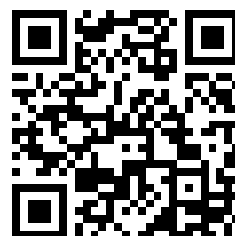

This is a reproduction of a library book that was digitized by Google as part of an ongoing effort to preserve the information in books and make it universally accessible.

Google[™] books

<https://books.google.com>



I 29.2: G93

Reed, Erik K.

1952 General Report on Archaeology and
History of Guam. 133 pp., 22 plates,
3 maps. Washington: U.S. Dept. of
Interior, National Park Service.

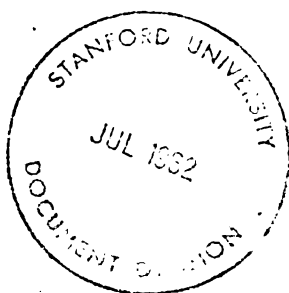


Nat. Park Service

GEN. P33. 1952

I 29.2: G93

ARCHEOLOGY AND HISTORY OF GUAM



NATIONAL PARK SERVICE
U.S. DEPARTMENT OF THE INTERIOR
WASHINGTON, D.C.

1962

**GENERAL REPORT ON
ARCHEOLOGY AND HISTORY
OF GUAM**

**Erik K. Reed
Regional Archeologist
National Park Service
Santa Fe, New Mexico**

1952

Digitized by Google



UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
WASHINGTON 25, D. C.

NOV - 4 1934

Hon. Carlton Skinner
Governor of Guam
Agana, Guam

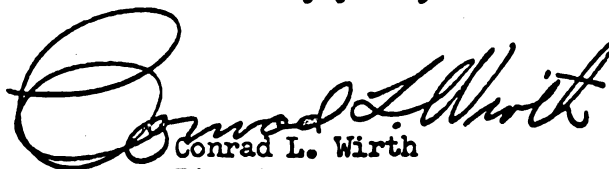
My dear Governor Skinner:

In accordance with your request, there is transmitted herewith a "General Report on Archeology and History of Guam". This study was prepared by the National Park Service under authority of the Park, Parkway and Recreational Area Act and pursuant to the provisions of the Historic Sites Act of August 21, 1935 (49 Stat. 666) which makes the Department of the Interior, through this Service, responsible for a nationwide program for the preservation of the irreplaceable historical and archeological resources of the United States and its territorial possessions.

The report is the result of a thirty-day field study in Guam with brief visits to Saipan, Tinian, and Rota by Dr. Erik K. Reed, Regional Archeologist, Region Three Office of the National Park Service in Santa Fe, New Mexico. On the basis of a comprehensive review of the ecology, cultural history of the Marianas, and historical and archeological data relating to Guam, derived from reconnaissance and previous studies, recommendations are made regarding conservation and interpretation of sites.

The cooperation of the various branches of the Government of Guam in assisting with transportation and information for the preparation of this report is greatly appreciated.

Sincerely yours,


Conrad L. Wirth
Director

Enclosure

GENERAL REPORT ON ARCHEOLOGY AND HISTORY OF GUAM

by
Erik K. Reed
Regional Archeologist
National Park Service
Santa Fe, New Mexico
1952

	Pp.
A. Setting and Background	
1. The island, general geography and geology	1-5
2. The biological setting: ecological associations, flora and fauna (Notes on zoology pp. 13 - 19)	6-19
3. Pre-Spanish people and culture (Note on physical anthropology, pp. 30-38)	20-38
4. History of the Marianas Islands, 1521-1941 (Notes and digressions, pp. 64-79)	39-79
5. Present occupation patterns and land use problems of Guam	80-89
6. Historical and archeological research on the Marianas	90-93
B. Historic Sites and Surviving Remains	
C. Surviving Archeological Sites	
D. Recommended Procedures and Action Program	
1. Basic legislation and general protection	
2. Areas to be reserved or developed	
3. Interpretive program	
a. Territorial Museum	
b. Division of Conservation and Science	
c. Markers and wayside exhibits	
d. Tours, talks, and schoolwork	
e. Publication needs and possibilities	

GENERAL REPORT ON ARCHEOLOGY AND HISTORY OF GUAM

by
Erik K. Reed

A. SETTING AND BACKGROUND

1. The Island, General Geography and Geology

Guam is the southernmost and largest of the Marianas Islands, a north-south chain 420 miles long, extending from latitude 20°30' North, longitude 143°45' East (Farallon de Pajaros), to latitude 13°14' North, longitude 142°31' East (Guam). Formerly densely populated by the native Chamorros discussed below, Guam was occupied by Spain from 1668 to 1898, when it became United States territory, as it still is. The others of the Marianas, owned but not actually colonized by Spain, were purchased by Germany in 1899 and taken by Japan in the First World War, and now form part of the Trust Territory of the Pacific Islands, administered by the United States as a United Nations mandate. The other, smaller, southern Marianas, large only when compared to the tiny uninhabited northern islands, are Rota, Tinian (with the adjoining islet of Aguijan, where carnivorous snails are being tried out on the Giant African snail), and Saipan.

Guam, the only eighteenth century outpost of European civilization in the Pacific Ocean beyond the Philippines, the regular stopping-place between Mexico and Manila from 1565 to 1815, and today,

since Philippine independence, the farthest outpost of actual United States territory in the Pacific, is the biggest single segment of Micronesia -- the largest island between Kyushu and New Guinea, between the Philippines and the Hawaiian Islands. Guam is approximately 30 miles long, 4 miles to $8\frac{1}{2}$ miles wide, and about 225 square miles in area. It is 1500 miles east of Manila, 1350 miles south of Yokohama, and about 3000 miles west of Honolulu, 5000 miles west of San Francisco.

The northern portion of Guam is a plateau -- flat but not horizontal, gradually sloping from somewhat over 500 feet above the sea on the east to 200-400 on the west, with steep cliffs on all sides toward the ocean, only occasionally broken by slopes or gaps or even readily negotiable trails, with small beaches of fine sand around the bays and coves between the high projecting points. The limestone plateau of the north, formerly densely forested but now virtually cleared of large trees, is without running water. The narrow waist of the island, from Pago Bay to Agana Bay, consists largely of swamp and small river valleys, and rather densely-grown or intensely cultivated low hills. The southern half is mountainous and surprisingly rugged, draining largely eastward into the Fena or Talafofo River, dropping to the sea in steep ridges and foothills and little valleys at numerous small bays, instead of high cliffs. Much of the south is covered by grassland. The island of Guam consists essentially of volcanic rock and coral limestone, enclosed by a

fringing reef of coral. It is the southernmost and largest mountain of the submerged volcanic range which extends southward from central Japan, through the Volcano Islands and Bonins and Marianas, one of the arcs forming a continuation of the Aleutian-Kurile-Japanese chain of volcanoes. Guam is a large volcanic base which has been repeatedly elevated, on which coral limestone has repeatedly formed.

The entire northern half is a shelving, more or less flat, plateau of metamorphosed coral limestone, a terrace atop a submerged volcanic base. The limestone plateau is interrupted only by Mt. Santa Rosa (rising to elevation 870 feet from 600 feet m.s.l. at its base, with the surrounding plateau at between 500 feet and 600 feet), a comparatively recent small volcanic hill -- not an actual crater itself, but composed of volcanic rock. A second hill further south is of limestone, a bulge or a remnant -- Barrigada, 674 feet m.s.l., rising from a surrounding 400-foot level. The 200-to-500-foot cliffs bounding the plateau are very abrupt, nearly vertical, with only occasional breaks.

The southern half of Guam is mountainous and largely basaltic, a "volcanic massif which has burst through the coralliferous limestone" (Alexander Agassiz). Remnants of limestone formations as old as Miocene (over seven million years ago) are found occasionally,

at considerable elevations, in the volcanic mountains of the southern half. Guam has been gradually and repeatedly elevated, apparently with submergences intervening.

The highest point on Guam is Mt. Lamlam, in the southwest, elevation 1334 feet. Other peaks of the rugged southern and southwestern portion rise to heights ranging between 1000 and 1275 feet.

Guam and the other southern Marianas (Rota, Tinian, Saipan) are relatively old islands -- weathered-volcanic combined with raised-coral type -- as against the unweathered, fresh, comparatively young, small volcanic peaks constituting the northern Marianas, a few of which are still alive as more or less active, at least smoking, volcanoes.

The island is closely encircled by a fringing reef, interrupted only at a few of the bays in the south and extending out to include Cocos Island, off the southwestern tip of Guam.

No references, notes, or citations are given for this section, as it is drawn partly from maps and from direct observation, partly from discussions with U.S.G.S. personnel working on Guam in 1952, and partly from non-technical, secondary, or general works, such as the following, which will also be referred to in connection with other topics:

Bowers, Neal M., "Chapter 8, The Mariana, Volcano, and Bonin Islands,"
in:
Freeman, Otis, ed., Geography of the Pacific, New York and London,
1951.

Oliver, Douglas L., The Pacific Islands, Cambridge (Harvard University Press), 1951.

Safford, William E., The useful plants of the island of Guam, with an introductory account of the physical features and natural history of the island, of the character and history of its people, and of their agriculture. Contributions from the U. S. National Herbarium, Volume IX, U. S. National Museum, Washington, 1905.

Thompson, Laura M., Guam and Its People, New York, 1947.

2. The Biological Setting: Ecological Associations, Flora and Fauna

Uncleared or more or less naturally revegetated portions of Guam are covered mostly with (1) typical beach growth along the coasts, the strand flora association of largely Indo-Malayan species -- with coconut palms predominating, with tall and small shrubs, and low vines, especially a blue-flowered morning-glory (presumably the goats-foot convolvulus, Ipomoea), with occasionally various trees of types mentioned below for other communities (the plant variously identified as Scaevola, fanflower or beach magnolia, or Messerschmidia argentia, velvet leaf tree, which covers much of Wake Island occurs here, but not in abundance); (2) at fairly low elevations above the coasts and inland, stretches of mixed brush with a variety of trees, mostly small hardwoods; or of virtually pure stands of tangantanga (Lucaena glauca), an acacia-like small tree or tall shrub, or tangantanga interspersed with occasional breadfruit (Artocarpus), coconut palms, Casuarina (the "Australian pine" or "Polynesian iron-wood"), etc.; and patches of bamboo thickets with little else between; (3) upland forest remnants or secondary forest growth, in the limestone plateau -- surviving ifil trees (Intsia) and other tropical hardwoods, and dense tangles of second-growth jungle; and (4) the extensive grasslands on the red volcanic soil of the southern hills and slopes, consisting of swordgrass (Miscanthus) with patches of woods, including much Pandanus, along tops of ridges, or with

scattered Casuarina trees (found also in the first and second types).

Other plant communities of more limited extent include occasional mangrove clumps in protected coastal locations, and the extremely interesting upper strand flora: "Vines, short coarse grass, and low shrubs, a treeless association occurring on thin rocky soils at the top of seaside cliffs within range of salt spray. Most highly developed along exposed eastern coasts." (Bowers, p. 211, in Freeman, ed., 1951). (146? p. 3)

On lower slopes of the high cliffs along the eastern coast of Guam, however, the biotic community appears more like (3) above, with ifil (Intsia), pu-ting (Barringtonia speciosa), the palomaria (Calophyllum, of the mangosteen family, an extremely hard wood), chopag (Ochrocarpus, a smallish tree with oval green leaves like the pu-ting; pinkish flowers, I am told, and no fruit or nut), and other tropical hardwoods; the fadang or "federico palm" (actually a cycad, Cycas circinalis, a source of sago but not utilized therefor in Guam, though the nuts are used), banyans (Ficus), and various smaller plants.

Of 545 species of ferns and flowering plants on Guam, 314, or 85%, were introduced by man, according to Dr. E. D. Merrill; and the presence of 231, or 42%, is due to accidental distribution. Only 61 species, or 11% of the total, are endemic (locally developed significant variations). More than 80% are species found also in

the Philippines. There are 47 species of ferns, according to Dr. E. H. Bryan (Guam Recorder, XIII, 1937).

Several of the common food plants, such as yams, taro, the federico cycad, and the breadfruit tree, and probably the coconut palm, were no doubt brought in by the original settlers, or at least by pre-Spanish natives. Many other crop plants were introduced by the Spaniards, or specifically by the Jesuit missionaries, after 1668, notably from America -- pineapples, sweet potatoes (probably not pre-Spanish here, as was the case in at least certain Pacific islands), corn (maize), manioc (cassava; tapioca), tomatoes, papayas, peppers (Capsicum), cacao (chocolate), as well as tobacco.

Other plants of special interest or importance include the nipa palm (Nypa fruticans, introduced from the Philippines for its leaves, used as thatch, according to Safford), the kapok or cotton tree (Ceiba, not a true cotton), betel-nut (Areca), the orangeberry or limonchine (Triphasia), the Polynesian arrowroot (Tacca pinnatifida, not recognized or pointed out to me, but listed for the island), and the species of Pandanus. Wild bananas (Musa), papayas, mangoes, breadfruit, and other "feral" fruit trees, in addition to many coconut palms, occur.

There have been extensive changes in the vegetation of Guam in addition to those brought about by deliberate artificial clearing of land for living

and farming purposes and, in recent years, for large military installations, highways, and new settlements, and cutting of wood (the tropical hardwood trees of the northern plateau are mostly gone). In a report of a geological survey report of Guam in 1937, Dr. H. T. Stearns remarks: "It is probable that forests were originally more widespread on the volcanics [the southern half of the island] than now. Continued burning and the cultivation of the areas underlain by these rocks have reduced the humus, soil fertility, and thickness of the soil to such a degree that little else but swordgrass can live."

The annual burning of the grassland hills continued into modern times: see the editorial deploring the practice in the Guam Recorder, VI, No. 3, June 1929. Probably the swordgrass (Miscanthus) cover is continuing to extend itself; a detailed study of surviving plant communities and of current ecological changes on Guam would be of very great interest.

The most valuable single reference on the foregoing would be Safford's Useful Plants; for check-lists, see E. D. Merrill, "An Enumeration of the Plants of Guam," Philippine Journal of Science 9: Bot., 17-155, 1914 (not seen) and E. H. Bryan, Jr., "The Plants of Guam," Guam Recorder, XIII, 1936-37; for concise and meaningful interpretations, Neil Bowers' chapter in Freeman (ed.), Geography of the Pacific (World), New York (MacMillan), (1946.) Other important

see p. 4 — 1931?

general references include E. D. Merrill, Bibliography of Polynesian Botany, 1773-1935, B. P. Bishop Museum Bulletin 144, Honolulu, 1937; R. Kanehira, Flora Micronesia, Tokyo, 1933 (not seen); L. Diels, "Beitrage zur Flora von Mikronesien und Polynesien," Botanische Jahrbuch 52-69, 1914-1938 (not seen). For other pertinent references, see: E. D. Merrill, A botanical bibliography of the islands of the Pacific, with A subject index by E. H. Walker, Contributions from the U. S. National Herbarium, Vol. 30, Part 1, U. S. National Museum, Washington, D.C., 1947.

The indigenous vertebrate fauna of Guam, other than a great variety of birds, was extremely limited, consisting only of two species of bats,^{1/} a little worm-like snake (Typhlops), a few very small lizards^{2/} (few in species, abundant in numbers, or at any rate quite common) and the large lizard (Varanus indicus, locally called "iguana," as I understand is the case also in the Philippine Islands -- not an iguanid, but a monitor lizard; up to about four feet long, greenish with yellow spots -- now scarce on Guam, but common on Rota).

Forty-five species of birds were listed by Dr. E. H. Bryan in 1936, including albatrosses, petrels, cormorants, frigate birds, herons and bitterns, ducks, megapodes (none left on Guam?), rails, snipes, plovers, gulls and terns, pigeons, cuckoos, swifts, kingfishers, warblers, flycatchers, starlings, crows, white-eyes, and honey-eaters.^{3/} There are no land- (tree-) dwelling birds of prey

regularly resident on Guam. ^{4/} Insects ^{5/} and other small invertebrates ^{6/} have undoubtedly been varied and numerous at all times, since before the arrival of people.

The first inhabitants brought no livestock, not even pigs, and apparently not even dogs -- at least the Chamorros had no dogs in the sixteenth century. The same was true of the Palaus, apparently, as late as the eighteenth century (pp. 30-31, 300, An account of the Pelew Islands, composed from the journals and communications of Captain Henry Wilson and some of his officers, who, in August 1783 were there shipwrecked, in the Antelope, a packet belonging to the Honourable East India Company, by George Keate, Esq., F.R.S., London, Second Edition, 1788). Rats and mice perhaps may have accompanied the Chamorros to the Marianas; this point -- pre-Spanish occurrence here of rats -- appears to be uncertain.

The Spaniards brought pigs, horses, cattle, carabaos, goats, turkeys and chickens, dogs and cats, certainly also rats, and the Philippine spotted deer, Cervus mariannus Desm., or Cervus philippinus, ^{7/} introduced by Governor Mariano Tobias in the 1770's.

The only new animals of American importation during the first half of the twentieth century would seem to be improved varieties of livestock, particularly dairy cattle. The honey bee, now occurring wild, was introduced from the Hawaiian Islands in 1907. Feral dogs, pigs, and particularly cats, are found, and already were on Guam

by 1905 (Safford) and at least on Tinian about 1860 (Delacorte's memoirs, cited below).

Ring-necked pheasants (Phasianus colchicus) were released by U. S. Navy personnel on Guam in 1945; the only one I saw in January-February 1952 was dead. Previously, the Painted quail (Coturnix chinensis lineata) had been brought in from the Philippines, by a Spanish officer in 1894, it is reported. This introduction was successful; several Painted quail were recorded in 1945, and a few were seen on Guam in January-February 1952.

The large poisonous toads (Bufo marinus) which are common in the southern Marianas were introduced to Guam in 1947, to keep down the insects; the monitor lizards are said to die from eating the toads.

In 1942-1944 the Japanese introduced into Micronesia the giant snail (Achatina fulica) from East Africa, now a very serious agricultural pest.^{8/} These reached Guam only in 1946, it is stated; they are now extremely abundant there. The record Achatina shell to date, collected by Dr. Y. Yamashiro in January 1952, is $7\frac{1}{2}$ inches long.

At the end of the war, the birds were almost all gone; since 1944, however, they have been coming back gradually (a list of species tentatively or positively recognized in January-February 1952 is appended^{9/}). Monitor lizards are now scarce; only four were seen

-- briefly glimpsed -- on Guam during this survey. There are comparatively few deer left; none was seen in the wild by us in January-February 1952 (a group of six deer is kept in captivity by a private individual on the beach drive north of Agana, not exploited or advertised but in full view).

Finally, the ocean about Guam, outside the fringing reef, is swarming with fishes of many kinds, ^{10/} which were formerly utilized as an important source of food.

NOTES (ZOOLOGY)

1/ The flying fox or fanihi, a large fruit-eating bat, Pteropus mariannus (not markedly different from other species of Pteropus in the western Pacific); and a small insectivorous bat, Emballonura. SEE: T. D. Carter, J. E. Hill, and G. H. Tate, Mammals of the Pacific World, New York (MacMillan), 1945; and general references on Guam such as Safford's Useful Plants and Mrs. Thompson's Guam and Its People.

2/ The little skink, Emoia cyanura, and four species of geckos, the commonest said to be Sapidodactylus lugubris. SEE: Arthur Loveridge, Reptiles of the Pacific World, New York (MacMillan), 1945, and general references on Guam (Safford's Useful Plants, Mrs. Thompson's Guam and Its People, etc.).

3/ SEE: E. H. Bryan, "Birds of Guam," The Guam Recorder,

May-October 1936; Ernst Mayr, Birds of the Southwest Pacific, New York (MacMillan), 1945; T. M. Blackman, Birds of the Central Pacific, Honolulu (Tongg), 1944; Joe T. Marshall, "The endemic avifauna of Saipan, Tinian, Guam and Palau," Condor, 51:200-221, 1949; Rollin H. Baker, The avifauna of Micronesia, its origin, evolution, and distribution, University of Kansas Museum of Natural History Publications, Vol. 3, No. 1, Lawrence, 1951.

Incidentally, of the seven birds of the Pacific area among the animals listed by the 1949 technical conference, at Lake Success, of the International Union for the Protection of Nature, and designated for immediate attention as vanishing or seriously threatened species, two are endemic to the Marianas Islands — the Marianas mallard (Anas oustaleti) and the Marianas megapode (Megapodius laperouse). Both are now apparently extinct on Guam, the mallard being fairly secure on Saipan and Tinian (especially if Lake Susupe, on Saipan, is protected, as has been repeatedly recommended), but the megapode surviving only in the northern Marianas. SEE: Baker, 1951; Yoshimaro Yamashino, "Notes on the Marianas Mallard," Pacific Science 2:121-122, April 1948; and Ernst Mayr, "Bird conservation problems in the southwest Pacific," Audubon Magazine, September-October 1945. The peculiar Guam rail, or "road chick" or "Guam quail," Rallus owstoni, concern for which has occasionally been expressed, is, however, abundant on the island at present.

4/ Formerly, before the American period, the short-eared owl (Asio flammeus, syn. Asio occipitrinus) occurred on Guam, but none has been recorded in the twentieth century (Safford, 1906; Bryan, 1936; Baker, 1951). A few small hawks are among occasional or accidental visitors to the Marianas, however. Baker (1951, p. 217) cites a few records of the Asiatic sparrow-hawk (Accipiter virgatus gularis) on Guam, from 1887 to 1945; Dr. Bryan refers to the same bird (as the Variegated hawk, A. virgatus nisoides, a synonym according to Baker, 1951) as an occasional stray from East Asia, not collected on Guam since 1900. Baker notes that the Peregrine falcon (Falco peregrinus japonensis) was definitely observed on Guam in 1945. Each of these is a casual winter visitor to Micronesia (Baker, 1951). In addition, the Chinese goshawk (Accipiter soloensis) has been observed on Rota, as well as Yap, though not recorded for Guam itself (Baker, 1951, p. 104). Among the ^{but} birds seen on Guam in January-February 1952, not definitely identified, was one which, on brief and casual observation, distinctly resembled the accipitrine hawks, and presumably it was one of these. The large and well-known bird of prey, the Frigate-bird or Man-o'-war bird (Fregattus) was not observed.

5/ SEE: O. H. Swezey and others, Insects of Guam, Vol. I and Vol. II, Bishop Museum Bulletins 172 (1942) and 189 (1946); for other pertinent references, see: E. H. Bryan, "Bibliography of

Micronesian entomology," Pacific Science Board (mimeographed), Honolulu, 1948. Notable are the large and beautiful spiders, very common in the brush. The conspicuous and fairly common butterflies are not very different from species of the United States, including a swallowtail (Papilio xuthus), a Monarch (Danaus archippus), a Vanessa I believe, a handsome black species with blue spots (probably Hypolimnas?), and a small white one, very common, like our "cabbage" butterfly. Honey bees (feral, as mentioned in the text) and the black native bee (Lithurgus guamensis) were encountered, possibly also leaf-cutter bees, Megachile spp.; Yellowjackets (Polistes macensis) and other, smaller wasps were seen. A moderate-sized dragonfly is probably of the Pantala spp. reported as common; also recorded for Guam are large and colorful Anax spp. dragonflies. Mosquitoes (Culex sp.) are sufficiently numerous and blood-thirsty to be a nuisance.

6/ No general reference on the various groups of invertebrates of Guam has been located or encountered. Technical papers or studies of particular groups include: E. H. Bryan, "Guam land shells," Guam Recorder XIV, 1937 (about 50 species listed); and three citations not seen -- R. Tucker Abbott, New syncerid Mollusks from the Marianas islands, Bishop Museum Occasional Papers, Vol. XIX, No. 15, 1949; J. C. Chamberlin, Three new species of false scorpions

from the island of Guam, Bishop Museum Occasional Papers, Vol. XVIII, No. 20, 1947; R. V. Chamberlin, "A new millipede and two new centipeds from Guam," Proc. Biol. Soc. Wash. 59:161-163, 1946. Ant-lions, hermit crabs, and other miscellaneous small creatures appear similar to those in other parts of the world. The coconut crab (Birgus latro) is a particularly interesting -- and rather delicious -- land crustacean.

7/ Cf. Sir Victor Brooke, F.Z.S., "On the deer of the Philippine Islands, with the description of new species," Proc. Zool. Soc. London, 1877 (pp. 51-60, Plates VIII-X). The genus or sub-genus now used for the Philippine spotted deer (a small one, of the sambar type) is Rusa, but the general name Cervus still appears in general works, such as T. D. Carter, J. E. Hill and G. H. Tate, Mammals of the Pacific World, New York (MacMillan), 1945.

8/ SEE the summary on pp. 7-8 of Economic Insects of Micronesia, Report of the Insect Control Committee for Micronesia 1947-48, compiled by E. H. Bryan, published by the National Research Council, Washington, 1949; and see technical papers by J. C. Bequaert and Albert R. Mead, published by the Museum of Comparative Zoology, Harvard (notably Bulletin, Vol. 105, 1-2, 1950).

9/ Reef heron, Demigretta (Ardea) sacra
White-tailed tropic-bird ("bos'n bird"), Phaethon lepturus
White tern, Gygis alba
Guam rail, Rallus owstoni
*Wood sandpiper, Thinga glariola

Golden plover, Pluvialis dominica fulva
 Edible-next swift, Collocalia inexpectata
 Green fruit-dove, Ptilinopus roseicapilla
 *White-throated dove, Gallicolumba xanthonura
 *Crow, Corvus kubaryi
 Dusky (Micronesian) starling, Aplonis opacus
 Cardinal honey-eater, Myzomela cardinalis
 *Kingfisher, Halcyon cinnamomeus
 *Micronesian broadbill, Myiagra oceanica
 Painted or Pygmy quail, Coturnix chinensis lineata
 (introduced)
 *Ring-necked pheasant, Phasianus colchicus (introduced)

*All these are quite, or fairly, common, except those
 asterisked; several unidentified birds, one each. Only one Ring-
 necked pheasant was noted, recently dead, in thick grass and vines.
 As to the crow, I am not even positive that I saw any, but at least
 one black bird glimpsed was definitely larger than the quite common
 Dusky Starling (which is 9" long, while the Marianas Crow is listed
 at 15"). Only two Kingfishers were seen; one of them was in the
 wrong place -- Marshall (1949) says that this species is not found
 in open shore habitats, but restricted to dense woodland and of
 secretive habits, while the conspicuous White-collared Kingfisher
 (Halcyon chloris) of open habit and shore habitat is entirely lacking
 on Guam (but is seen on Rota; certain islands have only this latter,
 which still stays out of the woods; other islands have both) -- but
 this was definitely a Micronesian Kingfisher, H. cinnamomeus, one of
 the few bird identifications on which I feel complete assurance, and
 he was sitting conspicuously on the fence at the Fr. Sanvitores

shrine on Tumon Beach.

Not recognized were the Reed warbler, Acrocephalus luscinia, and the Bridled white-eye, Zosterops conspicillata, only reported for Guam but fairly common and important. The Chinese least bittern, Ixobrychus sinensis, was observed on Rota but not on Guam.

For many of these birds, or closely related forms, including the hawks, bitterns and herons, the painted quail, megapodes, rails, kingfishers, starlings, white-eyes, see also Jean Delacour and Ernst Mayr, Birds of the Philippines, New York (MacMillan), 1946.

10/ SEE, among others, Henry W. Fowler, Fishes of Oceania, Bishop Museum Memoirs, Vol. X, 1928, and Supplements I, II, and III Memoirs, Vol. XI, Nos. 5¹ (1931) and 6² (1934), and Vol. XII, No. 2³ (1949); E. H. Bryan, "The fishes of Guam," The Guam Recorder, XV, 1938-1939.

3. Pre-Spanish People and Culture of the Marianas Islands

At an early date, the Marianas Islands (Guam, Rota, Tinian, Saipan) were reached by people from an undertermined source, perhaps from the Philippines or by way of Palau, traveling by canoe and bringing common Pacific food plants (taro, yams, breadfruit) but no domestic animals (except, very probably, poultry; not even dogs, apparently). They possessed polished stone implements and knowledge of pottery-making.

The culture of the pre-Spanish Chamorros is known principally from early historical documentary sources of the sixteenth and seventeenth centuries (great reduction of the population and marked modification of culture took place only toward 1700), and from archeological data. These sources have been discussed concisely by Laura Thompson (The Native Culture of the Marianas Islands, Bishop Museum Bulletin 185, Honolulu, 1945) and summarized very briefly in archeological reports and general historical or geographical studies. Comparisons have been made to Indonesia particularly (see especially H. Otley Beyers, Philippine and East Asian Archaeology, and Its Relation to the Origin of the Pacific Islands Population, Bulletin 29 of the National Research Council of the Philippines, University of the Philippines, Quezon City, P.I., 1948).

Little if any change in culture has been detected in the archeological remains, which appear to represent a single period of

continuous occupation, and there is no evidence to suggest that this occupation was preceded by any simpler ancient culture or more primitive people (In addition to Thompson, 1945, see Laura Thompson, Archaeology of the Marianas Islands, Bishop Museum Bulletin 100, Honolulu, 1932; Douglas Osborne, "Chamorro Archaeology," unpublished ms. on Guam sites, University of Washington, 1947 — cited herein after as "Osborne, ms." — summarized in his "Archaeology on Guam: a progress report," American Anthropologist 49:518-524, No. 4, July-September 1947 — cited as "Osborne, 1947").

— SEE, 113

Recent work on Saipan and Tinian and Rota by Alexander Spoehr of the Chicago Natural History Museum, the first thorough and systematic archeological investigations in the Marianas, may profoundly modify hitherto current conceptions of the prehistory of that area. On the basis of one as yet unpublished item of new information from Dr. Spoehr — a radiocarbon date obtained by Dr. W. F. Libby on material from a site on Saipan of 1527 B.C. plus or minus 200 — I have already deleted several statements in this report as to the supposed late date of immigration and brief period of cultural development. The date is associated with red-slipped pottery suggestive of Philippine ware and superior rather than inferior to the coarse Marianas Plainware of the latte sites.

The people who occupied the Marianas Islands in the sixteenth and seventeenth centuries, the original Chamorros, were

brown-skinned and dark-haired, and included some who were very large -- tall and heavy, with big skulls and powerful jaws -- according to historical documents and judging from bones recovered in archeological sites. ^{1/}

The language has been assigned to the Austronesian or Malayo-Polynesian stock, with especially close Indonesian connections (see, for example, W. E. Safford, "The Chamorro language of Guam," American Anthropologist V, 1903; H. Costenoble, "Chamorro language notes," Guam Recorder, XII, 1936). The comparatively small amount of linguistic work done has, however, been apparently based entirely on the modern Chamorro language of about 50 years ago; a great deal of Filipino influence from the early 1700's on may have considerably modified a tongue perhaps originally Polynesian.

As early as 1817 it was noted by a Russian visitor that the "Chamori or Mariana language has almost vanished with the people who spoke it * * * they count only in Spanish and it was difficult to get the numerals of the Mariana language. On the other hand it appears that appellations from the Philippine language have been given to many animals and objects introduced" (Chamisso in Kotzebue, 1821). A short manuscript on the Chamorro language, Lingua Mariana, by Father Sanvitores himself, is said to be in the archives of the Society of Jesus in Rome (it is hoped that a copy of this basic source will be obtained through, or at least by, Dr. R. W. Clopton, head of

the Education Department of the University of Hawaii).

The population of the southern Marianas in the sixteenth-seventeenth centuries has been estimated at from 40,000 to 100,000; of Guam alone, from 35,000 to 50,000 (see discussion below, under History, Note 10). This large population lived scattered in small local settlements; villages of 50 to 150 single-family huts along the coast, hamlets of 5 to 20 houses in the interior, an estimated total of about 180 settlements in 1668 (from the abridged translation of Garcia's Life of Sanvitores in the Guam Recorder, 1937). There were over 200 houses in aboriginal Agana, according to Father Sanvitores.

The latte stones represent the sites of such villages, coastal and — in the Fena (Talafofo) River drainage — interior; there were a great many of them 25 years ago (Hornbostel estimates 270 monument sites on the island of Guam, but this astonishingly high figure might be intended for individual house-site groups, although it wouldn't be high enough to mean the separate stones).

There are only a few stone-supported structures indicated at each site, however (2 to 12 sets of 4 to 10 pairs of latte); presumably these were either the houses of chiefs' families, or else men's clubs, or both. In the description of Tinian in 1742, George Anson says the natives assured him that the many great stone pillars on that island "were the foundations of particular buildings set

apart for those Indians only, who had engaged in some religious vow" (Walter, ed., 5th edition, London, 1749, p. 312). Guam p 148 15

In one historical source, the narrative of the Lopez de Legazpi expedition of 1565, it is stated that canoe sheds (as well as dwellings) were supported on stone pillars. The latte seen on Guam and others described by previous investigators do not seem high enough or widely spaced enough to shelter the praos 25 to 40 feet long, with an outrigger giving a total width of probably 15 feet or so, and with a mast and lateen sail, even if the mast were unstepped and the outrigger unshipped each time the canoe was stored. I do not, in short, find the boathouse explanation likely; on superficial consideration, it seems impracticable.

Actually, though, the idea of setting frame-and-thatch houses atop hemispherical stones precariously balanced on vertical slabs certainly appears, in a typhoon- and earthquake-ridden area, perfectly absurd offhand — but was clarified for me rather convincingly by Mr. Bert Bronson of Tumoning, Guam, to whom it occurred, in discussion of this on February 4, 1952, that lashing the frail but flexible house frameworks to the stones with coconut fiber ropes would give comparative security, with a strong though yielding resistance, in both tremors and, especially, high winds. This would, I believe, be true especially if the transverse floor members overlay the longitudinal stringers, and were tightly lashed directly to the

tazas only (the heads or caps, the hemispheres), and not fastened to the haleges or uprights, permitting a little play at a sort of ball-and-socket joint in temblors.

In the Palaus in the eighteenth century, the houses "were raised about three feet from the ground, placed on large stones, which appeared as if cut from the quarry, being thick and oblong; on these pedestals the foundation beams were laid, from whence sprang the upright supports of their sides" (Keate, 1788, p. 308).

The material culture of the sixteenth- and seventeenth-century Chamorros can be rather quickly summarized:

Food -- various cultivated and wild plants, and fish; no meat, except seafood (and probably coconut crabs, which are relished by modern Guamanians). Crops included yams, taro, breadfruit, coconuts, bananas (by the sixteenth century, apparently -- a somewhat uncertain point), rice (said in 1565 to be a major crop, presumably from China, Japan, or the Philippines -- not grown elsewhere in Micronesia and Polynesia). Maize and sweet potatoes and other American crop plants were added by the last quarter of the seventeenth century. Important among edible wild plants was the federico palm, Cycas circinalis, the nuts of which were used but not the sago. The fruit of the pu-ting (Barringtonia) was no doubt used, as it still is today for poisoning fish. Betel-nut (Areca) was chewed, with lime and pepper-leaf (Piper betle), as it still is by rural older people.

Domestic animals — none, not even dogs (I know of no other
area in the world to which people were not accompanied by dogs, from
Australia to the Arctic, except the comparatively nearby Palaus and
some of the far outlying islands of eastern Polynesia); except prob-
ably fowl, referred to more or less definitely in some of the early
accounts, though at least one (the Loayza voyage as narrated in
Turney, 1803) speaks only of doves kept in cages. Fowl were not
eaten, though pigeons were, in the Palaus up to 1783, according to
Captain Henry Wilson (Keate, 1788, pp. 300-301).

Clothing — men, none, save conical palm-leaf hats, and
occasionally sandals; women, a fringe or small apron or mat on a
belt. No weaving, no use of tapa (beaten paper-mulberry bark cloth).
Handwritten notes: "by the way", "long, thin, like a", "Kupen?"

Houses — of plants and thatch, presumably rectangular and
gabled (like later and modern Micronesian houses), raised on piles,
some of them on stone pillars (the latte, a unique local Marianas
development), furnished and partitioned with palm-leaf mats.

Boat-houses — canoe sheds of similar construction, also
sometimes raised on latte according to at least one source, which practice as
discussed above, seems impractical.

Canoes — the famous "flying prao," a large, swift, and
well-made sailing canoe, with single outrigger and with lateen sail
of matting.

Utensils and containers — only pottery has survived to be

found archeologically; very thick and very coarse hand-made (no wheel) reddish ware, not slipped or polished, with only a very little use of scratched or imprinted decoration, not highly fired and not very hard, evidently quite large wide-mouthed jars (a sample of potsherds from Guam and Rota has been brought in for examination, and will be reported separately). Pottery was not made in Micronesian islands other than the southern Marianas group and the Palaus (including Yap), nor anywhere in Polynesia, though produced in Melanesia clear out through Fiji. The southern Marianas pottery differs in certain important respects from that of Melanesia (cf. E. W. Gifford, Archaeological excavations in Fiji, Anthropological Records 13:3, University of California Press, 1951; the material from Fiji examined and discussed with Mr. Gifford at the University of California Museum of Anthropology at Berkeley January 9, 1952).

Undoubtedly baskets as well as wooden bowls were made, and undoubtedly coconut shells, bamboo joints, etc., and large shells, also were used as containers.

Implements, tools, and weapons — made of stone, shell, wood, bone, etc. Boulder mortars were used for grinding, and are still to be found, rather small cylindrical holes in often sizable rocks. The stone "pestles" found are short pebbles, shaped and used, which do not seem particularly suited for use in these mortars, but one was seen in current use with a small stone mortar at a farm-house

at Mochon Point on Rota. Bell-shaped limestone pounders of Caroline Islands type are also recorded from the Marianas.

The tripodal stone metate was introduced from Mexico in the seventeenth or eighteenth century, and is still to be seen in outlying villages on Guam. Metates cast of concrete by the Japanese for sale to the natives are still in use in the other islands and are found also on Guam.

Other stone objects found include well-made adzes and chisels with polished edges (similar to Melanesian rather than Polynesian types: cf. Gifford, 1951), crudely chipped flint knives or scrapers, hammers and pounders, net sinkers and slingstones. Bone implements of the pre-1700 Chamorros included barbed spearheads (largely of human tibiae, as in Melanesia more recently), and "needles" or awls (for making basketry or matting, I presume). Perforated tortoise-shell disks are said to have served as trophies and currency. Many things were made from shell -- fishhooks and gorges, adzes and scrapers, spoons, knives and awls, perforated shell disks (currency); shell rings are also found which are believed to have been imported from the Caroline Islands. Spears and slings were the only weapons; bows and arrows were unknown in the pre-Spanish Marianas as in the rest of Micronesia and Polynesia generally.

Social organization need not be gone into here: matri-lineal clans, monogamy, a well-developed caste system of three

distinct classes, ancestor cult and shamans, are reported (Garcia's life of Sanvitores, 1683, translation in the Guam Recorder, 1936-1939). *✓ corrected p. 10.*

COMMON 870

Of the pre-Spanish (and early historic) culture the following material remains have survived to be found archeologically:

- the latte stones at former village sites
- stone mortars, pestles and pounders, polished
- stone adzes and chisels, rough hammers and
- chipped scrapers
- pottery, almost entirely in sherds
- bone awls or needles
- bone spearheads (of human tibiae)
- slingstones
- stone net-sinkers
- shell fishhooks and gorges
- shell adzes, scrapers, spoons
- perforated shell disks; rings

For pertinent references, in addition to those already cited in this section, and general works on Oceania such as Douglas Oliver, The Pacific Islands (Cambridge, 1951) or Felix M. Keesing, Native Peoples of the Pacific World (New York, MacMillan, 1946), see C. R. H. Taylor, A Pacific Bibliography, printed matter relating to the native peoples of Polynesia, Melanesia, and Micronesia, Memoir

NOTE ON PHYSICAL ANTHROPOLOGY

1/ Among the few published papers on skeletal material from the Marianas, an interesting one is F. Wood Jones, "On two mandibles from Guam," Australian Journal of Dentistry, July 1, 1931, which describes the jaws as very massive, comparable to New Caledonians, with prominent square chins. There is also his unpublished "Skulls from Guam" (ms. at the Bishop Museum). -- I have not read it, but a few of the series of 88 crania were seen on January 14, 1952, at the Bishop Museum, with Dr. Charles Snow of the University of Kentucky, who was then working on Hawaiian skeletal material there. -- The skulls are very large and muscular, and the lower jaws are enormous. The comparison to the Heidelberg jaw made by R. W. Leigh (op. cit. infra) is, as Wood Jones (1931) points out, purely metrical and not morphological -- and meaningless, actually -- but the correspondence in measurements is quite striking.

Skeletal material from the Marianas of Dr. Spoehr's, examined cursorily at the Chicago Museum of Natural History on May 5, 1952, includes a few strongly-built men but obviously none of gigantic stature, and a few small skulls of distinctly Melanesian effect.

Wood Jones' unpublished description of Guam skulls is

UNIVERSITY OF MICHIGAN LIBRARY

partly summarized in a recent paper by Edward E. Hunt, Jr., "A view of somatology and serology in Micronesia," American Journal of Physical Anthropology, 8:157-184, No. 2, June 1950. Features mentioned include "an oval or ovoid vault, broad zygomatic arches [cheek-bones] * * * and well-defined temporal crests. Although a glabellar eminence [forehead prominent above the nose] is often seen in the males, the brow-ridges are usually not strongly developed. The palate is broad and the teeth large. The mandible is generally massive." (Hunt, 1950, 161-162.)

Another specific reference on Chamorro skulls is: Otto Schlaginhaufen, "Ueber eine Schaedelserie von den Marianen," Jahrbuch 1905 der St. Gallischen Naturwissenschaftlichen Gesellschaft, 454-559, 1905 (not seen — cited by Hunt). Schlaginhaufen measured 33 old Chamorro skulls from Saipan; the series showed considerable range in cranial index, forward and lateral projection of the malars (cheek-bones), slight alveolar prognathism (protrusion of the jaws), and low and rather flat noses (Hunt, 1950, 161).

Among the Japanese papers on Micronesian physical anthropology cited by Mr. Hunt, only one is concerned with skeletal material from the Marianas (and from Palau and Truk also — Seiji Arai, "On the cranium and extremity bones of Micronesians," Kagaku Nanyo 4:1-14, 1941). Hunt says that Arai found that the Chamorro and Palau skulls were larger and broader than those from Truk, and noted the strong

temporal and neck muscle attachments, narrow foreheads and nasion depression (the root of the nose low, under a prominent glabella), and massive lower jaws.

Finally, there is also a specialized study published on teeth from the Chamorro skulls: R. W. Leigh, "Dental Morphology and pathology of prehistoric Guam," Memoirs of the B. P. Bishop Museum 11:257-273, Honolulu, 1929. Very little caries (dental decay, resulting in cavities) was observed, but teeth had been lost frequently over the age of about 35.

The skeletal material from Guam in the Bishop Museum is currently being studied by Professor Riesenbergr of the Anthropology Department of the University of Hawaii, and a full report may be anticipated.

The present-day people of the Marianas are quite different, with only a few gigantic individuals of the old Chamorro type surviving in southern Guam. The native population was reduced from perhaps 50,000 to about 4,000 during the last quarter of the seventeenth century, and a considerable number of soldiers and settlers from the Philippine Islands were brought in by the Spaniards in the eighteenth and nineteenth centuries. The modern Guamanians and Saipanese are a mixture of Chamorro (and Carolinian, surely), Spanish, Mexican Indian, and Filipino, with the last the predominant element. Many of them would not look out of place in the Southwest or northern Mexico.

Hunt's paper (loc. cit.; 1950) is largely concerned with living Micronesians. He first discusses the anthropometry and metric types, on the basis mainly of K. Hasebe, "The natives of the South Sea Archipelago [Micronesia]," Jinruigaku Senshigaku Koza [Anthropology and Archeology Lectures] 1:1-35, Tokyo, 1938 (in Japanese; a manuscript English translation by SCAP available to Hunt, not seen by me), and summarizes Hasebe's theory of Micronesian racial history, involving several migrations. Hunt then takes up blood-group distributions (not used by Hasebe at all), other recent research and current theories on Micronesian anthropology.

The major points relating to the Marianas in Hunt's survey are weakened, I believe, by underrating the importance of post-1700 Spanish, Mexican, and Filipino elements: "The craniological evidence suggests that the aboriginal Chamorros were related to the other high islanders in western Micronesia [p. 162]. In the living, the western high islanders, including the Saipan Chamorros [who are of Guamanian type and derivation], are more Mongoloid than (the others) today. Indeed, the Chamorros now are metrically the most Mongoloid group in all Micronesia [p. 163] -- this may be misleading or meaningless except, perhaps, to anthropologists -- although many skull measurements are close to those of Orientals, the people do not resemble Chinese, Japanese, or Mongol types, with the exception of occasional individuals; but they are

ry like Filipinos and some Mexican types, and hence are "more
ngoloid" than the distinctly non-Mongoloid people of the Carolines
d Marshalls and Polynesia⁷. How much of this specialization comes
om recent admixture with Filipinos, Mexicans, and others, however,
not yet certain. [[]P. 164 — obviously much of it is, from historical
ta and eighteenth-century population figures⁷* * * The Chamorros of
; Marianas are metrically the most Mongoloid group, although they do
; have the high percentage of gene q (the "B" agglutinin) which
ually characterizes Mongoloids nearer Asia [[]p. 180 — actually, as I
derstand it, blood-group B is distinctively characteristic of Mongoloids
d others in Asia, and a very low percentage or entire absence of B
pears in the Philippines as well as in Polynesia generally and
ong American Indians other than Eskimo⁷."

Micronesia and Melanesia are regions of short stature,
ording to H. L. Shapiro (The Physical Characteristics of the
long Javanese, APAMNH 33-3, 1933; and The Anthropometry of Pukapuka,
AMNH 38-2, 1942). The average statures of groups of males in
lanesia run up only to 171 cm. (5'7 $\frac{1}{4}$ " in Fiji, where there is
lynesian admixture), and the Micronesian means of stature of male
ries from the Carolines, Marshalls, and Gilberts, "fall generally
etween 160 and 165 cms." (or, only 5'3" to 5'5" — Shapiro,
ukapuka, p. 167). In contrast, Polynesian male group means for the
ost part range between 169 and 172 cm., or 5'6 $\frac{1}{2}$ " to 5'8", with a
ew higher ones (a Tonga series 173 cm., Easter Island between

173 and 174, and Rarotonga 174 to 175) and one markedly smaller (Pukapuka 166 cm., or 5'5 $\frac{1}{4}$ ").

Unfortunately, I have no figures on stature in the Marianas, for either modern Guamanians or early Chamorros. The present-day people are, with rare exceptions, of small stature; at least some of the original people were very tall like Polynesians. There are, however, a few early references to small very dark people who formed the lowest caste.

Of several possible theories to explain the shorter darker folk, the obvious reasonable and likely assumption is that a Melanesoid or typical Micronesian population (the few Marshallese and Palauans I've seen were small, or of moderate stature, and very dark, with rather Melanesian or Australoid features) was dominated by a group of tall and heavy brown-skinned Polynesians, the Chamorros proper. A separate later arrival of this ruling class is an equally obvious theory, for which there is no known evidence whatever; it is possible that the short dark slaves accompanied the Chamorros proper in a single immigration, if it was from a source to the south or southwest, and if it was sufficiently late that the Melanesians (?) had not been absorbed, had not amalgamated with the Polynesians, by the sixteenth century; it is also highly possible that they derived from occasional Carolinian voyages to Guam, such as are historically documented for 1721, 1788, and 1804 onward. This would fit with

the occurrence archeologically of artifacts of Caroline Island types (bell-shaped stone pounders, Conus shell rings -- Thompson, 1932, pages 41 and 57), which could also, of course, derive from the eighteenth-century or even the nineteenth-century Carolinian visits and small-scale immigrations.

In any case, at least a major and typical group of the original Chamorros evidently were of Polynesian rather than Oceanic Negroid or Oriental Mongoloid type, tall and heavy, with light or medium brown skins, black or very dark brown hair and eyes, no doubt the soft, fine, wavy to curly hair of Polynesians rather than either the straight, heavy, Mongoloid type of black hair or the sharply curved Negroid "frizzly" variety, and with the "Caucasoid" (actually, Ainoid-Australoid) features of many Oceanic peoples.

A description by an Englishman in 1686 is more helpful than most early travelers' comments: "The natives of this island [Guahan] are strong-bodied, large-limbed. They are copper-coloured, like other Indians; their hair is black and long, their eyes meanly proportioned; they have pretty high noses; their lips are pretty full, and their teeth indifferent white. They are long-visaged, and stern of countenance, yet we found them to be affable and courteous." (William Dampier, A New Voyage Around the World, Vol. I, Ch. 10.)

The first description of Palauans is also interesting and pertinent: "The natives of these islands are a stout, well-made

people, rather above the middling stature; their complexions are of a far deeper colour than what is understood by the Indian copper, but not black. * * * Their hair is long and flowing, rather disposed to curl" (George Keate, An Account of the Pelew Islands, * * * Captain Henry Wilson, * * *, London, Second Edition, 1788, p. 318).

ADDENDUM: A newly-published paper bearing on the subject is: R. T. Simmons, J. S. Graydon, N. M. Semple, Joseph B. Birdsell, John D. Milbourne, and J. R. Lee, "A collaborative genetical survey in Marshall Islanders," *AJPA* 10:31-54, No. 1-March 1952. In this collaborative study, Dr. Birdsell has summarized the several theories on the racial affiliations of Micronesians as follows:

1. W. W. Howells — allied to Polynesian with a strong Indonesian influence (a brief comment in his Mankind So Far, New York, 1944; E. A. Hooton, in Up from the Ape, New York, 1946, is more discreet and does not mention Micronesians specifically);
2. Hasebe (Hunt, 1950) — combination of negroids, a "small generalized" type, Polynesians and Indonesian Mongoloids;
3. Birdsell — negritoid, "Caucasoid" (Ainoid), and Mongoloid basic components;
4. J. Avias ("Les groupes sanguins des Neo-Caledoniens et des Oceaniens en general du point de vue de l'anthropologie raciale," L'Anthropologie 53:209-239, 434-477, 1949) —

mixture of Melanesian, Indonesian, Polynesian, and recent Asiatic Mongoloid elements.

The results of blood-group testing, as given in this article, do not support the suggestions of Indonesian and Mongoloid and Polynesian elements or admixture, and show little difference between Marshallese and Papuans (Melanesians).

4. History of the Marianas Islands, 1521-1941

The first European discovery from the eastward of islands in the Pacific Ocean was that of the Marianas by Ferdinand Magellan, in 1521. Emerging into the South Sea, through the ice-choked strait which bears his name, in November 1520, Magellan, with his little fleet, crossed the entire eastern and central Pacific without sighting a single inhabited island until his landfall in the Marianas on March 6, 1521. The exact point is uncertain; Umatac Bay, where the Magellan monument is situated, is only one possibility.^{1/}

Proceeding westward, after a few days, to the Philippines, Magellan was killed on Mactan in April. His chief pilot, Sebastian del Cano, continued on from the Philippines, through the Indies and across the Indian Ocean and around Cape Horn into the Atlantic, arriving back at Seville on September 8, 1522, with one ship, Vittoria, and 31 of the original 237 men completing the first circumnavigation of the earth.

Cano set out to repeat the voyage in 1525-26, as Garcia Jofre de Loayza's second officer, and again struck across the open Pacific to the Marianas Islands. Loayza and Cano both died before the Marianas were reached; the fleet put in at Guam^{2/} to take on water, September 4-10, 1526, under the command of Alonso de Salazar, who died in the Marianas. The expedition continued on to Mindanao

and the Moluccas.

Loayza's party picked up and took along a Spaniard, Gonzalo de Vigo, who had jumped ship from Magellan's crew and had lived among the Chamorros for five years.^{3/}

Alvaro de Saavedra Ceron, in 1527-29, sailed from Acapulco to the Marianas, striking the Caroline Islands for the first time.^{4/} From Guam,^{5a/} Saavedra continued across to the Philippines and then down to Papua. In 1542 (?) Juan Gaetano, also sailing from Mexico, visited Guam in the course of his voyage.^{5b/}

In 1565, Miguel Lopez de Legazpi landed on Tinian or Guam,^{5c/} or both. The first Mass in the Marianas Islands was celebrated by the Augustinian fathers with his expedition on January 22, 1565. Heretofore, the Spanish voyages in the Pacific Ocean had been purely exploratory, but in 1565 opens the second period of the history of the Pacific, with the beginnings of Spanish colonization and exploitation following up the explorations and discoveries of the preceding 45 years.

In 1565 the first Spanish settlement in the Philippines was established by Lopez de Legazpi at Cebu (Manila and Cavite were founded, by him also, in 1571). In the same year of 1565, Andres de Urdaneta discovered the northern seaway, or "Urdaneta's passage," in latitude 35° N., where the prevailing westerlies made for comparatively safe and fast eastward crossings. The Spanish galleons from

the Philippines to Mexico used this route for the next 250 years. Regularly from 1568 on, the annual Manila galleon, on the outward voyage west from Mexico, crossed the Pacific in about latitude 12° - 13° N., directly to Guam, leaving Acapulco in March and reaching the Marianas in June, halting briefly to take on fresh water at Umatac Bay, and continuing west across the Philippine Sea to Luzon. The return voyage was made farther north with no stops, crossing north of the Hawaiian Islands to the southern California or Lower California coast and on down to Acapulco.

For much of that period, English seamen and privateers, beginning in 1587 with Thomas Cavendish, the third circumnavigator of the globe, if not with Drake himself in 1579, followed much the same route across the Pacific to the Marianas, hoping to fall in with the Manila galleon and plundering the Spaniards afloat and ashore all along the coasts of South America and Mexico.^{6/}

Few, if any, visits by Englishmen followed immediately thereafter, during the rest of the Elizabethan period and the early seventeenth century. At this time, however, the Dutch were expanding their overseas empire, competing with scarcely larger Portugal in the East Indies, a story climaxed with Tasman's circumnavigation of Australia in the 1640's. Dutch visitors to Guam during this period included Oliver Van Noort in 1600, Joris Spilbergen in 1616, and the great Nassau Fleet under the command of Jacob l'Eremitte in 1625.

Guam, and the rest of the Marianas Islands, from 1565 on, were, like the Philippines, part of New Spain and ruled by the Viceroy in Mexico, whose domain eventually extended from the Mississippi River to Manila, from Yucatan to Nootka Sound. No actual Spanish establishment was founded in the Marianas, however, during the first hundred years that the Manila galleon stopped there regularly. Presumably Spanish contacts with the natives from 1568 to 1668 were comparatively slight and limited for the most part to occasional trading at Umatac Bay. To what extent the Chamorros acquired new material objects from the Spaniards during this period is not known.

A single Franciscan priest and a few Spanish soldiers are reported to have stayed about a year on Guam in 1596-97. There is an account of a Spanish ship, Santa Margarita, its crew weakened by illness, being taken and plundered by the natives at Saipan in 1600. Another vessel, Concepcion, en route to Manila, was wrecked off Tinian in 1638, but survivors were, according to report, well treated; two crew members from the East Indies are said to have stayed, and in 1668 a European (? -- "a Christian named Pedro," says the original source) was found by the first missionary settlement. A survivor from the Concepcion, he had lived in the southern Marianas (probably on Tinian?) for 30 years.

Actual occupation of Guam and conversion of the Chamorros began with the arrival, from Manila by way of Acapulco, of Father

Diego Luis de Sanvitores, S. J., a native of Burgos, accompanied by five other priests^{7/} and a guard of 33 Spanish soldiers, on June 15, 1668, ^{8/} 147 years after the Marianas were first sighted by Europeans. Promptly the "Christian named Pedro" brought his two-year-old daughter to be baptized. She was christened Mariana, and the islands, hitherto called the Ladrones, were named the Marianas (Garcia's Life of Sanvitores, Madrid, 1683, p. 192).

At first well received, the venerable Father and his companions established their mission at Agana and built a church of palomaria wood. Dedicated to the Dulce Nombre de Maria, this structure was completed in a matter of months and formally opened February 2, 1669. A priests' house was also built. Fr. Medina visited all the settlements of Guam, baptizing 3,000 souls (all children?) in three months. Fr. Casanova went to Rota, Fr. Cardenoso and Fr. Morales to Tinian. Fr. Sanvitores himself remained in Agana (the student or lay brother Lorenzo Bustillo stayed with him), but in October 1668 he visited Saipan, with Fr. Morales from Tinian. All went well for a while.

Difficulties arose, however, the natives resisting conversion and colonization. They objected particularly to baptism of infants. One priest -- Fr. Luis de Medina -- was killed, and with him his secular companion (a Filipino or possibly a converted Chamorro?) Hipolito de la Cruz, on Saipan in January 1670, having insisted on baptizing a child who thereupon died. Fr. Sanvitores

himself was martyred on April 2, 1672, at the age of 45, by a Chamorro chieftain whose child he had baptized against the father's will. ^{9/} With him was killed his secular companion or servant, a Filipino. Native resistance was ascribed, and still is, to the influence of a Chinese, called "Choco," living near Merizo, who had been the only survivor of a sampan wrecked on Guam in 1648, and who had attained a position of power or prominence in the southern part of the island.

The rest of the seventeenth century is often described in general or secondary works as a period of continuous fighting, or 23 years of warfare and violent conquest. At the end of the struggle, say these accounts, the population had been reduced -- supposedly by Spanish attacks and massacres, and by Chamorro suicides to escape subjugation -- from an original total estimated between 50,000 and 100,000 to less than 5,000.

All this, or all except the population figures, is a misapprehension or exaggeration. To a certain extent, or in some cases, this story, I believe, is the result of deliberate or unconscious misrepresentation by anti-Spanish and anti-Catholic writers of English tradition.

The marked reduction in population is apparently genuine: a surprisingly high estimate, not less than 50,000 for the total, and possibly 50,000 on Guam alone, must be accepted; ^{10/} and figures on the native population after 1700 do not exceed 5,000.

The decrease was brought about, however, by the devastating typhoons of 1671 and 1693, and above all by epidemics of European diseases new to the natives, as happened also in the Americas, as well as by warfare and other direct Spanish action. Rather than continuous fierce combat and large-scale massacres, the true picture evidently would be of intermittent violence during a long period of uncertainty and tension, and gradual Spanish domination. The fighting was clearly sporadic and small-scale, though not without its dramatic episodes, rather than a determined conquest and systematic decimation. The mass suicide business, the noble savage preferring death to loss of freedom, I discount completely as invention of later writers, quite possibly based on a few actual cases of individual Chamorro leaders killing themselves.

In 1671, when the trouble was beginning, there were altogether 31 soldiers on hand, 12 of them Spanish (probably including, or largely, Mexican creoles) and 19 Filipino; some were armed with bows and arrows, others with firearms. At least one cannon is specifically mentioned also. During 1669 Fr. Sanvitores had gone up to Tinian, accompanied by two Spaniards and 9 Filipino soldiers, with 3 muskets and 1 fieldpiece, to break up a civil war on that island. A few more soldiers, and an additional Jesuit priest,^{11/} arrived in the galleon from Mexico on June 9, 1671. A converted local boy was murdered on the road by other Chamorros that month, and

the "war of Guam" gradually began during the early summer of 1671 (there is apparently no record of any punitive expedition to Saipan following the death of Fr. Medina). There were altogether between 70 and 80 killed on Guam, churchmen and garrison, from 1671 to 1684 (only about 30 from 1671 through 1676, then 40 or 50 in the outbreak of July 23, 1684), and 51 others in the other islands.^{12/} Eleven of the victims were Jesuit missionary priests.

Fighting did not begin fast and hard, it would seem. Only one Spanish death on Guam is recorded for 1671 -- Jose de Peralta, "killed in the hills," September. The Spaniards concentrated in Agana, evidently; they stockaded the church and waited. They were attacked in September by about or over 2,000 natives, who were repulsed with no Spanish casualties. The battle was interrupted by the typhoon of September 8, which partly destroyed the church; a small chapel was formed in the ruins, and defended against resumed Chamorro attacks, which continued into October for a total of 40 days, still with no losses to the Spanish.

After this determined attempt to eject the invaders, the Chamorros must have temporarily submitted or at least subsided; and, though practically without evidence for this, I have an idea that the Spaniards moved rather slowly and discreetly. Surprisingly, I have found no reference to punitive action upon the killing of Fr. Samvitores himself (— either Garcia omits that or I missed it, for

at least the individual who struck him down surely would have been taken and executed). His death followed a group of five other killings, all on March 31, 1672, suggestive of a general or coordinated outbreak, apparently localized in the Epau-Tumon vicinity. These five victims were laymen, bore Spanish names, ^{and} presumably were ^{was} soldiers. One [^] a native of Mexico, one "a Spaniard," the other three not specified, possibly Filipinos? (for reference see Note 12). No further action during the rest of 1672 and all of 1673 is given in my notes (not necessarily true of the sources -- originals not available, and published translations only hastily reviewed).^{13/} Three natives from the Marianas were taken to visit Mexico and Madrid in 1671-74.

Trouble began again with "another outbreak" in February 1674, apparently ending a quiet period. A priest and five companions were killed on the road between Umatac and Agat, evidently near Ceti Bay. In June 1674, Captain Damian de Esplana arrived (on the regular galleon from Acapulco); he improved the fortifications of Agana, built two new schools, trails and roads, and new (?) churches at Ritidian, Tarague, and Tepungan. He also led "punitive" expeditions against the natives; an unusual episode was the battle in the water off Tumon, on November 14, 1674, with Spaniards -- presumably in armor and on horseback -- charging native canoes. No losses to the Spanish force are recorded.

The only item I have for 1675 is the killing of a Jesuit father and two soldiers at Ritidian, on December 9, in the list of 1671-1684 "victims." Another priest was killed in January 1676; during that year Captain Esplana was replaced by Don Francisco de Irrisari y Vinar, the first commander with the title of Governor of the Marianas. In the fall of 1676, the Chamorros, justifiably provoked (it says in my notes; this must be my own summation of a series of incidents, surely not a statement by Garcia or Gobien or even Burney), rose again and attacked Sumay, destroying the mission there and wiping out the garrison (Fr. Monroy, Lt. Gov. Carbajal, and 6 soldiers, all from Mexico, were killed "in the sea before Sumay" on October 6; another soldier was killed on Guam during the month). The natives attacked Agana repeatedly in 1676-77, and were repulsed with heavy losses. The church was rebuilt at a different location during 1676.

For the next several years, 1678-1683, the Spaniards took the initiative vigorously; Governor Salas, 1678-80 and particularly the hard and capable Don Jose de Quiroga (as Governor, and as lieutenant to Governor Sarana) from 1680 into 1683, prosecuted relentlessly a systematic campaign of reduction, destroying Chamorro villages and effectively subduing the obstinate resistance of the people on Guam, with evidently heavy casualties to the natives but no recorded Spanish losses. The survivors were concentrated in

towns at Inapsan, Pago (a new foundation), Inarajan, Merizo, Umatac, Agat (also a new mission center, begun in 1680), and Agana.^{14/} Later in 1683, Captain Esplana, here as Governor for the second time, and Quiroga, as his lieutenant, conquered Saipan and Tinian and Rota in a brief campaign.

In the summer of 1684 a sudden revolt of the Chamorros on Guam, led by Antonio Yura, the chief of Apuguan, was temporarily nearly successful — on Sunday, July 23, between 40 and 50 Spanish soldiers were killed in the plaza and streets of Agana, and two Jesuits in the College; another priest, Fr. Teofilo de Angeles, was martyred at Ritidian the following day — but the rising was finally put down.^{15/}

Most of the remaining people of Guam fled to Rota and other islands, the "conquest" in 1683 probably having been temporary and formal, not implemented by occupation. A visiting Englishman in 1686, the far-wandering William Dampier, R.N.,^{16/} summarizes the uprising: "Not long before we arrived here, the natives rose on the Spaniards to destroy them, and did kill many; but the Governor with his soldiers at length prevailed * * * There were then 3 or 400 [!] Indians on this Island, but now there are not above 100, for all that were in this conspiracy went away to other islands." (William Dampier, A new voyage around the world, Vol. I, ch. 10)

The figure of only three or four hundred natives may be a mistake

for 3,000 or 4,000, which would sound more likely: however, many of the Chamorros of Guam might previously have already judiciously removed themselves to the other southern Marianas.

Another of the English navigators and privateers, Captain Eaton, is said to have visited Guam in 1684; but I have nothing more than his statement on it. Aside from Swan and Dampier's visit in 1686, I have nothing for the years 1685 to 1688; presumably the strife died down. In 1686 the Spanish military force was quite small, according to Dampier, and the missionary staff likewise: "The Spaniards have a small Fort on the west side, near the south end, with 6 guns in it [this is readily identified as Umatac Bay]. There is a Governor, and 20 or 30 Spanish soldiers. There are no more Spaniards on this island, beside 2 or 3 priests."

In a Spanish source, settlements on Guam at about this time are described as follows: "there are seven ports; that of San Antonio which is in the western part near a town which the natives call Hati, in which port there are two good rivers from which to obtain water [this is Ceti Bay; the name still is "Hati" to the local people]. Another port, which was visited by the Dutch for some three months during past years, careening their ships, is half a league from the point that divides the inlet of San Antonio from the southern part and faces a village called in their language [not meaning Dutch but Chamorro] Humatag. It has a good river where the

Dutch obtained water [this certainly implies that the Spanish ships, the Manila galleons, did not stop at Umatac at this period but in Apra harbor] * * * [other bays, without settlements or special interest, are described — evidently including, under other names, locations around to and including Inarajan; and in the other direction Seja Bay] continuing northward, near the town of San Ignacio de Agadna, where now are located the principal church and the house of the fathers of the Company [the priests of the Society of Jesus; the Jesuit order is called in Spanish the Compania de Jesus], the best port [i.e., Apra]."^{17/}

About the only other specific information I have is a statement, also from Sanvitores (by way of Garcia), referring to a slightly earlier period, about 1681, that "the Seminary for Boys today is in very good condition * * * a house of three capacious rooms, with a chapel of our Lady of Guadalupe."

The first severe epidemic in the Marianas was, according to Gobien, in 1688, from the ship which arrived from Mexico in June: the disease as briefly described sounds like influenza of some type, such as devastated populations in Middle America.

Esplana was governor again, 1690-94; and Quiroga again in 1694-95, during which period he again and definitely conquered Saipan, Tinian, and Rota, beginning in October 1694 a major campaign which was climaxed by a final battle on the islet of Aguijan in

July 1695, in which the Tinian people, including refugees from Guam, were subdued and brought to Guam. In 1696, the few Chamorros remaining on Saipan and Tinian were rounded up by Governor Jose Medraza, without resistance; by 1698, although a small number of Chamorros hid out on Rota, the population had been concentrated on Guam, and the other islands were practically uninhabited (and remained so for 120 years, except for continued small-scale occupation of Rota, where there were 234 natives in 1753).

Finally, as the seventeenth century ended, a terrible epidemic of smallpox completed the virtual extermination of the native population of the Marianas Islands.

In the eighteenth century, Guam was evidently a quiet outpost of the great dominion of New Spain, with a Spanish garrison of around 150 soldiers; the population gradually increased, largely by immigration of Filipinos under Spanish auspices. There were 95 mestizos (Spanish or Filipino x Chamorro) in 1726, and 764 in 1753; by 1790 there were 1,825 mixed-bloods. In 1783, the population of Guam totalled 3,231, about half "natives" (largely mestizo) and the other half including 151 soldiers, 818 other Spaniards and creoles (born overseas of Spanish parentage), and 648 Filipinos. In 1786 the low point was reached of 1,318 "natives" on Guam.^{18/} As early as 1781, natives and other local people were on an equal footing with other Spanish subjects, with full rights of citizenship.

Several English ships visited the Marianas during the eighteenth century. Dampier had been to Guam a second time, in Roebeck, in 1699 (see Note 20); in 1705, Rota was visited by William Funnell, who had been with Dampier.^{19/} In 1710 Guam was host briefly to an unusual group of travelers, headed by the eminent English privateer Captain Woodes Rogers, who had shortly before taken the 1709 Manila galleon. With him were, among others, William Dampier on his third or fourth visit;^{20/} Alexander Selkirk, the original of Robinson Crusoe, who had just been picked up on this voyage from his stay on Juan Fernandez Island off the South American coast; and Simon Hatley, the original of the Ancient Mariner, who in 1719 killed an albatross and was presently immortalized for that deed. In 1721 another English navigator, John Clipperton in Success, called at Guam and, like some of his predecessors, had a little difficulty with the Spanish Governor.

Another quite different group of visitors is recorded in 1721. Two canoe-loads of Caroline Islanders (15 men, 8 women, and 7 children) arrived from the south and stayed four months on Guam, trading for and accumulating iron objects.^{21/} Later, there was a supposedly accidental voyage from Yap in the 1760's, and another intentional trading visit from Carolinians is recorded in 1788.

Returning to the parade of noted English pirates, a distinguished visitor to the Marianas in 1742 (no company during the 20 years 1722-1741 is recorded) was George Anson, R.N., on Tinian for

several months of that year.^{22/} Anson described the beauty of the island, and recorded and sketched the great latte site near the landing-place (the House of Taga). Tinian was not permanently inhabited at this time, but Anson found -- and captured -- a Spanish sergeant and a party of "Indians" hunting cattle and jerking beef for the garrison of Guam. There were many wild cattle and an abundance of domestic poultry on Tinian.

Anson describes Guam as "the only settlement (in the Marianas) of the Spaniards; here they keep a governor and garrison, and here the Manila ship generally touches for refreshment in her passage from Acapulco to the Philippines. The Spanish troops employed at this island consist of 3 companies of foot, betwixt 40 men each; and", he adds, "this is the principal strength the Governor has to depend on, for he cannot rely on any assistance from the Indian inhabitants, being generally upon ill terms with them, and so apprehensive of them that he has debarred them the use of both firearms and lances * * * the Spaniards on the island of Guam are extremely few, compared to the Indian inhabitants."

the
Anson stated (1749) edition, p. 338) that total population of Guam was close to 4,000, of which about 1,000 were in San Ignatio de Agaña, where the Governor generally resided. There were, he estimated, 13 or 14 additional villages on the island. He referred to the Castle of San Angelo, with only five guns, 8-pounders, near the roadstead where the Manila ship usually anchored (Umatac Bay), and to the Castle of St. Lewis, 4 leagues northeast, with the same armament,

protecting a road where anchored a small vessel which arrived every other year from Manila (San Luis de Apra). "And besides these forts, here is a battery of five pieces of cannon on an eminence near the seashore" (the fort on the ridge behind Agana?).

Tinian was also visited by Commodore John Byron, R.N., in 1765, by Captain Samuel Wallis, R.N. in 1767; ^{23/} by Captain Gilbert in 1788, and by Lt. Mortimer in 1789. ^{24/}

Upon the expulsion of the Jesuits from all Spanish dominions in 1768, the propagation of the faith in the Marianas was taken over, beginning in 1769, by the Recollect friars of St. Augustine under the diocese of Cebu and the Archbishop of Manila).

Other than regular Spanish contacts and English privateers and explorers who paused at Tinian, few Europeans visited the Marianas during the eighteenth century.

A French traveler in 1772, Crozet on the Mascarin, referred to Guam as "the only island in the vast extent of the South Sea, sprinkled as it is with innumerable islands, which has a European-built town, a church, fortifications, and a civilised population," and described Agana, the brick battery protecting Apra Harbor (Fort St. Louis, with eight bronze 12-pounders of old pattern), and the 21 small Indian settlements, each village of 5 or 6 families,

scattered about the coast, the densely forested interior of the island being uncleared, unoccupied, and uncultivated. The total population is given as only "about 1500 Indians." Cotton mills and salt pans had recently been introduced by Governor Tobias.

The town of Agana had a beautiful church, highly decorated; the Commandant's House, spacious and well-built; barracks and magazine. The former residence of the Jesuits was now occupied by Augustinian friars; the former Jesuit college was not in use. ^{25/}

Another, better -known, French voyager, the scientific explorer La Perouse, visited the northern Marianas in 1786. ^{26/} In general references which mention La Perouse, I have picked up nothing to indicate he visited Guam. The first scientific survey of the southern Marianas was made in 1792 by naturalists of Malaspina's expedition.

Very little information on eighteenth-century Guam appears to be available from Spanish sources. Presumably the archives in Mexico have not been fully exploited for this particular subject. The same is true also for the first half of the nineteenth century; most of the data at hand are provided by outside visitors, Europeans, other than Spanish, and Americans.

The first description comes from the journal of William Haswell, first officer of the Lydia out of Boston (sailed in March 1801 for Manila and Canton, stopped on Guam during January and

February 1802).^{27/} Haswell mentions the small deer (already protected by law against hunting), wild hogs, and large bats; crops and possessions of the people; "neatly thatched basketwork houses about 12 feet from the ground"; describes Agana as a pleasant town of 6 streets, 500 buildings and 1,800 people, with two forts — one of 4 guns at the landing-place (near Piti), one of 7 guns on the hill-side above the town; and gives details on Umatac, Apra Harbor, troops and defenses. The population is estimated at 11,000 inhabitants; "the Governor and four Fryars are the only Spaniards from Old Spain, the others are from Peru, Manila, &c."^{28/} At least one other American ship touched at Guam early in the century, the Maria of Boston, Captain Samuel Williams, sailing from Manila in 1812 to make a survey of the Carolines.

Guam lost regular contact with the outside world through the Philippines and Mexico about the time of these American visits. The last of the Manila galleons left Acapulco in 1805 (but another general secondary source, Searles in 1936, says that in 1807 the Manila galleon richly laden from Acapulco wrecked and sank in Apra Harbor); the last return voyage from the Philippines to Mexico was in 1811.^{29/} In 1817, during the revolutionary period in Spanish America, the administrative control of Guam was moved from Mexico to Manila.

At the same time, closer local contacts developed. As mentioned above, a group of Caroline Islanders had made a trading

p53
on 21

voyage to Guam in 1788. Beginning in 1804, such trips were made regularly each year by Carolinians, assembling a fleet of their outrigger canoes at Lamorek in April, sailing to Guam in five days, trading for iron, and returning to the Carolines in May or June.^{30/}

Canoes such as had formerly been made by the Chamorros were now obtained on Guam in this way. Later, groups of Carolinians stayed and settled in the Marianas, remaining separate from the Chamorros and retaining their distinct language and customs.

A small colony of Hawaiians was established on Saipan by American traders about 1810, but was obliterated, it is said, by the Spaniards, in 1819 (?), the Hawaiians being taken to Guam as slaves. In 1817 and 1818, Tinian and Saipan began to be re-populated by Chamorros and Carolinians from Guam. Rota had already been re-occupied, a parish church having been established on that island by 1817. In 1819 the Filipinos on Guam numbered 1,774; the Spanish group only 965. Most of the population must have been listed as "natives," although no doubt only partially of Chamorro descent and largely mixed with Spanish, Mexican, and Filipino elements.

European visitors during the first part of the nineteenth century included the Russian expedition sent out by the Imperial Chancellor Prince Romanzoff,^{31/} headed by Lt. Kotzebue and including the naturalist Chamisso, in the brig Rurik, which visited Guam in 1817; a French traveler, Louis de Freycinet, in 1818; and a French

scientific group, including particularly botanists, headed by M. Dumont d'Urville, in the Astrolabe in 1828 and again in 1839 (intended for 1829?? — taken from Searles in the Guam Recorder, 1936, without checking).

Guam was particularly benefitted — perhaps the most since the expulsion in 1769 of the Jesuits who had greatly assisted the development of agriculture on the island — by the administration of Captain Don Francisco Ramon de Villalobos, Governor of the Marianas from September 26, 1831, to October 1, 1837. The many activities of Governor Villalobos included encouragement of commerce, improvement of agriculture, segregation and supporting of lepers, vaccination of the natives, construction of bridges, and establishment of a pottery kiln. In the field of agriculture, Villalobos tried to promote cultivation of coffee and to substitute (1) yams and taro for maize, to increase the acreage of rice and to introduce manila hemp.^{32/} Haswell in 1802 had said, "Their food is chiefly shellfish and plantains [possibly intending yams rather than bananas?], cocoa-nuts, and a kind of sweet potatoes which they dry and make flour of [taro, or else cassava (manioc): no reference to maize, or to rice]." Haswell also mentions tobacco, and chickens (but specifies no geese, ducks, or turkeys).

A violent hurricane laid waste the island the night of August 10, 1848. There was a severe earthquake on January 25, 1849,

which badly damaged churches and government buildings.^{33/} Not long after, a group of Caroline Islanders arrived at Guam in two ocean-going canoes, asking permission to stay in the Marianas, their home islands having been swept by enormous waves. Small colonies of Carolinians had already been settled in the Marianas, on Saipan and Tinian as well as Guam.

Guam was by this time used occasionally as a penal colony for the Philippines. In 1851 a group of about 50 Filipino convicts were scattered freely over Guam as farmers, by a trustful governor, Don Pablo Perez; they rose in conspiracy to seize the island, were rounded up and sent back to Manila.

In April 1852, another American, Captain Ewer of the Emily Morgan of New Bedford, visited Guam, and later described the island.^{34/} He encountered several Caroline Island canoes which had just arrived, and he discusses the regular trade, with remarks on the people and the canoes and their cargo. Captain Ewer describes briefly Umatac, Apra, and Agana.

In 1855 the parish on Rota was re-established, and a mission was established on Saipan by the Augustinians to attempt conversion of the Caroline Islanders colony there. About this time there were 349 people on Rota, in one town of two streets intersecting at a little plaza.^{35/} The population of the Marianas was considerably reduced by a smallpox epidemic in 1856,^{36/} and more than

1,000 Carolinians were brought in to replace losses.

There was a United States consul at Guam by 1855 — Captain Samuel J. Masters, formerly Police Magistrate of Lahaina in the Hawaiian Islands — accompanied by his secretary. The hospital physician was an American. A ship chandlery had been established at Guam by Messrs. Thomas Spencer & Co. There were four other foreigners resident, all Englishmen. No foreigner was allowed to live or stay in the Marianas without specific permission obtained from the Governor-General of the Philippine Islands at Manila.^{37/} The only previous reference noted to a foreigner resident on Guam is that when the Russian expedition, the Rurik, arrived it was met by a young Englishman, Robert Wilson, who was the Spanish government pilot at Agana.^{38/}

Another very active governor of the Marianas was Don Felipe de la Corte y Ruano Calderon, 1855-1860, whose interests ranged from attempting (unsuccessfully) the introduction of sugar cane on Guam as a commercial crop to writing a general history and description of the islands.^{39/}

In 1884, the Governor was assassinated by a native soldier as the first step in an otherwise completely unsuccessful plot of a group of 40 soldiers to seize the island. Four of the conspirators were executed, shot on the beach at Agana, on April 10, 1885.

In 1896, a break-out attempt by Tagalog prisoners was

suppressed; 80 of the Filipinos were killed in the prison. The garrison of Guam at this period consisted of one artillery company of 60 officers and men.

At the sudden end of the Spanish period in 1898, the total "native" population had risen to about 9,000 on Guam, and slightly over 1,000 on Saipan, Tinian, and Rota; there was one small colony of Carolinians on Guam, in Tumoning (in 1901; pressed by the new American administration to wear clothes, they moved up to Saipan). ^{40/}

On June 20-21, 1898, to the considerable surprise of the Spanish governor, Guam was occupied by the United States Navy; the treaty of December 10, 1898, transferred Guam as well as the Philippines to the United States. The rest of the Marianas and the Carolines (including Yap and Palau) were promptly purchased from Spain by expanding Imperial Germany, which had already occupied the Marshall Islands in 1885.

At this time, in 1899, the Augustinian friars were succeeded by Capuchin fathers; Guam still is a "missionary diocese" or vicariate, equivalent of a missionary province in old New Spain, administered by a titular bishop who is actually a Vicar Apostolic (at present the Most Reverend Apollinaris Baumgartner, O.F.M. Cap., Bishop of Joppa), and is not under the Archdiocese of Manila nor that of Hawaii.

For the next 43 years, Guam was controlled by the United

states and administered by the Navy. The other Marianas, like the Carolines and Marshalls, were controlled by Germany from 1899 until the First World War, when Japan seized all of German Micronesia; after the war, in 1919, these islands (except Guam) were assigned to Japan as a mandated territory under the League of Nations.

In November 1914, as the Japanese moved in, S. M. S. Kormoran of the Imperial German Navy, was interned at Guam (a belligerent's vessel in a then neutral port) and rested quietly in Apra Harbor for $2\frac{1}{2}$ years; the German Navy provided a splendid choir for Christmas services on Guam in 1915 and/or 1916. The first direct contact with enemy forces, consequently, when the United States entered the war on April 8, 1917, was a formal surrender demand on the commanding officer of the Kormoran by the United States Navy commandant and Governor of Guam. As the American lieutenant bearing the message left the vessel, she began to go down, scuttled rather than surrendered, in the honorable tradition of the German Navy; the crew was collected, now as prisoners of war instead of internees, except for a half-dozen who died and who were buried with full military honors in the United States Naval Cemetery on Guam.

Guam was primarily a United States naval base until 1931, when, as part of the then current disarmament program, the fortifications were dismantled and guns removed, the Marines withdrawn, and the base abandoned; but the island remained under naval government

until after the next war.

In December 1941, the coordinated explosion of rapid Japanese attack over the Pacific area in fast, hard blows against United States forward positions included, along with the strike at Pearl Harbor, the assault on Wake Island, and the destruction of United States air strength in the Philippines, the seizure on December 11 of virtually defenseless Guam, which remained under Japanese occupation for two and a half years.

NOTES AND DIGRESSIONS

1/ The usual statement in general works and many secondary sources, especially later ones, is simply "Magellan discovered Guam" — Umatac Bay is a logical point; Talafofo Bay has also been suggested. Actually, there is no absolute certainty as to which of the southern Marianas was Magellan's landfall, much less the exact spot. The narrative of the voyage by Pigafetta says merely that in latitude 12° N., longitude 146° , on Wednesday, March 6, "scoprimmo a maestro una piccola isola, e due altre a garbino. Una era piu alta e piu grande delle altre due [we discovered to the northwest a small island, and two others to the southwest. One was higher and bigger than the other two.] " (a second Italian version in 1536, from the French translation of 1525, or else possibly from the English translation of the same year by Richard Wren as "A briefe declaration of

the voyage of navigation made abowte the Worlde" — the Italian original having been lost: the edition checked in this investigation is that of 1800 printed in Milan, Primo Viaggio intorno al Globo Terracqueo fatta dal Cavaliere Antonio Pigafetta sulla squadra del Capit. Magaglianes negli anni 1519-1522, ora pubblicato per la prima volta, tratto da un Codice MS. della Biblioteca Ambrosiana di Milano e corredato di note da Carlo Amoretti, Milano, 1800 A.D.).

The derrotero of Francisco Albo or Alvaro, pilot, is quoted as follows: "On the 6th to west in 13°. This day we saw land and went to it, and there were two islands, which were not very large, and when we came between them we turned to the southwest and left one on the northwest" (from compilation of Magellan documents by Lord Stanley, Hakluyt Society, 1874; the original not seen — cited as "Add. MS British Museum 17621").

As early as 1742 the applicability of these statements to islands other than Guam was recognized by Lord Anson: "These islands were discovered by Magellan in the year 1521; and from the account given of the two he first fell in with, it should seem that they were those of Saypan and Tinian" (A Voyage Around the World in the Years 1740-44, by George Anson, * * * compiled from his papers and materials by Richard Walter, London, 5th ed., 1749, p. 337). The all-too-brief statements do sound rather like going between Saipan, with its greater size and high mountain, and Tinian, and swinging around

GM 1000
p 74-75

Tinian, perhaps to a point near the present harbor, Aguijan being recognized as a separate, third, island.

Amoretti nevertheless says Guam, in his notes in the first printed edition (Milan, 1800) of Pigafetta (pp. 49-50). The most logical argument for Guam so far encountered is in F. H. H. Guillemard, Ferdinand Magellan, Liverpool, 1891, to the effect that Rota's "high peak" (sic) came in view first, then Guam was sighted, and recognized as larger; that as for the statement from Alvo quoted in translation above, which actually is "y como fuimos en medio dellas" in the original, according to Guillemard, "This does not at all prove that the ships passed between the two islands, but rather the contrary" — that, being equally near the much larger one, they swung southwestward toward Guam, leaving Rota to the northwest.

Fuller, more detailed, analysis might settle the point; for the present it must be left as undetermined.

2/ Guam is specified for Salazar in secondary works, as in the case of Magellan; I have not seen primary sources on the Loayza expedition. Burney's compilation says they made the two southernmost of the Ladrones, in 13° and 12° N. latitude, but that Vigo came to them from Rota: perhaps meaning as they stood offshore. (Capt. James Burney, R.N., A Chronological History of the Discoveries in the South Sea, London, 1803).

3/ Burney, 1803, says that "To the great surprise of the Spaniards there came to them from the island named Borta one of their own countrymen, Goncalo de Vigo, a native of Galicia, who acknowledged that he had sailed from Spain in the fleet of Magahaes and had deserted from the Trinidad when Espinosa stopped at one of the islands to the north [*i.e.*, Tinian or Saipan?]" in his return to the Moluccas after his ineffectual attempt to return to New Spain (from Indonesia after Magellan's death), and that two others had also jumped ship, but had been killed.

A fascinating historical novel was based on the story of Gonzalo de Vigo (but has the entire action go on around Talafofo Bay, and has him picked up by Saavedra a few years later): Death Sails with Magellan, Charles Ford, New York (Random House), 1937.

4/ Ulithi and Kusaie, it is reported. Salazar is said to have discovered one of the Marshalls in 1526, after the deaths of Loayza and Cano. Palau and Yap, and perhaps others of the Carolines, were found by Ruy Lopez de Villalobos in 1542-43, and by Miguel Lopez de Legazpi in 1565, secondary sources state. There is also "the grim story on the south coast of Ponape of iron men who came up out of the sea and fought with the men of Kiti until overwhelmed with slingstones and spearthrusts."

This might, I suppose, derive from one or both of the two ships of Saavedra's expedition known to have been lost and presumed

o have been wrecked in 1527 or 1528, which also has been assumed,
nd fairly widely believed, to be the basis of the Hawaiian tradi-
ion of a Spanish (?) vessel which crashed near Honaunau on the
ona coast of the big island of Hawaii. Saavedra's outfit is also
redited with having "probably" discovered islands in the Marshalls.
varo de Mendana is also listed as a discoverer of the Marshall
lands in 1567 (as well as having discovered the Solomons in 1568,
nd the Ellice Islands; then on his second voyage, in 1595, Mendana
iscovered the Marquesas and the Santa Cruz Islands). Pedro
ernandez de Quiros, one of Mendana's captains, is listed as having
scovered Ngatik, south of Ponape, in 1595 (later, Quiros, on his
yage of 1606, discovered Tahiti and the New Hebrides; one of
iros' captains, Luis Vaez de Torres, in 1606 sailed through the
rait, since named for him, between Australia and New Guinea, both
which had been sighted by Portuguese navigators between 1510 and
30).

5/ For both Saavedra (1527-29) and Gaetano (1542?), I am
mply taking the statement from secondary or general sources with-
ut checking original narratives at all; the same for Lopez de
egazpi, although I have a little more information noted. Even the
ate of Gaetano's expedition apparently is uncertain, occasionally
iven as 1553 or 1555 instead of 1542. Gaetano is thought to have
iscovered the Hawaiian Islands; but this, as well as the wreck of

one of Saavedra's ships, is highly uncertain, to say the least.

See, among others, J. C. Beaglehole, The Exploration of the Pacific, London, 1947.

6/ The regular Manila treasure galleon was taken three times, with a loss to the Spaniards of about \$5,000,000: by Cavendish off Cape San Lucas in 1587, by Woodes Rogers (see below) in 1709, and by Anson (see below) in 1742, according to the Abbe Raynal, A Philosophical and Political History of the Settlements and Trades of the Europeans in the East and West Indies, London, 1788 (A translation by J. W. Justamond, F.R.S., published by Strahan and Cadell).

The enormous loot brought in by Francis Drake from his great voyage -- the second circumnavigation of the world -- when he arrived at Plymouth on or about September 26, 1580, for which he presently was knighted by Elizabeth aboard the Golden Hind at Deptford, the fortune which made possible the rise of England to world power (see W. P. Webb, "Windfalls of the Frontier," Harper's November 1951) came from other Spanish sources, along the west coasts of America from Chile to California.

7/ Actually four priests and a student friar not yet ordained: Fr. Tomas de Cardenoso, who had come from Manila with Fr. Sanvitores, and -- from among those in Acapulco en route to the Philippines -- Fr. Luis de Medina, leader of that entire group, Fr. Pedro de Casanova, Fr. Luis de Morales, and Brother Lorenzo Bustillo

-- p. 189, Father Francisco Garcia, S.J., Vida y martyrio del Venerable Padre Diego Luis de Sanvitores, Madrid, 1683 (original not seen; translation published in the Guam Recorder, September 1936-July 1939).

8/ The date given by Safford (summary of history in Useful Plants of Guam) is March 3. Ordinarily the Manila galleon left Mexico only in March and reached Guam and the Philippines during June. The basic source, Garcia's Life of Sanvitores (cited above), says they sailed at last from Acapulco only on March 23 (page 189) and sighted "Zarpana" (an old name for Rota) on June 15, then soon saw Guan (sic; usually Guan or Guahan in the older, Spanish writings), and arrived off Guam at nightfall (page 191). This last is interesting in connection with Guillemard's theory on Magellan's landfall, outlined in Note 1' above.

9/ On Tumon Bay, perhaps not very far from the spot where stands a monument to his memory, dedicated in January 1940, accompanied by a small chapel, at the northeast end of Tumon Beach.

10/ The figure of 50,000 people was given by Fr. Sanvitores himself, for Guam alone, and 40,000 for the other islands; and one may suspect a pious exaggeration, to emphasize the size of the problem and the glory of the achievement (and perhaps help justify the estimates for the next fiscal year), as has happened elsewhere with ardent missionary leaders. But later writers, from Kotzebue in

1821 to Oliver in 1951, have accepted or worked out similar figures. A reconstruction by Freycinet in 1829 (Thompson, 1947, p. 33) gave a total of 73,000 -- Guam 35,000; Rota 8,000; Tinian 7,000; Saipan 11,000; the northern Marianas 12,000. Another early statement (Tobias, governor 1771-74 -- Thompson, loc. cit.) selects 50,000 as the total of natives on all the southern Marianas at the time of Spanish arrival. Probably all these are based on the same single original source, Fr. Sanvitores. He also speaks of 180 settlements in 1668, those on the coast being of 50 to 150 houses each: say, 18,000 or so dwellings and at least 3 individuals to a family -- well over 50,000 people!

11/ Actually four new friars, but three leaving at the same time; a net gain of one. Fathers Francisco Esquerria, Francisco Solano, Alonso Lopez, and Diego de Noriega came in; but Frs. Casanova and Morales and Lorenzo Bustillo were sent on to the Philippines on the same ship.

12/ According to a document, "Victims sacrificed by the natives of the Marianas Islands because of their propagation of the Holy Catholic faith among them," translation published in the Guam Recorder, April 1926, without giving source and identification; it sounds authentic and corresponds with other data.

13/ Unless otherwise noted, the discussion of the period 1668-1684 is based on Garcia's Sanvitores (full citation in Note 7

above) and on Charles Le Gobien, Histoire des isles Mariannes, nouvellement converties a la religion chrestienne; et de la mort glorieuse des premiers missionnaires qui y ont preche la foy, Paris, 1700. Information given actually is drawn largely from quotations and paraphrases, in later works, or partial published translations; I have not used the original of either of these basic source versions (Gobien's work being also based on Garcia's Sanvitores, with added notes on later developments of 1684 into the 1690's; Burney's work of 1803, cited above in Note 2, draws extensively on Gobien).

14/ This is another of numerous parallels to another former province of New Spain: the Indians of New Mexico were in some instances collected into a few new or selected mission settlements for better control.

15/ Consequently there must have been a good many troops on Guam by 1684, to suppress the rebellion promptly after 40 or 50 casualties. I have encountered no figures on reinforcements after 1671; but compare Dampier's 1686 total of only 20 or 30 soldiers.

16/ A true rover; William Dampier was born in Somersetshire in 1652, by the age of 20 had been to Newfoundland and the East Indies, in 1674-77 was on Jamaica and on expeditions to the Gulf of Campeche; back in England 1678, returned to Jamaica 1679 and joined buccaneers attacking Darien; raiding the Peruvian coast in 1680; in 1683 sailed with a Captain Cook from Virginia to the Guinea coast of

Africa and around Cape Horn to raid the Pacific coasts of South America and, for about a year, with other privateers, the west coast of New Spain, then with Captain Swan on up to southern California and finally across the Pacific, March 31-May 20, 1686, to Guam. More on him later.

17/ Garcia, Sanvitores, transl. in Guam Recorder, XIV: 1937.

18/ These population figures taken mostly from Thompson, 1917, pp. 35-36 (derived from several original sources).

19/ No details at hand. The mention of Funnell's visit, and other data, from P. J. Searles, "Guam after the Spanish conquest," Guam Recorder XII:297-299 and 325-326, 1936.

20/ Spending the second half of 1686 in the Philippines, whence to China and the Moluccas and staying awhile in the Nicobars and Sumatra, Dampier got back to England in 1691, and sailed in 1692 around the Cape of Good Hope to Australia and the Pacific Islands (Melanesia, Guam and the Philippines), started back in May 1700 from Minor, foundered off Ascension in mid-Atlantic in February 1701, was picked up there in April and conveyed home; 1703-07 commanded two privateers in the South Seas (and may have called at Guam); sailed as a pilot with Woodes Rogers 1708-1711; died in -- of all places -- London in 1715. Dampier was, fortunately, literate and a good observer; his narratives of voyages were published in London, several

editions, 1699, 1709, 1729, etc.

21/ Described by Father Juan Antonio Cantova in a letter dated at Agana, March 22, 1722, published in Lettres Edifiantes * * *, Vol. XVIII, given (in full?) by Burney, 1803 (op. cit.), and reprinted in the Guam Recorder for September 1928; summarized and discussed in the introduction of George Keate, An Account of the Pelew Islands * * *, London, 1788 (Second Edition), pp. x-xi. Father Cantova was aroused by the prospect of new souls to conquer, visited the hitherto unproselyted Carolines in 1722 and again in 1731, on which return visit he was killed by the natives.

22/ Anson left England in September 1740, and came around to the west coast of Mexico by March 1742, when the annual Manila galleon was due to sail; the Spaniards spotted him lying in wait off Acapulco and cancelled the trip for that year. Anson finally left the coast of America on May 6, crossed the Pacific, and raised the Marianas in August — first the northern islands, then Saipan and Tinian and Aguijan. He laid up on Tinian for several months, until his men were in good health, and then continued westward to the South China coast, but in June 1743 returned as far as the northern tip of the Philippines in time to pick off the Manila galleon after all, with 4,000,000 pounds in gold and silver. A Voyage Round the World in the Years MDCCXL, I, II, III, IV, by George Anson, Esq.; Now Lord Anson, Commander in Chief of a Squadron of His Majesty's Ships,

Sent Upon an Expedition to the South-Seas. Compiled from his papers and materials, by Richard Walter, M.A., Chaplain of His Majesty's Ship the Centurion, in that Expedition. The Fifth Edition. London: Printed for the Author; by John and Paul Knapton, in Ludgate Street. MDCCXLIX.

23/ John Hawkesworth, L.L.D., An account of the Voyages undertaken by the order of his present Majesty, for making discoveries in the Southern Hemisphere and successively performed by Commodore Byron, Captain Carteret, Captain Wallis and Captain Cook in the Dolphin, the Swallow, and the Endeavour, Drawn up from the journals which were kept by the several commanders and from the papers of Sir Joseph Banks, Bart., published in London, 1773, and 1785, and by G. Mudie, Edinburgh, 1789.

Byron had left England in June 1764; coming through the Straits of Magellan in February, he visited islands in the Tuamotus and Gilberts, continued westward, and sighted Saipan and Tinian and Aguijan on July 28, 1765. Like Anson, he spent the summer on Tinian, but he did not see any basis for Anson's rather enthusiastic description of the island. Byron found huts left by the Spaniards and Indians, but none of the foraging parties was there yet this year. His men hunted wild hogs and cattle and poultry; it is remarked that Tinian "produces cotton and indigo in abundance." Byron sailed from Tinian on October 1 and went on around the world.

Captain Wallis halted more briefly. Having sailed, accompanying Carteret, in August 1766, he visited the Tuamotus and Tahiti, and then the Marianas, while Carteret went on to the Solomons and Bismarcks. Wallis stopped on Tinian only September 19-October 16, 1767.

24/ Searles, loc. cit. (reference, Note 19).

25/ Source not given in my notes; probably I picked it up in the Guam Recorder with the original source not given.

26/ With an expedition of two frigates, La Perouse sailed from Brest in August 1785, visited Madeira and Teneriffe, the west coast of South America, Easter Island and Hawaii, the west coast of North America, reached the Marianas in December 1786, and continued thence to Japan, China, and the southwest Pacific: he sent his journal home to France from Botany Bay, after leaving which, in 1788, he was never heard of again.

27/ North American trade with China had developed rapidly, from small beginnings in 1784-46 -- 23 American vessels to Canton in 1800 and 36 in 1801 (C. C. Stelle, "American trade in opium to China prior to 1820," Pacific Historical Review IX: 425-444, No. 4, December 1940). The trade to China motivated American exploration to the Pacific Northwest, beginning with Lewis and Clark, and led to the American settlement and eventual annexation of the Oregon country (R. G. Cleland, "Asiatic trade and the American occupation of the

pacific coast," Annual Report of the American Historical Association
for 1914, I:281-289, Washington, D.C., 1916).

That is to say — just as the Spanish discovery and
colonization of the Marianas Islands form part of the history of New
Spain, along with Spanish expansion from Mexico northward to New
Mexico and, eventually, into Texas and California — Mr. Haswell is
not an isolated phenomenon, not a mere chance visitor, but rather,
like the first American traders and fur-trappers in the Southwest
and the colonists of Texas, is a representative of the westward
expansion of the United States and a precursor of American control.

28/ Haswell's journal, the unpublished (so far as I know)
original of which is in the Essex Institute Library at Salem,
Massachusetts, quoted in the Guam Recorder for September and October
1925.

29/ "The last galleon to bring Manila cargo to Acapulco
reached that port in 1811" — Richard H. Dillon, "The last plan to
seize the Manila galleon," Pacific Historical Review XX:123-125, No. 2,
May 1951.

30/ Kotzebue, Chamisso, and others, A Voyage of Discovery
into the South Sea and Beering's Straits for the purpose of exploring
a Northeast Passage, undertaken in the years 1815-1818, * * * in the
ship Rurick, under Lt. in the Imperial Russian Navy Otto von Kotzebue,
transl. by H. E. Lloyd, 3 vols., London, 1821.

31/ Again, this is not a chance or unique occurrence, but part of a larger story. At just this time Imperial Russia was actively exploring the Pacific Ocean area, from Alaska to the Antarctic, inclusive, and establishing outposts as far out from Russian-held Alaska as northern California and the Hawaiian Islands: see my "Region Three Anthropological Notes" No. 96, November 1949, and several references published since then, such as Hector Chevigny, Lord of Alaska — the story of Baranov and the Russian Adventure, Portland, Oregon (Binfords & Mort), 1951; The Russians in Hawaii, Bulletin No. 38 of the University of Hawaii, Honolulu, 1951.

32/ Other crops also being raised on Guam in the 1830's were sweet potatoes, pineapples, papayas, tobacco, red peppers, tomatoes, squashes, peanuts [note that all of these so far, and corn among those mentioned in the text, are American plants], watermelons, muskmelons, eggplant, citrus fruits, tamarind, and turmeric. I believe all this, on Villalobos and plants, comes from De la Corte Calderon, op. cit. infra.

33/ As described in the diary of Fr. Aniseto; see below and under specific historic sites and buildings (Agana, Pago, Umatac).

34/ Life and Adventures in the South Pacific, 1861 — p. 60, partially reproduced in the Guam Recorder, June-September 1925. ^{Chamorro} p. 24.

35/ According to Governor de la Corte, cited below.

36/ Described in the diary of Fr. Aniceto de Ibanez del Carmen; as given in the Guam Recorder (Vol. III), August 1926. Brought in March by a passenger from the American schooner Frost, the epidemic killed 3,644 on Guam, mostly Chamorros, in nine months.

37/ From a "historical sketch" in The Friend, published at Honolulu in the 1850's, reprinted or quoted in the Guam Recorder.

38/ Kotzebue, op. cit.

39/ Felipe de la Corte y Ruano Calderon, A history of the Marianas Islands from the time of the arrival of the Spaniards to the 5th of May 1870 (a translation by Gertrude (Mrs. H. G.) Hornbostel mimeographed in 1937); the major source utilized by later writers.

40/ In 1902 the population of Saipan included 967 Chamorros and 621 Carolinians, that of Tinian, 36 Chamorros and 59 Carolinians: Georg Fritz, "Die Chamorro," Ethnologisches Notizblatt III-3, Berlin, 1904.

5. Present Occupation Patterns and Land-Use Problems of Guam

In the past 10 years, Guam has undergone Japanese occupation for $2\frac{1}{2}$ years (in connection with which there are several interesting stories or important items — a few of which are mentioned under specific localities and monuments below); U. S. Army Air Force strikes, and devastating naval bombardment in July 1944 almost entirely destroying Agana; assault and recapture by the 3rd Amphibious Corps, made up largely of the U. S. Marines, led by Major General R. S. Geiger, U.S.M.C., July 21-August 10, 1944 (landing beaches, etc., connected with the liberation of Guam, are mentioned below under specific localities and markers), with mopping up yet to be completed in fiscal year 1952, a few Japanese soldiers being still at large on the island in addition to the five who surrendered in the fall of 1951; bulldozing and other cleanup activities by the Navy, completing the razing of Agana, including the remnants of the Guam Museum; construction of several extensive military installations, including large airfields as well as quarters for personnel; a severe typhoon in 1949; and finally planning and, to an extent, reconstruction.

The rest of the Marianas Islands are included with the Carolines and Marshalls in the Trust Territory of the Pacific Islands, administered by the United States, through the Office of the High Commissioner, as a mandate from the United Nations under a

Trusteeship Agreement of 1947 and under Executive Order 9875, pursuant thereto, signed by the President on July 18, 1947. Interim administration by the U. S. Navy was replaced by civil government in 1951.

Guam remained under Navy control until July 1, 1950, when the civil government of the island was transferred to civil administration by an Organic Act, Guamanians becoming United States citizens under the same act. The relationship of the Territorial government with the Federal government is handled through the Division of Territories, Department of the Interior.

The island of Guam is still dominated, however, largely owned or controlled, by the military -- the Navy and the Air Force, all remaining Army ground forces having been recently withdrawn -- and is occupied in considerable part by active military installations, new developments under construction, and extensive abandoned military installations (disused airstrips, Quonset huts and other temporary structures, and concrete barracks, etc.). The two large abandoned airfields in the north half could undoubtedly be rehabilitated and readied for use without excessive difficulty, and these, I suppose, be considered as only temporarily abandoned as of the present. The installations (4 camps) on the east coast of the south half are apparently permanently abandoned and are going to pieces rapidly.

Actual ownership of land is as follows, according to the latest available figures (as of about February 1, 1952, as given to the Guam Congress in a speech by Manuel F. Leon Guerrero, formerly Acting Director of Land Management in the Government of Guam; the figures in parentheses are those as of August 1, 1950, when civil administration replaced naval government on Guam, taken from the mimeographed report by Robert K. Coote, "Land-use conditions and land problems on Guam"):

Military holdings	58,744	(49,128)
Interior Department (Federal Public Domain)	30,890	(29,603)
Government of Guam	850	(815)
Private owners	<u>46,813</u>	<u>(64,454)</u>
	137,297	(144,000)

In addition, the military has around 5,000 acres under leasehold from private owners. Transfer of the entire public domain from direct Interior Department control and Federal ownership to the Government of Guam has been proposed, is currently being worked out, and would seem the logical thing, as pointed out by Mr. Coote in his August 1950 report.* The Federal public domain consists largely of:

* Since this report was drafted, the recommended action has been taken by the Secretary of the Interior, according to a news dispatch noted in the Honolulu papers in early March 1952.

(1) interior of the northern half of the island, not at present extensively used for military or other purposes, unpopulated, and probably relatively unusable except perhaps as a Territorial Forest Reserve,** to be gradually reforested for eventual controlled and properly managed timber production (there are no historic or archeological sites known or reported in this area of no running water, and probably no recreational potentialities of importance); (2) much of the northeast coast, from the northeast corner (actually from Tagua Point, at the east end of Tarague Beach, about 2 miles west of Pati Point) to Sassayan or Campanaya Point, on the coast directly east of Mt. Barrigada — an area of interesting scenery and ecology, containing a number of important archeological sites; an area largely undeveloped and not at present easy of access, without good beaches, so far as known, and not well suited, at least in large part, for agriculture of any kind; now occupied apparently only by a few of

** The recent Public Lands Act (P.L. 33, August 29, 1951) empowers the Director of the Department of Land Management to set aside and operate forest reservations (Art. 4, Sec. 25) and soil erosion and water conservation lands (Art. 4, Sec. 26), and to recommend the creation of historical, scientific, or scenic parks (Art. 5, Sec. 29), as well as to lease or sell government lands in specified ways (Article 6) and to issue grazing permits (Article 7) and homesteading permits and conveyances (Article 8).

the Japanese stragglers; probably it should be retained in public ownership for the most part, without specific designation as a whole — simply as Government of Guam public domain, from which archeological reserves and biological reserves (a study by a botanist or ecologist probably should be made) can be withdrawn, other portions of which could perhaps be opened to private ownership through sale or exchange; (3) small scattered tracts, of no special importance so far as I know, in the central portion of the island; (4) an extensive area of the hill country in the southwest and south, extending from Santa Rita around to the vicinity of Inarajan, more or less surrounding (except on the north) the Fena-Talafofo River drainage — very possibly the Government of Guam could, while retaining title to most of this area, lease it at low rates for grazing (or, in valleys, farming), and thus be able to regulate operations according to the capacity and condition of the land; again, known archeological sites or other small areas of special interest could be withdrawn from entry as their exact locations and boundaries are determined by engineering surveys.

The northern plateau of the island is dominated by the Air Force, which owns virtually all the lands between the highway loop encircling the public domain there and the cliffs or beaches; the beaches are largely privately owned (but leased by the Air Force, such as beautiful Tarague). There is, I suppose, no likelihood of

iminent Air Force release even of the abandoned installations and
unutilized areas, but the good beaches ought to be acquired by the
Government of Guam if at all possible, for recreational potentiali-
ties as well as for protection of archeological remains (and one
historic building, the "Casa Real," on private property below
Ritidian Point), even with military use continuing.

In the south, various naval commands occupy much of the
western portion, around Apra Harbor and in the upper drainage of the
Fena (Talafofo) River, from the vicinity of Agana to just below (just
east and north of) the highest mountain peaks. It is not likely that
the Navy will withdraw from any sizable part of this entire more or
less continuous area, which is mostly occupied by active military
installations. At present (February 1952) the Navy is planning to
release surplus lands not in use, but surely these will be the small
scattered tracts of abandoned installations in the Southeast and
elsewhere.

The central waist of the island and the southeast are
privately owned, with only occasional tracts of government (public
domain or military) land. The southwest coast, south of Apra Harbor
(and west of the Fena River watershed and the adjoining public
domain south from Santa Rita), is also largely privately owned from
Agat south. Most of the Guamanian population is concentrated in these
areas, mainly near and inland from Agana; and here most of the

is agriculture, still carried on. The privately-owned beaches about the northwestern and northern end are unoccupied; clear evidences of old farms (coconut plantations, etc.) and house-sites may be occasionally seen. The one tract of private property within the public domain along the east coast in the north is utilized but not regularly inhabited (the area served as a refuge for a group of Guamanians who supported themselves there during the 2½-year Japanese occupation). The entire northern plateau, in fact, is virtually unpopulated north of Dededo except by the Air Force; there is only one straggling little village -- Yigo -- with an even smaller concentration close by at Santa Rosa, with a number of farms in this vicinity and atop Mt. Santa Rosa. There seem to be only a few other small scattered farms, in the Hilaan vicinity. There is only one seasonally- or temporarily-occupied house on the northern beaches, Juan Castro's place near Ritidian Point. Settlement is almost continuous in the western part of the mid-section of the island, from Asan and Agana (the capital, which was completely destroyed in 1944), and Tumoning through Sinajana and smaller villages to Barrigada and vicinity. On the east, however, the Pago Bay area is unoccupied: the former village of Pago was moved (by the Japanese, I believe) to Sumay, on Orote Peninsula, whence the people were again cleared out, to establish Santa Rita, I understand. Around the southern coast is a series of small towns comparatively undisturbed

by the war and the post-war period; from northeast to Southwest these are Yona, Talafofo, Inarajan, Merizo, Umatac. Farms and houses are scattered between these to some degree, and extend inland from them up the valleys; much of the interior, however, is not occupied permanently.

The total population (including the military) of Guam in 1950 was 58,754, including about 28,600 Guamanians. Of the total, 20,700 were concentrated in the municipalities of Sinajana and Barrigada, the former including the Agana vicinity. About half of the total is made up by United States military personnel, who would be largely in the municipalities (districts) of Yigo, Dededo, Asan, Piti, Sumay, and Agat.

Agriculture is generally small-scale and practically on a family subsistence basis. Farm products are not exported or even marketed locally to any extent. Livestock raising is not well developed at all, and grazing lands are in generally poor condition. Livestock, poultry, fruit trees, and farming equipment were extensively lost in the war and in the 1949 typhoon. The forests have been removed and destroyed pretty completely. Fishing is almost entirely neglected, surprisingly. In fine, the natural resources of Guam have been seriously depleted and yet are not being fully exploited at present or systematically rebuilt.

A considerable percentage of Guamanian citizens are

working, directly or indirectly, for the military (even so, the Navy or their contractors have found it advisable to import several thousand Filipino laborers). A very high percentage, probably the majority of Guamanians, have changed over completely from a self-supporting basis or subsistence economy to a dollar economy, dependence on cash received by sale of goods or services to, primarily, the military. Actually, the trend to a cash economy, instead of a subsistence basis, began early in the American period, between 1900 and 1911. The traditional attitude toward land ownership and alienation has persisted, however, and Guamanians do not generally sell their lands readily. Toward cash money and other possessions, except land, many or most Guamanians have an understandably careless attitude, after undergoing typhoons, earthquakes, the Japanese occupation, the American reconquest, and finally the less abrupt but heavy impact of post-war military activities and planned reconstruction.

Many complex problems, even further beyond the scope of this report than are topics already discussed, are created by these factors and various others. An important opportunity is offered for a historical and practical study by a social anthropologist interested in culture-change and applied anthropology, to compare and trace developments through (1) the aboriginal culture, as reconstructed from early historical sources and archeological materials, partly

done by Laura Thompson in The Native Culture of the Marianas Islands, B. P. Bishop Museum Bulletin 185, 1945; (2) the modified culture of 1700-1870, from travelers' descriptions and sources such as the memoirs of Governor de la Corte; (3) the people of Guam in the early twentieth century, drawing mainly on Safford, 1906; (4) the situation just before World War II, as discussed in the original 1941 edition of Mrs. Thompson's book Guam and Its People, and other sources; and (5) post-war and present-day Guam and its problems. Studies are needed for Guam such as the paper by Alexander Spoehr, "The Tinian Chamorros," Human Organization 10:16-20, No. 4, Winter 1951, and the book by Alice Joseph and V. Murray, Chamorros and Carolinians of Saipan, 1951.

6. Historical and Archeological Research on the Marianas Islands

The first historical narrative concerned largely with the Marianas is Father Garcia's life of Father Sanvitores, the leader of the Jesuit missionary group of 1668. This very important source was published in Madrid in 1683; translations to English of portions of it appeared in the Guam Recorder in 1936-39. Very few other published studies have been devoted specifically to the history of Guam, or of the Marianas Islands as a group, though much historical information is to be found in Safford's Useful Plants of Guam and other general works, and in the pre-war Guam Recorder (contributions particularly by Commander P. J. Searles). At present, the Guam Historical Society, under the vigorous leadership of Mr. P. B. Souder, is conducting a systematic program of collecting information on all phases of the history of Guam; and Father Julius Sullivan, O.F.M. Cap., the parish priest at Inarajan, is working on the history of the islands with particular reference to missionary efforts and the work of the church, and has already produced a series of notably well-written newspaper articles on dramatic events of 1668 to 1675 or so.

MR. SOUDER
FATHER SULLIVAN

Probably the first definite archeological observation in the Marianas (as against ethnological notes of 1521 on, which included reference as late as 1565 to stone pillars then in use as house supports) is Lord Anson's description and sketch of the very

large stone columns (the House of Taga) on Tinian, which he visited in 1742.

The memoirs, published in 1870, of Don Felipe de la Corte (Governor of the Marianas 1855-66) also describe this great and famous ruin. De la Corte remarks, "In Guam I have not seen a single cone [vertical member] more than 4 feet high, or hemisphere whose diameter exceeded 2 feet * * * In Guam, Rota, and Saipan the latte pillars consist only of two rough-hewn stones, one cone-shaped and the other a half-sphere placed on top of it, both of them together being not higher than 5 feet from the ground * * * [describes the House of Taga] * * * In the interior of Tinian I have seen other pyramids 5 and 6 feet tall, larger than any I have discovered on Guam." The quarry of As Nevis on Rota evidently was not known or noted at this time; it is said to have been discovered (i.e., first reported) by Hornbostel in 1924.

Messrs. Safford and, later, Searles, and others, included mention or description of latte sites in their general works or non-technical articles on the Marianas (e.g., W. E. Safford, "Guam and Its People," American Anthropologist 4-4, October-December 1902, reprinted in the Annual Report of the Smithsonian Institution for 1902, Washington, 1903, as well as his Useful Plants of Guam, 1906; a sensational journalistic, travelers'-tales article by Searles, P.J., "Mystery Monuments of the Marianas" in Scientific Monthly 146:385-391,

The only extensive and comparatively systematic archeological work before the war in the Marianas (except for whatever was done by Germans and, between wars, Japanese in the islands other than Guam, without, apparently, becoming known to American workers in the field) was that of Hans G. Hornbostel, who collected a great deal of material, mainly on Guam -- in part by excavating himself, in part by paying local people to dig up and bring in specimens -- and wrote descriptions and discussions of many sites. Hornbostel's notes and sketches, as well as the specimens he collected, are now in the Bishop Museum, of which he was designed a collaborator or local representative. These materials were studied and analyzed by Mrs. Laura M. Thompson, and her findings were published by the Museum in 1932 (Archaeology of the Marianas Islands, B. P. Bishop Museum Bulletin 100). The human skeletal remains were studied by Dr. F. Wood Jones (unpublished manuscript on "Skulls from Guam" in the Bishop Museum).

In 1944-46, James W. Brewer, Jr., of the National Park Service, was on Guam in a Naval Construction Battalion; he visited and photographed historic remains at Umatac, and elsewhere on the island. Soon after his return to the United States and to his civilian position in the National Park Service, Mr. Brewer endeavored to interest National Park Service officials, including myself,

in the historic sites of Guam.

In 1945 and 1946, Douglas Osborne, archeologist, now of ^{NOTE -} ^{OSBORNE} the University of Washington, was on Guam, as an officer in an MP battalion of the U. S. Marine Corps. He, and a few others interested, succeeded in carrying on extensive and systematic reconnaissance and test excavations, restored the latte groups at Gongna Cove, and collected archeological specimens, mainly potsherds, which Dr. Osborne later studied in detail (Osborne, ms., and 1947).

Since the war an integrated campaign in Micronesian and Melanesian archeology has been inaugurated by the Chicago Museum of National History and the University of California, including a major expedition to the Marianas Islands by Dr. Alexander Spoehr, of the ^{NOTE -} ^{SPOEHR} Chicago (Field) Museum, in 1949-50. Dr. Spoehr's investigations, which included systematic excavations as well as survey and mapping, were concentrated on Saipan and Tinian, with a shorter stay on Rota and a brief visit to Guam. Dr. Spoehr's results are in process of analysis and publication.

Dr. Philip Drucker of the Smithsonian Institution has also ^{NOTE -} ^{DRUCKER} visited Guam, while on active duty with the Navy and on assignment to Trust Territory administrative work. Finally, the present writer's survey in January-February 1952, though devoted largely to compilation of available data and survey of recreational possibilities and preservation needs, adds a small amount of new additional information on archeological sites of Guam.

B. HISTORIC SITES AND SURVIVING REMAINS

Only comparatively little has remained from the 230 years of Spanish occupation, between the normal ravages of time and vegetation and the effects of typhoons and earthquakes, and the destruction of Agana in July 1944 and other activities connected with the late war. Umatac and the vicinity of Agana and Apra Harbor were apparently the only two areas of permanent Spanish settlements. The only surviving structure otherwise appears to be the "Casa Real" below Ritidian Point, described below (subhead No. 5). I have encountered rather vague references to a few missions or other establishments elsewhere on the island*, but no definite information and no actual remains of structures (which may nevertheless exist, to be located by a less hasty and superficial survey).

1. Agana. Neither the surviving remnants of public structures, nor the cathedral church and government house which were destroyed by the bombardment, are to be regarded as very old. The first church at Agana was

JOHN B. LEWIS. NOVEMBER 1952

* For example, the statement by Captain Ewer, In Life and Adventures in the South Pacific, 1861, reprinted in the Guam Recorder, June-Sept., 1925, that, during his visit on Guam in April 1852, on a walk "into the country" he saw, about five miles northeast of Agana, the ruins of a monastery with the date 1636 (?--1686?) on the Keystone of an archway.

built in 1669, but the last was built, on the same site, in 1912. The last (?) government house was built by Gov. Solano, who came in 1884; presumably on the site of that of 1736. The stone bridge is discussed below along with the other "old Spanish" bridges.

The old Spanish fort (Ft. Apugan) above Agana evidently was transformed in 1942-43 into the Japanese fortification discussed below. The fort originally dates at least from 150 years ago, and probably was first built by the Spaniards in the middle or late 18th century; the earliest reference to it I have found so far is that of William Maswell in 1802, as a "citadel" with seven guns and ten soldiers.

Among the few surviving pre-war private houses in Agana, the Torres house is the most interesting and best-preserved; it appears to be comparatively old. It is a commodious and well-built two-story house, such as referred to or described by 19th-century visitors to Guam in 1802, ("a pleasant town" of 500 houses, 6 streets, 1000 people), in 1818, ("about 570 houses in Agana, only 50 of which are built of stone"), in the 1860's (78 private houses built of stone, 40 with tile roofs and 38 with thatched roofs). It is now ruinous, however. Although the exterior walls are standing to full height all around and the floors are mostly in place, it is deteriorating and being invaded by vegetation. The decking of the roof is gone, though the heavy rafters of durable ifil wood remain.

2. Apra harbor and Grote Point. No remains seem to survive of the Spanish fortifications of San Luis de Apra, described in English by several visitors from Anson (1742) onward. Lwer (1852) says of it, "In the centre of the bay is a small island, on which is a fine-looking fort, with five or six guns mounted for the protection of the commerce of the island . . . a solid piece of masonry mounting six guns of 18 pounds calibre. It is entirely surrounded by water, and guarded by a few soldiers." Fifty years before, Haswell says, "On the southwest side of the island is a very fine bay and harbor, defended on the west and northwest sides by a Reef and a small island . . . a large outer harbor . . . an inner harbor . . . and a large lagoon to the eastward which goes a long way into the island . . . This bay has two forts, one on an island in the middle of the harbor of six guns and it commands the entrance of the inner harbor; the other Fort of four guns is on the high hill on the starboard . . . At the hill fort, 5 men, at the island fort, 12."

In 1772, according to Crozet, the entrance of Apra Harbor was protected by the brick battery Saint Louis with eight bronze 12-pounders of old pattern. Thirty years before, in Anson's time, the "Castle of St. Lewis" was armed with five guns. The 1686 description by William Dampier of the "small fort on the west side, near the south end, with six guns" might possibly be intended for San Luis de Apra rather than Umatac.

The old Spanish lighthouse on Urote Point was perhaps not very old, as I find no mention of it in these 1742-1852 descriptions. In any case, nothing remains of it now.

The rock-cut stairway down the cliff on the north side of Urote Point, pictured in Thompson, 1945, plate 1-B, still exists but is in very poor condition.

3. Umatac Bay. This locality is the most interesting historically on Guam, with virtually the only significant and comparatively well-preserved surviving remains of the Spanish period.

First must be mentioned the monument to Ferdinand Magellan, though -- as pointed out in section A-4 of this report -- it is far from certain that this actually was the exact point of the first European landing in Micronesia.

Umatac definitely was, however, so far as known, the port of call for the Manila galleons, presumably from 1566 on.

Missionary endeavor and Spanish settlement, however, beginning in 1668, were centered around Agaña; there is little mention of Umatac until the 18th century in the sources I have been able to consult. Umatac was, nevertheless, one of the settlements into which the Cnamorros were concentrated in the 1680-83 campaigns, and churches evidently were built at Umatac, Agat, and other villages, in or soon after 1680. The present ruined old church at Umatac is not the original but ^{was} rebuilt extensively after the 1849 earthquake. Considerable portions of the structure may well be from the first church, incorporated in the reconstruction.

The three forts overlooking Umatac Bay are of the greatest interest. At least one is early, mentioned by Anson in 1742 (the Castle of San Angelo, with five 8-pounds, near the road where the Manila ship usually anchors) and perhaps by Dampier in 1686 (see above), by Maswell in 1602 (a fort of six guns; a lieutenant and 20 men). Finally in 1818 we get the complete outline, in the letter of a companion of Freycinet, printed in the Guam Recorder 4-1, April 1927: "defended by three forts, called the Sorrowful Virgin, the Holy Angel, and St. Vincent" (actually, N. S. de la Soledad, Santo Angel, N. S. del Carmen).

In 1870, Gov. de la Corte Calderon, in his memoirs of Guam as of 1855-60, described Umatac Bay as "more exposed than the foregoing ones to winds . . . However, as it is free from coral reefs, ships may anchor so close to the beach (of clean sand and gravel), and their boats can go back and forth at all hours. Moreover, one may, with great ease and promptness, at any time of the year, take on very good water there, from a little stream with a pebble-bar at its mouth.

"For this reason, Umatac Bay was always the port of arrival for the galleons from America until they ceased coming, and even yet almost all the ships which call at these islands go thither to take on water, although to transact all other business they have to anchor in Apra harbor."

The village of Umatac, with a population of 127 souls, he spoke of as "a little hamlet which ekes out a wretched existence with the help of the ships (whalers) which have to go there for water. It lies at the foot of a mountain range which leaves it no room for fields, nor can it be reached by any road.

"There is in it a house called the Casa Real of mamposteria with tile roof, formerly the residence of the governors whenever they went down there to receive from the galleons the funds sent them every year from Mexico; after having been destroyed by an earthquake it was rebuilt in 1862 on a much smaller scale. The church also has walls of mamposteria, but the other 19 houses of the village are wretched affairs of betel-nut splits and reeds, with roofs of nete thatch."

Haswell in 1802 had mentioned the "large house for the Governor . . . or for the Commanders of the Galleons that call there." In 1852, Capt. Ewer misplaces it at Merisa; probably the fine church with two large bells which he describes also should be placed at Umatac. The companion of Freycinet in 1818, cited above, described the town as consisting of about 30 "hovels" built on piles, but also pictured the church and convent (a large two-story building with terrace and stone stairway) and the Casa Real (the governor's summer palace).

Nothing appears to survive of the Governor's House, or of the convent. The church is ruined, but with most of the walls standing to a good height.

The forts are still in fair condition, but in need of repair and stabilization. Much is said to have gone since the war, owing to GI souvenir hunters and the typhoon of 1949; but the general effect is still much as described in 1927 in the Guam Recorder: "Opposite Fort Santo Angel, whose ruins crown the cliff on the northern shore, may still be seen the stone sentry box formerly part of the fort of N. S. de la Soledad on the hill at the south side; and traces of the water

attery, N. S. de Carmen, near the stream are still visible; the stones
s also those of the cathedral, are being gradually carried away for
uilding." The reference to the "water battery near the stream" is puz-
ling, as the third fort, N. S. del Carmen, is on a higher hill on the
rth above Santo Angel. But the point of interest is that already in
927 only the sentry-box remained conspicuous at Soledad. It still
tands, partly repaired recently (by the parish priest of Merizo). The
outn fort (Soledad) is a paved area (flagged with limestone blocks) en-
ircled by a wall 4 to 5 feet thick, standing only about $1\frac{1}{2}$ feet high on
e inside, with the aforementioned sentry-box at the northeast side, and
th a guard-room on the southeast side, its walls standing up to 9 feet
lgn to reach the level of the rim of the flagged enclosure.

- Merizo. The convento, built in 1858, is the only old Spanish build-
ng still in use (still as a parish house); the surviving bell-tower of
a otherwise completely ruined church dates only from 1917, however.

- The Road from Agana to Umatac. The old route is visible in many
laces and there are several "old" Spanish stone bridges. A shrine be-
ween Asan and Agat, mentioned below under Existing Historical Markers,
ncludes the statement that Governor Felipe Cerain had this difficult
oad constructed in 1784-1785, but the stone bridges are clearly of much
ater date.

In his memoirs, as given in English translation in the Guam
Recorder (for July, 1926, Vol.3), Felipe de la Corte Calderon, Governor
of Guam 1855-1866, speaks of the 16-foot-wide coast highway, from Agana
through Piti and Agat to Umatac, as very bad, with solid wooden bridges.

The road ought to be stone-built but appropriations have been insufficient -- a familiar situation.

A stone bridge in Agana was built less than 60 years ago -- not the present surviving one, but another which was replaced by a concrete structure in 1933: "In the city of Agana, capital of the Mariana Islands, on the 16th day of October, 1893, the Governor Don Juan de Godoy del Castillo, at 4 in the afternoon, set in place the first stone and thus began the construction of a bridge over the river which passes through this city, near where it empties into the sea." (quoted in the Guam Recorder, 1936).

The existing stone bridges include the one in Agana, on the former course of the Agana River, one arch, in fair condition; the one close to the coast two miles south of Agat ($\frac{1}{2}$ mile south of the Nimitz Beach entrance), in fairly good condition, double-arched, 12 yards long and 12 feet wide, floored with heavy timbers, with parapets 20 inches high (partially gone), with central and end buttresses; and a third on one of the two streams entering Seja Bay -- illustrated by Mrs. Thompson (1945, Pl. 1-A). The bridge hasn't changed much since whenever this photograph was taken, except for becoming largely overgrown with dense vegetation. It is in fair condition, double-arched, the floor nine feet wide between one-foot-wide parapets and 15 yards long to the bend onto the ramp at the north end, with a notable large central buttress upstream. There is also a bridge in Umatac which was originally "old Spanish" of stone, more recently rebuilt with concrete.

There is no trace of a bridge over the other stream at Seja Bay, and none over the two rivers entering Ceti Bay, between there and Umatac. Evidently whatever appropriations were made available between about 1870 and 1898 did not suffice to complete the program.

6. The Casa Real at Ritidian Point. The only known surviving Spanish structure north of the Agana vicinity is on the strand below Ritidian Point, near the farmhouse belonging to Mr. Juan Castro of Toto. It is referred to as a "Casa Real" but obviously must have been a chapel or a religious school; it is a typical small church structure.

The ruin is of an oblong stone building 39 feet long and 15 feet wide. There is a doorway at the west end, three windows along each side, no opening in the east wall (the altar end, if a church). The walls are 28 to 30 inches thick, and still stand up to $6\frac{1}{2}$ feet high in places. The three window openings in the north wall run 50 inches wide at the inside and narrow to 30 inches at the outside, in typical Spanish style.

According to Father Garcia (Life of Sanvitores, 1683), there was quite a thriving little parish of San Miguel at Ritidian in the 1670's, with a church, priest's house, schools for boys and girls, and a barracks. The church was built by the direction of Capt. Damian de Esplana in 1674. Other later sources and negative evidence indicate that settlement of this locality was abandoned after 1700. Consequently this ruin presumably is the 1674 church of San Miguel de Ritidian, though it seems incredible that so much could remain of a roughly-built stone structure in such dense growth after two hundred and fifty years.

World War II sites. Those representing the liberation of Guam are the most part already marked, as described below under "Existing historical markers and monuments." The Japanese occupation and attempted use are also represented by guns and remains of fortifications in Agaña Cave at the north end of Tumon Bay; by tunnels under the Bishop's Palace at Agaña; by a small fort on the hill overlooking Agaña, which presently is on the site of an old Spanish fort*; by concrete machine-gun nests at the north end of Agat Bay; by a Japanese submarine on display at Camp Dealey on the east coast.

It is located on the crest of the slope at the intersection of a line across the northeast tip of the Paseo de Susana to the end of Ypao Point (upon Point) and a line across the plaza bandstand and the George Washington High School to the towers of Radio Barrigada.

X = DESTROYED
② = PRESENT
OS = OCCUPATION SITE
LS = LATTE SITE

3. SURVIVING ARCHEOLOGICAL SITES

p. 13

Before the war, there were many latte groups and other archaeological sites on Guam -- H. G. Hornbostel estimated "more than 270 monument sites on the island" (Thompson, 1932, p. 15). The first of the accompanying maps, with distribution of latte as of 25 years or so ago known by nachure, is from among Hornbostel's notes at the Bishop Museum in Honolulu. The areas of "dense latte" at Mt. Santa Rosa and north of Tigo are questionable, and none is shown for the northeastern coast; but however undependable some of its details, the map supports the general effect of pre-war abundance of archeology on the island.

Right after the war, Douglas Osborne located and investigated 6 sites, which are indicated on Map 2, taken from Osborne's unpublished report of 1947. Several of these have since disappeared, or deteriorated further to a marked extent. A few additional sites not recorded by Osborne were also visited in 1952; there undoubtedly are quite a number of surviving latte groups which have not been surveyed by either Osborne myself, and considerable further work is needed to complete the archeological survey of Guam.

• Vicinity of Agana

Most of the latte sites which formerly existed in the general vicinity of the capital were already gone at the time of Osborne's work six years ago. Since then, others of which at least remnants survived in 1946 have disappeared -- Maina site described by Osborne has given way before a small reservoir, and the new church which was to be built on the site at Toto is now there, with no traces of the latte remaining.

There is, however, one fairly good site, in the Agana Heights area -- evidently not the "badly destroyed remnants of a rather large group" mentioned by Osborne, which seems to be completely gone -- on private property across the road from Commissioner Anselmo Garrido's house, a little over a mile south of the Tutujan road. On the Tenorio property there is an east-west group of 5 pairs of latte (9 of the 10 halege still standing, 6 tazas present, fallen and broken), 10 feet apart; each slab about 30" wide, 15" thick; 10" to 12" by 8" at the top; 36"-40" high. There are a few surface sherds, and it looks as if there should be some hidden deposit. On the Ulloa property, just to the west, there is a broken-up group with one halege (vertical slab) still standing in a distinct row of six; the opposite row, and three more houses in an east-west line, are indicated only by remnants. In addition, a few scattered latte stones and a bedrock mortar are found across the street to the south, in the back yard of the first house east of Commissioner Anselmo's. If at all possible, at least the first of these groups, located right in the outskirts of town, should be acquired and preserved for study and interpretive development.

2. Maimai

On the F. N. Santos property at this locality, three miles southeast of Agana, is a site probably typical of those which formerly existed, and of those which remain to be found (the Maimai site is listed by neither Thompson nor Osborne), in the central inland portion of the island. It is in tangantanga and other dense growth near very large bamboo thickets among rolling hills. There is an extensive occupation area

black soil and widely scattered potsherds and little shells, with no deep midden indicated at any one spot, and at least four sets of: (1) disturbed, small, four pairs, east-west, only standing about high, 10 feet apart each way, all heads fallen and broken, small; three very small pairs, northeast-southwest, standing 20" high, 24" at the ground, 8" thick, 10 feet apart, heads fallen, very small, aged and broken, not measurable; (3) four pairs, larger, about 10 feet high, in very bad shape; (4) five pairs, on up the hill in very dense rows, 12 to 15 feet apart, the stones larger than in the first two sets. Probably this area would repay excavation, but no special effort for preservation or interpretive development is indicated. There probably other similar sites still in existence but not yet recorded in this central area of the interior, in the central "waist" of the island.

Tumon Bay

Except for the important Gongna Cove site, discussed separately below, the formerly rich archeology of Tumon Bay had by 1945 been destroyed by road construction and recreational development along the beach, reported by Osborne and by J. W. Brewer, Jr., of the National Park Service. About 20 years before, the Tumon-Epau zone (not Epau or Ypao but so much as the central section of the bay) was one of the richest as investigated by Hornbostel (Thompson, 1932, pp. 8-11).

Gongna

A large site, of a dozen groups of latte, in Gongna Cove at north end of Tumon Bay, not separately recorded by Hornbostel, was

investigated in 1946 by Osborne and Lt. E. S. Carpenter, U.S.M.C., who made test excavations, collected artifacts and potsherds, and restored the stone columns, as described in detail in Osborne's report, and briefly in his published note of 1947. The site is now completely overgrown by jungle, but easily found and in fair condition. As discussed below, it should be preserved and developed.

5. Hilaan Point

The site on the beach below (just north of) Hilaan Point, not specifically mentioned by Mrs. Thompson in her report based on Hornbostel's work, is described by Osborne. It is in the bush south of the NCS beach, close to an old truck trail. There is a single set of five pairs (one pair overthrown and disturbed in the edge of the trail) of rough slab verticals, the heads (all fallen) neat hemispherical unmodified brain corals about 30" in diameter and 18" thick. The latte are aligned approximately northeast-southwest, roughly parallel with the coast, the rows 8'6" apart and the slabs in each row 9 feet apart. The typical latte is about 36" high; 28" wide at ground level, 24" halfway up, and 10" at the top. There are potsherds and shells about, evidences of occupation to the southwest, and remnants of another latte group -- two fallen slabs and one good taza; there is another scattered one, several pieces, up against the cliff base among papaya and coconut trees at an old farm, the Guillermo Flores place; remnants of still others are scattered by former house and farm sites and old roads. Potsherds are found widely over this entire area. No special measures are recommended for this site, which certainly would repay excavation.

① LS

Haputo Point

The large site which Osborne describes, and compares to Gongna, five groups of latte and midden 16" deep, I did not succeed in finding. There are many scattered potsherds on the lowest slope of Haputo and the beaches below, and a small rock-shelter on the end of the point with deep midden -- sherds and shells in black soil -- in a small cove of the slope beside it, and a similar concentrated little midden just in front of a large rock halfway around the cove just to the left and about 100 yards in. There obviously must have been considerable original occupation of the entire vicinity of Haputo Point.

Pugua

A small site on the beach below (cove just north of) Pugua was noted by Hornbostel and by Osborne; I did not visit this locality. There is no reason for it to have been disturbed since 1946.

Urano Point

The distinctive latte group which Hornbostel (see Thompson, pp. 11-13) and Osborne describe as the Urano site, with flat thin mounds over five feet tall and with large narrow oval tazas with rounded-out slots, evidently is not at Urano Point but some distance away; I did not find it. It sounds particularly interesting, with its unusual latte. Hornbostel reports burials and artifacts, similar to those of Espau (Tumon Bay), from excavations there.

In the immediate vicinity of Urano Point, and all the way from there to Ritidian Point, occasional potsherds are found and continuous occupation area is suggested, but only one latte site was

found -- about one mile north of Uruno Point, a short distance south of
a fishing and farming camp -- remnants of two groups of latte disturbed
by trees which have grown up among them and by the rooting of pigs. There
are comparatively few potsherds here, but black soil all around, extensive
shallow midden. There are five pairs of halege in each set, mostly brok-
en or overthrown; the tazas are missing or scattered. Both sets of latte
run SSW-NNE, not quite in line with each other, the south group being
"jogged" slightly inland (east). In the first (north) group, the halege
are irregular, flattish, rough slabs around 27" high, 16" wide (narrowing
to 10" at the top), and 8" thick, the rows 8'6" apart and the stones in
each row 9 feet apart. The second group consists of similar slabs at
somewhat smaller distances, 32" high, 28" wide narrowing to 14", and
averaging 8" thick.

9. The North Coast: Ritidian Point to Tagua Point

No latte were found in the vicinity of the Casa Real or along
the coast to the southwest of Ritidian Point. Potsherds were found along
the base of the cliff, where there are little rock-shelters, and one small
cave containing no archeological remains, as well as along the strand.

Osborne speaks of "several small latte groups in a poor state of preserva-
tion" in this vicinity; they probably are on around to the east. Dr.

L. H. Bryan, Jr., says that one of the chief areas of latte sites found
by Hornbostel "was on both sides of Ritidian Point, from Uruno Point to
east of Tarague Bay" ("Notes on the ancient culture of Guam. The latte

tes," Guam Recorder XIV, 1937. Mrs. Thompson's monograph simply mentions Ritidian and Minepsan among monument sites, p. 15).

Caves at both Ritidian Point and Minepsan Point are mentioned by Thompson; the former is described in a manuscript of Hornbostel's at Bishop Museum ("Notes on the cave at Ritidian Point, Guam" -- human skeletal remains, potsherds, stone implements, charcoal, etc., scattered confusion), and the Minepsan cave, with a few stick-figure pictographs, Osborne. Drawings were also found in a cave at Mergagan Point (Thompson, 1932, p. 20).

A group of exceptionally large latte at Minepsan is also described by Osborne. I was not able to visit the Minepsan locality. On one visit made to the beautiful Tarague Beach area, the only locality on the north coast east of Ritidian Point visited in January-February 1932, no latte were observed. Any sites there are likely to be disturbed unless the Air Force exercises care in road construction and recreational development.

The Northeast Corner of the Island

No archeological sites are recorded by either Hornbostel or Osborne from Tarague Beach to Pati Point on the east end of the north coast, or from Pati Point south through the Anao vicinity straight east to Mt. Santa Rosa, and I did not enter any of this sector. The cliff ascends abruptly to the sea with no beaches along here. Sites are nevertheless to be expected, although it is one of the few parts of the coast left unmarked on the map herein reproduced as Figure 1, and the area should be surveyed.

11. Janum

At the Janum locality, on the east coast near Catalina Point and just east (northeast) of Sagua Bay, evidences of intensive occupation -- basalt mortars, slingstones, bones, abundant potsnerds -- were noted by Osborne; the locality is not mentioned by Mrs. Thompson and evidently was not investigated by Hornbostel.

Two sets of latte were found near the Taitano place at Janum, about or over 100 yards apart. One is of six and the other of eight medium-sized nalege, about 30" tall, mostly standing but the caps mostly disappeared. Nearby, on the Taitano farm, there are several stone (basalt boulder) mortars, a few pebble pestles, and an abundance of potsnerds.

12. ragat Point

Here, also not previously recorded, is an extensive and important site, much disturbed by natural forces but still interesting and promising. At least some of the latte were standing up to about 10 years ago in good condition. There is now an extensive group of scattered fallen columns, with two stones standing in each of two rows and other sets evident. There were at least three distinct latte groups. Slabs (nalege) now standing run 30" to 36" high, 8" to 10" thick and 18" wide at the top, about 24" by 14" at maximum width and thickness. The fallen stones strewn about include similar slabs; very rough, more or less hemispherical, tazas, about 30" high by 60" diameter; and miscellaneous big rocks. There are two basaltic boulder mortars, and an abundance of

(21) OS

(22) LS

(23) OS

(24) LS

A
B
C

[ABC]
*

fisherds, midden deposit over a foot deep. The entire site is about 24-05 Also
feet along the coast by 75 feet from the strand to a rock point
standing just inland. The site is in dense growth, with many putting
chopag trees, just above the narrow beach. Ragat Point is reached
on a trail which goes down the cliff southeast of the Marbo post ex-
change and the Air Force housing area. Ownership was not determined,
there is no modern occupation of this section of the coast by
amanians.

The Northern Interior

Very few archeological sites are on record or to be expected
the plateau of the northern half of Guam, in spite of the abundance
remains all around the coast below the cliffs. Any that formerly
isted, furthermore, are likely to have been destroyed by airfields
other modern construction except in the central part, where there
ems to have been no occupation at all, prehistoric or modern.

Two interior sites are described by Osborne, only one with
tte, at Mogfog -- this group apparently has been removed since 1946
military construction, as none could be found in the vicinity of
fog and around where oldtimers stated the latte to be. Osborne also
fers to evidences of prehistoric occupation east of Yigo (no latte),
scattered potsnerds throughout the vicinity. A large former latte
te at Dededo had already been destroyed in 1946 by airfield construc-
on.

14. Pago

The former settlement of Pago, occupied 1681-1857, on the northwest side of Pago Bay, in cultivated fields on the Perez property, is marked by abundant potsherds, including much Chinese and/or Japanese porcelain as well as the locally made coarse thick brown Marianas Plainware, but no latte or other visible remains of structures. Investigation of this site would be a particularly interesting study.

15. Yona and Pulantat

The marine encampment close to Yona cleared away a number of latte; remnants of at least two groups were seen in February 1952, about 1/4 mile northwest of the village. The large Madog site near Pulantat is reported to be still there undamaged; it was described by Osborne in his 1947 published paper as follows: "In a dense tongue of jungle above Pulantat, near the radio station, is one of the most spectacular sites on Guam. It has not been previously mentioned * * * One of the several latte groups is in an excellent state of preservation. The supports are well shaped and smoothed, and the caps approach the type previously recorded for Fena (Laura Thompson, 1932, p. 14). Another set has the most massive supports yet seen on Guam. The single standing stone is nearly 7½' high and 3½' in diameter. With the cap in place it must have been 10½ or 11 feet * * * many smaller contiguous latte. Unusual and asymmetrical shapes and sizes are common. All of these are buried in nearly impenetrable jungle and limoncnina thickets. * * * Other smaller sites exist nearby." (American Anthropologist 49-3, p. 522). Additional detail is given in Osborne's manuscript report. I did not visit this important site.

16. The Ylig-Togcha Sector

A latte site in the Ylig vicinity is mentioned by Thompson (1932) and described by Osborne, and a similar one in the Togcha vicinity is mentioned by Osborne. Neither was found in 1952, but they may well still exist. ^[17] This area of the east coast, between Talafofo Bay and the Yona-Pago Bay area, looks promising and has never been intensively surveyed; it would repay investigation, along the coast itself and up the little streams and the entire Ylig River drainage, which should contain latte sites comparable to those of the Fena River basin. There are remnants of at least two destroyed latte sites in farms alongside the road about halfway between Togcha Bay and Camp Dealey.

17. Talafofo Vicinity

The other 50% of the Talafofo River site at Asoiroga has disappeared since Osborne's brief description of it as half destroyed by the road (Highway 4) in 1946. Potsherds were collected below the mill by M/Sgt. A. L. Aitken, USAF, in the last few years. No archaeological site appears to survive in the immediate vicinity of the town of Talafofo. There seem to be no pictographs in the Talafofo caves; those referred to by Mrs. Thompson and others (e.g., Lt. F. A. Stephenson, "Talafofo cave writing," Guam Recorder XIII, 1936) must either be intended for Inarajan (see No. 19 below) or else are imaginary interpretations of natural streakings or else have been covered by dripstone and lime incrustations -- which would have long since concealed any very ancient pictographs in at least the smaller caves here and in much of the largest one.

18. Dandan

At this locality, a mile north of Malojlo and halfway between Talafofo and Inarajan, just west of (inland from) the highway, there is an extensive occupation site with two groups of latte and scattered remnants of others, on the farm of Mr. Jose San Nicolas and in the Martinez pasture. These are large stones, $3\frac{1}{2}$ to 4 feet high but very thick, in groups oriented roughly NW-SE and NE-SW. Potsherds are abundant. No sites around Malojlo are mentioned in Thompson, 1932, but Hornbostel is said to have dug here and found human bones. Other sites are reported in the general vicinity and north toward Talafofo.

32 OS
LS

19. Inarajan and the South Coast

The cave on the north side of Inarajan Bay in which there are several rather small stick-figure pictographs in white is a little wave-cut cleft just above the water, with no floor; I do not see how it could have contained potsherds and broken stone implements (Thompson, 1932, p. 20) of any considerable antiquity or in any quantity.

No latte have been reported in the vicinity of Inarajan, or anywhere along the southeast coast, from Malojlo (two miles north of Inarajan) around to Merizo, but there surely must be archeological remains of prehistoric and historic Cnamorro occupation in this area. A find of potsherds at a depth of 13 feet on the Merizo-Umatac road near the Toguan River in 1926 is reported (Thompson, 1932, p. 31). Many shell gorges and fishhooks have been found on Cocos Island.

32?

34 OS

Latte sites just inland from Merizo and extending up as far, apparently, as Jalaoian have been heard of but not visited. There is none surviving or known to have existed at Merizo or close to the coast

35?

in the vicinity, or on up the southwest coast past Umatac and Ceti Bay to Facpi Point. A small site with a few latte stones is reported on Facpi Point by M/Sgt. A. L. Aitken, USAF.

Potsherds are common along the strand at Umatac, Ceti Bay (as mentioned by Osborne, ms.), and Seja Bay, but there seem to be no latte whatever. No sites in this part of Guam are mentioned by Mrs. Thompson. Osborne, however, found one good taza near the beach at Ceti Bay, and thinks there may have been a latte group there; he collected a particularly interesting range of potsherds here.

LS (36)

20. Inland from Umatac

A partly overthrown latte group on the right side of the road on a hillside about two miles from Umatac toward Mt. Lamiam and Agat is mentioned by Osborne (1947, p. 522, and ms. report). No sites in this vicinity are mentioned by Mrs. Thompson; but this one is said locally to have been dug into by collectors for items to sell to Hornbostel in the 1920's. It has not been noticeably disturbed further since 1946. Three slabs in one row are still in place; heaped at one end of the set are three more halege and a half-dozen capstones, at the other end are two more tazas. No potsherds were found here (Osborne collected several).

LS (37)

There is another set of latte just off the Umatac road, below it on the north on a slope, a few hundred yards southwest of the first site above: five pairs of good heavy $3\frac{1}{2}$ -foot vertical columns, spaced 12 feet apart in two rows 15 feet apart, all heads present but all fallen and some broken.

LS (38)

Several other latte sites are known to exist inland from Umatac; mainly in the Sologna Valley, at locations within view from the

first Umatac Road site -- one well up in the valley and almost clear across it, at N. 70° E. from the Umatac Road site, one down and to the right, close to a little knoll 35° S. of E. from the Umatac Road site. Another, the Rajon or Pajung Valley site, is across the Sologna Valley to the east, and beyond it is reported the Fanji site, a group of 12 columns 3½ feet high "standing in a square" (presumably 6 pairs in 2 rows), according to Mr. Joe Quinata of Umatac.

21. The Talafofo River Basin

Only in the comparatively extensive drainage of the Talafofo River have latte sites been recorded in any number in the interior of Guam (Thompson, 1932; H. G. Hornbostel, "Notes on inland latte," ms. at Bishop Museum; Osborne, 1947, and ms.). Several of importance have been separately described:

Acapulco (Osborne, ms.) -- a large site on a tributary stream safely below the Fena dam, believed to survive undamaged (not visited in 1952).

Fena (Thompson, 1932, pp. 14-15; Osborne, ms.) -- has been destroyed, and entirely submerged by the Fena Reservoir.

Mepo (Thompson, 1932, p. 14; Osborne, ms.) -- removed in the construction of the entrance spur for Magazine 173 in the Naval Ammunition Depot, the very large stones heaped on either side of the entrance.

Chandi,ja (Osborne, ms.) -- an important site, largely destroyed by a NAD road. 44

Bona (Osborne, ms.) -- a small site, evidently has disappeared, except for the stones which have been set up near the NAD entrance. 42

San Isidro (Osborne, ms.) -- could not be located, and may have been removed in the course of NAD construction. 45

Other sites have been reported to exist in the basin, and those downstream from Fena toward Talafofo presumably survive. Very possibly there are important sites to be found along the Ugum River, major tributary from the south. There seems to be none on the grassy uplands on the north of the Fena basin crossed by the Santa Rita-Talafofo road. 44) ?
45) ?

D. RECOMMENDED PROCEDURES AND ACTION PROGRAM

1. Basic legislation and general protection

General protection by law of surviving historic structures and archeological sites from destruction or vandalism is the first and fundamental need, especially with the recent transfer of the public domain on the island to the Government of Guam, until which these lands were theoretically covered, like all other federal lands, by the Antiquities Act of 1906. A territorial law, similar to the various state laws protecting historic and archeological remains, should be promptly enacted, stating the general policy of conservation of historical resources in line with the Historic Sites Act of 1935, and specifically prohibiting any disturbance of historic and archeological sites on all government lands, providing for the authorization of excavations or collecting on the island by qualified representatives of reputable institutions, by issuance of permits on the favorable recommendation of the Conservation Committee for Micronesia of the Pacific Science Board (National Research Council), or of the Subcommittee for Pacific Archeology of the same organization. The only other measures looking toward general protection of historic and archeological remains which I can suggest are educational -- involving a degree of care in arousing local interest -- and discussed in section three below.

2. Areas to be reserved or developed

(1) AGANA. The plaza and the adjoining "azotea" or governor's garden should be kept, and kept up, much as they are now, with perhaps the

dition of historical markers (with fairly long explanatory text, rather than -- as is preferable in many instances -- merely labels). Restoration of the 1884-1944 Government House or of the 1912-1944 church, or other public buildings formerly located about the plaza, does not seem necessary or justifiable.

The old Spanish stone bridge just off Marine Drive should be preserved (this requires primarily its being kept clear of vegetation) and could be marked. A very nice little park could be made here, by putting a lily-pond type of small pool under the bridge in the former channel, perhaps enlarging it to a bilobate shape, placing a few shade trees, and adding benches -- a quiet, restful little park, neither a formal garden nor a recreation area.

Of major interest to possible tourists would be the Japanese tunnel-tunnels in the hill under the Bishop's residence and the Japanese fort on the hill near Tutujan which I judge to be on the site of, and perhaps incorporating masonry of, old Fort Apugan of the 19th century. The former -- the artificial caves -- would require no attention beyond keeping them unoccupied and marking them. The fort needs to be cleared of vegetation and cleaned up generally; the masonry is in fairly good condition.

Restoration or even maintenance of the Torres House as an uninhabited exhibit would be quite possible, but undoubtedly much more costly than its historic interest would justify. Possibly the owners could be induced to rehabilitate it without major structural change and occupy

it, but to permit its being designated and marked as a historic house for visitors to see (from the outside). Another possibility, if funds were available, would be acquisition and rehabilitation of the house for use as the historical section of the Guam Territorial Museum or as headquarters for the Guam Historical Society or both. In any case, the Torres house should be preserved somehow from further deterioration and final collapse, if at all possible, as a surviving remnant of pre-war Agaña -- either by the Government of Guam or by the Guam Historical Society, under satisfactory understanding with the owners. Clearing out of all vegetation is the most urgent need; permanent re-roofing is necessary for continued preservation.

The surviving latte site in the Agaña Heights area should be preserved, excavated, and if possible acquired -- at least the comparatively good east group of latte -- for interpretive development, possibly as a field archeology laboratory of the Guam Museum.

(2) TUMON BAY. The archeological site (12 latte groups) in Gongna Cove, at the north end of Tumon Bay, is one of the few so located as to be suitable for preservation and interpretation, or "recreational" development. The land on which it is located should be acquired, the site should be brushed off and kept clear; the latte should be preserved, fallen tazas restored again, the area protected from disturbance, the signs replaced, and a detailed interpretive plan worked out, in connection with recreational development of Tumon Bay.

(3) POLANTAT, MAIMAI, URUNO, etc. Archeological sites (latte groups) other than that at Gongna Cove, discussed above under Tumon Bay, and that in the Agana Heights area, need not be specifically reserved or developed, but should be given protection, whether on public land, or private property, under the recommended general legislation.

(4) UMATAC. The three old forts and the ruined church should be acquired by the Territorial Government, for protection and for possible development as a historical park. A certain amount of repair and stabilization is needed at all these buildings. A most interesting plan or interpretive development here, with museum exhibits and other interpretive devices covering the early Spanish period, could be worked up, but I do not believe it would be justifiable, even if the area were to be considered for National Historic Site status, unless the history of Spanish Guam were not covered in the Guam Museum.

(5) SEJA BAY. The old Spanish stone bridge at Seja Bay should also be protected, which could perhaps be done most simply by reserving it along with the buildings at Umatac and placing it under the same supervision.

(6) THE "CASA REAL" AT RITIDIAN POINT. This very interesting ruin, close to a house belonging to Juan Castro of Toto and presumably on his property, certainly should be acquired, protected, and preserved, if at all possible, even if it is not surprisingly old as suggested above. No special interpretive or other development, beyond clearing it and keeping it brushed off, is recommended at the present time; but it could well be designated nevertheless as a territorial historical park for primarily protective purposes.

(7) WORLD WAR II SITES AND MONUMENTS. Preservation and historical development of the landing beaches north and south of Apra Harbor would be pleasing but is not practicable. The only areas requiring special treatment in this connection would appear to be very limited ones at the historical markers described below in section 3-c. Of the physical remains of Japanese occupation mentioned in section B-6 above, the coast defense guns on the beach at Gongna Cove and the tunnels in the cliff behind Agaña are of interest; the former can be protected from vandalism, if not from natural deterioration, by inclusion, along with the adjoining restored archeological (latte) site, in general recreational development of Tumon Beach, and the tunnels require neither special preservation, except for prohibition of vandalism, nor any extensive interpretation.

3. Interpretive Program

None of the protective measures recommended for preservation of historic sites and archeological remains are fully justifiable unless at least some degree of public use, current or expectable, is involved. As I do not envision tourism becoming very important on Guam, in the foreseeable future, the following recommendations are intended primarily for the direct benefit, inspirational and educational, of the people of Guam themselves.

a. Territorial Museum. The first requisite, it seems to me, is development of the Guam Museum, to cover both natural history and human history, with particular emphasis on marine biology and Marianas archeology, to serve both as a collecting-point and repository, for scientific

and historical data as well as for actual specimens, and also as an educational medium for the people of Guam, especially school children, with systematic exhibits incorporating explanatory statements. A tentative detailed museum plan can be worked up for later submission if desired. Organized displays on each of several fields of interest should be prepared. In addition, and without awaiting plans, historical and archeological objects can be accumulated systematically, and should include such items as the three-legged concrete estate now lying out beside a house in Umatac, and uprooted latte stones at Magazine 173, NAD, as well as available smaller archeological specimens. The installation of an exhibit on Guam in the Interior Department Museum in Washington is also a good idea (see Guam Daily News, October 12, 1951).

More helpful as a general guide than anything I could write is a recent paper by Alfred M. Brooks on "Village and small-town museums," (Museum News, March 1, 1952, p. 7), which strikes me as so valuable a clear-cut statement of basic principles applicable to all small museums that I quote it in full forthwith:

"Discussion of museums, spoken and written, is without end. However, in this discussion one kind of museum is almost always omitted, the village or small-town museum, commonly called Historical because it is usually an adjunct of the local historical society. Its quarters are, as a rule, humble; a room, or a few rooms, in which are gathered all sorts of objects having an historical association with the community and countryside. But no matter how small, it performs an important service not only at home, but often abroad, by preserving precious and sometimes invaluable things that might otherwise have been thrown away and lost forever. It may be little more than a communal attic, but attics contain treasures on which a very small museum may well build an enviable reputation.

"The meager financial support of these museums is derived mainly from membership dues, and the income from small vested funds. Occasionally the historical society that sponsors them receives a legacy large enough, if not otherwise ear-marked, to buy a house, and even to add a fire-proof extension. Better, as a rule, the latter, though small, when the money will not provide both, because security against fire is the one thing above all others that induces persons so inclined to give or loan valuable objects, manuscripts, maps and books which are a "talking point." something that the local press will notice, and the public need; something people will go to see, and be proud to show others. Too often however all the money goes into the building that, the sum total of dues and income being inadequate, becomes a financial handicap. This is briefly the story of the local, perhaps the typical town museum, cared for by a group of historical- and museum-minded people, mostly women, whose labors are wholly those of love and whose training, professionally speaking, is nil.

"In these circumstances the case of the small local historical museum sounds pretty discouraging, and the chances of its ever being anything but a failure seems unlikely. This is not true however, for the fact remains that a spark of historical and artistic interest is being kept alive even in the most heedless town or village. Meanwhile the museum is protecting what has been salvaged to date, and is slowing down the drain of many desirable things from the community by way of the antique dealer and the collector. It is saving at least some of the records of the past and establishing a background without which there can be no foreground for the picture of our life.

"What can the untrained people who have taken on themselves this museum job do to improve their museum? If the museum is starting from scratch, how to plan best for the future? The first answer, though oversimplified, is to think of the museum as you do of your own home, and of its care as an outside housekeeping job -- an outside interest in the sense of the civic, or charitable, or church work you do. Get the people who are interested together and divide up the housekeeping among them. Many hands make light work.

"Next, agree to the three basic rules, and stick to them as if life itself depended upon them. The life of every successful museum, smallest to largest, does depend on them in the same way that

the successful life of stores, of hotels, and of all public institutions depends on them. And see to it that no bit of work done in following these rules is wasted. The three rules are: keep clean; be orderly; look attractive. In single words: cleanliness, orderliness, attractiveness. The most important of these is cleanliness. The last, attractiveness, will result naturally from the first two.

"A few concrete amplifications of these oversimplified answers. Never crowd the objects exhibited. Shakespeare knew this, and said it as none but he could, "Order gave each thing view." Make this your law. Then keep it. The inevitable result of crowding is confusion that makes it impossible to see things to advantage that are set out with the express purpose of being seen to the best advantage. It also makes cleaning and dusting difficult.

"Know where everything is -- objects on exhibit, and those in storage. And have at hand a quick, sure way of finding out where, when, and from whom every item was obtained. This is a must. The way to meet it is two-fold. Put a number on each item, in ink or sewn, as far as possible. Keep a correspondingly numbered card catalogue, with group headings under which the individual items belonging to the group are recorded as to source, date, and donor together with any pertinent comment. When possible a page reference to the type of thing recorded in some reliable book or encyclopedia that the museum or the town library may own. Do not be abashed by the smile of any professional or near-professional cataloguer at this way of keeping your museum in hand. A working tool is worthwhile when you cannot have a precision instrument.

"The museum is the place for all books, pamphlets, manuscripts and maps that deal with local matters in any form. It is not the place for books in general: Dickens, anthologies of poetry, volumes on science, and many more belong in the town or village library. Also, most resolutely, stick to being a museum and resist not being one. Avoid being thought of as a genealogical society. It will save no end of time in trying to answer questions about family trees that can only be properly answered by a professional genealogical society or a family history.

"Finally, it is a matter of general agreement that there are many unlisted small local museums scattered through the country that are not only highly educational but also delightful communal centers. Whenever and wherever this is so, it is because those who run them have a passion for cleanliness, orderliness, and attractiveness."

b. Division of Conservation and Sciences. The idea of a separate governmental unit for these purposes may be impracticable or premature, but I wish nevertheless to offer the suggestion for consideration. It will no doubt suffice, at least for the time being, to have parks and monuments administered by the Director of the Department of Land Management, and the museum handled along with the public library by the Department of Education, but I believe it would be desirable to establish a separate organization, to combine the functions of a State Parks Board, the supervision of the territorial Museum, and other concerns of the government in the fields of conservation and science.

c. Markers and Wayside Exhibits.

(1) Existing Historical Markers and Monuments.

First in historical order is the Magellan Monument at Umatac; as discussed above, there is no known positive evidence that Umatac actually was the point at which Magellan landed.

A stone marker at the north end of Tumon Beach carries the inscription: "In this very place was martyred the Venerable Father Diego Luis de Sanvitores, S.J., on April 2, 1672. Msgr. Olano Vic. Apostolic dedicated this remembrance. Being Governor of Guam Capt. J. T. Alexander U.S.N., January 1940."

The monument is in fair condition; a small chapel adjoining is kept up and in current use.

A much older historical memorial is the roadside shrine between Asan and Agat, just off the present highway (Marine Drive) north of the turnoff to Agana Heights and Santa Rita, with two plaques in the altar. The upper one states in Spanish, "The Governor Don Felipe Cerain, R.I.P., had this difficult road constructed in 1784 and 1785, planted the coconut-trees of the community, and brought [caused, produced] innumerable benefits to these islands. Pray to God for his soul," and the second reads, "The Governor Don Francisco Villalobos, the governors, [i.e., Commissioners] Don Antonio Guerrero, Don Juan de Rivers, and Don Lucas de Castor, and all the district leaders [cavezas de barangay — heads of wards] of Agana, with the help of their fellow-citizens succeeded from 1832 to 1834 in establishing the first rice fields in this fertile meadow. They gratefully entreat the protection of the Virgin Mother of God, and in honor of the Sovereign Queen they wish to make its name, Cienega de La Purisima."

Most of the other existing historical markers or monuments pertain to World War II and the liberation of Guam. The first in historical sequence and most interesting is the concrete memorial at Merizo commemorating the rising there against Japanese occupation, just before the American

reconquest, and the Guamanians killed by the Japanese for that attempt: "Requerdon ayu sihu i manmapuno nu i Japones giya tinta, Maleso gi dia 15 di Julio, 1944; yan giya faha, Maleso gi dia di Julio, 1944. (lists of 16 names and 30 names, executed at the localities Tinto and Faha, respectively) Mandichoso i manmatai gi sainata — mahatsa esta na tablero nu i taotao Maleso. 1948."

The next in order of time and significance is the monument with a shell and a flagpole, placed by the American Legion, on Marine Drive opposite the road down from Santa Rita, "At this point landed U. S. forces — 21 July 1944 — liberation of Guam."

Two command post locations during the brief campaign are indicated by less permanent signs: A board marker in a small low-fenced plot at Piti, "Command post of Brig. Gen. L. C. Shepherd, USMC, 1st Provisional Marine Brigade, July 1944, during reconquest of Guam," and a red board marker on the road from Agana to Maina and Koontz Junction, near Tutujan, "Command post of Maj. Gen. R. S. Geiger, USMC, 3rd Amphibious Corps, August 1944, liberation of Guam."

Finally there is the Battle of Yigo monument, on the highway close to Yigo, with a wooden sign between two American tanks, at the approximate location of the last organized Japanese resistance.

(2) Proposed Additional Markers and Exhibits.

All of the existing signs and shrines described above should be maintained; those of wood should be replaced by otherwise similar markers of permanent material.

The following are suggested in addition:

Gongna Cove: at the archeological (latte) site, short explanatory signs, like those installed by Osborne six years ago but of permanent materials, or else one larger marker incorporating a restoration drawing of the village to show latte supporting houses; at the nearby Japanese fortifications, a sign identifying the coastal guns and commenting on Japanese defense arrangements, the American landings having come south of where the enemy expected and prepared at Tumon Bay.

Agana Heights latte site: if acquired for development, a complete interpretive scheme with several explanatory signs and exhibits-in-place and field exhibit of specimens; in any case, at least a single marker to the effect that it is a latte group, house-support pillars, from pre-Spanish or early historic times, typical of the hundreds of sites which formerly existed on Guam.

Agana — Spanish period: A series of historical markers, each with very brief text, could well be installed in the plaza-azotea area, particularly at the remaining

structures of the Governor's garden. A historical marker at the old Torres House is recommended. A plaque or small sign on the Spanish bridge just off Marine Drive is desirable, but perhaps not essential — the effect of antiquity might be impaired by giving the construction period.

Agana — Japanese occupation: An explanatory sign at the entrance to one of the main tunnels of the grid or network under the Bishop's Palace might be worthwhile. A marker on the fort near Tutujan, overlooking the town, "Japanese fortification during the 1942-1944 occupation — believed to be on the site of an old Spanish fort" or some similar brief general statement, would also be of possible value.

Apra Harbor — Orote Point: The site of Fort St. Louis, if it can be positively located, could be marked, but I do not feel that this is essential. A sign at the head of the old Spanish staircase cut in the cliff near the light-house on Orote Point is desirable.

Invasion beaches: more extensive and detailed marking is perhaps desirable.

Old Pago: a historical marker, text about as follows: "Site of the former Chamorro village of PAGO, founded about A.D. 1680 under Spanish auspices, abandoned in 1857 after the smallpox epidemic, the survivors moving to

Sumay" -- if this information is accurate, or else whatever corrections are required.

Talafafo caves. Natural history interpretation, by means of at least a brief explanatory sign, is desirable as well as "recreational" development, but no human history seems to be involved.

Inarajan cave: no marker or other development should be installed unless constant protection has been provided for the few and easily-destroyed pictographs.

Merizo: A metal plaque on the wall of the parish house could identify it as a convento built in 1858, the only Spanish building still in use on Guam, and could well also give the date (1917) for the nearby bell-tower.

Umatac: in addition to the Magellan monument, historical markers at each of the three Spanish forts and the ruined church are definitely recommended; explanatory, with fairly long texts.

Bridges on the Agat-Umatac road: that on the west coast just south of Nimitz Beach could be marked; but I see no great need to mark the one at Seja Bay, at least at present.

d. Tours, Talks, and Schoolwork. Probably as an extension service of the territorial museum, provision of guided trips to historic and archeological sites, and of illustrated lectures and informal talks

on scientific and historical fields in the Mariana Islands, would be desirable. Very possibly the Pan-American World Airways would like to have such interpretive services, field trips as well as talks, available for travelers required to lay over in Guam.

Of particular value, it seems to me, would be the incorporation of guided field trips, to such points of historical interest as Umatac, in the school curriculum at appropriate times; the study of history, often found pretty dry, especially by quite young scholars with yet undeveloped imaginations, may come alive when depending not entirely on books and lectures but also utilizing actual sites and remains.

e. Publication Needs and Possibilities. Comprehensive but comprehensible summaries of the various fields of science and human history in Guam are, it seems to me, a felt want: non-technical surveys of the geology, flora, fauna, pre-Spanish archeology, early history, and recent history, sufficiently complete and correct to be of some value, but so clearly and simply written as to be of wide understandability and general interest. These, and also more detailed scientific publications, should be among the objectives of the Guam Museum. I doubt that a museum journal is needed, but either a revived Guam Recorder or a historical society periodical bulletin, even a mimeographed one, should be encouraged.



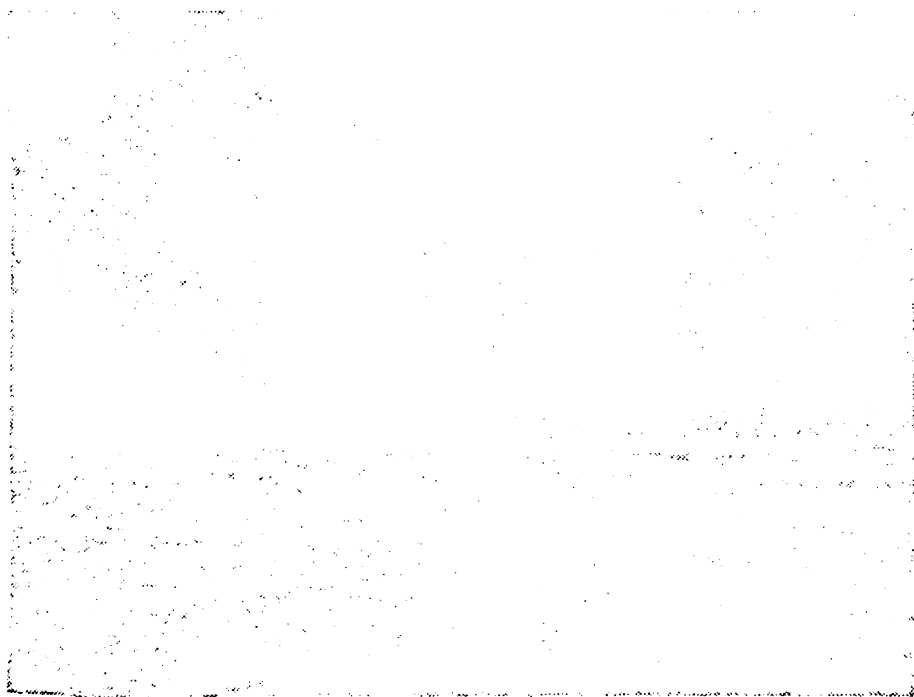
1a - Latte of the Gongna Cove site (Tumon Bay) in 1952



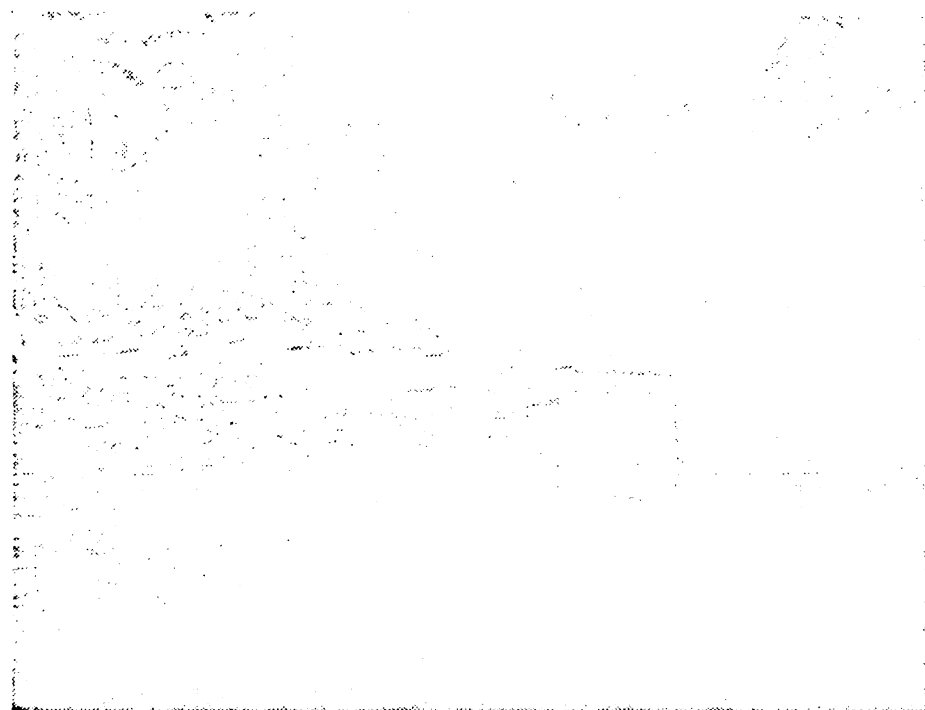
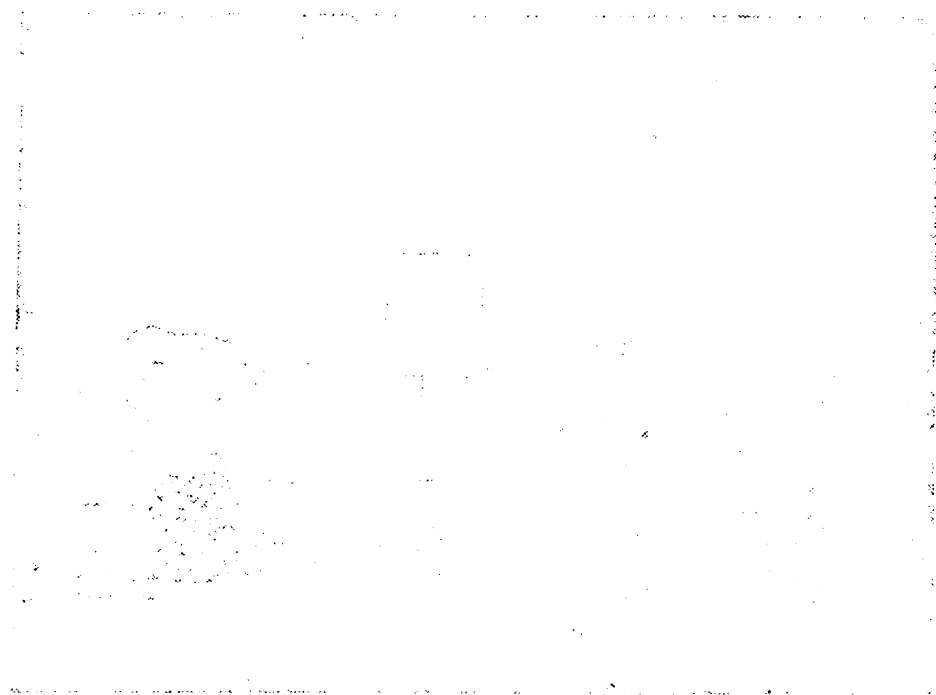
1b - Latte of the Gongna Cove site (Tumon Bay) in 1952 .



2a and 2b - Gongna Cove site in 1946, cleared and restored (photo D. Osborne)

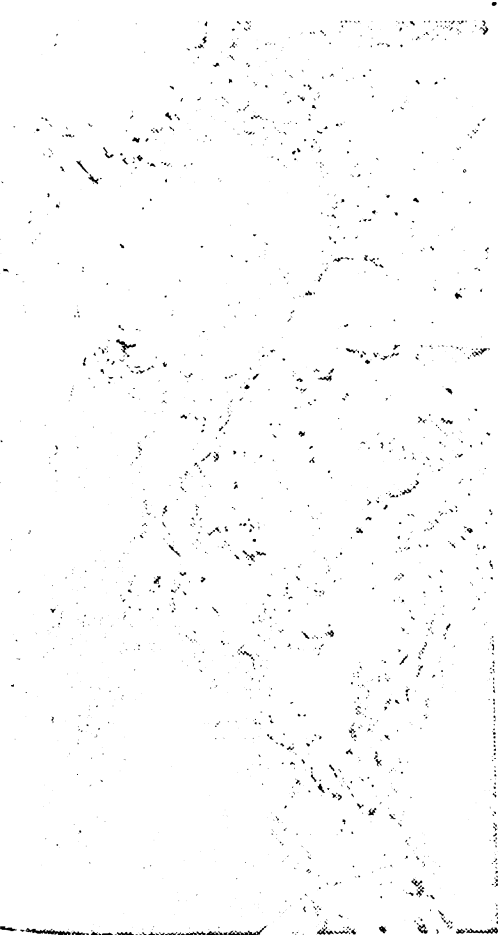


and 3b - Gongna Cove site in 1946, cleared and restored (photo D. Osborn)

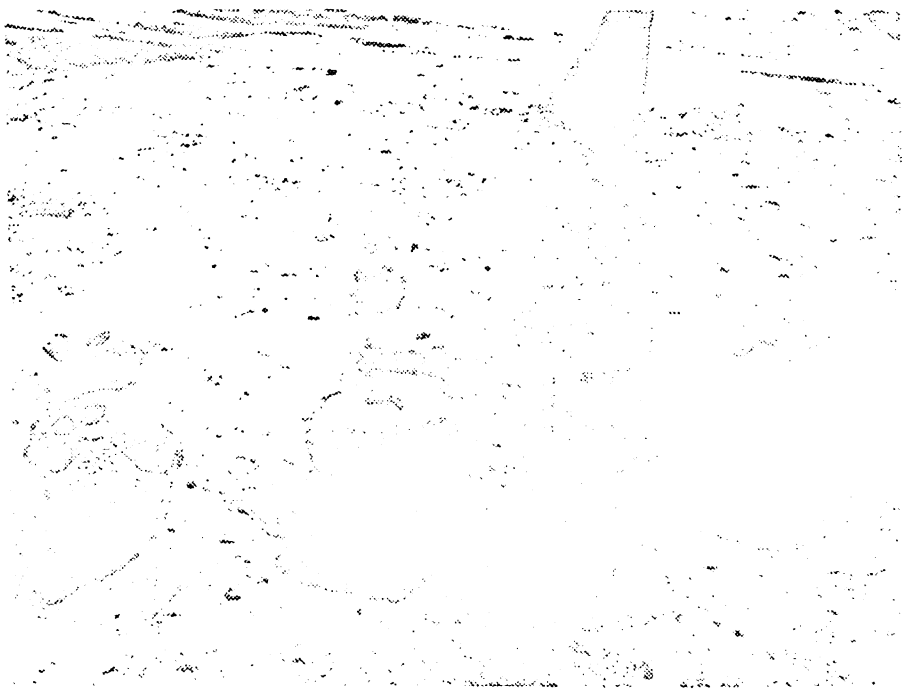


4a and 4b - Temporary sign at Gongna Cove, 1946 (photo D. Osborne)

5a - Human burial found at Congna,
1946 (photo D. Osborne)



Mortars at
site, 1946
(D. Osborne)





6a - Standing halege at Pagat Point, 1952



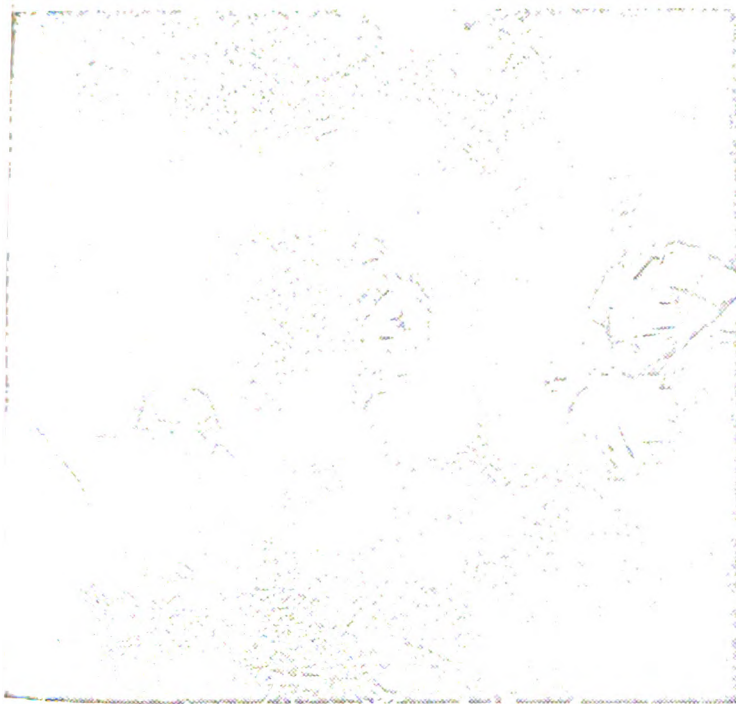
6b - Boulder mortar at Pagat Point, 1952



7a - Standing halege, latte group, Agana Heights



7b - Wave-cut rock-shelter, Inarajan Bay



8a - Latte at Pulantat above Yona
1946 (photo D. Osborne)

smaller latte at
Pulantat, 1946
(photo D. Osborne)

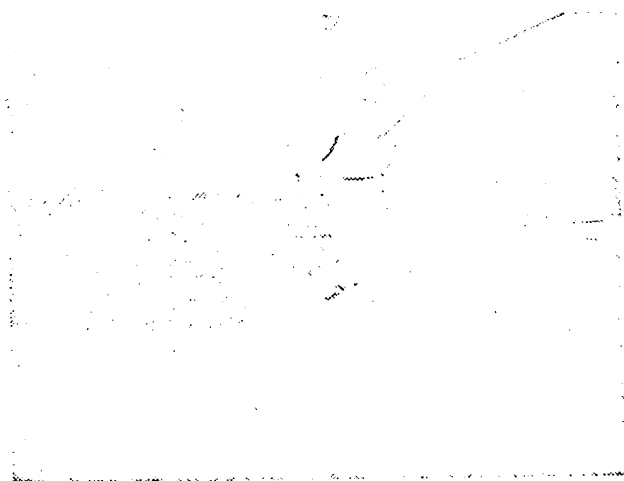
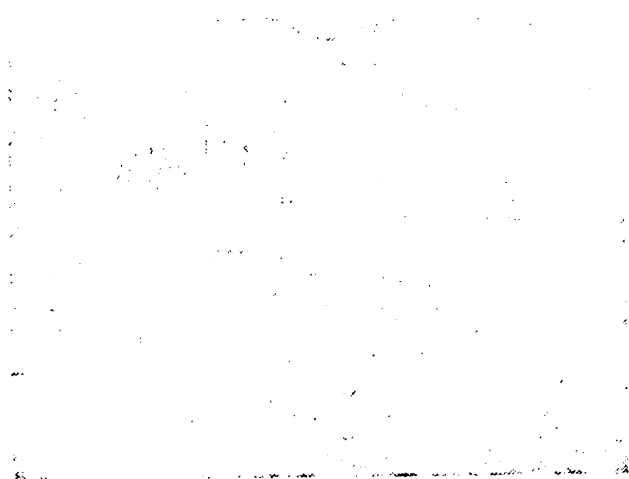
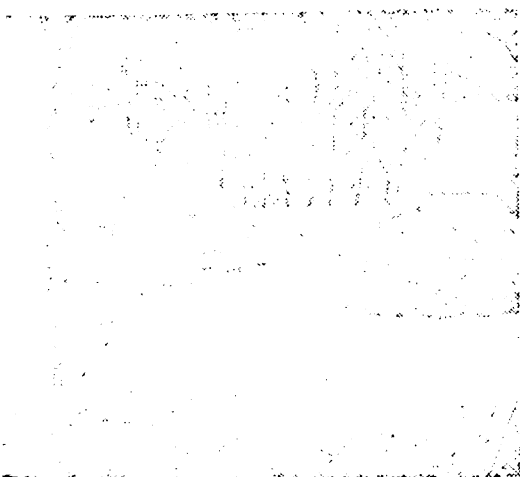


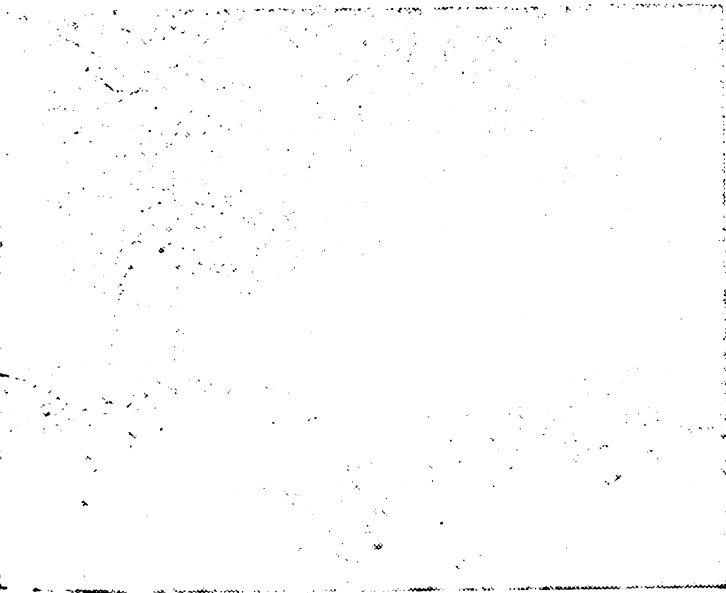


9a - Standing latte near
Jinepsan, 1946
(photo D. Osborne)



standing latte near
Jinepsan, 1946
(photo D. Osborne)

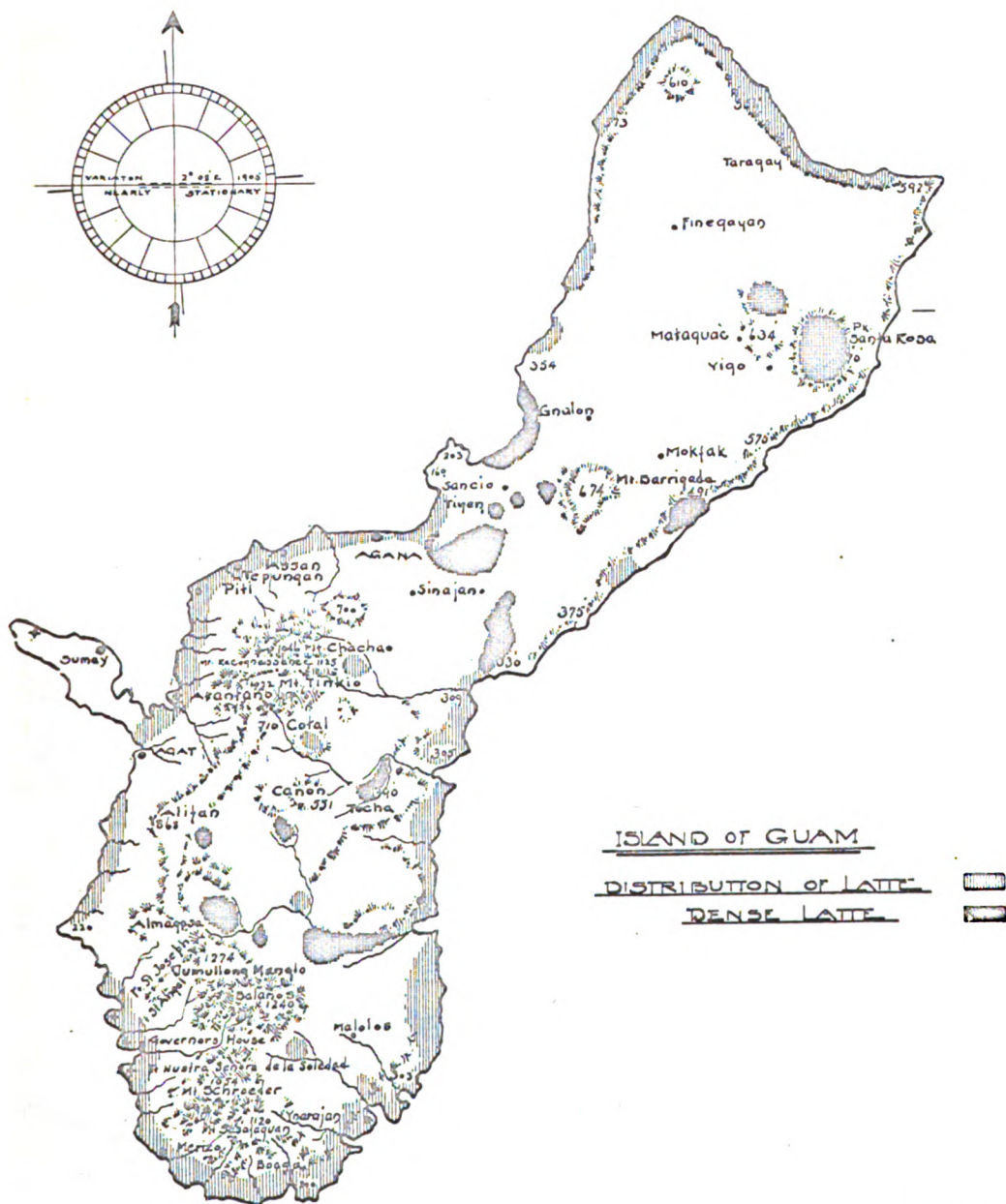




11a - The detached tana of the
As Nieves group, island
of Rota

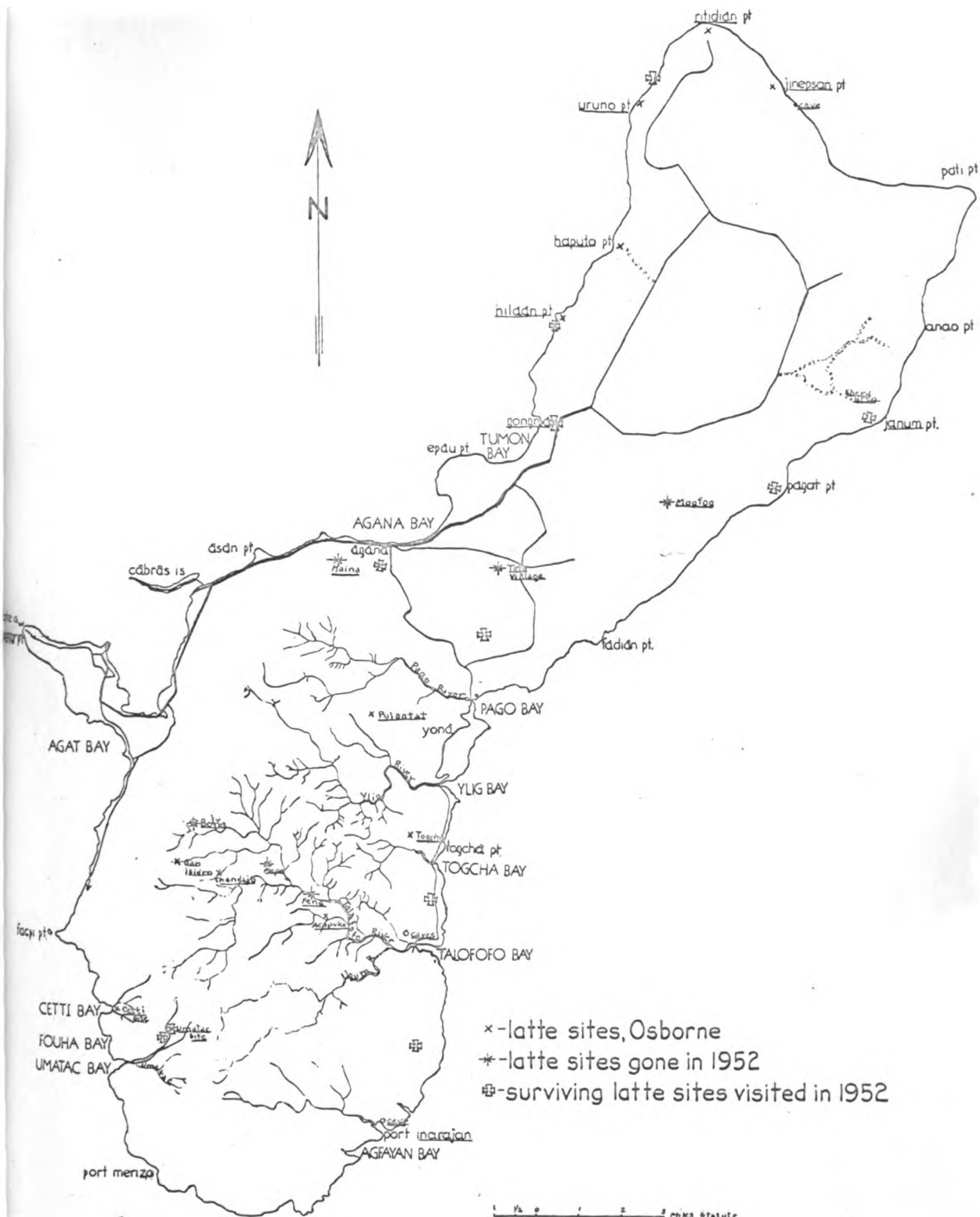
A typical house, at Talafofo, of
modern materials on the Micronesian
plan





MAP I

SEE p 104



GUAM

MAP 3

Stanford University Libraries



3 6105 123 502 804

