

HEALTH SURVEY OF THE TRUST TERRITORY

OF THE

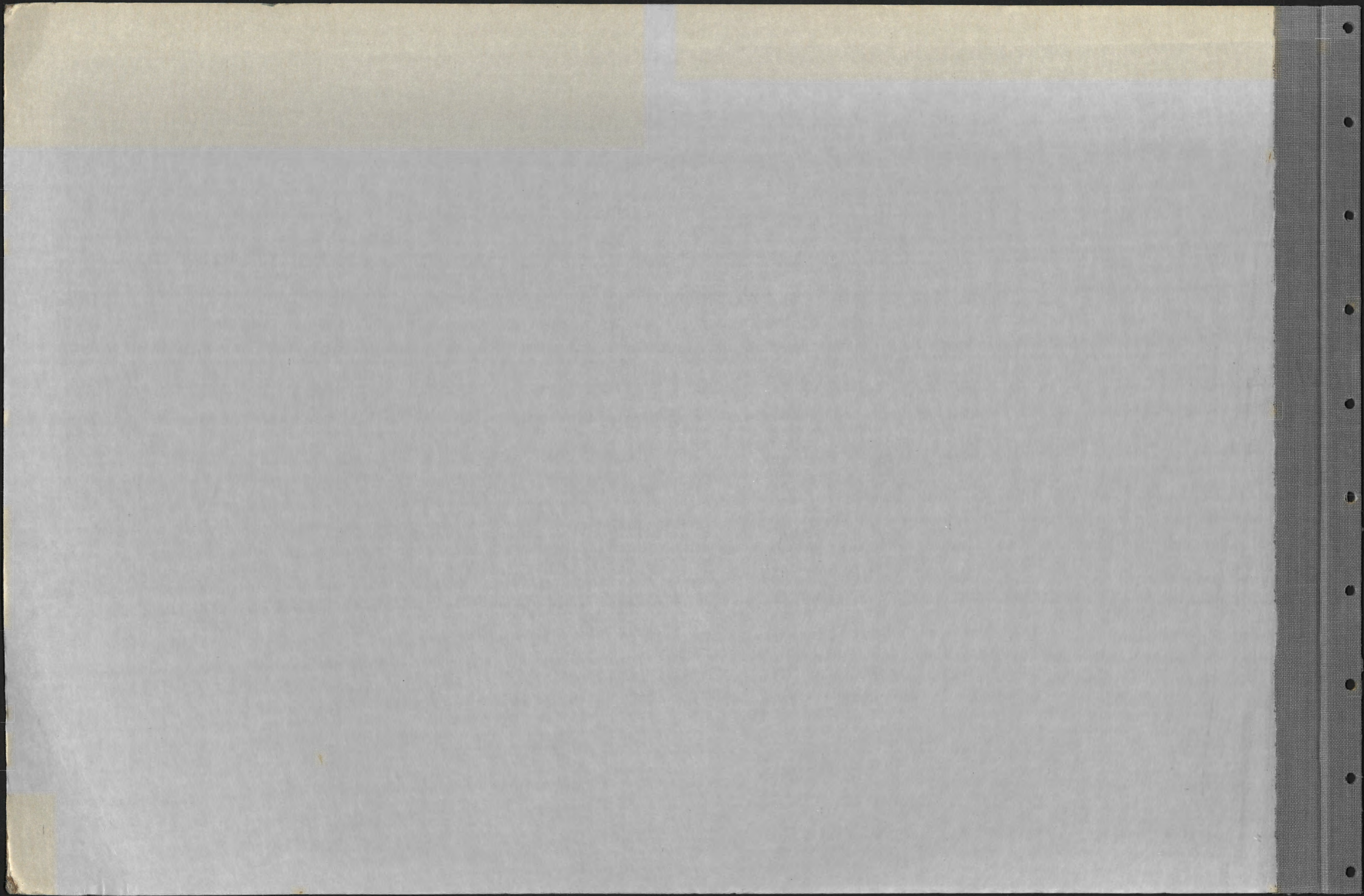
PACIFIC ISLANDS

1948-50

Pac
RA
558
.T75
U54



10 002605241
UNIVERSITY OF HAWAII



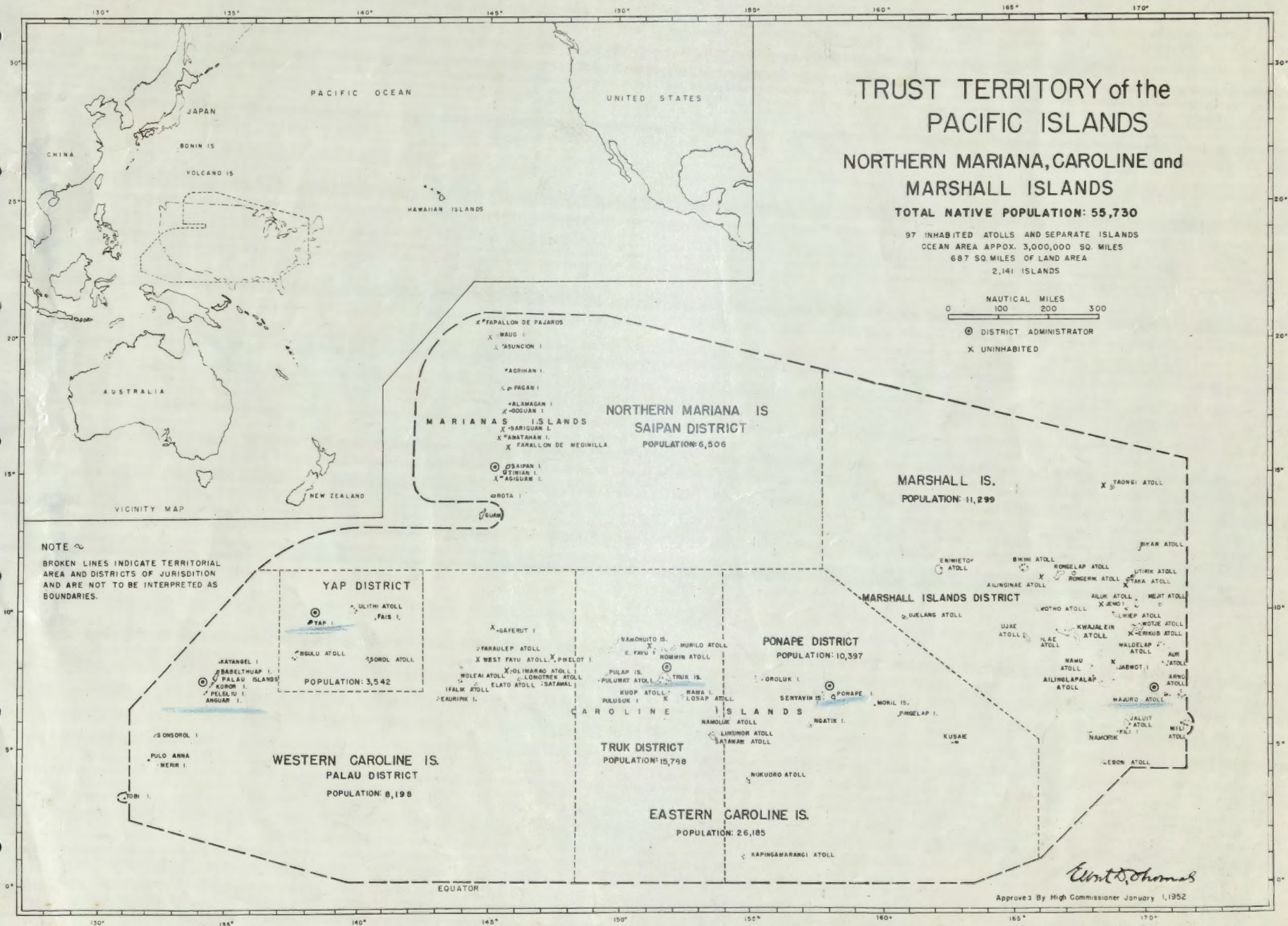


TABLE OF CONTENTS

	Page
Part I. Background of the health survey.....	
Purpose of survey.....	
General description of Trust Territory.....	
II. Population.....	
Recent population shifts.....	
Variation in size of population.....	
Birth and death rates.....	
Age distribution.....	
Comparison of Trust Territory population with United States population.....	
Variation of age by sex.....	
Marital status.....	
Height and weight.....	
Blood-pressure readings.....	
III. Disease prevalence.....	
Improvement in health conditions prior to health survey.....	
Findings of health survey.....	
Laboratory tests and X-ray examinations.....	
Miscellaneous diseases.....	
Appendix--Detailed statistical tables.....	

To Hetzel
7-17-52
Pool

HEALTH SURVEY
OF THE TRUST TERRITORY
OF THE PACIFIC ISLANDS

1948-50

Place reference to appendix table
at beginning of each section.

District, island or atoll, and sex	Age group (years)						
	10-14	15-19	20-24	25-34	35-44	45-64	65 and over
	Average weight (pounds)						
PALAU--Continued							
Pulo Anna Island:							
Male.....	75.0	-	159.0	130.0	160.0	145.0	120.0
Female.....	-	90.0	-	-	-	120.0	150.0
Satawal Island:							
Male.....	92.7	129.5	125.0	138.3	144.0	133.2	120.0
Female.....	70.0	93.1	114.6	116.5	110.2	108.6	-
Sonsorol Island:							
Male.....	-	-	140.0	150.0	147.5	143.6	128.9
Female.....	111.6	-	-	153.3	142.5	124.2	109.2
Tobi Island:							
Male.....	98.8	108.0	-	147.6	134.6	131.6	115.0
Female.....	-	110.0	-	146.2	115.9	113.0	90.0
Ulithi Atoll:							
Male.....	79.1	124.8	133.9	141.5	139.8	141.0	140.6
Female.....	59.4	120.0	132.0	122.1	126.5	116.1	112.0
Woleai Atoll:							
Male.....	84.2	119.2	140.0	145.8	141.9	138.2	135.5
Female.....	77.3	121.5	123.0	127.3	116.4	111.5	140.0
Yap Islands:							
Male.....	66.6	105.8	127.5	131.7	129.7	125.3	114.3
Female.....	68.3	103.1	106.0	106.1	104.9	97.7	87.6
MARSHALL ISLANDS							
Male.....	76.1	117.6	133.4	140.9	137.3	137.8	129.0
Female.....	79.7	108.5	112.2	116.4	124.7	120.3	112.8
Ailuk Atoll:							
Male.....	66.3	103.2	132.0	143.7	138.1	127.8	112.8
Female.....	76.8	106.7	112.1	116.4	124.5	118.0	94.0
Arno Island:							
Male.....	82.0	116.3	139.9	143.2	143.4	148.8	138.0
Female.....	78.5	105.3	120.0	120.6	124.3	119.7	98.0
Aur Island:							
Male.....	68.0	113.7	128.7	134.6	140.1	137.2	105.0
Female.....	87.7	114.3	120.0	118.6	111.6	116.8	105.0
Ebon Atoll:							
Male.....	70.6	110.5	140.9	140.0	144.4	139.2	135.0
Female.....	76.2	120.8	118.4	122.4	131.6	121.6	113.0
Ine Island:							
Male.....	98.4	131.6	134.7	133.1	134.6	136.0	120.0
Female.....	71.2	99.2	117.1	114.5	129.9	120.5	110.0
Kwajalein Atoll:							
Male.....	83.0	119.8	131.5	141.4	137.1	140.9	130.0
Female.....	80.4	105.2	110.4	111.7	123.9	123.7	120.0
Lib Island:							
Male.....	64.0	110.0	137.0	154.0	145.3	143.0	110.0
Female.....	93.3	110.8	106.5	99.0	131.7	126.0	100.0
Likiep Atoll:							
Male.....	72.9	111.5	133.1	145.8	128.2	137.6	110.0
Female.....	72.2	107.3	108.8	111.8	121.9	119.1	110.0
Majuro Atoll:							
Male.....	80.4	120.0	133.7	142.5	137.1	141.6	110.0
Female.....	86.5	105.8	113.3	120.2	126.6	123.4	110.0
Maloelap Atoll:							
Male.....	72.4	124.8	132.0	141.9	134.8	138.7	110.0
Female.....	62.2	109.1	112.3	116.0	128.6	128.2	110.0

To Netzel
7-18-52
rod

The following symbols are used in the tables in this volume:

Not applicable (three dots).....	...
Quantity is zero, frequency (one dash).....	-
Quantity is zero, percent (one cipher).....	0
Percent is more than 0 but less than 0.05.....	0.0

LIST OF TEXTUAL TABLES

PART I

Table	Page
✓ 1. Distribution of islands or atolls by size and population density, Saipan, Saipan, Palau, and Marshall Islands Districts: 1948-50.....	

PART II

✓ 2. Birth and death rates: 1924-30.....	
✓ 3. Females 15-44 years of age visably pregnant on day of survey, Saipan, Palau, and Marshall Islands Districts: 1948-50.....	
✓ 4. Percentage distribution by age group, Saipan, Palau, and Marshall Islands Districts: 1948-50.....	
✓ 5. Distribution of islands by median age, Saipan, Palau, and Marshall Islands Districts: 1948-50.....	
✓ 6. Age distribution for the Yap-Chamorros and the leprosarium patients, Tinian Isl. Tinian Island: 1948-50.....	
✓ 7. Decennial rate of increase, birth rate, death rate, and age distribution for the United States at 20-year intervals.....	
✓ 8. Average weight by height and sex, 25-44 year age group, Saipan, Palau, and Marshall Islands Districts: 1948-50.....	
✓ 9. Average height by age group and sex, Saipan, Palau, and Marshall Islands Districts: 1948-50.....	
✓ 10. Average weight by age group and sex, Saipan, Palau, and Marshall Islands Districts: 1948-50.....	
✓ 11. Height differences between sexes for selected age groups, Saipan, Palau, and Marshall Islands Districts: 1948-50.....	
✓ 12. Weight differences between sexes for selected age groups, Saipan, Palau, and Marshall Islands Districts: 1948-50.....	
✓ 13. Median systolic and diastolic blood pressure by age group and sex, Saipan, Palau, and Marshall Islands Districts: 1948-50.....	

PART III

✓ 14. Percentage of positive stools by age group, Saipan, Palau, and Marshall Islands Districts: 1948-50.....	
✓ 15. Percentage of positive stools by sex, Saipan, Palau, and Marshall Islands Districts: 1948-50.....	
✓ 16. Distribution of islands by percentage of positive stools, Saipan, Palau, and Marshall Islands Districts: 1948-50.....	
✓ 17. Percentage of positive stools by parasitic infestation, Saipan, Palau, and Marshall Islands Districts: 1948-50.....	
✓ 18. Distribution of islands by percentage of positive Kahn reactions, Saipan, Palau, and Marshall Islands Districts: 1948-50.....	
✓ 19. Percentage distribution of examined population with positive Kahn reactions, by age group, Saipan, Palau, and Marshall Islands Districts: 1948-50.....	
✓ 20. Results of survey for active yaws, Saipan, Palau, and Marshall Islands Districts: 1948-50.....	

Table

- ✓21. Results of survey for syphilis and gonorrhea, Saipan, Palau, and Marshall Islands Districts: 1948-50.....
- ✓22. Results of X-ray examinations, Saipan, Palau, and Marshall Islands Districts: 1948-50.....
- ✓23. Results of X-ray survey for active pulmonary tuberculosis by age group, Saipan, Palau, and Marshall Islands Districts: 1948-50.....
- ✓24. Percentage of chest X-rays indicative of active pulmonary tuberculosis, by rank order, selected islands or atolls, Saipan, Palau, and Marshall Islands Districts: 1948-50.....
- ✓25. Tuberculosis diagnoses for natives not X-rayed, Saipan, Palau, and Marshall Islands Districts: 1948-50.....
- ✓26. Distribution of islands by percentage of positive tuberculin tests, Saipan, Palau, and Marshall Islands Districts: 1948-50.....
- ✓27. Percentage of positive tuberculin tests, by rank order, selected islands or atolls, Saipan, Palau, and Marshall Islands Districts: 1948-50.....
- ✓28. Percentage of positive reactions among tuberculin-tested population, by age group, Saipan, Palau, and Marshall Islands Districts: 1948-50.....
- ✓29. Percentage of positive reactions among tuberculin-tested population, by sex, Saipan, Palau, and Marshall Islands Districts: 1948-50.....
- ✓30. Morbidity for selected diagnoses, Saipan, Palau, and Marshall Islands Districts: 1948-50.....
- ✓31. Results of survey for clinically suspicious cases of leprosy, Saipan, Palau, and Marshall Islands Districts: 1948-50.....

APPENDIX TABLES

- ✓1. Age and sex distribution, selected islands or atolls, Saipan, Palau, and Marshall Islands Districts: 1948-50.....
- ✓2. Distribution of natives examined by age group and sex, Saipan, Palau, and Marshall Islands Districts: 1948-50.....
- ✓3. Marital status by age distribution and sex, Saipan, Palau, and Marshall Islands Districts: 1948-50.....
- ✓4. Average height and weight by age group and sex, Saipan, Palau, and Marshall Islands Districts: 1948-50.....
- ✓5. Average weight by age group and sex, selected islands or atolls, Saipan, Palau, and Marshall Islands Districts: 1948-50.....
- ✓6. Average height by age group and sex, selected islands or atolls, Saipan, Palau, and Marshall Islands Districts: August 1948 - June 1950.....
- ✓7. Height and weight distribution by age group and sex, Saipan, Palau, and Marshall Islands Districts: 1948-50.....
- ✓8. Blood-pressure readings in specified categories, by age group and sex, Saipan, Palau, and Marshall Islands Districts: 1948-50.....
- ✓9. Blood-pressure readings by age group and sex, Saipan, Palau, and Marshall Islands Districts: 1948-50.....
- ✓10. Systolic blood-pressure readings by age group and sex, Saipan, Palau, and Marshall Islands Districts: 1948-50.....
- ✓11. Diastolic blood-pressure readings by age group and sex, Saipan, Palau, and Marshall Islands Districts: 1948-50.....
- ✓12. Pulse rate by age group and sex, Saipan, Palau, and Marshall Islands Districts: 1948-50.....
- ✓13. Results of stool examinations by sex, selected islands or atolls, Saipan, Palau, and Marshall Islands Districts: 1948-50.....
- ✓14. Results of stool examinations by selected island or atoll, Saipan, Palau, and Marshall Islands Districts: 1948-50.....
- ✓15. Results of stool examinations by age group, Saipan, Palau, and Marshall Islands Districts: 1948-50.....
- ✓16. Results of stool examinations by age group and sex, Saipan, Palau, and Marshall Islands Districts: 1948-50.....
- ✓17. Positive results of Kahn tests by age group and sex, Saipan, Palau, and Marshall Islands Districts: 1948-50.....

Table

Page

- ✓18. Positive results of Kahn tests by sex, selected islands or atolls, Saipan, Palau, and Marshall Islands Districts: 1948-50.....
- ✓19. Results of chest X-ray examinations by age group and sex, Saipan, Palau, and Marshall Islands Districts: 1948-50.....
- ✓20. Findings of chest X-ray examinations by sex, selected islands or atolls, Saipan, Palau, and Marshall Islands Districts: 1948-50.....
- ✓21. Positive reactions to tuberculin tests and percentage distribution by sex, selected islands or atolls, Saipan, Palau, and Marshall Islands Districts: 1948-50.....
- ✓22. Percentage of tuberculin positives by age group and sex, Saipan, Palau, and Marshall Islands Districts: 1948-50.....
- ✓23. Results of tuberculin tests by age group and sex, Saipan, Palau, and Marshall Islands Districts: 1948-50.....
- 24. Twenty-seven selected diagnoses or diagnostic groups by island or atoll, Saipan, Palau, and Marshall ~~Islands~~ Islands Districts: 1948-50.....

PART I

BACKGROUND OF THE HEALTH SURVEY

PURPOSE OF SURVEY

The Trust Territory of the Pacific Islands, comprising the former Japanese Mandated Islands, was invaded and occupied by United States military forces during World War II. As soon as the islands were occupied they were placed under military government which continued until July 1947 when, under terms of a trusteeship agreement by the United Nations, the United States was designated as the administering authority of the islands. Subsequent Presidential action placed responsibility for civil administration of the islands with the United States Navy Department pending the enactment of legislation by Congress designating the permanent governing authority. Under direction of the Secretary of the Navy, the Commander in Chief of the Pacific Fleet served as High Commissioner of the Trust Territory.

The primary mission of the United States in the islands is to make them economically self-sufficient. In the over-all program designed to accomplish this end, the responsibility for health and sanitation occupies an important place. The trusteeship agreement directed the United States to care for and improve the health of the inhabitants. It was recognized immediately following occupation by United States forces that a broad general health-service policy must be established to meet the need for improvement of health and hygiene in the islands.

The inhabitants of the Trust Territory had lived for a quarter of a century under Japanese rule, and during this period very little had been done to improve health and sanitation conditions. As a result of the war the natives were in a state of mental shock. They had been displaced from their homes, their food had been confiscated, trade and industry had been abandoned, and schools were nonexistent. Medical needs had long been neglected. The islanders, a primitive people who have been exposed to the diseases of civilization against which they have no racial immunity, were economically unable to support doctors, dentists, and nurses in private practice or to maintain hospitals, dispensaries, or departments of public health. In view of these circumstances, the United States was confronted with the problem of furnishing immediate needs of food, water, clothing, shelter, and medical attention.

A Health Service Policy of the United States Navy for the Trust Territory of the Pacific Islands was adopted in 1947. Its purposes were:

1. To raise public-health standards and to control preventable disease among the inhabitants.
2. To provide means of rendering medical and dental care to the inhabitants.
3. To conduct medical and dental research into health problems peculiar to the Trust Territory of the Pacific Islands.
4. To train native men and women in the arts of medical, dental, and nursing practice.

It provided for (1) an annual health and sanitation survey on each island; (2) reporting preventable diseases and the collection of appropriate vital statistics; (3) a program for eradication of intestinal parasites and yaws; (4) an organization for the treatment of tuberculosis and leprosy; (5) a program to insure potable water and the sanitary disposal of sewage and garbage; (6) routine immunization of natives against smallpox, typhoid fever, and tetanus; (7) rodent control; (8) quarantine rules and regulations; (9) food-sanitation program; (10) program to improve nutritional status of the inhabitants; and (11) a venereal-disease program.

One of the main difficulties encountered in developing a public-health program for the Trust Territory was the lack of reliable information concerning health and sanitation conditions. There were no vital statistics available except scanty data compiled by the Japanese and certain health and sanitation reports accumulated during American occupation. The most reliable reports came from the naval dispensaries where natives living in the immediate vicinity were given medical care and treatment. Although there was definite indication from these reports that certain diseases were adversely affecting the health of the islanders and that sanitation in general was on a very low level, a correct appraisal of disease prevalence, morbidity, and sanitation problems could not be made without a comprehensive survey.

Motivated by these considerations the United States Navy undertook a health survey of the Trust Territory to determine the public-health problems of the indigenous population of that area. The U. S. S. Whidbey, equipped with a photofluorographic unit, clinical laboratory facilities, and dental examining facilities, began the survey in the Marshall Islands area on 1 August 1948. The ship was staffed with medical officers, X-ray and laboratory technicians, a dental officer and technician, personnel to perform sanitary surveys, and clerical technicians. Traveling from island to island the survey group examined every native and investigated and evaluated the food, water, sewage, and garbage facilities, as well as the general living conditions and native habits and customs that had a bearing on the subject of health and sanitation. The survey included, among other things, a physical examination, photofluorographic examination of the chest, Kahn test, tuberculin skin test, and stool examination. This report concerns those islands surveyed by the U. S. S. Whidbey during the period from August 1948 through June 1950. All of the Western Caroline Islands, the Northern Marianas Islands (except Alamagan and Agrihan Islands), and the eastern islands of the Marshall Islands group are included.

GENERAL DESCRIPTION OF TRUST TERRITORY

Geography.--The Trust Territory embraces four subareas: The Western Caroline Islands, the Eastern Caroline Islands, the Marshall Islands, and the Northern Marianas Islands (except Guam). The territory includes 96 distinct island units (1,460 individual islands) with a combined land area of approximately 687 square miles. Located in the western Pacific north of the equator, the territory covers about 3 million square miles. Of the 96 island units, only 64 are inhabited at the present time. For administrative purposes, the Trust Territory is divided into five districts--Saipan District in the Marianas, Palau District in the Western Carolines, Truk and Ponape Districts in the Eastern Carolines, and the Marshall Islands District. This report includes only the districts of Saipan, Palau, and part of the Marshall Islands. About one-half of the inhabited islands of the entire Trust Territory are represented.

Area.--The islands and atolls of this portion of the Trust Territory vary in size from 9/100 of a square mile of dry land for Eauripik Atoll to 143 square miles for Babelthuap Island. Thirteen islands have an area of less than 1 square mile. Ten of these are in the Palau District; the other three are in the Marshall Islands District. Next to Babelthuap, the four largest islands are Saipan, Tinian, Yap (group), and Rota.

(Text ~~is~~ Table 1)

Text Table I

October 15, 1951
AH:mr

~~Table~~ Table 10. -- DISTRIBUTION OF ISLANDS OR ATOLLS BY SIZE AND POPULATION DENSITY, *Saipan, Palau, and Marshall Islands Districts: 1948-50*

*TD
Retzgel
10-16-51
mr*

Population density per square mile	Square miles of dry land per island or atoll				
	Less than 1	1-4	5-19	30-49	Over 140
Under 20				Tinian Island	
20-49	Merir Island		Mili Atoll	Rota Island	Babelthuap Island
50-99	Pulo Anna Island	Kayangel Atoll Wotje Atoll	Koror Island Peleliu Island	Yap Islands	
100-199	Elato Atoll Lib Island Utirik Atoll	Ailuk Atoll Angaur Island Likiep Atoll Malcoelap Atoll Sonsorol Island	Kwajalein Atoll	Saipan Island	
200-299		Aur and Tabal Islands Fais Island Ulithi Atoll Woleai Atoll	Arno and Ine Islands		
300-399	Lamotrek Atoll Ngulu Atoll	Ebon Atoll Majuro Atoll			
400-499	Ifalik Atoll Mejit Island Satawal Island	Namorik Island			
600-699	Tobi Island				
700-799	Faraulep Atoll				
Over 1,500	Eauripik Atoll				

37 islands

Topography.--The islands are of two types: High volcanic islands and low islands and atolls of coral formation. The Marshall Islands and the Caroline Islands (except for the volcanic outcroppings at Truk, Ponape, Kusaie, Palau, and Yap) are of coral formation, mostly in the form of atolls. Babelthup and Koror of the Palaus are of the high volcanic type. Alamagan, Agrihan, Saipan, Tinian, and Rota of the Marianas are also volcanic islands although volcanic activity has not occurred for a long time and their volcanic cores are largely covered with coral limestones. Of the low atolls, Tobi, Sonsorol, Angaur, and Fais are table reefs which rise 50 feet or more above sea level and are characterized by a small lake or marshy center with coasts dropping sharply in steep cliffs. The Marshall Islands, surrounded by coral reefs, are only slightly elevated above the high-tide mark.

Climate.--The climate of the Trust Territory is tropical with high and relatively uniform temperatures. The mean annual temperatures, based on prewar records, range from 78° to 81° F. Humidity, also, is generally very high.

The winds affecting the territory are (1) the trade-wind systems of the Northern and Southern Hemispheres, (2) the doldrum belt or equatorial (intertropical) front, and (3) the monsoon system of the Asia-Australia region.

The northeast trade winds affect the islands very little other than in the Northern Marshalls. In this region rather constant northeast winds bring a dry winter season during which acute scarcity of water becomes a problem. This is offset by a rainy period in late summer and early fall. Southeast trade winds prevail in the Southern Marshalls and the Western Carolines.

The doldrum belt of rising air, an equatorial zone of characteristically light winds and calm accompanied by great humidity and heavy rainfall, lies between the northeast trade winds and the southeast trade winds and shifts northward and southward with the seasons. In January-February the doldrum belt is south of the equator. During the July-August period the doldrum belt lies north of the equator, over the Marianas, Northern Carolines, and Central Marshalls.

The monsoons, blowing out of cold Asia toward warm Australia, join and accelerate the northeast trade winds in the Marianas and Western Carolines during the winter period. In the July-August period the monsoon reverses, and, blowing inward toward Asia, crosses the Palaus, Yap, and the Southern Marianas from a southwest direction, veering in the Northern Marianas toward a southeast direction.

For the most part the greatest rainfall is received by the southern islands. Precipitation on high islands is supplemented by orographic rain. In the Carolines and Southern Marshalls the average annual rainfall is over 120 inches. In the Marianas the total annual rainfall varies from 60 to 100 inches. The Northern Marshalls receive considerably less rainfall than the Southern Marshalls. Although they have heavier rains, they are of a seasonal nature and their annual total appears to be less than 60 inches. Squalls and thunderstorms of brief duration occur frequently throughout the islands. Typhoons, occurring less frequently, are the most destructive storms. The areas most likely to be affected are the Western Carolines and the Southern Marianas, especially the low islands.

Plants and insects.--Tropical plants and forests cover the islands. The soils support an abundant ground cover, but when cultivated the fertility and humus content are quickly depleted. Erosion, distribution of rainfall, insect pests, diseases, and weeds are further handicaps to agriculture. Tree crops of coconut, breadfruit, pandanus, papaya, and banana, and root crops of arrowroot and taro are the principal crops of the low islands. On the high islands more food crops are grown, including vegetables, citrus fruits, and pineapples. Corn is one of the chief crops in the Marianas.

Poisonous plants are found on the islands. The changot (poison tree) occurs on Yap Island. The juice of this tree causes severe swelling and burning on contact with human skin. The bark and fruit of Cerbera lactoria, also found on Yap Island, contain a powerful toxin. The sapucaia tree, said to exist in the Marianas, has one-seeded fruit which, if crushed and tossed into the water, will kill any fish therein. Allergic reactions can be produced by copra dust and the blossoms of sugarcane.

Insects are exceptionally numerous. Nearly one-half of the estimated 7,000 species found in the Trust Territory are common to all islands, while the others are endemic to specific areas. The kinds of insects vary little from one low atoll to another or from one high island to another, but many species are found on the high islands that are not found on the atolls.

Entomological problems were prominent among those encountered by the military government units. There were four principal pests--the giant African snail, the rhinoceros beetle, the banana root borer, and the coconut beetle. They gained a foothold in the islands during the war and, finding no natural enemies there, have spread extensively and are now threatening the native food supply by widespread destruction of edible vegetation.

Mosquitoes are prevalent throughout the Trust Territory. They breed the year around and are especially numerous after heavy rains. Control programs of varying degrees were in operation prior to inspection by the survey team. On Maloelap, Kwajalein, and Ailuk Atolls in the Marshall Islands District no mosquitoes were seen. From Aur Island and Mili, Ebon, and Majuro Atolls in the same district, only the culicine species was reported, and on Mejit Island and Utirik Atoll only culex varieties were noted. Culex quinquefasciatus, a possible intermediate host of Wuchereria bancrofti and vector of filariasis, and Culex carolinensis are common to all islands in the Palau District.

Aedes aegypti, vector of dengue and one of the worst pests of the Pacific, was seen on Saipan Island and throughout the Palau District except on Faraulep Atoll and Satawal Island. This species also has a prominent role in the transmission of yellow fever, and although yellow fever does not occur in the ~~Pacific~~ Pacific area, its introduction remains a serious threat. Aedes finlayi, a potential vector of filariasis, was found on Woleai, Yap, Ifalik, and Sorol. Other species reported from the Palau District were Culex annulirostris, Culex sitiens, Aedes pandani, and Aedes vexans. From the Saipan District, in addition to the Aedes aegypti species previously mentioned, Anopheles subpictus, Culex quinquefasciatus, Culex annulirostris, and Aedes vexans were reported.

Lice, transmitters of typhus fever, are present, and mites of the family Trombididae, potential vectors of Rickettsia orientalis, are said to be prevalent in the Trust Territory. Flies and rats are superabundant. The dog tick and the tropical bedbug are also present. Ants, scorpions, and centipedes occur in most of the islands, and rats and mice abound.

Poisonous sea snakes and fish inhabit the waters around the islands. Among them are the moray, scorpion fish, toadfish, stonefish, weevers, sting ray, and poisonous jellyfish. Sharks, gars, swordfish, octopuses, and giant clams are also present.

History.--It is probable that the first inhabitants of Micronesia were canoe-voyaging immigrants from the marginal islands of Malaysia. Early explorations of the islands were made by Spanish, English, and Portuguese explorers. Although no serious attempts were made by any country to assume control of the islands, they were, for the most part, under Spanish influence until 1885 when the Germans assumed a protectorate over the Marshalls. Spain continued to control the Carolines and Marianas until they were sold to Germany in 1899. German control of Micronesia was terminated in 1914 when the Japanese took military possession of the Marshalls, Carolines, and Northern Marianas. At the close of World War I, Japan became the mandatory power for the islands under the mandates system of the League of Nations.

During the time of Spanish control little effort was made to exploit the islands in an economic sense. Emphasis was placed upon pacification and Christianization of the Marianas. Under German control development of trade and expansion of production was encouraged but economic exploitation was tempered by a policy of self-interest. For the first time public health activities assumed a role of importance. Hospitals were erected and health and sanitation measures were enacted. In contrast Japanese rule was complete and direct, and the islands were subjected to severe economic exploitation. Japanese laws were enforced, and Japanese language and customs were taught. Attention given to public-health activities was primarily for the benefit of the Japanese.

From 1938 on the islands were treated as a closed military area and during World War II the islands were used as bases for Japanese aggression. In 1944 the islands were invaded and captured by United States forces. As each island was occupied it became subject to United States authority in accordance with the international law of belligerent occupation.

Island peoples, customs, and cultures.--The inhabitants of the Trust Territory are broadly classified as Micronesians, or "people of the tiny islands." They are divided into a number of regional and local groupings which differ in physical characteristics, language, and customs. The Micronesian stock is characterized by median stature, brown skin, straight to wavy hair, and high cheek bones. The peoples of the Carolines tend to have Mongoloid-type characteristics while those of the Marshalls are more of the Caucasoid type. Negritoid and Australoid characteristics appear throughout but are most pronounced in the Palau District. The Chamorros of the Marianas are culturally distinct. They are descendants of the indigenous Marianas people who through three centuries have intermarried with Spanish, Filipino, and Chinese immigrants and later with German and Japanese immigrants. They came to be known as "Chamorros" in early Spanish times, a name derived from the word "chamorri" meaning high chief or noble. Another group of inhabitants of the Marianas are the immigrants from the "outislands," called Kanakas by the Chamorros.

The native cultures of Micronesia vary among islands. This variation is accentuated by differing degrees of acculturation acquired by contact with Spaniards, Germans, Japanese, and Americans. Modern ways of life have been adopted to a great extent in the Saipan and Marshall Islands Districts. The native customs in Saipan, especially among the Chamorros, are patterned after those of western civilization with a definite Spanish background. For the most part the immigrants have accepted the Saipanese customs, dropping their own home-island habits, superstitions, and taboos. The Marshall Islands show extensive acculturation. The mission church, the dispensary, and the formal school are firmly incorporated into Marshallese society. They have not, however, fully supplanted the old Marshallese religion, medical beliefs, and practices. In much of the Palau District, particularly the Yap area which is the least Christianized of Micronesia, the inhabitants have clung to traditional patterns.

Although all the island languages are Malayo-Polynesian, eight individual languages and many dialects are spoken within the Territory. During Japanese occupation the Japanese language came close to becoming a common tongue. Most of the older inhabitants throughout the Trust Territory speak Japanese in addition to their native tongue. In Saipan many speak German. All Chamorros speak their own tongue with a few speaking a combination of Chamorro and Japanese. The immigrant peoples have retained their native island tongues, adding Ponapese, Yapese, Ulithian, Palauan, Marshallese, and Trukese to the languages spoken in the Saipan District. The inhabitants of most of the islands in the Palau District speak Ulithian, a native language which is said to have originated in Ulithi and spread through the Western Carolines. Palauan is the native tongue of Babelthuap, Koror, and the adjoining islands, and Yapese is the language of the Yap Islands. In the Marshall Islands Marshallese is the universal language. English is now being taught in the schools of the Trust Territory and most children can speak at least words of greeting in English. A few adults in addition to the school teachers and practitioners, speak some English. The variety of languages spoken offers the greatest barrier to the educational program.

The majority of the islanders wear Western-style, cloth garments. In the Palau District, however, use of the traditional-style clothing strongly persists. For the most part, loin cloths are worn by the men and lava-lavas by the women. On Yap Island the women wear grass skirts instead of lava-lavas. When one grass skirt becomes filthy a new skirt is made and placed over it. Bare feet are universal on many of the islands and quite common on the others where shoes may be worn occasionally.

Women are considered unclean during periods of menstruation or childbirth, and they are segregated in designated huts during this time. It is taboo for them to leave the hut or the immediate area for any reason, and no one is permitted to come within 30 feet of the hut. This custom made it very difficult to obtain physical examinations of the female population.

The population of Saipan District is almost entirely Roman Catholic. Many islands in Palau District are predominantly Catholic but the Protestant faith is also well represented. There are many inhabitants among the Palauans, especially in the Yap Islands, who are not Christians and who still cling to the old and traditional religious beliefs of gods, ghosts, magic, and witchcraft. The Marshallese are mostly Protestant.

Government.--Island government was in an emergency status during the early period of American occupation. The islands were subject to military government regulated by the international laws of war until the United States was designated as the administering authority by the trusteeship agreement. The basic policy of the military government was to grant the territories the highest degree of self-government that they were capable of assimilating. The islanders were encouraged to take an active part in their local governments and elections were held for minor public offices. Local islanders were elected or appointed to such posts as chiefs, magistrates, and members of island councils. Military government came to an end in July 1947 and civil administration was begun. Under civil administration, American policy continued toward training and encouraging competent islanders to assume responsibilities in government posts. Local customs and traditions and other conditions peculiar to a given area were taken into consideration in determining appropriate local systems of community rule. For this reason local governments developed along slightly different lines in the three districts.

The Saipan people established a municipal government which later carried a large share of the responsibility for the administration of island affairs. It was administered by a high council and a board of commissioners headed by a chief commissioner. In the Palau District local government was developed on the basis of established districts. Each district was administered by a district chief, working with a council of "nobles" of the district. Though chieftainship is normally hereditary, it has been possible to introduce elective systems, and in some districts leaders have been chosen who are not in the strict line of highest birth but are acceptable to the people. A central government consisting of an administrative council, congress, and a high court serves to draw together the common interests of the districts. The Marshallese have been exposed longest to experiments in local self-government, the existing system having been established in the early days of American occupation under the Marshalls-Gilberts command. It recognizes the traditional status of acknowledged chiefs and creates for each atoll a system of local administration with magistrates and other paid officials, and also has representative atoll councils.

Economic status.--The economy of the Trust Territory suffered a severe setback as a result of the dislocations, deprivations, and destruction of World War II. Of necessity rehabilitation was the immediate objective following occupation by United States military forces; the ultimate aim, as stated before, is the establishment of a self-sustaining economy. Substantial advances toward both objectives have been made during the postwar period.

The natural resources of the islands are meager and opportunities for future expansion and development are limited. Agriculture and fishing offer the greatest economic possibilities for the islanders. Copra has been the chief agricultural money crop so far as the islanders are concerned. During their stay the Japanese developed large scale production of sugarcane and manioc. In 1937, 28,378 acres were reported to be planted in sugarcane, almost all on Saipan, Tinian, and Rota. These enterprises, including the mills and equipment, were completely destroyed in the bombing and shelling which preceded the invasion. Handicraft made by individuals in their homes is also an important export. The most active home industries are found on Saipan where many islanders have become shoemakers, blacksmiths, silversmiths, tailors, seamstresses, machinists, and electricians. In the Marshall Islands boat building has become an important industry. Other industries producing for local consumption are small soap factories on Truk and Ponape, a soya-sauce factory on Saipan, and several small sawmills. Potentialities of the mining industry are limited because of the relatively small amount and the inferior quality of the minerals. Only phosphate, bauxite, and manganese are mined in substantial quantities. A phosphate mine was in operation on the island of Angaur at the time of the survey.

The economic status of the majority of the islands/or atolls/is considered poor. There were several islands, however, where the economic status was exceptionally good in comparison with the other islands. Tinian, Angaur, Kayangel, Sorol, Tobi, Ailuk, Aur, Kwajalein, Likiep, Majit, and Tabal were all outstanding in this respect.

~~xxxxThe economic status of the majority of the islandsxxx~~

On these islands the inhabitants appeared better fed and better clothed and homes were ^{of superior construction with equipment excelling that on} ~~better constructed and better equipped than on~~ other islands surveyed.

Education.--The first schools in the islands were those established by missionaries. During Japanese occupation these mission schools were allowed to continue and, in addition, public schools were provided for the islanders. Education, however, was not compulsory. The basic course of instruction covered 3 years and was followed by a 2-year supplemental course for pupils showing special aptitude. All teachers were Japanese and the Japanese language was the major subject taught. This school system was disorganized by military activities of the war period, and by the time the United States took over most school facilities had been destroyed. In spite of the many obstacles a program of free public education was begun almost immediately under military government supervision. At the time of the survey the educational level of the majority of the islanders, in comparison with the United States standards, was that of about second grade. It is estimated that the educational level of those who have been trained in the present school system has been raised to the equivalent of seventh or eighth grade.

As compared with other islands, the educational level appeared high on Saipan, Tinian, Kwajalein, Mejit, Likiep, and Satawal. On the other hand, the educational status of the inhabitants on Namorik, Lamotrek, Faraulep, and Elato appeared to be below average.

Medical practices and facilities.--During Japanese occupation at least 12 hospitals were in existence, 8 of which were maintained by the government. The government hospitals were located on Saipan, Yap, Ponape, Truk, Kusaie, Koror, Angaur, and Jaluit. Several of these had operating rooms and roentgenologic equipment with electric current supplied from storage batteries. A sugar company maintained a hospital on Tinian and one on Saipan. In addition, asylums for lepers were present on Saipan, Yap, Koror, and Jaluit, and five hospitals for tuberculous patients were maintained on Yap.

The basic health program instituted by the Navy provided for a 50- to 75-bed dispensary at each district center. In addition, there are two 10- to 25-bed dispensaries and one 8-bed dispensary. Each dispensary has one or more doctors of the Medical Corps, United States Navy. First-aid dispensaries, manned by local health aides and visited about four times a year by a doctor or hospital corpsman, are maintained in most of the outlying islands. A leprosarium is located on Tinian. Cases requiring treatment not available at these dispensaries are sent to the United States Naval Medical Center, Guam, Marianas Islands. Medical, dental, and nursing training programs for the indigenous people are also provided at the United States Naval Medical Center, Guam. Similar programs are conducted in the district dispensaries for health aides, nurses' aides, and laboratory workers.

Although many aspects of modern medical treatment are readily accepted, local customs and ideas persist which can be eradicated only through long-term education. It is a common belief that the sick can be healed by magic. A practice of more remedial value is the use of herbs in treatment of various ailments. In many instances, the natives appear at the dispensaries for treatment only after native medicine and witchcraft have failed to alleviate their ills. Where belief in evil spirits as the basis for explanations of the causes of disease is well established, the germ theory is met with indifference or skepticism. As a result it is very difficult to obtain cooperation in segregating persons with communicable diseases. Those with tuberculosis lead normal everyday lives, intermingle with other inhabitants, and take no precautions against spread of the disease.

In the more isolated places obstetrical cases are cared for in the home by friends and relatives; where services of a practitioner are available, they are cared for by the practitioner assisted by midwives. In many places the dispensaries have facilities for the delivery of obstetrical cases. The practitioners have been trained in sterile technique, but little or no sterile technique is practiced in cases delivered at home without the aid of a practitioner. Infants and small children receive no special care. Breast feeding of infants is supplemented by a solution of coconut milk and squeezings from taro root and other miscellaneous plants fed from a bottle, in most cases an old sake bottle with an improvised nipple of wood or leaves. Coconut, breadfruit, and other foods are started at a relatively young age, from 6 to 9 months.

The aged and infirm are cared for in their respective homes as also are the mentally deficient. When mental cases become violent, which occurs only in rare instances, they are locked up.

Nutrition.--Native vegetation and fish are the principal sources of food. Their acquisition is based upon opportunism which often gives rise to unpredictable shortages. Generally speaking, the diet of the natives is high in starch but deficient in proteins and fats. The common foods are coconuts, breadfruit, and fish, with very few fruits and vegetables. Pigs, chickens, and ducks are available on most islands but are usually reserved for festive occasions. Imported products such as rice, flour, sugar, coffee, tea, canned milk, canned corned beef, canned salmon, bacon, and sausage supplement the diet, but quantities are limited and the supply is often exhausted before a new shipment makes more available. On some islands where the breadfruit and coconut trees were destroyed during the war, acute food shortages have occurred.

Kava, a drink which produces languor and sleepiness, is prepared from juices of certain roots and used extensively throughout the islands. On at least one island a native distillery is in operation preparing fermented coconut juice. Imbibing of the beverage did not appear to be universal throughout the island. Sour toddy wine, although illegal, is also probably consumed. This drink, which is made from flowers of wine palms, is highly intoxicating and is said to have deleterious effects upon the urinary and nervous systems. Among the Yapese chewing of betel nut is practically universal. The pathways and gathering places are spattered with betel-nut spittle, and it is believed that this habit of careless spitting has much to do with the spread of pulmonary tuberculosis. The betel nut is highly alkaloid in content and causes the formation of concretions on the teeth.

Dr. E. A. Alpert, who took part in the United States Commercial Company survey of 1946, makes the following statement in his report:

"It is obvious that the basic foods of the Micronesian native--in quantities now available (i. e., as of mid-1946) and ordinarily consumed--are deficient in practically every nutritional factor studied, more especially in protein, calcium, iron, vitamin C, the vitamins of B-complex, and in calories. * * * The high carbohydrate content of the native diet increases the quantity of vitamins necessary to preserve the nutritional status."

Sanitation.--Improvement of sanitary conditions on the islands was one of the main problems confronting civil-administration health officials. There is no evidence that the Japanese considered health and sanitation from the viewpoint of benefiting the natives. So far as is known no water-borne sewage system existed, except perhaps in certain Japanese naval installations. Although the Japanese developed the system of latrine disposal of human waste in their own installations, the natives customarily used the beaches or any available area close to their dwellings for sites of defecation. The Japanese also introduced the practice of using human waste as fertilizer and it is believed that this practice contributed to the high incidence of amebic dysentery during Japanese occupation.

American occupation forces used pit latrines until septic tanks and sewer systems could be introduced. As soon as possible, civil-administration officials established a sanitation program designed to improve general health conditions. Rules for sanitation were made a part of government regulations for each island, and infraction of them became a punishable offense. The sanitation program has met with most success at the civil-administration centers where continual inspection by medical personnel is possible. Inspections of outlying islands are less frequent, and the responsibility for carrying out the program rests with health aides who have been instructed in sanitation measures.

The findings of the health survey reveal that most islands have community latrines which, in general, are clean and in good repair. It was evident, however, that use of the beaches was still a common practice throughout the islands and, in many places, leaves and coconut fiber used in lieu of toilet paper were thrown about promiscuously. Maloelap Atoll was the only place where no latrines were available; but many islands had latrines, in some instances clean and well constructed, which were seldom used. Even on Saipan Island where virtually every household has its own pit latrine, use of the beach was evident.

Garbage is usually ^{buried in pits, but on some islands it is} ~~disposed of by carrying it to pits, or by burning it, or by dumping it in the sea~~ burned or carried out to sea and dumped. The most inadequate methods of garbage disposal were noted on Utirik Atoll and Namorik Island where it was allowed to accumulate over long periods of time.

Water supply.--In general, rainfall furnishes the fresh water supply. It is supplemented by wells wherever possible, and on the high islands springs, streams, ponds, and reservoirs are also utilized. The amount of fresh water required to fill the needs of the indigenous population is considerably less than that required by the customs and standards of the United States. It is said that inhabitants of some of the coral islands are able to exist comfortably on as little as a gallon of fresh water per capita per day. On the high islands the per capita consumption is estimated to be about twice that amount. The islanders bathe in the ocean or lagoons and do their laundry in sea water, thus conserving the fresh water. Little or no fresh water is used in preparing foods and coconut juice is available to quench thirst.

Rain water is collected in old oil drums by means of spouts and drains on houses and coconut trees. The water is then stored in the drums, often without covers or safeguards against debris. There were indications that the water supply on the following islands or atolls was contaminated: Babelthuap, Elato, Lamotrek, Yap, Aur, Tabal, Ebon, Kwajalein, Majuro, Mili, Maloelap, Namorik, and Ormed. Most wells were contaminated and the natives were warned to boil the water before using it. On Saipan Island all water is chlorinated.

Civil-administration officials have given careful attention to means of obtaining an adequate water supply free from impurities. Rigid standards are now observed in the inspection of the water distribution systems. Local water supplies have been improved; additional wells and watersheds, protected against possible pollution, have been built; and covered storage tanks are in wide usage.

PART II

POPULATION

The total native population of the Trust Territory in January 1948 was officially placed at 51,239 and in 1950 at 54,299. About three-fifths of the population live on the seven principal islands of Saipan, Palau, Yap, Majuro, Truk, Ponape, and Kusaie. The last three islands are not included in this study. The population figures presented in the accompanying tables are based upon the number of identification cards distributed during the survey--one to each inhabitant present on the island at the time of the U. S. S. Whidbey's visit. Although it was intended that every inhabitant be included, the length of time involved in making a survey of this nature coupled with the fact that there is a great deal of interisland visiting resulted in some individuals being examined at places other than their home islands and others not receiving any examination at all. The survey does not approach 100-percent coverage for each island visited. Efforts were made to obtain complete coverage in the first period of the survey, which includes the portion of the Trust Territory covered herein. The area of the island and the scattering of the population and terrain were factors which limited the extent to which the population was brought into the survey. The cooperation of the local chiefs or administrative heads varied with the amount of control they exercised over their people, hence another factor limiting complete coverage was introduced. Estimates of island and district populations were obtained from chiefs and administrative heads. There was no method for determining how accurate these estimates were. However, in a number of cases there was close correspondence between the number examined and the estimated population.

RECENT POPULATION SHIFTS

Widespread population shifts occurred just before and during the war when all local people were removed from strategic zones and from islands used as military bases. Many islanders took to the hills or went to uninhabited islands. Conditions became even more unsettled following entry of American forces when it became necessary for military government personnel to get islanders to places of safety and out of the way of military operations. It has been part of American postwar policy to get the islanders back to their homes or to places where they want to live. One of the largest group movements involved the Yap-Chamorroes who originally lived on Tinian; they were moved to Yap Island by the Japanese and, in March of 1948, were moved back to Tinian by the United States. Because of the tenacious attachment of the islanders to their ancestral homes any forced moves have been avoided except in emergencies.

VARIATION IN SIZE OF POPULATION

Population varies from island to island. Out of 39 islands/ or atolls, 24 have a population between 100 and 499. Five islands have a population of less than 100, and ten islands have a population of 500 or more. Included in this latter group are six with over 1,000 inhabitants. They are Saipan, Babelthuap, Yap, Koror, Majuro, and Kwajalein.

The greatest variation from small to large islands occurs in Palau District where the actual population varies from 11 to 3,380. The populations of the islands in the Marshall Islands District show the most uniformity in size.

Area is no indication of population. Some of the larger islands are very sparsely populated in terms of their size. Tinian and Rota, for instance, are nearly as large as Saipan but their populations are very much smaller. On the tiny islands with an area of less than 1 square mile the population density is far greater than on the larger islands. However, population density in terms of overall area is often misleading since on many of the larger islands only a very small area is inhabitable. This is especially true on the volcanic islands where much of the island is too rocky to be inhabited. The result is a concentration of population in a very small area with an extremely high population density while the rest of the island has few or no inhabitants at all.

BIRTH AND DEATH RATES

It is believed by population experts that a fairly stable balance between births and deaths was characteristic of the Pacific island peoples until it was upset by outside influence. Population decline appears to have been brought about by contact with outsiders. Introduction of new epidemic diseases, deterioration of diet following introduction of trade goods, extensive warfare, overindulgence in liquors, and various other factors have caused the death rate to rise. The birth rate, on the other hand, was lowered by such influences as venereal disease, dietetic deficiencies, disturbance of sex and marriage customs, and the practice of abortion and infanticide. This depopulation trend has been checked in certain areas. Generally speaking, fertility has remained high by Western standards while the abnormal death rate has declined. Public health and medical work, quarantine measures, growing immunity to introduced diseases, lack of birth control, and banning of infanticide have all contributed to the reversal of the over-all depopulation trend. Among the various population groups, existing conditions vary from extreme depopulation to rapid increase. The Chamorro population of Saipan appears to be the most rapidly increasing group in the territory while depopulation is most threatening in the Palau District, particularly on the southwestern islands of Merir, Pulo Anna, Sonsorol, and Tobi. It is said that at one time there were over a thousand people living on these islands. In June 1949 the combined population of the 4 islands was 263, and most of these were in the postreproductive age group.

Statistics for 1950 on the native population of the entire Trust Territory indicate a birth rate of 33.5 per 1,000 of population and a death rate of 13.1 per 1,000 of population. General indications concerning birth and death rates in the Trust Territory for the period 1924-30 are given by the Japanese statistics shown in table 2. It will be noted that during this period the greatest excess of births over deaths occurred among the Chamorros of Saipan. At the opposite extreme, the Yap area had an extremely high death rate and very low birth rate. It is believed, however, that this situation has been modified to a great extent in the last few years and that births now equal or exceed deaths in this area; in the year immediately preceding the survey 63 deaths and 91 births were recorded on Yap.

(Text ~~is~~ Table 2)

~~Table 1~~ Table 2 -- BIRTH AND DEATH RATES: 1924-30

To
Hetzal
10-11-51
Rod

Area ¹	Birth rate per 1,000	Death rate per 1,000
Marshalls.....	17-36	17-23
Palau.....	23-30	12-24
Yap.....	14	39
Saipan:		
Chamorro.....	38-43	16-25
Carolinian.....	32-37	26-35

¹Not comparable to present-day districts.

Source: Handbook on the Trust Territory of the Pacific Islands, pp. 53-64.

The following table shows by district the number of females visably pregnant at the time of the health survey. Estimated annual birth rates based on ~~times~~ ~~figures~~ these figures are also shown. For comparative purposes, in the United States in 1949 birth rates per 1,000 estimated female population, ages 15-44, were as follows: All races, 105.2; white, 102.6; nonwhite, 126.4.¹

(Text ~~Table 3~~ Table 3)

AGE DISTRIBUTION

The median age for the three districts combined is 23.0. Over one-third of the population is under 15 years of age and approximately one-fifth are 45 years of age or over. It should be borne in mind that since very few natives knew their own age most ages were estimated by the interpreter.

The age distribution in Saipan District presents the most youthful pattern of population found in the territory. The median age is 17.3 as compared with 25.5 for Palau District and 23.6 for the Marshall Islands District.² Over 45 percent of its population are under 15 years of age and only 13.2 percent are 45 years of age or over. In comparison, about one-third of the population of both Palau and the Marshall Islands Districts are under 15 years of age; those over 45 years of age account for 22.0 percent in Palau and 21.4 percent in the Marshall Islands. The age distributions for Palau and the Marshall Islands are quite similar. It may be noted, however, that the Marshall Islands District has proportionately more in the 15-24 age group (18.9¹⁹ as compared with 15.7¹⁶ percent) and less (25.9²⁶ against 28.9²⁹ percent) in the 25-44 age group.

(Text ~~Table 4~~ Table 4)

The populations of the islands/ or atolls/ present varied patterns of age distribution. All islands in ^{the} Saipan District have low median ages. In the Marshall Islands District median ages run slightly higher, and in the Palau District they are extremely high on more than one-half of the islands.

(Text ~~Table 5~~ Table 5)

¹"Births by Age of Mother, Race, and Birth Order, United States 1949," Fed. Sec. Agcy., PHS, Nat. Off. of Vital Statistics, 15 Oct. 1951, p. 145.

²Only part of the Marshall Islands District is included in this study. Statistics were available for about two-thirds of the inhabited islands of the district, accounting for over 70 percent of the population.

To Hetszel
7-18-52
Rod

Table 3.--FEMALES 15-44 YEARS OF AGE VISIBLY PREGNANT ON DAY OF SURVEY, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50

	Total	District		
		Saipan	Palau	Marshall Islands
		Number		
Natives examined.....	22,146	4,999	10,575	6,572
Females 15-44 years of age.....	4,138	1,036	2,416	686
Females pregnant on day of survey..	406	119	152	135
		Annual birth rate per 1,000 [✓]		
Natives examined.....	24.4	31.7	19.2	27.3
Females 15-44 years of age.....	130.8	153.2	83.9	262.4

[✓] Estimated on basis that all pregnancies will terminate in live births. Rates computed by relating total pregnancies on day of survey to population and multiplying by 4/3.

~~Table~~ ⁴ 2 --PERCENTAGE DISTRIBUTION BY AGE GROUP, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50

*TD
Ketzner
10-4-54*

Age group (years)	Total	District		
		Saipan	Palau	Marshall Islands
All ages.....	100.0	100.0	100.0	100.0
Under 15.....	36.4	45.8	33.4	33.8
15-24.....	16.8	16.5	15.7	18.9
25-44.....	27.0	24.5	28.9	25.9
45-64.....	14.2	11.0	14.9	15.5
65 and over.....	5.6	2.2	7.1	5.9
Median age.....	23.0	17.3	25.5	23.6

Just 5

Table 5. DISTRIBUTION OF ISLANDS BY MEDIAN AGE, SAIPAN, PALAU, MARSHALL ISLANDS DISTRICTS: 1948-50

To Metzger
10-4-51
rod

Median age (years)	District		
	Saipan	Palau	Marshall Islands
	Number of islands		
Under 20.....	2	3	1
20-24.....	1	3	10
25-29.....	-	3	5
30-39.....	-	7	-
40 and over.....	-	4	-

Table 5. - Distribution of islands by median age, Saipan, Palau, and Marshall Islands Districts: 1948-50

Six of the thirty-nine islands have a median age under 20. They are Rota, Lib, Saipan, Angaur, Peleliu, and Babelthuap. The highest median ages are found on the islands of Merir, Sonsorol, Fais, and Tobi, all with a median age over 40.

Age distributions for the islands / or atolls / of the Marshall Islands and Saipan Districts are relatively consistent, but in the Palau District there is considerable variation. Merir, Sonsorol, and Tobi have the highest proportion of old people. There is a strong tendency on the part of the young people of these islands to leave for homes elsewhere while the older people remain. Of Merir's 11 inhabitants only 3 are under 45 years of age. Approximately 70 percent of Sonsorol's population of 111 are 45 years of age and over, and almost one-third of the total have reached or passed the 65-year mark. On Tobi, 60 percent of the 128 inhabitants have reached or passed 45 years of age. At the other extreme are Koror, Eauripik, and Rota (), each of which has only 10 percent in the 45-and-over age group.

The median age of 22.8 for Tinian Island appears high as compared with Saipan and Rota in the same district. The explanation for this lies in the fact that of the two groups of inhabitants on Tinian, the Yap-Chamorros and the patients at the leprosarium, the latter group is composed mainly of middle-aged and old people. There are no small children at the colony. Infants born at the leprosarium are sent to Saipan immediately and cared for at the hospital until they are adopted. The median age for the leprosarium patient is 35.4 while that for the Yap-Chamorros is 16.6, the second lowest in these districts.

(Text ~~Table~~ Table 6)

An unusual situation exists on Pulo Anna where 14 of the 16 inhabitants are members of one family: The chief, his mother, two brothers, two sisters, two young Indonesian girls who are the wives of ~~his~~ his two brothers, and six children.

4 (See appendix Tables 1 and 2 for further information on age distribution.)

To
Netzel
7-18-52
Kod

~~Table 6.~~ Table 6.--AGE DISTRIBUTION FOR THE YAP-CHAMORROS AND THE LEPROSARIUM PATIENTS, TINIAN ISLAND: 1948-50

Age group (years)	Natives examined, Tinian Island		Yap-Chamorros		Leprosarium patients	
	Number	Percent	Number	Percent	Number	Percent
All ages.....	397	100.0	310	100.0	87	100.0
Under 15.....	150	37.8	148	47.7	2	2.3
15-19.....	33	8.3	26	8.4	7	8.1
20-24.....	28	7.1	19	6.1	9	10.3
25-44.....	127	32.0	85	27.4	42	48.3
45-64.....	45	11.3	25	8.1	20	23.0
65 and over.....	14	3.5	7	2.3	7	8.0
Median age.....	22.8	...	16.6	...	35.4	...

COMPARISON OF TRUST TERRITORY POPULATION WITH UNITED STATES POPULATION

Although the two populations and the factors influencing their growth are not comparable, it is of interest to compare the birth and death rates and age distributions in the Trust Territory with those of the United States during a period of rapid growth and again during a period of moderate growth.

The United States was experiencing its most rapid population growth in the nineteenth century. The population has continued to increase since that time but at a steadily diminishing rate. The 1880 census showed an increase of 26.0 percent over the preceding census while the rate of increase from 1930 to 1940 was only 7.2 percent. In making general comparisons between the two populations, we find both birth and death rates higher in the Trust Territory than in the United States. The only exception is the birth rate of Yap, which is lower than that of the United States even in 1940. The median age for Saipan is below that for the United States in 1880, in the Marshall Islands it closely resembles that for the United States in 1900, while in Palau it is nearest to the 1920 median of the United States.

(Text ~~Table~~ Table 7)

VARIATION OF AGE BY SEX

Ages vary between the sexes. From appendix table 3 it may be noted that on two-thirds of the islands the median age is higher for females than for males. The greatest difference is on Pulo Anna where, as previously mentioned, the population is very small and an unusual one. On Ifalik, Faraulep, and Lamotrek the median age for females is over 10 years higher than for males; it is almost 9 years higher on Lib; and 7 years higher on Tobi. On most islands where males are older than females, the difference is slight. Exceptions are Ailuk, where the median age for males exceeds that for females by 7 years; Mili, where it exceeds by 5 years; and Aur, where it is ~~xxxx~~ almost 4 years higher.

The sexes are evenly balanced in each district. The most marked tendency towards masculinity is noted on Kwajalein Atoll where, out of a population of 1,061, males exceed females by nearly 200. The Yap Islands with a population of 2,500 has 136 more males than females. A slight excess of females is noted on Saipan Island which has about 50 more females than males in its population of 4,043.

Sept 7

Table 5a. --DECENNIAL RATE OF INCREASE, BIRTH RATE, DEATH RATE, AND AGE DISTRIBUTION FOR THE UNITED STATES AT 20-YEAR INTERVALS

To
Hetzell
10-4-51
Rod

Type of rate and age group (years)	1880	1900	1920	1940
	Rate			
Decennial rate of increase.....	26.0	20.7	14.9	7.2
Birth rate per 1,000 population..	(2)	(1)	23.7	17.9
Death rate per 1,000 population..	(2)	(1)	13.1	10.8
	Percent of population			
Under 15.....	38.1	34.4	31.8	25.1
15-24.....	20.1	19.6	17.7	18.2
25-44.....	25.7	28.0	29.6	30.1
45-64.....	12.6	13.7	16.2	19.8
65 and over.....	3.4	4.3	4.8	6.8
Median age.....	20.9	22.9	25.2	29.0

(1) No data for these periods.

819 61
10-4-51
Rod

Miss Hitzel
7-22-52

MARITAL STATUS

The traditional marriage customs with their large gatherings, feasting, and exchanging of property are still practiced throughout the territory. Missionary influence has made its imprint on marriage customs, and many marriages are now performed with church sanction. In the past marriage has been a means of cementing relations between kin groups and of maintaining or improving the social status of one's descendants. The personal choice factor is undoubtedly assuming greater importance in marriages of young people today. The ease of obtaining a divorce varies according to local customs. Except in the Marianas where Catholic influence is greatest, the divorce rate is high and remarriages frequent. It is believed that divorce rates are highest in the Yap Islands. In this area a formal separation constitutes divorce. Early marriages are customary; and if a marriage is broken, usually another partner is soon taken.

Earlier marriages for women result in a much higher proportion of married females than males in the 15-19 age group--30.2 percent for females as compared with 4.7 percent for males. In all age groups up to 45 years of age, with the exception of Palau's 35-44 group, there are proportionately more married females than males. The reverse is true without exception for those 45 years of age and over.

(For further detail relative to marital status, see appendix table 3.)

HEIGHT AND WEIGHT

The inhabitants of the Trust Territory are of medium stature and weight. In the adult age groups the average height ranges from 5 feet 2 inches to 5 feet 6 inches for males and from 4 feet 11 inches to 5 feet 1 inch for females. The average weight for males is from 133 to 145 pounds and for females from 112 to 135 pounds.

(Text Table 8)

Height and weight vary by district. For a given height the inhabitants of Saipan and Palau are heavier than those in the Marshall Islands, with Saipan having a slight edge over Palau in this respect. The difference is more marked for females than for males. It may be noted in table 9 that the average heights for Saipan are slightly higher than those of the other two districts. In Palau males are noticeably shorter than in Saipan and the Marshall Islands.

(Text Table 9)

2478

Table 5b. -- AVERAGE WEIGHT BY HEIGHT AND SEX, 25-44 YEAR AGE GROUP, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS, 1948-50

TO
Hetzl
10-4-51
rod

Height (inches) and sex	District		
	Saipan	Palau	Marshall Islands
	Average weight (pounds)		
60-62:			
Male.....	130.6	128.5	122.4
Female.....	134.4	126.2	123.5
63-65:			
Male.....	137.9	137.7	135.3
Female.....	149.3	135.9	133.1
66-68:			
Male.....	150.0	147.6	142.9
Female.....	(V)	(V)	(V)
69-71:			
Male.....	164.4	159.2	160.9
Female.....	(V)	(V)	(V)

(V) No females over 65 inches in height.

Table 8. - Average weight by height and sex,
25-44 year age group, Saipan, Palau, and
Marshall Islands Districts: 1948-50

To Netzel
7-18-52
Rrd

~~Table~~ Table 9.--AVERAGE HEIGHT BY AGE GROUP AND SEX, SAIPAN, PALAU,
AND MARSHALL ISLANDS DISTRICTS: 1948-50

Age group (years)	District and sex					
	Saipan		Palau		Marshall Islands	
	Male	Female	Male	Female	Male	Female
10-14.....	53.4	54.7	52.4	53.3	54.8	54.9
15-19.....	63.4	61.1	61.8	59.5	63.1	59.1
20-24.....	65.8	61.2	64.4	60.2	65.4	59.8
25-34.....	65.4	60.9	64.7	60.1	65.8	59.6
35-44.....	65.6	60.8	64.2	59.9	65.1	60.0
45-64.....	64.8	60.4	63.6	59.2	64.6	59.8
65 and over.....	63.1	59.1	62.2	57.9	63.5	58.7

Although in all districts both height and weight increase up to a certain age and then decline, the age at which the decline starts is not uniform. For instance, height increases through age group 20-24 and then declines slightly for both sexes in Saipan and for females in Palau, ^{and the Marshall Islands.} The age of declining height is later for males in Palau and ~~in the Marshall Islands.~~ ^{Islands.} Weight increases through age group 35-44, except for males in Palau and the Marshall Islands where the decline starts with the 35-44 age group.

(Text Table 10)

It is of interest to note differences in height and weight between the sexes as shown in tables 11 and 12. Adult males are from 4 to 6 inches taller and 9 to 24 pounds heavier than females in the same age groups. In tables 9 and 10 it may be noted that, without exception, in the 10-14 age group females are taller and heavier than males. Females are also slightly heavier than males in Palau's 15-19 age group.

(Text Tables 11 and 12)

(See appendix tables 4-7 for further details.)

BLOOD-PRESSURE READINGS

Blood-pressure readings were taken for over 60 percent of the population. Only one reading was taken for each individual and all readings were taken routinely during the course of the examination.

No generalizations may be made for the Trust Territory as a whole with respect to variations in median blood-pressure readings. Variations follow no consistent pattern in the districts. As normally expected, median blood-pressure readings, systolic and diastolic for both sexes, increase with age. This increase is most rapid in the Saipan District. The median systolic and diastolic readings are generally higher for males than for females, with the least difference between sexes occurring in the Marshall Islands.

(Text Table 13)

The relationship of systolic blood pressure to diastolic pressure is shown in appendix table 8. In all districts the percent of high readings (systolic 155+/any diastolic) is larger after the age of 45. The reverse is true at the lower end of the scale where the percent of readings (systolic under 105/diastolic under 65) decreases with age. The concentration point is systolic 105-134/diastolic 65-94. Marshall Islands District has the highest proportion in this group, with Palau second, and Saipan lowest of all.

(For more complete information pertaining to blood pressure, reference is made to appendix tables 9-11. Also see appendix table 12 relative to pulse rate by age ^{group} and sex.)

To Netzel
7-18-52
RDL

~~Table~~ Table 10.--AVERAGE WEIGHT BY AGE GROUP AND SEX, SAIPAN, PALAU,
AND MARSHALL ISLANDS DISTRICTS: 1948-50

Age group (years)	District and sex					
	Saipan		Palau		Marshall Islands	
	Male	Female	Male	Female	Male	Female
10-14.....	72.3	77.3	68.4	72.1	76.1	79.7
15-19.....	116.5	116.2	110.3	111.6	117.6	108.5
20-24.....	137.4	123.8	132.9	118.9	133.4	112.2
25-34.....	141.6	131.7	139.4	120.8	140.9	116.4
35-44.....	148.1	139.2	139.3	121.9	137.3	124.7
45-64.....	144.5	133.6	136.1	114.6	137.8	120.3
65 and over.....	128.0	113.3	124.0	100.2	129.0	112.8

To Hertz
 7-18-52
 Rod

~~Table 11.~~ Table 11.--HEIGHT DIFFERENCES BETWEEN SEXES FOR SELECTED AGE GROUPS, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50

Age group (years)	District		
	Saipan	Palau	Marshall Islands
	Average male height exceeds the average female height (in inches) by--		
20-24.....	4.6	4.2	5.6
25-34.....	4.5	4.6	6.2
35-44.....	4.8	4.3	5.1
45-64.....	4.4	4.4	4.8
65 and over.....	4.0	5.7	4.8

To Netzel
7-18-52
rod

~~Table~~ Table 12.--WEIGHT DIFFERENCES BETWEEN SEXES FOR SELECTED AGE GROUPS, SAIPAN, PALAU, AND MARSHALL ISLANDS: DISTRICTS: 1948-50

Age group (years)	District		
	Saipan	Palau	Marshall Islands
	Average male weight exceeds the average female weight (in pounds) by--		
20-24.....	13.6	14.0	21.2
25-34.....	9.9	18.6	24.5
35-44.....	8.9	17.4	12.6
45-64.....	10.9	21.5	17.5
65 and over.....	14.7	23.8	16.2

13

GROUP

Table 25 -- MEDIAN SYSTOLIC AND DIASTOLIC BLOOD PRESSURE BY AGE AND SEX, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50

District and sex	Age group (years)					
	15-24		25-44		45 and over	
	Systolic	Diastolic	Systolic	Diastolic	Systolic	Diastolic
Saipan:						
Male.....	3 119	1 69	9 124	3 76	3 135	1 80
Female.....	113	70	115	3 73	3 132	1 79
Palau:						
Male.....	1 118	1 70	3 122	4 74	3 125	2 75
Female.....	117	69	119	70	3 122	73
Marshall Islands:						
Male.....	3 116	2 76	1 118	1 77	1 125	1 78
Female.....	113	74	1 117	76	1 130	1 79

PART III

DISEASE PREVALENCE

IMPROVEMENT IN HEALTH CONDITIONS PRIOR TO HEALTH SURVEY

American occupation forces found the health of the islanders generally poor and their needs for medical and surgical care extremely pressing. The conditions under which the native population had been forced to live during World War II, wartime diets of low calorie content, and the inadequacy of medical treatment received prior to and during the war had all left their mark.

By the time the health survey was launched, however, health conditions were much improved. The islanders had received medical care on an emergency basis from 1945, immediately following occupation, until July 1947, when the territory passed from military government to civil administration. In 1947 the Health Service Policy of the United States Navy for the Trust Territory of the Pacific Islands (outlining a health program for the Trust Territory) was adopted for the purpose of controlling preventable disease and rendering medical and dental care. By 1 August 1948, the date the health survey started, this program was in full operation and rapid strides had been made in the control of preventable disease. Measures to correct sanitary practices of the islanders were being enforced; treatments, inoculations, and vaccinations had been administered; and the food supply had been improved to the extent that malnutrition no longer existed except in a few areas. Diseases which were previously the most serious threats had been brought under control. In many respects the health survey served as a means of evaluating the health program.

A marked reduction in the prevalence of intestinal parasites was accomplished in this interval prior to the health survey. It is believed that at the time of American occupation nearly 100 percent of the indigenous population were infested with hookworm. *Ascaris* and *Trichuris* were also extremely prevalent. As a result of a mass deworming program, the control of flies, and education relative to health habits and sanitation (particularly the use of sanitary latrines) the prevalence of intestinal parasites had been noticeably reduced throughout the Trust Territory.

Yaws is another disease which had been brought under control with effective treatment. The large number of inhabitants exhibiting multiple scars and the high proportion of positive Kahn tests bear testimony to its widespread prevalence. Very few primary lesions were noted during this survey, however, as they had been virtually eradicated by extensive treatment with penicillin administered by Navy medical officers on field trips prior to the survey.

FINDINGS OF HEALTH SURVEY

Laboratory Tests and X-Ray Examinations

Stool examinations.--Stool examinations were made for 2,252 inhabitants of the Saipan District, 4,584 of the Palau District, and 3,495 of the Marshall Islands District, approximately 45 percent of the combined population (see appendix table 15). As shown in tables 14 and 15, 52.4 percent of all stools examined were positive. The highest proportion of positives occurred among children from 5 to 14 years of age.

(Text Tables 14 and 15)

Comparison of the three districts reveals that Saipan had the highest proportion of positive examinations, 79.3 percent as compared with 64.5 percent for Palau and a much lower percentage of 19.3 for the Marshall Islands. On the following islands or atolls less than 5 percent of the stool examinations were positive: Ngulu, Lib, Aur, Mejit, Likiep, Utirik, Tabal, and Kwajalein. Over 75 percent of the stool examinations were positive on Eauripik, Namorik, Saipan, Elato, Tinian, Kayangel, Faraulep, Woleai, Satawal, Ifalik, and Lamotrek. (See appendix table 13.)

(Text Table 16)

The most prevalent intestinal parasites were hookworm, Trichuris, and Ascaris. Eleven percent of the stools contained two or all three of these species. Hookworm was found in 23.1 percent of the stools, Trichuris in 22.3 percent, and Ascaris in 17.2 percent. The relative importance of the three species varies from district to district. In the Saipan District Ascaris has the greatest prevalence, with Trichuris ranking second and hookworm third. The rank order in the Palau District is just the reverse; while in the Marshall Islands District Trichuris is the most prevalent, hookworm ranks second, and Ascaris is practically nonexistent. (See appendix table 14.)

(Text Table 17)

Variations of prevalence rates by age and sex are slightly different for each species. Hookworm and Ascaris show opposite tendencies with respect to age. The former increases with age while the latter decreases. Trichuris shows little change by age. Hookworm is more prevalent among males while Trichuris and Ascaris have slightly higher rates among females. (See appendix tables 15 and 16.)

To Hatzel
7-18-52
Kend

~~Table~~ Table 14. --PERCENTAGE OF POSITIVE STOOLS BY AGE GROUP, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50

Age group (years)	Percentage positive			
	Total	District		
		Saipan	Palau	Marshall Islands
All ages.....	52.4	79.3	64.5	19.3
Under 5.....	47.7	74.6	51.6	20.9
5-14.....	60.3	88.7	68.8	23.6
15-24.....	48.8	76.4	65.3	16.1
25-44.....	51.4	77.2	64.9	16.0
45 and over.....	51.5	74.4	65.7	21.4

To Hatzel
7-18-52
Rod

~~Table~~ Table 15.--PERCENTAGE OF POSITIVE STOOLS BY SEX,
SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS:
1948-50

Sex	Percentage positive			
	Total	District		
		Saipan	Palau	Marshall Islands
Total.....	52.4	79.3	64.5	19.3
Male.....	53.5	79.5	64.9	18.9
Female.....	51.4	79.1	64.2	19.6

To Hitzel
7-18-52
rod

~~Table~~ Table 16.--DISTRIBUTION OF ISLANDS BY PERCENTAGE OF POSITIVE STOOLS, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50

Percentage of positive stools	Number of islands			
	Total	District		
		Saipan	Palau	Marshall Islands
Under 5.....	8	-	2	6
5-9.....	4	-	-	4
10-24.....	4	-	1	3
25-49.....	5	1	4	-
50-74.....	7	-	5	2
75 and over.....	11	2	8	1

To Hitzel
7-18-52
Pod

~~Table~~ Table 17.--PERCENTAGE OF POSITIVE STOOLS BY PARASITIC INFESTATION, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50

Parasitic infestation	Percentage positive			
	Total	District		
		Saipan	Palau	Marshall Islands
All parasites..	52.4	79.3	64.5	19.3
Hookworm.....	23.1	26.2	34.0	6.8
Trichuris.....	22.3	40.6	22.0	11.0
Ascaris.....	17.2	44.2	16.8	0.3
Other.....	2.8	5.6	1.4	2.9

The actual procedure of obtaining the sample of stool specimens resulted in a haphazard rather than a representative cross section of the population. Each individual examined was given a stool box and requested to submit a feces specimen. The number of specimens obtained varied greatly. After the specimens were received a portion had to be rejected because of contamination due to the wrapping of specimens in leaves or paper and a second portion for inadequacy of specimen. The specimens left were then examined for ova of the helminth or platyhelminth group. On some of the specimens (in some instances, on all) examinations were made for protozoa. Stools were examined by the simple flotation technique with a concentrated sugar solution used for ova of helminths and flukes. Direct normal saline smears were used to determine the presence of protozoan cysts. When protozoan cysts were indicated iron-hematoxylin stains were made for further identification.

Kahn tests.--Kahn tests were given to 16,320 inhabitants, nearly three-fourths of the population of Saipan, Palau, and Marshall Islands Districts. (See appendix table 17.) The Kahn-test technique was not uniform throughout the portion of the survey here reported. Originally, the three-tube test was utilized. Sometime during the period of the survey of the Marshall Islands this technique was changed to the use of the middle tube (second dilution of antigen) only, while continuing to utilize the same Kahn antigen. Approximately 50 percent of the Kahn tests were positive, with little difference between the sexes. The Palau District had by far the highest proportion of positives, 65.4 percent as compared with 38.1 percent for the Marshall Islands District and 30.4 percent for the Saipan District.

Wide variation occurred among the islands which parallels the variation between the districts. Tabal Island in the Marshall Islands District had the lowest percentage of all, only 3.6 percent positive. The next lowest was Saipan Island, with 22.8 percent. At the other extreme was Elato Atoll in the Palau District, the only place where every individual tested had a positive reaction. Other islands or atolls where over 75 percent of the population had positive reactions were Kayangel (95.4), Satawal (92.9), Woleai (89.1), Peleliu (87.0), Lamotrek (84.2), and Faraulep (77.3), all in the Palau District. (See appendix table 18.)

(Text Table 18)

Sept 17

*To Nat'l
11/5/51
Pod*

1819

Table 15. -- DISTRIBUTION OF ISLANDS BY PERCENTAGE OF POSITIVE KAHN REACTIONS, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50

Percentage of positive Kahns	Number of islands			
	Total	District		
		Saipan	Palau	Marshall Islands
Under 25.....	2	1	-	1
25-49.....	17	-	6	11
50-74.....	13	2	7	4
75 and over.....	7	-	7	-

Generally speaking, the proportion of positive reactions increases with age up to the age group of 45 and over, where a slight decline is noted. The same rate of increase from age group to age group is not observed in each district, however. In the Saipan District a marked increase occurs between age groups 5-14 and 15-24, with little change in the age groups thereafter. (It should be noted that the conspicuously high rate for Saipan's under-5-years-of-age population is based on only 39 tests.) Very little variation is observed between the age groups in the Palau District. On the other hand, the Marshall Islands District exhibits definite increases with each age group.

(Text Table 19)

In this survey a positive Kahn test was considered likely evidence of the presence of yaws. It is recognized that the Kahn test is far from being an infallible index to the prevalence of yaws since a positive reaction to the test may result from many diseases and conditions. However, due to the fact that malaria was not noted in this area and that syphilis, leprosy, and infectious mononucleosis were in small occurrence in proportion to the number of positive Kahn tests, it would appear to be a reliable guide in this instance.

Yaws is a contagious disease which may be transmitted from person to person by direct contact or carried by flies. It is not, as commonly believed, a venereal disease. The spirochete, Treponema pertenue, enters through open lesions such as scratches and minor cuts. The primary lesions appear most frequently on the lower extremities and may last from 3 months to 3 years. It is not unusual for old healed-over lesions to break down. Tertiary-stage lesions often cause severe scarring and, in the form of gangosa (an ulcerative lesion of the mucous membranes of the nose, pharynx, and mouth), sometimes completely destroy the features.

A large number of inhabitants exhibited multiple scars as evidence of having had yaws, but very few diagnoses of active yaws were established during the course of the health survey. As shown on table 20, most of these cases were found in the Marshall Islands District. Numerous cases of active yaws were suspected, but dark-field examinations of the lesions were negative, possibly due to local treatment of ulcerative lesions with merthiolate and mercuric ointments by the native health aides.

(Text Table 20)

To Hertz
7-18-52
Rud

~~Table~~ Table 19.--PERCENTAGE DISTRIBUTION OF EXAMINED ~~POPULATION~~
POPULATION WITH POSITIVE KAHN REACTIONS, BY AGE GROUP,
SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50

Age group (years)	Percentage positive			
	Total	District		
		Saipan	Palau	Marshall Islands
All ages.....	50.1	30.4	65.4	38.1
Under 5.....	37.6	41.0	61.3	18.9
5-14.....	42.9	18.3	65.0	25.9
15-24.....	49.5	33.7	66.4	37.4
25-44.....	53.8	36.7	66.3	43.0
45 and over.....	52.9	32.0	63.9	44.0

During the survey urogenital examinations were made of the male population only, as the females were reluctant to permit examination. Little or no acute urethritis due to gonococcus was noted but, although they were not reported on the Health Record, medical officers at some of the hospitals stated that among the females there were many cases of "salpingitis, gonococcic" and "cervicitis, acute, due to gonococcus." The presenting symptoms of gonococcus infection among the males, reportedly widespread, were those of a nongonococcic urethritis. Syphilis was almost nonexistent, a condition found to parallel the prevalence of yaws. Very few cases of primary chancres were found, and secondary skin manifestations were infrequent in occurrence among both males and females. Several cases of syphilis and gonorrhoea were reported from Majuro and Kwajalein Atolls, but only an occasional case was reported from any of the other islands or atolls (see table 21).

(Text Table 21)

Chest X-ray examinations.—Chest X-ray examinations were made of approximately 82 percent of the population of the Saipan, Palau, and Marshall Islands Districts. Many of those not X-rayed were aged and infirm. The initial examination consisted of a 35 mm. photofluorographic roentgenogram which, if the X-ray shadows were suspiciously abnormal, was followed by a 14" x 17" chest film. The findings reported in this survey were made from the 14" x 17" films without further clinical study.

On the basis of these examinations 4.5 percent of those X-rayed were found to have chest defects, and 1.3 percent were suspected of active pulmonary tuberculosis. The number of chest tumors, cardiovascular abnormalities, and bone deformities was negligible, ^{none} ^{over} ~~each~~ being 0.3 percent ~~of~~ of the total X-rayed.

(Text Tables 22 and 23)

The prevalence rates for active pulmonary tuberculosis increase with age, showing but little variation by sex. The proportion of active pulmonary tuberculosis suspects among those X-rayed is greatest for those 45 years of age and over, 3.2 percent as compared with the next highest rate of 1.2 percent for the 25-44 age group. Only slight differences were noted between rates for both sexes, the over-all rate for females exceeding that for males by 0.1 percent. (See appendix table 19.)

20
21

To Hotel
11/15/50
Br

Table 16.---RESULTS OF SURVEY FOR ACTIVE YAWS, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50

District and island or atoll	Number of cases	District and island or atoll	Number of cases
Total.....	73	Marshall Islands--Continued	
Palau.....	2	Majuro Atoll.....	7
Babelthuap Island.....	1	Ailuk Atoll.....	4
Elato Atoll.....	1	Aur Island.....	3
Marshall Islands.....	71	Likiep Atoll.....	3
Ine Island.....	12	Wotje Atoll.....	3
Ebon Atoll.....	11	Kwajalein Atoll.....	2
Maloeiap Atoll.....	11	Namorik Island.....	2
Mejit Island.....	8	Tabal Island.....	2
		Utirik Atoll.....	2
		Lib Island.....	1

✓ No active cases of yaws reported for Saipan District.

Sept 21
22

December 18, 1951
AH:mfr

To Netzel
12-19-51
Rood

~~Table~~ ²¹ ~~22~~ Table 29. --RESULTS OF SURVEY FOR SYPHILIS AND GONORRHEA, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50

District and island or atoll	Number of cases	
	Syphilis	Gonorrhoea
Total.....	6	12
Palau.....	-	2
Koror Island.....	-	1
Yap Islands.....	-	1
Marshall Islands.....	6	10
Ailuk Atoll.....	-	1
Arno Island.....	1	1
Ebon Atoll.....	1	-
Kwajalein Atoll.....	-	3
Majuro Atoll.....	4	4
Namorik Island.....	-	1

¹No cases of syphilis or gonorrhoea reported for Saipan District.

Sept 22
23
~~Table~~ Table 18. --RESULTS OF X-RAY EXAMINATIONS, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50

X-ray findings	Total		District					
			Saipan		Palau		Marshall Islands	
	Num-ber	Per-cent	Num-ber	Per-cent	Num-ber	Per-cent	Num-ber	Per-cent
X-ray examinations.....	18,094	100.0	4,226	100.0	8,733	100.0	5,135	100.0
All chest defects.....	817	4.5	230	5.4	388	4.4	199	3.9
Tuberculosis, pulmonary.....	267	1.5	85	2.0	141	1.6	41	0.8
Moderately and far-advanced.....	94	0.5	24	0.6	53	0.6	17	0.3
Other active.....	147	0.8	44	1.0	81	0.9	22	0.4
Arrested.....	26	0.1	17	0.4	7	0.1	2	0.0
Chest tumor.....	31	0.2	7	0.2	17	0.2	7	0.1
Cardiovascular abnormality..	48	0.3	11	0.3	11	0.1	26	0.5
Bone deformity.....	32	0.2	3	0.1	2	0.0	27	0.5
Other.....	439	2.4	124	2.9	217	2.5	98	2.0

Of the three districts Saipan has the highest percentage of chest defects, with Palau ranking second and the Marshall Islands lowest of all--5.4, 4.4, and 3.9 percent, respectively. Of the persons X-rayed only 0.7 percent in the Marshall Islands, 1.5 in Palau, and 1.6 in Saipan were recorded as being suspected of having active pulmonary tuberculosis.

According to chest X-ray examinations (table 24) 10 islands had no active pulmonary tuberculosis. On the other islands the percentage positive for the X-rayed population ranged from Kwajalein's 0.1 to Faraulep's 6.8. On six of these islands or atolls--Ine, Taba, Lamotrek, Sonsorol, Elato, and Faraulep--over 3 percent of the X-rayed population had active pulmonary tuberculosis. (See appendix table 20.)

(Text Table 24)

An interesting experience was reported from Taba Island. The U. S. S. Whidbey visited this island in November 1948, but because heavy seas rendered the X-ray machine ~~inoperable~~ inoperable the ship was forced to return at a later date to complete the examinations. During the initial visit one 39-year-old woman on the island showed clinical evidence of pulmonary tuberculosis and had positive sputum for tubercle bacilli. At that time nine people were living in the same house with this active case of pulmonary tuberculosis. Eighteen months later when the survey ship returned the woman had died of her disease, but the chest films for the other nine members of the household were still negative for tuberculosis.

Tuberculosis diagnoses without X-ray.--Table 25 shows tuberculosis diagnoses which occurred among inhabitants who were not X-rayed. These diagnoses had been established prior to the health survey, and in some cases the individuals were receiving treatment for the diagnosis.

(Text Table 25)

Tuberculin test.--Nearly 90 percent of the population were tuberculin-tested. Two test-strength dosages of tuberculin, 0.0001 mg. P. P. D. and 0.00002 mg. P. P. D., were employed for the tests, the latter dosage being used early in the program and occasionally when the 0.0001 mg. was not available. On most of the islands in the Marshall Islands District 0.0001 mg. was used, while primarily 0.00002 mg. was used in Palau District. Both dosages were used in the Saipan District. From Rabelthup Island, where 0.0001 mg. P. P. D. tuberculin was used on approximately one-half of the tested population and 0.00002 mg. P. P. D. tuberculin on the remainder, it was reported that there was no significant variance between the number of positive reactors in regard to differences in dosage used.

To Nitzel
7-1-52

By rank order, ↑

24
~~Table 25. --~~ PERCENTAGE OF CHEST X-RAYS INDICATIVE OF ACTIVE PULMONARY TUBERCULOSIS, SELECTED ISLANDS OR ATOLLS, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50

Island or atoll and district	Percentage active	Island or atoll and district	Percentage active
Faraulep Atoll ¹	6.8	Wotje Atoll ²	1.2
Elato Atoll ¹	3.8	Majuro Atoll ²	0.9
Sonsorol Island ¹	3.6	Mejit Island ²	0.7
Lamotrek Atoll ¹	3.5	Babelthuap Island ¹	0.6
Tabal Island ²	3.4	Satawal Island ¹	0.6
Ine Island ²	3.1	Ebon Atoll ²	0.4
Mili Atoll ²	2.9	Ailuk Atoll ²	0.3
Fais Island ¹	2.8	Namorik Island ²	0.3
Yap Islands ¹	2.8	Kwajalein Atoll ²	0.1
Aur Island ²	2.4	Angaur Island ¹	0
Koror Island ¹	2.4	Eauripik Atoll ¹	0
Malcoelap Atoll ²	2.2	Lib Island ¹	0
Kayangel Atoll ¹	2.1	Likiep Atoll ²	0
Ngulu Atoll ¹	2.1	Merir Island ¹	0
Tinian Island ³	1.8	Peleliu Island ¹	0
Ifalik Atoll ¹	1.7	Pulo Anna Island ¹	0
Saipan Island ³	1.6	Tobi Island ¹	0
Woleai Atoll ¹	1.3	Ulithi Atoll ¹	0
Arno Island ²	1.2	Utirik Atoll ²	0
Rota Island ³	1.2		

- ¹ Palau District.
- ² Marshall Islands District.
- ³ Saipan District.

Title
Percentage of chest X-rays indicative of active pulmonary tuberculosis, by rank order, selected islands or atolls, Saipan, Palau, and Marshall Islands Districts: 1948-50

25 26

25

to Hatzel
11/15/51
Roh

~~Table~~ Table 20.--TUBERCULOSIS DIAGNOSES FOR NATIVES NOT X-RAYED, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50

District and island or atoll	Tuberculosis							
	Total cases	Pulmonary		Skin	Lymph nodes	Male genitalia	Bronchus	Other
		Active	Arrested					
Total.....	44	9	3	6	14	1	1	10
Saipan: Saipan Island.	6	1	-	2	1	-	-	2
Palau.....	33	4	3	3	13	1	1	8
Babelthuap Island...	4	1	-	1	1	-	-	1
Fais Island.....	1	-	-	-	-	-	-	1
Koror Island.....	4	-	-	-	3	-	-	1
Ngulu Atoll.....	1	-	-	-	-	1	-	-
Peleliu Island.....	2	-	-	-	-	-	-	2
Satawal Island.....	1	-	-	-	1	-	-	-
Sonsorol Island.....	1	1	-	-	-	-	-	-
Yap Islands.....	19	2	3	2	8	-	1	3
Marshall Islands.....	5	4	-	1	-	-	-	-
Ailuk Atoll.....	2	1	-	1	-	-	-	-
Kwajalein Atoll.....	1	1	-	-	-	-	-	-
Majuro Atoll.....	1	1	-	-	-	-	-	-
Tabal Island.....	1	1	-	-	-	-	-	-

The findings for the Yap Islands presented in this paper are all based on dosages of 0.00002 mg. P. P. D. tuberculin. However, in 6 of the 10 districts of Yap all natives with negative reactions to these first tests were given a second test of 0.005 mg. P. P. D. tuberculin. Out of 304 tests there were 251 positive reactions. In other words, of the negative reactors to 0.00002 test-strength tuberculin who were retested with 0.005 test-strength tuberculin approximately 83 percent reacted positively. The practice of employing second-test-strength doses of tuberculin was discontinued. It was found that most individuals reacted to the second dose and the reactions were regularly so severe that they were alarming the natives.

(Text Table 26)

Of the tuberculin-tested population ⁴⁷46.5 percent were positive reactors. The Marshall Islands District had much the lowest percent positive, 19.2 percent as compared with ⁵⁵54.6 percent for the Saipan District and 60.9 percent for the Palau District. (See appendix table 21.)

There is wide variation among islands in the proportion of positive reactors. The widest range occurs in the Palau District, from ^{0.10}6.1 percent for Elato Island to ⁸⁵84.5 percent for the Yap Islands. All of the islands in the Marshall Islands District had less than 40 percent positive reactors. The two lowest percentages in this district were those for Ebon Atoll and Arno Island--3.2 and 4.3, respectively. Most consistency was shown in the Saipan District where the percent positive was 36.4 for Tinian Island, 42.1 for Rota Island, and 58.4 for Saipan Island.

(Text Table 27)

The proportion of positive reactors progresses steadily with age. The only exception is in the Saipan District where the peak is reached in age group 15-24, and a slight decline occurs after the age of 44. (See appendix tables 22 and 23.)

(Text Table 28)

The percentages for both sexes in each district are very close. Where substantial differences exist the higher percentage is for males.

(Text Table 29)

26 26

10/14/51
11/15/51
Ford

Table 21.---DISTRIBUTION OF ISLANDS BY PERCENTAGE OF POSITIVE TUBERCULIN TESTS, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50

Percentage of positive tuberculin tests	Number of islands			
	Total	District		
		Saipan	Palau	Marshall Islands
Under 9.....	3	-	1	2
10-19.....	6	-	-	6
20-29.....	7	-	3	4
30-39.....	8	1	3	4
40-49.....	3	1	2	-
50-59.....	6	1	5	-
60-69.....	4	-	4	-
70-79.....	1	-	1	-
80 and over.....	1	-	1	-

To Hetzel
7-18-52
Rood

~~Table 23.~~ Table 23.--RESULTS OF X-RAY SURVEY FOR ACTIVE PULMONARY TUBERCULOSIS BY AGE GROUP, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50

Age group (years)	Active by X-ray							
	Total		District					
			Saipan		Palau		Marshall Islands	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
All ages.....	241	1.3	68	1.6	134	1.5	39	0.7
Under 5.....	5	0.5	3	0.8	-	0	2	0.6
5-14.....	15	0.3	5	0.4	8	0.4	2	0.2
15-24.....	39	1.1	16	2.0	17	1.1	6	0.5
25-44.....	67	1.2	17	1.5	43	1.5	7	0.5
45 and over.....	115	3.2	27	4.4	66	3.5	22	2.0

To Netzel
7-18-52
Rod

~~Table~~ Table 28.--PERCENTAGE OF POSITIVE REACTIONS AMONG TUBERCULIN-TESTED POPULATION, BY AGE GROUP, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50

Age group (years)	Percentage positive			
	Total	District		
		Saipan	Palau	Marshall Islands
All ages.....	46.5	54.6	60.0	19.2
Under 5.....	9.1	8.0	16.3	1.7
5-14.....	32.7	44.3	40.1	6.9
15-24.....	53.3	78.7	65.4	20.9
25-44.....	60.3	73.0	73.5	27.7
45 and over.....	58.9	71.1	76.2	27.7

To Helzel
7-18-52
Rosh

~~Table~~ Table 29.--PERCENTAGE OF POSITIVE REACTIONS AMONG
TUBERCULIN-TESTED POPULATION, BY SEX, SAIPAN, PALAU,
AND MARSHALL ISLANDS DISTRICTS: 1948-50

Sex	Percentage positive			
	Total	District		
		Saipan	Palau	Marshall Islands
Total.....	46.5	54.6	60.0	19.2
Male.....	47.6	54.4	61.2	22.1
Female.....	45.3	54.8	58.8	16.2

Miscellaneous Diseases

Diseases diagnosed from the general physical examinations rather than from special tests and examinations are shown by island in appendix table 24. This table lists the frequencies for 27 diagnoses, selected because of their importance in terms of prevalence or special interest. Prevalence rates for those diseases which occurred with greatest frequency are presented by district in table 30. The prevalence of these diseases is shown in rates per 1,000 examined in contradistinction to the percentages used for the results of special tests and examinations. For one reason, practically the entire population received the general physical examinations, while only a portion of it received the special tests and examinations. Furthermore, the prevalence rates for some of these diseases are quite low and are therefore better shown as rates per 1,000 examined.

(Text Table 30)

The most prevalent diseases in the Saipan, Palau, and Marshall Islands Districts are skin diseases, diseases of the eye, and respiratory diseases. Leprosy is also of major importance. Other diseases of wide prevalence are degenerative joint disease, neoplastic diseases, rickets and vitamin deficiency, anemia, and inflammatory diseases of the ear. Diseases carried by mosquitoes and other arthropods do not assume the importance in the Trust Territory which is usual in other tropical areas. Malaria is not an indigenous disease at the present time because of the absence of anopheline mosquitoes. None of the rickettsioses were present. Although dengue, typhoid fever, and amebic dysentery are regarded as widespread in the territory, no cases were reported present in these three districts during the survey. Several cases of filariasis were reported from the Palau District and one case from the Saipan District.

It should be borne in mind that some of the variations occurring among the islands may be due to the fact that examinations on the various islands were performed during different seasons of the year and by different personnel.

Skin diseases.--Skin diseases are prevalent throughout the territory. The low standards of hygiene among the islanders and the humid, hot climate of the area are all conducive to these conditions.

To Netzel
7-1-52

27
28
~~Table 27~~ RANK ORDER, ~~ACCORDING TO~~ PERCENTAGE OF POSITIVE TUBERCULIN TESTS, SELECTED ISLANDS OR ATOLLS, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50

Island or atoll and district	Percentage positive by order	Island or atoll and district	Percentage positive by order
Yap Islands ✓	84.5	Lib Island ³	34.0
Fais Island ✓	79.0	Tabel Island ³	32.9
Tobi Island ✓	66.4	Aur Island ³	30.0
Koror Island ✓	63.8	Eauripik Atoll ✓	28.9
Merir Island ✓	63.6	Mili Atoll ³	27.9
Peleliu Island ✓	62.4	Namorik Island ³	27.5
Angaur Island ✓	59.7	Majuro Atoll ³	25.6
Saipan Island ²	58.4	Pulo Anna Island ✓	23.1
Sonsorol Island ✓	57.9	Kwajalein Atoll ³	22.8
Ngulu Atoll ✓	56.5	Satawal Island ✓	20.0
Woleai Atoll ✓	54.6	Wotje Atoll ³	19.2
Ulithi Atoll ✓	52.5	Mejit Island ³	18.0
Babelthuap Island ✓	47.8	Malcoelap Atoll ³	16.4
Rota Island ²	42.1	Ailuk Atoll ³	13.3
Kayangel Atoll ✓	40.2	Utirik Atoll ³	12.6
Lamotrek Atoll ✓	38.6	Likiep Atoll ³	10.1
Ifalik Atoll ✓	38.5	Elato Atoll ✓	6.1
Tinian Island ³	36.4	Arno Island ³	4.3
Ine Island ³	36.0	Ebon Atoll ³	3.2
Faraulep Atoll ✓	34.5		

✓ Palau District.
² Saipan District.
³ Marshall Islands District.

To Hatzel
7-18-52
pod

~~Table~~ Table 30.--MORBIDITY FOR SELECTED DIAGNOSES, SAIPAN, PALAU, AND MARSHALL ISLANDS
DISTRICTS: 1948-50

(Prevalence rates per 1,000 examinations)

Selected diagnosis	Total		District					
	Number	Rate	Saipan		Palau		Marshall Islands	
			Number	Rate	Number	Rate	Number	Rate
Examinations.....	22,146	...	4,999	...	10,575	...	6,572	...
Dermatophytosis.....	6,611	298.5	1,899	379.9	2,683	253.7	2,029	308.7
Chronic tonsillitis and nasopharyngitis.....	3,326	150.2	1,433	286.6	555	52.5	1,338	203.6
Diseases of the skin and cellular tissue..	3,304	149.2	1,231	246.2	665	62.9	1,408	214.2
Pterygium.....	2,087	94.2	449	89.8	675	63.8	963	146.5
Degenerative joint dis- ease.....	1,563	70.6	262	52.4	900	85.1	401	61.0
Conjunctivitis.....	909	41.0	273	54.6	443	41.9	193	29.4
Cataract.....	784	35.4	87	17.4	519	49.1	178	27.1
Acute respiratory in- fections.....	632	28.5	426	85.2	123	11.6	83	12.6
Neoplastic diseases....	325	14.7	60	12.0	74	7.0	191	29.1
Inflammatory diseases of ear.....	217	9.8	132	26.4	10	0.9	75	11.4
Opacity of cornea.....	211	9.5	82	16.4	86	8.1	43	6.5
Vitamin deficiency.....	195	8.8	101	20.2	28	2.6	66	10.0
Anemia.....	185	8.4	64	12.8	4	0.4	117	17.8

par. desk

Dermatophytosis is the most common in occurrence--the prevalence rate for the three districts combined was 298.5 per 1,000 inhabitants. The Saipan District had the highest rate for this disease, 379.9 as compared with 308.7 for the Marshall Islands and 253.7 for Palau. Over one-half of the population of Tabal, Aur, Faraulep, Satawal, Rota, Wotje, Lamotrek, and Malcoelap had dermatophytosis. In this class *tinea versicolor* is in such common occurrence that it is ignored by the natives. *Tinea cruris* and *tinea circinata* are also prevalent.

The prevalence rate for diseases of skin and cellular tissue was 149.2 per 1,000. This group of diseases includes a high proportion of local infections of skin (including *ecthyma* which is especially prevalent in this area); diseases of sweat glands; dermatitis seborrheica; dermatosis, n. e. c.; and molluscum contagiosum. Rates were much higher in the Saipan and Marshall Islands Districts than in the Palau District, 246.2 and 214.2 per 1,000 as compared with 62.9, respectively.

Diseases of the eye.--Over 4,000 cases of diseases of the eye and adnexa were reported from this area; the prevalence rate was 198.4 per 1,000. Pterygium, conjunctivitis, and cataract were greatest in occurrence. The intense sunlight, fine coral sands blowing about, the use of open fires, and frequent submersion in salt water are considered factors possibly contributing to the wide prevalence of pterygium and conjunctivitis. The cataracts were mostly of the senile type, occurring among the aged. Eighty-five cases of blindness were reported, 17 bilateral and 68 unilateral. It is believed that most of these were either congenital or the result of physical injury.

In comparison with the other districts, the Marshall Islands had a strikingly high rate for pterygium, 146.5 per 1,000 as compared with 89.8 for Saipan and 63.8 for Palau. Conjunctivitis was most prevalent in the Saipan District, while cataracts occurred most frequently in the Palau District.

Acute respiratory infections.--Acute respiratory infections are in common occurrence throughout the three districts. The over-all prevalence rate was 28.5 per 1,000. This rate is much higher in the Saipan District than in the Marshall Islands and Palau Districts, 85.2 per 1,000 as compared with 12.6 and 11.6, respectively. Acute pharyngitis, acute tonsillitis, and common cold occurred most frequently. The changeable humid climate, crowded living conditions, sleeping on floors, low levels of nutrition, and poor standards of sanitation are undoubtedly factors contributing to these diseases. It may be noted in appendix table 24 that Saipan Island had an unusually large number of acute respiratory infections for its examined population.

Chronic tonsillitis and nasopharyngitis.--Chronic tonsillitis and nasopharyngitis are widespread in this area. The prevalence rate for the three districts combined was 150.2 per 1,000. The rate for the Palau District, 52.5, was far below those for Saipan and Marshall Islands, 286.6 and 203.6, respectively.

Leprosy.--Eighty-six lepers from various parts of the Trust Territory were under treatment at the leprosarium on Tinian Island at the time of the health survey. Of these cases, 25 were thought to be lepromatous, 59 tuberculoid, and 2 mixed. As shown in table 31, 83 additional cases clinically suspicious for leprosy were found in the Saipan and Palau Districts during the course of the survey. None were reported from the Marshall Islands District.

(Text Table 31)

The fact that the true macular lesion is not readily recognized by other than specialists in the field may have reduced the discovery rate for leprosy in this survey. Recognition of leprosy was especially difficult because of the prevalence of tinea versicolor and traumatic contracture, both requiring differentiation from the disease. Personnel conducting the survey were reluctant to make a diagnosis of leprosy where there was any question of its certainty.

Diseases of ear.--Inflammatory diseases of the ear occurred at the rate of 9.8 per 1,000 inhabitants. The majority of cases were in the Saipan District where the rate was 26.4 per 1,000. The rate in the Marshall Islands District was 11.4 and only 0.9 in the Palau District.

The most prevalent disease of the ear was "infection, diffuse, external auditory meatus." It is an interesting fact that out of the 161 cases reported, 101 were on Saipan Island. It is not known whether personnel conducting the survey were more thorough in making examinations on this island than they were elsewhere or whether an epidemic was in occurrence at the time of the survey.

Degenerative joint disease.--Degenerative joint disease was rather prevalent, showing a rate of 70.6 per 1,000 in the three districts combined. Rates were highest in the Palau District and lowest in the Saipan District. This disease was most prevalent among the aged.

To Hertz
7-18-52
Red

~~Table~~ Table 31.--RESULTS OF SURVEY FOR CLINICALLY SUSPICIOUS CASES OF LEPROSY, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: ✓ 1948-50

Par. 1

District and island or atoll	Number of cases	District and island or atoll	Number of cases
Total.....	83	Palau--Continued	
Saipan: Saipan Island.....	65	Yap Islands.....	3
Palau.....	18	Koror Island.....	2
Lamotrek Atoll.....	4	Satawal Island.....	2
Babelthuap Island.....	3	Woleai Atoll.....	2
		Elato Atoll.....	1
		Fais Island.....	1

✓ No clinically suspicious cases of leprosy for Marshall Islands District.

Neoplastic diseases.--A total of 325 neoplastic diseases was reported, establishing a prevalence rate of 14.7 per 1,000. Only 11 neoplasms were proved malignant although other malignancies were suspected. The malignant neoplasms were distributed among the islands or atolls as follows: Saipan, 3; Babelthuap, 2; and 1 each on Tinian, Ulithi, Woleai, Yap, Kwajalein, and Wotje. Among the 312 benign neoplasms there were 114 melanomas of skin, ~~infections~~ 63 lipomas, and 29 hemangiomas and lymphangiomas. The bulk of these were on Majuro, Ebon, Saipan, Yap, Babelthuap, Malcelap, and Mili.

Vitamin deficiency.--The prevalence rate for vitamin deficiency was 8.8 per 1,000. Of the 195 cases reported, 98 were on Saipan Island, where the prevalence rate was 24.2. Other islands where the rate was high were Ine, 72.8; Arno, 57.6; and Mili, 28.2.

Anemia.--Anemia, with a prevalence rate of 8.4 per 1,000, was reported in substantial numbers from Saipan, Majuro, Ebon, and Mili. According to reports of this survey anemia was practically nonexistent in the Palau District.

Leukoplakia buccalis.--It was reported that a large number of cases of leukoplakia buccalis were seen on Saipan and Babelthuap Islands, principally among betel-nut chewers. A comparatively small number were reported on ^{the} Health Record cards used in this study for tabulation purposes, but in the summary reports accompanying the cards it was estimated that on Saipan alone over 200 cases of leukoplakia buccalis were observed, many of them proved by biopsy. It was further pointed out in the reports ~~islandwide~~ that although betel-nut chewing is also a common practice on the Yap Islands, leukoplakia buccalis was not prevalent there. It was suggested that this might be due to the fact that oral mud packs to hide the staining effect of the betel nut are used on Yap but not on Babelthuap. The reports from Saipan did not state whether or not the mud pack is used there.

June 18, 1951

Appendix Table - AGE AND SEX

ISLANDS OR ATOLLS, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50

District and island or atoll	Total	All Ages		Age group (years) and sex														
		Total		Under 15		15-19		20-24		25-44		45-64		65 and over				
		Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female			
	22,146	4,999	559															
	4,043	397																
Total	10,575	327	3,380	4,120	3,922	999	993	847	887	2,947	3,022	1,549	1,592	670	575			
Saipan	17.3	35		1,161	1,129	219	237	185	184	607	615	269	279	55	56			
Rota Island	15.9	233		130	141	20	26	17	13	74	76	30	23	4	4			
Saipan Island	17.0	100		949	920	177	200	154	157	460	485	213	237	41	48			
Tinian Island	22.8	129		82	68	22	11	14	14	73	54	26	19	10	4			
Palau	25.5	1,364		1,823	1,710	455	441	345	419	1,492	1,556	774	805	407	341			
Angaur Island	18.2	140		84	63	10	16	14	14	42	40	15	16	8	5			
Babelthuap Island	19.6	11		724	747	105	131	76	121	390	441	220	207	116	100			
Eauripik Atoll	23.4	53		25	27	7	4	4	4	22	30	6	6	1	1			
Elato Atoll	34.6	718		4	3	-	-	1	1	12	10	2	2	-	-			
Fais Island	44.6	13		9	13	3	4	2	9	61	44	40	37	8	3			
Faraulep Atoll	34.0	200		16	16	3	1	4	4	8	28	7	10	1	-			
Ifalik Atoll	34.1	111		28	29	16	6	10	4	39	59	9	29	2	1			
Kayangel Atoll	20.8	128		60	26	2	2	5	10	18	16	6	1	6	5			
Koror Island	20.1	417		71	227	231	123	98	73	80	201	191	54	56	14	14		
Lamotrek Atoll	31.1	347		81	15	15	9	5	7	19	44	10	9	-	-			
Merir Island	62.5	2,500		6	-	-	-	-	-	2	1	1	3	2	2			
Ngulu Atoll	27.5			23	7	4	4	2	3	1	9	12	5	4	1			
Peleliu Island	19.1	6,572		49	165	140	35	31	21	34	74	96	52	38	17	10		
Pulo Anna Island	32.5	353		4	3	-	-	1	2	-	2	-	1	1	2			
Satawal Island	29.4	191		96	32	18	10	8	8	43	54	13	9	2	1			
Sonsorol Island	54.8	181		61	8	8	-	-	1	8	8	19	24	14	21			
Tobi Island	47.9	759		63	9	2	2	2	-	22	13	25	34	7	12			
Ulithi Atoll	36.0	206		13	47	44	14	12	1	10	65	57	41	61	29			
Wolsai Atoll	27.3	1,061		77	48	51	15	10	3	20	65	58	22	35	3			
Yap Islands	30.7	82		82	340	273	97	108	8	92	390	354	226	223	177	132		
Marshall Islands	23.6	1,186		30	1,136	1,083	325	315	37	284	848	851	506	508	208	178		
Ailuk Atoll	20.1	446		84	59	70	10	11	2	14	43	40	30	31	15	18		
Arno Island	28.0	362		92	26	31	9	6	1	4	28	26	21	23	4	2		
Aur Island	23.4	177		92	30	34	10	9	3	8	28	20	11	11	7	10		
Ebon Atoll	20.7	418		88	173	159	17	30	2	22	78	81	63	76	28	19		
Ine Island	25.0	173		105	33	36	5	10	1	8	24	20	15	28	12	3		
Kwajalein Atoll	23.4	143		32	136	125	112	55	6	47	191	134	79	54	14	16		
Ldb Island	16.2	302		38	24	15	2	6	5	4	8	5	4	5	1	3		
Likiep Atoll	22.1			73	115	98	15	23	9	26	65	75	40	34	15	16		
Majuro Atoll	21.7			74	198	186	93	72	8	52	135	155	80	86	26	19		
Malcoelap Atoll	23.4			37	74	83	14	23	3	22	55	60	28	34	20	15		
Mejit Island	21.1			92	65	55	8	17	1	18	37	51	35	32	14	17		
Mili Atoll	27.4			95	31	38	2	4	4	5	21	27	20	14	4	7		
Namorik Island	23.4			111	63	60	15	18	12	19	56	62	39	36	16	15		
Tabal Island	26.1			80	29	12	7	20	8	6	26	30	14	9	2			
Utirik Atoll	23.4			78	29	25	1	3	7	11	15	22	7	11	6	6		
Wotje Atoll	25.1			159	51	56	5	8	12	18	38	43	20	24	17	10		

Includes individuals who

* 32 inhabitants not examined
on Kwajalein Is.

11 not examined on Eniwetok

** 372 on island
not all examined

total population 16, 3 examined on Eniwetok

Delete answers
for less than 10 cases?

approx 50 added
missing other islands

Add Total
Column

20

male

Population
much
greater
(island?)
male -

16

AGE AND SEX DISTRIBUTION, JERUVAH ISLANDS OR ATOLLS: SAIPAN, PALAU, MARSHALL ISLANDS DISTRICTS: 1948-50

District and island or atoll	Median age		Age (years) and sex															
			All ages ¹		Under 15		15-19		20-24		25-44		45-64		65 and over			
	Total	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female			
Total	21.0	22.7	23.3	11,138	11,008	4,320	3,922	999	900	847	917	2,247	3,022	1,549	1,592	670	575	
Saipan	17.3	17.0	17.6	2,497	2,502	1,161	1,129	219	207	185	184	607	615	269	279	55	56	
Rota Island	15.9	16.9	15.2	275	262	130	141	20	26	17	13	74	76	30	23	4	4	
Saipan Island	17.0	16.4	17.6	1,995	2,008	949	930	177	180	154	157	460	485	213	237	41	48	
Yinian Island	22.8	23.4	22.1	227	170	82	68	22	11	14	14	73	54	26	19	10	4	
Palau	25.5	25.3	25.7	5,299	5,276	1,823	1,710	455	441	345	419	1,492	1,556	774	805	407	341	
Angur Island	14.2	16.2	19.4	173	154	84	63	10	16	14	14	42	40	15	16	8	5	
Belethnap Island	19.8	19.4	19.9	1,831	1,749	724	717	105	131	75	121	390	441	220	207	116	100	
Kauripik Atoll	23.4	27.5	25.7	85	72	25	27	7	4	4	4	22	30	6	6	1	1	
Elato Atoll	34.6	36.2	33.8	19	16	4	3	-	-	1	1	12	10	2	2	-	-	
Fais Island	41.6	41.6	40.6	123	110	9	13	3	4	2	9	61	44	40	37	8	3	
Paranlep Atoll	30.0	21.2	33.2	41	59	16	16	3	1	6	4	8	28	7	10	1	-	
Ifalik Atoll	34.3	24.0	36.3	104	128	28	39	16	6	10	4	39	59	9	29	2	1	
Kayngal Atoll	20.8	20.5	21.0	69	60	32	26	2	2	5	10	18	16	6	1	6	5	
Korer Island	20.1	19.8	20.4	693	671	277	231	123	98	73	60	201	191	54	56	14	14	
Laeatrek Atoll	32.1	24.6	34.7	59	81	15	15	9	5	6	7	19	44	10	9	-	-	
Merir Island	64.5	62.5	62.5	5	6	-	-	-	-	-	-	2	1	1	3	2	2	
Ngulu Atoll	27.5	26.0	28.2	430	23	7	4	4	2	3	1	9	12	5	4	1	-	
Pelelie Island	19.1	17.8	20.5	369	349	165	140	35	31	25	34	74	96	52	38	17	10	
Pulo Anna Island	32.5	23.8	34.5	9	4	3	-	-	1	2	-	2	-	1	1	1	2	
Satawal Island	29.4	28.5	30.0	102	96	32	18	10	8	2	8	43	54	13	9	2	1	
Sonsorol Island	34.8	53.1	57.5	50	61	8	8	-	-	1	-	8	8	19	24	14	21	
Tobi Island	47.9	44.6	51.8	65	63	9	2	2	2	-	-	22	13	25	34	7	12	
Ulithi Atoll	36.0	34.4	38.6	204	213	47	44	14	12	11	10	65	57	41	61	26	29	
Woleai Atoll	27.3	26.9	27.9	170	177	48	51	15	10	16	20	65	58	22	35	4	3	
Yap Islands	30.7	31.4	29.9	1,318	1,182	340	273	97	102	88	92	390	354	226	223	177	132	
Marshall Islands	23.6	23.3	23.8	3,342	3,230	1,136	1,063	325	315	317	284	848	851	506	500	208	178	
Ailuk Atoll	20.1	26.3	18.9	169	184	59	70	10	11	12	14	43	40	30	31	15	18	
Arno Island	25.0	27.5	23.6	99	92	36	31	9	6	11	4	28	26	21	23	4	2	
Aur Island	23.4	25.7	21.9	89	92	30	34	10	9	3	8	28	20	11	11	7	10	
Ebon Atoll	20.7	18.7	21.1	371	338	173	159	17	30	12	22	78	81	63	76	28	19	
Ine Island	25.0	25.8	24.1	101	105	33	36	5	10	11	8	24	20	15	28	12	3	
Kwajalein Atoll	23.6	23.5	23.8	625	432	136	123	112	55	96	47	121	134	79	54	14	16	
Lik Island	16.2	9.5	18.3	24	30	24	15	2	6	5	4	8	5	4	5	1	3	
Likiep Atoll	22.1	19.8	23.0	259	273	115	98	15	23	9	26	65	75	40	34	15	21	
Majuro Atoll	21.7	20.9	22.8	612	574	198	186	93	72	80	52	135	155	80	86	26	17	
Malcoelap Atoll	23.6	24.6	22.8	209	237	74	83	14	23	18	22	55	60	28	34	10	18	
Mejit Island	21.1	20.4	21.4	170	192	65	55	8	17	11	13	37	31	24	18	10	17	
Mili Atoll	27.8	31.0	25.5	82	95	31	35	2	4	4	5	21	27	20	16	4	7	
Morok Island	21.0	22.3	23.9	207	211	61	68	15	11	18	10	56	52	28	27	12	10	
Taka Island	26.5	26.6	26.4	93	78	29	14	7	20	8	6	26	30	14	9	9	7	
Utirik Atoll	23.8	21.8	25.0	65	78	29	25	1	3	7	11	15	22	7	11	7	7	
Wotje Atoll	23.2	21.2	24.3	143	158	51	56	5	5	12	12	38	43	20	22	10	10	

¹Includes individuals whose age was not stated.

approx 50 under 15 including other islands

female

hamotres

Satawal

Woleai

Papua

Malcoelap

Namorik

under Majuro

- Eru Is.
- Kwajalein Is.
- Bwile Is.
- Taka Is.

A - 2

(1)
(2)

Appendix Table 2. —

1 DISTRIBUTION OF NATIVES EXAMINED BY AGE GROUP AND SEX, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50

Age group (years) and sex	Total	District		
		Saipan	Palau	Marshall Islands
All ages ✓	22,146	4,999	10,575	6,572
Male ✓	11,138	2,497	5,299	3,342
Female ✓	11,008	2,502	5,276	3,230
Under 1.....	798	246	367	185
Male.....	405	114	190	101
Female.....	393	132	177	84
1-4.....	2,670	769	1,053	848
Male.....	1,369	374	566	429
Female.....	1,301	395	487	419
5-9.....	2,256	626	986	644
Male.....	1,137	334	474	329
Female.....	1,119	292	512	315
10-14.....	2,318	649	1,127	542
Male.....	1,209	339	593	277
Female.....	1,109	310	534	265
15-19.....	1,992	456	896	640
Male.....	999	219	455	325
Female.....	993	237	441	315
20-24.....	1,734	369	764	601
Male.....	847	185	345	317
Female.....	887	184	419	284
25-29.....	1,789	362	867	560
Male.....	852	171	412	269
Female.....	937	191	455	291
30-34.....	1,648	317	867	464
Male.....	810	151	422	237
Female.....	838	166	445	227
35-39.....	1,402	313	726	363
Male.....	712	165	366	181
Female.....	690	148	360	182
40-44.....	1,130	230	588	312
Male.....	573	120	292	161
Female.....	557	110	296	151
45-49.....	1,073	209	538	326
Male.....	513	97	269	147
Female.....	560	112	269	179
50-54.....	793	156	367	270
Male.....	388	74	171	143
Female.....	405	82	196	127
55-59.....	633	102	318	213
Male.....	309	48	158	103
Female.....	324	54	160	110
60-64.....	642	81	356	205
Male.....	339	50	176	113
Female.....	303	31	180	92
65-69.....	403	60	199	144
Male.....	202	29	99	74
Female.....	201	31	100	70
70-74.....	340	23	208	109
Male.....	193	10	118	65
Female.....	147	13	90	44
75 and over.....	502	28	341	133
Male.....	275	16	190	69
Female.....	227	12	151	64

Single dash

400
460

219 237
185 184
404 421

✓ Includes individuals whose age was not stated.

Appendix table 3.

To Hets. 1
8-3- rod

AGE DISTRIBUTION AND SEX, MARITAL STATUS, AND CIVIL ADMINISTRATIVE DISTRICT, TRUST

TERRITORY OF THE PACIFIC ISLANDS: Saipan, Palau, and Marshall Islands & Districts: 1948-50

District and marital status	Age group (years) and sex											
	15-19		20-24		25-34		35-44		45 and over			
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female		
Total	999	993	847	887	1,662	1,775	1,285	1,247	2,219	2,167		
Single.....	952	691	413	252	293	274	154	172	296	489		
Married.....	47	300	434	633	1,366	1,499	1,127	1,074	1,918	1,674		
Unknown.....	-	2	-	2	3	2	4	1	5	4		
Saipan	219	237	185	184	322	357	285	258	324	335		
Single.....	212	197	123	75	75	53	27	20	35	40		
Married.....	7	40	62	109	247	304	258	238	288	295		
Unknown.....	-	-	-	-	-	-	-	-	1	-		
Palau	455	441	345	419	834	900	658	656	1,181	1,146		
Single.....	433	292	168	107	130	140	71	103	130	271		
Married.....	22	148	177	311	704	760	587	553	1,050	875		
Unknown.....	-	1	-	1	-	-	-	-	1	-		
Marshall Islands	325	315	317	284	506	518	342	333	714	686		
Single.....	307	202	122	70	88	81	56	49	131	178		
Married.....	18	112	195	213	415	435	282	283	580	504		
Unknown.....	-	1	-	1	3	2	4	1	3	4		
	67.6	72.4	5.5	35.6	61.5	75.0	82.0	84.0	82.5	85.0	81.2	73.5

MARITAL STATUS BY AGE + SEX

(Title)
Marital status by age distribution and sex,
Saipan, Palau, and Marshall Islands
& Districts: 1948-50

A-4

To H
8-2 mod

August 1, 1951
AH:mr

4

Appendix Table 4. —

AVERAGE HEIGHT AND WEIGHT BY AGE GROUP AND SEX, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50

Age group (years) and district	Average height (inches)			Average weight (pounds)		
	Total	Male	Female	Total	Male	Female
All ages:	55.1	56.1	54.0	98.6	100.4	96.8
Saipan.....	55.1	56.1	54.0	98.6	100.4	96.8
Palau.....	56.3	57.4	55.1	100.8	105.3	96.2
Marshall Islands..	57.1	59.0	55.1	104.1	110.5	97.5
Under 15:						
Saipan.....	44.0	44.0	43.9	49.1	48.8	49.3
Palau.....	44.4	44.1	44.7	48.7	47.9	49.6
Marshall Islands.....	44.1	44.4	43.8	50.5	50.8	50.2
15-24:						
Saipan.....	62.8	64.5	61.2	122.9	126.1	119.9
Palau.....	61.3	62.9	59.8	117.5	119.9	115.1
Marshall Islands.....	61.9	64.2	59.4	118.1	125.5	110.3
25-44:						
Saipan.....	63.2	65.5	60.8	139.9	144.9	134.8
Palau.....	62.2	64.5	60.0	130.3	139.4	121.2
Marshall Islands.....	62.6	65.5	59.7	129.6	139.6	119.7
45 and over:						
Saipan.....	62.4	64.5	60.2	136.5	142.0	131.2
Palau.....	61.2	63.2	59.0	123.1	132.8	112.2
Marshall Islands.....	62.0	64.3	59.6	127.6	135.5	119.0

delete

Do we need this table?

4.7
4.5
5.8

10.1
18.2
19.9

4.3
4.2
4.7

10.8
20.6
16.5

including since age group 15-24 are important
 growth. Since, generally, population is about
 a third of the total population, the average including
 them in the average is about a quarter of the total
 pulling down the average height of the population
 for the population.

5

Appendix Table 5.

AVERAGE WEIGHT BY AGE GROUP AND SEX, SELECTED ISLANDS OR ATOLLS, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50

District, island or atoll, and sex	Age group (years)						
	10-14	15-19	20-24	25-34	35-44	45-64	65 and over
	Average weight (pounds)						
SAIPAN							
Male.....	72.3	116.5	137.4	141.6	148.1	144.5	128.0
Female.....	77.3	116.2	123.8	131.7	139.2	133.6	113.3
Rota Island:							
Male.....	65.7	113.0	129.4	140.0	143.4	141.7	138.0
Female.....	71.7	112.4	115.9	123.0	126.9	120.6	105.0
Saipan Island:							
Male.....	73.7	118.6	139.4	143.1	150.8	146.3	129.9
Female.....	78.2	117.6	125.6	134.5	142.5	136.2	115.2
Tinian Island:							
Male.....	65.2	103.6	124.8	135.5	137.6	132.6	116.8
Female.....	74.3	108.9	113.1	121.1	124.0	118.4	107.8
PALAU							
Male.....	68.4	110.3	132.9	139.4	139.3	136.1	124.0
Female.....	72.1	111.6	118.9	120.8	121.9	114.6	100.2
Angaur Island:							
Male.....	70.0	114.2	136.3	147.6	158.4	147.1	136.8
Female.....	78.2	120.2	124.5	126.7	126.3	125.3	-
Babelthuap Island:							
Male.....	64.8	104.7	132.2	140.7	141.0	141.7	128.9
Female.....	72.7	112.6	123.0	124.8	128.0	124.0	115.2
Eauripik Atoll:							
Male.....	59.8	118.6	145.0	151.1	141.3	141.7	-
Female.....	56.5	130.0	121.2	135.0	124.2	104.0	99.8
Elato Atoll:							
Male.....	-	-	150.0	132.5	141.7	148.0	-
Female.....	70.0	-	-	118.0	128.0	117.5	-
Fais Island:							
Male.....	82.0	97.5	125.0	145.8	143.4	146.7	152.0
Female.....	103.3	123.3	127.6	129.7	134.6	135.5	100.0
Faraulep Atoll:							
Male.....	80.0	113.3	133.7	150.0	145.0	131.1	-
Female.....	61.2	-	118.0	130.0	123.3	117.4	-
Ifalik Atoll:							
Male.....	67.1	126.4	139.8	142.1	139.3	131.5	135.0
Female.....	84.3	105.0	106.7	120.9	114.3	103.7	-
Kayangel Atoll:							
Male.....	64.4	105.0	152.5	151.5	140.0	141.7	138.0
Female.....	74.0	115.0	138.9	131.0	135.0	150.0	135.0
Koror Island:							
Male.....	66.9	111.7	132.6	141.4	146.7	138.6	130.9
Female.....	78.1	115.8	123.9	131.4	136.4	131.1	106.8
Lamotrek Atoll:							
Male.....	92.5	107.2	152.0	139.8	137.8	140.0	-
Female.....	59.1	115.0	109.8	120.8	116.9	101.0	-
Merir Island:							
Male.....	-	-	-	-	135.0	120.0	200.0
Female.....	-	-	-	-	140.0	131.7	100.0
Ngulu Atoll:							
Male.....	110.0	126.7	130.0	160.0	142.5	140.0	160.0
Female.....	70.0	127.5	120.0	139.8	145.8	130.0	-
Peleliu Island:							
Male.....	69.2	108.5	133.2	141.5	143.1	142.6	130.1
Female.....	72.0	114.7	116.2	118.9	130.0	121.8	120.3

Single dash

Per dash

Single dash

Appendix Table 5

AVERAGE WEIGHT BY AGE GROUP AND SEX, SELECTED ISLANDS OR ATOLLS, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50--Continued

District, island or atoll, and sex	Age group (years)						
	10-14	15-19	20-24	25-34	35-44	45-64	65 and over
	Average weight (pounds)						
PALAU--Continued							
Pulo Anna Island:							
Male.....	75.0	-	159.0	130.0	160.0	145.0	120.0
Female.....	-	90.0	-	-	-	120.0	150.0
Satawal Island:							
Male.....	92.7	129.5	125.0	138.3	144.0	133.2	120.0
Female.....	70.0	93.1	114.6	116.5	110.2	108.6	-
Sonsorol Island:							
Male.....	-	-	140.0	150.0	147.5	143.6	128.9
Female.....	111.6	-	-	153.3	142.5	124.2	109.2
Tobi Island:							
Male.....	98.8	108.0	-	147.6	134.6	131.6	115.0
Female.....	-	110.0	-	146.2	115.9	113.0	90.0
Ulithi Atoll:							
Male.....	79.1	124.8	133.9	141.5	139.8	141.0	140.6
Female.....	59.4	120.0	132.0	122.1	126.5	116.1	112.0
Woleai Atoll:							
Male.....	84.2	119.2	140.0	145.8	141.9	138.2	135.5
Female.....	77.3	121.5	123.0	127.3	116.4	111.5	140.0
Yap Islands:							
Male.....	66.6	105.8	127.5	131.7	129.7	125.3	114.3
Female.....	68.3	103.1	106.0	106.1	104.9	97.7	87.6
MARSHALL ISLANDS							
Male.....	76.1	117.6	133.4	140.9	137.3	137.8	129.0
Female.....	79.7	108.5	112.2	116.4	124.7	120.3	112.8
Ailuk Atoll:							
Male.....	66.3	103.2	132.0	143.7	138.1	127.8	112.8
Female.....	76.8	106.7	112.1	116.4	124.5	118.0	94.6
Arno Island:							
Male.....	82.0	116.3	139.9	143.2	143.4	148.8	138.0
Female.....	78.5	105.3	120.0	120.6	124.3	119.7	98.0
Aur Island:							
Male.....	68.0	113.7	128.7	134.6	140.1	137.2	105.0
Female.....	87.7	114.3	120.0	118.6	111.6	116.8	105.5
Ebon Atoll:							
Male.....	70.6	110.5	140.9	140.0	144.4	139.2	135.2
Female.....	76.2	120.8	118.4	122.4	131.6	121.6	113.1
Ine Island:							
Male.....	98.4	131.6	134.7	133.1	134.6	136.0	129.4
Female.....	71.2	99.2	117.1	114.5	129.9	120.5	110.0
Kwajalein Atoll:							
Male.....	83.0	119.8	131.5	141.4	137.1	140.9	135.5
Female.....	80.4	105.2	110.4	111.7	123.9	123.7	127.4
Lib Island:							
Male.....	64.0	110.0	137.0	154.0	145.3	143.0	110.0
Female.....	93.3	110.8	106.5	99.0	131.7	126.0	100.0
Likiep Atoll:							
Male.....	72.9	111.5	133.1	145.8	128.2	137.6	126.9
Female.....	72.2	107.3	108.8	111.8	121.9	119.1	112.4
Majuro Atoll:							
Male.....	80.4	120.0	133.7	142.5	137.1	141.6	130.5
Female.....	86.5	105.8	113.3	120.2	126.6	123.4	107.0
Malcoelap Atoll:							
Male.....	72.4	124.8	132.0	141.9	134.8	138.7	123.7
Female.....	62.2	109.1	112.3	116.0	128.6	128.2	116.0

Per Week

Single Week

Appendix Table 5.

AVERAGE WEIGHT BY AGE GROUP AND SEX, SELECTED ISLANDS OR ATOLLS, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50--Continued

District, island or atoll, and sex	Age group (years)						
	10-14	15-19	20-24	25-34	35-44	45-64	65 and over
	Average weight (pounds)						
MARSHALL ISLANDS--Con.							
Mejit Island:							
Male.....	69.5	113.0	133.2	125.7	125.1	120.0	115.0
Female.....	68.9	109.8	111.4	114.6	114.6	111.3	110.0
Mili Atoll:							
Male.....	89.7	125.0	142.0	141.4	141.4	133.5	140.0
Female.....	84.4	120.0	130.6	121.3	138.4	126.2	125.0
Namorik Island:							
Male.....	71.4	102.5	130.1	137.8	138.1	136.4	127.7
Female.....	88.5	110.7	107.7	120.9	118.8	116.5	123.3
Tabal Island:							
Male.....	65.9	128.7	129.1	127.2	136.7	131.5	127.8
Female.....	84.0	98.5	91.2	107.2	124.6	104.6	90.0
Utirik Atoll:							
Male.....	76.0	110.0	130.3	143.6	132.0	145.4	120.7
Female.....	84.6	116.7	108.2	115.1	113.3	113.3	100.0
Wotje Atoll:							
Male.....	76.6	121.6	142.7	146.1	142.3	144.1	137.7
Female.....	84.8	124.2	112.9	117.5	127.6	114.2	107.7

6

Appendix Table 6.

AVERAGE HEIGHT BY AGE GROUP AND SEX, SELECTED ISLANDS OR ATOLLS, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: AUGUST 1948-JUNE 1950

District, island or atoll, and sex	Age group (years)						
	10-14	15-19	20-24	25-34	35-44	45-64	65 and over
	Average height (inches)						
SAIPAN							
Male.....	53.4	63.4	65.8	65.4	65.6	64.8	63.1
Female.....	54.7	61.1	61.2	60.9	60.8	60.4	59.1
Rota Island:							
Male.....	53.1	63.1	65.5	66.4	66.4	64.8	64.2
Female.....	53.0	60.9	61.3	61.3	61.0	60.9	61.2
Saipan Island:							
Male.....	53.1	63.4	65.9	64.8	65.5	64.8	62.9
Female.....	55.0	61.2	61.3	60.9	61.2	60.4	58.7
Tinian Island:							
Male.....	52.9	62.9	65.1	65.6	65.6	64.6	63.3
Female.....	54.3	61.1	61.1	60.3	60.7	60.3	59.5
PALAU							
Male.....	52.4	61.8	64.4	64.7	64.2	63.6	62.2
Female.....	53.3	59.5	60.2	60.1	59.9	59.2	57.9
Angaur Island:							
Male.....	54.3	63.0	65.1	65.9	65.7	64.6	63.8
Female.....	55.7	61.1	62.4	60.4	59.2	60.2	-
Babelthwap Island:							
Male.....	52.0	61.2	65.1	65.0	64.7	63.7	62.0
Female.....	53.7	59.9	60.7	60.3	59.9	59.3	59.2
Eauripik Atoll:							
Male.....	48.3	61.7	65.0	64.8	64.5	64.7	-
Female.....	48.1	62.7	61.2	61.8	60.1	58.2	55.9
Elato Atoll:							
Male.....	-	-	66.0	63.8	63.7	64.0	-
Female.....	52.0	-	-	62.0	60.4	61.5	-
Fais Island:							
Male.....	56.0	55.0	64.5	66.1	65.0	64.4	63.8
Female.....	58.7	56.7	60.3	61.9	62.9	62.9	60.0
Faraulep Atoll:							
Male.....	54.3	62.7	63.8	66.4	66.5	63.3	-
Female.....	50.2	-	59.7	61.4	61.3	59.8	-
Ifalik Atoll:							
Male.....	50.7	62.3	63.7	64.7	64.7	65.4	64.0
Female.....	55.3	58.2	59.3	60.4	60.7	60.0	-
Kayangel Atoll:							
Male.....	52.7	56.5	66.0	65.2	64.6	64.2	64.4
Female.....	50.8	59.0	62.1	61.6	61.8	57.0	58.0
Koror Island:							
Male.....	53.4	62.9	64.9	65.3	64.9	64.6	63.8
Female.....	54.8	60.1	60.8	60.5	60.2	59.6	56.0
Lamotrek Atoll:							
Male.....	57.2	59.8	65.5	64.5	64.2	65.3	-
Female.....	47.8	58.2	58.0	58.8	58.4	58.4	-
Morir Island:							
Male.....	-	-	-	-	63.0	64.0	65.0
Female.....	-	-	-	-	54.0	61.3	58.0
Ngulu Atoll:							
Male.....	62.0	64.7	64.7	65.3	63.5	64.0	65.0
Female.....	52.0	58.5	61.0	60.5	59.8	60.5	-
Peleliu Island:							
Male.....	53.6	61.7	64.8	65.0	65.0	64.0	64.0
Female.....	53.1	60.7	61.0	60.6	60.0	59.0	59.8

Single dash

Part dash

Single dash

A Appendix Table 6.

AVERAGE HEIGHT BY AGE GROUP AND SEX, SELECTED ISLANDS OR ATOLLS, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: AUGUST 1948-JUNE 1950--Continued

District, island or atoll, and sex	Age group (years)						
	10-14	15-19	20-24	25-34	35-44	45-64	65 and over
	Average height (inches)						
PALAU--Continued							
Pulo Anna Island:							
Male.....	55.0	-	67.0	65.0	67.0	65.0	63.0
Female.....	-	61.0	-	-	-	61.0	60.0
Satawal Island:							
Male.....	57.7	64.1	63.5	64.1	64.7	63.4	59.5
Female.....	58.0	55.1	60.4	60.1	59.2	61.1	-
Sonsorol Island:							
Male.....	-	-	66.0	62.5	63.5	63.6	61.4
Female.....	56.0	-	-	59.0	60.5	59.2	59.6
Tobi Island:							
Male.....	59.2	63.0	-	64.1	63.4	62.1	62.8
Female.....	-	58.0	-	61.5	58.2	57.4	57.5
Ulithi Atoll:							
Male.....	54.5	62.4	63.5	64.5	63.6	64.3	64.2
Female.....	52.8	59.3	58.9	59.5	60.2	59.9	60.6
Woleai Atoll:							
Male.....	55.8	62.4	63.8	65.9	64.8	64.2	65.2
Female.....	51.6	61.0	60.9	62.4	61.2	64.5	60.0
Yap Islands:							
Male.....	52.6	60.6	63.4	63.5	63.1	62.7	61.4
Female.....	52.6	60.0	58.4	58.8	58.9	58.0	57.5
MARSHALL ISLANDS							
Male.....	54.8	63.1	65.4	65.8	65.1	64.6	63.5
Female.....	54.9	59.1	59.8	59.6	60.0	59.8	58.7
Ailuk Atoll:							
Male.....	53.4	62.8	66.0	66.3	65.7	64.1	63.1
Female.....	55.6	58.7	59.5	60.1	60.9	59.6	56.7
Arno Island:							
Male.....	55.5	59.1	64.8	65.6	64.2	64.7	63.8
Female.....	51.9	59.5	60.2	60.5	57.6	59.8	58.0
Aur Island:							
Male.....	53.9	64.6	67.3	65.8	65.8	64.8	59.0
Female.....	57.3	60.9	60.4	61.1	57.4	60.1	59.5
Ebon Atoll:							
Male.....	54.0	62.4	65.7	65.4	65.2	64.0	63.1
Female.....	54.9	60.5	60.4	61.0	61.1	60.1	59.2
Ine Island:							
Male.....	58.4	66.6	65.2	66.1	65.0	65.8	64.0
Female.....	53.0	54.1	57.2	57.9	60.7	60.0	60.5
Kwajalein Atoll:							
Male.....	55.6	63.5	65.2	65.8	64.9	64.7	64.8
Female.....	55.4	59.8	60.8	59.3	59.5	59.4	60.4
Lib Island:							
Male.....	51.5	63.5	66.2	67.6	64.7	65.5	61.0
Female.....	57.7	57.7	59.2	59.0	58.7	59.6	58.0
Likiep Atoll:							
Male.....	54.5	63.3	64.2	66.2	65.1	64.5	63.3
Female.....	54.1	59.4	59.0	59.4	60.3	59.8	59.0
Majuro Atoll:							
Male.....	55.5	62.8	65.4	65.8	65.0	64.8	64.2
Female.....	54.6	58.9	59.6	59.6	60.2	59.9	56.7
Maloelap Atoll:							
Male.....	54.2	64.1	65.9	66.4	64.6	64.8	62.1
Female.....	51.6	59.3	59.6	58.1	60.7	59.9	58.2

*Par
back*

*Single
back*

Appendix Table 6.

AVERAGE HEIGHT BY AGE GROUP AND SEX, SELECTED ISLANDS OR ATOLLS, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: AUGUST 1948-JUNE 1950--Continued

District, island or atoll, and sex	Age group (years)						
	10-14	15-19	20-24	25-34	35-44	45-64	65 and over
	Average height (inches)						
MARSHALL ISLANDS--Con.							
Mejit Island:							
Male.....	53.7	63.1	66.5	64.1	64.1	63.4	62.9
Female.....	52.8	58.5	58.6	58.9	60.2	59.0	57.5
Mili Atoll:							
Male.....	58.8	66.5	67.0	67.0	66.7	66.3	65.0
Female.....	57.9	63.8	62.4	61.8	62.0	62.2	61.5
Namorik Island:							
Male.....	54.0	60.1	64.8	65.8	65.2	64.6	64.6
Female.....	57.1	59.4	59.5	59.6	59.3	59.8	58.6
Tabal Island:							
Male.....	52.6	65.6	63.6	64.0	65.5	64.5	62.1
Female.....	53.8	56.4	57.6	57.5	59.0	57.4	59.0
Utirik Atoll:							
Male.....	53.1	62.0	65.1	66.2	65.2	62.8	61.8
Female.....	55.8	60.0	58.2	59.5	59.0	59.1	58.0
Wotje Atoll:							
Male.....	55.0	63.8	66.8	66.1	65.8	64.8	63.6
Female.....	55.8	60.6	59.9	60.4	59.7	59.4	60.0

Appendix Table 7. - SAIPAN, PALAU, and MARSHALL ISLANDS DISTRICTS:
HEIGHT AND WEIGHT DISTRIBUTION BY AGE GROUP AND SEX 1948-50

SAIPAN DISTRICT

Parallel Table

Line number	Weight class (pounds)	Age group (years)											Age group (years)--Continued											Line number					
		15-24					25-44						25-44--Continued						45 and over										
		Height (inches)											Height (inches)--Continued						Height (inches)										
		Number Natives	Under 54	54-56	57-59	60-62	63-65	66-68	69-71	72 and over	Number Natives	Under 54	54-56	57-59	60-62	63-65	66-68	69-71	72 and over	Number Natives	Under 54	54-56	57-59		60-62	63-65	66-68	69-71	72 and over
Male													Male--Continued																
1	Average weight, all classes, in pounds.	(126.1)	(1)	(1)	(1)	(109.0)	(126.1)	(136.4)	(150.8)	(1)	(144.9)	(1)	(1)	(1)	(130.6)	(137.9)	(150.0)	(164.4)	(1)	(142.0)	-	(1)	(1)	(125.8)	(137.8)	(155.0)	(1)	(1)	1
2	Total.....	398	1	8	17	70	131	141	29	1	599	3	1	1	76	195	247	70	6	308	-	1	6	62	128	94	14	3	
3	Under 90.....	19	-	7	10	-	-	-	-	-	1	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	
4	90-99.....	19	-	1	5	11	1	1	-	-	2	1	-	-	-	-	-	-	-	8	-	1	2	4	1	-	-	-	
5	100-109.....	38	-	-	-	26	8	4	-	-	12	-	-	-	5	4	1	1	-	8	-	-	-	6	1	1	-	-	
6	110-119.....	53	-	-	2	14	24	13	-	-	33	-	-	-	16	10	4	2	1	24	-	-	-	9	11	3	1	-	
7	120-129.....	77	-	-	-	8	41	27	1	-	83	-	-	-	18	42	22	1	-	48	-	-	3	14	26	5	-	-	
8	130-139.....	71	-	-	-	8	29	29	5	-	104	1	-	-	14	47	37	5	-	54	-	-	-	16	27	11	-	-	
9	140-149.....	60	-	-	-	1	13	37	9	-	132	-	-	-	14	43	56	18	1	57	-	-	-	8	32	15	1	1	
10	150-159.....	25	-	-	-	1	5	12	7	-	79	-	-	-	4	21	45	6	2	41	-	-	-	3	15	21	2	-	
11	160-169.....	24	1	-	-	-	8	12	3	-	65	-	-	-	1	16	35	12	1	24	-	-	1	-	7	13	2	1	
12	170 and over.....	12	-	-	-	-	1	6	4	1	88	-	-	-	4	12	46	25	1	43	-	-	-	2	8	24	8	1	
Female													Female--Continued																
13	Average weight, all classes, in pounds.	(119.9)	(1)	(1)	(110.3)	(118.4)	(129.4)	(1)	(1)	-	(134.8)	(1)	(1)	(123.4)	(134.4)	(149.3)	(1)	(1)	(1)	(131.2)	(1)	(1)	(127.0)	(131.2)	(147.4)	(1)	(1)	-	
14	Total.....	412	2	11	75	198	116	9	1	-	601	6	14	140	298	121	17	4	1	300	3	13	100	132	48	3	1	-	
15	Under 90.....	11	2	2	5	2	-	-	-	-	10	1	3	4	2	-	-	-	-	12	1	3	6	2	-	-	-	-	
16	90-99.....	27	-	2	11	11	3	-	-	-	23	1	-	17	5	-	-	-	-	24	-	3	10	8	2	-	1	-	
17	100-109.....	83	-	2	22	50	9	-	-	-	51	1	1	18	30	-	1	-	-	29	1	1	8	17	2	-	-		
18	110-119.....	77	-	3	11	36	26	1	-	-	84	-	3	21	42	15	2	1	-	32	-	1	10	15	5	1	-		
19	120-129.....	83	-	1	12	43	24	3	-	-	105	1	3	28	53	16	3	-	1	59	-	1	21	28	8	1	-		
20	130-139.....	51	-	1	8	29	12	-	1	-	77	-	-	18	38	18	2	1	-	29	1	3	11	10	3	1	-		
21	140-149.....	43	-	-	5	18	18	2	-	-	74	2	-	10	41	20	1	-	-	34	-	-	13	17	4	-	-		
22	150-159.....	12	-	-	-	2	8	2	-	-	59	-	2	9	33	14	1	-	-	20	-	-	5	10	5	-	-		
23	160-169.....	12	-	-	-	2	10	-	-	-	50	-	-	8	27	14	1	-	-	25	-	1	8	10	6	-	-		
24	170 and over.....	13	-	-	1	5	6	1	-	-	68	-	2	7	27	24	6	2	-	36	-	-	8	15	13	-	-		

See footnote at end of table.

Appendix Table 7.

HEIGHT AND WEIGHT DISTRIBUTION BY AGE GROUP AND SEX, 1948-50--Continued
PALAU DISTRICT

Seipan, Palau, and Marau islands

7

Line number	Weight class (pounds)	Age group (years)											Age group (years)--Continued														Line number		
		15-24						25-44					25-44--Continued						45 and over										
		Height (inches)											Height (inches)--Continued						Height (inches)										
		Number of natives examined	Under 54	54-56	57-59	60-62	63-65	66-68	69-71	72 and over	Number of natives examined	Under 54	54-56	57-59	60-62	63-65	66-68	69-71	72 and over	Number of natives examined	Under 54	54-56	57-59	60-62	63-65	66-68		69-71	72 and over
1	Average weight, all classes, in pounds.	(119.9)	(1)	(1)	(89.7)	(113.5)	(126.0)	(139.9)	(1)	(1)	(139.4)	(1)	(1)	(116.1)	(128.5)	(137.7)	(147.6)	(159.2)	(1)	(132.8)	(1)	(1)	(107.8)	(123.8)	(137.4)	(149.8)	(1)	(1)	1
2	Total.....	771	16	23	70	191	294	153	22	2	1,439	5	7	27	274	624	420	72	10	1,007	5	7	85	288	438	161	17	6	2
3	Under 90.....	71	16	19	31	4	1	-	-	-	3	1	1	1	-	-	-	-	-	6	3	1	2	-	-	-	-	-	3
4	90-99.....	47	-	3	20	20	3	-	1	-	-	-	-	-	-	-	-	-	-	34	-	2	23	7	1	1	-	-	4
5	100-109.....	82	-	-	15	45	20	1	-	1	23	-	1	5	7	6	3	1	-	69	-	2	25	30	8	3	-	1	5
6	110-119.....	107	-	-	4	43	58	2	-	-	104	1	3	7	51	36	5	1	-	108	1	1	15	66	24	-	1	6	
7	120-129.....	155	-	1	-	48	79	24	3	-	227	3	-	9	88	102	19	5	1	203	-	1	11	82	92	15	-	2	7
8	130-139.....	110	-	-	-	16	65	27	2	-	314	-	-	4	65	177	63	4	1	173	-	-	3	55	93	20	2	-	8
9	140-149.....	125	-	-	-	11	45	61	8	-	340	-	2	1	38	154	135	7	3	189	-	-	5	24	122	36	2	-	9
10	150-159.....	44	-	-	-	2	17	21	4	-	182	-	-	-	9	81	79	13	-	91	1	-	-	14	45	28	1	2	10
11	160-169.....	19	-	-	-	2	4	10	3	-	142	-	-	-	12	43	66	20	1	64	-	-	-	5	28	25	6	-	11
12	170 and over.....	11	-	-	-	2	7	1	1	-	104	-	-	-	4	25	50	21	4	70	-	-	1	5	25	33	5	1	12
13	Average weight, all classes, in pounds.	(115.1)	(1)	(95.3)	(107.8)	(119.7)	(133.4)	(1)	(1)	-	(121.2)	(1)	(102.5)	(113.0)	(126.2)	(135.9)	(1)	(1)	(1)	(112.2)	(1)	(93.6)	(106.1)	(122.4)	(133.9)	(1)	(1)	-	13
14	Total.....	817	15	57	277	363	86	15	4	-	1,446	16	83	497	655	174	16	3	2	886	24	106	384	285	76	8	3	-	14
15	Under 90.....	46	6	19	18	3	-	-	-	-	48	5	15	22	4	2	-	-	-	127	12	48	59	6	2	-	-	-	15
16	90-99.....	74	3	14	41	15	1	-	-	-	98	2	17	60	17	-	2	-	-	128	6	20	78	21	3	-	-	-	16
17	100-109.....	151	2	13	80	51	2	1	2	-	219	2	24	115	70	5	1	1	1	153	4	18	81	44	4	2	-	-	17
18	110-119.....	176	2	6	63	88	14	3	-	-	261	2	6	118	118	15	1	1	-	128	-	7	58	58	4	1	-	-	18
19	120-129.....	180	-	2	53	104	17	4	-	-	295	1	16	84	156	35	2	-	1	122	1	6	48	55	11	1	-	-	19
20	130-139.....	97	1	2	16	53	21	4	-	-	205	-	3	45	112	41	4	-	-	78	-	4	25	33	16	-	-	-	20
21	140-149.....	46	-	-	4	29	11	2	-	-	164	2	2	25	97	34	3	1	-	68	-	-	24	26	16	1	1	-	21
22	150-159.....	27	-	-	2	10	14	-	1	-	73	-	-	18	37	18	-	-	-	36	-	1	8	16	9	1	1	-	22
23	160-169.....	12	-	1	-	8	2	1	-	-	47	-	-	7	24	14	2	-	-	25	1	1	3	10	8	1	1	-	23
24	170 and over.....	8	1	-	-	2	4	-	1	-	36	2	-	3	20	10	1	-	-	21	-	1	-	16	3	1	-	-	24

See footnote at end of table.

Appendix Table 7.

HEIGHT AND WEIGHT DISTRIBUTION BY AGE GROUP AND SEX, 1948-50--Continued
MARSHALL ISLANDS DISTRICT

Saipar, Palau, and Marshall Islands Districts

HEIGHT AND WEIGHT DISTRIBUTION BY AGE GROUP AND SEX, 1948-50--Continued
MARSHALL ISLANDS DISTRICT

Line number	Weight class (pounds)	Age group (years)											
		15-24							25-44				
		Height (inches)											
		Number of Natives examined	Under 54	54-56	57-59	60-62	63-65	66-68	69-71	72 and over	Number of Natives examined	Under 54	54-56
1	Average weight, all classes, in pounds.	(125.5)	(3)	(3)	(95.6)	(111.6)	(125.6)	(135.9)	(144.2)	(3)	(139.6)	-	(3)
2	Total.....	617	7	7	23	102	269	168	38	3	816	-	2
3	Under 90.....	16	1	6	8	1	-	-	-	-	-	-	-
4	90-99.....	23	1	-	6	14	2	-	-	-	3	-	1
5	100-109.....	44	1	-	4	24	14	1	-	-	14	-	-
6	110-119.....	88	-	-	-	29	50	8	1	-	48	-	-
7	120-129.....	179	2	1	3	23	103	43	3	1	146	-	1
8	130-139.....	116	1	-	2	7	60	37	9	-	204	-	-
9	140-149.....	93	1	-	-	3	26	54	8	1	181	-	-
10	150-159.....	37	-	-	-	-	10	17	9	1	107	-	-
11	160-169.....	14	-	-	-	1	2	4	7	-	69	-	-
12	170 and over.....	7	-	-	-	-	2	4	1	-	44	-	-
Female													
13	Average weight, all classes, in pounds.	(110.3)	(3)	(99.6)	(104.6)	(116.3)	(126.1)	(3)	(3)	-	(119.7)	(3)	(107.6)
14	Total.....	577	17	46	216	249	38	4	7	-	822	20	47
15	Under 90.....	23	5	7	10	1	-	-	-	-	21	3	3
16	90-99.....	81	4	9	32	14	1	-	1	-	78	3	9
17	100-109.....	145	4	18	67	49	4	2	1	-	149	5	13
18	110-119.....	153	2	11	56	75	7	1	1	-	175	4	10
19	120-129.....	103	2	1	17	69	10	-	4	-	154	4	7
20	130-139.....	45	-	-	12	24	8	1	-	-	94	-	4
21	140-149.....	16	-	-	2	10	4	-	-	-	76	-	1
22	150-159.....	5	-	-	-	4	1	-	-	-	28	-	-
23	160-169.....	3	-	-	-	1	2	-	-	-	18	1	-
24	170 and over.....	3	-	-	-	2	1	-	-	-	29	-	-

Average not computed for less than 25 individuals.

Line number	Weight class (pounds)	Age group (years)--Continued														
		25-44--Continued							45 and over							
		Height (inches)--Continued														
		Number of Natives examined	57-59	60-62	63-65	66-68	69-71	72 and over	Number of Natives examined	Under 54	54-56	57-59	60-62	63-65	66-68	69-71
1	Average weight, all classes, in pounds.	(3)	(122.4)	(135.3)	(142.9)	(160.9)	(3)	(135.5)	-	(3)	(111.8)	(121.0)	(134.0)	(147.0)	(3)	(3)
2	Total.....	9	84	292	340	83	6	639	-	3	25	126	271	188	23	3
3	Under 90.....	-	-	-	-	-	-	2	-	-	-	1	1	-	-	-
4	90-99.....	2	-	-	-	-	-	14	-	-	5	8	1	-	-	-
5	100-109.....	3	6	3	1	1	-	34	-	1	7	19	7	-	-	-
6	110-119.....	2	20	19	6	6	1	63	-	-	7	24	26	5	1	-
7	120-129.....	2	35	65	42	1	-	124	-	1	1	33	70	17	1	1
8	130-139.....	-	15	94	85	10	-	127	-	-	1	25	65	33	3	-
9	140-149.....	-	6	60	94	20	1	105	-	-	2	10	43	47	2	1
10	150-159.....	-	2	34	58	13	-	83	-	-	2	4	35	38	4	-
11	160-169.....	-	-	13	35	19	2	54	-	1	-	1	17	30	5	-
12	170 and over.....	-	-	4	19	19	2	33	-	-	-	1	6	18	7	1
Female--Continued																
13	Average weight, all classes, in pounds.	(112.1)	(123.5)	(133.1)	(3)	(3)	-	(119.0)	(3)	(103.5)	(111.4)	(126.0)	(134.5)	(3)	(3)	(3)
14	Total.....	283	362	100	5	5	-	581	12	50	218	237	50	9	4	1
15	Under 90.....	12	3	-	-	-	-	40	1	12	25	2	-	-	-	-
16	90-99.....	46	17	3	-	-	-	70	7	7	38	16	1	-	1	-
17	100-109.....	68	57	6	-	-	-	87	1	9	46	27	3	1	-	-
18	110-119.....	60	84	15	1	1	-	91	1	13	22	46	8	1	-	-
19	120-129.....	44	74	24	-	1	-	103	1	3	33	50	15	1	-	-
20	130-139.....	23	52	15	-	-	-	77	-	2	32	33	4	3	2	1
21	140-149.....	18	37	18	1	1	-	48	1	2	10	30	5	-	-	-
22	150-159.....	8	15	5	-	-	-	25	-	2	6	11	4	2	-	-
23	160-169.....	3	9	4	1	-	-	19	-	-	4	8	5	1	1	-
24	170 and over.....	1	14	10	2	2	-	21	-	-	2	14	5	-	-	-

Appendix Table 9

Palau, Marshall

June 21, 1951
AHmr
Districts:

9-8

BLOOD PRESSURE READINGS BY AGE GROUP AND SEX 1948-50

SAIPAN DISTRICT

Systolic (millimeters of mercury)	Age group (years)																																	
	15-24										25-44										45 and over													
	Number of Natives examined	Diastolic (millimeters of mercury)									Number of Natives examined	Diastolic (millimeters of mercury)									Number of Natives examined	Diastolic (millimeters of mercury)												
		Under 25	25- 54	55- 64	65- 74	75- 84	85- 94	95- 104	105- 124	125 and over		Not stated	Under 25	25- 54	55- 64	65- 74	75- 84	85- 94	95- 104	105- 124		125 and over	Not stated	Under 25	25- 54	55- 64	65- 74	75- 84	85- 94	95- 104	105- 124	125 and over	Not stated	
Total.....	404	-	43	88	137	103	13	-	-	-	20	607	-	15	66	189	233	77	11	1	-	15	324	1	4	25	72	114	77	13	4	-	14	
Under 85.....	5	-	3	2	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
85-104.....	68	-	23	27	13	3	2	-	-	-	-	39	-	5	10	19	5	-	-	-	-	-	8	-	3	4	-	1	-	-	-	-	-	-
105-114.....	88	-	9	22	43	13	1	-	-	-	-	118	-	3	30	61	23	1	-	-	-	40	-	1	9	21	9	-	-	-	-	-	-	-
115-124.....	82	-	6	17	36	20	3	-	-	-	-	157	-	4	12	51	81	9	-	-	-	47	-	4	4	16	22	4	1	-	-	-	-	-
125-134.....	86	-	1	14	29	38	4	-	-	-	-	131	-	-	11	33	73	14	-	-	-	61	1	-	4	14	32	9	-	-	-	-	-	-
135-154.....	48	-	1	6	14	25	2	-	-	-	-	115	-	2	3	20	46	38	5	1	-	98	-	-	2	16	38	40	2	-	-	-	-	-
155-174.....	7	-	-	-	2	4	1	-	-	-	-	24	-	5	-	3	5	13	3	-	-	43	-	-	1	5	11	19	5	2	-	-	-	-
175 and over.....	-	-	-	-	-	-	-	-	-	-	-	7	-	-	-	2	-	2	3	-	-	13	-	-	1	-	1	5	5	1	-	-	-	-
Not stated.....	20	-	-	-	-	-	-	-	-	-	20	15	-	-	-	-	-	-	-	-	-	15	14	-	-	-	-	-	-	-	-	-	-	14

Female																																		
Total.....	421	-	43	92	139	107	25	1	-	-	14	615	3	34	105	202	184	45	14	4	-	24	335	-	10	27	78	112	63	22	3	-	20	
Under 85.....	5	-	3	2	-	-	-	-	-	-	-	3	-	2	1	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-
85-104.....	99	-	24	45	24	6	-	-	-	-	-	108	-	25	36	40	4	1	-	-	-	34	-	4	12	10	7	-	1	-	-	-	-	-
105-114.....	130	-	9	29	61	25	5	1	-	-	-	191	-	6	43	94	45	3	-	-	-	43	-	3	2	20	13	3	-	-	-	-	-	-
115-124.....	113	-	7	12	42	44	8	-	-	-	-	136	-	-	13	48	68	6	-	1	-	46	-	-	6	16	21	3	-	-	-	-	-	-
125-134.....	35	-	-	2	10	19	4	-	-	-	-	80	-	1	6	17	40	13	2	-	-	50	-	1	3	19	19	6	2	-	-	-	-	-
135-154.....	19	-	-	1	5	11	7	-	-	-	-	51	-	-	3	2	25	17	4	-	-	78	-	1	1	8	34	25	9	-	-	-	-	-
155-174.....	4	-	-	1	-	2	1	-	-	-	-	17	-	-	2	1	1	4	7	2	-	48	-	-	5	13	22	7	1	-	-	-	-	-
175 and over.....	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	1	1	1	-	-	15	-	1	-	5	4	3	2	-	-	-	-	-
Not stated.....	16	-	-	-	2	-	-	-	-	-	14	26	-	-	1	-	1	-	-	-	-	24	20	-	-	-	-	-	-	-	-	-	-	20

PALAU DISTRICT

Male																																		
Total.....	800	-	20	157	277	163	24	-	-	-	159	1,492	1	7	155	614	503	87	5	-	-	120	1,181	1	7	95	362	380	100	10	-	-	226	
Under 85.....	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
85-104.....	38	-	17	20	1	-	-	-	-	-	-	14	-	6	5	3	-	-	-	-	-	18	-	5	9	2	2	-	-	-	-	-	-	-
105-114.....	181	-	2	107	66	4	2	-	-	-	-	192	-	1	113	67	9	1	-	-	-	1	128	-	2	80	44	2	-	-	-	-	-	-
115-124.....	294	-	-	28	196	68	2	-	-	-	-	689	1	28	451	206	3	-	-	-	-	336	1	-	3	211	117	4	-	-	-	-	-	-
125-134.....	96	-	1	-	13	80	2	-	-	-	-	357	-	-	8	82	260	7	-	-	-	289	-	-	3	84	195	10	-	-	-	-	-	
135-154.....	31	-	-	1	11	18	-	-	-	-	-	113	-	-	1	10	27	74	1	-	-	172	-	-	3	21	64	80	4	-	-	-	-	
155-174.....	1	-	-	1	-	-	-	-	-	-	-	7	-	-	-	1	2	4	-	-	-	12	-	-	-	6	6	-	-	-	-	-	-	
175 and over.....	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Not stated.....	159	-	-	-	-	-	-	-	-	-	159	118	-	-	-	-	-	-	-	-	-	118	226	-	-	-	-	-	-	-	-	-	-	226

Female																																		
Total.....	860	-	29	208	377	120	11	-	-	-	115	1,556	1	46	291	653	321	36	6	-	1	201	1,146	-	21	131	319	295	69	3	1	1	306	
Under 85.....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	2	-	-	-	-	-	-	-	-	-	-
85-104.....	44	-	22	18	2	2	-	-	-	-	-	85	-	39	32	12	2	-	-	-	-	26	-	15	6	5	-	-	-	-	-	-	-	-
105-114.....	269	-	6	151	107	5	-	-	-	-	-	331	-	6	205	111	8	1	-	-	-	174	-	4	103	63	3	1	-	-	-	-	-	-
115-124.....	366	-	-	37	253	73	2	-	-	-	1	640	1	-	41	446	147	3	-	-	-	317	-	-	21	197	95	3	-	-	-	-	-	-
125-134.....	54	-	-	-	14	38	2	-	-	-	-	242	-	-	11	79	148	3	1	-	-	203	-	-	1	48	150	4	-	-	-	-	-	
135-154.....	13	-	1	2	1	2	7	-	-	-	-	52	-	1	-	4	15	29	3	-	-	110	-	-	-	5	47	56	2	-	-	-	-	
155-174.....	-	-	-	-	-	-	-	-	-	-	-	4	-	-	1	-	1	-	-	-	-	7	-	-	-	1	-	5	1	-	-	-	-	
175 and over.....	-	-	-	-	-	-	-	-	-	-	-	2	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	
Not stated.....	114	-	-	-	-	-	-	-	-	-	114	200	-	-	-	1	-	-	-	-	-	199	306	-	-	-	-	-	-	-	-	-	-	306

840
46

Appendix 9
 DISTRIBUTION OF BLOOD PRESSURE READINGS BY AGE GROUP AND SEX, 1948-50--Continued

MARSHALL ISLANDS DISTRICT

Saipan, Palau, and Marshall Islands Districts:

Systolic (millimeters of mercury)	Age group (years)																																		
	15-24										25-44										45 and over														
	Diastolic (millimeters of mercury)										Diastolic (millimeters of mercury)										Diastolic (millimeters of mercury)														
	Under 25	25- 54	55- 64	65- 74	75- 84	85- 94	95- 104	105- 124	125 and over	Not stated	Under 25	25- 54	55- 64	65- 74	75- 84	85- 94	95- 104	105- 124	125 and over	Not stated	Under 25	25- 54	55- 64	65- 74	75- 84	85- 94	95- 104	105- 124	125 and over	Not stated					
Male																																			
Total.....	642	2	8	69	196	231	68	4	-	-	64	848	-	5	68	265	350	103	10	1	-	46	714	-	4	57	186	238	122	22	3	-	82		
Under 85.....	1	1	1	-	26	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	1	50	1	24	-	-	-	-	-	-	-		
85-104.....	62	5	31	17	8	1	-	-	-	-	76	2	31	30	11	2	-	-	-	-	-	-	1	111	1	17	58	31	4	2	-	-	-		
105-114.....	199	2	1	27	114	38	16	4	-	-	232	2	20	123	78	7	1	-	-	-	-	1	151	1	5	53	80	12	-	3	-	-	-		
115-124.....	233	-	1	6	52	152	20	2	-	-	279	-	11	62	183	22	1	-	-	-	-	-	123	1	4	31	53	31	3	-	-	-	-		
125-134.....	65	-	-	5	11	27	20	2	-	-	144	-	2	31	57	51	3	-	-	-	-	-	162	-	6	23	63	57	13	-	-	-	-		
135-154.....	17	-	-	-	1	5	11	-	-	-	63	1	4	28	20	17	3	-	-	-	-	-	30	-	-	2	6	14	6	1	-	-	-		
155-174.....	1	-	-	-	1	-	-	-	-	-	7	-	-	-	1	4	2	-	-	-	-	-	5	-	-	-	2	1	2	6	2	-	-	-	
175 and over.....	1	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-	1	2	-	-	-	-	-	-	
Not stated.....	63	-	-	-	-	-	-	-	-	-	63	45	-	-	-	-	-	-	-	-	-	45	82	-	-	-	-	-	-	-	-	-	-	82	
Female																																			
Total.....	599	1	16	88	193	205	46	6	-	1	43	851	1	18	93	237	318	86	11	1	-	86	686	-	4	40	123	234	109	28	3	-	145		
Under 85.....	1	1	-	-	-	-	-	-	-	-	-	4	3	1	-	-	-	-	-	-	-	-	-	-	3	15	7	3	2	-	-	-	-	-	
85-104.....	116	14	61	33	8	-	-	-	-	-	123	11	54	44	12	2	-	-	-	-	-	-	30	3	15	7	3	2	-	-	-	-	-	-	
105-114.....	204	1	21	114	51	17	-	-	-	-	220	1	25	110	73	10	-	-	-	-	-	-	77	1	8	31	32	5	-	1	-	-	-	-	
115-124.....	180	-	4	36	118	18	2	-	-	-	222	2	9	47	140	24	-	-	-	-	-	-	114	-	1	37	66	9	1	-	-	-	-	-	
125-134.....	46	-	-	8	26	8	2	-	-	-	127	-	3	26	59	32	7	-	-	-	-	-	107	-	6	25	51	22	3	-	-	-	-	-	
135-154.....	7	-	-	1	1	3	2	-	-	-	64	1	10	32	17	4	-	-	-	-	-	-	177	10	10	20	69	58	18	2	-	-	-	-	
155-174.....	1	-	-	1	-	-	-	-	-	-	4	-	-	2	1	-	-	-	-	-	-	-	33	-	-	2	13	12	5	1	-	-	-	-	
175 and over.....	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	1	-	1	1	-	-	-	-	-	
Not stated.....	43	-	-	-	-	-	-	-	-	-	43	87	1	-	-	-	-	-	-	-	-	86	145	-	-	-	-	-	-	-	-	-	-	-	145

578

807

632

554

764

541

Hetzgel

Appendix Table 8.--BLOOD-PRESSURE READINGS IN SPECIFIED CATEGORIES, BY AGE GROUP AND SEX, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50

SAIPAN DISTRICT

Age group (years) and sex	Number of readings	Systolic/diastolic*									
		Under 105/ under 65	105-134/ under 65	135-154/ under 65	Under 105/ 65-94	105-134/ 65-94	135-154/ 65-94	Under 105/ 95+	105-134/ 95+	135-154/ 95+	155+/ any
Number											
15-24:											
Male.....	384	55	69	7	18	187	41	-	-	-	7
Female.....	405	74	59	1	30	218	18	-	1	-	4
25-44:											
Male.....	592	16	60	5	24	346	104	-	-	6	31
Female.....	589	66	70	3	45	334	44	-	3	4	20
45 and over:											
Male.....	310	7	19	2	1	127	94	-	2	2	56
Female.....	315	17	17	2	17	120	67	1	2	9	63
Percentage											
15-24:											
Male.....	100.0	14.3	18.0	1.8	4.7	48.7	10.7	0	0	0	1.8
Female.....	100.0	18.3	14.6	0.2	7.4	53.8	4.4	0	0.2	0	1.0
25-44:											
Male.....	100.0	2.7	10.1	0.8	4.1	58.4	17.6	0	0	1.0	5.2
Female.....	100.0	11.2	11.9	0.5	7.6	56.7	7.5	0	0.5	0.7	3.4
45 and over:											
Male.....	100.0	2.3	6.1	0.6	0.3	41.0	30.3	0	0.6	0.6	18.1
Female.....	100.0	5.4	5.4	0.6	5.4	38.1	21.3	0.3	0.6	2.9	20.0

PALAU DISTRICT

Number											
15-24:											
Male.....	641	37	138	1	1	433	30	-	-	-	1
Female.....	745	40	194	3	4	494	10	-	-	-	-
25-44:											
Male.....	1,372	11	151	1	4	1,086	111	-	-	1	7
Female.....	1,354	71	264	1	14	946	48	-	1	3	6
45 and over:											
Male.....	955	14	86	3	4	667	165	-	-	4	12
Female.....	840	23	129	-	5	564	108	-	1	2	8

*See footnote at end of table.

Appendix Table 8.--BLOOD-PRESSURE READINGS IN SPECIFIED CATEGORIES, BY AGE GROUP AND SEX, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50--Continued

PALAU DISTRICT--Continued

Age group (years) and sex	Number of readings	Systolic/diastolic*									
		Under 105/ under 65	105-134/ under 65	135-154/ under 65	Under 105/ 65-94	105-134/ 65-94	135-154/ 65-94	Under 105/ 95+	105-134/ 95+	135-154/ 95+	155+/ any
Percentage											
15-24:											
Male.....	100.0	5.8	21.5	0.2	0.2	67.6	4.7	0	0	0	0.2
Female.....	100.0	5.4	26.0	0.4	0.5	66.3	1.3	0	0	0	0
25-44:											
Male.....	100.0	0.8	11.0	0.1	0.3	79.2	8.1	0	0	0.1	0.5
Female.....	100.0	5.2	19.5	0.1	1.0	69.9	3.5	0	0.1	0.2	0.4
45 and over:											
Male.....	100.0	1.5	9.0	0.3	0.4	69.8	17.3	0	0	0.4	1.3
Female.....	100.0	2.7	15.4	0	0.6	67.1	12.9	0	0.1	0.2	1.0

MARSHALL ISLANDS DISTRICT

Age group (years) and sex	Number of readings	Number									
		Under 105/ under 65	105-134/ under 65	135-154/ under 65	Under 105/ 65-94	105-134/ 65-94	135-154/ 65-94	Under 105/ 95+	105-134/ 95+	135-154/ 95+	155+/ any
Percentage											
15-24:											
Male.....	578	37	42	-	26	450	17	-	4	-	2
Female.....	556	76	29	-	41	396	5	-	5	2	2
25-44:											
Male.....	802	33	35	5	44	614	55	-	5	3	8
Female.....	764	69	41	1	58	521	59	-	7	4	4
45 and over:											
Male.....	632	25	29	6	25	353	143	-	3	13	35
Female.....	541	18	16	10	12	278	147	-	4	20	36

*Millimeters of mercury.

Hetzgel 6-11-52

Appendix Island Table 14. -- ~~DISTRIBUTION~~ OF SYSTOLIC BLOOD-PRESSURE READINGS BY AGE GROUP AND SEX, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50

10

SAIPAN DISTRICT

Age group (years) and sex	Natives examined	Readings taken	Under 85	85-104	105-114	115-124	125-134	135-154	155-174	175 and over
Number										
All ages ✓	4,999	3,388	338	711	688	602	454	413	144	38
Male ✓	2,497	1,708	199	293	283	293	282	263	75	20
Female ✓	2,502	1,680	139	418	405	309	172	150	69	18
Under 15	2,290	790	323	352	78	21	11	4	1	-
Male	1,161	421	193	177	37	7	4	2	1	-
Female	1,129	369	130	175	41	14	7	2	-	-
15-44	2,047	1,970	14	314	527	488	332	233	52	10
Male	1,011	976	6	107	206	239	217	163	31	7
Female	1,036	994	8	207	321	249	115	70	21	3
45 and over	659	625	1	42	83	93	111	176	91	28
Male	324	310	-	8	40	47	61	98	43	13
Female	335	315	1	34	43	46	50	78	48	15
Percentage										
All ages ✓	...	100.0	10.0	21.0	20.3	17.8	13.4	12.2	4.2	1.1
Male ✓	...	100.0	11.6	17.2	16.6	17.2	16.5	15.4	4.4	1.2
Female ✓	...	100.0	8.3	24.9	24.1	18.4	10.2	8.9	4.1	1.1
Under 15	...	100.0	40.9	44.6	9.9	2.6	1.4	0.5	0.1	0
Male	...	100.0	45.8	42.0	8.8	1.7	1.0	0.5	0.2	0
Female	...	100.0	35.2	47.4	11.1	3.8	1.9	0.5	0	0
15-44	...	100.0	0.7	16.0	26.8	24.8	16.8	11.8	2.6	0.5
Male	...	100.0	0.6	11.0	21.1	24.5	22.2	16.7	3.2	0.7
Female	...	100.0	0.8	20.8	32.3	25.1	11.6	7.0	2.1	0.3
45 and over	...	100.0	0.2	6.7	13.3	14.9	17.8	28.2	14.6	4.5
Male	...	100.0	0	2.6	12.9	15.2	19.7	31.6	13.9	4.2
Female	...	100.0	0.3	10.8	13.6	14.6	15.9	24.8	15.2	4.8

Single desk
Single desk

PALAU DISTRICT

Age group (years) and sex	Natives examined	Readings taken	Under 85	85-104	105-114	115-124	125-134	135-154	155-174	175 and over
Number										
All ages ✓	10,575	6,222	7	334	1,396	2,700	1,251	496	33	5
Male ✓	5,299	3,092	3	121	541	1,338	748	318	21	2
Female ✓	5,276	3,130	4	213	855	1,362	503	178	12	3
Under 15	3,533	305	4	109	120	55	10	4	2	1
Male	1,823	119	2	51	40	17	6	1	1	1
Female	1,710	186	2	58	80	38	4	3	1	-
15-44	4,708	4,117	1	181	973	1,989	749	209	12	3
Male	2,292	2,015	1	52	373	983	453	144	8	1
Female	2,416	2,102	-	129	600	1,006	296	65	4	2
45 and over	2,327	1,795	2	44	302	653	492	282	19	1
Male	1,181	955	-	18	128	336	289	172	12	-
Female	1,146	840	2	26	174	317	203	110	7	1
Percentage										
All ages ✓	...	100.0	0.1	5.4	22.4	43.4	20.1	8.0	0.5	0.1
Male ✓	...	100.0	0.1	3.9	17.5	43.3	24.2	10.3	0.7	0.1
Female ✓	...	100.0	0.1	6.8	27.3	43.5	16.1	5.7	0.4	0.1
Under 15	...	100.0	1.3	35.7	39.3	18.0	3.3	1.3	0.6	0.3
Male	...	100.0	1.7	42.8	33.6	14.3	5.0	0.8	0.8	0.8
Female	...	100.0	1.1	31.2	43.0	20.4	2.2	1.6	0.5	0
15-44	...	100.0	0.0	4.4	23.6	48.3	18.2	5.1	0.3	0.1
Male	...	100.0	0.0	2.6	18.5	48.8	22.5	7.1	0.4	0.0
Female	...	100.0	0	6.1	28.5	47.8	14.1	3.1	0.2	0.1
45 and over	...	100.0	0.1	2.4	16.8	36.4	27.4	15.7	1.1	0.1
Male	...	100.0	0	1.9	13.4	35.2	30.3	18.0	1.2	0
Female	...	100.0	0.2	3.1	20.7	37.7	24.2	13.1	0.8	0.1

Single desk
Single desk

See footnote at end of table.

10 9
Appendix Island Table 14 -- ~~DISTRIBUTION OF SYSTOLIC BLOOD-PRESSURE READINGS BY AGE GROUP AND SEX, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50--Continued~~

MARSHALL ISLANDS DISTRICT

Age group (years) and sex	Natives examined	Readings taken	Under 85	85-104	105-114	115-124	125-134	135-154	155-174	175 and over
Number										
All ages ✓	6,572	4,206	9	570	1,160	1,261	623	493	77	13
Male ✓	3,342	2,175	4	242	598	703	338	243	38	9
Female ✓	3,230	2,031	5	328	562	558	285	250	39	4
Under 15	2,219	323	2	112	115	81	9	1	1	2
Male	1,136	160	2	54	56	40	5	1	-	2
Female	1,083	163	-	58	59	41	4	-	1	-
15-44	2,940	2,702	7	377	855	914	382	151	13	3
Male	1,490	1,382	2	138	431	512	209	80	8	2
Female	1,450	1,320	5	239	424	402	173	71	5	1
45 and over	1,400	1,173	-	80	188	265	230	339	63	8
Male	714	632	-	50	111	151	123	162	30	5
Female	686	541	-	30	77	114	107	177	33	3
Percentage										
All ages ✓	...	100.0	0.2	13.6	27.6	30.0	14.8	11.7	1.8	0.3
Male ✓	...	100.0	0.2	11.1	27.5	32.3	15.5	11.2	1.7	0.4
Female ✓	...	100.0	0.2	16.1	27.7	27.5	14.0	12.3	1.9	0.2
Under 15	...	100.0	0.6	34.7	35.6	25.1	2.8	0.3	0.3	0.6
Male	...	100.0	1.2	33.8	35.0	25.0	3.1	0.6	0	1.2
Female	...	100.0	0	35.6	36.2	25.2	2.4	0	0.6	0
15-44	...	100.0	0.2	14.0	31.6	33.8	14.1	5.6	0.5	0.1
Male	...	100.0	0.1	10.0	31.2	37.0	15.1	5.8	0.6	0.1
Female	...	100.0	0.4	18.1	32.1	30.4	13.1	5.4	0.4	0.1
45 and over	...	100.0	0	6.8	16.0	22.6	19.6	28.9	5.4	0.7
Male	...	100.0	0	7.9	17.6	23.9	19.5	25.6	4.7	0.8
Female	...	100.0	0	5.5	14.2	21.1	19.8	32.7	6.1	0.6

✓ Includes individuals whose age was not stated.

Hetzyl

Appendix Table 11.--DIASTOLIC BLOOD-PRESSURE READINGS BY AGE GROUP AND SEX, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50

SAIPAN DISTRICT

Age group (years) and sex	Natives examined	Readings taken	Under 25	25-54	55-64	65-74	75-84	85-94	95-104	105 and over
Number										
All ages ✓...	4,999	3,392	4	612	644	883	871	305	61	12
Male ✓.....	2,497	1,708	1	330	296	429	455	168	24	5
Female ✓....	2,502	1,684	3	282	348	454	416	137	37	7
Under 15.....	2,290	790	-	461	240	66	18	5	-	-
Male.....	1,161	421	-	267	117	31	5	1	-	-
Female.....	1,129	369	-	194	123	35	13	4	-	-
15-44.....	2,047	1,974	3	135	351	667	627	160	26	5
Male.....	1,011	976	-	58	154	326	336	90	11	1
Female.....	1,036	998	3	77	197	341	291	70	15	4
45 and over.....	659	625	1	14	52	150	226	140	35	7
Male.....	324	310	1	4	25	72	114	77	13	4
Female.....	335	315	-	10	27	78	112	63	22	3
Percentage										
All ages ✓...	...	100.0	0.1	18.0	19.0	26.0	25.7	9.0	1.8	0.4
Male ✓.....	...	100.0	0.1	19.3	17.3	25.1	26.6	9.8	1.4	0.3
Female ✓....	...	100.0	0.2	16.7	20.7	27.0	23.7	8.1	2.2	0.4
Under 15.....	...	100.0	0	58.4	30.4	8.4	2.3	0.6	0	0
Male.....	...	100.0	0	63.4	27.8	7.4	1.2	0.2	0	0
Female.....	...	100.0	0	52.6	33.3	9.5	3.5	1.1	0	0
15-44.....	...	100.0	0.2	6.8	17.8	33.8	31.8	8.1	1.3	0.2
Male.....	...	100.0	0	5.9	15.8	33.4	34.4	9.2	1.1	0.1
Female.....	...	100.0	0.3	7.7	19.7	34.2	29.2	7.0	1.5	0.4
45 and over.....	...	100.0	0.2	2.2	8.3	24.0	36.2	22.4	5.6	1.1
Male.....	...	100.0	0.3	1.3	8.1	23.2	36.8	24.8	4.2	1.3
Female.....	...	100.0	0	3.2	8.6	24.8	35.6	20.0	7.0	1.0

single desk

single desk

PALAU DISTRICT

Number										
All ages ✓...	10,575	6,219	3	168	1,163	2,719	1,804	333	24	5
Male ✓.....	5,299	3,090	2	48	456	1,300	1,054	214	15	1
Female ✓....	5,276	3,129	1	120	707	1,419	750	119	9	4
Under 15.....	3,533	306	-	38	125	115	22	4	-	2
Male.....	1,823	119	-	14	49	46	8	1	-	1
Female.....	1,710	187	-	24	76	69	14	3	-	1
15-44.....	4,708	4,113	2	102	811	1,921	1,107	158	11	1
Male.....	2,292	2,013	1	27	312	891	666	111	5	-
Female.....	2,416	2,100	1	75	499	1,030	441	47	6	1
45 and over.....	2,327	1,795	1	28	226	681	675	169	13	2
Male.....	1,181	955	1	7	95	362	380	100	10	-
Female.....	1,146	840	-	21	131	319	295	69	3	2

single desk

See footnote at end of table.

Appendix Table 11.--DIASTOLIC BLOOD-PRESSURE READINGS BY AGE GROUP AND SEX, SAIPAN, PAIAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50--Continued

PAIAU DISTRICT--Continued

Age group (years) and sex	Natives examined	Readings taken	Under 25	25-54	55-64	65-74	75-84	85-94	95-104	105 and over
Percentage										
All ages ✓...	...	100.0	0.0	2.7	18.7	43.7	29.0	5.4	0.4	0.1
Male ✓.....	...	100.0	0.1	1.6	14.8	42.1	34.1	6.9	0.5	0.0
Female ✓...	...	100.0	0.0	3.8	22.6	45.3	24.0	3.8	0.3	0.1
Under 15.....	...	100.0	0	12.4	40.8	37.6	7.2	1.3	0	0.7
Male.....	...	100.0	0	11.8	41.2	38.6	6.7	0.8	0	0.8
Female.....	...	100.0	0	12.8	40.6	36.9	7.5	1.6	0	0.5
15-44.....	...	100.0	0.0	2.5	19.7	46.7	26.9	3.8	0.3	0.0
Male.....	...	100.0	0.0	1.3	15.5	44.3	33.1	5.5	0.2	0
Female.....	...	100.0	0.0	3.6	23.8	49.0	21.0	2.2	0.3	0.0
45 and over.....	...	100.0	0.1	1.6	12.6	37.9	37.6	9.4	0.7	0.1
Male.....	...	100.0	0.1	0.7	9.9	37.9	39.8	10.5	1.0	0
Female.....	...	100.0	0	2.5	15.6	38.0	35.1	8.2	0.4	0.2

single desk

MARSHALL ISLANDS DISTRICT

Number										
All ages ✓...	6,572	4,205	4	66	497	1,311	1,678	556	82	11
Male ✓.....	3,342	2,172	2	24	229	699	873	303	37	5
Female ✓...	3,230	2,033	2	42	268	612	805	253	45	6
Under 15.....	2,219	323	-	11	82	110	99	19	1	1
Male.....	1,136	159	-	7	35	52	54	9	1	1
Female.....	1,083	164	-	4	47	58	45	10	-	-
15-44.....	2,940	2,701	4	47	318	891	1,104	303	31	3
Male.....	1,490	1,380	2	13	137	461	581	171	14	1
Female.....	1,450	1,321	2	34	181	430	523	132	17	2
45 and over.....	1,400	1,173	-	8	97	309	472	231	50	6
Male.....	714	632	-	4	57	186	238	122	22	3
Female.....	686	541	-	4	40	123	234	109	28	3
Percentage										
All ages ✓...	...	100.0	0.1	1.6	11.8	31.2	39.9	13.2	2.0	0.3
Male ✓.....	...	100.0	0.1	1.1	10.5	32.2	40.2	14.0	1.7	0.2
Female ✓...	...	100.0	0.1	2.1	13.2	30.1	39.6	12.4	2.2	0.3
Under 15.....	...	100.0	0	3.4	25.4	34.1	30.6	5.9	0.3	0.3
Male.....	...	100.0	0	4.4	22.0	32.7	34.0	5.7	0.6	0.6
Female.....	...	100.0	0	2.4	28.6	35.4	27.4	6.1	0	0
15-44.....	...	100.0	0.1	1.7	11.8	33.0	40.9	11.2	1.1	0.1
Male.....	...	100.0	0.1	0.9	9.9	33.4	42.1	12.4	1.0	0.1
Female.....	...	100.0	0.2	2.6	13.7	32.6	39.6	10.0	1.3	0.2
45 and over.....	...	100.0	0	0.7	8.3	26.3	40.2	19.6	4.3	0.5
Male.....	...	100.0	0	0.6	9.0	29.4	37.6	19.3	3.5	0.5
Female.....	...	100.0	0	0.7	7.4	22.7	43.2	20.1	5.2	0.6

single desk

single desk

✓ Includes individuals whose age was not stated.

To Netzer
7-18-52
Rod

Appendix Table 12.--PULSE RATE BY AGE GROUP AND SEX, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50

SAIPAN DISTRICT

Age group (years) and sex	Natives examined	Number taken	Under 60	60-69	70-79	80-89	90-99	100 and over
Number								
All ages ✓	4,999	646	-	71	232	232	73	38
Male ✓	2,497	351	-	43	120	125	45	18
Female ✓	2,502	295	-	28	112	107	28	20
Under 15	2,290	207	-	34	80	54	23	16
Male	1,161	110	-	19	43	26	16	6
Female	1,129	97	-	15	37	28	7	10
15-44	2,047	349	-	28	125	144	37	15
Male	1,011	192	-	19	61	81	21	10
Female	1,036	157	-	9	64	63	16	5
45 and over	659	89	-	9	27	34	12	7
Male	324	49	-	5	16	18	8	2
Female	335	40	-	4	11	16	4	5
Percentage								
All ages ✓	...	100.0	0	11.0	35.9	35.9	11.3	5.9
Male ✓	...	100.0	0	12.3	34.2	35.6	12.8	5.1
Female ✓	...	100.0	0	9.5	38.0	36.3	9.5	6.8
Under 15	...	100.0	0	16.4	38.6	26.1	11.1	7.7
Male	...	100.0	0	17.3	39.1	23.6	14.5	5.4
Female	...	100.0	0	15.5	38.1	28.9	7.2	10.3
15-44	...	100.0	0	8.0	35.8	41.3	10.6	4.3
Male	...	100.0	0	9.9	31.8	42.2	10.9	5.2
Female	...	100.0	0	5.7	40.8	40.1	10.2	3.2
45 and over	...	100.0	0	10.1	30.3	38.2	13.5	7.9
Male	...	100.0	0	10.2	32.6	36.7	16.3	4.1
Female	...	100.0	0	10.0	27.5	40.0	10.0	12.5

PALAU DISTRICT

Number								
All ages ✓	10,575	4,344	10	436	1,156	2,460	275	7
Male ✓	5,299	2,288	5	230	627	1,289	135	2
Female ✓	5,276	2,056	5	206	529	1,171	140	5
Under 15	3,533	638	4	82	205	275	68	4
Male	1,823	345	4	45	113	143	38	2
Female	1,710	293	-	37	92	132	30	2
15-44	4,708	2,566	2	255	690	1,460	156	3
Male	2,292	1,356	-	141	385	753	77	-
Female	2,416	1,210	2	114	305	707	79	3
45 and over	2,327	1,137	4	99	258	725	51	-
Male	1,181	585	1	44	127	393	20	-
Female	1,146	552	3	55	131	332	31	-

See footnote at end of table.

to Hertzell
7-18-52
Rod

Appendix Table 12.--PULSE RATE BY AGE GROUP AND SEX, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50--Continued

PALAU DISTRICT--Continued

Age group (years) and sex	Natives examined	Number taken	Under 60	60-69	70-79	80-89	90-99	100 and over
Percentage								
All ages ✓	...	100.0	0.2	10.0	26.6	56.6	6.3	0.2
Male ✓	...	100.0	0.2	10.1	27.4	56.3	5.9	0.1
Female ✓	...	100.0	0.2	10.0	25.7	57.0	6.8	0.2
Under 15.....	...	100.0	0.6	12.8	32.1	43.1	10.6	0.6
Male.....	...	100.0	1.2	13.0	32.8	41.4	11.0	0.6
Female.....	...	100.0	0	12.6	31.4	45.1	10.2	0.7
15-44.....	...	100.0	0.1	9.9	26.9	56.9	6.1	0.1
Male.....	...	100.0	0	10.4	28.4	55.5	5.7	0
Female.....	...	100.0	0.2	9.4	25.2	58.4	6.5	0.2
45 and over.....	...	100.0	0.4	8.7	22.7	63.8	4.5	0
Male.....	...	100.0	0.2	7.5	21.7	67.2	3.4	0
Female.....	...	100.0	0.5	10.0	23.7	60.1	5.6	0

MARSHALL ISLANDS DISTRICT

Number								
All ages ✓	6,572	3,153	6	98	968	1,157	545	379
Male ✓	3,342	1,648	5	69	596	523	270	185
Female ✓	3,230	1,505	1	29	372	634	275	194
Under 15.....	2,219	712	-	12	178	230	146	146
Male.....	1,136	367	-	6	110	99	83	69
Female.....	1,083	345	-	6	68	131	63	77
15-44.....	2,940	1,773	2	41	533	717	305	175
Male.....	1,490	905	2	29	318	330	138	88
Female.....	1,450	868	-	12	215	387	167	87
45 and over.....	1,400	664	4	45	256	208	94	57
Male.....	714	375	3	34	168	94	49	27
Female.....	686	289	1	11	88	114	45	30
Percentage								
All ages ✓	...	100.0	0.2	3.1	30.7	36.7	17.3	12.0
Male ✓	...	100.0	0.3	4.2	36.2	31.7	16.4	11.2
Female ✓	...	100.0	0.1	1.9	24.7	42.1	18.3	12.9
Under 15.....	...	100.0	0	1.7	25.0	32.3	20.5	20.5
Male.....	...	100.0	0	1.6	30.0	27.0	22.6	18.8
Female.....	...	100.0	0	1.7	19.7	38.0	18.3	22.3
15-44.....	...	100.0	0.1	2.3	30.1	40.4	17.2	9.9
Male.....	...	100.0	0.2	3.2	35.1	36.5	15.2	9.7
Female.....	...	100.0	0	1.4	24.8	44.6	19.2	10.0
45 and over.....	...	100.0	0.6	6.8	38.6	31.3	14.2	8.6
Male.....	...	100.0	0.8	9.1	44.8	25.1	13.1	7.2
Female.....	...	100.0	0.3	3.8	30.4	39.4	15.6	10.4

✓ Includes individuals whose age was not stated.

Hetzyl

Appendix Table 13.--RESULTS OF STOOL EXAMINATIONS BY SEX, SELECTED ISLANDS OR ATOLLS, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50

GRAND TOTAL

District, island or atoll, and sex	Number of stool examinations	Positive									Negative
		Total	Hook-worm	Tri-chu-ris	As-ca-ris	Hook-worm and Tri-chu-ris	As-ca-ris and Tri-chu-ris	Hook-worm and Asca-ris	Hook-worm, Asca-ris, and Tri-chu-ris	Other	
Number											
Total.....	10,331	5,418	1,542	1,350	1,075	461	315	204	180	291	4,913
Male.....	5,057	2,706	849	628	509	245	145	100	80	150	2,351
Female.....	5,274	2,712	693	722	566	216	170	104	100	141	2,562
Percentage											
Total.....	100.0	52.4	14.9	13.1	10.4	4.5	3.0	2.0	1.7	2.8	47.6
Male.....	100.0	53.5	16.8	12.4	10.1	4.8	2.9	2.0	1.6	3.0	46.5
Female.....	100.0	51.4	13.1	13.7	10.7	4.1	3.2	2.0	1.9	2.7	48.6

SAIPAN DISTRICT

District, island or atoll, and sex	Number of stool examinations	Positive										Negative
		Total	Hook-worm	Tri-chu-ris	As-ca-ris	Hook-worm and Tri-chu-ris	As-ca-ris and Tri-chu-ris	Hook-worm and Asca-ris	Hook-worm, Asca-ris, and Tri-chu-ris	Other		
Number												
Total.....	2,252	1,786	184	354	439	127	278	124	155	125	466	
Male.....	1,157	920	116	182	212	88	128	63	67	64	237	
Female.....	1,095	866	68	172	227	39	150	61	88	61	229	
Rota Island.....	272	131	6	47	37	5	5	2	1	28	141	
Male.....	130	53	-	18	18	-	2	-	-	15	77	
Female.....	142	78	6	29	19	5	3	2	1	13	64	
Saipan Island.....	1,812	1,507	131	282	390	99	264	107	141	93	305	
Male.....	910	761	80	144	185	70	121	56	59	46	149	
Female.....	902	746	51	138	205	29	143	51	82	47	156	
Tinian Island.....	168	148	47	25	12	23	9	15	13	4	20	
Male.....	117	106	36	20	9	18	5	7	8	3	11	
Female.....	51	42	11	5	3	5	4	8	5	1	9	
Percentage												
Total.....	100.0	79.3	8.2	15.7	19.5	5.6	12.3	5.5	6.9	5.6	20.7	
Male.....	100.0	79.5	10.0	15.7	18.3	7.6	11.1	5.4	5.8	5.5	20.5	
Female.....	100.0	79.1	6.2	15.7	20.7	3.6	13.7	5.6	8.0	5.6	20.9	
Rota Island.....	100.0	48.2	2.2	17.3	13.6	1.8	1.8	0.7	0.4	10.3	51.8	
Male.....	100.0	40.8	0	13.8	13.8	0	1.5	0	0	11.5	59.2	
Female.....	100.0	54.9	4.2	20.4	13.4	3.5	2.1	1.4	0.7	9.2	45.1	
Saipan Island.....	100.0	83.2	7.2	15.6	21.5	5.5	14.6	5.9	7.8	5.1	16.8	
Male.....	100.0	83.6	8.8	15.8	20.3	7.7	13.3	6.2	6.5	5.1	16.4	
Female.....	100.0	82.7	5.6	15.3	22.7	3.2	15.8	5.6	9.1	5.2	17.3	
Tinian Island.....	100.0	88.1	28.0	14.9	7.1	13.7	5.4	8.9	7.7	2.4	11.9	
Male.....	100.0	90.6	30.8	17.1	7.7	15.4	4.3	6.0	6.8	2.6	9.4	
Female.....	100.0	82.4	21.6	9.8	5.9	9.8	7.8	15.7	9.8	2.0	17.6	

Appendix Table 13.--RESULTS OF STOOL EXAMINATIONS BY SEX, SELECTED ISLANDS OR ATOLLS, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50--Continued

PALAU DISTRICT

District, island or atoll, and sex	Number of stool examinations	Positive									Negative
		Total	Hook-worm	Tri-chu-ris	As-ca-ris	Hook-worm and Tri-chu-ris	As-ca-ris and Tri-chu-ris	Hook-worm and As-ca-ris	Hook-worm, As-ca-ris, and Tri-chu-ris	Other	
		Number									
Total.....	4,584	2,958	1,176	665	632	284	36	76	24	65	1,626
Male.....	2,283	1,481	647	302	294	137	17	35	13	36	802
Female.....	2,301	1,477	529	363	338	147	19	41	11	29	824
Angaur Island.....	141	79	10	1	62	-	1	4	-	1	62
Male.....	74	36	5	-	28	-	1	2	-	-	38
Female.....	67	43	5	1	34	-	-	2	-	1	24
Babelthuap Island...	1,151	663	234	19	336	5	9	39	8	13	488
Male.....	566	326	134	10	154	2	4	14	4	4	240
Female.....	585	337	100	9	182	3	5	25	4	9	248
Eauripik Atoll.....	75	57	4	46	-	7	-	-	-	-	18
Male.....	39	26	4	19	-	3	-	-	-	-	13
Female.....	36	31	-	27	-	4	-	-	-	-	5
Elato Atoll.....	33	29	8	17	-	1	1	-	-	2	4
Male.....	18	15	6	6	-	1	1	-	-	1	3
Female.....	15	14	2	11	-	-	-	-	-	1	1
Fais Island.....	71	5	2	3	-	-	-	-	-	-	66
Male.....	26	3	1	2	-	-	-	-	-	-	23
Female.....	45	2	1	1	-	-	-	-	-	-	43
Faraulep Atoll.....	68	62	14	31	-	17	-	-	-	-	6
Male.....	32	31	9	12	-	10	-	-	-	-	1
Female.....	36	31	5	19	-	7	-	-	-	-	5
Ifalik Atoll.....	125	118	36	58	-	23	-	-	-	1	7
Male.....	66	61	23	28	-	9	-	-	-	1	5
Female.....	59	57	13	30	-	14	-	-	-	-	2
Kayangel Atoll.....	49	44	8	-	30	-	-	6	-	-	5
Male.....	25	22	3	-	14	-	-	5	-	-	3
Female.....	24	22	5	-	16	-	-	1	-	-	2
Koror Island.....	580	217	107	11	71	-	2	6	-	20	363
Male.....	276	121	59	8	40	-	-	3	-	11	155
Female.....	304	96	48	3	31	-	2	3	-	9	208
Lamotrek Atoll.....	119	116	16	62	-	38	-	-	-	-	3
Male.....	45	43	6	26	-	11	-	-	-	-	2
Female.....	74	73	10	36	-	27	-	-	-	-	1
Merir Island.....	7	3	2	1	-	-	-	-	-	-	4
Male.....	4	2	1	1	-	-	-	-	-	-	2
Female.....	3	1	1	-	-	-	-	-	-	-	2
Ngulu Atoll.....	-	-	-	-	-	-	-	-	-	-	-
Male.....	-	-	-	-	-	-	-	-	-	-	-
Female.....	-	-	-	-	-	-	-	-	-	-	-
Peleliu Island.....	256	142	37	3	85	-	4	11	-	2	114
Male.....	133	73	20	2	40	-	3	7	-	1	60
Female.....	123	69	17	1	45	-	1	4	-	1	54
Pulo Anna Island....	4	1	1	-	-	-	-	-	-	-	3
Male.....	3	1	1	-	-	-	-	-	-	-	2
Female.....	1	-	-	-	-	-	-	-	-	-	1

Appendix Table 13.--RESULTS OF STOOL EXAMINATIONS BY SEX, SELECTED ISLANDS OR ATOLLS, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50--Continued

PALAU DISTRICT--Continued

District, island or atoll, and sex	Number of stool examinations	Positive									Negative
		Total	Hook-worm	Tri-churis	As-ca-ris	Hook-worm and Tri-churis	As-ca-ris and Tri-churis	Hook-worm and Asca-ris	Hook-worm, Asca-ris, and Tri-churis	Other	
Number--Continued											
Satawal Island.....	139	129	37	29	12	34	6	2	9	-	10
Male.....	87	83	20	20	3	27	5	2	6	-	4
Female.....	52	46	17	9	9	7	1	-	3	-	6
Sonsorol Island.....	49	19	5	6	-	-	-	-	-	8	30
Male.....	27	10	1	2	-	-	-	-	-	7	17
Female.....	22	9	4	4	-	-	-	-	-	1	13
Tobi Island.....	58	6	4	-	-	-	-	-	-	2	52
Male.....	16	2	2	-	-	-	-	-	-	-	14
Female.....	42	4	2	-	-	-	-	-	-	2	38
Ulithi Atoll.....	154	93	54	39	-	-	-	-	-	-	61
Male.....	67	41	26	15	-	-	-	-	-	-	26
Female.....	87	52	28	24	-	-	-	-	-	-	35
Woleai Atoll.....	278	257	71	135	-	46	-	-	-	5	21
Male.....	138	124	39	63	-	17	-	-	-	5	14
Female.....	140	133	32	72	-	29	-	-	-	-	7
Yap Islands.....	1,227	918	526	204	36	113	13	8	7	11	309
Male.....	641	461	287	88	15	57	3	2	3	6	180
Female.....	586	457	239	116	21	56	10	6	4	5	129
Percentage											
Total.....	100.0	64.5	25.6	14.5	13.8	6.2	0.8	1.6	0.5	1.4	35.5
Male.....	100.0	64.9	28.3	13.2	12.9	6.0	0.7	1.5	0.6	1.6	35.1
Female.....	100.0	64.2	23.0	15.8	14.7	6.4	0.8	1.8	0.5	1.3	35.8
Angaur Island.....	100.0	56.0	7.1	0.7	44.0	0	0.7	2.8	0	0.7	44.0
Male.....	100.0	48.6	6.8	0	37.8	0	1.4	2.7	0	0	51.4
Female.....	100.0	64.2	7.5	1.5	50.7	0	0	3.0	0	1.5	35.8
Babelthuap Island...	100.0	57.6	20.3	1.6	29.2	0.4	0.8	3.4	0.7	1.1	42.4
Male.....	100.0	57.6	23.7	1.8	27.2	0.4	0.7	2.5	0.7	0.7	42.4
Female.....	100.0	57.6	17.1	1.5	31.1	0.5	0.8	4.3	0.7	1.5	42.4
Eauripik Atoll.....	100.0	76.0	5.3	61.3	0	9.3	0	0	0	0	24.0
Male.....	100.0	66.7	10.2	48.7	0	7.7	0	0	0	0	33.3
Female.....	100.0	86.1	0	75.0	0	11.1	0	0	0	0	13.9
Elato Atoll.....	100.0	87.9	24.2	51.5	0	3.0	3.0	0	0	6.1	12.1
Male.....	100.0	83.3	33.3	33.3	0	5.6	5.6	0	0	5.6	16.7
Female.....	100.0	93.3	13.3	73.3	0	0	0	0	0	6.7	6.7
Fais Island.....	100.0	7.0	2.8	4.2	0	0	0	0	0	0	93.0
Male.....	100.0	11.5	3.8	7.7	0	0	0	0	0	0	88.5
Female.....	100.0	4.4	2.2	2.2	0	0	0	0	0	0	95.6
Faraulep Atoll.....	100.0	91.2	20.6	45.6	0	25.0	0	0	0	0	8.8
Male.....	100.0	96.9	28.1	37.5	0	31.2	0	0	0	0	3.1
Female.....	100.0	86.1	13.9	52.8	0	19.4	0	0	0	0	13.9

Appendix Table 13.--RESULTS OF STOOL EXAMINATIONS BY SEX, SELECTED ISLANDS OR ATOLLS, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50--Continued

MARSHALL ISLANDS DISTRICT

District, island or atoll, and sex	Number of stool examinations	Positive									Negative
		Total	Hook-worm	Tri-chu-ris	As-ca-ris	Hook-worm and Tri-chu-ris	As-ca-ris and Tri-chu-ris	Hook-worm and Asca-ris	Hook-worm, Asca-ris, and Tri-chu-ris	Other	
Number											
Total.....	3,495	674	182	331	4	50	1	4	1	101	2,821
Male.....	1,617	305	86	144	3	20	-	2	-	50	1,312
Female.....	1,878	369	96	187	1	30	1	2	1	51	1,509
Ailuk Atoll.....	108	8	-	8	-	-	-	-	-	-	100
Male.....	43	2	-	2	-	-	-	-	-	-	41
Female.....	65	6	-	6	-	-	-	-	-	-	59
Arno Island.....	127	16	8	5	-	1	-	-	-	2	111
Male.....	66	11	4	5	-	1	-	-	-	1	55
Female.....	61	5	4	-	-	-	-	-	-	1	56
Aur Island.....	118	2	-	2	-	-	-	-	-	-	116
Male.....	46	-	-	-	-	-	-	-	-	-	46
Female.....	72	2	-	2	-	-	-	-	-	-	70
Ebon Atoll.....	406	231	41	140	-	24	-	-	-	26	175
Male.....	203	113	26	62	-	11	-	-	-	14	90
Female.....	203	118	15	78	-	13	-	-	-	12	85
Ine Island.....	127	29	1	10	-	-	-	-	-	18	98
Male.....	71	17	-	5	-	-	-	-	-	12	54
Female.....	56	12	1	5	-	-	-	-	-	6	44
Kwajalein Atoll.....	737	35	1	16	-	-	-	-	-	18	702
Male.....	371	14	1	5	-	-	-	-	-	8	357
Female.....	366	21	-	11	-	-	-	-	-	10	345
Lib Island.....	70	-	-	-	-	-	-	-	-	-	70
Male.....	36	-	-	-	-	-	-	-	-	-	36
Female.....	34	-	-	-	-	-	-	-	-	-	34
Likiep Atoll.....	215	7	-	7	-	-	-	-	-	-	208
Male.....	86	3	-	3	-	-	-	-	-	-	83
Female.....	129	4	-	4	-	-	-	-	-	-	125
Majuro Atoll.....	452	96	31	44	1	1	-	-	-	19	356
Male.....	221	42	13	19	-	1	-	-	-	9	179
Female.....	231	54	18	25	1	-	-	-	-	10	177
Malcelap Atoll.....	274	14	-	9	-	-	-	-	-	5	260
Male.....	114	6	-	3	-	-	-	-	-	3	108
Female.....	160	8	-	6	-	-	-	-	-	2	152
Mejit Island.....	178	3	1	2	-	-	-	-	-	-	175
Male.....	73	-	-	-	-	-	-	-	-	-	73
Female.....	105	3	1	2	-	-	-	-	-	-	102
Mili Atoll.....	105	60	-	50	-	1	-	-	-	9	45
Male.....	51	27	-	24	-	-	-	-	-	3	24
Female.....	54	33	-	26	-	1	-	-	-	6	21
Namorik Island.....	201	155	98	28	-	23	-	4	1	1	46
Male.....	80	63	42	12	-	7	-	2	-	-	17
Female.....	121	92	56	16	-	16	-	2	1	1	29
Tabal Island.....	129	5	-	2	-	-	-	-	-	3	124
Male.....	66	2	-	2	-	-	-	-	-	-	64
Female.....	63	3	-	-	-	-	-	-	-	3	60

Appendix Table 13.--RESULTS OF STOOL EXAMINATIONS BY SEX, SELECTED ISLANDS OR ATOLLS, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50--Continued

MARSHALL ISLANDS DISTRICT--Continued

District, island or atoll, and sex	Number of stool examinations	Positive									Negative
		Total	Hook-worm	Trichuris	Ascaris	Hook-worm and Trichuris	Ascaris and Trichuris	Hook-worm and Ascaris	Hook-worm, Ascaris, and Trichuris	Other	
Number--Continued											
Utirik Atoll.....	92	3	1	2	-	-	-	-	-	-	89
Male.....	31	-	-	-	-	-	-	-	-	-	31
Female.....	61	3	1	2	-	-	-	-	-	-	58
Wotje Atoll.....	156	10	-	6	3	-	1	-	-	-	146
Male.....	59	5	-	2	3	-	-	-	-	-	54
Female.....	97	5	-	4	-	-	1	-	-	-	92
Percentage											
Total.....	100.0	19.3	5.2	9.5	0.1	1.4	0.0	0.1	0.0	2.9	80.7
Male.....	100.0	18.9	5.3	8.9	0.2	1.2	0	0.1	0	3.1	81.1
Female.....	100.0	19.6	5.1	10.0	0.1	1.6	0.1	0.1	0.1	2.7	80.4
Ailuk Atoll.....	100.0	7.4	0	7.4	0	0	0	0	0	0	92.6
Male.....	100.0	4.6	0	4.6	0	0	0	0	0	0	95.3
Female.....	100.0	9.2	0	9.2	0	0	0	0	0	0	90.8
Arno Island.....	100.0	12.6	6.3	3.9	0	0.8	0	0	0	1.6	87.4
Male.....	100.0	16.7	6.1	7.6	0	1.5	0	0	0	1.5	83.3
Female.....	100.0	8.2	6.6	0	0	0	0	0	0	1.6	91.8
Aur Island.....	100.0	1.7	0	1.7	0	0	0	0	0	0	98.3
Male.....	100.0	0	0	0	0	0	0	0	0	0	100.0
Female.....	100.0	2.8	0	2.8	0	0	0	0	0	0	97.2
Ebon Atoll.....	100.0	56.9	10.1	34.5	0	5.9	0	0	0	6.4	43.1
Male.....	100.0	55.7	12.8	30.5	0	5.4	0	0	0	6.9	44.3
Female.....	100.0	58.1	7.4	38.4	0	6.4	0	0	0	5.9	41.9
Ine Island.....	100.0	22.8	0.8	7.9	0	0	0	0	0	14.2	77.2
Male.....	100.0	23.9	0	7.0	0	0	0	0	0	16.9	76.1
Female.....	100.0	21.4	1.8	8.9	0	0	0	0	0	10.7	78.6
Kwajalein Atoll.....	100.0	4.7	0.1	2.2	0	0	0	0	0	2.4	95.2
Male.....	100.0	3.8	0.3	1.3	0	0	0	0	0	2.2	96.2
Female.....	100.0	5.7	0	3.0	0	0	0	0	0	2.7	94.3
Lib Island.....	100.0	0	0	0	0	0	0	0	0	0	100.0
Male.....	100.0	0	0	0	0	0	0	0	0	0	100.0
Female.....	100.0	0	0	0	0	0	0	0	0	0	100.0
Likiep Atoll.....	100.0	3.2	0	3.2	0	0	0	0	0	0	96.7
Male.....	100.0	3.5	0	3.5	0	0	0	0	0	0	96.5
Female.....	100.0	3.1	0	3.1	0	0	0	0	0	0	96.9
Majuro Atoll.....	100.0	21.2	6.8	9.7	0.2	0.2	0	0	0	4.2	78.8
Male.....	100.0	19.0	5.9	8.6	0	0.4	0	0	0	4.1	81.0
Female.....	100.0	23.4	7.8	10.8	0.4	0	0	0	0	4.3	76.6
Malcelap Atoll.....	100.0	5.1	0	3.3	0	0	0	0	0	1.8	94.9
Male.....	100.0	5.3	0	2.6	0	0	0	0	0	2.6	94.7
Female.....	100.0	5.0	0	3.8	0	0	0	0	0	1.2	95.0

Appendix Table 13.--RESULTS OF STOOL EXAMINATIONS BY SEX, SELECTED ISLANDS OR ATOLIS, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50--Continued

MARSHALL ISLANDS DISTRICT--Continued

District, island or atoll, and sex	Number of stool examinations	Positive								Negative	
		Total	Hook-worm	Tri-chu-ris	As-ca-ris	Hook-worm and Tri-chu-ris	As-ca-ris and Tri-chu-ris	Hook-worm and Asca-ris	Hook-worm, Asca-ris, and Tri-chu-ris		Other
Percentage--Continued											
Mejit Island.....	100.0	1.7	0.6	1.1	0	0	0	0	0	0	98.3
Male.....	100.0	0	0	0	0	0	0	0	0	0	100.0
Female.....	100.0	2.8	1.0	2.0	0	0	0	0	0	0	97.1
Mili Atoll.....	100.0	57.1	0	47.6	0	1.0	0	0	0	8.6	42.8
Male.....	100.0	52.9	0	47.1	0	0	0	0	0	5.9	47.1
Female.....	100.0	61.1	0	48.1	0	1.8	0	0	0	11.1	38.9
Namorik Island.....	100.0	77.1	48.8	13.9	0	11.4	0	2.0	0.5	0.5	22.9
Male.....	100.0	78.8	52.5	15.0	0	8.8	0	2.5	0	0	21.2
Female.....	100.0	76.0	46.3	13.2	0	13.2	0	1.6	0.8	0.8	24.0
Tabal Island.....	100.0	3.9	0	1.5	0	0	0	0	0	2.3	96.1
Male.....	100.0	3.0	0	3.0	0	0	0	0	0	0	97.0
Female.....	100.0	4.8	0	0	0	0	0	0	0	4.8	95.2
Utirik Atoll.....	100.0	2.3	1.1	2.2	0	0	0	0	0	0	96.7
Male.....	100.0	0	0	0	0	0	0	0	0	0	100.0
Female.....	100.0	4.9	1.6	3.3	0	0	0	0	0	0	95.1
Wotje Atoll.....	100.0	6.4	0	3.8	1.9	0	0.6	0	0	0	93.6
Male.....	100.0	8.5	0	3.4	5.1	0	0	0	0	0	91.5
Female.....	100.0	5.2	0	4.1	0	0	1.0	0	0	0	94.8

Appendix Table 14

A

70 Netzel
11/5/52

22
14
24

RESULTS OF STOOL EXAMINATIONS BY SELECTED ISLAND OR ATOLL, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50

District and island or atoll	Stool examinations		Number of individuals with stools positive for				Negative
	Total	Positive ✓	Hookworm	Trichuris	Ascaris	Other parasites	
Total.....	10,331	5,418	2,387	2,306	1,774	291	4,913
Saipan.....	2,252	1,786	590	914	996	125	466
Rota Island.....	272	131	14	58	45	28	141
Saipan Island.....	1,812	1,507	478	786	902	93	305
Tinian Island.....	168	148	98	70	49	4	20
Palau.....	4,584	2,958	1,560	1,009	768	65	1,626
Angaur Island.....	141	79	14	2	67	1	62
Babelthuap Island.....	1,151	663	286	41	392	13	488
Eauripik Atoll.....	75	57	11	53	-	-	18
Elato Atoll.....	33	29	9	19	1	2	4
Fais Island.....	71	5	2	3	-	-	66
Faraulep Atoll.....	68	62	31	48	-	-	6
Ifalik Atoll.....	125	118	59	81	-	1	7
Kayangel Atoll.....	49	44	14	-	36	-	5
Koror Island.....	580	217	113	13	79	20	363
Lamotrek Atoll.....	119	116	54	100	-	-	3
Merir Island.....	7	3	2	1	-	-	4
Ngulu Atoll.....	-	-	-	-	-	-	-
Peleliu Island.....	256	142	48	7	100	2	114
Pulo Anna Island.....	4	1	1	-	-	-	3
Satawal Island.....	139	129	82	78	29	-	10
Sonsorol Island.....	49	19	5	6	-	8	30
Tobi Island.....	58	6	4	-	-	2	52
Ulithi Atoll.....	154	93	54	39	-	-	61
Woleai Atoll.....	278	257	117	181	-	5	21
Yap Islands.....	1,227	918	654	337	64	11	309
Marshall Islands.....	3,495	674	237	383	10	101	2,821
Ailuk Atoll.....	108	8	-	8	-	-	100
Arno Island.....	127	16	9	6	-	2	111
Aur Island.....	118	2	-	2	-	-	116
Ebon Atoll.....	406	231	65	164	-	26	175
Ine Island.....	127	29	1	10	-	18	98
Kwajalein Atoll.....	737	35	1	16	-	18	702
Lib Island.....	70	-	-	-	-	-	70
Likiep Atoll.....	215	7	-	7	-	-	208
Majuro Atoll.....	452	96	32	45	1	19	356
Malcoelap Atoll.....	274	14	-	9	-	5	260
Mejit Island.....	178	3	1	2	-	-	175
Mili Atoll.....	105	60	1	51	-	9	45
Namorik Island.....	201	155	126	52	5	1	46
Tabal Island.....	129	5	-	2	-	3	124
Utirik Atoll.....	92	3	1	2	-	-	89
Wotje Atoll.....	156	10	-	7	4	-	146

✓ The number of stools positive for one or more parasites is less than the total number of specific parasitic infestations since more than one species of parasite was present in some stools.

Appendix Table 14, 15

~~14~~

To be checked 11/15/51

15

RESULTS OF STOOL EXAMINATIONS BY AGE, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50

District and age group (years)	Stool examinations		Number of individuals with stools positive for--				Negative
	Total	Positive ✓	Hookworm	Trichuris	Ascaris	Other parasites	
TOTAL							
All ages ✓	10,331	5,418	2,387	2,306	1,774	291	4,913
Under 5	1,353	645	153	247	326	61	708
5-14	2,309	1,392	497	674	630	61	917
15-24	1,776	867	381	350	268	52	909
25-44	2,895	1,488	748	648	357	68	1,407
45 and over	1,988	1,023	604	384	192	49	965
SAIPAN							
All ages ✓	2,252	1,786	590	914	996	125	466
Under 5	390	291	69	127	186	27	99
5-14	608	539	196	327	335	30	69
15-24	369	282	91	131	149	17	87
25-44	570	440	153	209	210	36	130
45 and over	313	233	80	119	115	15	80
PALAU							
All ages ✓	4,584	2,958	1,560	1,009	768	65	1,626
Under 5	498	257	67	70	140	1	241
5-14	998	687	270	220	292	16	311
15-24	729	476	255	156	117	15	253
25-44	1,382	897	525	364	145	16	485
45 and over	974	640	442	198	74	17	334
MARSHALL ISLANDS							
All ages ✓	3,495	674	237	383	10	101	2,821
Under 5	465	97	17	50	-	33	368
5-14	703	166	31	127	3	15	537
15-24	678	109	35	63	2	20	569
25-44	943	151	70	75	2	16	792
45 and over	701	150	82	67	3	17	551

High
dash
Par
dash

✓ The number of stools positive for one or more parasites is less than the total number of specific parasitic infestations since more than one species of parasite was present in some stools.
 ✓ Includes individuals whose age was not stated.

Netzel

Appendix Table 16.--RESULTS OF STOOL EXAMINATIONS BY AGE GROUP AND SEX, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50

SAIPAN DISTRICT

Age group (years) and sex	Natives examined	Number of stool examinations	Positive									Negative
			Total	Hook-worm	Tricho-uris	Asca-ris	Hook-worm and Tri-cho-uris	Asca-ris and Tri-cho-uris	Hook-worm and Asca-ris	Hook-worm, Asca-ris, and Tri-cho-uris	Other parasites	
Number												
All ages ✓	4,999	2,252	1,786	184	354	439	127	278	124	155	125	466
Male ✓...	2,497	1,157	920	116	182	212	88	128	63	67	64	237
Female ✓	2,502	1,095	866	68	172	227	39	150	61	88	61	229
Under 5:												
Male.....	488	195	145	8	25	51	9	22	10	8	12	50
Female.....	527	195	146	9	23	47	4	27	12	9	15	49
5-14:												
Male.....	673	328	291	22	58	49	26	58	26	31	21	37
Female.....	602	280	248	17	35	47	16	66	21	37	9	32
15-24:												
Male.....	404	184	146	18	31	37	14	17	10	11	8	38
Female.....	421	185	136	14	34	43	5	12	12	7	9	49
25-44:												
Male.....	607	273	205	42	43	43	26	17	11	8	15	68
Female.....	615	297	235	20	55	67	8	26	12	26	21	62
45 and over:												
Male.....	324	177	133	26	25	32	13	14	6	9	8	44
Female.....	335	136	100	8	25	23	6	19	4	8	7	36
Percentage												
All ages ✓	...	100.0	79.3	8.2	15.7	19.5	5.6	12.3	5.5	6.9	5.6	20.7
Male ✓...	...	100.0	79.5	10.0	15.7	18.3	7.6	11.1	5.4	5.8	5.5	20.5
Female ✓	...	100.0	79.1	6.2	15.7	20.7	3.6	13.7	5.6	8.0	5.6	20.9
Under 5:												
Male.....	...	100.0	74.4	4.1	12.8	26.2	4.6	11.3	5.1	4.1	6.2	25.6
Female.....	...	100.0	74.9	4.6	11.8	24.1	2.1	13.8	6.2	4.6	7.7	25.1
5-14:												
Male.....	...	100.0	88.7	6.7	17.7	14.9	7.9	17.7	7.9	9.4	6.4	11.3
Female.....	...	100.0	88.6	6.1	12.5	16.8	5.7	23.6	7.5	13.2	3.2	11.4
15-24:												
Male.....	...	100.0	79.3	9.8	16.8	20.1	7.6	9.2	5.4	6.0	4.3	20.6
Female.....	...	100.0	73.5	7.6	18.4	23.2	2.7	6.5	6.5	3.8	4.9	26.5
25-44:												
Male.....	...	100.0	75.1	15.4	15.8	15.8	9.5	6.2	4.0	2.9	5.5	24.9
Female.....	...	100.0	79.1	6.7	18.5	22.6	2.7	8.8	4.0	8.8	7.1	20.9
45 and over:												
Male.....	...	100.0	75.1	14.7	14.1	18.1	7.3	7.9	3.4	5.1	4.5	24.8
Female.....	...	100.0	73.5	5.9	18.4	16.9	4.4	14.0	2.9	5.9	5.1	26.5

See footnote at end of table.

Appendix Table 16.--RESULTS OF STOOL EXAMINATIONS BY AGE GROUP AND SEX, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50--Continued

PALAU DISTRICT

Age group (years) and sex	Na-tives ex-amined	Num-ber of stool exam-inations	Positive									Negati-ve
			Total	Hook-worm	Tri-chu-ris	As-ca-ris	Hook-worm and Tri-chu-ris	As-ca-ris and Tri-chu-ris	Hook-worm and Asca-ris	Hook-worm, Asca-ris, and Tri-chu-ris	Other para-sites	
Number												
All ages ✓	10,575	4,584	2,958	1,176	665	632	284	36	76	24	65	1,626
Male ✓...	5,299	2,283	1,481	647	302	294	137	17	35	13	36	802
Female ✓	5,276	2,301	1,477	529	363	338	147	19	41	11	29	824
Under 5:												
Male.....	756	290	152	30	32	76	4	3	3	3	1	138
Female.....	664	208	105	23	24	53	3	1	1	-	-	103
5-14:												
Male.....	1,067	510	344	103	70	112	21	9	12	7	10	166
Female.....	1,046	488	343	87	77	123	21	10	14	5	6	145
15-24:												
Male.....	800	351	230	105	47	40	22	2	5	1	8	121
Female.....	860	378	246	90	58	56	22	3	9	1	7	132
25-44:												
Male.....	1,492	628	410	201	95	38	53	3	8	2	10	218
Female.....	1,556	754	487	182	143	73	62	4	15	2	6	267
45 and over:												
Male.....	1,181	503	345	208	58	28	37	-	7	-	7	158
Female.....	1,146	471	295	147	61	33	38	1	2	3	10	176
Percentage												
All ages ✓	...	100.0	64.5	25.6	14.5	13.8	6.2	0.8	1.6	0.5	1.4	35.5
Male ✓...	...	100.0	64.9	28.3	13.2	12.9	6.0	0.7	1.5	0.6	1.6	35.1
Female ✓	...	100.0	64.2	23.0	15.8	14.7	6.4	0.8	1.8	0.5	1.3	35.8
Under 5:												
Male.....	...	100.0	52.4	10.3	11.0	26.2	1.4	1.0	1.0	1.0	0.3	47.6
Female.....	...	100.0	50.5	11.1	11.5	25.5	1.4	0.5	0.5	0	0	49.5
5-14:												
Male.....	...	100.0	67.5	20.2	13.7	22.0	4.1	1.8	2.4	1.4	2.0	32.5
Female.....	...	100.0	70.3	17.8	15.8	25.2	4.3	2.0	2.9	1.0	1.2	29.7
15-24:												
Male.....	...	100.0	65.5	29.9	13.4	11.4	6.3	0.6	1.4	0.3	2.3	34.5
Female.....	...	100.0	65.1	23.8	15.3	14.8	5.8	0.8	2.4	0.3	1.8	34.9
25-44:												
Male.....	...	100.0	65.3	32.0	15.1	6.1	8.4	0.5	1.3	0.3	1.6	34.7
Female.....	...	100.0	64.6	24.1	19.0	9.7	8.2	0.5	2.0	0.3	0.8	35.4
45 and over:												
Male.....	...	100.0	68.6	41.4	11.5	5.6	7.4	0	1.4	0	1.4	31.4
Female.....	...	100.0	62.6	31.2	13.0	7.0	8.1	0.2	0.4	0.6	2.1	37.4

See footnote

See footnote at end of table.

Appendix Table 16.--RESULTS OF STOOL EXAMINATIONS BY AGE GROUP AND SEX, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50--Continued

MARSHALL ISLANDS DISTRICT

Age group (years) and sex	Na-tives ex-am-ined	Num-ber of stool ex-am-ina-tions	Positive									Nega-tive
			Total	Hook-worm	Tri-chu-ris	As-ca-ris	Hook-worm and Tri-chu-ris	As-ca-ris and Tri-chu-ris	Hook-worm and Asca-ris	Hook-worm, Asca-ris, and Tri-chu-ris	Other para-sites	
Number												
All ages ✓	6,572	3,495	674	182	331	4	50	1	4	1	101	2,821
Male ✓	3,342	1,617	305	86	144	3	20	-	2	-	50	1,312
Female ✓	3,230	1,878	369	96	187	1	30	1	2	1	51	1,509
Under 5:												
Male.....	530	231	45	6	23	-	1	-	-	-	15	186
Female.....	503	234	52	8	24	-	2	-	-	-	18	182
5-14:												
Male.....	606	340	83	14	55	2	4	-	-	-	8	257
Female.....	580	363	83	8	62	-	5	1	-	-	7	280
15-24:												
Male.....	642	298	44	10	22	1	-	-	-	-	11	254
Female.....	599	380	65	14	30	1	11	-	-	-	9	315
25-44:												
Male.....	848	419	67	29	23	-	7	-	1	-	7	352
Female.....	851	524	84	29	40	-	5	-	1	-	9	440
45 and over:												
Male.....	714	328	65	27	20	-	8	-	1	-	9	263
Female.....	686	373	85	37	31	-	7	-	1	1	8	288
Percentage												
All ages ✓	...	100.0	19.3	5.2	9.5	0.1	1.4	0.0	0.1	0.0	2.9	80.7
Male ✓	...	100.0	18.9	5.3	8.9	0.2	1.2	0	0.1	0	3.1	81.1
Female ✓	...	100.0	19.6	5.1	10.0	0.1	1.6	0.1	0.1	0.1	2.7	80.4
Under 5:												
Male.....	...	100.0	19.5	2.6	10.0	0	0.4	0	0	0	6.5	80.5
Female.....	...	100.0	22.2	3.4	10.2	0	0.8	0	0	0	7.7	77.8
5-14:												
Male.....	...	100.0	24.4	4.1	16.2	0.6	1.2	0	0	0	2.4	75.6
Female.....	...	100.0	22.9	2.2	17.1	0	1.4	0.3	0	0	1.9	77.1
15-24:												
Male.....	...	100.0	14.8	3.4	7.4	0.3	0	0	0	0	3.7	85.2
Female.....	...	100.0	17.1	3.7	7.9	0.3	2.9	0	0	0	2.4	82.9
25-44:												
Male.....	...	100.0	16.0	6.9	5.5	0	1.7	0	0.2	0	1.7	84.0
Female.....	...	100.0	16.0	5.5	7.6	0	1.0	0	0.2	0	1.7	84.0
45 and over:												
Male.....	...	100.0	19.8	8.2	6.1	0	2.4	0	0.3	0	2.7	80.2
Female.....	...	100.0	22.8	9.9	8.3	0	1.9	0	0.3	0.3	2.1	77.2

✓ Includes individuals whose age was not stated.

Appendix Table 16-17

POSITIVE RESULTS OF KAHN TESTS BY AGE GROUP AND SEX, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50

~~78~~
~~16~~
17

District, age group (years), and sex	Number Number examined	Number of Kahn tests	Positive reactions	Percent positive
TOTAL				
All ages ✓	22,146	16,320	8,181	50.1
Male ✓	11,138	8,419	4,163	49.4
Female ✓	11,008	7,901	4,018	50.8
Under 5:				
Male	1,774	167	57	34.1
Female	1,694	131	55	42.0
5-14:				
Male	2,346	1,796	753	41.9
Female	2,228	1,618	710	43.9
15-24:				
Male	1,846	1,732	834	48.2
Female	1,880	1,688	860	50.9
25-44:				
Male	2,947	2,733	1,447	52.9
Female	3,022	2,671	1,463	54.8
45 and over:				
Male	2,219	1,985	1,071	54.0
Female	2,167	1,780	921	51.7
SAIPAN				
All ages ✓	4,999	3,215	979	30.4
Male ✓	2,497	1,683	531	31.6
Female ✓	2,502	1,532	448	29.2
Under 5:				
Male	488	21	6	28.6
Female	527	18	10	55.6
5-14:				
Male	673	450	85	18.9
Female	602	392	69	17.6
15-24:				
Male	404	374	134	35.8
Female	421	370	117	31.6
25-44:				
Male	607	547	207	37.8
Female	615	497	176	35.4
45 and over:				
Male	324	290	99	34.1
Female	335	253	75	29.6
PALAU				
All ages ✓	10,575	8,092	5,293	65.4
Male ✓	5,299	4,133	2,683	64.9
Female ✓	5,276	3,959	2,610	65.9
Under 5:				
Male	756	65	39	60.0
Female	664	46	29	63.0
5-14:				
Male	1,067	864	564	65.3
Female	1,046	778	504	64.8
15-24:				
Male	800	756	490	64.8
Female	860	770	523	67.9
25-44:				
Male	1,492	1,396	916	65.6
Female	1,556	1,401	939	67.0
45 and over:				
Male	1,181	1,049	673	64.2
Female	1,146	961	612	63.7

See footnote at end of table.

appendix 17
 166

POSITIVE RESULTS OF KAHN TESTS BY AGE GROUP AND SEX, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50--Continued

18
 19

District, age group (years), and sex	Natives Number examined	Number of Kahn tests	Positive reactions	Percent positive
MARSHALL ISLANDS				
All ages ✓	6,572	76.3 5,013	1,909	38.1
Male ✓	3,342	2,603	949	36.4
Female ✓	3,230	2,410	960	39.8
Under 5:				
Male	530	81	12	14.8
Female ✓	503	1033 14.3 67 148	16	23.9 18.9
5-14:				
Male	606	1166 482	104	21.6 +
Female ✓	580	930 448	137	30.6 + 25.9
15-24:				
Male ✓	642	1241 602	210	34.9 +
Female ✓	599	1151 549	221	40.3 + 37.4
25-44:				
Male	848	1699 790	324	41.0 +
Female ✓	851	1563 773	348	45.0 + 43.0
45 and over:				
Male ✓	714	1400 646	299	46.3 +
Female ✓	686	1212 566	234	41.3 - 44.0

✓ Includes individuals whose age was not stated.

To Hazel
 8-17-51

Appendix Table 17. 18.

August 17, 1951
AH:mr

POSITIVE RESULTS OF KAHN TESTS BY SEX, SELECTED ISLANDS OR ATOLLS, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50

District, island or atoll, and sex	Natives Number examined	Number of Kahn tests	Positive reactions	Percent positive
Total.....	22,146	16,320	8,181	50.1
Male.....	11,138	8,419	4,163	49.4
Female.....	11,008	7,901	4,018	50.8
Saipan.....	4,999	3,215	979	30.4
Male.....	2,497	1,683	531	31.6
Female.....	2,502	1,532	448	29.2
Rota Island.....	559	333	227	68.2
Male.....	275	181	106	58.6
Female.....	284	152	121	79.6
Saipan Island.....	4,043	2,632	601	22.8
Male.....	1,995	1,345	321	23.9
Female.....	2,048	1,287	280	21.8
Tinian Island.....	397	250	151	60.4
Male.....	227	157	104	66.2
Female.....	170	93	47	50.5
Palau.....	10,575	8,092	5,293	65.4
Male.....	5,299	4,133	2,683	64.9
Female.....	5,276	3,959	2,610	65.9
Angaur Island.....	327	233	148	63.5
Male.....	173	129	86	66.7
Female.....	154	104	62	59.6
Babelthuap Island.....	3,380	2,401	1,711	71.3
Male.....	1,631	1,165	806	69.2
Female.....	1,749	1,236	905	73.2
Eauripik Atoll.....	137	96	36	37.5
Male.....	65	48	14	29.2
Female.....	72	48	22	45.8
Elato Atoll.....	35	27	27	100.0
Male.....	19	14	14	100.0
Female.....	16	13	13	100.0
Fais Island.....	233	189	96	50.8
Male.....	123	106	56	52.8
Female.....	110	83	40	48.2
Faraulep Atoll.....	100	66	51	77.3
Male.....	41	30	26	86.7
Female.....	59	36	25	69.4
Ifalik Atoll.....	232	182	128	70.3
Male.....	104	85	54	63.5
Female.....	128	97	74	76.3
Kayangel Atoll.....	129	88	84	95.4
Male.....	69	47	45	95.7
Female.....	60	41	39	95.1
Koror Island.....	1,364	1,111	750	67.5
Male.....	693	569	372	65.4
Female.....	671	542	378	69.7
Lamotrek Atoll.....	140	127	107	84.2
Male.....	59	51	41	80.4
Female.....	81	76	66	86.8
Merir Island.....	11	8	2	25.0
Male.....	5	3	1	33.3
Female.....	6	5	1	20.0
Ngulu Atoll.....	53	44	20	45.4
Male.....	30	22	12	54.5
Female.....	23	22	8	36.4
Peleliu Island.....	718	552	480	87.0
Male.....	369	282	240	85.1
Female.....	349	270	240	88.9
Pulo Anna Island.....	13	11	5	45.4
Male.....	9	7	4	57.1
Female.....	4	4	1	25.0

19
To Hetsel
8-21-51
Roch
17
18

Singledash

x

x

x

x

x

Appendix *File 18.*

POSITIVE RESULTS OF KAHN TESTS BY SEX, SELECTED ISLANDS OR ATOLLS, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50--Continued

19
18

District, island or atoll, and sex	<i>Notices</i> Number examined	Number of Kahn tests	Positive reactions	Percent positive	
Palau--Continued					
Satawal Island.....	200	156	145	92.9	x
Male.....	102	88	80	90.9	
Female.....	98	68	65	95.6	
Sonsorol Island.....	111	90	39	43.3	
Male.....	50	41	17	41.5	
Female.....	61	49	22	44.9	
Tobi Island.....	128	114	58	50.9	
Male.....	65	62	32	51.6	
Female.....	63	52	26	50.0	
Ulithi Atoll.....	417	307	172	56.0	
Male.....	204	159	88	55.3	
Female.....	213	148	84	56.8	
Woleai Atoll.....	347	276	246	89.1	x
Male.....	170	139	122	87.8	
Female.....	177	137	124	90.5	
Yap Islands.....	2,500	2,014	988	49.1	
Male.....	1,318	1,086	573	52.8	
Female.....	1,182	928	415	44.7	
Marshall Islands.....					
Male.....	6,572	5,013	1,909	38.1	
Female.....	3,342	2,603	949	36.4	
Ailuk Atoll.....	3,230	2,410	960	39.8	
Male.....	353	260	89	34.2	
Female.....	169	127	35	27.6	
Female.....	184	133	54	40.6	
Arno Island.....	191	146	107	73.3	✓
Male.....	99	83	66	79.5	
Female.....	92	63	41	65.1	
Aur Island.....	181	129	34	26.4	
Male.....	89	66	13	19.7	
Female.....	92	63	21	33.3	
Ebon Atoll.....	759	478	203	42.5	
Male.....	371	234	106	45.3	
Female.....	388	244	97	39.8	
Ine Island.....	206	143	100	69.9	
Male.....	101	80	53	66.2	
Female.....	105	63	47	74.6	
Kwajalein Atoll.....	1,061	842	257	30.5	
Male.....	629	513	125	24.4	
Female.....	432	329	132	40.1	
Lib Island.....	82	69	39	56.5	
Male.....	44	35	19	54.3	
Female.....	38	34	20	58.8	
Likiep Atoll.....	532	427	113	26.5	
Male.....	259	203	64	31.5	
Female.....	273	224	49	21.9	
Majuro Atoll.....	1,186	893	380	42.6	
Male.....	612	483	205	42.4	
Female.....	574	410	175	42.7	
Maloelap Atoll.....	446	368	121	32.9	
Male.....	209	174	55	31.6	
Female.....	237	194	66	34.0	
Mejit Island.....	362	285	112	39.3	
Male.....	170	128	37	28.9	
Female.....	192	157	75	47.8	
Mili Atoll.....	177	126	65	51.6	
Male.....	82	62	34	54.8	
Female.....	95	64	31	48.4	
Namorik Island.....	418	351	172	49.0	
Male.....	207	172	91	52.9	
Female.....	211	179	81	45.2	

Appendix Table 18. —

POSITIVE RESULTS OF KAHN TESTS BY SEX, SELECTED ISLANDS OR ATOLLS, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50--Continued

19
18

District, island or atoll, and sex	^{Native} Number examined	Number of Kahn tests	Positive reactions	Percent positive
Marshall Islands--Con.				
Tabal Island.....	173	137	5	3.6 ✓
Male.....	93	76	3	3.9
Female.....	80	61	2	3.3
Utirik Atoll.....	143	118	40	33.9
Male.....	65	51	17	33.3
Female.....	78	67	23	34.3
Wotje Atoll.....	302	241	72	29.9
Male.....	143	116	26	22.4
Female.....	159	125	46	36.8

TO
Hetzl
11-

1879

Appendix Table 13. --RESULTS OF CHEST X-RAY EXAMINATIONS BY AGE AND SEX, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50

District, age group (years), and sex	All X-ray examinations	Chest defects									Negative
		Total	Tuberculosis, pulmonary				Chest tumor	Cardio-vascular abnormality	Bone deformity	Other ✓	
			Total	Moderately and far-advanced, active	Other active ✓	Arrested					
TOTAL											
All ages ✓	18,094	817	267	94	147	26	31	48	32	439	17,277
Male ✓	9,294	430	134	58	69	7	22	30	12	232	8,864
Female ✓	8,800	387	133	36	78	19	9	18	20	207	8,413
Under 5.....	1,099	24	5	1	4	-	-	3	-	16	1,075
Male.....	599	12	3	1	2	-	-	-	-	9	587
Female.....	500	12	2	-	2	-	-	3	-	7	488
5-14.....	4,341	111	19	3	12	4	2	2	1	87	4,230
Male.....	2,252	63	10	2	7	1	1	1	-	51	2,189
Female.....	2,089	48	9	1	5	3	1	1	1	36	2,041
15-24.....	3,521	96	37	12	24	1	1	3	2	53	3,425
Male.....	1,766	50	12	5	7	-	1	2	1	34	1,716
Female.....	1,755	46	25	7	17	1	-	1	1	19	1,709
25-44.....	5,544	223	77	28	41	8	3	10	13	120	5,321
Male.....	2,787	106	39	21	16	2	1	8	5	53	2,681
Female.....	2,757	117	38	7	25	6	2	2	8	67	2,640
45 and over.....	3,576	363	129	50	66	13	25	30	16	163	3,213
Male.....	1,887	199	70	29	37	4	19	19	6	85	1,688
Female.....	1,689	164	59	21	29	9	6	11	10	78	1,525
SAIPAN											
All ages ✓	4,226	230	85	24	44	17	7	11	3	124	3,996
Male ✓	2,147	110	41	15	20	6	6	8	1	54	2,037
Female ✓	2,079	120	44	9	24	11	1	3	2	70	1,959
Under 5.....	391	12	3	-	3	-	-	-	-	9	379
Male.....	198	7	1	-	1	-	-	-	-	6	191
Female.....	193	5	2	-	2	-	-	-	-	3	188
5-14.....	1,249	39	7	1	4	2	1	-	1	30	1,210
Male.....	664	19	3	-	2	1	1	-	-	15	645
Female.....	585	20	4	1	2	1	-	-	1	15	565
15-24.....	806	28	14	4	9	1	1	-	-	13	778
Male.....	397	14	4	1	3	-	1	-	-	9	383
Female.....	409	14	10	3	6	1	-	-	-	4	395
25-44.....	1,167	64	24	8	11	5	-	4	2	34	1,103
Male.....	580	29	14	7	6	1	-	4	1	10	551
Female.....	587	35	10	1	5	4	-	-	1	24	552
45 and over.....	610	87	37	11	17	9	5	7	-	38	523
Male.....	307	41	19	7	8	4	4	4	-	14	266
Female.....	303	46	18	4	9	5	1	3	-	24	257
PALAU											
All ages ✓	8,733	388	141	53	81	7	17	11	2	217	8,345
Male ✓	4,486	224	76	33	42	1	13	7	1	127	4,262
Female ✓	4,247	164	65	20	39	6	4	4	1	90	4,083
Under 5.....	401	5	-	-	-	-	-	-	-	5	396
Male.....	244	3	-	-	-	-	-	-	-	3	241
Female.....	157	2	-	-	-	-	-	-	-	2	155
5-14.....	2,016	59	9	2	6	1	1	1	-	48	1,957
Male.....	1,029	37	6	2	4	-	-	-	-	31	992
Female.....	987	22	3	-	2	1	1	1	-	17	965
15-24.....	1,593	39	17	7	10	-	-	3	-	19	1,554
Male.....	780	25	8	4	4	-	-	2	-	15	755
Female.....	813	14	9	3	6	-	-	1	-	4	799

See footnotes, stand of table.

19

rough

Appendix Table 13. --RESULTS OF CHEST X-RAY EXAMINATIONS BY AGE AND SEX, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50--Continued

District, age group (years), and sex	All X-ray examinations	Chest defects									Negative
		Total	Tuberculosis, pulmonary				Chest tumor	Cardio-vascular abnormality	Bone deformity	Other ²	
			Total	Moderately and far-advanced, active	Other active ¹	Arrested					
PALAU--Con.											
25-44.....	2,853	109	46	19	24	3	3	2	2	56	2,744
Male.....	1,444	54	22	13	8	1	1	2	1	28	1,390
Female.....	1,409	55	24	6	16	2	2	-	1	28	1,354
45 and over.....	1,867	176	69	25	41	3	13	5	-	89	1,691
Male.....	988	105	40	14	26	-	12	3	-	50	883
Female.....	879	71	29	11	15	3	1	2	-	39	808
MARSHALL ISLANDS											
All ages ³	5,135	199	41	17	22	2	7	26	27	98	4,936
Male ³	2,661	96	17	10	7	-	3	15	10	51	2,565
Female ³	2,474	103	24	7	15	2	4	11	17	47	2,371
Under 5.....	307	7	2	1	1	-	-	3	-	2	300
Male.....	157	2	2	1	1	-	-	-	-	-	155
Female.....	150	5	-	-	-	-	-	3	-	2	145
5-14.....	1,076	13	3	-	2	1	-	1	-	9	1,063
Male.....	559	7	1	-	1	-	-	1	-	5	552
Female.....	517	6	2	-	1	1	-	-	-	4	511
15-24.....	1,122	29	6	1	5	-	-	-	2	21	1,093
Male.....	589	11	-	-	-	-	-	-	1	10	578
Female.....	533	18	6	1	5	-	-	-	1	11	515
25-44.....	1,524	50	7	1	6	-	-	4	9	30	1,474
Male.....	763	23	3	1	2	-	-	2	3	15	740
Female.....	761	27	4	-	4	-	-	2	6	15	734
45 and over.....	1,099	100	23	14	8	1	7	18	16	36	999
Male.....	592	53	11	8	3	-	3	12	6	21	539
Female.....	507	47	12	6	5	1	4	6	10	15	460

¹Includes minimal, active; stage unspecified, active; and any stage stated as "inactive or activity uncertain or suspicious."

²Includes the following findings: Soft tissue, fibrous, or calcific density, "possible bronchiectasis," widening of mediastinum, and diaphragmatic adhesions.

³Includes individuals whose age was not stated.

~~4-19~~

total
" 20/5/1 Rod

20 19

Appendix Table 10 -- FINDINGS OF CHEST X-RAY EXAMINATIONS BY SEX, SELECTED ISLANDS OR ATOLLS, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50

District, island or atoll, and sex	All X-ray examinations	Chest defects			Negative
		Total	Tuberculosis, pulmonary, active	Other	
Total.....	18,094	817	241	576	17,277
Male.....	9,294	430	127	303	8,864
Female.....	8,800	387	114	273	8,413
Saipan.....	4,226	230	68	162	3,996
Male.....	2,147	110	35	75	2,037
Female.....	2,079	120	33	87	1,959
Rota Island.....	425	24	5	19	401
Male.....	210	14	2	12	196
Female.....	215	10	3	7	205
Saipan Island.....	3,418	189	56	133	3,229
Male.....	1,721	87	28	59	1,634
Female.....	1,697	102	28	74	1,595
Tinian Island.....	383	17	7	10	366
Male.....	216	9	5	4	207
Female.....	167	8	2	6	159
Palau.....	8,733	388	134	254	8,345
Male.....	4,486	224	75	149	4,262
Female.....	4,247	164	59	105	4,083
Angaur Island.....	267	4	-	4	263
Male.....	146	1	-	1	145
Female.....	121	3	-	3	118
Babelthiap Island.....	2,614	100	17	83	2,514
Male.....	1,271	60	12	48	1,211
Female.....	1,343	40	5	35	1,303
Eauripik Atoll.....	111	2	-	2	109
Male.....	57	2	-	2	55
Female.....	54	-	-	-	54
Elato Atoll.....	26	2	1	1	24
Male.....	14	1	-	1	13
Female.....	12	1	1	-	11
Fais Island.....	144	9	4	5	135
Male.....	95	9	4	5	86
Female.....	49	-	-	-	49
Faraulep Atoll.....	74	5	5	-	69
Male.....	31	3	3	-	28
Female.....	43	2	2	-	41
Ifalik Atoll.....	174	13	3	10	161
Male.....	88	7	1	6	81
Female.....	86	6	2	4	80
Kayangel Atoll.....	95	6	2	4	89
Male.....	52	3	1	2	49
Female.....	43	3	1	2	40
Koror Island.....	1,222	47	29	18	1,175
Male.....	628	24	12	12	604
Female.....	594	23	17	6	571
Lamotrek Atoll.....	113	9	4	5	104
Male.....	55	4	1	3	51
Female.....	58	5	3	2	53
Merir Island.....	9	-	-	-	9
Male.....	4	-	-	-	4
Female.....	5	-	-	-	5
Ngulu Atoll.....	48	1	1	-	47
Male.....	27	-	-	-	27
Female.....	21	1	1	-	20
Peleliu Island.....	609	13	-	13	596
Male.....	308	7	-	7	301
Female.....	301	6	-	6	295

Single check

Per check

20 A
 Appendix Table 10 -- FINDINGS OF CHEST X-RAY EXAMINATIONS BY SEX, SELECTED ISLANDS OR ATOLLS, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50--Continued

District, island or atoll, and sex	All X-ray examinations	Chest defects			Negative
		Total	Tuberculosis, pulmonary, active	Other	
Palau--Continued					
Pulo Anna Island.....	13	-	-	-	13
Male.....	9	-	-	-	9
Female.....	4	-	-	-	4
Satawal Island.....	169	5	1	4	164
Male.....	94	3	1	2	91
Female.....	75	2	-	2	73
Sonsorol Island.....	84	6	3	3	78
Male.....	42	3	2	1	39
Female.....	42	3	1	2	39
Tobi Island.....	118	2	-	2	116
Male.....	63	1	-	1	62
Female.....	55	1	-	1	54
Ulithi Atoll.....	328	4	-	4	324
Male.....	179	2	-	2	177
Female.....	149	2	-	2	147
Woleai Atoll.....	305	12	4	8	293
Male.....	148	8	3	5	140
Female.....	157	4	1	3	153
Yap Islands.....	2,210	148	60	88	2,062
Male.....	1,175	86	35	51	1,089
Female.....	1,035	62	25	37	973
Marshall Islands.....					
Male.....	5,135	199	39	160	4,936
Female.....	2,661	96	17	79	2,565
Ailuk Atoll.....	2,474	103	22	81	2,371
Male.....	294	17	1	16	277
Female.....	145	9	1	8	136
Arno Island.....	149	8	-	8	141
Male.....	167	3	2	1	164
Female.....	87	3	2	1	84
Aur Island.....	80	-	-	-	80
Male.....	82	3	2	1	79
Female.....	43	1	1	-	42
Ebon Atoll.....	39	2	1	1	37
Male.....	653	21	3	18	632
Female.....	316	12	-	12	304
Ine Island.....	337	9	3	6	328
Male.....	97	7	3	4	90
Female.....	56	1	-	1	55
Kwajalein Atoll.....	41	6	3	3	35
Male.....	871	32	1	31	839
Female.....	558	15	1	14	543
Lib Island.....	313	17	-	17	296
Male.....	66	2	-	2	64
Female.....	33	1	-	1	32
Likiep Atoll.....	33	1	-	1	32
Male.....	425	11	-	11	414
Female.....	207	7	-	7	200
Majuro Atoll.....	218	4	-	4	214
Male.....	1,016	23	9	14	993
Female.....	528	8	3	5	520
Malcoelap Atoll.....	488	15	6	9	473
Male.....	229	12	5	7	217
Female.....	104	5	1	4	99
Mejit.....	125	7	4	3	118
Male.....	269	14	2	12	255
Female.....	126	9	-	9	117
Male.....	143	5	2	3	138
Female.....					

20 78

Appendix Table (10) -- FINDINGS OF CHEST X-RAY EXAMINATIONS BY SEX, SELECTED ISLANDS OR ATOLLS, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50--Continued

District, island or atoll, and sex	All X-ray examinations	Chest defects			Negative
		Total	Tuberculosis, pulmonary, active	Other	
Marshall Islands--Con.					
Mili Atoll.....	137	14	4	10	123
Male.....	62	5	3	2	57
Female.....	75	9	1	8	66
Namorik Island.....	352	12	1	11	340
Male.....	172	7	1	6	165
Female.....	180	5	-	5	175
Tabal Island.....	89	10	3	7	79
Male.....	45	5	2	3	40
Female.....	44	5	1	4	39
Utirik Atoll.....	143	5	-	5	138
Male.....	65	3	-	3	62
Female.....	78	2	-	2	76
Wotje Atoll.....	245	13	3	10	232
Male.....	114	5	2	3	109
Female.....	131	8	1	7	123

Appendix Table 20 - 21

POSITIVE REACTIONS TO TUBERCULIN TESTS AND PERCENTAGE DISTRIBUTION BY SEX, SELECTED ISLANDS OR ATOLLS, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50

District and island or atoll	Tuberculin tests			Positive reactions			Percent positive		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total.....	19,543	9,813	9,730	9,085	4,675	4,410	46.5	47.6	45.3
Saipan.....	4,491	2,247	2,244	2,453	1,222	1,231	54.6	54.4	54.8
Rota Island.....	537	263	274	226	115	111	42.1	43.7	40.5
Saipan Island.....	3,572	1,765	1,807	2,088	1,033	1,055	58.4	58.5	58.4
Tinian Island.....	ok 382	219	163	ok 139	74	65	36.4	33.8	39.9
Palau.....	9,166	4,559	4,607	5,499	2,788	2,711	60.0	61.2	58.8
Angaur Island.....	300	163	137	179	100	79	59.7	61.3	57.7
Babelthiap Island.....	2,831	1,365	1,466	1,353	622	731	47.8	45.6	49.9
Eauripik Atoll.....	135	63	72	39	19	20	28.9	30.2	27.8
Elato Atoll.....	33	18	15	2	1	1	6.1	5.6	6.7
Fais Island.....	195	109	86	154	95	59	79.0	87.2	68.6
Faraulep Atoll.....	84	35	49	29	14	15	34.5	40.0	30.6
Ifalik Atoll.....	218	97	121	84	40	44	38.5	41.2	36.4
Kayangel Atoll.....	112	60	52	45	27	18	40.2	45.0	34.6
Koror Island.....	1,198	589	609	765	372	393	63.8	63.2	64.5
Lamotrek Atoll.....	132	55	77	51	23	28	38.6	41.8	36.4
Merir Island.....	11	5	6	7	4	3	63.6	80.0	50.0
Ngulu Atoll.....	46	24	22	26	14	12	56.5	58.3	54.5
Peleliu Island.....	582	287	295	363	180	183	62.4	62.7	62.0
Pulo Anna Island....	13	9	4	3	1	2	23.1	11.1	50.0
Satawal Island.....	170	76	94	34	17	17	20.0	22.4	18.1
Sonsorol Island.....	107	47	60	62	28	34	57.9	59.6	56.7
Tobi Island.....	122	62	60	81	46	35	66.4	74.2	58.3
Ulithi Atoll.....	345	174	171	181	101	80	52.5	58.0	46.8
Woleai Atoll.....	333	163	170	182	99	83	54.6	60.7	48.8
Yap Islands.....	2,199	1,158	1,041	1,859	985	874	84.5	85.1	84.0
Marshall Islands.....	5,886	3,007	2,879	1,133	665	468	19.2	22.1	16.2
Ailuk Atoll.....	279	136	143	37	18	19	13.3	13.2	13.3
Arno Island.....	186	95	91	8	5	3	4.3	5.3	3.3
Aur Island.....	180	88	92	54	32	22	30.0	36.4	23.9
Ebon Atoll.....	690	336	354	22	16	6	3.2	4.8	1.7
Ine Island.....	178	94	84	64	36	28	36.0	38.3	33.3
Kwajalein Atoll.....	1,028	609	419	234	158	76	22.8	25.9	18.1
Lib Island.....	47	33	14	16	4	12	34.0	12.1	85.7
Likiep Atoll.....	457	212	245	46	25	21	10.1	11.8	8.6
Majuro Atoll.....	963	490	473	247	152	95	25.6	31.0	20.1
Malcelap Atoll.....	438	205	233	72	42	30	16.4	20.5	12.9
Mejit Island.....	339	155	184	61	29	32	18.0	18.7	17.4
Mili Atoll.....	136	63	73	38	19	19	27.9	30.2	26.0
Namorik Island.....	415	205	210	114	60	54	27.5	29.3	25.7
Tabal Island.....	173	93	80	57	37	20	32.9	39.8	25.0
Utirik Atoll.....	143	65	78	18	9	9	12.6	13.8	11.5
Wotje Atoll.....	234	128	106	45	23	22	19.2	18.0	20.8

Single check

† Tested with 0.0002 mg. P.P.D. tuberculin. all others
 tested with 0.0001 mg. of P.P.D. do not use P.P.D.

† ² Approximately one-half of population tested with 0.0001 mg. P.P.D. and the other one-half with 0.0002 mg. P.P.D.

† NOTE. — All the other islands or atolls (with no footnote reference) were tested with 0.0001 mg. P.P.D.

To Helzel
7-18-52
Pod

Appendix Table 22.--PERCENTAGE OF TUBERCULIN POSITIVES BY AGE GROUP AND SEX, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50

Age group (years) and sex	Total	District		
		Saipan	Palau	Marshall Islands
All ages.....	46.5	54.6	60.0	19.2
Male.....	47.6	54.4	61.2	22.1
Female.....	45.3	54.8	58.8	16.2
Under 5:				
Male.....	10.0	8.3	17.4	1.9
Female.....	8.3	7.7	14.8	1.5
5-14:				
Male.....	32.6	43.4	40.7	6.4
Female.....	32.8	45.2	39.5	7.4
15-24:				
Male.....	53.8	77.6	66.8	23.7
Female.....	52.8	79.7	64.1	17.9
25-44:				
Male.....	63.2	74.4	76.2	32.8
Female.....	57.6	71.8	71.0	22.7
45 and over:				
Male.....	61.5	70.6	78.2	32.9
Female.....	56.2	71.5	74.0	22.1

single desk

Appendix Table 22-23

A-22

June 27, 1951
AH:mr

9

RESULTS OF TUBERCULIN TESTS BY AGE GROUP AND SEX, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50

23

District, age group (years), and sex	Natives examined	Tuberculin tests			Number not tested
		Total	Positive	Negative	
TOTAL					
All ages ✓	22,146	19,543	46.5 9,085	10,458	2,603
Male ✓	11,138	9,813	4,675	5,138	1,325
Female ✓	11,008	9,730	4,410	5,320	1,278
<i>sample desk</i>					
Under 5:		2,339	9.1 214		
Male	1,774	1,215	121	1,094	559
Female	1,694	1,124	93	1,031	570
5-14:		4,365	32.7 1428		
Male	2,346	2,245	732	1,513	101
Female	2,228	2,120	696	1,424	108
15-24:		3,459	53.3 1843		
Male	1,846	1,699	914	785	147
Female	1,880	1,760	929	831	120
25-44:		5,527	60.3 3334		
Male	2,947	2,691	1,700	991	256
Female	3,022	2,836	1,634	1,202	186
45 and over:		3,832	58.9 2258		
Male	2,219	1,957	1,204	753	262
Female	2,167	1,875	1,054	821	292
<i>Palau desk</i>					
SAIPAN					
All ages ✓	4,999	4,491	54.6 2,453	2,038	508
Male ✓	2,497	2,247	1,222	1,025	250
Female ✓	2,502	2,244	1,231	1,013	258
Under 5:		776	9.0 62 31	344	113
Male	488	375	31	344	113
Female	527	401	31	370	126
5-14:		1,229	44.3 544 284	370	19
Male	673	654	284	370	19
Female	602	575	260	315	27
15-24:		764	60.1 287	83	34
Male	404	370	287	83	34
Female	421	394	314	80	27
25-44:		1,135	73.0 829 415	143	49
Male	607	558	415	143	49
Female	615	577	414	163	38
45 and over:		584	71.1 415 204	85	35
Male	324	289	204	85	35
Female	335	295	211	84	40
PALAU					
All ages ✓	10,575	9,166	60.0 5,499	3,667	1,409
Male ✓	5,299	4,559	2,788	1,771	740
Female ✓	5,276	4,607	2,711	1,896	669
Under 5:		861	16.3 140 83	393	280
Male	756	476	83	393	280
Female	664	385	57	328	279
5-14:		2,013	40.1 807 411	599	57
Male	1,067	1,010	411	599	57
Female	1,046	1,003	396	607	43
15-24:		1,527	65.4 998 484	241	75
Male	800	725	484	241	75
Female	860	802	514	288	58
25-44:		2,812	73.5 2,067 1,028	321	143
Male	1,492	1,349	1,028	321	143
Female	1,556	1,463	1,039	424	93
45 and over:		1,947	76.2 1,483 779	217	185
Male	1,181	996	779	217	185
Female	1,146	951	704	247	195

See footnote at end of table.

To Hazel 1
8-17-51 read

Appendix Table 22
23

RESULTS OF TUBERCULIN TESTS BY AGE GROUP AND SEX, SAIPAN, PALAU, AND MARSHALL ISLANDS
DISTRICTS: 1948-50--Continued

District, age group (years), and sex	Natives examined	Tuberculin tests			Number not tested
		Total	Positive	Negative	
MARSHALL ISLANDS					
All ages ✓	6,572	5,886	1,133	4,753	686
Male ✓	3,342	3,007	665	2,342	335
Female ✓	3,230	2,879	468	2,411	351
Under 5:					
Male	530	364	7	357	166
Female	503	338	5	333	165
5-14:					
Male	606	581	37	544	25
Female	580	542	40	502	38
15-24:					
Male	642	604	143	461	38
Female	599	564	101	463	35
25-44:					
Male	848	784	257	527	64
Female	851	796	181	615	55
45 and over:					
Male	714	672	221	451	42
Female	686	629	139	490	57

✓ Includes individuals whose age was not stated.

Appendix Table 24.--TWENTY-SEVEN SELECTED DIAGNOSES OR DIAGNOSTIC GROUPS BY ISLAND OR ATOLL, SAIPAN, PALAU, AND MARSHALL ISLANDS DISTRICTS: 1948-50

Line number	District and island or atoll	Natives examined	Diagnosis or diagnostic group																											Line number	
			Trachoma	Dermatophytosis	Neoplastic diseases	Allergic disorders	Vitamin deficiency	Obesity	Anemia ¹	Motor neurone disease and muscular atrophy	Conjunctivitis	Opacity of cornea	Pterygium	Cataract	Inflammatory diseases of ear	Diseases of ear and mastoid process, n. e. c. ²	Chronic tonsillitis and nasopharyngitis ³	Acute respiratory infections	Diseases of the coronary arteries	Chronic rheumatic heart disease and other heart diseases ⁴	Arteriosclerosis	Hemorrhoids	Cystic diseases of breast, chronic, female	Diseases of the skin and cellular tissue	Degenerative joint disease	Congenital malformations	Amputation, traumatic, and avulsion	Injuries ⁵	Pregnancy, uterine, not delivered		
1	Total.....	22,146	101	6,611	325	60	195	427	185	53	909	211	2,087	784	217	29	3,326	632	200	94	62	101	160	3,304	1,563	148	56	82	406	1	
2	Saipan.....	4,999	41	1,899	60	31	101	262	64	18	273	82	449	87	132	15	1,433	426	32	33	11	1	59	1,231	262	31	13	15	119	2	
3	Rota Island.....	559	-	340	5	2	-	11	-	1	16	11	34	9	10	-	24	2	-	-	2	-	1	20	10	1	2	2	18	3	
4	Saipan Island.....	4,043	41	1,396	51	29	98	242	64	16	251	68	399	67	116	15	1,358	407	32	33	9	1	58	1,204	244	30	11	13	93	4	
5	Tinian Island.....	397	-	163	4	-	3	9	-	1	6	3	16	11	6	-	51	17	-	-	-	-	-	7	8	-	-	-	8	5	
6	Palau.....	10,575	47	2,683	74	18	28	70	4	23	443	86	675	519	10	-	555	123	34	20	44	-	38	665	900	55	40	34	152	6	
7	Angaur Island.....	327	-	62	-	1	-	4	-	-	2	2	2	6	-	-	12	3	-	-	-	-	-	10	12	2	-	2	6	7	
8	Babelthup Island.....	3,380	4	622	21	10	15	40	3	6	93	36	138	116	1	-	276	77	34	10	20	-	33	269	168	22	10	6	55	8	
9	Bauripik Atoll.....	137	1	38	-	-	-	-	-	-	13	-	7	5	-	-	14	1	-	-	-	-	-	15	6	1	-	-	2	9	
10	Elato Atoll.....	35	-	16	-	-	-	1	-	-	1	-	8	1	-	-	5	-	-	-	-	-	-	3	1	1	-	-	-	10	
11	Fais Island.....	233	2	47	2	-	-	1	-	2	4	1	62	15	-	-	-	-	-	-	-	-	-	15	47	-	2	1	3	11	
12	Faraulep Atoll.....	100	-	66	3	-	-	-	-	-	13	1	10	8	-	-	4	1	-	1	-	-	-	10	3	2	-	-	2	12	
13	Ifalik Atoll.....	232	-	105	3	-	2	1	-	-	30	4	29	11	-	-	15	1	-	-	-	-	-	26	27	2	-	-	2	13	
14	Kayangel Atoll.....	129	-	14	-	-	-	2	1	-	6	-	8	3	-	-	19	14	-	-	1	-	1	8	5	1	1	1	2	14	
15	Koror Island.....	1,364	1	210	4	-	9	-	-	-	24	11	36	7	4	-	38	7	-	-	-	-	2	25	19	5	3	7	29	15	
16	Lamotrek Atoll.....	140	1	73	4	-	1	-	-	-	11	2	15	5	-	-	3	-	-	-	-	-	-	20	7	-	-	-	1	16	
17	Merir Island.....	11	1	-	1	-	-	1	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	1	3	-	-	-	-	17	
18	Ngulu Atoll.....	53	-	9	-	-	-	1	-	-	-	-	8	5	-	-	3	-	-	-	-	-	-	1	5	-	-	-	1	18	
19	Peleliu Island.....	718	1	116	2	1	-	3	-	-	13	4	31	25	2	-	6	5	-	2	-	-	20	41	2	2	4	5	5	19	
20	Pulo Anna Island.....	13	-	1	1	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	20	
21	Satawal Island.....	200	1	127	2	-	-	-	-	-	14	5	17	13	-	-	15	2	-	-	-	-	-	18	4	1	-	-	5	21	
22	Sonsorol Island.....	111	-	31	1	2	2	2	-	-	10	2	20	26	-	-	-	-	-	-	1	1	-	7	42	1	-	-	-	22	
23	Tobi Island.....	128	7	21	2	-	-	-	-	1	4	-	10	17	-	-	6	-	-	-	-	-	-	9	38	-	-	-	-	23	
24	Ulithi Atoll.....	417	9	53	3	1	2	2	-	5	27	1	45	45	-	-	19	2	-	1	4	-	-	29	94	2	-	-	6	24	
25	Woleai Atoll.....	347	1	136	2	-	-	-	-	-	42	2	86	12	1	-	42	3	-	-	-	-	-	38	18	-	4	-	4	25	
26	Yap Islands.....	2,500	18	936	23	3	6	3	-	9	135	15	143	194	2	-	78	7	-	4	17	-	2	141	359	13	16	11	30	26	
27	Marshall Islands.....	6,572	13	2,029	191	11	66	95	117	12	193	43	963	178	75	14	1,338	83	134	41	7	100	63	1,408	401	62	3	33	135	27	
28	Ailuk Atoll.....	353	-	139	10	-	-	1	-	-	10	4	66	28	-	-	17	4	-	-	-	-	-	17	38	5	1	3	11	28	
29	Arno Island.....	191	-	55	4	-	11	2	7	-	14	-	32	-	5	2	85	8	6	-	1	5	2	42	15	5	-	2	3	29	
30	Aur Island.....	181	-	123	1	1	-	-	1	-	15	1	41	19	2	-	11	4	-	1	-	-	1	16	15	-	-	-	1	30	
31	Ebon Atoll.....	759	3	155	50	1	12	13	21	2	4	-	100	7	17	10	292	7	51	3	3	46	33	399	98	2	-	1	17	31	
32	Ine Island.....	206	-	81	10	1	15	9	5	1	5	-	37	1	1	-	108	2	6	1	-	2	1	41	27	-	-	3	4	32	
33	Kwajalein Atoll.....	1,061	5	264	7	2	3	8	1	3	19	14	83	3	7	-	39	14	-	3	-	-	-	30	-	2	-	6	16	33	
34	Lib Island.....	82	-	16	-	1	-	-	-	-	1	-	3	1	1	-	7	-	-	2	-	-	-	-	-	2	1	-	-	1	34
35	Likiep Atoll.....	532	-	126	1	1	1	1	-	-	10	3	59	18	1	-	14	2	-	-	-	-	-	22	16	4	-	1	12	35	
36	Majuro Atoll.....	1,186	3	266	62	3	18	47	62	-	32	-	187	4	29	1	617	33	57	21	1	39	19	634	83	14	-	9	30	36	
37	Malcoelap Atoll.....	446	1	226	15	-	-	4	-	2	30	7	93	28	2	-	14	1	-	3	-	-	1	32	29	9	1	2	7	37	
38	Mejit Island.....	362	1	78	5	-	-	-	-	3	8	3	66	10	-	-	21	-	-	1	2	-	-	16	21	2	-	1	9	38	
39	Mili Atoll.....	177	-	23	14	-	5	6	19	-	1	-	31	1	5	1	55	2	14	3	-	8	5	89	26	4	1	3	1	39	
40	Namorik Island.....	418	-	156	2	1	-	1	1	-	2	6	65	11	-	-	17	1	-	-	-	-	-	16	2	4	-	-	10	40	
41	Tabal Island.....	173	-	125	1	-	-	3	-	-	21	3	40	16	1	-	16	3	-	2	-	-	-	14	11	2	-	-	4	41	
42	Utirik Atoll.....	143	-	34	1	-	1	-	-	-	3	1	12	5	1	-	2	-	-	-	-	-	-	9	-	3	-	-	6	42	
43	Wotje Atoll.....	302	-	162	8	-	-	-	-	1	18	1	48	26	3	-	23	2	-	1	-	-	-	31	18	5	-	2	3	43	

¹This title includes only the following diagnoses: Anemia, sickle cell; Anemia, specified, n. e. c.; and Anemia, unspecified type. No other specific types recorded.

²The abbreviation "n. e. c." means "not elsewhere classified."

³Full titles are as follows: "Chronic tonsillitis and hypertrophy of tonsils and adenoids" and "Pharyngitis, rhinitis, and nasopharyngitis, chronic."

⁴"Other heart disease" excludes "Diseases of the coronary arteries."

⁵Excludes "Amputation, traumatic, and avulsion."

LIBRARY
OF THE
MUSEUM OF
ART AND HISTORY

LIBRARY USE
ONLY

1/85



+

Pac
RA
558
.T75
U54

