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OFFICE OF THE CHIEF OF NAVAL OPERATIONS

Washington 25, D. C.



31 October 1944

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MEMORANDUM

From: Chief of Naval Operations.
To: Distribution List.

Subject: Military Government Field Report -- Forwarding of.

Enclosure: (A) Military Government Field Report No. 37,
"Excerpts from Medical Report, Tinian, 10
August to 31 August 1944."

1. Enclosure (A) is forwarded for information and use.
2. Authority for transmission by registered mail within the continental limits of the U.S. and via the Naval Postal System outside the continental limits of the U.S. is necessary and authorized.

/s/ WILLIAM H. VANDERBILT
By direction

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NAVY DEPARTMENT
CHIEF OF NAVAL OPERATIONS
CENTRAL DIVISION
MILITARY GOVERNMENT SECTION
WASHINGTON 25, D. C.

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Military Government Field Report No. 37
"Excerpts from Medical Report, Tinian,
10 August to 31 August 1944"
31 October 1944

The forwarding endorsement to this report by the Commanding General stated that recommendations pertaining to action within his command were approved and are being effected as rapidly as conditions permit. It added that in the control of fly and mosquito breeding Japanese civilians are being used under Sea Bee supervision, all under the direction of the Island Sanitation officer.

A/P2-216
DJC: awb

MEDICAL DEPARTMENT
ISLAND COMMAND, NAVY NO. 3247
C/O FLEET POST OFFICE
SAN FRANCISCO, CALIFORNIA.

10 September 1944.

From: Island Medical Officer.
To: Commander in Chief, Pacific Fleet.

Via: (1) Island Commander.
(2) ComFwd Area.

Subject: Medical Activities on Tinian for the period 10 August through 31 August 1944, Report of.

References: (a) Chapter 54, Section 7 (b) and 23 U.S. Navy Reg. 1920.
(b) Chapter XI, U.S. Pacific Fleet Regulations 1943.

1. A report of the medical activities during the first month of the occupation of the Island of Tinian, Marianas, is hereby submitted in accordance with references (a) and (b).

2. The report is presented in three (3) sections, eg:

I. Health of the Command.
(Prepared by the Island Medical Officer).

II. Sanitary Report.
(Prepared by Comdr. H.L. Hartley (MC), USNR,
Island Sanitation Officer).

III. Epidemiologic Report.

(Prepared by Epidemiology Unit # 105, Lt. J. W. Colvin (MC) USN, in charge).

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D. J. CRACOVANER.

- CC: CincPoa
- Prov Hq., FMF
- V Amphibious Corps
- BuMed
- IsCom Saipan
- File

Section I

Health of the Command

1. Administrative Situation.

The Second and Fourth Marine Divisions made a landing on The Island of Tinian on 24 July 1944. The island was declared secured on 1 August 1944. Garrison Forces began landing on 3 August 1944. The island was under command of VAC from 28 July to 9 August 1944. Civil Affairs passed to CTG 10.12 on 1 August. The island passed to CTG 10.12 on 10 August 1944, who assumed the designation of Island Commander, Tinian. The Fourth Division and two RCT's of the Second Division re-embarked between 14 August and 19 August: RCT 8 became a part of the Garrison Forces on 10 August.

2. Health of the Command

In general, the health of the command is good. However, as shown in Table I and Graph I there has been a slow, but progressive, increase in the total number of ineffectives. As is usual in advanced bases in the Central Pacific, the diseases of epidemiologic import that must be guarded against are Dengue Fever and those of enteric origin.

The Second and Fourth Marine Divisions landing on Tinian were seeded with dengue contracted on Saipan. This, together with the fact that Tinian was a known endemic area of dengue, bode ill for the newly arriving Garrison Forces, who were disembarking in rapidly increasing numbers. Here was an area in which the vector of dengue was present, in which a reservoir of the disease has been introduced and on which a large non-immune population was being landed. It seemed reasonable to expect that a fullblown epidemic would take hold of the Garrison Forces in from six to seven weeks, unless the problem of Aedes breeding was attacked early and vigorously. Unfortunately, the term "Military Necessity" once again has proved a bar to this accomplishment and the necessary personnel and equipment have not been made available. Unless there is an early reversal of this situation, the number of man-days lost due to dengue will be impressive

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3. Health of the Civilian Population.

There are 8,307 Japanese, 2,365 Koreans and 4 Chinese on Tinian. They all are interned in a camp in the center of the Island.

Considering what they have gone through, it can be said that the general health of the civilian population is good. There have been no outbreaks of epidemic proportions. It is planned to screen the civilian population as soon as practicable for tuberculosis, eye conditions (including trachoma) and helmenthic infections. Necessary inoculations will be performed as soon as supplies arrive.

Table III shows the camp census, the dispensary treatments, hospitalizations and deaths in the civilian population. An average of nine hundred forty-six and two tenths (946.2) treatments per day have been administered at the camp dispensaries of which there are two; one for Japanese, the other for Koreans.

There have been one hundred forty-two (142) deaths in camp and fifty-six (56) deaths in the hospital. The most frequent causes of death have been gunshot wounds, tetanus, malnutrition, dysentery, pneumonia and gas gangrene. (Table IV)

TABLE III

DISPENSARY TREATMENTS, TRANSFERS TO HOSPITAL AND DEATHS, CIVILIAN POPULATION.

Date	Camp Census	No. Treated	No. Transferred	Hospital	Deaths*	
		In Camp *	to Hospital *	Census*	Camp	Hospital
Aug. 1	1,590					
2	3,291					
3	7,664					
4	8,491	1,998				
5	9,458	1,444				
6	9,707				7	
7	10,112				7	
8	10,063	676	27		4	2
9	10,042	646	81	25	6	0
10	10,049	1,105	78	104	2	3
11	9,997	1,080	2	175	5	0
12	9,999	1,368	26	177	5	2
13	10,008	927	3	199	2	2
14	10,195	995	18	199	5	1
15	10,248	992	8	213	1	2
16	10,256	1,254	11	211	7	5
17	10,518	868	3	215	9	2
18	10,537	1,084	4	209	7	4
19	10,531	927	1	203	12	2
20	10,533		3	200	6	4
21	10,576	1,106	5	208	2	2
22	10,587	648	2	210	3	2
23	10,630	850	3	207	2	2
24	10,624	703	3	199	6	2
25	10,666	802	8	181	3	1
26	10,664	666	2	183	3	2
27	10,568		5	179	2	2
28	10,525	632	10	177	7	2
29	10,614	546	8	183	6	2
30	10,622	595	13	188	7	5
31	10,639	797	4	194	2	1

* Missing data not available.

TABLE IV
CAUSES OF DEATH AMONG CIVILIAN POPULATION
MONTH OF AUGUST

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<u>Cause of Death</u>	<u>In Camp</u>	<u>In Hospital</u>
Gunshot wound	46	4
Tetanus	25	21
Malnutrition (Beri-beri)	20	6
Dysentery	14	5
Pneumonia	12	5
Gas gangrene	5	7
Heart Disease	2	0
Brain Abscess	1	2
Meningitis	1	1
Empyema	1	1
Diphtheria	1	0
Uremia	1	1
Yaws	0	1
Hemorrhage	0	1
Bronchitis	0	1
Cause Undetermined (Five dead on arrival)	13	0
Total	142	56
GRAND TOTAL		198

4. Medical Facilities.

A. Hospital Facilities: At the present time, the hospital facilities on the island are furnished by three (3) G-6 dispensaries and one medical company. The dispensaries are G-6 numbers 38, 45 and 35. The medical company is "E" Company, Second Medical Battalion.

- (1) G-6 Number 38: Attached to Island Command.
 Equipment landed 5 August.
 Began taking patients 8 August.
 Capacity expanded to three hundred (300) beds.

Employed for hospitalization of civilians. While observing operations on Saipan, the necessity for planning and providing adequate hospital facilities for the civilian population on Tinian became readily apparent. The original plans called for a four hundred bed field hospital for the first thirty (30) days of occupation of this island and for the early landing of G-6 Number 38 for the care of the Garrison Forces. None were provided for the civilian population. Toward the end of the Saipan operation, however, it was learned that the probability of landing the field hospital on Tinian was slim due to the necessity of early withdrawal for the purpose of restaging for the next operation. And, eventually, such was the case. This left G-6 Number 38 as the only hospital facility available for Garrison Forces. In view of the anticipated large numbers of seriously wounded civilians and of the fact that, from the standpoint of epidemic diseases, the civilian population constituted a threat to the

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health of the entire command, it was decided to expand the G-6 Number 38 to three hundred beds and to employ it for the care of civilians. The G-6 Unit equipment was landed on 4 August and it began to take patients on 8 August. For the first twenty-one (21) days of the occupation of this island, the only hospital facilities available for some thirteen thousand (13,000) garrison personnel was Company "E", Second Medical Battalion, attached to the 8th RCT, which was expanded to one hundred twenty-five (125) beds. Fortunately, a low sick rate among the Garrison Forces rendered this number adequate....

C. Medical Equipment and Supplies: There has been a dire shortage of medical supplies ever since the occupation of the island. This situation was accentuated by the requirements attending the expansion of the G-6 Number 38 and the extraordinary demands of the civil internment camp....

5. Recommendations.

1. For action within command:

None.

2. For action by higher authority:

The problem of civilian population is essentially a human one, and, the American conscience being what it is, something is going to be done for them whether or not such assistance is planned. Both on Saipan and Tinian the needs were met by and to the embarrassment of the combat troops, and subsequently the Garrison Forces.

If it is planned to care for the civilian population in future operations, the following is recommended, based on the experience on Saipan and Tinian; namely, that medical facilities be provided on the basis of both population and phase of operation. For example:

Initial Phase (From D-day until 90 days after target is secured):

Dispensary facilities: A well-stocked dispensary unit (about thrice the supplies of a G-10 Unit) with 2 medical officers (junior grade) and 8 hospital corpsmen for each 6,000 of population.

Hospital facilities: A G-6 dispensary expanded to 300 beds for each 15,000 of population.

Occupational Phase (90 days after target is secured):

Withdraw one-half of all dispensary and hospital facilities.

It will be realized that there is an upper limit to the amount of medical facilities to be allocated depending upon the tactical plan in relation to populated areas and on the fact that there is an initial overhead above which the rate of expansion of medical facilities drops in proportion to the increase in population.

The above facilities should be embarked with the assault forces and landed as soon as the tactical situation permits. Only thus can the combat troops be relieved of the burden of taking care of the civilians....

Section II.

Monthly Sanitary Report

Island of Tinian, Marianas

For the Period

August 10, 1944 to August 31, 1944....

1. GENERAL CONDITIONS OF THE ISLAND....

Flies are numerous but not present in the numbers indicated by intelligence reports received prior to occupation. At least two varieties of Culex mosquitoes have been found and there are two varieties of Aedes. Some unidentified types have been discovered.

Roaming of livestock on the island has created several hazards. Cattle and goats are present in large numbers and there are some hogs. These animals are not infrequently shot by sentries at night and some have been killed along the highways. Not only does disposal of these carcasses add to the burden of sanitation but their presence adds to fly breeding and to contamination of water points. Preliminary attempts to corral cattle have met with failure as they are apparently not used to fencing and are not restrained by a few strands of barbed wire....

4. Waste Disposal.

(a). Latrines....

Latrines at the Civilian Internment Camp are built so that the top is flush with the ground to accommodate the squatting habit of the users. A rectangular opening 8" x 16" is provided with a hinged cover but these are frequently left open. This habit is gradually being overcome by training. The fact that the opening is not closed by anatomical approximation during use has also increased the difficulty of control. During the early stages of development these latrines rapidly became tremendous fly breeders. Contents and even portions of the walls of some pits were actually obliterated by a white curtain of squirming maggots.

Treatment of latrines has consisted of burning out with oil every day or the application of Penite or both. Where Penite has been available it has answered the problem. In the Civilian Internment Camp it controlled a very bad situation within two days, killing not only maggots but also many adult flies which entered the pits. In some cases the ground around the latrines was littered with dead flies. P.D.B. is not yet available....

9. VENEREAL PROPHYLAXIS.

Prophylactic stations have not been set up. The only source of infection is in the Civilian Internment Camp where little opportunity for exposure is

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offered. As regulation of internees becomes less rigid such exposures may be anticipated in the future. Data on venereal rates among civilians are not yet available....

15. RECOMMENDATIONS.

(a). For Action Within the Command.

1. Continuation and expansion of the present system of garbage and refuse disposal. This should include the setting up of equipment for thorough cleaning of cans, trucks and disposal areas.
2. Continuation of latrine pit blasting.
3. Rapid cleanup of areas breeding Aedes mosquitoes, especially Tinian Village.
4. Construction and distribution of fly traps roughly on the basis of four per hundred persons.
5. Establishment of corral for live stock and prevention of roaming.
6. Continuation of program of temporary control of fly and mosquito breeding in destroyed homes and stables.
7. Institution of permanent control of hazards mentioned in paragraph six as soon as possible.

SECTION III

EPIDEMIOLOGIC REPORT Tinian Island, Marianas.

Epidemiology Unit Number 105....

FLY SURVEY OF TINIAN ISLAND

A. General Statement -- Flies constitute one of the worst if not the worst problem on the island. Advanced information purported a notable endemic fly population. Added to this, many new breeding places have been created.

The most acute local problem which first presented itself was the civilian internment camp. Here large numbers of civilians were concentrated in a few days. Overloaded latrines, waste and garbage disposal nearly impossible, and unorganized food preparation all resulted in an unbelievable fly infestation.

In cooperation with the Civil Affairs Medical Officer and the Sanitation Officer, preliminary, practical experiments and recommendations were made.

1. Spraying of latrines with the recommended dosage of sodium arsenite was inadequate. The large volume of urine deposited daily in latrines created too great a dilution factor to give more than a minor kill of the surface layer of maggots. The strength of the spray was doubled and in addition to a daily application in the morning, an evening spray of oil was applied. Furthermore, it was found that tremendous numbers of resting flies on nearby bushes, fences, etc., could be readily killed by spraying with sodium arsenite. The effectiveness of this type of spray is notably increased by adding sugar or molasses.
2. As fly traps became available, the concentration of civilians dispersed with additional temporary housing, chow areas organized, and additional latrines dug, the above control program became very satisfactory.
3. A cleanup program specifically directed to eliminate old latrine pits, bomb shelters, and waste food was organized to progress from east to west to take advantage of the prevailing wind.
4. At present it may be stated that fly control in this important area, a focus of all native enteric and other pathogens is being as effectively carried out as is possible under the general conditions prevailing on the island as a whole.

B. Fly Survey.

A survey of the island to determine the breeding places was carried out and the situation can be briefly stated as follows:

1. Natural breeding places.
 - a. Manure piles and litter in barns and stables.
 - b. Food stuffs, rotten fruits, etc.
 - c. Sugar cane pulp or cane fields were of minor importance.
2. Newly created breeding places brought about by the disruption of normal life. These are listed in order of their importance.
 - a. Spoiling enemy food stores.
 - (1) Dried fish.
 - (2) Bean paste, etc.
 - (3) Rice.
 - (4) Native latrine pits, sumps, and crocks in which "night soil" was collected.
 - b. Unburned or improperly buried animals and enemy dead.
 - c. Organic waste, molasses, crushed sugar cane in the vicinity of the sugar mill is of very minor importance....

C. Discussion and Control Recommendations

1. Discussion -- Flies on Tinian constitute by far the major insect problem and are potentially the greatest single factor from the

epidemic standpoint. At this writing it can be considered that the species of major importance are distributed throughout the island. The greatest concentration of breeding is taking place in spoiling food stores, native latrine pits, and unburned or improperly buried dead animals and manure piles. As is to be expected, living units in the vicinity of such foci of infestation are favored with the greatest number of flies. Fortunately, the canefields have not presented the fly breeding problem we had anticipated. Freshly cut or chewed cane is attractive but soon dries and draws adult flies for only a day or two. No breeding occurs therein. Fly control in the present phase of occupation should be paramount in the sanitation program as some units are still eating out of doors. Hand in hand with the fly control must go construction, maintenance, strict supervision of heads, chow halls, and waste disposal.

2. Control

- a. At present the lack of adequate personnel to effect satisfactory fly control appears to be the greatest stumbling block.
- b. Greater emphasis should be placed on disposal of spoiling enemy food stores and elimination of native latrines throughout the island.
- c. More important than increasing the number of fly traps in use is the proper baiting, placing and emptying of the traps. This has been a very weak point in the control program. All traps, particularly those near chow and latrine areas should be emptied and rebaited every five days or less. Traps should be so constructed as to facilitate regular cleaning.
- d. Greater use should be made of poison bait sprays on food placed in tins or merely strips of straw matting or cardboard or cloth near favorite fly resting places, and sprayed instead of spraying shrubbery which is killed by the sodium arsenite. One-half of a "C" ration can to three gallons of spray is sufficient to make the poison bait spray.

Native Rectal Cultures

	Cultured	Positive	%	Salmonella	Shiga	E. Typh	Misc.
Japanese Male Adult	131	59	45	22	6	0	31
" Female "	77	31	40.2	10	8	2	11
" Male Child	0	0	0	0	0	0	0
" Female "	11	7	63.6	4	0	1	2
" Babies	3	1	33.3	0	1	0	0
Korean Male Adult	65	22	33.8	6	1	0	14
" Female "	23	7	30.4	4	0	1	2
" Male Child	4	1	25.0	0	0	0	1
" Female "	18	7	38.8	3	0	2	2
" Babies	22	7	31.8	0	2	0	5
Totals	354	142		49	18	6	68

There were other natives cultured but presented no pathogens. These total one hundred and thirty two (132). This brings to four hundred and eighty six (486) the overall total cultured and of these one hundred and forty two (142) were considered to harbor enteric pathogens. Of these only seventy three (73) were found to carry either salmonella, shigella, or E. typhosa. 15.0% proved to be carriers of known pathogens, while 29.2% were carriers of the other undetermined pathogens....

SEROLOGY SURVEY WITH KAHN ANTIGEN

Race and Sex	No. Tested	No. Positives	Percentage
Japanese Male Adult	106	22	20.7
" Female "	44	7	15.9
" Child	10	1	10.0
" Male Child	18	1	5.5
Korean Male Adult	103	8	7.7
" Female Adult	33	5	15.1
" Child	16	1	6.2
" Male "	0	0	0.0
Mixed Race and Sex (Children)	34	0	0.0
Mixed Race (Females)	38	3	7.8
Totals	402	48	Average 11.9%

Average percents:

I.	Mixed race and sex	Males	11.3%
		Females	11.0%
II.	Korean Only	Males	7.7%
		Females	10.6%
III.	Japanese Only	Males	13.1%
		Females	12.9%

HOSPITAL ADMISSION CARD

The unit was able to have made a hospital admission slip for the natives of Tinian. This is presented herewith being in both English and Anglized Japanese. It was so arranged as to have all the data on one page so that the back side could be used for progress notes and treatment. This has proved to be of some help to the doctors in Garrison Hospital (G-6)....

I want to inquire about your health: Anato no kenko jotai wo shiritai no desu.

Name _____ Age _____ Sex: _____
 Namae: _____ O-toshi: _____
 Occupation _____ Birthplace _____
 Shobai: _____ Doko de umare-mashita ka: _____
 Nationality Japanese _____ Korean _____
 Dojin deska: Nihonjin: _____ Chosenjin: _____ Chamorro: _____
 Time in Tinian: _____
 Tinian de dono gurai isunde i-mashita ka: _____
 Parents birthplace _____
 Otosan to Okasan wa doko de umare-mashita ka: _____
 Marital status _____
 Kekkon shimashita ka: _____
 Number of children living _____ Ages _____
 Kodomo wa ikumei ga ikite imasu ka: _____ O-toshi: _____
 Number of children dead _____ Ages _____
 Kodomo wa ikumei ga nakunarimashita ka: _____ O-toshi: _____
 Number of sisters _____ Number of brothers _____
 Onna no kyodai ikumei (nin): _____ Otoko no kyodai ikumei (nin): _____
 Mother living _____ Father living _____
 Okasan ga ikite imasu ka: _____ Otosan ga ikite imasu ka: _____
 If dead, cause of death _____
 Do yu funi nakunari mashita ka: _____

History of diseases: Maeni nan no byoki ni kakari mashita ka: _____ Pat. Fam. _____ Pat. F _____

TUBERCULOSIS/Kekkaku: _____	BLADDER DISEASE/bokoyo _____
LEPROSY/Raibyō: _____	COUGHING/Seki: _____
SYPHILIS/Baidoku: _____	SPITTING BLOOD/Chi wo haku: _____
GONORRHEA/RIMBYO: _____	CHEST PAIN/Mune no itemi: _____
CHANCROID/Yokine: _____	STOMACH PAIN/ Hara no itemi: _____
HEART DISEASE/Shinzoboyo: _____	BLACK STOOL/Daiben ga kuroi deska: _____
CANCER/Gan: _____	SLATE STOOL/ " nesumiro deska: _____
CHOLERA/Korera: _____	DIZZINESS/Memai: _____
PNEUMONIA/Haien: _____	CRAMPS/Keiren: _____
SMALL POX/Tennento _____	DYSURIA/Shyoben no itami: _____
DYSENTERY/Sekiri: _____	FREQUENT URINATION/Tabi shyoben _____
EPILEPSY/Tenkan: _____	wo shimasko _____
INSANITY/Seishinbyo: _____	HEMATURIA/Chi no shyoben deska: _____
TYPHOID FEVER/Cho chibusu: _____	

Mense information: Gekkei _____

At what age did it begin? _____
 Gekkei wa otoshi hajimari mashita ka: _____
 Is there much flow? _____
 Gekkei motoki wo chi wa takusan nagare masu ka: _____
 Is there cramping? _____
 Gekkei wa itami shimashita ka: _____

Remarks: _____

- A. Several specimens of captured stores were tested chemically for poisons and bacterial contamination. A list of these and the findings have been sent to the proper authorities. The types of examination and techniques were according to U. S. Public Health Standards. This report is submitted as a guide and will be set up as standard in this laboratory. The chemical tests were made using the copper wire technique and the methyl alcohol determination was a modification of Deniges' method.
1. Sample #1. Crabmeat: White Land Brand.
 - a. Appearance of the container: The container is a clean metal can, lacquered outside and inside, showed no corrosion inside and the ends were slightly concave.
 - b. Appearance of the contents: Fancy-packed crabmeat of good color, clean appearance and odor, packed in parchment paper.
 2. Sample #2. Cuttlefish:
 - a. Appearance of the container: The container is a clean metal can, lacquered outside, tinned inside, showed no corrosion inside, and the ends were slightly concave.
 - b. Appearance of the contents: Wet-packed cuttlefish of clean appearance and odor.
 3. Sample #3. Salmon and mushrooms:
 - a. Appearance of the container: The container is a clean, metal can, lacquered outside, tinned inside, and showed no corrosion inside and the ends were slightly concave.
 - b. Appearance of the contents: Wet-packed, half salmon, half pickled mushrooms, of clean appearance and odor.
 4. Chemical examination.
 - a. Heavy metal preservatives, antimony, arsenic or mercury were absent in all samples.
 - b. Volatile preservatives, phenols and formalin, were absent in all samples.
 5. Microscopical examination.
 - a. No helminth ova or larvae, fungus, yeast or mold spores, conidia nor hyphae were observed.
 - b. There were no foreign substances observed.
 - c. Tissue study showed no evidence of proteolysis, which in the absence of chemical preservatives, should indicate that all fish samples were packed when caught or kept well refrigerated.
 - d. There were exceedingly few dead bacteria present.
 6. Bacteriological examination. At the end of twenty-four hours incubation viable bacteria, yeasts, molds, and fungi were absent in all samples.

7. Remarks: The samples #1, #2, #3, appear free, by laboratory examination, from harmful chemical preservatives and living pathogenic micro and macro organisms. They have been well sterilized under apparently good conditions. They are palatable and considered safe for human consumption.

B. In addition to the above, three specimens were submitted for toxicologic analysis in suspected methyl alcohol poisoning....

SNAILS....

B. Poison Cone Snail. This large land snail is very common throughout the island in rural districts especially among banana stands and heavy undergrowth. Piles of empty shells have been observed near gardens, taro patches, etc., indicating that they have been collected by the natives. This snail presents a problem not from its poisonous nature but in that these dead molluscs furnish innumerable breeding places for flies. As many as fifty maggots have been taken from one shell. The Japanese ate this snail. They were gathered and removed from the shell, then rolled in wood ashes (supposedly to remove its poisonous properties) and boiled. The Koreans state that they did not like them as the first time they were eaten they produced an acute epigastric pain. Tolerance is apparently obtained if they continue to be eaten.....

Epidemiologic general statements can be made at this phase of Tinian island occupation.

1. Dengue as previously reported is endemic and one vector is present, possibly another (*Aedes albopictus* variety). A rise in incidence should be anticipated in view of present future plans, and mosquito control program should be augmented.
2. Bacillary dysentery is endemic and many carriers are present to aid vectors etc., in its spread. Strict adherence to rigid sanitation principles is thought wise.
3. Other diseases such as acid fast infections, skin disease, eye pathology, fungus infestations bear investigation. The existence of large numbers of carriers of protozoan and higher intestinal parasites as found in routine laboratory work on natives has to be looked upon as an insidious epidemiological problem. This is being further investigated by a survey at the present time.
4. No malaria or its vectors were found. Similarly no filariasis has been suspected or seen.
5. Positive serology was found to be 119 per 1000 both Japanese and Koreans living here. Apparently the original natives, the Chamorros, have been removed to the adjacent island Saipan. The rate is interesting on a comparable scale -- they are to be repeated following three or four weeks treatment in an effort to determine that percentage is due to yaws or syphilis. No cases have been diagnosed as Framboesia at this writing.
6. The climate is what can be called moderate, hot in daylight with cool nights. By and large, the island can be said to be a relatively healthful place. This may change or vary with the onset of the dry season next March.