarial control measures were immediately instituted upon our arrival. Each unit maintaining its own malarial control officer and a small staff to assist. A base malarial control unit consisting of two malariologists, two entomologists and a civil engineer, with approximately twenty five field and laboratory technicians, enlisted, and about seventy five native laborers, supervised and helped carry out the surveys, suppressive treatment programs, and malarial control program in general.

Originally *Plasmodium falciparum* constituted about 48% of the admissions for this island. At present only a rare case of this species is encountered and a gradual decrease in the cases of *Plasmodium vivax* has also occurred.

It is hard to really evaluate the statistics from malarial control reports of the actual cases contracted on this island proper. Numerous men arrive here for rest periods, when suppressive treatment is discontinued and a break through occurs giving the men their original admission on this island which in the majority of cases were contracted on other bases.

Suppressive Atabrine therapy was used on all malarious bases in this area until July, 1943, when it was discontinued on this island, as no longer warranted. Due to the few cases which have occurred, on this base which could actually have been acquired here, this action was warranted.

In addition to malaria, the native population suffers from hook-worm disease, (*Necator americanus*), infestation with *Trichocephalus trichiurus*, Yaws, Tropical Ulcers and Tuberculosis with a few cases of filariasis

seen at the local French Hospital.

A few cases of liver and intestinal flukes also occur amongst the natives and as the intermediate hosts are present there remains a potential foci of infection. For the major part these natives are from Indo-China and are imported as contract laborers.

## (2) Clinical Practices.

Suppressive doses of atabrine has been used to prevent the development of clinical malaria, in a dosage of 0.2 gm. twice weekly. This dosage only suppresses the clinical symptoms in a certain percentage of cases but those who do break through exhibit as a rule only mild symptoms.

The antimalarial therapy utilized at this hospital is the "combined quinine and atabrine treatment". This program has yielded the best results. For the first three days a daily dosage of quinine hydrochloride, gr. 30, together with atabrine gr.  $\frac{4}{3}$ , is given orally, in divided doses, three times daily. This is followed by atabrine, four and one-half grains daily for four more days.

It was found that 80% of the cases, so treated, relapsed in from six weeks to three months. To over come this high relapse rate, the men are discharged to duty after clinical symptoms have subsided with recommendations to their medical officer to continue the atabrine 0.2 gm. twice a week for a period of three months.

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This protracted treatment reduces the relapse rate appreciably.

All Wounds were treated both locally and orally with sulfathiazole or one of the sulfonamide drugs, with gratifying results.

## (3) Employment of and results from new and improved techniques or drugs.

No new drugs have been employed to date. The most satisfactory anesthetic agent employed was sodium pentothal. This drug was used on all cases except where surgical relaxation of the abdomen was desired.

## (4) Noteworthy Cases.

Thirty-six cases of gas bacillus infection were treated at this hospital.

All wounds had been dusted with sulfanilamide in the field and most of the patients had received sulfathiazole by mouth, although because of battle conditions this was irregular and interrupted. All fractures were received well splinted.

Thirty-four cases, or 94% of the total number, had the infection on admission or developed suggestive signs before debridement could be done. One patient developed gas bacillus infection after a debridement which was known to be incomplete, but which could not be completed because of massive

thigh wounds and shock. Gas bacillus infection did not occur in any case in which thorough debridement was done.

Five deaths occurred in this group of thirty-six, giving a mortality rate of 13.9 percent.

Since patients were received 12 to 48 hours after injury, prophylactic serum was not administered.

Suspected cases and frank clinical cases received large therapeutic doses of gas gangrene combined antitoxin. Immediate and thorough debridement was carried out on cases in which gangrene was not present. Amputation was performed at once on all cases of gas bacillus infection with thrombosis of the artery and gangrene. All wounds were dusted with sulfanilamide crystals and packed with vaseline gauze.

It was necessary to amputate in fourteen of these cases and to reamputate in four cases. Amputation stumps were left open. Oral sulfathiazole therapy was carried out, and plasma, blood transfusions, or fluids were given intravenously as indicated. In five cases X-ray therapy was employed using a small portable diagnostic machine with a dosage estimated to deliver 75r.

Because in all cases sulfanilamides and combined antitoxin serum were used, the individual efficiency of either agent cannot be evaluated. X-ray therapy was used empirically. Sulfanilamide crystals in the wounds, sulfathiazole by mouth, and adequate splinting combined with thorough debridement appear to have lessened the factors which favor the development of gas bacillus infections.

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#### (5) Suggestions for Research.

(a) The incidence of filariasis in the natives of this island is fairly high according to reports from the Local French Hospital. Numerous thick blood films containing stained microfilaria bancrofti have been sent to this hospital and verified.

This island is not listed as being an endemic area for this disease. All cases which have developed in the U. S. Military personnel on this island have spent some time on other islands which were considered endemic.

A thorough check on this disease with emphasis placed on length of time from original infection to appearance of first clinical symptoms and minimum and maximum length of time necessary before microfilariae may be found in the blood stream.

(b) The strain of Plasmodium vivax encountered in this area seems to be more resistant to the routine treatment than the same species encountered in other parts of the world.

The initial quinine-atabrine therapy seems just as effective in the acute stages usually aborting the paroxysms in the first 48 hours but 80% of these cases relapse in from 6 weeks to 3 months without fail. Is this species naturally more resistant or has it acquired a tolerance for the anti-malarial drugs used, due to long periods of suppressive treatment?



(c) Thorough study should be made of the various trematode infections which are common in the natives of the various pacific islands with special emphasis on their intermediate hosts and the manner in which they infect their human host.

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