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Vegetation Survey of the Republic of Palau

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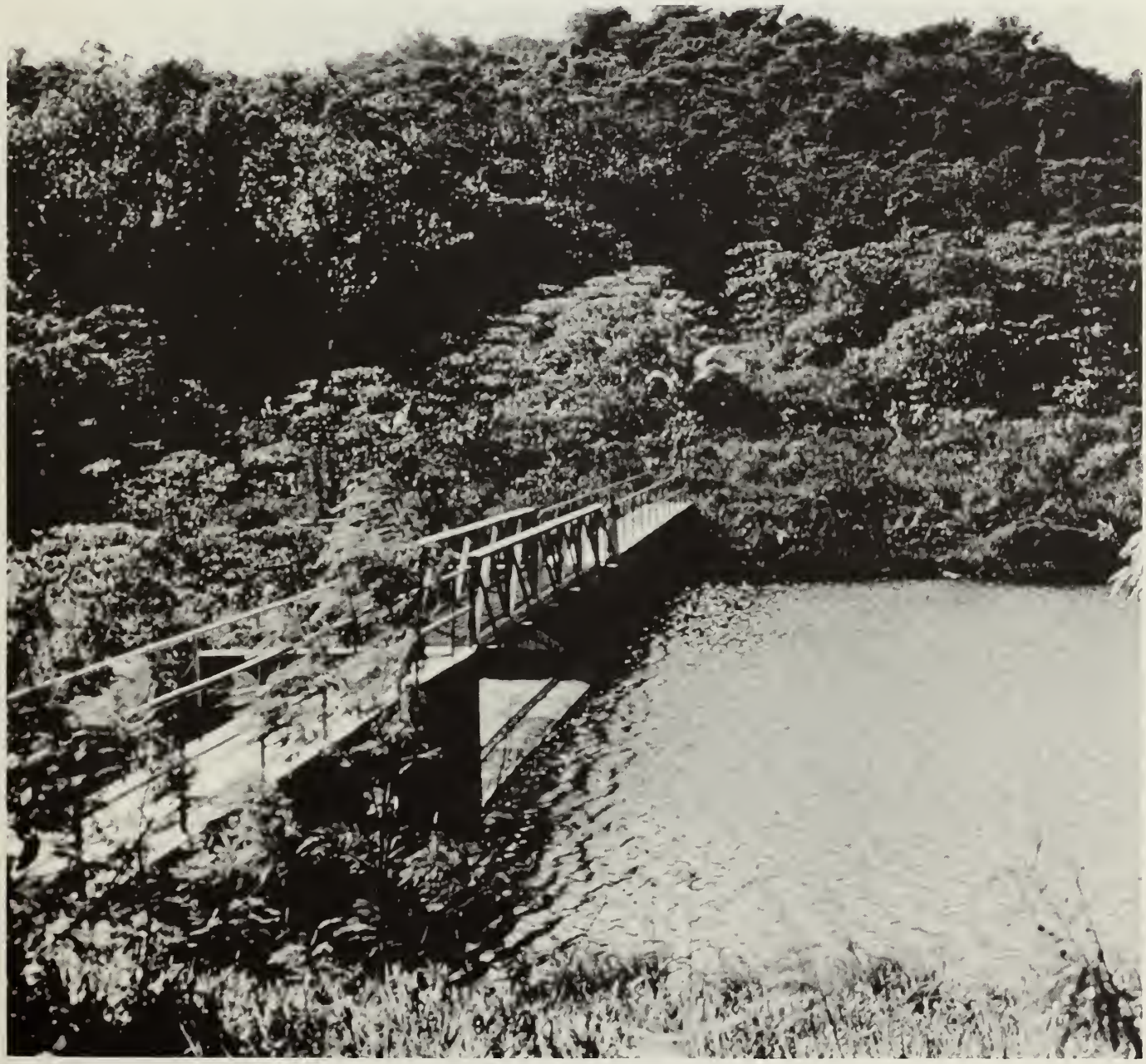
Craig D. Whitesell **Alan H. Ambacher**



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Cover: Upland forest surrounding a water reservoir which supplies water to the city of Koror, Island of Babelthuap, Republic of Palau.

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INTRODUCTION

Palau is an archipelago of high and low islands located in the western Caroline Islands. The largest island in the group is the heavily forested high island of Babelthuap. Knowledge of the soils and the extent and composition of Palau's vegetation, including the forests, is needed for land-use planning. To fill this need, a formal agreement was drawn up between the High Commissioner of the Trust Territory of the Pacific Islands, and two agencies of the U.S. Department of Agriculture—the Soil Conservation Service and the Forest Service.

Vegetation maps of Palau are a product of this agreement. They were prepared by the Forest Service in cooperation with the government of Palau, and are intended to serve as a working tool for natural resource managers and as a base for resource inventories.

This bulletin describes the different vegetation types, their ecological function and uses for 42 islands in Palau, and includes 17 map sections inside the back cover.

GEOGRAPHY AND CLIMATE

The Republic of Palau, lat. 7°20′ N and long. 134°28′ E, is located at the extreme western edge of the Caroline Islands. The archipelago lies about 800 km (500 statute mi) north of the equator, 800 km east of the Philippine Islands, and 6,000 km (3,750 statute mi) southwest of Hawaii (*fig. 1*). The island group consists of four volcanic high islands and approximately 200 low and raised coral and coralline limestone islands.

Most of the Republic's usable forest resource is in the centrally

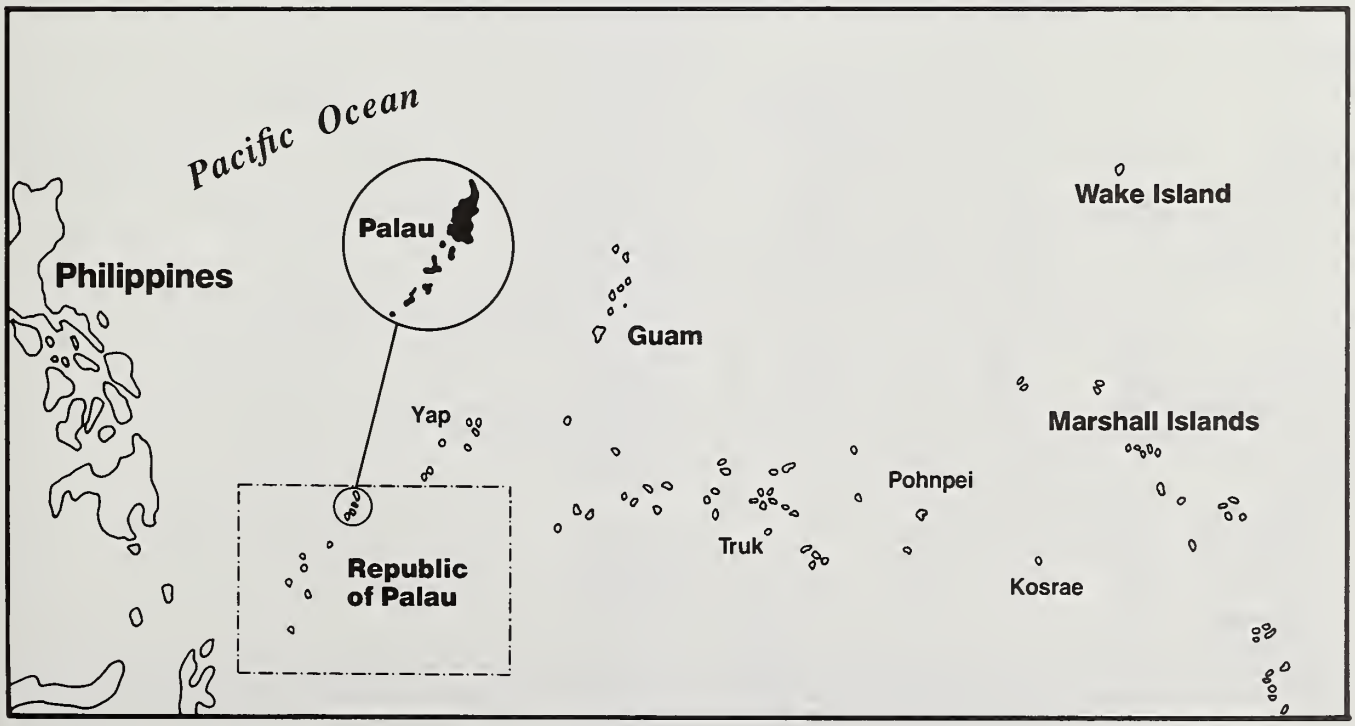


Figure 1—The Republic of Palau is located in the Western Caroline Islands.

located high island of Babelthuap (*tables 1 and 2, figs. 1, 2 and 3*). Babelthuap and the other high islands of the Republic—Malakal, Ngerekebesang, and Koror—(*table 3*) are characterized by low, rolling hills, coastal bottomlands, and tidal flats. Maximum elevation is about 215 m (700 ft).

Thirty-eight smaller islands were also surveyed during the project. Peleliu and Angaur, the two major islands to the south, are raised coral islands with jagged hills and level coastal areas (*table 4*). Much of the native vegetation on these two islands was destroyed during World War II, although remnants of limestone forest can still be found in the hills. Secondary vegetation, commonly found after disturbance, grows on 50 percent of the land area of Peleliu and on 68 percent of Angaur.

The famed Rock Islands of Palau are extremely steep, coralline limestone islands, typically undercut along the water's edge. They occupy the area from Koror Island south to the island of Peleliu. We actually surveyed only one-fifth of the Rock Islands due to incomplete aerial photography. A summary of the vegetation found on 35 Rock Islands is found in *table 5* and a detailed breakdown by island and state, in *table 6A-C*.

Palau is hot and humid. The mean annual temperature of Koror, the capitol, is 27 °C (81 °F), with a mean annual rainfall of 3,730 mm (147 in). Rainfall varies little from month to month—February, March, and April are slightly drier than average. Relative humidity of the area averages about 90 percent at night and from 75 to 80 percent during the day. The average diurnal range of temperatures is 7 °C (12 °F). Although Palau lies outside the main paths of severe tropical disturbances and typhoons, such storms with high winds occasionally hit the islands, causing damage to crops, trees, and dwellings. In March 1967, the most destructive storm recorded struck with winds of 117 kph (73 mph).

Table 1—*Area of Republic of Palau by island group, land class and type, 1979*

Land class and type	Symbol	Island Group: Babelthuap	Island Group: Other high islands	Island Group: Coral Islands	Island Group: Rock Islands	Total
		Hectares (acres)				
Forest						
Upland forest	UP	21,690	201	0	0	21,891 (54,093)
Swamp forest	SW	1,617	15	47	1	1,680 (4,151)
Mangrove forest	MN	4,025	205	435	43	4,708 (11,633)
Plantation forest	PF	24	2	0	0	26 (64)
Rock Island forest	RI	104	210	0	802	1,116 (2,758)
Limestone forest	LI	0	0	1,175	57	1,232 (3,044)
Casuarina forest	CA	0	0	451	0	451 (1,114)
Atoll forest	AT	0	0	97	58	155 (383)
Palm forest	PO	0	<1	0	0	<1 (1)
Total forest		27,460	633	2,205	961	31,259 (77,241)
Secondary vegetation	SV	515	79	131	2	727 (1,796)
Agroforest						
Agroforest	AG	8	0	2	6	16 (40)
Agroforest (w/coconut)	AG.CO	173	6	100	0	279 (689)
Coconut plantation	CO	743	0	0	71	814 (2,011)
Total agroforest		924	6	102	77	1,109 (2,740)
Nonforest						
Marsh, fresh	M.F	448	<1	27	0	475 (1,174)
Marsh, cultivated	M.C	107	2	25	0	134 (331)
Marsh, saline	M.S	0	0	25	<1	25 (62)
Grassland	G	6,728	53	1	1	6,783 (16,761)
Strand	S	0	0	10	1	11 (27)
Cropland	C	140	59	4	0	203 (502)
Cropland/secondary vegetation	C/SV	0	28	0	0	28 (69)
Urban	U	141	222	33	1	397 (981)
Urban/cropland	U/C	106	70	0	0	176 (435)
Urban/agroforest	U/A	0	0	61	0	61 (151)
Urban/secondary vegetation	U/SV	0	3	0	0	3 (70)
Barren	B	149	5	26	0	180 (445)
Water	W	15	9	17	7	48 (119)
Total nonforest		7,834	451	229	10	8,524 (21,063)
Total area		36,733	1,169	2,667	1,050	41,619 (102,840)

Table 2—*Area of forest land, by size and density classes, Babelthuap Island, Republic of Palau, 1979*

Type	Size class[1]	Density classes[2]			Total
		Low	Medium	High	
		Hectares (acres)			
Upland Forest	0	0	6	639	645 (1,593)
Upland Forest	1	246	424	15,791	16,461 (40,677)
Upland Forest	2	3	638	3,943	4,584 (11,326)
Swamp Forest	0	0	2	2	4 (9)
Swamp Forest	1	357	705	347	1,409 (3,481)
Swamp Forest	2	88	65	51	204 (505)
Mangrove	0	0	0	459	459 (1,134)
Mangrove	1	5	0	3,395	3,400 (8,401)
Mangrove	2	0	0	166	166 (411)
Rock Island Forest	1	0	0	103	103 (255)
Rock Island Forest	2	0	0	1	1 (2)
Plantation Forest	1	0	0	24	24 (60)
Total forest land		699	1,840	24,921	27,460 (67,854)

[1]0—Short, shrub-like trees smaller than 12.5 cm in d.b.h.

1—Trees averaging less than 30 cm in d.b.h., but larger than 12.5 cm in d.b.h.

2—Trees averaging 30 cm or more in d.b.h.

[2]Crown closure of main canopy: low <30 pct; medium 30-70 pct; high >70 pct.

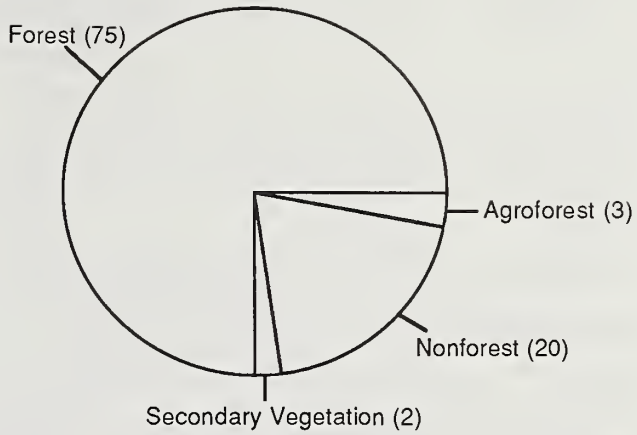


Figure 2—Areal percentages of land classes, Republic of Palau, in 1979.

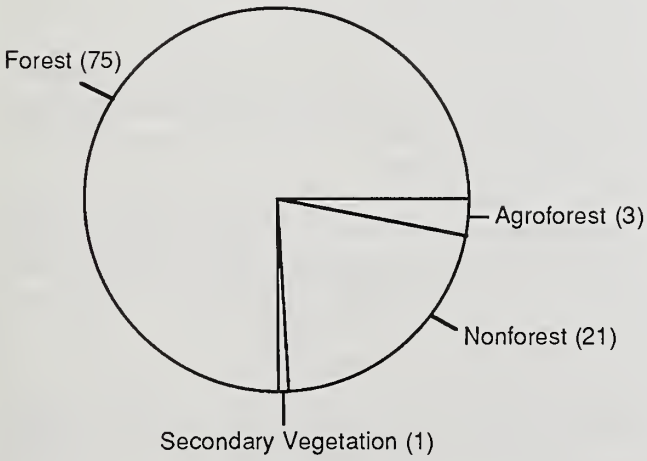


Figure 3—Areal percentages of land classes, Republic of Palau in 1979 show that the forest class is by far the largest. Eighty-six percent of the nonforest class or 18 percent of the total land area of Babelthuap Island is grassland.

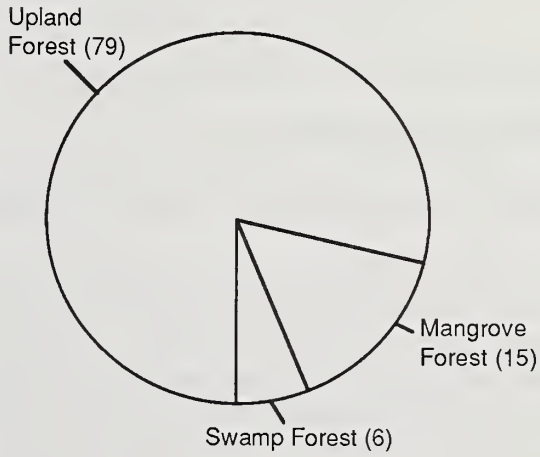


Figure 4—Percentages of land area in the major forest types, Babelthuap Island, Republic of Palau, 1979. The plantation and Rock Island forest types comprise less than 1 percent of the total area.

Table 3—*Area of the high islands of Koror, Malakal, and Ngerekebesang, Republic of Palau, by island, land class, and type, 1979*

Land class and type	Symbol	Island			Total
		Koror	Malakal	Ngerekebesang	
		Hectares (acres)			
Forest					
Upland forest	UP	56	26	119	201 (497)
Swamp forest	SW	15	0	0	15 (37)
Mangrove forest	MN	189	0	16	205 (507)
Plantation forest	PF	2	0	0	2 (5)
Rock Island forest	RI	206	3	1	210 (519)
Palm forest	PO	<1	0	0	<1 (1)
Total forest		468	29	136	633 (1,564)
Secondary vegetation	SV	54	11	14	79 (195)
Agroforest					
Agroforest (w/coconut)	AG.CO	0	0	6	6 (15)
Total agroforest		0	0	6	6 (15)
Nonforest					
Marsh, fresh	M.F	0	0	<1	<1 (1)
Marsh, cultivated	M.C	2	0	0	2 (5)
Grassland	G	9	2	42	53 (131)
Cropland	C	47	0	12	59 (146)
Cropland/secondary vegetation	C/SV	28	0	0	28 (69)
Urban	U	146	38	38	222 (548)
Urban/cropland	U/C	70	0	0	70 (173)
Urban/secondary vegetation	U/SV	3	0	0	3 (7)
Barren	B	0	5	0	5 (12)
Water	W	9	<1	0	9 (22)
Total nonforest		314	45	92	451 (1,114)
Total area		836	85	248	1,169 (2,888)

SURVEY METHODS

Palau's vegetative types were identified and delineated on photographs taken in 1976, at a scale of 1:10,000. The minimum area mapped during the project was 0.4 ha (1 acre). Updating the photos to account for recent changes was not possible. Field work in 1985, however, showed that the vegetation maps are fairly accurate.

Vegetation types were identified by examining the photos stereoscopically for differences in tone, texture, and pattern. In some cases, individual species were recognized by their distinctive shapes. The accuracy of the vegetative typing depended on the age and quality of the photographs, the skill and training of the photo interpreter, and on comparisons of potential types to actual field characteristics.

Before mapping could begin, a vegetative mapping scheme was needed. Since much of the islands are inaccessible by road and because funds were limited, the types defined were restricted to those easily interpreted without intensive ground checking. Type characteristics delineated were limited to those useful to foresters and land-use planners.

After field reconnaissance, the vegetation coding system presented in this bulletin was adopted. The photos were then edited and sent to the Engineering Geometronics Section of the Forest Service's Pacific Southwest Regional Office, for transfer to base maps and for measurement of type areas.

TYPE CLASSIFICATIONS

For mapping purposes, the islands of Palau were divided into four major land classes—forest, secondary vegetation, agroforest, and nonforest.

Table 4—*Area of the coral islands of Peleliu, Angaur, Kayangel, Republic of Palau, by island, land class, and type, 1979*

Land class and type	Symbol	Island			Total
		Peleliu	Anguar	Kayangel	
		Hectares (acres)			
Forest					
Swamp forest	SW	38	9	0	47 (116)
Mangrove forest	MN	435	0	0	435 (1,075)
Limestone forest	LI	587	588	0	1,175 (2,903)
Casuarina	CA	404	47	0	451 (1,114)
Atoll	AT	1	51	45	97 (240)
Total forest		1,465	695	45	2,205 (5,448)
Secondary vegetation	SV	96	31	4	131 (324)
Agroforest					
Agroforest	AG	2	0	0	2 (5)
Agroforest (w/coconut)	AG.CO	0	0	100	100 (247)
Total agroforest		2	0	100	102 (2,298)
Nonforest					
Marsh, fresh	M.F	27	0	0	27 (67)
Marsh, cultivated	M.C	16	9	0	25 (63)
Marsh, saline	M.S	25	0	0	25 (63)
Grassland	G	0	<1	1	1 (3)
Strand	S	2	0	8	10 (25)
Cropland	C	3	0	1	4 (10)
Urban	U	26	7	<1	33 (82)
Urban/agroforest	U/C	10	51	0	61 (151)
Barren	B	13	13	0	26 (64)
Water	W	13	4	<1	17 (42)
Total nonforest		135	84	10	229 (566)
Total area (coral islands)		1,698	810	159	2,667 (6,590)

Forest—The forest class consists of eight types of areas vegetated with live trees. The Rock Island forest type is a subtype of limestone forest.

Upland forest (UP)
Swamp forest (SW)
Mangrove forest (MN)
Atoll forest (AT)
Casuarina forest (CA)
Limestone forest (LI)
  Rock Island forest subtype (RI)
Plantation forest (PF)
Palm forest (PO)

Secondary vegetation (SV)—Secondary vegetation includes vines, shrubs, and small trees on recently disturbed areas. In Palau, *Macaranga carolinensis* and *Bambusa* spp. are important components of secondary vegetation.

Agroforest (AG)—The agroforest class is made up of areas under cultivation for fruit and other food crops, and trees and wood products. Primary types in this class are:

Agroforest with coconuts (AG.CO)
Coconut plantation (CO)

Nonforest—Nonforest areas consist of lands that have never supported forests or are currently developed for nonforest uses. Seven types are included:

Marsh (M)
Grassland or savanna (G)
Strand (S)
Cropland (C)
Urban (U)
Barren (B)
Water (W)

The forest class and coconut plantation type were further subdivided into size and density classes (*table 2*), identified by these codes:

Code	Size class
0	Short, shrub-like stands smaller than 12.5 cm (5 in) in diameter at breast height (d.b.h.)
1	Trees averaging less than 30 cm (12 in) in d.b.h., but larger than or equal to 12.5 cm (5 in) in d.b.h.
2	Trees averaging 30 cm (12 in) or more in d.b.h.

Code	Density class
H	High—crown closure of main canopy greater than 70 percent.
M	Medium—crown closure of main canopy between 30 and 70 percent.
L	Low—crown closure of main canopy less than 30 percent.

On the folded maps, vegetative areas are numbered and identified by symbols in the legend. In each code, the vegetation type is shown first, followed by the size class and density class. For example, MN1H would indicate mangrove between 12.5 cm (5 in) and 30 cm (12 in) in diameter with a dense crown closure. Where possible, predominant species are identified. In such cases, the type code is followed by a period, followed by the first letter of the genus name, as in MN1H.S when *Sonneratia* makes up at least 20 percent of the mangrove stand. Occasionally, two-storied stands have been identified, usually with a sparse main canopy and an understory of secondary vegetation. For example, UP2L/SV.H would indicate a scattered overstory of upland species overtopping secondary vegetation (*table 7*) that is at least 20 percent *Hibiscus*.

VEGETATION TYPE DESCRIPTIONS

A detailed description of the primary types found in each of the major land classes is listed below. Classes are described by habitat and major overstory and understory species. A partial list of Palauan plant species is presented in *table 8*.

Forest

Although the Palauan islands at one time may have been completely covered with native forest, they are now only 75 percent forest. Most of the remaining land is classed as grassland, agro-

Table 5—*Area of selected Rock Islands, Republic of Palau, by State, land class, and type, 1979*

Land class and type	Symbol	State				Total
		Airai	Koror	Ngere-chelong	Peleliu	
		Hectares (acres)				
Forest						
Rock Island forest	RI	191	593	0	18	802 (1,982)
Mangrove forest	MN	1	0	2	40	43 (106)
Limestone forest	LI	0	0	0	57	57 (141)
Swamp forest	SW	0	0	0	1	1 (2)
Atoll	AT	0	0	0	58	58 (143)
Total forest		192	593	2	174	961 (2,375)
Secondary vegetation	SV	2	0	0	0	2 (5)
Agroforest						
Agroforest	AG	0	0	0	6	6 (15)
Coconut	CO	0	0	6	65	71 (175)
Total agroforest		0	0	6	71	77 (190)
Nonforest						
Strand[1]	S	0	0	0	1	1 (2)
Urban	U	0	1	0	0	1 (2)
Grassland	G	0	1	0	0	1 (2)
Water	W	1	6	0	0	7 (17)
Total nonforest		1	8	0	1	10 (24)
Total area		195	601	8	246	1,050 (2,595)

[1]Includes 0.4 ha of saline marsh.

forest, or secondary vegetation. Almost all of the agroforest and secondary vegetation was once forest land, but the origins of the grasslands are less sure. During the Japanese administration (1914–1945), large areas in southern Babelthuap were cleared of native forest for pineapple and sugar cane fields. During the same period, bauxite mining in Ngardmau State, on the northwest coast destroyed native forest. Whatever their origins, however, most of the grassland area is not yet too eroded and infertile to support forest growth.

Upland Forest (UP)

Upland forests are found on the volcanic, high islands of Babelthuap, Malakal, Koror, and Ngerekebesang. Most of the other islands of Palau are limestone or coral and support limestone, rock island, or atoll forest types.

The upland forests of Palau are the most species diverse in Micronesia, and include a number of species endemic to Palau. While many interesting ecological communities are present within the upland forests they could not be consistently identified on the photographs, and therefore were not mapped.

One of the most common tree species found in Palau, as in the rest of the Caroline Islands, is *Campnosperma brevipetiolata*. It is usually found growing at elevations less than 150 m (500 ft) on flat or gently sloping sites and along rivers and streams. Other major species found in Palau's upland forests include *Parinari corymbosa*, *Alphitonia carolinensis*, *Rhus taitensis*, *Elaeocarpus carolinensis*, *Serianthes kanehirae*, *Semecarpus venenosus*, *Calophyllum inophyllum*, *Gmelina palawensis*, and *Pterocarpus indicus*. Many other tree species occupy the upper canopy in Palauan upland forests.

Species commonly found in the understory of Palau's forests include palms, especially *Pinanga insignis* and other plants, including *Pandanus aimiriikensis*, *Ixora casei*, *Eugenia cuminii*, *Osmoxylon oliveri*, *Manilkara udoido*, *Symplocos racemosa*, and *Cyathea lunulata*.

Swamp Forest (SW)

Swamp forests occur where soils are inundated with fresh or slightly brackish water. The most common habitat for such forests is in low lying areas, just inland of mangroves, above tidal influences. Coastal lowland swamps of Palau are generally quite disturbed, with *Hibiscus tiliaceus* being a common component after disturbance. Taro cultivation is a common competing land use for these swamp areas and is probably the main reason for the clearing of swamp forest.

In Palau, species common to swamps on the landward side of mangroves and along rivers include *Horsfieldia amklaal*, *Cynometra ramiflora*, *Calophyllum soulattri*, *Barringtonia racemosa*, *Heritiera littoralis*, *Samadera indica*, and in the understory, *Stemonurus ammui*. The climbing vine *Derris trifoliata* is commonly found growing on trees.

A swamp forest association which is common to low areas of

impeded drainage is the *Horsfieldia amklaal*, *Barringtonia racemosa*, and *Donax canniformis* type, first described by Hosokawa (1952). This type of swamp forest is not restricted to coastal areas but is quite commonly found along streams in the interior hills of Babelthuap. *Horsfieldia* trees in these upland swamp areas occasionally attain diameters over 100 cm (39 in).

Some remnants of swamp forest occur on Peleliu. Species commonly found in these wet areas are *Barringtonia racemosa* and *Terminalia catappa*. On Angaur, *Barringtonia racemosa*, *Hibiscus tiliaceus*, and *Areca catechu* (betelnut) grow in a swampy area that remains near the airstrip.

Mangrove Forest (MN)

In mangrove forests, tree roots are periodically inundated with sea water. They serve as a natural filtering and nutrient buffering system between high islands and lagoons, settling silt and providing a slow sustained release of nutrients into the lagoon. Mangroves also serve as fish spawning grounds and habitat for birds and fruit bats, and provide lumber, firewood, and fisheries.

In Palau, the mangrove forest type occurs along lower portions of rivers and their mouths, on coastal mud flats, and on some offshore islets. Where well developed, stands may reach 15 to 20 m (50 to 70 ft).

Although large mangrove trees can be found, Palauan mangroves typically grow in stands of medium-sized trees (MN1). In the interior of large mangrove areas, however, dense stands of short, small trees may be found (MN0)—especially in areas where the water circulation is limited and the soil is relatively firm. The presence of a hard-pan layer of organic material is probably responsible for the stunted growth. *Rhizophora* spp. predominate in MN0 stands but *Bruguiera gymnorrhiza* is occasionally found. Individual trees are typically 2 to 3 m (7 to 10 ft) tall and less than 8 cm (3 in) in d.b.h.—too small to be usable for wood products.

Sonneratia alba and *Rhizophora mucronata* are dominant on the seaward side of the mangrove (Stemmermann and Proby 1978). At the mouths of larger rivers or around bay indentations, *Rhizophora mucronata* and *R. apiculata* may grow in pure stands or mixed with *Sonneratia* and some *Bruguiera*. On the landward side of mangroves, the species mix may include *Lumnitzera littorea* and *Xylocarpus granatum*. Where estuaries become river-like, *Rhizophora* spp. are rarely found, *Sonneratia* remains common, and *Bruguiera*, *Xylocarpus*, and *Lumnitzera* become common.

Heritiera littoralis is found along the landward side of mangroves and upstream. Stands of *Nypa fruticans* occur along the lower portions and mouths of some rivers. Although *Nypa* palm is fairly common, it generally grows in stringers too narrow to map.

The mangroves of Babelthuap Island are well developed, especially on the south and southwest coasts. The mangroves of Peleliu Island are generally stunted and less dense than those of Babelthuap. One mangrove stand is in Kayangel Atoll, along the shore of a saltwater pond in the interior of a small islet adjacent to Kayangel Island proper. These *Bruguiera* and *Rhizophora* trees, now 5 to 6 m (16 to 20 ft) tall, were planted by the Palau Department of Agriculture and Forestry in the mid 1970's.

Atoll Forest (AT)

The atoll forest type generally is found towards the interior of larger and wetter uninhabited atolls and along sandy or rocky coasts of high islands. Although generally located behind the strand, atoll forest species are often mixed with the strand species, so the transition from strand to atoll forest is often gradual and indefinite.

Species commonly found in atoll forests include an outer fringe of shrubby *Scaevola taccada*, occasionally with *Tournefortia argentea* and *Sophora tomentosa*. On rocky coasts, *Pemphis acidula* is common. Both *Tournefortia* and *Pemphis* grow into small well-formed trees. Tall *Casuarina litorea* trees may be present, especially along the leeward shore. Other species include *Calophyllum inophyllum*, *Cordia subcordata*, *Hernandia sonora*, *Guettarda speciosa*, *Pandanus* spp., *Pisonia grandis*, *Terminalia catappa*, *Morinda citrifolia*, *Neisosperma oppositifolia*, *Hibiscus tiliaceus*, *Ficus* spp., and *Premna obtusifolia*.

Human activity has altered the vegetation throughout Micronesia. Agroforest now predominates on most atolls, especially the inhabited ones. Atoll forest has largely disappeared except on uninhabited atolls and sandy or limestone coasts.

Casuarina Forest (CA)

In a number of places, especially along coastal areas of Peleliu and Angaur, dense stands of *Casuarina litorea* trees can be found. Although such areas are not well-developed forest communities, they are distinct on aerial photos and readily identified. Where such stands exist, the ground is covered with a thick carpet of fallen needles. This layer of needles tends to inhibit other growth, resulting in the habitat characteristic of *Casuarina* stands. Larger, relatively pure stands of *Casuarina* trees are delineated as CA1H. Where sparse in density, *Casuarina* may also be a component of other types such as atoll forest (AT), limestone forest (LI), or secondary vegetation (SV).

Limestone Forest (LI)

This is a vegetation type found mainly on the coral islands of Peleliu, Angaur, and the Rock Islands. The species composition of LI varies on the different islands, there being a number of endemic species present. The limestone forest habitat, however, is similar on all islands, supporting both scrubby and tall trees sometimes growing out of bare rock. The humus from decaying leaves and other debris provide a sustained cycling of nutrients. Species commonly found in the limestone forest include *Intsia bijuga*, *Psychotria* spp., and *Clerodendrum inerme*.

Native limestone forest once covered much of Peleliu. However, the vegetation of the island was greatly disturbed during World War II. Less disturbed limestone forest occurs in the mountainous regions of northern Peleliu. Species of this vegetation type, however, are common and can be found scattered throughout the island, and in the secondary vegetation type as well. On Angaur, areas of limestone forest are found interspersed among freshwater, and occasionally, saltwater depressions. These areas are coded LI.SW to indicate the swamp-like condition of the understory. Occasionally, sites are found where

limestone forest and *Casuarina* trees (LI.CA) or atoll forest (LI.AT) species grow together (*table 4*).

Rock Island Forest (RI)

The Rock Islands of Palau are coralline limestone islands, typically vegetated with Rock Island forest. This forest type is considered a subtype of the limestone forest type (LI), but was mapped separately to indicate the uniqueness of the Rock Islands. In all, 1,117 hectares (2,760 acres) of Rock Island forest

Table 6A—*Area by vegetation type for selected Rock Islands, State of Airai, Republic of Palau, 1979*

Island	Vegetation type					Total area
	Rock Island forest (RI)	Mangrove forest (MN)	Total forest	Secondary vegetation (SV)	Water	
	Hectares (acres)					
Chesechosou	10	0	10	0	0	10 (25)
Diebebal	2	0	2	0	0	2 (5)
Ngedert	2	0	2	0	0	2 (5)
Ngeream	171	1	172	2	<1	174 (430)
Ngkesill	2	0	2	0	0	2 (5)
Omelochel	4	0	4	0	0	4 (10)
Total area	191	1	192	2	<1	194 (479)

Table 6B—*Area by vegetation type for selected Rock Islands, State of Koror, Republic of Palau, 1979*

Island	Vegetation type			Total area
	Rock Island forest (RI)	Grassland (G)	Urban (U), Water (W)	
	Hectares (acres)			
Bukrrairong	13	0	0	13 (32)
Itelblong	6	0	0	6 (14)
Meduu	4	0	0	4 (9)
Ngedesakr	6	0	0	6 (15)
Ngerbechetel	2	0	0	2 (4)
Ngerchaol	71	0	1	72 (179)
Ngermalk	23	0	1	24 (60)
Ngermechaech	1	0	0	1 (3)
Ngertecheif	2	0	0	2 (4)
Ngerur	5	0	0	5 (13)
Ngeteklou	47	0	2	49 (120)
Ngetkuml	2	0	0	2 (4)
Ordachel	6	0	0	6 (14)
Tengetcheyangl	1	0	0	1 (3)
Torius	3	0	0	3 (7)
Ucheliungs	2	0	0	2 (6)
Uchulangas	2	0	0	2 (5)
Ulebsechl	394	1	3	398 (985)
Ullemetamel	4	0	0	4 (9)
Total area	594	1	7	602 (1,486)

Table 6C—*Area by vegetation type for selected islands, States of Ngerechelong and Peleliu, Republic of Palau, 1979*

State and island	Vegetation type								Total area
	Rock island forest (RI)	Mangrove forest (MN)	Lime-stone forest (LI)	Atoll forest (AT)	Total forest	Agro-forest (AG)	Coco-nut (CO)	Marsh and strand (M)(S)	
	Hectares (acres)								
Ngerechelong									
Ngerkeklau	0	2	0	0	2	0	6	0	8 (19)
Peleliu									
Belualasmau	0	0	0	2	2	0	0	0	2 (6)
Ngebad	0	[1]11	41	4	56	0	0	1	57 (141)
Ngedbus	0	6	0	24	30	0	65	0	95 (234)
Ngerumetochel	18	0	0	0	18	0	0	0	18 (45)
Ngesuall	0	0	2	0	2	0	0	0	2 (4)
Ngurungor	0	10	15	0	25	0	0	0	25 (62)
Olngeuaol	0	9	0	28	37	0	0	0	37 (92)
Ruriid	0	4	0	0	4	6	0	0	10 (25)
Tengabardl	0	1	0	0	1	0	0	0	1 (2)
Total area	18	43	58	58	177	6	71	1	255 (630)

[1]Includes <1 ha of swamp forest (SW).

Table 7—*Vegetation type codes used for the islands in the Republic of Palau*[1]

Land class	Vegetation codes	Vegetation types, subtypes and components
Forest	UP	Upland forest, various size and density classes apply
	UP/SV	Secondary vegetation understory
	UP/SV.BB	Bamboo understory
	UP/SV.G	Grass understory
	UP.CO	Coconut component
	UP.CO/SV	Coconut component, secondary vegetation understory
	UP.SW	Swamp forest component
	UP.PO	Palm forest component
	UP/C	Cultivated inclusions
	SW	Swamp forest, various size and density classes apply
	SW.B	*Barringtonia* component
	SW/SV	Secondary vegetation understory
	SW/SV.BB	Bamboo understory
	SW.CO	Coconut component
	SW.CO/SV	Coconut component, secondary vegetation understory
	SW.UP	Upland forest component
	MN	Mangrove, various size and density classes apply
	MN.R	*Rhizophora* component
	MN.SW	Swamp forest component
	MN.AT	Atoll forest component
	MN.N	*Nypa* palm component
	MN/SV	Secondary vegetation understory
	MN.D	Evidence of disturbance
	AT	Atoll forest, various size and density classes apply
	AT/SV	Secondary vegetation understory
	AT.LI	Limestone forest component
	AT.CA	*Casuarina* component
	AT.CO	Coconut component
	PF	Plantation forest, various size and density classes apply
	PF.M	Mahogany plantation
	LI	Limestone forest, various size and density classes apply
	LI/SV	Secondary vegetation understory
	LI.SW	Swamp forest component
	LI.CA	*Casuarina* component
	LI.CO	Coconut component
	RI	Rock Island forest, a sub-type of limestone forest, various size and density classes apply
	CA	*Casuarina* forest, various size and density classes apply
	CA/SV	Secondary vegetation understory
	CA.AT	Atoll forest component
	CA.LI	Limestone forest component
	PO.I	Palm forest, various size and density classes apply, Ivory Nut palm component
Secondary vegetation	SV	Secondary vegetation, size and density do not apply
	SV.BB	Bamboo component
	SV.G	Grass component
	SV.S	Shrub component
	SV.H	*Hibiscus* component
Agroforest	AG	Agroforest
	AG.CO	Coconut component
	AG.CO/M.F	Coconuts with freshwater marsh understory
	AG.CO/U	Coconuts with urban inclusions
	CO	Coconut plantation, various size and density classes apply
	CO.SW	Swamp forest component
	CO.UP	Upland forest component
	CO/U	Urban inclusions
	CO/SV	Secondary vegetation understory
	CO/M.F	Freshwater marsh understory
Nonforest	M.F	Freshwater
	M.F.C	Freshwater, cultivated
	M.F.P	Freshwater, *Phragmites*
	M.F/SV	Freshwater marsh with secondary vegetation inclusions
	M.S	Marsh, saline
	G	Grassland or savanna
	G.B	Barren component
	G.CA	Abandoned cultivation
	G.D	Disturbed lands
	G.F	Fern component
	G.G	Grass component
	G.P	Pandanus component
	G.S	Shrub component
	S	Strand vegetation
	C	Cropland
	C/SV	Cropland with secondary vegetation inclusions
	U	Urban land
	U/AG	Agroforest inclusions
	U/C	Cropland inclusions
	U/SV	Secondary vegetation inclusions
	U/SV.BB	Bamboo inclusions
	B	Barren land
	B.CL	Clay soil patches
	B.D	Disturbed
	B.R	Rock outcrops
	B.S	Sand
	W.F	Freshwater
	W.S	Saline water

[1]*NOTES:*

Size classes and density codes are used only with the forest class and with the coconut plantation type.

Various combinations of components are used, especially within the grassland type, as for G.B.F.P or grassland with barren, fern, and pandanus components.

Each component, inclusion, or understory species identified must be present on at least 20 percent of the mapped area.

Table 8—*Partial list of plant species found on Palau*[1]

Genus	Species	Author	Family
Acrostichum	aureum	L.	Pteridaceae
Alphitonia	carolinensis	Hosoka	Rhamnaceae
Areca	catechu	L.	Palmae
Artocarpus	spp.		Moraceae
Bambusa	vulgaris	Schrader	Gramineae
Barringtonia	racemosa	(L.) Spreng.	Lecythidaceae
Bikkia	palauensis	Val.	Rubiaceae
Bruguiera	gymnorrhiza	(L.) Lamarck	Rhizophoraceae
Calophyllum	inophyllum	L.	Guttiferae
Calophyllum	soulattri	Burm. f.	Guttiferae
Campnosperma	brevipetiolata	Volkens	Anacardiaceae
Casuarina	litorea	L.	Casuarinaceae
Clerodendrum	inerme	(L.) Gaertn.	Verbenaceae
Cocos	nucifera	L.	Palmae
Cordia	subcordata	Lamarck	Boraginaceae
Cyathea	lunulata	(Forst. f.) Copel.	Cyatheaceae
Cynometra	ramiflora	Schltr.	Gesneriaceae
Cyperus	javanicus	Houtt.	Cyperaceae
Decaspermum	spp.		Myrtaceae
Derris	trifoliata	Loureiro	Leguminosae
Donax	canniformis	(Forst. f.) Schum.	Marantaceae
Dracaena	multiflora	Warb. ex Sarasin	Agavaceae
Elaeocarpus	carolinensis	Koidz.	Tiliaceae
Eleocharis	geniculata	(L.) Roemr & Schultes	Cyperaceae
Eugenia	cuminii	(L.) Druce	Myrtaceae
Eugenia	spp.		Myrtaceae
Eurya	japonica	(Korth.) This.-Dyer	Theaceae
Ficus	spp.		Moraceae
Fimbristylis	cymosa	R. Br.	Cyperaceae
Garcinia	mangostana	L.	Guttiferae
Gleichenia	linearis	(Burm. f.) C.B.CL	Gleicheniaceae
Gmelina	palawensis	H. J. Lam	Verbenaceae
Guettarda	speciosa	L.	Rubiaceae
Gulubia	palauensis	(Becc.) Moore & Fosb.	Palmae
Heritiera	littoralis	Dry.	Sterculiaceae
Hernandia	sonora	L.	Hernandiaceae
Hibiscus	tiliaceus	L.	Malvaceae
Horsfieldia	amklaal	Kanehira	Myristicaceae
Intsia	bijuga	(Colebr.)O.Ktze.	Leguminosae
Ipomoea	aquatica	Forsskal, Fl.	Convolvulaceae
Ipomoea	pes-caprae	(L.) V. Ooststr.	Convolvulaceae
Ischaemum	chordatum	(Trin.) Hack. Warb.	Gramineae
Ixora	casei	Hance	Rubiaceae
Lippia	nodiflora	(L.) Rich.	Verbenaceae
Lumnitzera	littorea	(Jack) Voigt	Combretaceae
Macaranga	carolinensis	Volk.	Euphorbiaceae
Mangifera	indica	L.	Anacardiaceae
Manilkara	udoido	Kan.	Sapotaceae
Melastoma	malabathricum	(Naudin) Fosb. & Sachet	Melastomaceae
Metroxylon	amicarum	(Wendl.) Becc.	Palmae
Miscanthus	floridulus	(Labill.) Warb.	Gramineae
Morinda	citrifolia	L.	Rubiaceae
Musa	spp.		Musaceae
Neisosperma	oppositifolia	(Lam.) Fosb. & Sachet	Apocynaceae
Nephelium	lappaceum	L.	Sapindaceae
Nypa	fruticans	Wurmb.	Palmae
Osmoxylon	oliveri	Fosb. & Sachet	Araliaceae
Pandanus	aimiriikensis	Mart.	Pandanaceae
Pandanus	spp.		Pandanaceae
Parinari	corymbosa	(Bl.) Miq.	Rosaceae
Paspalum	distichum	L.	Gramineae
Pemphis	acidula	Forst.	Lythraceae
Phragmites	karka	(Retz.) Trin. ex Steud.	Gramineae
Pinanga	insignis	Becc.	Palmae

continued

Table 8—*Partial list of plant species found on Palau (continued)*

Genus	Species	Author	Family
Pisonia	grandis	R. Brown	Nyctaginaceae
Premna	obtusifolia	R. Brown	Verbenaceae
Psychotria	spp.		Rubiaceae
Pterocarpus	indicus	Willd.	Leguminosae
Ptychosperma	palauensis	(Kaneh.) Moore & Fosb.	Palmae
Rhizophora	apiculata	Blume	Rhizophoraceae
Rhizophora	mucronata	Lamarck	Rhizophoraceae
Rhus	taitensis	Guillemin	Amacardiaceae
Samadera	indica	Graetn.	Simaroubaceae
Scaevola	taccada	(Gaertner) Roxburgh	Goodeniaceae
Semecarpus	venenosus	Volkens	Anacardiaceae
Serianthes	kanehirae	Fosb.	Leguminosae
Sonneratia	alba	J. E. Sm.	Sonneratiaceae
Sophora	tomentosa	L.	Leguminosae
Stemonurus	ammui	(Kaneh.) Sleumer	Icacinaceae
Swietenia	macrophylla	King	Meliaceae
Swietenia	mahagoni	(L.) Jacq.	Meliaceae
Symplocos	racemosa	(Koidz.) Nooteb.	Symplocaceae
Terminalia	catappa	L.	Combretaceae
Timonius	timon	(Spr.) Merr.	Rubiaceae
Tournefortia	argentea	(L.f.) Johnston	Boraginaceae
Vigna	marina	(Burm.) Merrill	Leguminosae
Wikstroemia	elliptica	Merr.	Thymelaeaceae
Xylocarpus	granatum	Koenig	Meliaceae

[1]Dicotyledonae follow Fosberg and others (1979) and Fosberg and others (1980). Palm nomenclature follows that of Moore and Fosberg(1956).

were typed, representing only a fraction of the total area of the Rock Islands. Unfortunately, no photography was available for most of the Rock Islands.

The forest of the Rock Islands is diverse in species composition and varies among islands. Some of the more common species include the native palms *Gulubia palauensis* and *Ptychosperma palauensis*, and the forest trees *Semecarpus venenosus*, *Intsia bijuga*, *Psychotria* spp., *Premna obtusifolia*, *Cordia* spp., *Clerodendrum inerme*, and *Bikkia palauensis*. *Pandanus* spp. and *Dracaena multiflora* are also common in the understory.

Plantation Forest (PF)

Forest plantations are planted for commercial forest production, erosion control, or conversion. The type is limited to experimental species introduction trials near the Nekkeng Forestry Station and to several small plantations, most of which were established during the Japanese era. Various introduced species include *Swietenia mahagoni*, *S. macrophylla*, *Pterocarpus indicus*, and the fruit trees *Nephelium lappaceum* (rambutan) and *Garcinia mangostana*.

Palm Forest (PO)

Although there are six native palms found in Palau, they usually occupy the understory or middle canopy layers of the forest, and do not occur in pure, mappable stands. The only palm forest stand located during the project was on Koror, a 0.4 hectare (1 acre) area of the introduced ivory nut palm (*Metroxylon amicarum*).

Secondary Vegetation

Areas of fast-growing small trees, shrubs, and vines growing in recently disturbed areas are classified as secondary vegetation. Such areas sometimes represent traditional gardens in a fallow phase. To some extent secondary vegetation functions as a natural "bandage" protecting disturbed soils from Palau's heavy rains, allowing humus and nutrients to accumulate in the soils.

On Palau's volcanic islands, *Macaranga carolinensis* is the usual component of secondary vegetation. *Bambusa* is also common. Generally, *Hibiscus tiliaceus* occurs more commonly on wetter sites, although it can be found growing elsewhere. The impenetrable *Hibiscus* thickets common to Pohnpei and Kosrae are not found here, except in some wetter areas.

The most common secondary vegetation species found on the limestone islands of Peleliu and Angaur are *Macaranga carolinensis* and the native limestone species, *Timonius timon*.

Agroforest

Agroforests occupy areas generally along the coast and near dwellings and are characterized by a mix of food-producing trees, forest trees, and other plants. These "tree gardens" rep-

resent a sustainable system of food production and wise use of available resources. The canopy is often uneven and may be interspersed with small taro patches, open canopy gardens, and areas of secondary vegetation—all too small to be mapped separately.

Agroforest with a crown cover of over 20 percent coconut trees (*Cocos nucifera*) is typed as AG.CO. Other species commonly present include breadfruit (*Artocarpus* spp.), mango (*Mangifera indica*), bananas (*Musa* spp.), *Eugenia* spp., and betelnut (*Areca catechu*).

Coconut Plantation (CO)

In Palau, coconut plantations—geometric grids of planted coconut palms—are relatively common. Most were established in the late 1800's by the Germans for copra production. On the island of Babelthuap—especially on the sandy east coast—these coconut plantations have been abandoned and are reverting to upland forest. Such areas are coded as either CO.UP or CO/SV, depending upon the size and composition of the associated vegetation.

Nonforest

Marsh (M)

Marsh areas are dominated by grasses, sedges, and herbs growing in standing water most of the year. A number of types of marshes are identified, including freshwater and saline:

• Marsh, freshwater (M.F)—Areas just slightly above sea level and surrounded by mangroves, as in the freshwater marsh/open canopy swamp forest category described by Stemmermann and Proby (1978), or in depressions in upland areas. The vegetation in these areas may include tall reeds, especially *Phragmites karka*, sedges, and other taller herbaceous growth. Where the water is somewhat brackish, the fern *Acrostichum aureum* may be present. Freshwater marshes cultivated for taro are coded M.F.C, and here the edible vine *Ipomoea aquatica* may be found.

• Marsh, saline (M.S)—Areas dominated by herbaceous vegetation growing in salt or brackish water conditions. Saline marshes are generally located along the coast, near mangroves or in depressions in sand or mud flats. Only 0.4 hectare (1 acre) of saline marsh, on Ngebad Island, was mapped. Other inclusions of saline marsh are too small for mapping. Common species include *Cyperus javanicus*, *Derris trifoliata* (especially at the edge of mangroves), *Eleocharis geniculata*, *Fimbristylis cymosa*, *Lippia nodiflora*, *Paspalum distichum*, and *Vigna marina*. A number of woody species characteristic of coastal sands, swamp forests, and mangroves may surround or be sparsely scattered in the marshes.

Grassland/Savanna (G)

Grasslands/savannas are areas of land supporting a layer of herbaceous, fern or low shrub cover. Tall shrubs and trees, if present, are widely scattered. The soils are generally poorly drained clays.

Some of the grasslands/savannas on Babelthuap are a result of human activity—land clearing, mining, or wildfire. Other grasslands/savannas may also be the result of past human disturbance or be a natural occurrence related to the presence of bauxite soils. In any event, the grasslands are maintained by frequent fires that destroy both vegetation and the humus layer of the soil. The combined effects of wind, sun, and heavy rain cause continuing erosion of the degraded soils, insuring that only adapted herbaceous and fern species will survive.

Five major subtypes of grasslands/savannas have been identified: bare, fern lands, grasslands, shrubs, and abandoned agriculture.

• Bare—Areas of patchy herbaceous growth—generally low grasses and sedges—on poor soils. Patches of bare soil are common (designated G.B).

• Fern lands—Areas in which predominant cover is a tangled mat of *Gleichenia linearis* fern (designated G.F). Such areas are subject to frequent burning and soils are generally heavy, infertile clays. On Babelthuap, this type often replaces the mix of native and introduced shrubs, *Pandanus* spp., and herbaceous vegetation that is characteristic of savanna in the western Caroline Islands.

• Grasslands—grasslands/savannas with a mixture of graminoid species (designated G.G) may include other associations such as ferns, shrubs, and pandanus. Graminoid species include *Ischaemum* spp. and *Miscanthus floridulus*.

• Shrubs—Areas with a mixture of shrubs (designated G.S). Species specific to grasslands/savannas include *Eurya japonica*, *Wikstroemia elliptica*, *Melastoma malabathricum*, and *Decaspermum* spp.

• Abandoned agriculture—Grasslands/savannas once under cultivation (designated G.CA). Where soils are not so degraded, a number of herbaceous species may be found. In Palau, the most common species is *Ischaemum chordatum*.

Strand (S)

The strand type includes herbaceous vegetation or shrubs growing along the ocean shore on a sandy or rocky substrate. This type is usually included with the atoll forest type, since the two are hard to separate. A total of 11 hectares (27 acres) of strand vegetation was mapped on Kayangel, Peleliu, and other small islands of Palau. Herbaceous species include *Vigna marina*, *Ipomoea pes-caprae*, and *Fimbristylis* spp. The small tree *Pemphis acidula* is also common.

Cropland (C)

Cropland is cultivated land without tree cover. Most of these gardens are too small to delineate and are included with other types such as agroforest or secondary vegetation.

Barren (B)

Areas lacking natural vegetation, for such reasons as presence of rocks and sterile soil, are delineated as barren. Many barren areas on Babelthuap Island are abandoned bauxite mines.

Urban (U)

Urban areas are those developed for nonforest, nonagricultural use. Where buildings, roads, or similar features are interspersed with vegetation, the area may be classified as urban/secondary vegetation (U/SV), urban/agroforest (U/AG), or urban/cropland (U/C).

Water (W)

Water includes both fresh water and saline pools (W.S).

GLOSSARY

Agroforest: Land where planted fruit trees and other agricultural plants are cultured among forest trees.

D.b.h.: Diameter at breast height. Tree diameter outside bark measured at breast height, 1.3 m above the ground.

Forest land: Land at least 10 percent stocked by live trees or land formerly having such tree cover and not currently developed for nonforest use.

Land area: Land area includes dry land and land temporarily or partially covered by water, such as marshes, swamps, and river flood plains.

Land class: A classification of land by major use or major vegetative characteristics, i.e., forest, secondary vegetation, agroforest, and nonforest.

Nonforest land: Land that has never supported forests; or was formerly forested, but is currently developed for nonforest use.

Secondary vegetation: A vegetation type characterized by small, fast-growing trees and vines, usually weedy invaders.

Vegetation type: An area delineated on the folded maps as having species composition similar to one of the types described in the section on type classification.

REFERENCES

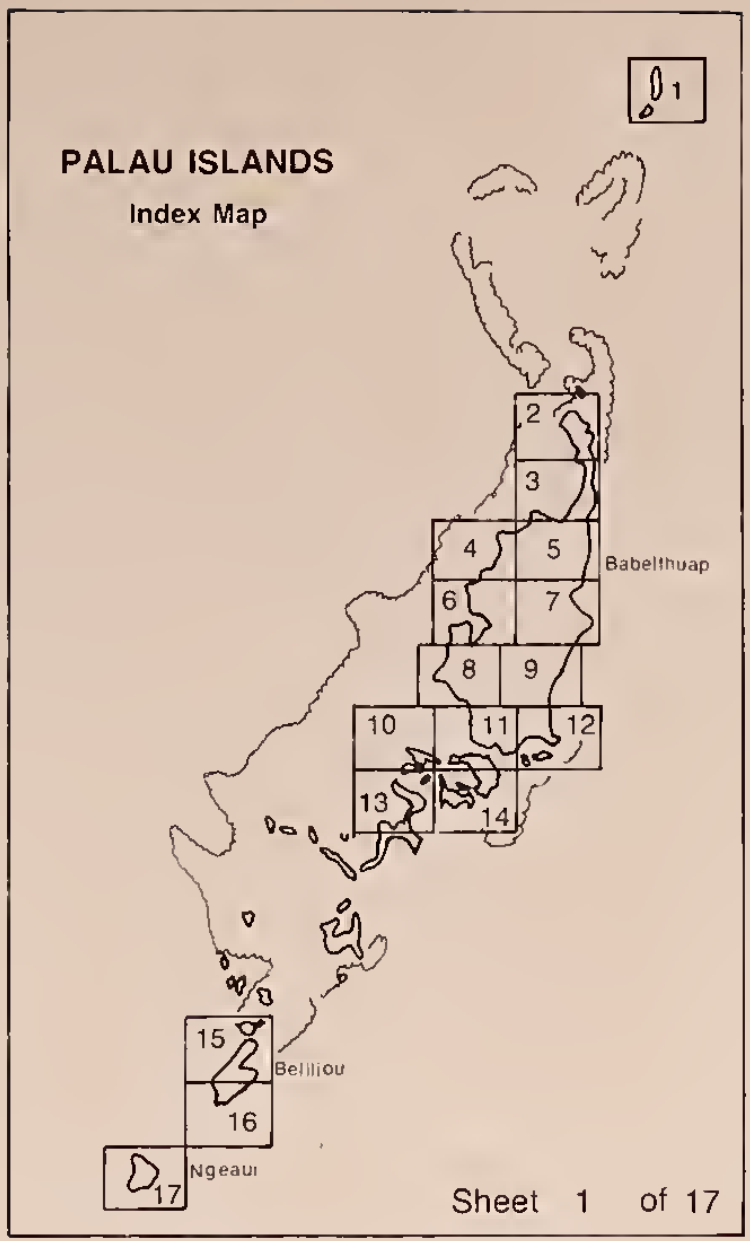
Fosberg, F. Raymond; Sachet, Marie-Helene; Oliver, Royce. **A geographical checklist of the Micronesian dicotyledonae.** Micronesica 15(1–2): 41–295; 1979.

Fosberg, F. Raymond; Otobed, Demi; Sachet, Marie-Helene; Oliver, Royce; Powell, Dulcie A.; Canfield, Joan E. **Vascular plants of Palau with vernacular names.** Department of Botany, Smithsonian Institution, Washington DC; 1980. 43 p.

Hosokawa, Takashide. **A synchrological study of the swamp forests in the Micronesian Islands.** Mem. Fac. Sci. Kyushu Univ. Ser. E. 1:101–123; 1952.

Moore, Harold E.; Fosberg, F. Raymond. **The palms of Micronesia and the Bonin Islands.** Gentes Herbarium 8(6): 423–478; 1956.

Stemmermann, Lani; Proby, Fred. **Inventory of wetland vegetation in the Caroline Islands.** Vol. I. Honolulu, HI: Pacific Ocean Division, U.S. Army Corps of Engineers; 1978. 231 p.



Cole, Thomas G., Falanruw, Marjorie C., MacLean, Colin D., Whitesell, Craig D., Ambacher, Alan H. Vegetation survey of the Republic of Palau. Resour. Bull. PSW-22. Berkeley, CA: Pacific Southwest Forest and Range Experiment Station, Forest Service, U.S. Department of Agriculture, 1987.

VEGETATION LEGEND

For explanation of vegetation type codes see Table 7.

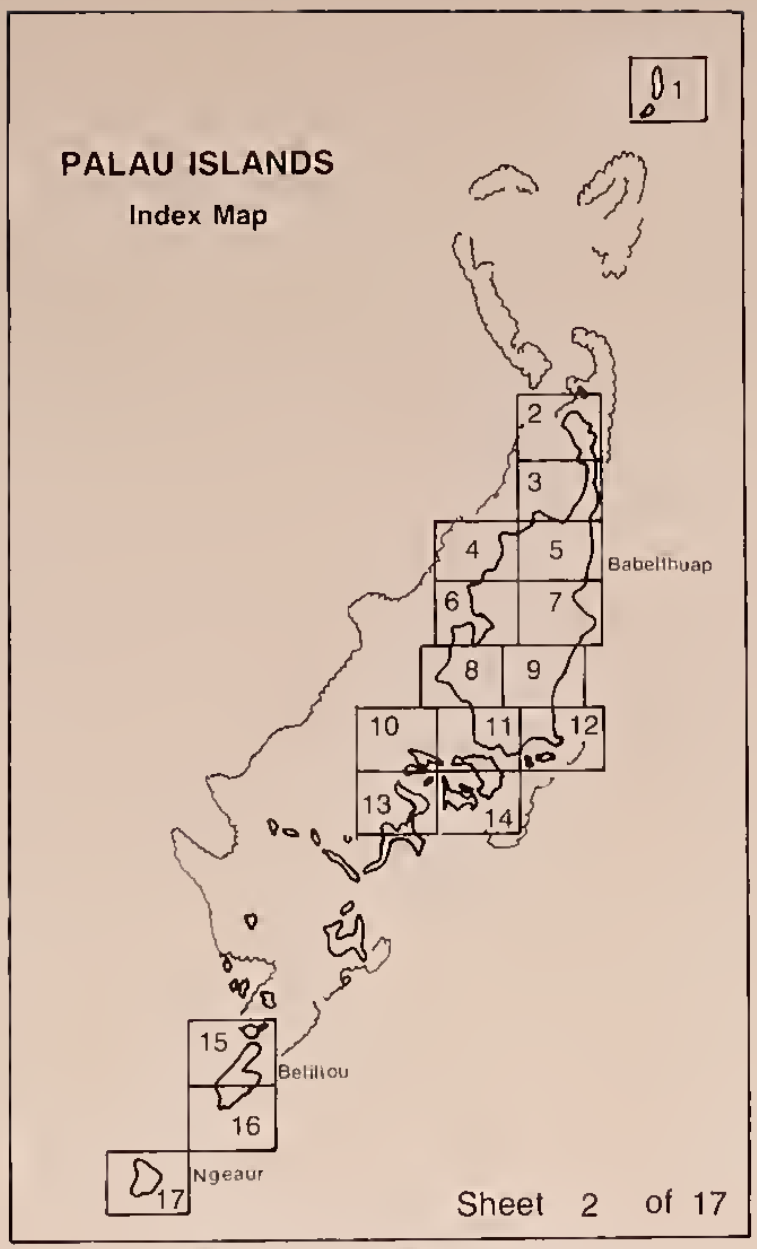
ITEM	LABEL	AREA (ACRES)	AREA (HECTARES)
1	AT1H	14	5.7
2	SV	2	.8
3	AT1H	15	6.1
4	SV	2	.8
5	C	1	.4
6	C	2	.8
7	AG.CO	229	92.7
8	G.CA	1	.4
9	G.CA	1	.4
10	U	1	.4
11	SV	2	.8
12	SV	2	.8
13	SV	1	.4
14	AT1H	5	2.0
15	S	8	3.2
16	S	8	3.2
17	AT1H	20	8.0
18	AG.CO	1	.4
19	SV.S	2	.8
20	W	1	.4
21	S	2	.8
22	AG.CO	9	3.6
23	AT1M/SV	38	15.3
24	S	2	.8
25	AG.CO.AT	5	2.0
26	AT1H	16	6.4
27	AG.CO	3	1.2
28	AT1H	2	.8

Base map is reproduction US Geological Survey topographic quadrangle at 1:20,000 scale by USDA Forest Service Pacific Coast Region, San Francisco California

SCALE 1:20,000

Vegetation map compiled by Pacific Southwest Forest and Ranger Experiment Station and Pacific Northwest Forest and Range Experiment Station, Forest Service, U.S. Department of Agriculture. Cartography by Alan H. Ambacher, USDA - Forest Service, Pacific Southwest Region, Engineering Geometronics Section; 1987.

PALAU ISLANDS
SHEET 1 of 17



Cole, Thomas G., Falanruw, Marjorie C., MacLean, Colin D., Whitesell, Craig D., Ambacher, Alan H. Vegetation survey of the Republic of Palau. Resour. Bull. PSW-22. Berkeley, CA: Pacific Southwest Forest and Range Experiment Station, Forest Service, U.S. Department of Agriculture, 1987.

UNITED STATES
DEPARTMENT OF THE INTERIOR
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SCALE 1:20,000

CONTOUR INTERVAL 10 METERS
SUPPLEMENTARY CONTOUR INTERVAL 5 METERS
DATUM IS MEAN SEA LEVEL

SHORELINE SHOWN REPRESENTS THE APPROXIMATE LINE OF MEAN HIGH WATER
THE MEAN RANGE OF TIDE IS APPROXIMATELY 1 METER

Vegetation map compiled by Pacific Southwest Forest and Range Experiment Station and Pacific Northwest Forest and Range Experiment Station, Forest Service, U.S. Department of Agriculture. Cartography by Alan H. Ambacher, USDA - Forest Service, Pacific Southwest Region, Engineering Geomechanics Section; 1987.

PALAU ISLANDS
SHEET 2 of 17

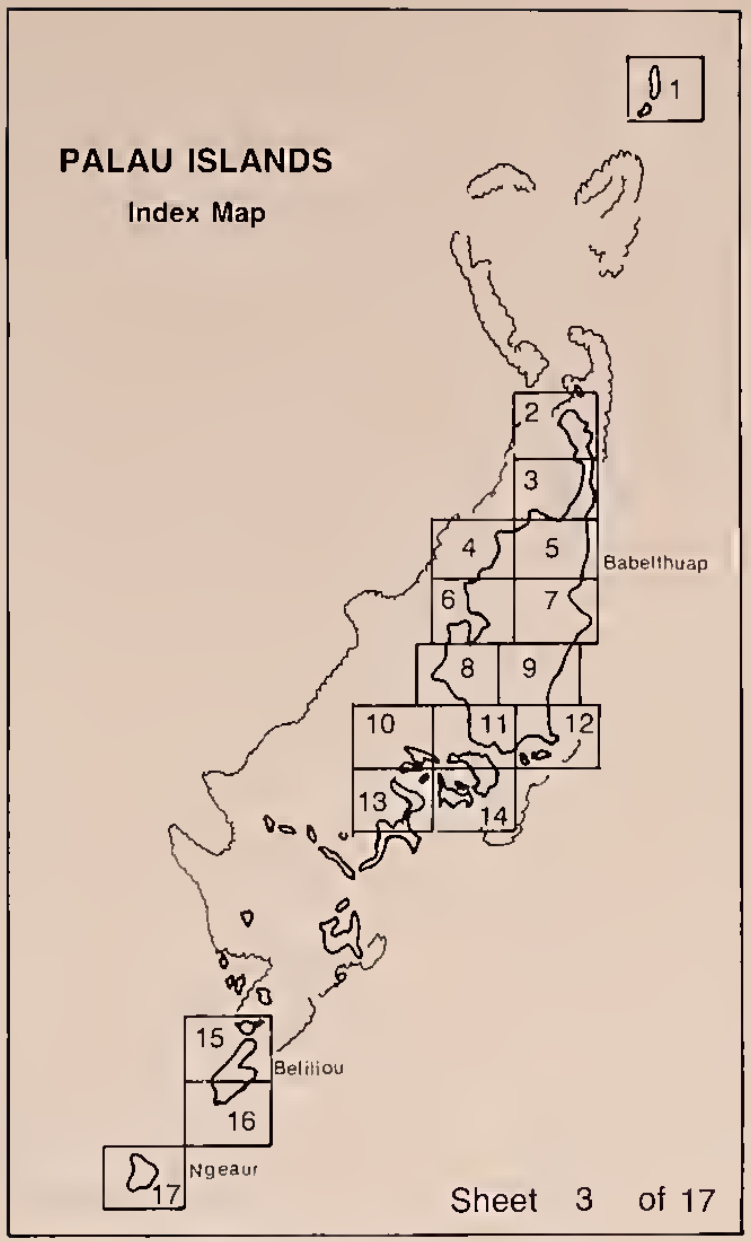
VEGETATION LEGEND

For explanation of vegetation type codes see Table 7.

ITEM	LABEL	AREA (ACRES)	AREA (HECTARES)
	BABELTHUAP		
1	MN2H	39	15.8
2	MN1H	107	43.3
3	MN2H	19	7.7
4	MN0H.R	3	1.2
5	CO1M/SV	3	1.2
6	MN2H	6	2.4
7	UP1H.CO	7	2.8
8	UP2M.CO	12	4.9
9	CO1M/SV	2	.8
10	SV.BB	5	2.0
11	UP1M/SV	15	6.1
12	UP1H	17	6.9
13	CO1M/SV	62	25.1
14	G.G	1	.4
15	G.G	1	.4
16	G.G	1	.4
17	MN1H	5	2.0
18	SW1L/SV	34	13.8
19	SV	2	.8
20	UP1M/SV	12	4.9
21	G.F.G.S	13	5.3
22	SW1L/SV	87	35.2
23	G.G	2	.8
24	G.G.S	3	1.2
25	CO1M/SV	17	6.9
26	AG	2	.8
27	G.G	19	7.7
28	CO1M/SV	1	.4
29	CO1M/SV	2	.8
30	CO1M/SV	17	6.9
31	UP1H	5	2.0
32	UP1L.CO/SV	36	14.6
33	U/C	3	1.2
34	G.G	1	.4
35	CO1H	7	2.8
36	G.G	2	.8
37	UP1H	2	.8
38	G.G	1	.4
39	UP1H.CO	4	1.6
40	U/C	16	6.5
41	G.G	6	2.4
42	SV	2	.8
43	C	10	4.0
44	SW2L.CO/SV	47	19.0
45	SV	2	.8
46	M.F	1	.4
47	M.F	2	.8
48	CO1M/SV	10	4.0
49	U	2	.8
50	MN1H	6	2.4
51	UP1H	11	4.5
52	MN1H	74	29.9
53	UP1H	2	.8
54	M.F	1	.4
55	UP1M.CO	5	2.0
56	M.F	5	2.0
57	CO1M/SV	29	11.7
58	G.G	1	.4
59	M.F	3	1.2
60	G.G.P	414	167.5
61	SV.S	5	2.0
62	G.G	10	4.0
63	CO1H	2	.8
64	SV	3	1.2
65	CO1M/SV	19	7.7
66	MN1H	104	42.1
67	SW1L/SV	34	13.8
68	CO1H	4	1.6
69	UP1H	22	8.9
70	CO1M/SV	15	6.1
71	SV	2	.8
72	SW1H	23	9.3
73	SV	2	.8
74	SV	2	.8
75	M.F	4	1.6
76	SV	1	.4
77	MN1H	26	10.5
78	MN2H	7	2.8
79	MN1H.R	35	14.2
80	CO1M/SV	86	34.8
81	G.G.S	3	1.2
82	M.F.C	13	5.3
83	UP1H	4	1.6
84	MN1H	3	1.2
85	G.G	1	.4
86	AG.CO/U	32	12.9
87	SV	1	.4
88	C	2	.8
89	M.F	6	2.4
90	UP1H	1	.4
91	UP1H	4	1.6
92	C	3	1.2
93	G.G	7	2.8
94	CO1M/SV	201	81.3
95	G.G.S	99	40.1
96	UP1H	2	.8
97	UP1H	1	.4
98	UP1H	1	.4
99	M.F	1	.4
100	CO1M.UP	8	3.2
101	CO1M/SV	19	7.7
102	SW1L/SV	9	3.6
103	UP1H	1	.4
104	SW2L/SV	27	10.9
105	SV	5	2.0
106	UP1H	26	10.5
107	MN1H	1	.4
108	G.G	2	.8
109	MN1H.R	67	27.1
110	CO1H	1	.4
111	UP1H	1	.4
112	UP1H.CO	6	2.4
113	SW1L/SV	3	1.2
114	SV	2	.8
115	MN0H	9	3.6
116	MN1H	12	4.9
117	UP1H	37	15.0
118	G.G.S	2	.8
119	UP1H.CO	22	8.9
120	G.G.S	1	.4
121	UP1H	16	6.5
122	G.G	1	.4
123	B	5	2.0
124	MN1H	18	7.3
125	SW1M/SV	28	11.3
126	UP1H	8	3.2
127	B	4	1.6
128	UP1M	3	1.2
129	B	7	2.8
130	G.G	1	.4
131	G.G	1	.4
132	U	13	5.3
133	SV	1	.4
134	G.G	6	2.4
135	UP1M	8	3.2
136	SV	2	.8
137	M.F.C	10	4.0
138	SV	2	.8
139	SV	3	1.2
140	SV	2	.8
141	UP1M	3	1.2
142	MN1H	1	.4
143	UP1H	4	1.6
144	MN2H	37	15.0
145	MN0H.R	31	12.5
146	MN1H	14	5.7
147	MN0H.R	34	13.8
148	SV	6	2.4
149	UP1H	4	1.6
150	U	5	2.0
151	U	1	.4
152	U/C	5	2.0
153	B.CL	8	3.2
154	SW1M/SV	1	.4
155	SW1M.CO	18	7.3
156	MN1H	51	20.6
157	CO1M.SW	2	.8
158	SW1M/SV	8	3.2
159	UP1H	2	.8
160	G.F.G.S	127	51.4
161	CO1M/SV	12	4.9
162	SW1M/SV	21	8.5
163	MN1H	1	.4
164	UP1M/SV	2	.8
165	SV	5	2.0
166	M.F	2	.8
167	SW1M/SV	7	2.8
168	SV	2	.8
169	B.D	1	.4
170	MN1H	33	13.4
171	MN2H	9	3.6
175	C	5	2.0
176	CO1M/SV	23	9.3
177	SW1L/SV	16	6.5
178	UP1H	25	10.1
	NGERKEKLAU		
1	CO1H	15	6.1
2	MN1H	2	.8
3	MN1H	2	.8

Produced by the United States Geological Survey
in cooperation with Trust Territory of the Pacific Islands
Control by USGS and TTPI
Compiled by photogrammetric methods from aerial photographs taken 1969 and 1971. Field checked 1975
Limited field check 1980. Map edited 1981
Projection and metric grid ticks from coordinate values
Modified Azimuthal Equidistant

MN MAGNETIC NORTH DECLINATION
AT CENTER OF SHEET



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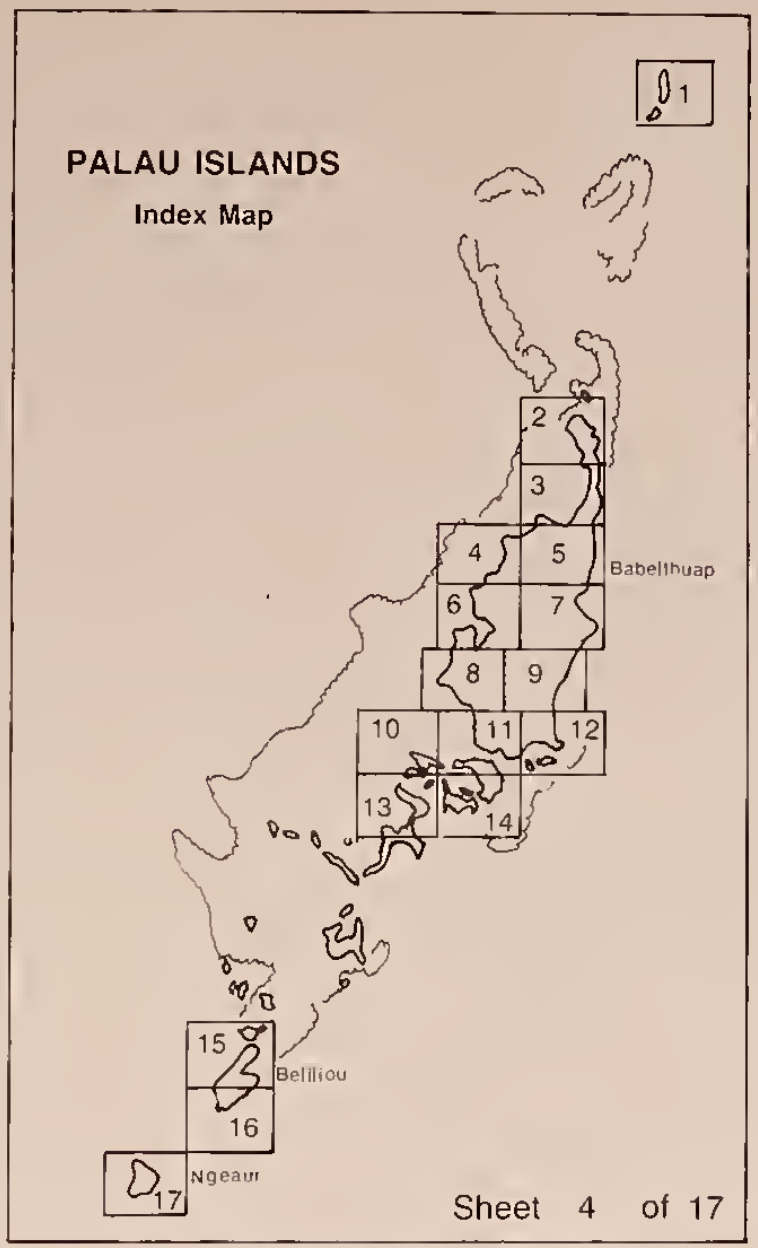
BABELTHUAP
Ngeremlengui
Ngiwal
Ngatpang
Aimeliik
Airai
Koror
Peleliu
Angaur
Coral
Reef
Ngeruktabel
Ngeruangel
Ngeruangel
Ngeruang



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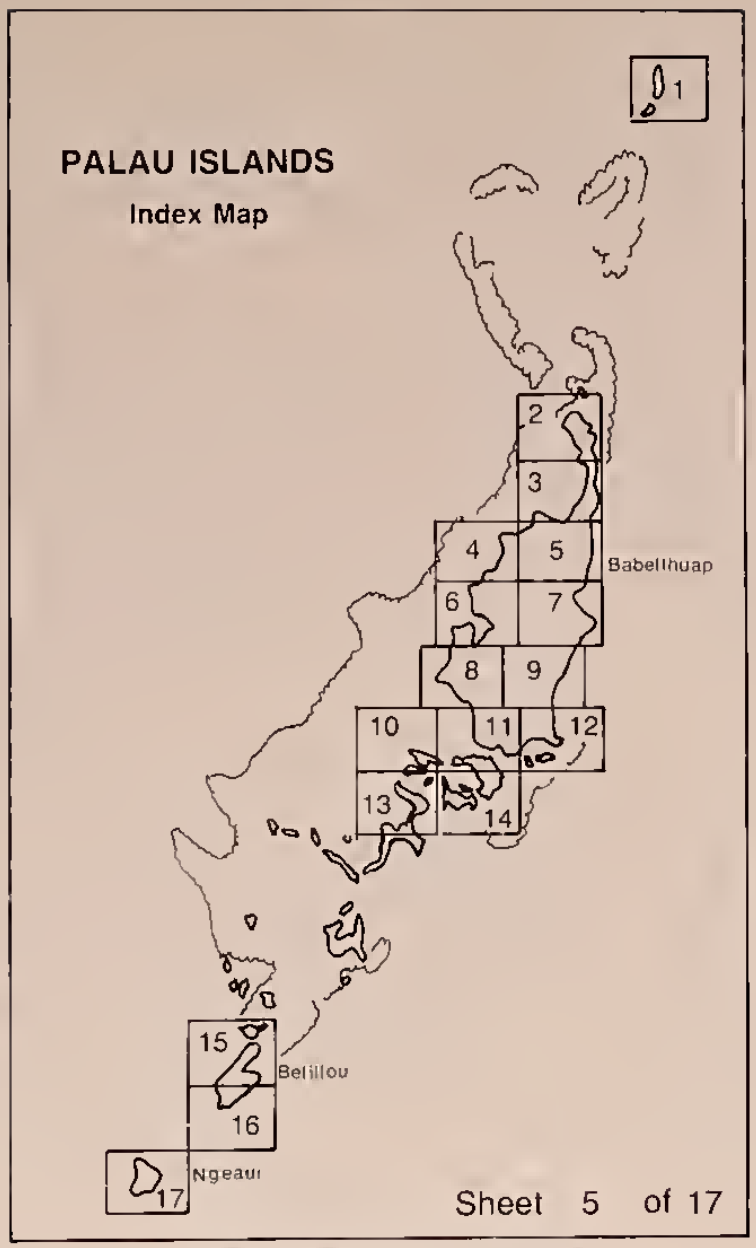
BABELTHUAP
Ngemelis
Ngeremlengui
Ngiwal
Ngeremeskang
Ngeremasech



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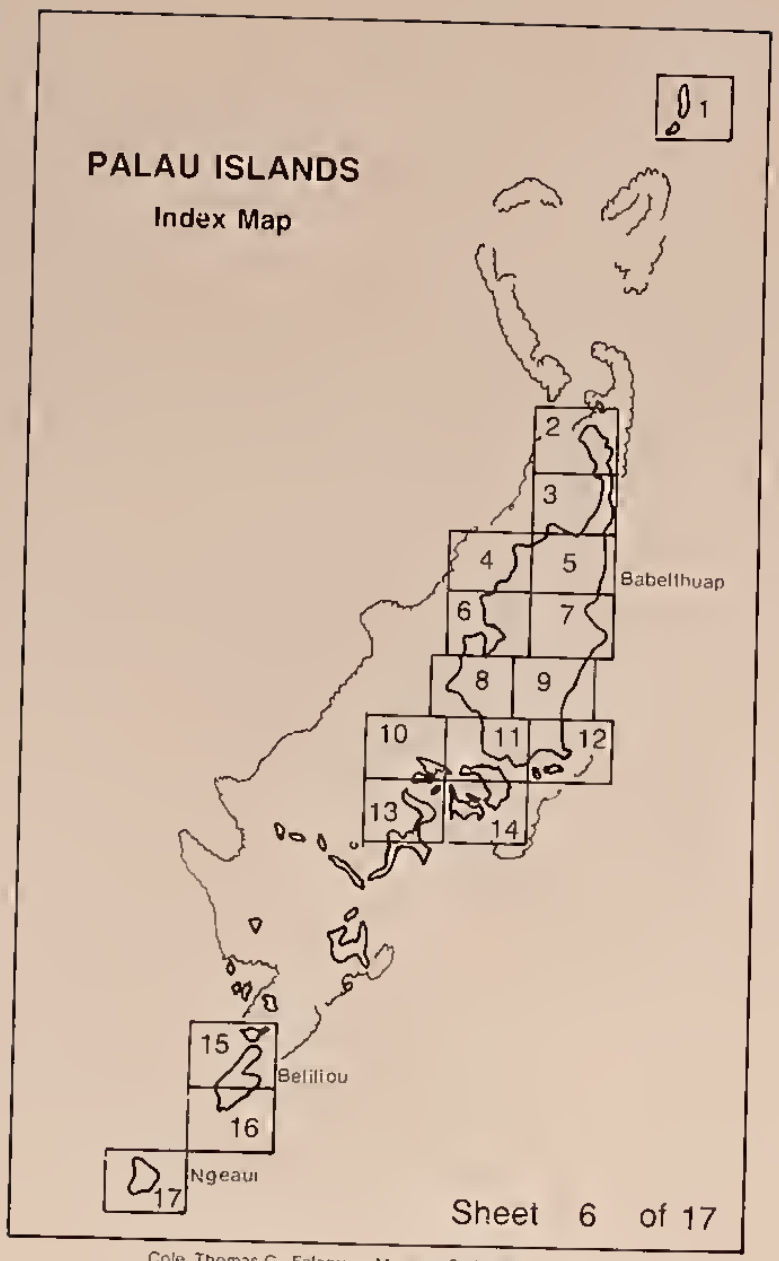
BABELTHUAP
N G E R A R D
N G I W A L
N G E R M A C H E L
P A C I F I C
O C E A N
Coral
Ngeremeskang
Ngeiwal
Ngeiwalu
Ngaremdilu
Ngaremlengui
Ngeremeskang
Ngeriungs
Ngeriungs
Ngeriungs



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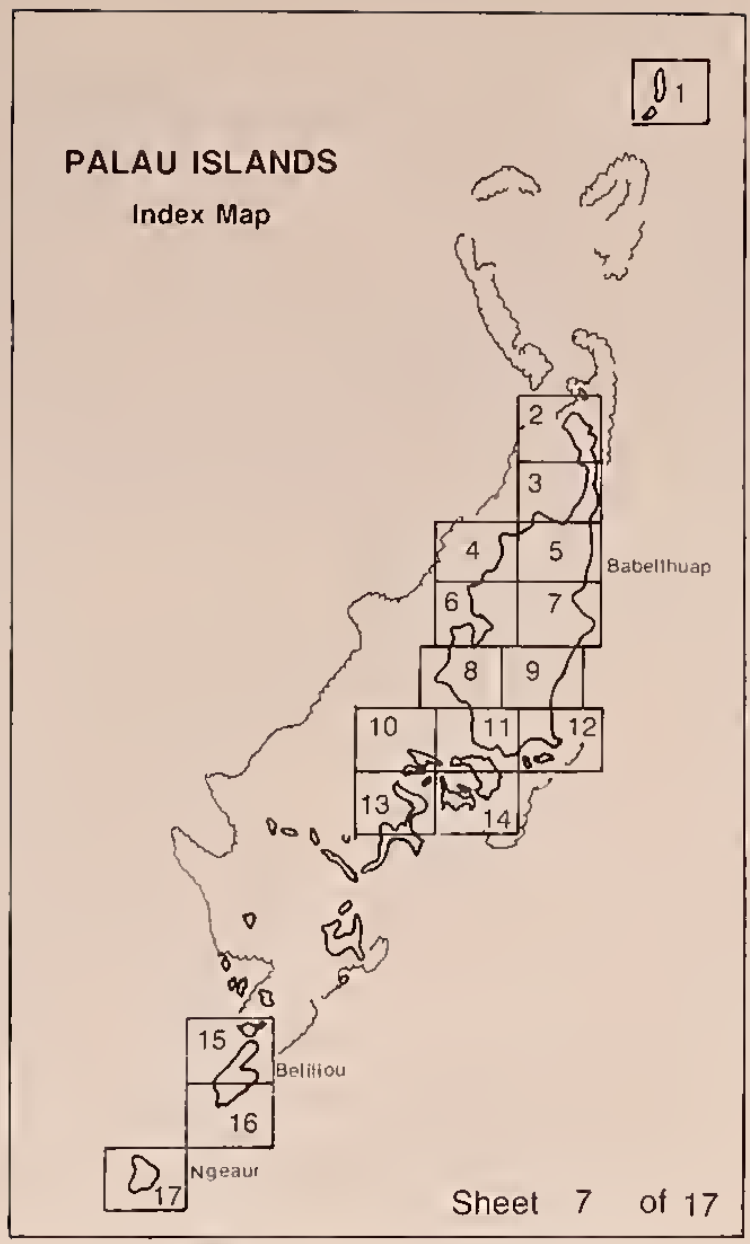
BABELTHUAP
Coral
Ngeruktabel
Ngeruktabel Mtns
Ngeruktabel Mtns
Ngeruktabel Mtns



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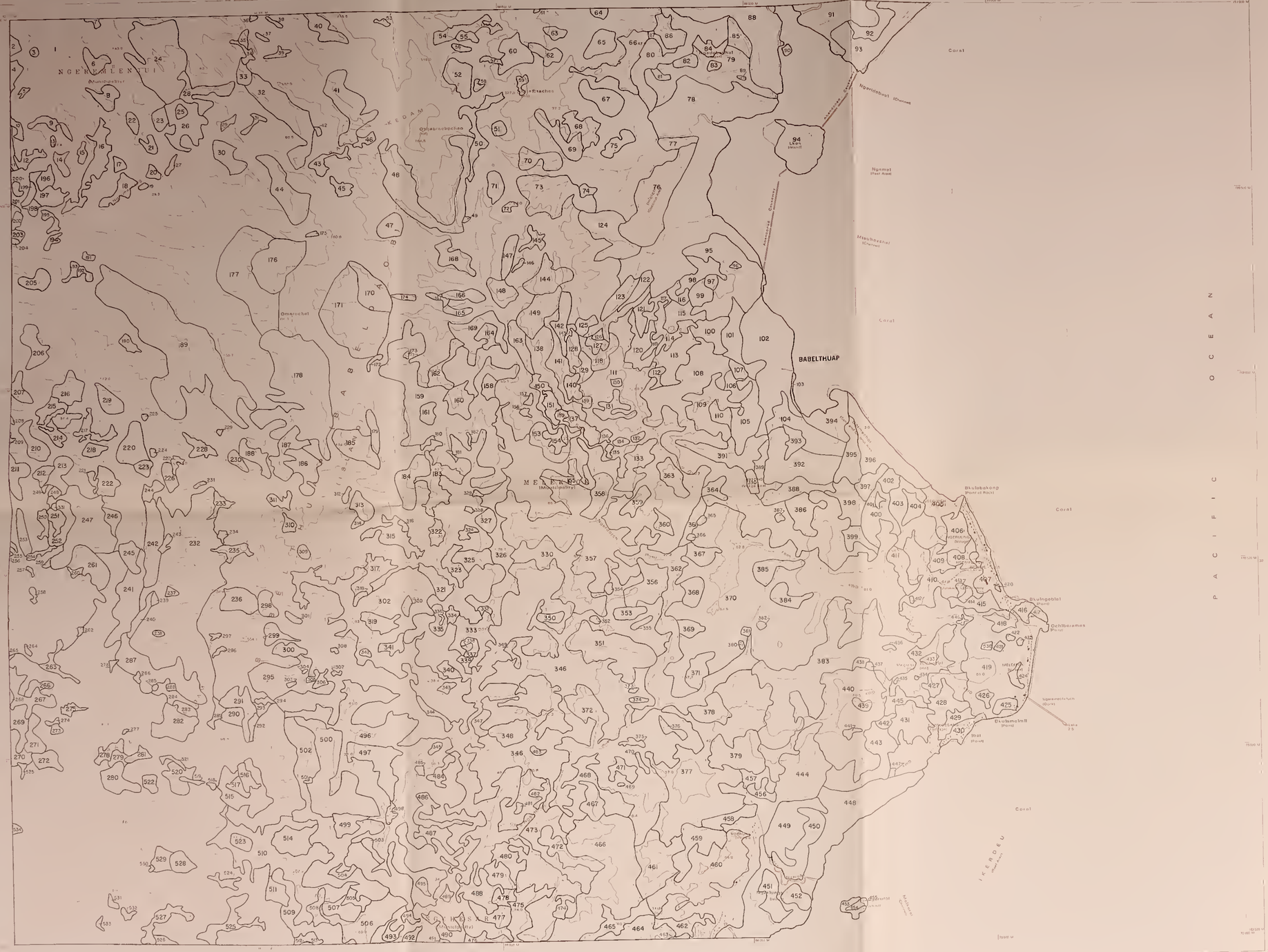
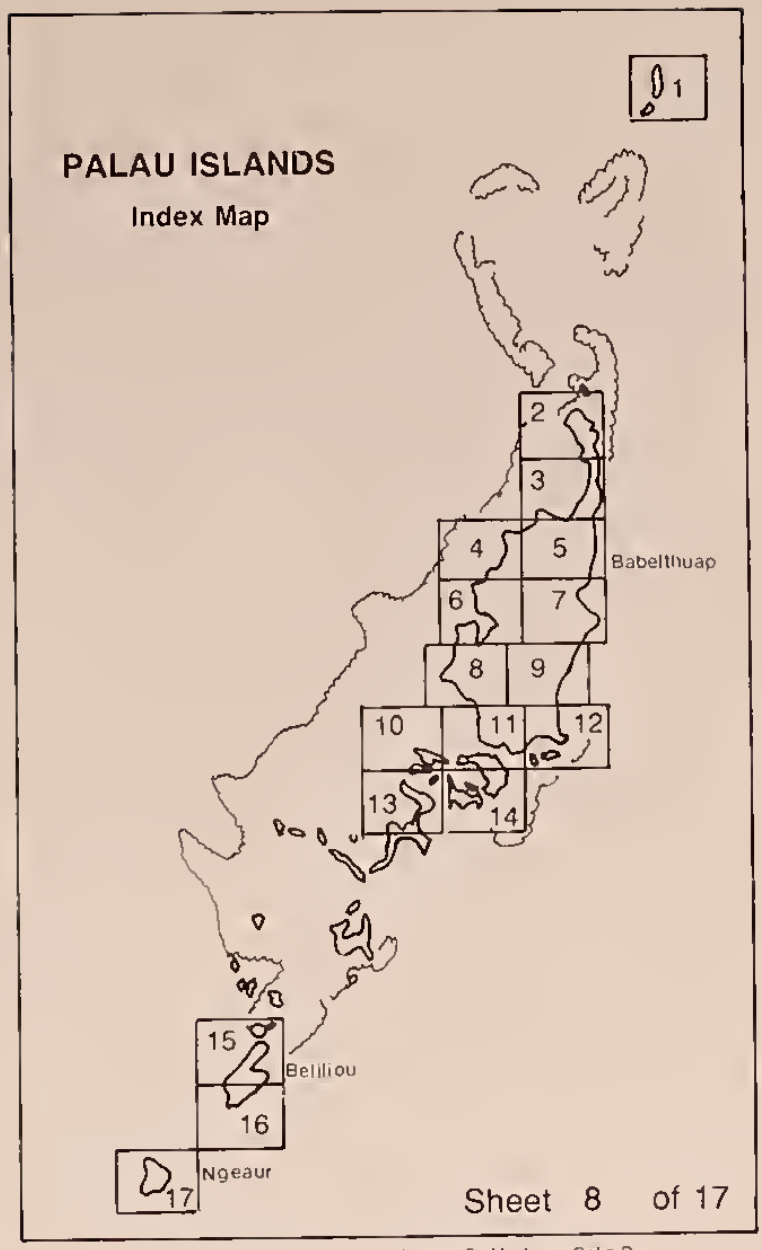

NGERMELENGUI
BABELTHUAP
MELEKEOK
Coral
Ngaremlengui (Port Anson)
Ngiwal (Port Arthur)
Ngatpang (Port Hunter)
Ngchesar (Port Lloyd)
Ngeremlengui (Port Adolphus



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UNITED STATES
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GEOLOGICAL SURVEY

CONTOUR INTERVAL 10 METERS
SUPPLEMENTARY CONTOUR INTERVAL 5 METERS
DATUM IS MEAN SEA LEVEL

SHORELINE SHOWN REPRESENTS THE APPROXIMATE LINE OF MEAN HIGH WATER
THE MEAN RANGE OF TIDE IS APPROXIMATELY 4 METER

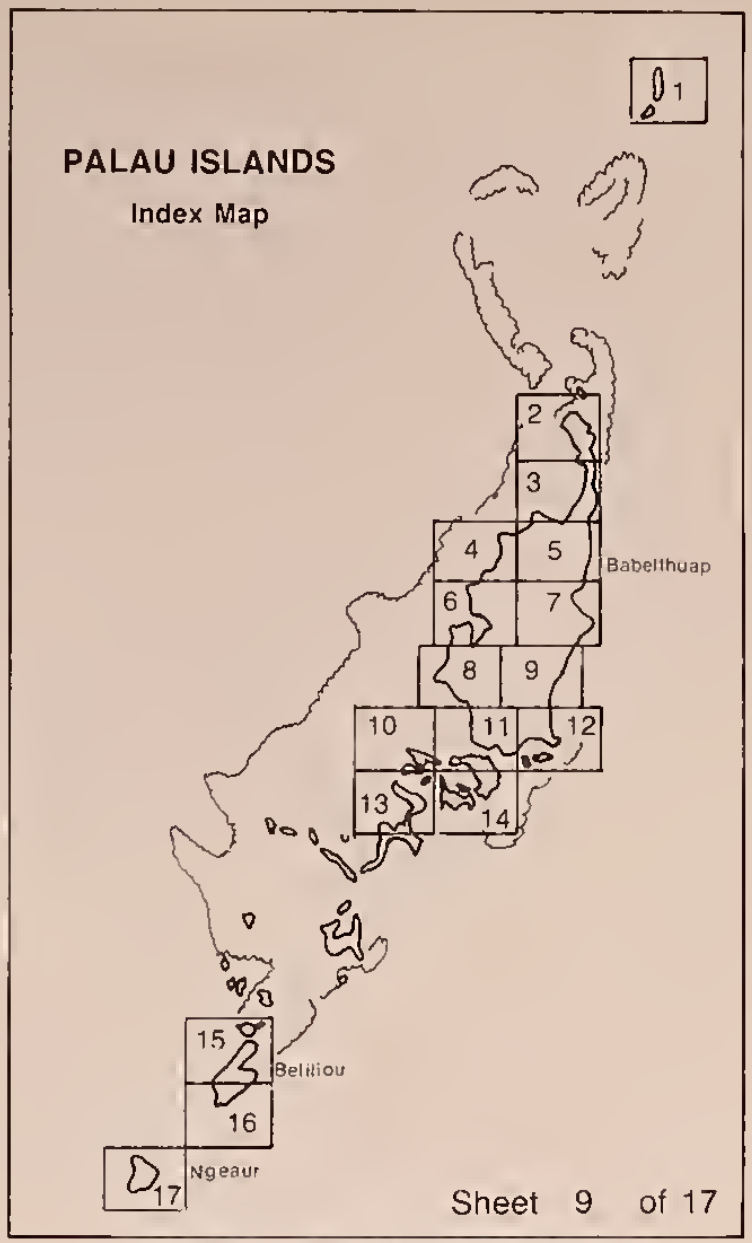
Vegetation map compiled by Pacific Southwest Forest and Range Experiment Station and Pacific Northwest Forest and Range Experiment Station, Forest Service, U.S. Department of Agriculture. Cartography by Alan H. Ambacher, USDA - Forest Service, Pacific Southwest Region, Engineering Geomorphics Section; 1987.

PALAU ISLANDS
SHEET 8 of 17

VEGETATION LEGEND

For explanation of vegetation type codes see Table 7

ITEM	LABEL	AREA (ACRES)	AREA (HECTARES)
1	MN1H	10	4.0
2	UP1L/SV	137	55.4
3	UP1H	12	4.9
4	MN1H	25	10.1
5	G.G	1	.4
6	SV	5	2.0
7	SV.BB	297	120.2
8	UP2H	84	34.0
9	UP1L/SV	30	12.1
10	UP1M/SV	50	20.2
11	UP1L/SV	17	6.9
12	UP2H	180	72.8
13	UP1H	4391	1777.0
14	MN1H	70	28.3
15	MN1H	14	5.7
16	MN1H	356	144.1
17	G.F.G.S	87	35.2
18	UP1H	18	7.3
20	UP1H	5	2.0
21	MN0H	2	.8
22	MN1L	7	2.8
23	UP1H	8	3.2
24	MN0H.R	43	17.4
26	SW1M/SV.BB	21	8.5
27	G.G	40	16.2
28	UP1H	11	4.5
29	G.G	2	.8
30	UP1L/SV.BB	15	6.1
31	G.G.S	4	1.6
32	G.G.S	1	.4
33	UP2H	21	8.5
34	G.G.S	12	4.9
35	SV.BB	71	28.7
36	SV	6	2.4
37	G.G.S	4	1.6
38	G.G.S	3	1.2
39	SV	3	1.2
40	UP1H	21	8.5
41	UP2H	201	81.3
42	G.G.S	2	.8
43	G.F.G	2	.8
44	SV	4	1.6
45	G.F	1	.4
46	G.G	1	.4
47	G.G.F	1	.4
48	G.G.F	1	.4
49	G.F	2	.8
50	G.G	20	8.1
51	G.F.G	11	4.5
52	G.G.S	14	5.7
53	G.G.S	1	.4
54	G.G	1	.4
55	G.F.S	2	.8
56	G.G.S	1	.4
57	G.G.S	1	.4
58	G.F.S	7	2.8
59	G.F	6	2.4
60	G.F.S	70	28.3
61	G.F	1	.4
62	G.F	1	.4
63	G.F.S	5	2.0
64	UP0H	4	1.6
65	G.F	1	.4
66	G.G	2	.8
67	G.F.G	18	7.3
68	G.F	2	.8
69	G.G	22	8.9
70	G.CA.F	30	12.1
71	PF1H	1	.4
72	G.CA.G	7	2.8
73	G.CA.G	19	7.7
74	G.D.F.G	6	2.4
75	G.F.S	9	3.6
76	UP1H	5	2.0
77	G.F.G	41	16.6
78	G.G	30	12.1
79	UP1H	1	.4
80	UP1H	6	2.4
81	SW2M/SV.BB	46	18.6
82	G.F.G.S	81	32.8
83	UP1H	3	1.2
84	SW1M/SV.BB	18	7.3
85	SW2M	9	3.6
86	G.G	5	2.0
87	UP1H	119	48.2
88	G.G	1	.4
89	M.F	1	.4
90	G.F.G.S	5	2.0
91	UP1M	2	.8
92	G.G	16	6.5
93	M.F.P	2	.8
94	M.F	1	.4
95	G.F	1	.4
96	G.F.G	2	.8
97	G.G	2	.8
98	UP1H	19	7.7
99	M.F	1	.4
100	G.B.G	10	4.0
101	UP2H	4	1.6
102	M.F	2	.8
103	G.G	1	.4
104	G.G	1	.4
105	G.G	1	.4
106	G.G	2	.8
107	M.F.P	3	1.2
108	M.F.P	1	.4
109	UP1M.PO	6	2.4
110	M.F	1	.4
111	G.G	8	3.2
112	G.G	1	.4
113	SW1L/SV	6	2.4
114	UP2H	545	220.6
115	M.F	1	.4
116	G.G	7	2.8
117	UP1H	16	6.5
118	G.F	2	.8
119	G.F	7	2.8
120	PF1H	10	4.0
121	MN0H.R	8	3.2
122	G.F	1	.4
123	UP1H	3	1.2
124	G.F.S	49	19.8
125	UP1H	1	.4
126	UP1H	1	.4
127	G.F	1	.4
128	UP0H	4	1.6
129	G.G	1	.4
130	G.F	1	.4
131	UP0H	3	1.2
132	UP1H	12	4.9
133	G.F	6	2.4
134	MN0H.R	4	1.6
135	MN0H.R	5	2.0
136	UP1H	2	.8
137	G.F	1	.4
138	PF1H	1	.4
139	G.F	1	.4
140	PF1H.M	5	2.0
141	G.G.S	17	6.9
142	G.G	1	.4
143	M.F	1	.4
144	UP1H	38	15.4
145	M.F	1	.4
146	PF1H.M	6	2.4
147	G.F.S	13	5.3
148	G.G	1	.4
149	G.G	1	.4
150	PF1H.M	2	.8
151	G.F	1	.4
152	PF1H.M	5	2.0
153	UP1H	2	.8
154	PF1H.M	4	1.6
155	UP1H	8	3.2
156	G.F.S	3	1.2
157	PF1H	1	.4
158	UP1L	2	.8
159	PF1H.M	1	.4
160	G.F	6	2.4
161	UP1H	1	.4
162	UP1H	1	.4
163	UP1H	1	.4
164	PF1H.M	2	.8
165	PF1H	8	3.2
166	U	6	2.4
167	G.F.S	7	2.8
168	U	1	.4
169	G.F.S	12	4.9
170	PF1H.M	1	.4
171	G.G	1	.4
172	G.G	1	.4
173	UP2M	12	4.9
174	UP2M	33	13.4
175	SV	3	1.2
176	G.F.G.S	23	9.3
177	UP2M	1	.4
178	G.G	6	2.4
179	UP2H	53	21.4
180	G.F.G.S	3	1.2
181	G.G	45	18.2
182	UP1H	8	3.2
183	M.F	2	.8
184	UP1M/SV.BB	110	44.5
185	G.G	36	14.6
186	M.F	1	.4
187	UP1H	16	6.5
188	M.F	3	1.2
189	G.F.G	10	4.0
190	M.F	4	1.6
191	G.G	3	1.2
192	G.F.G.S	8	3.2
193	M.F	1	.4
194	M.F	1	.4
195	G.F.G	33	13.4
196	G.G	1	.4
197	G.G	1	.4
198	G.G	4	1.6
199	G.F.S	23	9.3
200	UP2H	16	6.5
201	G.G.S	1	.4
202	G.G	1	.4
203	G.G	3	1.2
204	G.G	1	.4
205	G.F	6	2.4
206	UP2H	3	1.2
207	UP2M	23	9.3
208	SV	7	2.8
209	UP2M	17	6.9
210	G.G	5	2.0
211	UP2H	166	67.2
212	G.G	2	.8
213	G.G	1	.4
214	SV	6	2.4
215	UP1H	3	1.2
216	G.G.S	7	2.8
217	UP1H	5	2.0
218	B.CL	1	.4
219	G.G.P	6	2.4
220	UP1L/SV	23	9.3
221	SV	2	.8
222	G.F	2	.8
223	G.G.S	4	1.6
224	UP1H.CO	40	16.2
225	U/C	14	5.7
226	MN2H	27	10.9
227	AG.CO	3	1.2
228	MN1H	14	5.7
229	UP1H	2	.8
230	MN1H	4	1.6
231	G.G	52	21.0
232	UP1L/SV.BB	24	9.7
233	MN1H	51	20.6
234	UP1H	21	8.5
235	MN1H	1	.4
236	MN1H	7	2.8
237	UP1H	8	3.2
238	B.CL	1	.4
239	B.R	2	.8
240	MN1H	5	2.0
241	UP1H	4	1.6
242	UP1H	2	.8
243	MN1H	2	.8
244	G.G	198	80.1
245	AG.CO	2	.8
246	U/SV.BB	28	11.3
247	SV.BB	6	2.4
248	SV	7	2.8
249	G.G.P.S	9	3.6
250	G.G.S	2	.8
251	UP1H	3	1.2
252	SV	1	.4
253	SV	16	6.5
254	UP1M	5	2.0
255	B.R	2	.8
256	SV	4	1.6
257	B.R	1	.4
258	SV	1	.4
259	UP1H	7	2.8
260	U/C	1	.4
261	SV	4	1.6
262	G.G	1	.4
263	MN1H	144	58.3
264	SW1M/SV	5	2.0
265	UP1H	1	.4
266	UP1H	4	1.6
267	UP1H	2	.8
268	UP1M/SV.BB	30	12.1
269	SV	7	2.8
270	G.G	4	1.6
271	UP1H	3	1.2
272	UP1H	1	.4
273	B.R	1	.4
274	UP1H	2	.8
275	G.F.G	2	.8
276	UP1L/SV	19	7.7
277	UP1H	13	5.3
278	MN1H	6	2.4
279	MN2H	6	2.4
280	MN1H	3	1.2
281	G.G.S	1	.4
282	B.R	4	1.6
283	UP0H	4	1.6
284	SV	2	.8
285	MN1H	14	5.7
286	G.G	1	.4
287	UP1H	121	49.0
288	G.G.P.S	1	.4
289	G.G.S	4	1.6
290	MN1H.R	3	1.2
291	MN1H	19	7.7
292	UP1M/SV	7	2.8
293	MN1H	1	.4
294	UP0H	1	.4
295	G.F.P	1	.4
296	UP1M/SV	15	6.1
297	MN1H	11	4.5
298	G.F	1	.4
299	G.F	1	.4
300	G.F.G	2	.8
301	UP1H	1	.4
302	UP1H	12	4.9
303	C	1	.4
304	CO1H	4	1.6
305	U	4	1.6
306	UP1H	1	.4
307	G.G	1	.4
308	G.CA.G	1	.4
309	SW1H	4	1.6
310	C	3	1.2
311	SW1H	2	.8
312	SW1L/SV	6	2.4
313	G.G	1	.4
314	UP1H	3	1.2
315	G.G	40	16.2
316	G.G.S	3	1.2
317	G.G.P	131	53.0
318	UP1H	68	27.5
319	G.G	1	.4
320	G.G	33	13.4
321	UP0H	4	1.6
322	UP1L/SV	8	3.2
323	G.G	5	2.0
324	SV.BB	22	8.9
325	UP1M.CO	11	4.5
326	C	1	.4
327	SV.BB	10	4.0
328	G.G	3	1.2
329	CO1M.UP	2	.8
330	MN1H	5	2.0
331	UP1H	23	9.3
332	UP1H.CO	12	4.9
333	G.F.G.S	8	3.2
334	C	7	2.8
335	G.G	6	2.4
336	CO1H	1	.4
337	UP1H	1	.4
338	G.G	4	1.6
339	UP1H	5	2.0
340	G.G	61	24.7
341	MN1H	129	52.2
342	SW1M/SV	6	2.4
343	CO1M.UP	71	28.7
344	G.G	2	.8
345	CO1M/SV	5	2.0
346	G.G	18	7.3
347	UP1H	1	.4
348	UP1H	4	1.6
349	UP1H	16	6.5
350	SV.BB	21	8.5
351	UP1L/SV	5	2.0
352	UP1H	1	.4
353	UP1L/SV	5	2.0
354	UP0H	3	1.2
355	G.F.G.P	5	2.0
356	CO1M.UP	22	8.9
357	SV	3	1.2
358	CO1M.UP	2	.8
359	UP1M	1	.4
360	G.G	6	2.4
361	G.B.G	77	31.2
362	G.F.G.S	4	1.6
363	G.F.G.P	61	24.7
364	SV.BB	113	45.7
365	G.G.P	42	17.0
366	UP1H	16	6.5
367	G.G.S	29	11.7
368	G.G.S	2	.8
369	UP2H	19	7.7
370	G.G.P.S	15	6.1
371	UP1L	4	1.6
372	UP1L/SV	7	2.8
373	G.G	8	3.2
374	G.G.P	6	2.4
375	UP1L/SV	31	12.5
376	G.F.S	5	2.0
377	G.F.G.S	4	1.6
378	G.G	2	.8
379	M.F.P	2	.8
380	M.F.P	1	.4
381	UP1H	15	6.1
382	SV	4	1.6
383	CO1M.UP	18	7.3
384	UP1H	2	.8
385	C	3	1.2
386	UP1H	1	.4
387	U	1	.4
388	CO1H	5	2.0
389	CO1M.UP	4	1.6
390	U/C	35	14.2
391	U/SV	3	1.2
392	AG.CO	2	.8
393	MN1H	235	95.1
394	SW1M/SV	6	2.4
395	MN2H	43	17.4
396	SW1M/SV	8	3.2
397	G.G	28	11.3
398	MN1H	2	.8
399	G.F.G.S	121	49.0
400	SW1H	17	6.9
401	SW1M.UP	15	6.1
402	G.F	1	.4
403	G.F	1	.4
404	G.F	1	.4
405	SW1M/SV	77	31.2
406	SV	3	1.2
407	G.F.G	2	.8
408	G.F.S	4	1.6
409	PF1H.M	5	2.0
410	G.G.S	3	1.2
411	UP1H.SW	10	4.0
412	PF1H	2	.8
413	UP1H	34	13.8
414	UP2H	44	17.8
415	UP1L	2	.8
416	G.F.S	6	2.4
417	G.F.G.S	5	2.0
418	UP0H	7	2.8
419	G.F.G.S	12	4.9
420	G.F.G.S	41	16.6
421	UP0H	5	2.0
422	G.F.G.S	2	.8
423	G.S	3	1.2
424	G.F.G.S	2	.8
425	G.G.S	1	.4
426	G.F.G.S	1	.4
427	G.F.G	1	.4
428	G.G	1	.4
429	G.G.S	2	.8
430	UP2H	12	4.9
431	UP2H	82	33.2
432	G.F.G.S	2	.8
433	G.G.S	1	.4
434	UP2H	20	8.1
435	G.F.G.S	10	4.0
436	G.G.S	1	.4
437	G.F.G.S	28	11.3
438	UP2H	10	4.0
439	UP2H	11	4.5
440	UP2H	298	120.6
441	G.G.S	6	2.4
442	UP2H	6	2.4
443	UP1H	8	3.2
444	G.F.G.S	13	5.3
445	UP0H	5	2.0
446	G.G	1	.4
447	UP1H	25	10.1
448	G.G	2	.8
449	G.G	4	1.6
450	G.F	5	2.0
451	UP1H	26	10.5
452	G.G	7	2.8
453	G.F	2	.8
454	G.G	3	1.2
455	G.F.G.S	6	2.4
456	UP1L	3	1.2
457	G.G.S	2	.8
458	SV.S	13	5.3
459	SV	8	3.2
460	G.G	2	.8
461	G.G	1	.4
462	G.G	3	1.2
463	G.G.S	6	2.4
464	G.G	4	1.6
465	G.G	1	.4
466	G.G	27	10.9
467	G.CA.G	14	5.7
468	UP1H	4	1.6
469	G.G.S	2	.8
470	UP2H	7	2.8
471	UP2H	23	9.3
472	G.F.G.S	7	2.8
473	UP2H	6	2.4
474	G.F.G.S	29	11.7
475	UP2H	24	9.7
476	G.G.S	6	2.4
478	UP1H	1	.4



Cole, Thomas G., Falanruw, Marjorie C., MacLean, Colin D., Whitesell, Craig D., Ambacher, Alan H. Vegetation survey of the Republic of Palau. Resour. Bull. PSW-22. Berkeley, CA: Pacific Southwest Forest and Range Experiment Station, Forest Service, U.S. Department of Agriculture, 1987.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SCALE 1:20,000

CONTOUR INTERVAL 10 METERS
SUPPLEMENTARY CONTOUR INTERVAL 5 METERS
DATUM IS MEAN SEA LEVEL

SHORELINE SHOWN REPRESENTS THE APPROXIMATE LINE OF MEAN HIGH WATER
THE MEAN RANGE OF TIDE IS APPROXIMATELY 3 METER

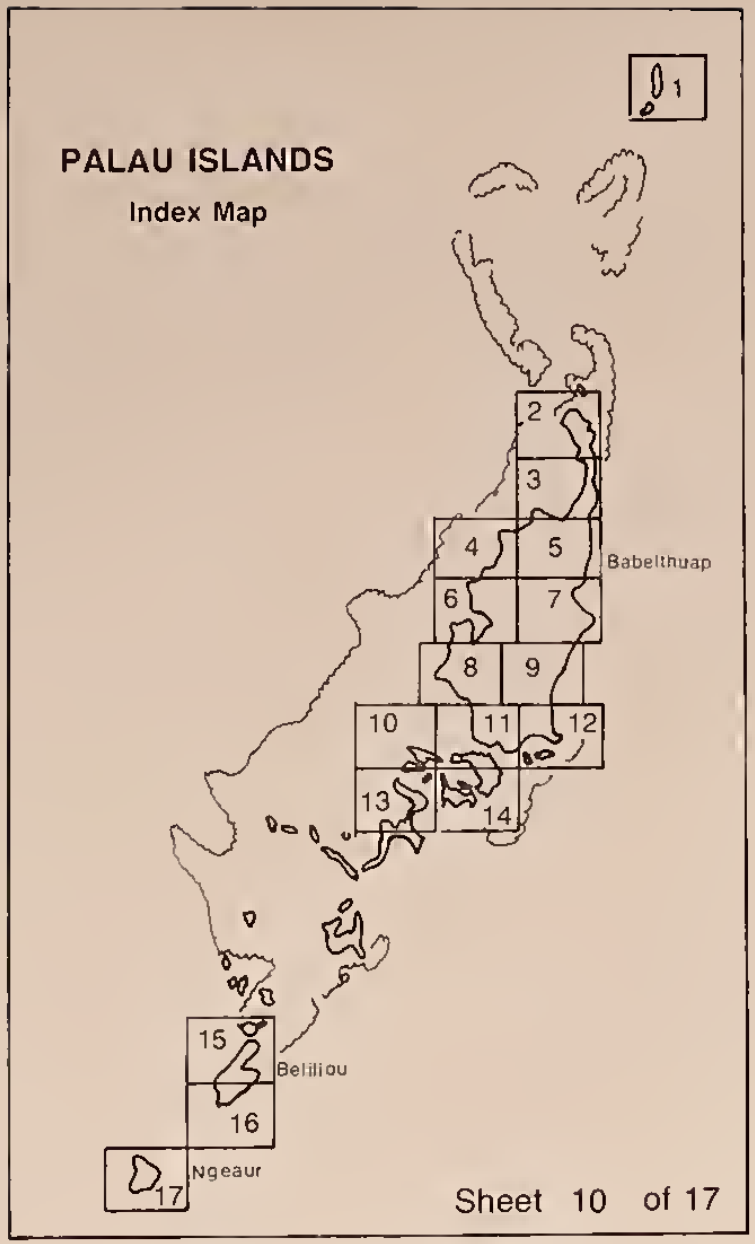
Vegetation map compiled by Pacific Southwest Forest and Range Experiment Station and Pacific Northwest Forest and Range Experiment Station, Forest Service, U.S. Department of Agriculture. Cartography by Allan H. Ambacher, USDA – Forest Service, Pacific Southwest Region, Engineering Geometronics Section; 1987.

VEGETATION LEGEND

For explanation of vegetation type codes see Table 7

ITEM	LABEL	AREA (ACRES)	AREA (HECTARES)
1	UP2H	480	194.2
2	G F S	3	1.2
3	G G	1	.4
4	UP1H	6345	2567.7
5	G F G S	10	4.0
6	UP1H	1	.4
7	G F G S	6	2.4
8	G F S	4	1.6
9	G F	2	.8
10	G F G S	48	19.4
11	M F	4	1.6
12	UP0H	2	.8
13	UP2H	7	2.8
14	UP2H	10	4.0
15	G G	1	.4
16	G S	5	2.0
17	G F G S	47	19.0
18	G G S	6	2.4
19	G F S	1	.4
20	UP0H	1	.4
21	G F S	2	.8
22	G F	1	.4
23	G F S	1	.4
24	G F	1	.4
25	G F	1	.4
26	UP2M	31	12.5
27	G F G S	2	.8
28	G F	1	.4
29	G G S	9	3.6
30	G F G S	18	7.3
31	UP2H	10	4.0
32	UP1H	1	.4
33	G F	1	.4
34	UP0M	4	1.6
35	CO1H	2	.8
36	G G	6	2.4
37	AG.CO	3	1.2
38	UP0H	1	.4
39	G G	1	.4
40	G G	1	.4
41	UP0H	3	1.2
42	G F G S	7	2.8
43	UP0H	4	1.6
44	UP1M.CO	9	3.6
45	G G	3	1.2
46	UP1M/SV.BB	26	10.5
47	CO1H	3	1.2
48	AG.CO	39	15.8
49	MN1H	11	4.5
50	MN1H	1	.4
51	U	7	2.8
52	CO1M/SV	3	1.2
53	UP2M	10	4.0
54	UP2H	10	4.0
55	UP1H	4	1.6
56	MN1H	46	18.6
57	CO1M/SV	7	2.8
58	G G	1	.4
59	G G	1	.4
60	SV	2	.8
61	G G	1	.4
62	U/C	2	.8
63	CO1M/M F	16	6.5
64	CO1M/SV	9	3.6
65	G F G S	6	2.4
66	CO1H	4	1.6
67	G G	2	.8
68	C	1	.4
69	UP1M.CO	54	21.9
70	C	1	.4
71	MN1H	54	21.9
72	SV	18	7.3
73	CO1H	2	.8
74	SW1H	10	4.0
75	C	9	3.6
76	G G	7	2.8
77	MN1H	162	65.6
78	MN2H.R	6	2.4
79	MN0H.R	47	19.0
80	SW1L.CO	26	10.5
81	CO1M/SV	33	13.4
82	SV	2	.8
83	G G	11	4.5
84	UP1M/SV	23	9.3
85	G G	4	1.6
86	G G	7	2.8
87	UP1H	7	2.8
88	C	1	.4
89	UP1M.GO	4	1.6
90	G F G S	6	2.4
91	G G	1	.4
92	G F G S	4	1.6
93	G O	10	4.0
94	UP2H	44	17.8
95	UP2H	14	5.7
96	G G	2	.8
97	G G S	1	.4
98	G G S	2	.8
99	G G	1	.4
100	C	2	.8
101	G B G	4	1.6
102	UP2M	4	1.6
103	G CA.G	6	2.4
104	SV	2	.8
105	UP1H	2	.8
106	SV	2	.8
107	G F G S	105	43.7
108	G G S	1	.4
109	G G S	1	.4
110	C	2	.8
111	G G S	3	1.2
112	UP0H	3	1.2
113	G G S	8	3.2
114	G G	3	1.2
115	UP0H	2	.8
116	UP0H	1	.4
117	G G S	1	.4
118	SV	1	.4
119	UP0H	3	1.2
120	C	17	6.9
121	SV	5	2.0
122	UP1H	3	1.2
123	UP1H	1	.4
124	UP1H	56	22.7
125	UP1H	3	1.2
126	G G S	46	18.6
127	UP1H	3	1.2
128	C	2	.8
129	G G S	6	2.4
130	G G	1	.4
131	UP0H	3	1.2
132	G F G S	6	2.4
133	UP0H	4	1.6
134	G G S	2	.8
135	AG.CO	2	.8
136	SV	2	.8
137	G F G	1	.4
138	C	2	.8
139	M F	2	.8
140	G O F	2	.8
141	C	1	.4
142	UP0H	2	.8
143	G G	1	.4
144	M F	2	.8
145	G G S	3	1.2
146	UP0H	4	1.6
147	G F G	10	4.0
148	UP0H	5	2.0
149	UP0H	9	3.6
150	SW1M/SV	10	4.0
151	SW1M/SV	5	2.0
152	G G	3	1.2
153	SV	2	.8
154	CO1M/SV	38	15.4
155	SW1M/SV	10	4.0
156	G G	2	.8
157	G G	1	.4
158	M F	11	4.5
159	G G	1	.4
160	SW1L/SV	3	1.2
161	C	2	.8
162	M F	7	2.8
163	SW1H	91	36.8
164	G G	2	.8
165	G G	2	.8
166	G G	6	2.4
167	SV	2	.8
168	CO1H	16	6.5
169	CO1H	2	.8
170	G G	3	1.2
171	CO1H	1	.4
172	M F	9	3.6
173	SW1M/SV	18	7.3
174	SV	3	1.2
175	SV S	2	.8
176	SV	1	.4
177	M F	4	1.6
178	G G	1	.4
179	G G	3	1.2
180	UP1H	2	.8
181	G G	1	.4
182	SV	1	.4
183	G G S	2	.8
184	SV	5	2.0
185	G G S	6	2.4
186	SV	4	1.6
187	UP1H	1	.4
188	SV	3	1.2
189	G G	1	.4
190	SV	2	.8
191	UP0H	5	2.0
192	G F S	7	2.8
193	G F S	3	1.2
194	G F.G S	7	2.8
195	UP1H	1	.4
196	G F G S	4	1.6
197	G F G	3	1.2
198	G G	1	.4
199	G G S	13	5.3
200	UP2H	726	293.8
201	G F G S	8	3.2
202	UP2H	75	30.4
203	G G S	2	.8
204	G G S	6	2.4
205	G F G	2	.8
206	G G	2	.8
207	G F G	1	.4
208	G G S	2	.8
209	G F S	3	1.2
210	G G S	3	1.2
211	G F G S	21	8.5
212	UP2H	2	.8
213	G F	2	.8
214	G G S	8	3.2
215	G F	3	1.2
216	G G	2	.8
217	G G S	2	.8
218	G F G	31	12.5
219	G G	3	1.2
220	M F	1	.4
221	M F	2	.8
222	M F	1	.4
223	M F	4	1.6
224	G S	3	1.2
225	M F	2	.8
226	M F	1	.4
227	UP2H	7	2.8
228	SV	3	1.2
229	SV	1	.4
230	M F	1	.4
231	M F	2	.8
232	G F S	1	.4
233	G F S	2	.8
234	G S	8	3.2
235	UP2H	6	2.4
236	UP2H	3	1.2
237	G F G S	16	6.5
238	UP2H	5	2.0
239	G F G S	3	1.2
240	G F G S	1	.4
241	UP2H	2	.8
242	UP2H	5	2.0
243	G G	1	.4
244	G F G S	1	.4
245	G B G S	1	.4
246	G F G	3	1.2
247	G F G S	12	4.9
248	G S	1	.4
249	G F G S	11	4.5
250	M F	1	.4
251	UP0H	26	10.5
252	G G	4	1.6
253	SV	15	6.1
254	UP0H	2	.8
255	G G S	1	.4
256	UP0H	4	1.6
257	UP0H	2	.8
258	UP0H	2	.8
259	G G S	1	.4
260	G G	1	.4
261	G F G	1	.4
262	SV	2	.8
263	G G S	4	1.6
264	SV	3	1.2
265	G F G	14	5.7
266	G F S	2	.8
267	UP0H	7	2.8
268	G G	2	.8
269	SV	9	3.6
270	UP0H	6	2.4
271	SV	6	2.4
272	G G S	3	1.2
273	SV	7	2.8
274	UP0H	9	3.6
275	UP1M	13	5.3
276	G S	1	.4
277	G G S	3	1.2
278	UP1M.CO	4	1.6
279	CO1H	5	2.0
280	SV	5	2.0
281	M F	2	.8
282	G G	2	.8
283	G G	3	1.2
284	CO1H	24	9.7
285	UP1L.CO	4	1.6
286	W	1	.4
287	MN0H.R	30	12.1
288	U	1	.4
289	SV	5	2.0
290	C	9	3.6
291	MN1H	122	49.4
292	SW1L.CO	58	23.5
293	G G	1	.4
294	G G	1	.4
295	SW1M/SV	12	4.9
296	UP1M.CO	3	1.2
297	SV.BB	7	2.8
298	CO1M/SV	2	.8
299	SV	7	2.8
300	UP1H	15	6.1
301	UP1H.CO	7	2.8
302	CO1H	25	10.1
303	MN1H	5	2.0
304	G G	3	1.2
305	G G	1	.4
306	G G	1	.4
307	UP1H	10	4.0
308	CO1M/SV	10	4.0
309	UP1H	5	2.0
310	MN1H	41	16.6
311	UP1H	13	5.3
312	UP2H	480	194.2
313	SV	4	1.6
314	MN1H	1	.4
315	AG.CO	5	2.0
316	SW1H	14	5.7
317	MN1H	17	6.9
318	SW2M/SV	27	10.9
319	G F	1	.4
320	G F S	1	.4
321	M F	3	1.2
322	G G	11	4.5
323	G F G S	3	1.2
324	UP1H	1	.4
325	UP0H	9	3.6
326	M F	1	.4
327	M F	6	2.4
328	G G S	8	3.2
329	G G S	19	7.7
330	G G S	4	1.6
331	G G S	10	4.0
332	G S	2	.8
333	M F P	1	.4
334	M F P	1	.4
335	UP0H	3	1.2
336	G G S	4	1.6
337	UP0H	2	.8
338	G F S	4	1.6
339	G F	2	.8
340	G F	2	.8
341	UP0H	22	8.9
342	SW1H	3	1.2
343	UP2H	6	2.4
344	G G S	23	9.3
345	M F	2	.8
346	M F	1	.4
347	M F	1	.4
348	G F G S	4	1.6
349	G F G S	3	1.2
350	G F S	20	8.1
351	G F S	3	1.2
352	G F S	3	1.2
353	G F G S	1	.4
354	G F G S	2	.8
355	G F G S	2	.8
356	G F S	19	7.7
357	G F S	6	2.4
358	G F G S	11	4.5
359	G G	1	.4
360	G F	5	2.0
361	G F S	7	2.8
362	UP0H	3	1.2
363	G F G S	43	17.4
364	G F G S	1	.4
365	G F G S	2	.8
366	G F S	1	.4
367	G F G S	4	1.6
368	G F S	3	1.2
369	G F S	41	16.6
370	G F S	2	.8
371	M F	1	.4
372	M F	1	.4
373	M F	2	.8
374	M F	1	.4
375	G G	1	.4
376	G F	1	.4
377	G F	3	1.2
378	G F S	52	21.0
379	G S	8	3.2
380	G F S	5	2.0
381	UP0H	1	.4
382	G F G S	2	.8
383	UP0H	26	10.5
384	SV G	4	1.6
385	G G	3	1.2
386	G F G S	12	4.9
387	G F G S	5	2.0
388	G G S	7	2.8
389	G G S	23	9.3
390	UP2H	386	155.2
391	M F P	33	13.3
392	UP1H	18	7.2

PALAU ISLANDS
SHEET 9 of 17



Cole, Thomas G., Falanruw, Marjorie C., MacLean, Colin D.; Whitesell, Craig D., Ambacher, Alan H. Vegetation survey of the Republic of Palau. Resour. Bull. PSW-22. Berkeley, CA: Pacific Southwest Forest and Range Experiment Station, Forest Service, U.S. Department of Agriculture; 1987.

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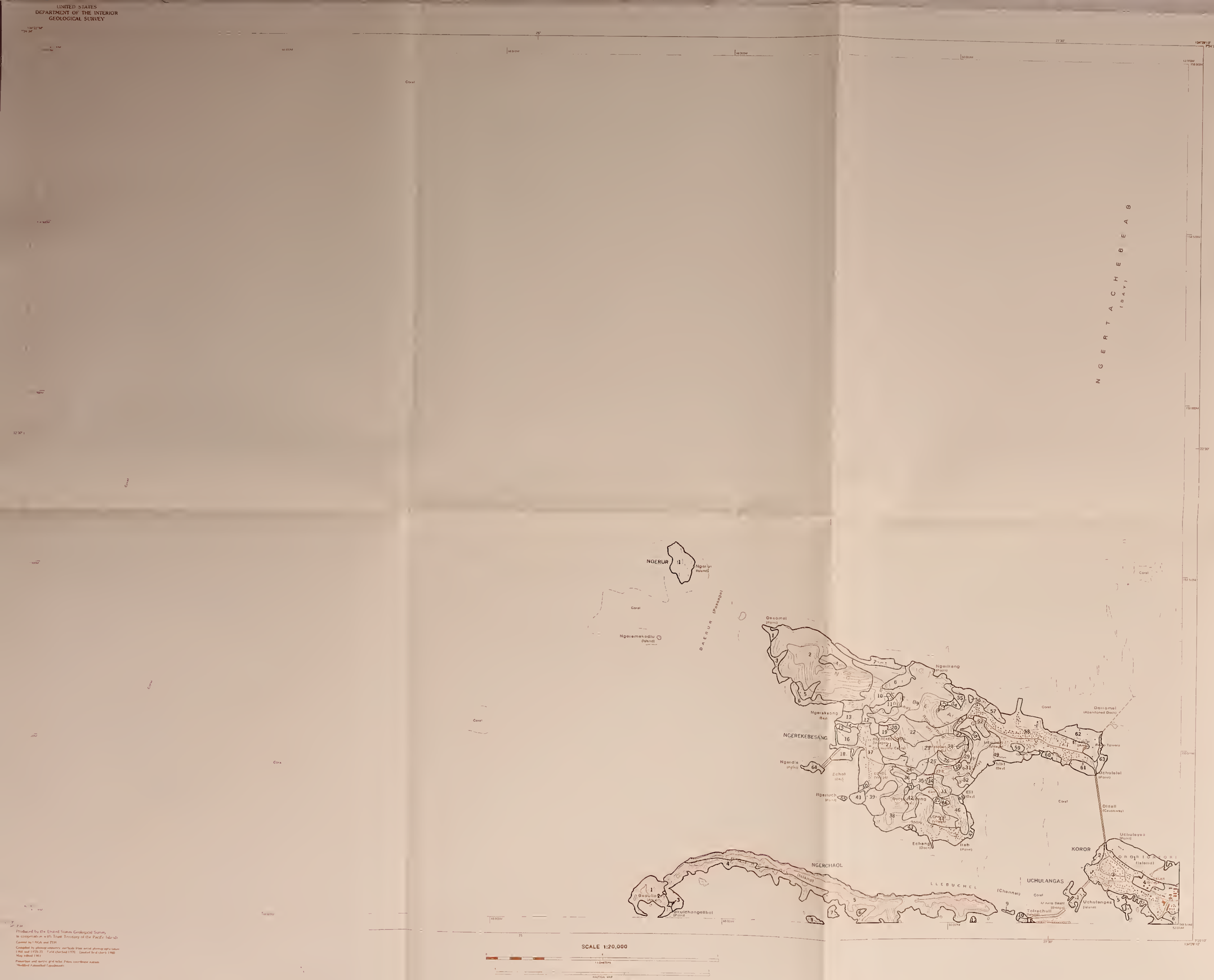
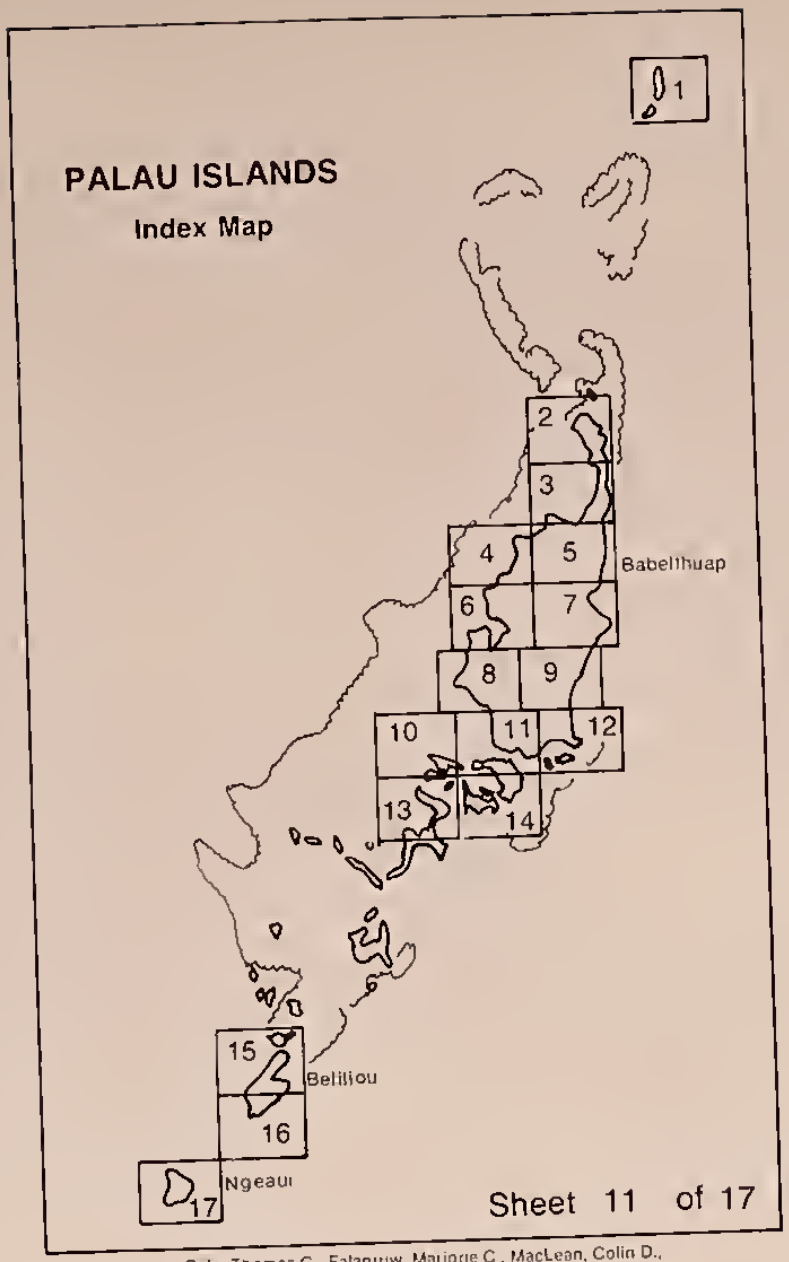

NGERTACHEBEAB
(BAY)
NGERUR
Ngoiyu (Island)
Ngeremekadiu (Island)
OAERUR (Passage)
Coral
Ngesomol (Point)
Ngerilang (Point)
Ngeriskong (Bay)
NGEREKEBESANG
Ngeridis (Islet)
Echol (Islet)
Ngeiluch (Point)
Ngerekebesang (Community Center)
Ngeremeskang (Point)
Ngeremeskang (Bay)
Ngeremeskang (Pass)
Ngeremeskang (Channel)
Ngeremeskang (Reef)
Ngeremeskang (Point)
Ngeremeskang (Islands)
Ngeremeskang (Islands)
Ngeremeskang (Islands



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SCALE 1:20,000

CONTOUR INTERVAL 10 METERS
SUPPLEMENTARY CONTOUR INTERVAL 5 METERS
DATUM IS MEAN SEA LEVEL

SHORELINE SHOWN REPRESENTS THE APPROXIMATE LINE OF MEAN HIGH WATER
THE MEAN RANGE OF TIDE IS APPROXIMATELY 1 METER

VEGETATION LEGEND

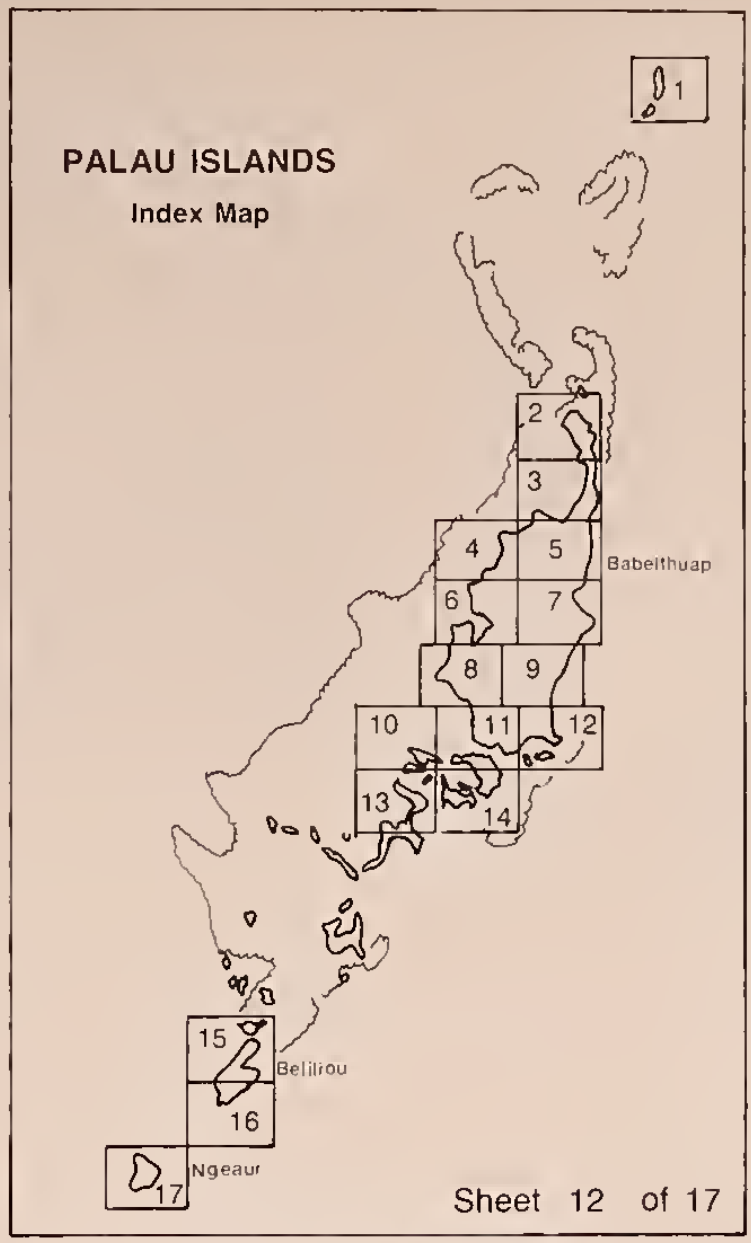
For explanation of vegetation type codes see Table 7

ITEM	LABEL	AREA (ACRES)	AREA (HECTARES)
	BABELTHUAP		
1	UP1H	4079	1650.7
2	G F G S	6	2.4
3	G G S	1	4
4	G G S	2	8
5	UP0H	9	3.6
6	G G.S	3	1.2
7	G F G S	1	4
8	G F G S	2	8
9	G F S	2	8
10	G F	2	8
11	G F	6	2.4
12	G F	1	4
13	UP2H	5	2.0
14	G G S	7	2.8
15	G F S	1	4
16	G F G S	6	2.4
17	G D F S	1	4
18	G G.S	1	4
19	UP2M	145	58.7
20	G G S	1	4
21	G G S	2	8
22	G F G.S	6	2.4
23	G F.S	3	1.2
24	UP1M	5	2.0
25	UP0H	17	6.9
26	G F.G S	36	14.6
27	UP1H	23	9.3
28	UP1H	2	8
29	SV	3	1.2
30	G F G.S	18	7.3
31	UP0H	13	5.3
32	G F.G S	38	15.4
33	SV	2	8
34	UP1H	1	4
35	CO1H	7	2.8
36	MN1H	787	318.5
37	SW1M	2	8
38	G G	60	24.3
39	UP1H	8	3.2
40	UP1H	3	1.2
41	UP1H	1	4
42	G F G	22	8.9
43	G F S	2	8
44	G G S	57	23.1
45	SV	5	2.0
46	G G	36	14.6
47	G G S	18	7.3
48	G G S	4	1.6
49	G G	3	1.2
50	G G	1	4
51	G.G	1	4
52	G G S	3	1.2
53	M F P	1	4
54	G G S	1	4
55	G G S	2	8
56	G G S	1	4
57	G F G	1	4
58	G F G	2	8
60	M F P	2	8
61	M F P	1	4
62	G G	2	8
63	G G	1	4
64	G G S	14	5.7
65	MN0H R	16	6.5
66	G G	14	5.7
67	G G S	14	5.7
68	UP2M	6	2.4
69	G F	1	4
70	G F G S	1	4
71	G F	2	8
72	UP2H	3	1.2
73	G F G.S	1	4
74	G G	24	9.7
75	M.F P	3	1.2
76	SW1L/SV	25	10.1
77	SW1L/SV.BB	50	20.2
78	G.G	3	1.2
79	UP1H	2	8
80	G G	1	4
81	G G	1	4
82	CO1M UP	3	1.2
83	UP1H	15	6.1
84	G G	2	.8
85	G F.G S	1	4
86	G G S	3	1.2
87	UP2H	17	6.9
88	G G	4	1.6
89	UP2H	14	5.7
90	G G S	2	8
91	G G S	2	8
92	UP2H	3	1.2
93	G.F G S	3	1.2
94	G F G S	6	2.4
95	UP2M	38	15.4
96	G.F G S	22	8.9
97	UP2H	28	11.3
98	G F	9	3.6
99	G G	9	3.6
100	G F.G S	14	5.7
101	G.G S	1	4
102	W	10	4.0
103	UP1L	2	8
104	G G S	3	1.2
105	G G	6	2.4
106	G F.G P	16	6.5
107	UP2H	6	2.4
108	UP2M	20	8.1
109	UP2M	16	6.5
110	G G S	3	1.2
111	G F S	3	1.2
112	UP2M	4	1.6
113	G.G	4	1.6
114	G.G.S	4	1.6
115	UP2M	5	2.0
116	G.G	2	8
117	G.G	1	4
118	UP0H	8	3.2
119	G.G	5	2.0
120	UP1H	1	4
121	G G	1	4
122	G G S	9	3.6
123	G.F.G S	11	4.5
124	G G	4	1.6
125	G.G.S	2	8
126	UP1H	1	4
127	G.F.G P	69	27.9
128	UP1H	28	11.3
129	UP1H	2	8
130	UP1H	9	3.6
131	UP0H	3	1.2
132	G.G.S	1	4
133	UP1H	7	2.8
134	G G.S	5	2.0
135	G.CA.G	105	42.5
136	C	14	5.7
137	G G	10	4.0
138	UP1M	2	8
139	G.G	7	2.8
140	G G	1	4
141	G G	5	2.0

ITEM	LABEL	AREA (ACRES)	AREA (HECTARES)
142	UP1M	2	8
143	G G	3	1.2
144	UP1H	3	1.2
145	G G S	54	21.9
146	UP2H	4	1.6
147	UP1H	5	2.0
148	UP1H	1	4
149	UP2H	9	3.6
150	UP1H	7	2.8
151	G G S	3	1.2
152	M.F P	5	2.0
153	UP0H	4	1.6
154	UP1H	1	4
155	MN1L	6	2.4
156	C	1	4
157	C	2	8
158	UP1H	2	.8
159	UP1H	2	8
160	M.F.P	2	8
161	M.F.P	7	2.8
162	UP1H	7	2.8
163	G F G P	97	39.3
164	UP1H	5	2.0
165	UP1H	1	4
166	UP0H	22	8.9
167	AG CO	1	4
168	UP2M/SV	3	1.2
169	G F	4	1.6
170	U	12	4.9
171	G G S	8	3.2
172	UP1H	2	8
173	SW1M/SV	8	3.2
174	C	3	1.2
175	G G	41	16.6
176	M.F P	7	2.8
177	UP1H	15	6.1
178	G F	7	2.8
179	G F G S	43	17.4
180	UP1H	4	1.6
181	UP1H	3	1.2
182	UP1L	5	2.0
183	MN1H	66	26.7
184	SW1L/SV	40	16.2
185	M F	3	1.2
186	UP1H	4	1.6
187	UP1H	2	8
188	UP1H	1	4
189	M F	1	4
190	C/SV	5	2.0
191	MN2H	10	4.0
192	G D F S	13	5.3
193	MN1H	7	2.8
194	AG CO	31	12.5
195	G G	8	3.2
196	CO1H	1	4
197	C	3	1.2
198	G G	1	4
199	C	3	1.2
200	C	1	4
201	U	1	4
202	MN1H	1	4
203	MN1H	11	4.5
204	MN0H R	44	17.8
205	MN1H	14	5.7
206	MN0H	4	1.6
207	SV	3	1.2
208	SV.BB	6	2.4
209	SV	2	.8
210	SW1M/SV	14	5.7
211	CO1M UP	5	2.0
212	AG	3	1.2
213	SV.BB	5	2.0
214	G G	68	27.5
215	UP1H	75	30.4
216	M.F P	3	1.2
217	G.F.G P	24	9.7
218	UP1H	3	1.2
219	G.F G P	160	64.8
220	B D	8	3.2
221	UP1H	1	4
222	UP1H	28	11.3
223	G G	43	17.4
224	U	4	1.6
225	G G	11	4.5
226	U	9	3.6
227	C	2	8
228	UP2M/SV	2	8
229	UP1H	3	1.2
230	U/C	51	20.6
231	UP1H	3	1.2
232	C	4	1.6
233	G G S	1	4
234	G G	17	6.9
235	SV	2	8
236	UP1H	8	3.2
237	G G	6	2.4
238	MN2H	10	4.0
239	SW1M/SV	38	15.4
240	M F C	2	.8
241	C	1	4
242	CO1M.UP	1	4
243	UP1H	3	1.2
244	G G	3	1.2
245	UP1M	5	2.0
246	C	4	1.6
247	C	3	1.2
248	G G	2	8
249	SW1M/SV	4	1.6
250	UP1H	15	6.1
251	UP1H	1	4
252	SW1H	2	8
253	CO1M SW	1	4
254	M F P	13	5.3
255	AG CO	16	6.5
256	C	1	4
257	UP1H	2	8
258	C	4	1.6
259	SW1M/SV	6	2.4
260	UP1H	1	4
261	C	7	2.8
262	UP1M/C	14	5.7
263	UP1H	6	2.4
264	UP0H	9	3.6
265	G G	2	8
266	M F.P	2	8
267	G.G.S	3	1.2
268	G.G.S	99	40.1
269	UP1L.CO	9	3.6
270	G.G	3	1.2
271	SV	7	2.8
272	UP1H	12	4.9
273	SV	4	1.6
274	SV	1	4
275	G.G	169	68.4
276	UP1H	10	4.0
277	C/SV	2	.8
278	UP2H	7	2.8
279	UP1M/SV	9	3.6
280	UP1M/SV	18	7.3
281	UP1M/SV	5	2.0

ITEM	LABEL	AREA (ACRES)	AREA (HECTARES)
282	W	4	1.6
283	G G	1	4
284	C	2	8
285	MN0H.R	34	13.8
286	C	8	3.2
287	MN0H R	40	16.2
288	RI1H	2	8
289	W	1	4
290	G G	1	4
291	C	3	1.2
292	SV	1	4
293	RI1H	11	4.5
294	MN1H	6	2.4
295	SW1M/SV	15	6.1
296	MN0H.R	17	6.9
312	G G S	4	1.6
313	G G	1	4
314	G G	1	4
315	SW1M/SV	0	0
316	G G	40	16.2
317	G G	1	4
318	G.G	3	1.2
319	G.G	21	8.5
320	AG	14	5.7
321	UP1H SW	2	8
322	UP2H	9	3.6
323	UP2H	1	4
324	G G S	1	4
325	G CA G	6	2.4
326	UP9H	2	8
327	C CA G	169	68.4
328	MNZH	42	17.0
329	G F G S P	263	106.5
330	U	123	133.6
331	B.D	5	2.0
332	B D	2	8
333	B D	5	2.0
	KOROR		
1	MN1H	73	29.5
2	MN0H.R	18	7.3
3	SV	2	8
4	MN1L D	1	4
5	U/C	20	8.1
6	SV	2	8
7	C/SV	9	3.6
8	MN1H	30	12.1
9	MN2M	13	5.3
10	SW1M/SV	19	7.7
11	UP1H	11	4.5
12	U	1	4
13	RI1H	33	13.4
14	MN2H	15	6.1
15	UP1H	4	1.6
16	RI1H	8	3.2
17	SV G	2	8
18	U/C	18	7.3
19	RI1H	12	4.9
20	W S	3	1.2
21	MN1H	21	8.5
22	SV	6	2.4
23	U	1	4
24	G G	1	4
25	PO1H.I	1	4
26	C	5	2.0
27	SV	43	17.4
28	U	2	8
29	SV	3	1.2
30	PF1H	5	2.0
31	G G S	1	4
32	U	1	4
33	C/SV	3	1.2
34	C/SV	6	2.4
35	U	1	4
36	U/SV	8	3.2
37	U	3	1.2
38	G G	1	4
39	UP1H	55	22.3
40	G G	7	2.8
41	C	1	4
42	G.G	4	1.6
43	SV	13	5.3
44	G.G	3	1.2
45	MN1M	19	7.7
46	U/C	16	6.5
47	C	8	3.2
48	U/C	29	11.7
49	MN1H	8	3.2
50	U	1	4
51	SV	5	2.0
52	C	15	6.1
53	U/C	6	2.4
54	U	2	8
55	U/C	9	3.6
56	C	21	8.5
57	UP1H/SV	15	6.1
58	MN1H	14	5.7
59	C/SV	48	19.4
60	MN1H	48	19.4
62	C	46	18.6
63	UP1M/SV	4	1.6
64	U	267	108.1
65	MN1H	26	10.5
66	U	12	4.9
67	MN1M	17	6.9
68	C	3	1.2
69	C	2	8
70	SV	1	4
71	SV	2	8
72	U/C	7	2.8
73	SWIM/SV	7	2.8
	NGEREAM		
297	RI1H	4	1.6
298	RI1H	154	62.3
299	RI1H	1	4
300	MN1H	2	8
301	RI0H	3	1.2
302	RI2H	1	.4
303	RI2H	1	4
304	RI0H	1	4
305	RI0H	1	4
306	RI1H	64	25.9
307	W	1	4
308	RI1H	1	4
309	RI1H	1	4
310	RI1H	1	4
311	RI0H	7	2.8
	CHESECHOSOU		
1	RI0H	22	8.9
	NGKESILL		
1	RI1H	4	1.6
	DLEBEBAL		
1	RI1H	6	2.4

Vegetation map compiled by Pacific Southwest Forest and Range Experiment Station and Pacific Northwest Forest and Range Experiment Station, Forest Service, U.S. Department of Agriculture.
Cartography by Alan H. Ambacher, USDA Forest Service, Pacific



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UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Produced by the United States Geological Survey
in cooperation with Trust Territory of the Pacific Islands

Control by USGS and TTPI

Compiled by photogrammetric methods from aerial photographs taken 1968-75. Ties and checked 1970. Limited field check 1980

Map edited 1981

Projection and grids are Universal Transverse Mercator

Modified Azimuthal Equidistant

SCALE 1:20,000

Kilometers

CONTOUR INTERVAL 10 METERS
SUPPLEMENTARY CONTOUR INTERVAL 5 METERS
DATUM IS MEAN SEA LEVEL

SHORELINE SHOWN REPRESENTS THE APPROXIMATE LINE OF MEAN HIGH WATER
THE MEAN RANGE OF TIDE IS APPROXIMATELY 1 METER

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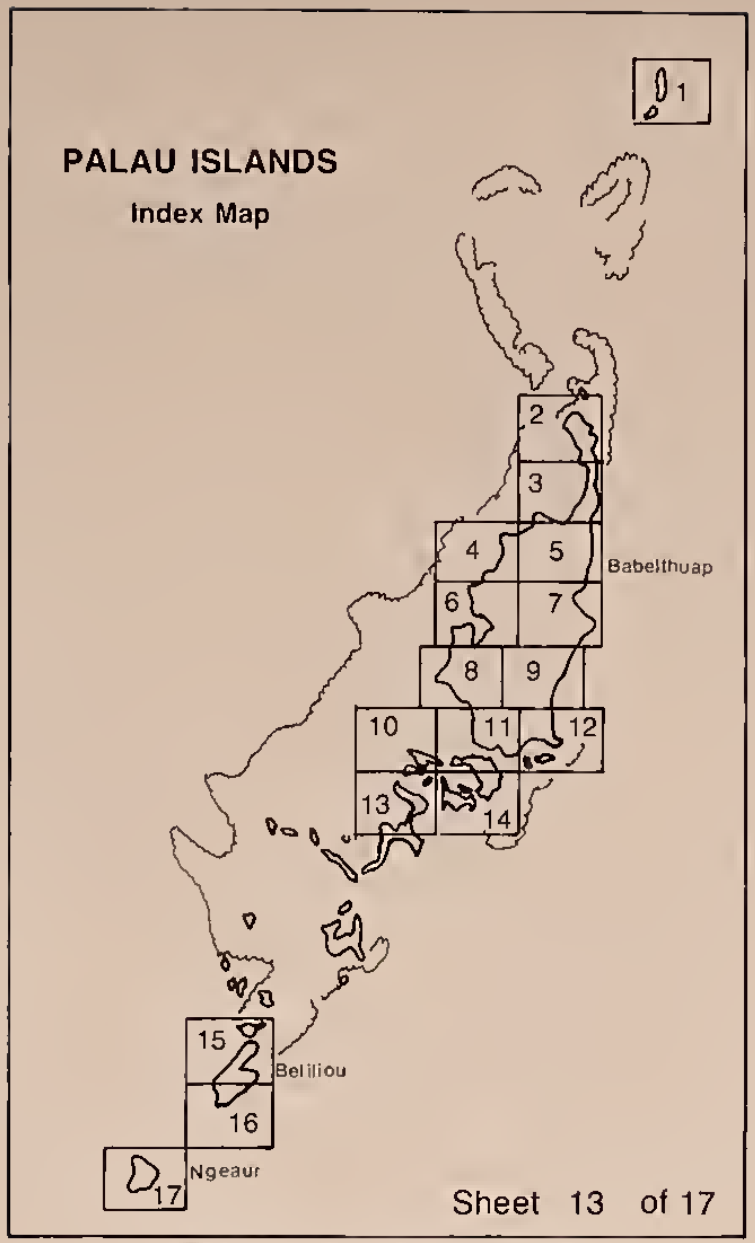
PALAU ISLANDS
SHEET 12 of 17

VEGETATION LEGEND

For explanation of vegetation type codes see Table 7.

ITEM	LABEL	AREA (ACRES)	AREA (HECTARES)
1	UP1H	1654	669.4
2	G.F.G.S	2	.8
3	UP2M	20	8.1
4	G.F.S	2	.8
5	G.F.G.S	1	.4
6	G.F.G.S	2	.8
7	M.F.P	2	.8
8	SW1M/SV	60	24.3
9	M.F.P	1	.4
10	M.F	2	.8
11	SW1M/SV	27	10.9
12	UP1H	105	42.5
13	MN1H	910	368.3
14	UP1L.SW	8	3.2
15	CO1H	2	.8
16	SW1H	1	.4
17	MNQH.R	27	10.9
18	MNQH.R	6	2.4
19	CO1M.SW	8	3.2
20	G.G	1	.4
21	CO1M.SW	4	1.6
22	G.G	1	.4
23	G.G	3	1.2
24	G.G	2	.8
25	G.G	2	.8
26	G.G	1	.4
27	UP0H	2	.8
28	G.G	2	.8
29	G.G	2	.8
30	SW1M/SV	12	4.9
31	AG.CO/M.F	12	4.9
32	G.G	1	.4
33	G.G.S	1	.4
34	G.G.S	1	.4
35	G.F.G.S	1	.4
36	G.F.G.S	3	1.2
37	G.F.G.S	8	3.2
38	G.F.G.S	4	1.6
39	G.G.S	1	.4
40	G.G.S	1	.4
41	G.G.S	1	.4
42	G.G.S	1	.4
43	G.G.S	38	15.4
44	G.F.G.S	4	1.6
45	G.G.S	14	5.7
46	UP2H	9	3.6
47	UP2M	20	8.1
48	G.G.S	11	4.5
49	G.F.G	4	1.6
50	G.F.G	4	1.6
51	UP2M	2	.8
52	UP2M	21	8.5
53	G.F.G.S	8	3.2
54	CO1M.SW	12	4.9
55	G.G	1	.4
56	G.G	2	.8
57	UP2H	7	2.8
58	G.G	1	.4
59	UP2M	20	8.1
60	UP2H	4	1.6
61	G.F.G.S	17	6.9
62	G.CA.G.P.S	73	29.5
63	UP1H	4	1.6
64	UP2H	12	4.9
65	G.F.G.S	21	8.5
66	G.G.S	4	1.6
67	G.F.G.S	2	.8
68	G.F.G.S	32	12.9
69	UP1H	1	.4
70	UP1H	3	1.2
71	G.CA.G	25	10.1
72	M.F.P	2	.8
73	UP1H	8	3.2
74	M.F.P	3	1.2
75	G.CA.G	22	8.9
76	G.G	1	.4
77	RI1H	22	8.9
78	CO1M.SW	4	1.6
79	SV	2	.8
80	SW1M.CO	14	5.7
81	M.F	17	6.9
82	RI1H	20	8.1
83	SW1M/SV.BB	59	23.9
84	UP1H	11	4.5
85	G.CA.G.P	18	7.3
86	G.CA.G	10	4.0
87	MN2H	13	5.3
88	G.G	4	1.6
89	CO1M.SW	4	1.6
90	RI1H	10	4.0
91	CO1M.SW	2	.8
92	MNQH.R	19	7.7
93	RI1H	8	3.2
94	MNQH.R	30	12.1
95	G.G	10	4.0
96	RI1H	2	.8
97	CO1M/SV	11	4.5
98	CO1M.SW	7	2.8
99	CO1M.UP	1	.4
100	RI1H	3	1.2
101	MNQH.R	61	24.7
102	RI1H	44	17.8
103	CO1M.SW	5	2.0
104	RI1H	2	.8
105	CO1M/SV	3	1.2
106	SV	8	3.2
107	CO1H	8	3.2
108	UP1L	3	1.2
109	CO1H	8	3.2
110	UP1H	2	.8
111	M.F	2	.8
112	RI1H	5	2.0
113	RI1H	1	.4
114	AG.CO	2	.8
115	CO1H	1	.4
116	CO1H	1	.4
117	RI1H	3	1.2
118	RI1H	5	2.0
119	RI1H	3	1.2
120	RI1H	6	2.4
121	RI1H	87	35.2
122	CO1H	1	.4
123	RI2H	3	1.2
124	W	1	.4
125	W	1	.4
126	MN1H	2	.8
127	UP1H	10	4.0
128	C	12	4.9
129	CO1H	1	.4
130	AG.CO	1	.4
131	MN1H	3	1.2
132	MN1H.D	2	.8
133	G.G.S	14	5.7
134	UP1H	29	11.7
135	G.G.S	10	4.0
136	UP2H	9	3.6
137	UP2M	4	1.6
138	UP2M	3	1.2
139	UP2M	7	2.8
140	UP2M	8	3.2
141	UP2M	6	2.4
142	G.F.G.S	19	7.7
143	UP2M	18	7.3
144	UP2M	9	3.6
145	G.G.S	1	.4
146	UP2H	6	2.4
147	G.G.S	1	.4
148	G.G.S	4	1.6
149	UP2H	2	.8
150	G.CA.G	8	3.2
151	UP0H	2	.8
152	G.F.S	2	.8
153	G.G.S	6	2.4
154	G.G.S	5	2.0
155	G.G	3	1.2
156	G.G.S	3	1.2
157	G.G.S	9	3.6
158	UP0H	3	1.2
159	G.F	1	.4
160	G.G	10	4.0
161	G.F.G.S	12	4.9
162	G.G	3	1.2
163	UP1H	4	1.6
164	UP1H	1	.4
165	UP1M	8	3.2
166	G.G	3	1.2



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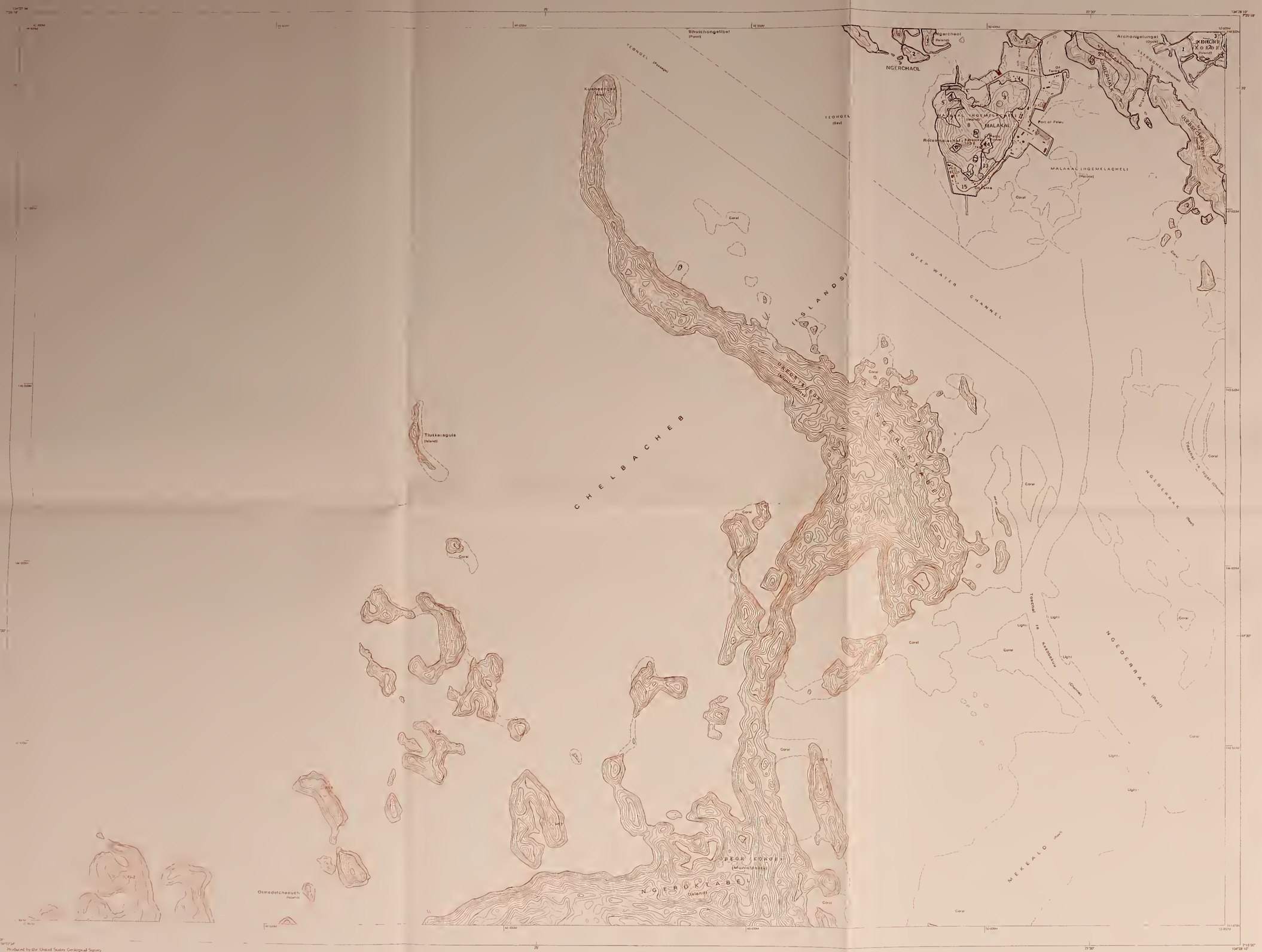


Produced by the United States Geological Survey
in cooperation with Trust Territory of the Pacific Islands.
Control by USGS and TTPI.
Compiled by photogrammetric methods from aerial photography
taken 1968-71. Field checked 1979. Limited field check 1980.
Map edited 1981.
Projection and metric grid tic: Palau coordinate system
(Modified Universal Transverse Mercator)

SCALE 1:20,000

CONTOUR INTERVAL 10 METERS
SUPPLEMENTARY CONTOUR INTERVAL 5 METERS
DATUM IS MEAN SEA LEVEL

SHORELINE SHOWN REPRESENTS THE APPROXIMATE LINE OF MEAN HIGH WATER
THE MEAN RANGE OF TIDE IS APPROXIMATELY 1 METER

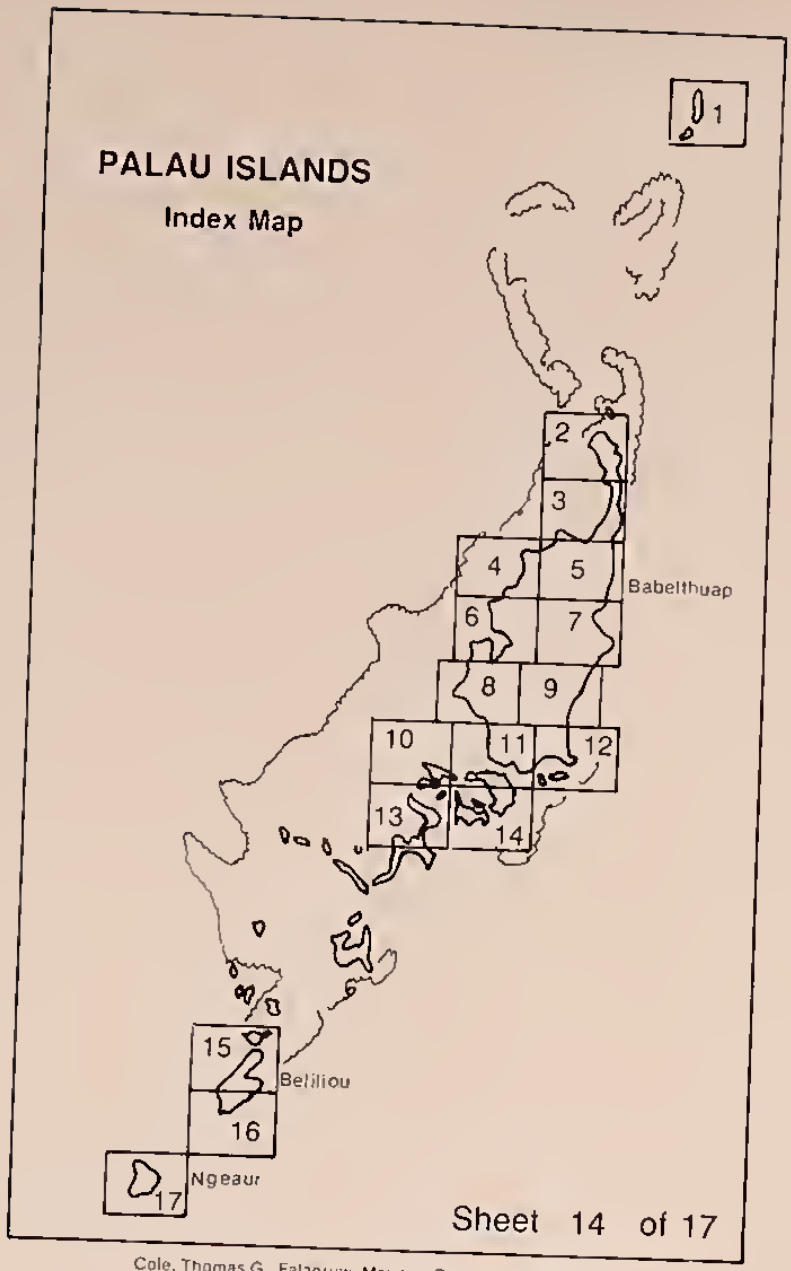
Vegetation map compiled by Pacific Southwest Forest and Range Experiment Station and Pacific Northwest Forest and Range Experiment Station, Forest Service, U.S. Department of Agriculture. Cartography by Alan H. Ambacher, USDA - Forest Service, Pacific Southwest Region, Engineering Geometronics Section; 1987.

VEGETATION LEGEND

For explanation of vegetation type codes see Table 7

ITEM	LABEL	AREA (ACRES)	AREA (HECTARES)
KOROR			
1	U	12	4.9
2	MN1H	17	6.9
3	U	1	.4
4	SV	1	.4
MALAKAL			
1	RI0H	6	2.4
2	U	79	32.0
3	SV	21	8.5
4	W.S	1	.4
5	B	8	3.2
6	SV	1	.4
7	SV	3	1.2
8	UP1H	65	26.3
9	B.R	1	.4
10	SV	1	.4
11	B.R	1	.4
12	G.S	1	.4
13	G.S	4	1.6
14	B	2	.8
15	U	15	6.1
NGERCHAOL			
1	RI1H	9	3.6
2	RI1H	4	1.6
3	RI1H	6	2.4
4	RI1H	4	1.6
5	RI1H	1	.4
NGERMALK			
1	U	1	.4
2	RI1H	13	5.3
3	W.S	1	.4
4	RI0H	44	17.8
5	RI0H	1	.4
ULEBSECHL			
1	RI0H	66	26.7
2	RI0H	4	1.6
3	RI0H	1	.4
4	RI1H	1	.4

PALAU ISLANDS
SHEET 13 of 17



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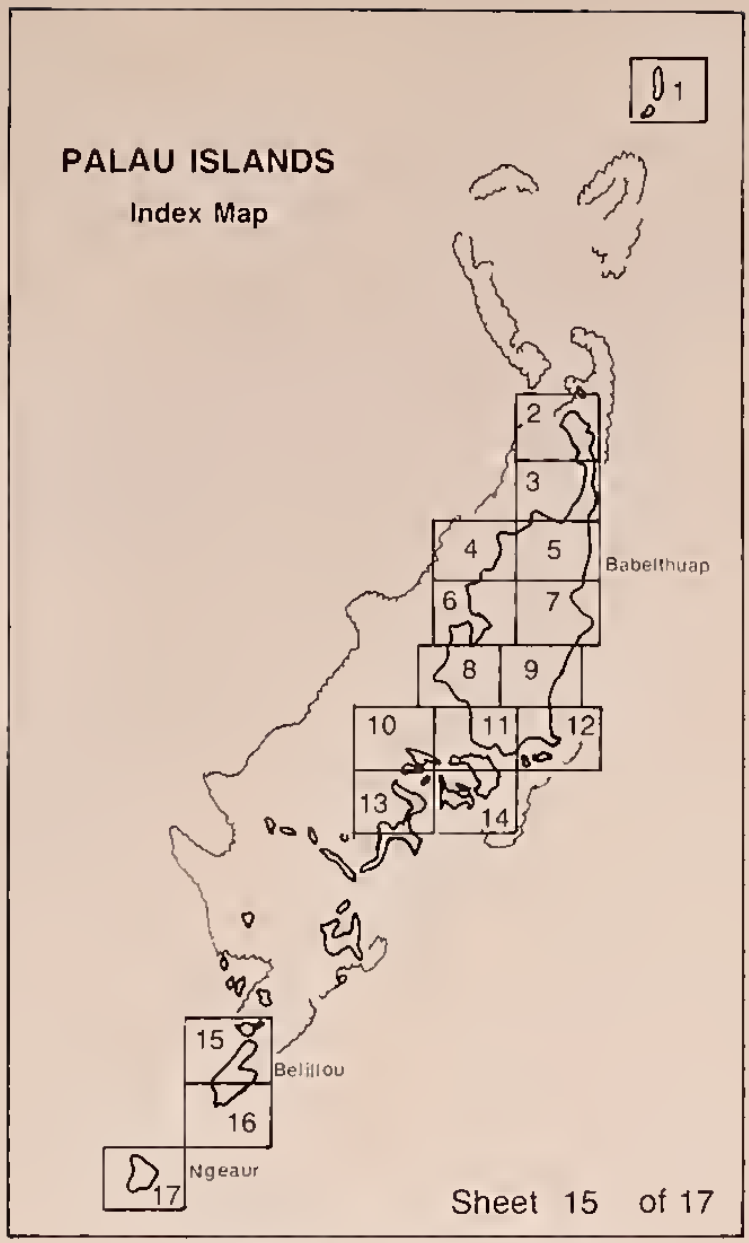
PALAU ISLANDS
SHEET 14 of 17

VEGETATION LEGEND

For explanation of vegetation type codes see Table 7

ITEM	LABEL	AREA (ACRES)	AREA (HECTARES)
	BUKRRAIRONG		
1	RI0H	32	12.9
	CHESECHOSOU		
1	RI0H	3	1.2
	ITELBLONG		
1	RI0H	13	5.3
2	RI0H	1	.4
	KOROR		
1	SV	46	18.6
2	U	3	1.2
3	MN1H	31	12.5
4	C/SV	3	1.2
5	MN1H	8	3.2
6	U/C	49	19.8
7	C	2	.8
8	MN1H	22	8.9
9	M F C	6	2.4
10	MN1H	11	4.5
11	MN1H	1	.4
12	MN1H	1	.4
13	MN1M	4	1.6
14	MN1H	2	.8
15	MN1H	3	1.2
16	RI0H	2	.8
17	RI0H	10	4.0
18	MN1H	12	4.9
19	UF1H	50	20.2
20	SV	1	.4
21	U	6	2.4
22	SV	2	.8
23	U	1	.4
24	SW1M/SV	12	4.9
25	G G	2	.8
26	G G	1	.4
27	MN1H	3	1.2
28	G G S	3	1.2
29	U/C	18	7.3
30	C	7	2.8
31	SV BB	2	.8
32	SW1M/SV	5	2.0
33	MN1H	10	4.0
34	RI1H	19	7.7
35	RI0H	5	2.0
36	RI0H	28	11.3
37	W S	1	.4
38	W S	1	.4
39	W S	1	.4
40	RI0H	4	1.6
41	RI0H	2	.8
42	RI1H	4	1.6
43	RI1H	2	.8
44	W S	10	4.0
45	RI0H	78	31.6
46	W S	1	.4
47	RI1H	5	2.0
48	W S	1	.4
49	RI1H	12	4.9
50	RI1H	5	2.0
51	RI1H	2	.8
52	RI0H	194	78.5
53	RI1H	15	6.1
54	W S	3	1.2
55	W S	1	.4
56	RI1H	69	27.9
57	SV	1	.4
	MEDUU		
1	RI0H	9	3.6
	NGEDERT		
1	RI0H	6	2.4
	NGERBECHETEL		
1	RI0M	1	.4
2	RI0M	1	.4
3	RI0M	2	.8
	NGEDESAKR		
1	RI0H	15	6.1
	NGEREAM		
1	RI0H	139	56.3
2	RI0H	3	1.2
3	RI0H	2	.8
4	RI1H	15	6.1
5	RI0H	5	2.0
6	RI0H	8	3.2
7	SV	4	1.6
8	RI0H	11	4.5

ITEM	LABEL	AREA (ACRES)	AREA (HECTARES)
	NGERMECHAECH		
1	RI0H	3	1.2
	NGERTECHIEF		
1	RI0H	4	1.6
	NGERUMETOCHEL		
1	RI0H	13	5.3
2	RI0H	13	5.3
3	RI1H	3	1.2
4	RI0H	3	1.2
	NGETEKLOU		
1	W S	4	1.6
2	RI0H	63	25.5
3	RI1H	15	6.1
4	RI0H	38	15.4
	NGETKUML		
1	RI0H	4	1.6
	OMELOCHEL		
1	RI0H	10	4.0
	ORDACHEL		
1	RI0H	14	5.7
	TENGETCHEYANGEL		
1	RI0H	3	1.2
	TORIIUS		
1	RI0H	7	2.8
	UCHELIUNGS		
1	RI0H	6	2.4
	ULLEMETAMEL		
1	RI0H	2	.8
2	RI0H	1	.4
3	RI0H	2	.8
4	RI0H	4	1.6
	ULEBSECHL		
1	RI0H	2	.8
2	RI0H	2	.8
3	RI1H	698	282.5
4	RI0H	4	1.6
5	RI0H	1	.4
6	RI0H	1	.4
7	RI0H	3	1.2
8	RI2H	1	.4
9	RI2H	3	1.2
10	RI2H	1	.4
11	RI2H	2	.8
12	RI0H	1	.4
13	W.S	1	.4
14	RI0H	1	.4
15	RI0H	1	.4
16	RI0H	1	.4
17	RI0H	8	3.2
18	W.S	1	.4
19	RI0H	5	2.0
20	RI0H	2	.8
21	RI0H	6	2.4
22	RI2H	3	1.2
23	W.S	1	.4
24	RI2H	1	.4
25	RI1H	6	2.4
26	RI1H	5	2.0
27	RI0H	1	.4
28	RI1H	2	.8
29	RI1H	125	50.6
30	G G	3	1.2
31	RI0H	6	2.4
32	RI1H	10	4.0
33	W.S	1	.4
34	W.S	1	.4
35	W.S	1	.4
36	W.S	2	.8



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SCALE 1:20,000

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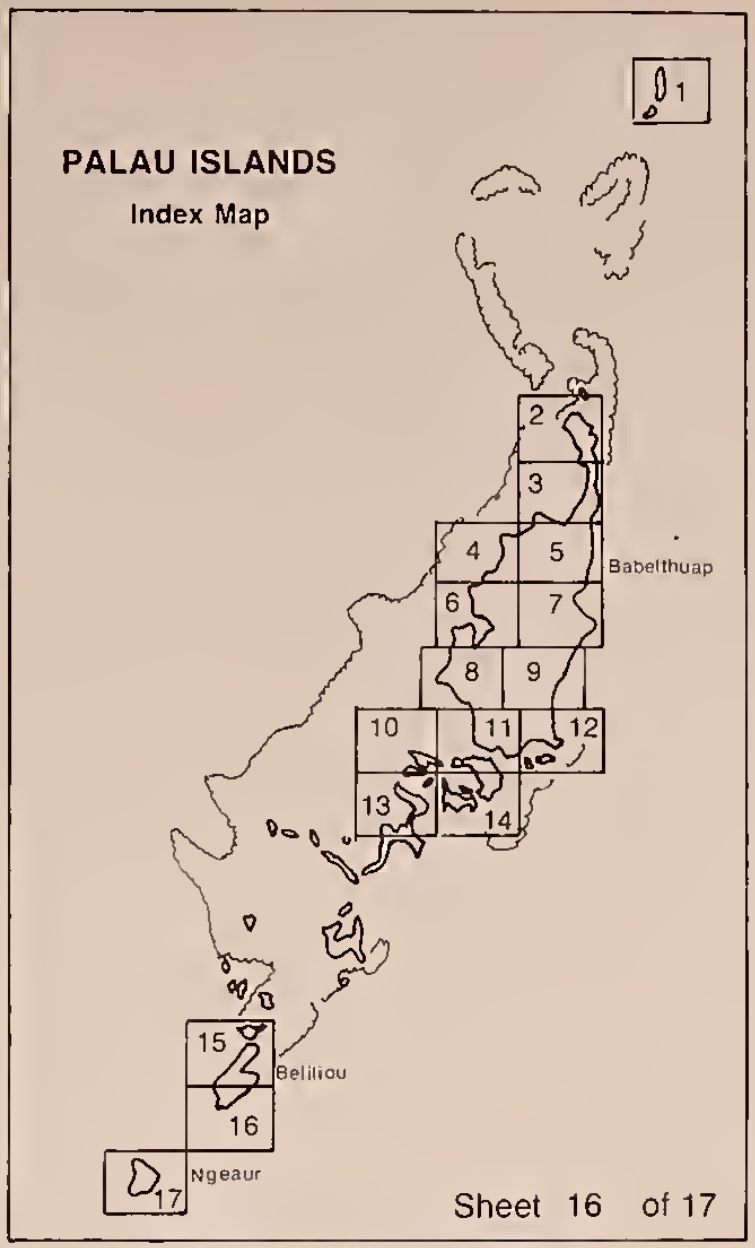
PALAU ISLANDS
SHEET 15 of 17

VEGETATION LEGEND

For explanation of vegetation type codes see Table 7

ITEM	LABEL	AREA (ACRES)	AREA (HECTARES)
	BELUALASMAU		
1	AT1H.CO	6	2.4
	NGEDBUS		
1	AT1H	43	17.4
2	CO1M/SV	158	63.9
3	MN1H	7	2.8
4	AT1H	3	1.2
5	CO1M/SV	2	.6
6	MN1H	3	1.2
7	AT1H	14	5.7
8	MN1H	4	1.6
	NGEBAD		
1	S	2	.8
2	MN1H	17	6.9
3	AT1H	11	4.5
4	MN1H.N	4	1.6
5	LI1M.CA	84	34.0
6	SW1H	2	.8
7	W.S	1	.4
8	LI2M	15	6.1
9	MN1H	5	2.0
	NGURUNGOR		
1	MN1H	25	10.1
2	LI2M	37	15.0
	NGESUALL		
1	LI2M	4	1.6
	OLNGEUAL		
1	AT1H	48	19.4
2	AT1H/SV	5	2.0
3	MN1H	22	8.9
4	AT1M/SV	11	4.5
5	AT1H	6	2.4
	PELEIU		
1	MN1H	2	.8
2	MN1H	11	4.5
3	MN1H	1	.4
4	MN1H	7	2.8
5	MN1H	1	.4
6	MN1H	1	.4
7	MN1H	7	2.8
8	MN1H	3	1.2
9	MN2H	36	14.6
10	LI1M/SV	224	90.6
11	U	1	.4
12	SW2M/SV	51	20.6
13	MN2M.AT	42	17.0
14	MN1L.SW	22	8.9
15	SW2M	8	3.2
16	MN2M	29	11.7
17	MN1H	68	27.5
18	MN1H	1	.4
19	LI1M/SV	6	2.4
20	MN1H	3	1.2
21	SV	1	.4
22	CA2H	4	1.6
23	LI1M/SV	39	15.8
24	LI1H	15	6.1
25	MN1H	27	10.9
26	CA2M.AT	27	10.9
27	MN1H	60	24.3
29	AG	6	2.4
30	SV.H	6	2.4
31	SV.H	19	7.7
32	M.S	2	.8
33	LI1M/SV	225	91.1
34	M.S	48	19.4
35	M.F	8	3.2
36	MN1H	258	104.4
37	M.F	20	8.1
38	W.F	1	.4
39	W.F	2	.8
40	SV	10	4.0
41	SV	4	1.6
42	SV	53	21.4
43	SV.S	10	4.0
44	B	6	2.4
45	CA2M/SV	98	39.7
46	CA1L/SV	55	22.3
47	SV	10	4.0
48	SV	7	2.8
49	SV	4	1.6
50	CA2M/SV	87	35.2
51	SV	5	2.0
52	CA2M.AT	91	36.8
53	MN0L/SV	11	4.5
54	SW2L.B	2	.8
55	MN0H	30	12.1
56	LI1H	24	9.7
57	M.F.C	2	.8
58	LI1M/SV	202	81.7
59	LI1L/SV	18	7.3
60	C	8	3.2
61	CA2M.AT	24	9.7
62	M.F	31	12.5
63	LI1H	278	112.5
64	MN1H.R	19	7.7
65	W.S	3	1.2
66	MN1H	1	.4
67	LI1M	26	10.5
68	MN1H	1	.4
69	W.S	1	.4
70	W.S	3	1.2
71	U	1	.4
72	M.F.C	1	.4
73	M.F.C	2	.8
74	M.F.C	2	.8
75	M.F.C	1	.4
76	M.F.C	1	.4
77	MN1H	140	56.7
78	MN1H	1	.4
79	MN1H	1	.4
80	MN2M	60	24.3
81	M.F.C	1	.4
82	M.F.C	1	.4
83	M.F.C	1	.4
84	M.F.C	13	5.3
85	CA2M/SV	20	8.1
86	M.F.C	5	2.0
87	U	57	23.1
88	U/AG	13	5.3
89	LI1M/SV	55	22.3
90	SW2M	7	2.8
91	SV	1	.4
92	SW1H	6	2.4
93	W.S	6	2.4
94	W.S	4	1.6
95	CA2M.AT	20	8.1
96	W.S	1	.4
97	MN1H	5	2.0
98	MN1H	8	3.2
99	MN2H	5	2.0
100	U/AG	8	3.2
101	CA2M/SV	38	15.4
102	LI2M/SV	73	29.5
103	SW1L	20	8.1
104	U/AG	3	1.2
105	M.F.C	5	2.0
	RURIID		
1	MN1H	11	4.5
2	AG	14	5.7
	TINGABARD		
1	MN1H	2	.8



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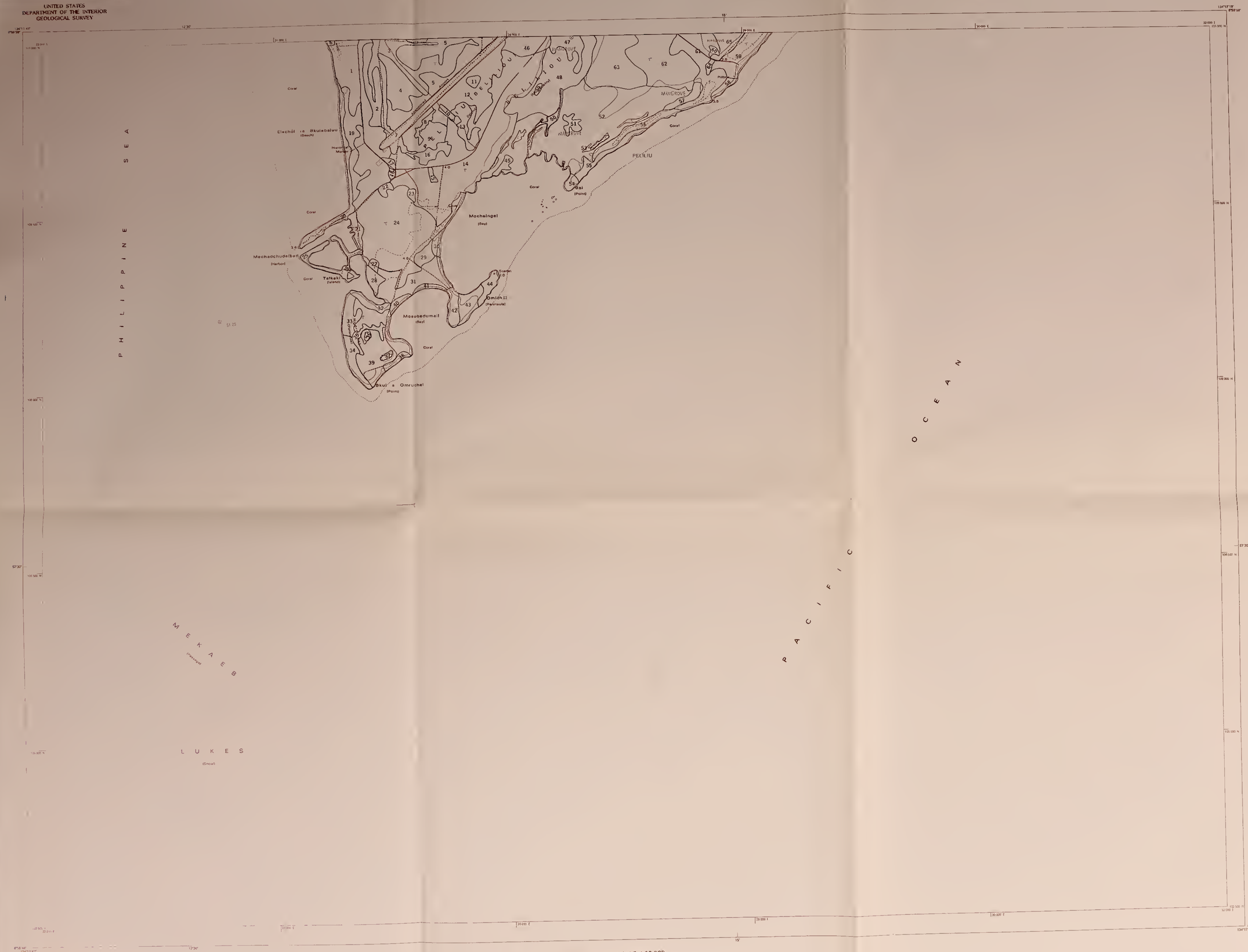
PHILIPPINE SEA
PACIFIC OCEAN
MEKAEB
(Island)
LUKES
(Islands)
Elechol ra Bkulabaluu
(Beach)
Mechadchudelbad
(Harbor)
Talkeki
(Islands)
Mochelngel
(Bay)
Mesubedumail
(Bay)
Omidkill
(Peninsula)
Bkul a Omruchel
(Point)
PEELILIU
Bai
(Point)
Coral
MANGROVE
Marsh
Swamp
Stream
Trail
Road
Pond
Spring
Sand
Gravel
Quarry
Pit
Wreck
Rock
Tank
Tower
Building
Cemetery
Airport
Dam
Levee
Well
Windmill
Water hole
Spot elevation
Contour
Boundary
Hydrography
Transmission line
Pipeline
Section line
Land grid
Ferry
Lake
Intermittent lake
Channel
Intermittent channel
Canal
Intermittent canal
Reservoir
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Shoreline
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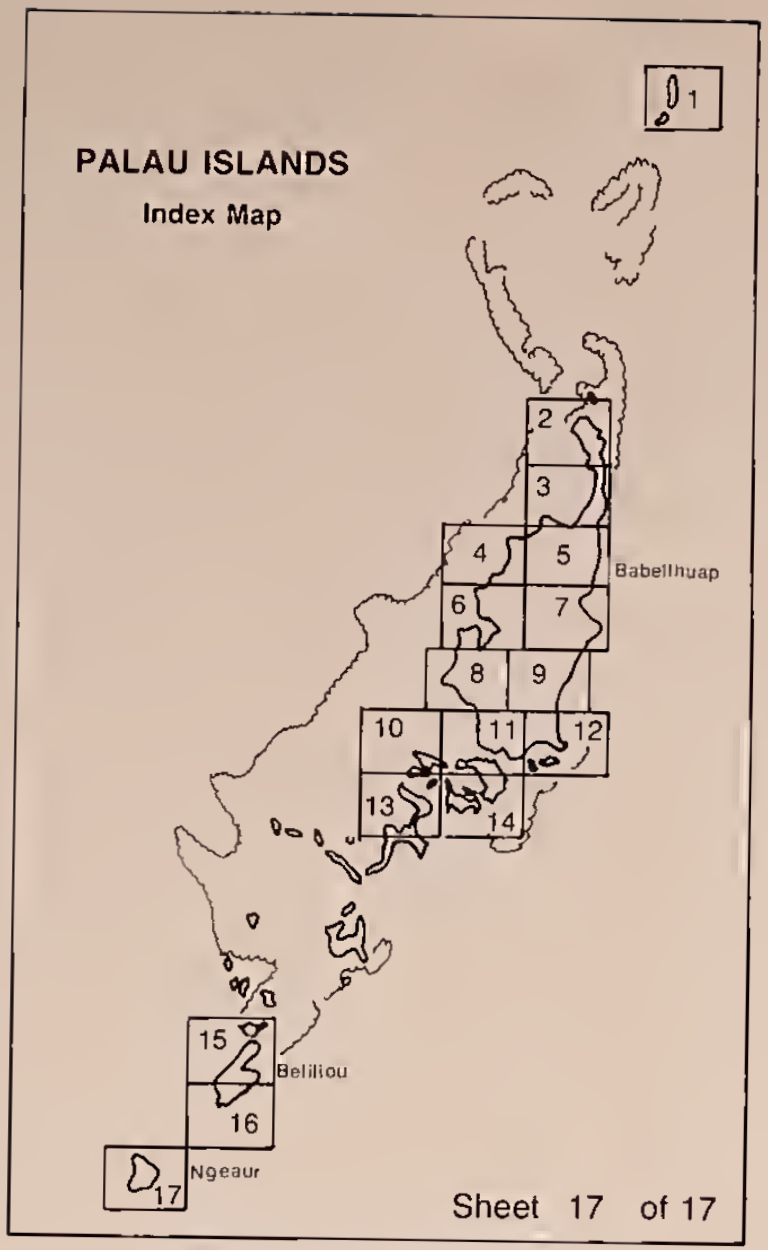
Sounding
Depth curve
Mine
Quarry
Prospect
Perennial streams
Elevation



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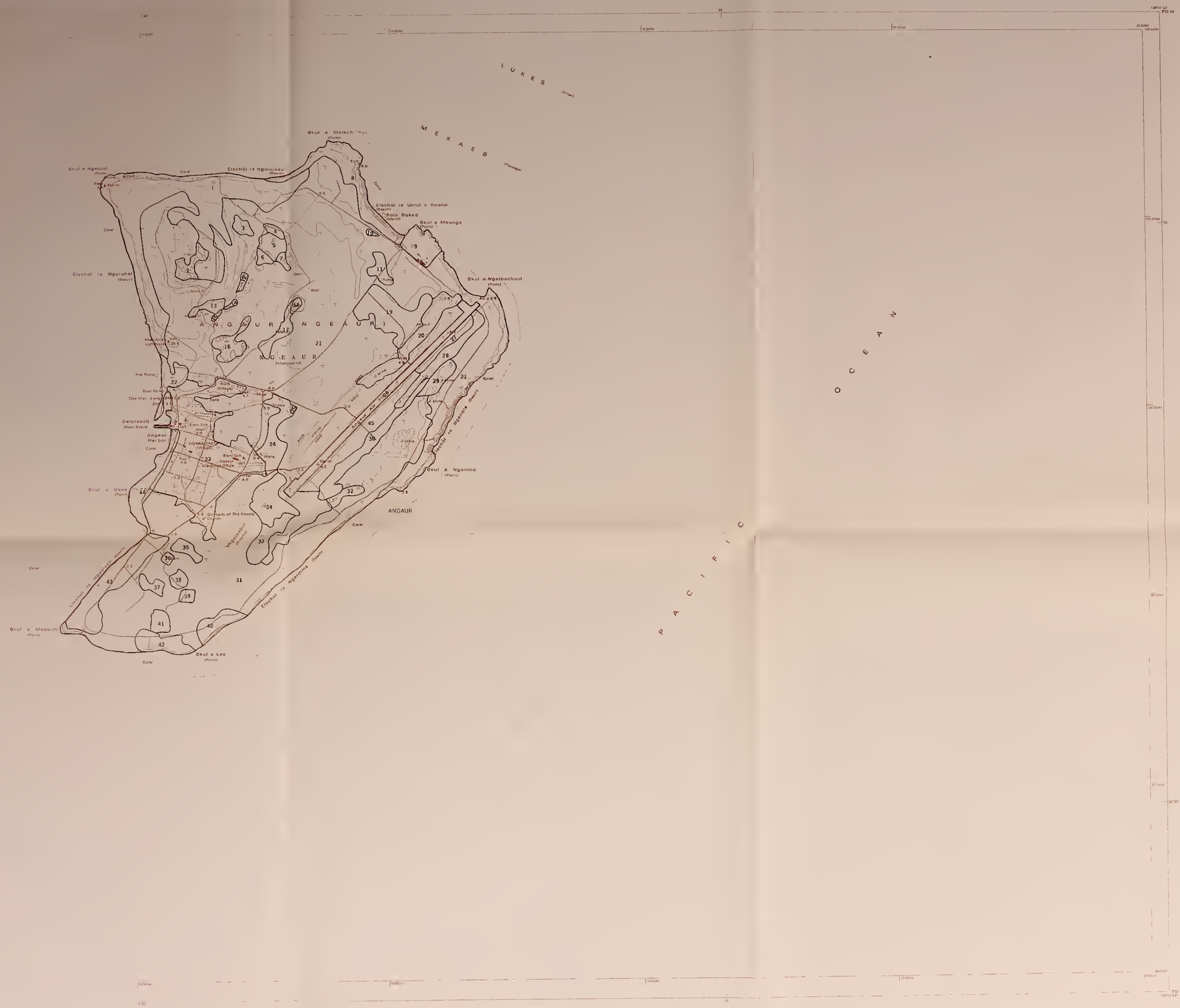
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



VEGETATION LEGEND

For explanation of vegetation type codes see Table 7

ITEM	LABEL	AREA (ACRES)	AREA (HECTARES)
1	L1H.CO	161	65.2
2	W.S	9	3.6
3	CA1M	4	1.6
4	CA2M	3	1.2
5	L1M.SW	8	3.2
6	SW1H	3	1.2
7	SW1H	2	.8
8	AT1M.LI	37	15.0
9	U	15	6.1
10	G	1	.4
11	L1M/SV	7	2.8
12	SW1H	2	.8
13	CA2M	5	2.0
14	SW1H	1	.4
15	SW1H	1	.4
16	SW1H	12	4.9
17	L1M.SW	9	3.6
18	SW1H	2	.8
19	L1M/SV	36	14.6
20	CA2M	27	10.9
21	L1M/SV	863	349.2
22	CA2M.AT	11	4.5
23	U/AG	127	51.4
24	SV	20	8.1
25	B	1	.4
26	B	32	12.9
27	CA2M	8	3.2
28	CA1M	17	6.9
29	SV	9	3.6
30	CA2M	24	9.7
31	L1M/SV	355	143.7
32	CA1M/SV	5	2.0
33	SV.H	15	6.1
34	M.F.C	21	8.5
35	CA2M.LI	6	2.4
36	U	2	.8
37	CA2M.LI	5	2.0
38	L1M/SV	4	1.6
39	L1M/SV	3	1.2
40	AT2M.LI	12	4.9
41	L1H/SV	6	2.4
42	AT2M.CA	15	6.1
43	AT2M.LI	43	17.4
44	AT2M.LI	20	8.1
45	SV	32	12.9

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Control by [illegible] and [illegible]

Compiled by photogrammetric methods from aerial photographs
taken 1969-1975. Field checked 1976
Limited field check 1980. Map edited 1981

Projection and metric grid ticks Palau coordinate system
Modified Transverse Mercator

SCALE 1:20,000

KILOMETERS

NAUTICAL MILE

CONTOUR INTERVAL 10 METERS
SUPPLEMENTARY CONTOUR INTERVAL 5 METERS
DATUM IS MEAN SEA LEVEL

SHORELINE SHOWN REPRESENTS THE APPROXIMATE LINE OF MEAN HIGH WATER
THE MEAN RANGE OF TIDE IS APPROXIMATELY 1 METER

TRUE NORTH
MAGNETIC NORTH
1°12'
1978
CENTER OF SHEET

Vegetation map compiled by Pacific Southwest Forest and Ranger Experiment Station and Pacific Northwest Forest and Range Experiment Station, Forest Service, U.S. Department of Agriculture. Cartography by Alan H. Ambacher, USDA - Forest Service, Pacific Southwest Region, Engineering Geometronics Section, 1987.

PALAU ISLANDS
SHEET 17 of 17

Cole, Thomas G.; Falanruw, Marjorie C.; MacLean, Colin D.; Whitesell, Craig D.; Ambacher, Alan H. **Vegetation survey of the Republic of Palau.** Resour. Bull. PSW-22. Berkeley, CA: Pacific Southwest Forest and Range Experiment Station, Forest Service, U.S. Department of Agriculture; 1987. 13 p. + 17 maps.

The vegetation of the Republic of Palau, in the Western Caroline Islands, was mapped for land-use planning, forest resource management, and timber volume surveys. The 17 maps show the location and extent of vegetation types identified from 1976 aerial photographs. Forest area is estimated at 31,259 hectares (77,241 acres) or 75 percent of the area surveyed. An additional 6,783 hectares (16,761 acres) are grasslands/savannas. At 16 percent of the total area, the grasslands/savannas of Palau have the second greatest land area.

Retrieval Terms: vegetation survey, forest types, vegetation maps, forest resources, Palau, Belau, Caroline Islands, Micronesia