

An Annotated List of the Vascular Plants of Puluwat Atoll

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Abstract—Previous botanical research on Puluwat Atoll (Truk, Federated States of Micronesia) indicated a vascular flora of no more than 46 species. A total of 184 vascular species is reported, the majority of which may be classified as new records. Eighty seven species are introduced plants found mainly on inhabited Puluwat Islet. Four other islets are uninhabited and contain fewer native and introduced species than Puluwat Islet. Native species comprise more than 90% of the flora of these latter islets. Most of the locally-named species are either native to the atoll or are culturally-useful introduced plants. Twenty eight species are cultivated as food plants most of which are important staples like *Colocasia esculenta*, *Cyrtosperma chamissonis*, *Artocarpus altilis*, *A. marianensis*, *Musa* sp., and *Cocos nucifera* and are represented by many cultivars. While some cultivars previously recorded are no longer present on the atoll, others are being introduced. The research suggests a high rate of species and cultivar turnover and an erosion of traditional knowledge. The present distribution of species is partly related to islet size, the extent of human habitation and cultivation practices, and environmental modification, particularly during World War II.

Introduction

Relatively little is published on the vascular plants of Puluwat. Freycinet (1826), who visited Puluwat and the adjacent western Caroline islands during his voyage to the Mariana Islands, recorded some of the characteristic plants of the Western Carolines. The Sudsee Expeditions of Micronesia by the Germans in the late 19th to early 20th centuries reported the Puluwatese names of 46 plant species, some of which were prominent in Puluwatese material culture (Damm and Sarfert, 1935). In 1954, Niering (1961) spent one hour on Puluwat during a fieldship stopover and listed 42 species of vascular plants 11 of which were collected. Fosberg et al. (1979, 1982, 1987) listed 44 species of vascular plants from Puluwat and re-identified some of Niering's specimens. Additional information on the plants of Puluwat can be found in Elbert's (1975) *Puluwat Dictionary* based on fieldwork conducted in 1967.

This paper presents the results and implications of plant collections and botanic and ethnobotanic observations on Puluwat, conducted during July and August 1988. Two hundred and four plant specimens were collected. The accompanying annotated list contains 185 entries representing 184 species of vascular plants found on the atoll.

Geographic sketch of Puluwat

Puluwat Atoll is located in the western part of Truk, Federated States of Micronesia, at approximately 7° 22' N latitude, and 149° 11' E longitude. The atoll consists of five

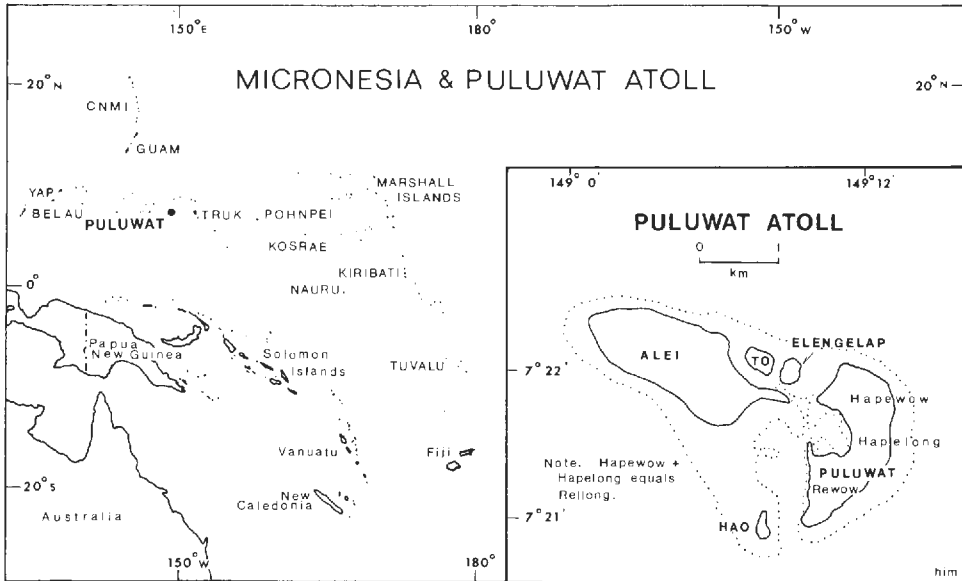


Figure 1. Location map of Puluwat Atoll.

islets—Hao, Alei, Elengelap, To, and Puluwat, of which only the latter is permanently inhabited (Figure 1). The total dry land area of the atoll is 3.40 sq. km (Bryan, 1971).

The population of Puluwat in 1980 numbered 441 people (Bureau of the Census, 1982); They reside in three villages located around the protected inner lagoon of Puluwat Islet. The other islets are uninhabited, although Alei (Alet) Islet was previously inhabited (Freycinet, 1826). During the Japanese Mandate, Alei had a lighthouse and airfield. Despite the influence of westernization in Micronesia, the Puluwatese are subsistence agriculturalists and fisherfolk. Most of their cash income comes from infrequent copra sales to Truk or from relatives residing on Moen, Truk or other parts of Micronesia or the US. About 10 residents are teachers employed by the Truk Department of Education.

Vegetation Zonation

As with many atolls, Puluwat's vegetation can be arranged in zones. Windward coasts are fringed by a strand forest composed of *Scaevola sericea*, *Tournefortia argentea*, *Pandanus tectorius*, and a ground cover of *Vigna marina* and *Thuarea involuta*. On rocky shores and raised beaches, *Pemphis acidula* occurs frequently. Inland from this strand forest is a second zone dominated by *Cocos nucifera* with *Guettarda speciosa*, *Morinda citrifolia*, and *Premna serratifolia*, the commonly found shrub species. In managed coconut plantations, the ground is dominated by a heavy cover of *Nephrolepis saligna*. *Asplenium nidus* and *Polypodium scolopendria* are abundant epiphytes.

The interiors of the islets are planted to *Artocarpus altilis* and *A. mariannensis*, which are less tolerant of salt spray. *Ficus tinctoria* and *F. prolixa*, *Cocos nucifera*, *Eu-*

genia malaccensis, *Morinda citrifolia*, and a fairly wide range of shrub and herb species are found in these interior zones. These breadfruit woodlands surround the swampy, freshwater depressions, which on Puluwat Islet have been excavated for the *maa* (mound) cultivation of *Colocasia esculenta*, *Cyrtosperma chamissonis*, *Saccharum officinarum*, and other food and ornamental plants. Introduced weed species are also common on the *maa*. These mounds are about 1 m high and stand approximately 0.5 m above the water table; they are constructed by anchoring coconut and pandanus trunks in the excavated depressions to form a roughly oval base which is then filled with organic litter, trunks, and other rotted vegetation. An organic muck, composed of decomposing plants and materials sieved from the water and gathered from abandoned mounds forms the upper 0.5 m layer. The *maa* and *Colocasia esculenta* cultivation are restricted to Puluwat Islet. On the other islets, *Cyrtosperma chamissonis* is planted in seemingly natural depressions. On Alei Islet, parts of these depressions are dominated by *Bruguiera gymnorhiza*, *Ficus prolixa*, and *Hibiscus tiliaceus*. The fern *Acrostichum aureum* occurs frequently. Towards the windward coasts, *Barringtonia asiatica* and *Mammea odorata* are often found at the edge of these depressions.

As most Puluwatese have their homes around the lagoon, the vegetation of these shores has been greatly altered. *Cocos nucifera*, *Hibiscus tiliaceus*, and *Cordia subcordata* fringe the shoreline. Around the homesites, bananas, coconuts, and a wide range of weeds and ornamental plants can be found.

Discussion

Despite knowledge of Puluwat's existence to the western world by the 18th century, relatively little has been reported of its vegetation. Reports by Damm and Sarfert (1935), Niering (1961), and Fosberg et al. (1979, 1982, 1987) indicate no more than 46 vascular plant species for the atoll. Elbert (1975) listed 132 vernacular names of plant species, and another 170 locally named varieties. However, most of the species were not fully identified, or supported by voucher specimens. Thirty of Elbert's (1975) species, identified by their local names only, could not be found during this study. These species are either extinct, or are no longer known by their earlier identifications. We collected or observed a total of 182 species on Puluwat, the majority (approximately 132 species if Elbert's [1975] and Damm and Sarfert's [1935] identifications are excluded) of which may be considered new records. Although 74 of these species may have been introduced to the atoll, perhaps after Niering's 1954 visit, 58 species are likely to be previously unreported indigenous species.

Of the 184 species given in the annotated list, below, 146 have local names. All native trees, shrubs, and food plants have specific local names. Ten species (mainly Poaceae) have the generic name of *fatil* (literally, grasses). Most of the named species are either native to the atoll, for example *Barringtonia asiatica*, or an introduced species having some culturally valuable usage (i.e., an ornamental or edible species). Unlike Namoluk Atoll where Marshall (1975) found that 74 of the 119 species were used in traditional medicine, relatively few species are presently used for traditional medicine on Puluwat. Elbert (1975) listed 22 species which were used in traditional medicine, and 9 species used in love magic. Many, if not all, of the recently introduced ornamental plants,

Table 1. Comparison of the major Puluwat cultivars listed by Elbert (1975) and this study.

Species	No. reported by Elbert (1975)	No. lost since 1975	No. of var- eties common to both studies	No. of var- eties intro- duced since 1975	Total No. present on Puluwat— 1988	Total No. of cultivars listed in this study
<i>Artocarpus altilis</i>	35	11	24	5	29	40
<i>A. mariannensis</i>	7	0	7	0	7	7
<i>Cocos nucifera</i>	11	2	9	0	9	11
<i>Colocasia esculenta</i>	33	17	16	13	29	46
<i>Cyrtosperma chamissonis</i>	33	20	13	11	24	44
<i>Musa</i> × <i>sapientum</i>	30	11	19	4	23	34

the flowers and sometimes the leaves of which are used in *mwaramwars* (flower head-dresses), have a vernacular name. These ornamentals are restricted to Puluwat Islet, either cultivated around the village or on the *maa*. Unnamed plants have relatively little local usage except as a mulch or fertilizer on the *maa*. These plants are invariably small, introduced species which are weeded and placed in a hole that will be planted with *Colocasia* or *Cyrtosperma taro*.

The comparison of species indicates a high rate of species turnover; a number of possible reasons account for this. First, some species, such as introduced ornamentals, may be extinct because of environmental constraints, the necessity of human manipulation for their continued existence, or their very low abundance on the atoll. For example, there are only two chlorotic individuals of *Tabebuia heterophylla* on Puluwat. It is highly unlikely that this species will be found there 20 years from now. A second reason may reflect the perceived value and changing nature of traditional knowledge. Puluwat is no longer an isolated atoll where survival depends solely on an intimate knowledge of the atoll's environment and resources, but is to an increasing extent a part of the modern world. As indicated earlier, 10 grass species are known by the collective name *fatil*. It is likely that these grasses, some of which are indigenous to Puluwat and may have been present when Elbert compiled his dictionary, were formerly known by specific local names. However, they were not identified in this most recent study by specific local names because they are no longer known to nor necessary for the survival of younger generations of Puluwatese. This changing nature of traditional knowledge serves to highlight its fragility.

Twenty eight food plants are found on the atoll. The most important species in terms of their contribution to the diet and the number of cultivars are *Colocasia esculenta* (46), *Cyrtosperma chamissonis* (44), *Artocarpus altilis* (40), *Musa* sp. (34), and *Cocos nucifera* (11), all of which are introduced species. The seeded breadfruit, *Artocarpus mariannensis*, although limited to only seven cultivars, is another important food tree. Species such as *Carica papaya*, *Citrus aurantifolia*, *Mangifera indica*, *Annona muricata*, *Ipomoea aquatica*, *I. batatas*, *Dioscorea* spp., and *Tacca leontopetaloides* are not widely cultivated. Cultivars of the important staple food plants are presented in the annotated species list, and in Table 1. Some cultivars listed by Elbert (1975) are no longer present or known by younger Puluwatese today, while others have been introduced to the atoll since Elbert's fieldwork in 1967. For example, since 1967, 13 varieties of *Colocasia esculenta* have

Table 2. Distribution of species on Puluwat islets from authors' collections or observations (* = introduced).

Species	Islet				
	Puluwat	Alei	Elengelap	Hao	To
Pteridophyta					
<i>Acrostichum aureum</i>	×	×			
<i>Asplenium nidus</i>	×	×	×	×	×
<i>Ceratopteris thalictroides</i>	×				
<i>Diplazium melanocaulon</i>					×
<i>Nephrolepis hirsutula</i>	×				
<i>Nephrolepis saligna</i>	×	×	×	×	×
<i>Polypodium scolopendria</i>	×	×	×	×	×
<i>Pteris tripartita</i>	×	×		×	×
Unknown fern				×	
Gymnospermae					
* <i>Araucaria heterophylla</i>	×				
Monocotyledonae					
* <i>Alocasia macrorrhiza</i> v. <i>macrorrhiza</i>	×				
* <i>Alpinia purpurata</i>	×				
* <i>Ananas comosus</i>	×				
* <i>Canna indica</i>	×				
<i>Chrysopogon aciculatus</i>	×				
* <i>Cocos nucifera</i>	×	×	×	×	×
* <i>Colocasia esculenta</i>	×	×			
* <i>Cordyline fruticosa</i>	×				
<i>Corymborkis veratrifolia</i>		×			
* <i>Crinum asiaticum</i>	×				
* <i>Crinum</i> sp.	×				
* <i>Curcuma australasica</i>	×				
<i>Cymodocea rotundata</i>	×	×	×	×	×
<i>Cyperus brevifolius</i>	×				
<i>Cyperus odoratus</i>	×				
<i>Cyperus polystachyos</i>	×				
Unknown Cyperaceae		×			
* <i>Cyrtosperma chamissonis</i>	×	×		×	×
<i>Dendrobium</i> sp.	×				
* <i>Digitaria violascens</i>	×				
* <i>Dioscorea alata</i>	×				
<i>Dioscorea bulbifera</i>	×				
* <i>Dioscorea</i> sp.	×				
<i>Eleocharis geniculata</i>	×				
* <i>Elusine indica</i>	×				
<i>Eragrostis amabilis</i>	×				
<i>Fimbristylis cymosa</i>	×	×			×
<i>Fimbristylis dichotoma</i>	×				
* <i>Hedychium coronarium</i>	×				
* <i>Heliconia latispatha</i>	×				
* <i>Heliconia</i> sp.	×				
* <i>Hippeastrum puniceum</i>	×				
* <i>Hymenocallis littoralis</i>	×	×			
<i>Ischaemum polystachyum</i> v. <i>intermedium</i>	×	×			

Table 2. (continued)

Species	Islet				
	Puluwat	Alei	Elengelap	Hao	To
<i>Lepturus repens</i>	×	×	×	×	×
* <i>Musa</i> × <i>sapientum</i>	×	×			×
<i>Oplismenus compositus</i> v. <i>compositus</i>	×				
<i>Pandanus dubius</i> . var. <i>dubius</i>	×				
<i>Pandanus tectorius</i>	×	×	×	×	×
<i>Pandanus</i> sp.	×				
* <i>Paspalum conjugatum</i>	×	×			
<i>Paspalum distichum</i>	×				
* <i>Rhoeo spathacea</i>	×				
* <i>Saccharum officinarum</i>	×				
* <i>Sporobolus diander</i>	×				
<i>Stenotaphrum micranthum</i>	×				
<i>Tacca leontopetaloides</i>	×	×	×	×	×
<i>Thalassia hemprichii</i>	×				
<i>Thuarea involuta</i>	×	×			
* <i>Xanthosoma sagittifolium</i>	×				
* <i>Zepharanthes rosea</i>	×				
<i>Zoysia matrella</i>	×				×
Dicotyledonae					
* <i>Acalypha hispida</i>	×				
<i>Achyranthes aspera</i>	×				
* <i>Ageratum conyzoides</i>	×				
* <i>Allamanda cathartica</i>	×				
<i>Allophylus timoriensis</i>	×	×	×	×	×
<i>Alternanthera sessilis</i>	×				
* <i>Annona muricata</i>	×				
* <i>Artocarpus altilis</i>	×	×			
* <i>Artocarpus mariannensis</i>	×	×	×	×	×
* <i>Asclepias curassavica</i>	×				
* <i>Bacopa procumbens</i>	×				
* <i>Barleria cristata</i>	×				
<i>Barringtonia asiatica</i>	×	×		×	×
* <i>Blechnum brownii</i> v. <i>puberulum</i>	×				
* <i>Bougainvillea spectabilis</i>	×				
<i>Bruguiera gymnorrhiza</i> f. <i>gymnorhiza</i>	×	×			
* <i>Caesalpinia pulcherrima</i>	×				
<i>Calophyllum inophyllum</i> v. <i>inophyllum</i>	×	×	×		×
* <i>Cananga odorata</i>	×				
<i>Canavalia rosea</i>	×	×	×		×
<i>Canavalia sericea</i>	×				
* <i>Capsicum frutescens</i>	×				
* <i>Carica papaya</i>	×			×	
* <i>Cassia alata</i>	×				
<i>Cassytha filiformis</i>	×	×	×	×	×
<i>Casuarina equisetifolia</i>	×				
* <i>Catharanthus roseus</i>	×				
<i>Centella asiatica</i>	×				

Table 2. (continued)

Species	Islet				
	Puluwat	Alei	Elengelap	Hao	To
<i>Cerbera manghas</i>		×			
* <i>Citrus aurantifolia</i>	×				
<i>Clerodendrum buchananii</i> v. <i>fallax</i>	×				
<i>Clerodendrum inerme</i> v. <i>oceanicum</i>	×				
* <i>Codiaeum variegatum</i>	×				
<i>Cordia subcordata</i>	×	×			×
<i>Crateva speciosa</i>	×	×			
* <i>Cucurbita pepo</i>	×				
* <i>Cucurbita</i> sp.	×				
* <i>Delonix regia</i>	×				
* <i>Dentella repens</i>	×				
<i>Desmodium umbellatum</i>	×				
<i>Dodonaea viscosa</i>					×
* <i>Eclipta alba</i>	×				
<i>Erythrina variegata</i> v. <i>orientalis</i>	×				
* <i>Eugenia malaccensis</i>	×	×	×		
<i>Euphorbia chamissonis</i>	×	×	×		×
* <i>Euphorbia hirta</i>	×				
* <i>Euphorbia thymifolia</i>	×				
<i>Ficus prolixa</i>	×	×	×	×	×
<i>Ficus tinctoria</i> v. <i>neo-ebudorum</i>	×	×	×	×	×
* <i>Gardenia</i> sp.	×				
* <i>Gardenia taitense</i>	×				
* <i>Gomphrena globosa</i>	×				
<i>Guettarda speciosa</i>	×	×	×	×	×
<i>Hedyotis biflora</i>	×				
<i>Hernandia sonora</i>	×	×	×		×
* <i>Hibiscus rosa-sinensis</i> v. <i>rosa-sinensis</i>	×				
<i>Hibiscus tiliaceus</i>	×	×			
* <i>Hippobroma longiflora</i>	×				
* <i>Impatiens balsamina</i>	×				
* <i>Ipomoea aquatica</i>	×				
* <i>Ipomoea batatas</i>	×	×			
<i>Ipomoea littoralis</i>	×				
<i>Ipomoea macrantha</i>	×				
<i>Ipomoea pes-caprae</i> ssp. <i>brasiliensis</i>	×	×			
<i>Intsia bijuga</i>		×	×	×	×
<i>Ixora casei</i>	×				
* <i>Jasminum sambac</i>	×				
* <i>Jatropha integerrima</i>	×				
* <i>Kalanchoe pinnata</i>	×				
<i>Laportea ruderalis</i>	×	×	×	×	×
<i>Ludwigia octovalvis</i>	×				
<i>Lumnitzera littorea</i>	×				
* <i>Malvastrum coromandelianum</i>	×				
* <i>Malva viscus</i> v. <i>penduliflorus</i>	×				
<i>Mammea odorata</i>	×				

Table 2. (continued)

Species	Islet				
	Puluwat	Alei	Elengelap	Hao	To
* <i>Mangifera indica</i>	×				
* <i>Manihot esculenta</i>	×				
* <i>Mirabilis jalapa</i>	×				
<i>Morinda citrifolia</i> v. <i>citrifolia</i>	×	×	×	×	×
<i>Morinda pedunculata</i>	×				
<i>Neisosperma oppositifolia</i>	×	×	×	×	×
* <i>Nerium oleander</i> v. <i>oleander</i>	×				
<i>Ocimum sanctum</i>	×				
<i>Pemphis acidula</i>	×	×	×		
* <i>Phyllanthus amarus</i>	×				
<i>Physalis minima</i>	×				
<i>Piper fragile</i>	×	×	×	×	×
<i>Piper ponapense</i>	×				
<i>Pipturus argenteus</i> v. <i>argenteus</i>	×	×	×	×	×
<i>Pisonia grandis</i>		×		×	×
* <i>Plectranthus scutellaroides</i>	×				
* <i>Plumeria rubra</i>	×				
<i>Polygonum minus</i> v. <i>procerum</i>	×				
* <i>Polyscias filicifolia</i>	×				
<i>Portulaca australis</i>	×				
* <i>Portulaca grandiflora</i>	×				
<i>Portulaca oleracea</i> v. <i>granulato-stellulata</i>	×				
<i>Portulaca</i> sp.	×				
<i>Premna serratifolia</i>	×	×	×	×	×
* <i>Pseuderanthemum carruthersii</i> v. <i>carruthersii</i>	×				
* <i>Pseuderanthemum carruthersii</i> v. <i>atropurpureum</i>	×				
<i>Rhizophora mucronata</i> v. <i>stylosa</i>	×				×
* <i>Rosa</i> sp. hort. var.	×				
<i>Scaevola sericea</i>	×	×	×	×	×
* <i>Sida acuta</i>	×				
<i>Sophora tomentosa</i>	×	×	×		
<i>Soulamea amara</i>	×	×	×	×	×
* <i>Spermacoce ernstii</i>	×				
* <i>Tabebuia heterophylla</i>	×				
* <i>Tagetes erecta</i>	×				
* <i>Tecoma stans</i>	×				
<i>Terminalia catappa</i>	×				
<i>Terminalia samoensis</i>	×	×	×	×	×
<i>Thespesia populnea</i>	×	×	×	×	×
* <i>Thevetia peruviana</i>	×				
<i>Tournefortia argentea</i>	×	×	×	×	×
<i>Triumfetta procumbens</i>	×	×	×	×	×
<i>Vernonia cinerea</i>	×				
<i>Vigna marina</i>	×	×	×	×	
<i>Vitex negundo</i> v. <i>bicolor</i>	×				
* <i>Wedelia trilobata</i>	×				
<i>Wollastonia biflora</i> v. <i>biflora</i>	×	×	×	×	×
<i>Xylocarpus granatum</i>	×				

Table 3. Distribution of species on Puluwat Atoll according to Islet. Number of species and percentage (in parentheses).

	Hao	Elengalap	To	Puluwat	Alei	Total Area
Area (km ²)	0.05	0.06	0.1	1.47	1.72	3.40
Introduced Species	3 (8.4)	2 (5.6)	4 (9.3)	87 (49.1)	9 (15.5)	
Indigenous Species	32 (91.6)	34 (94.4)	39 (90.7)	90 (50.9)	49 (84.5)	
Total Species	35	36	43	177	58	

been introduced to the atoll, while 17 previously listed varieties are no longer present. We can only suggest that these changes represent a selection process by the Puluwatese in order to maintain food productivity and stability through diversity.

Tables 2 and 3 present the distribution of indigenous and introduced species for the five islets of Puluwat Atoll. In accordance with MacArthur and Wilson's (1963, 1967) theory of island biogeography, the smaller islets of Hao (0.05 sq. km with 35 species), Elengalap (0.06 sq. km with 36 species), and To (0.1 sq. km with 43 species) have fewer species than the larger islets of Puluwat and Alei. Indigenous species constitute more than 90% of the flora on these small islets. However, Puluwat Islet (with an area of 1.47 sq. km) has 177 species (87 introduced, 90 indigenous), while Alei Islet measuring 1.72 sq. km, has only 58 species (9 introduced, 49 indigenous). Of the 87 introduced species found on Puluwat Islet, the majority of these species are ornamentals, food plants, and weeds. These are restricted to the village, trails and cultivated sites. Furthermore, almost all ornamentals and weedy species are absent from the interior forests, coconut woodlands, and strand of the five islets. Indeed the high number of indigenous species on Puluwat Islet is surprising, as it is inhabited and the only islet where the extensive *maa* gardens are found.

Compared to that of Puluwat Islet, the flora of Alei Islet has fewer indigenous and introduced species given Alei's larger size. There are a number of reasons to account for this. First, only two full days were spent collecting on Alei. That we were able to find a number of rare species, for example, *Corymborkis veratrifolia* and *Cerbera manghas* only on Alei, suggests that our collections may be fairly complete. However, some small plants may have been missed because of noisome and numerous mosquitos. Second, large areas of Alei are inundated by salt water during high tides which limits the extent of non-saline habitats and a salt intolerant vegetation. These areas are dominated by *Bruguiera gymnorhiza*. Third, it could be that Alei's indigenous flora is recovering from previous inhabitation (Freycinet, 1826), or from extensive disturbance during World War II; it was the site of a Japanese airstrip and much of the former and indigenous vegetation may have been removed. Present day disturbance is restricted to the cultivation of breadfruit, coconuts, and *Cyrtosperma chamissonis*, which is planted directly on undrained swampy depressions; the islet is presently uninhabited.

Annotated List of Species

All vascular plants collected or observed during the 1988 Puluwat fieldwork are listed below. Details of habitat, abundance, local name and uses are followed by the name

of the islet where the specimen was collected and the specimen number, or the islet where the plant was observed. All specimens deposited in the University of Guam Herbarium (GUAM) are identified by our initials and collection number (i.e., HIM & EM 279). Introduced species are indicated by an asterisk. Elbert's (1975) vernacular names, written according to the orthographic conventions of that time, are indicated by the initial E. Vernacular names listed by Damm and Sarfert (1935) are indicated by the initials D&S. Species previously recorded for Puluwat by Fosberg, Sachet & Oliver (1979, 1982, 1987) or Niering (1961) are indicated by initials FSO and N respectively. Niering's (1961) collection numbers are also included. Although Elbert (1975) identified many species by their vernacular names, few species were completely identified. Thus species not reported by Fosberg, et al. (1979, 1982, and 1987) and Niering (1961) are considered new records for Puluwat.

Pteridophyta

PARKERIACEAE

Ceratopteris thalictroides (L.) Brongn.

A succulent aquatic fern frequently found on the taro mounds (*maa*) of Puluwat Islet only. Local name: *affeiyhohhon*. The plant is used as a medicine. When weeded, it is often buried as a mulch and fertilizer of the *maa* only. Puluwat, HIM & EM 118. New record.

POLYPODIACEAE

Acrostichum aureum L.

Frequent aquatic fern in depressions and *maa*. Local name: *appaaw*. The stalks are used to form the bottoms of *unik* (fishtraps). E: *yapawu*. D&S: *abau*. Puluwat, HIM & EM 121, 272. New record.

Asplenium nidus L. sensu lato

Common epiphytic fern in coconut/breadfruit woodlands and found on all islets. Local name: *rheeluk*. The leaves are used to line preserved breadfruit pits, and young and tender leaves are sometimes eaten as a vegetable. E: *reelluk*. D&S: *luk*. FSO 1982: 45; N 1961. Puluwat, HIM & EM 275.

Diplazium melanocaulon Brack

Local name: *hifiniker*. Leaves used as Christmas decorations. E: *hafinikeer*. To, HIM & EM 305.

Nephrolepis hirsutula (Forst.) Presl.

Observed by Niering as the dominant terrestrial fern of coconut plantations. Not collected or observed by present authors. This species may have been overlooked by authors. Local name: *amaare*. No local use. D&S identified *amare* as *N. acuta*, a synonym for *N. hirsutula*. N 1961. Fosberg (pers. comm.) suggests that *N. hirsutula* may be a misidentification.

Nephrolepis saligna Carr.

Abundant groundcover fern in coconut and breadfruit woodlands, standing 1.5 m. Local name: *amaare*. Niering (1961) lists *N. hirsutula* as the dominant fern of these woodlands. Freycinet (1826) noted that *amare* is a general name for ferns. No local use. FSO 1982: 64. Puluwat, HIM & EM 212.

Polypodium scolopendria (Burm. f.) Copel.

Abundant fern on coconut trunks. Local name: *rhiirhi*. Leaves used in love magic (Elbert, 1975: 156) and *mwaramwars*; roots and leaves used in medicines. E: *riiri*. FSO 1982: 67. N 1961. Puluwat, HIM & EM 195.

Pteris tripartita Sw.

Abundant terrestrial fern of shady coconut and breadfruit woodlands. The two specimens were collected from cultivated depressions on Puluwat Islet. Local name: *hifinikerh*. Leaves used as a Christmas tree decoration and *mwaramwars*. E: *hafinikeer*. Puluwat, HIM & EM 119, 293. New record.

Unknown Fern

Rare, sterile and very young specimen found growing in *Barringtonia asiatica* forest. Hao, HIM & EM 321.

Gymnospermae

ARAUCARIACEAE

**Araucaria heterophylla* (Salisb.) Franco

Rare ornamental of which there is only one tree on the atoll, standing 2 m high in Rewow Village. A recent introduction from Moen, Truk. No local name. Puluwat, HIM & EM 199. New record.

Monocotyledonae

PANDANACEAE

Pandanus dubius Spreng. var. *dubius*

A rare pandan on Puluwat Atoll. This specimen was collected from a taro mound (*maa*) in the Rellong taro swamp. Local name: *poku*. The leaves are wrapped around the trunks of coconut trees to keep rats from climbing up the trunk. The trunks of *P. dubius* and *P. tectorius* (described below) are used to form the circumference and base of the *maa* in the excavated depressions on Puluwat Islet. E: *pokuuw*. Puluwat, HIM & EM 287. New record.

Pandanus tectorius Park. (sensu latissimo).

Abundant coastal and coconut woodland tree. Local name: *faarh*. A very useful tree. The trunk is split into long strips to be used as the vertical and horizontal roofing frames (*wo* and *opelol*, respectively). Pandanus leaves, which last longer than coconut leaves were used as thatching; these were "sewn" onto Pandanus proproot thatch formed with threads made from pandanus roots (Elbert, 1975: 243). Leaves are used as preserved breadfruit wrappers, for mats, small baskets, and bracelets. Old proproots form the sides and back of fishtraps (*unik*). Phalanges sometimes eaten as a snack. Bracts are woven into *mwaramwars* and the flowers are used as personal adornment. Elbert's (1975) list of pandanus varieties included: *faar ira*, *ferayiluuta (maangiluuta)*, *feren Kirinis*, *ferenewaal*, *killaw*, *lifaar*. E: *faar*, *feran*. D&S: *fas*. FSO 1987: 25–26. N 1961. Puluwat, HIM & EM 171, 278.

Pandanus sp.

Pandanus cultivated for its leaves which are used in weaving. This variety is said to have been introduced from Satawal or Houk. Provisionally classified as a native species. Local name: *maang*. Observed on Puluwat Islet, but not collected.

ZOSTERACEAE

Cymodocea rotundata Ehrenb. & Hempr. ex Aschers.

Abundant seagrass, collected at Rewow village shore. Local name: *yeloot*. No local use. Observed along shores of all islets. Puluwat, HIM & EM 313. New record.

HYDROCHARITACEAE

Thalassia hemprichii (Ehrenb.) Aschers

Common seagrass of sheltered lagoons. Local name: *yeloot*. E: *yeloot*. FSO 1987: 29. N 1961. Puluwat, HIM & EM 318.

POACEAE

Chrysopogon aciculatus (Retz.) Trin.

Rare grass collected at Puluwat Intermediate School grounds. Local name: *fatil*. No local use. Puluwat, HIM & EM 180. New record.

**Digitaria violascens* Link

Common grass of disturbed and cultivated areas. Local name: *fatil*. Note: Most of the *fatil* are used as a fertilizer on the *maa* only. Every two months, the women weed their *maa*. The *fatil* and other weeds are buried in holes dug into the *maa*. Puluwat, HIM & EM 160. New record.

**Elusine indica* (L.) Gaertn.

Frequent weed of village and disturbed areas. Local name: *fatil*. No local use. FSO 1987: 41. N 1961, 771. Puluwat, HIM & EM 169, 312.

Eragrostis amabilis (L.) W. & A.

Common grass of lawns in villages. No local name. No local use. Puluwat, HIM & EM 192. New record.

Ischaemum polystachyum var. *intermedium* (Brog्न.) Fosb. & Sachet

Frequent grass of the *maa* and moist coconut/breadfruit woodlands. Local name: *fatil*. Used as a fertilizer in the cultivated depression. Puluwat, HIM & EM 140; Alei, 298. New record.

Lepturus repens (Forst. f.) R. Br. (sensu lato).

Common grass of cultivated and disturbed areas and woodlands. Local name: *fatil*. Observed on all islets. FSO 1987: 48. N 1961. Puluwat, HIM & EM 159.

Oplismenus compositus (L.) Beauv. var. *compositus*

Frequently occurring grass in coconut woodland. Local name: *fatil*. Puluwat, HIM & EM 166. New record.

****Paspalum conjugatum* Berg.**

Frequently occurring grass in the village. Local name: *fatil*. FSO 1987. N 1961, 763. Observed on Alei. Puluwat, HIM & EM 168.

***Paspalum distichum* L.**

Frequently occurring grass in the cultivated depressions. Local name: *pwukarim-waan*. Buried as a fertilizer on the *maa*. Puluwat, HIM & EM 135. New record.

****Saccharum officinarum* L.**

Frequent plant, cultivated on the *maa*. Local name: *woow*. Canes chewed for its sugar content. D&S: *uou*. FSO 1987: 57. Not collected, but observed on Puluwat Islet only.

****Sporobolus diander* (Retz.) Beauv.**

Rare grass in the cultivated depressions. Local name: *fatil*. Used as a fertilizer on the *maa*. Puluwat, HIM & EM 163. New record.

***Stenotaphrum micranthum* (Desv.) Hubb.**

Listed by Niering as frequent in recently cleared areas planted with coconuts. Local name: not known. Not collected or observed by present authors. FSO 1987: 61. N 1961.

***Thuarea involuta* (Forst. f.) R. Br. ex R. & S.**

Common grass of village, trailside, and strand. No local name. FSO 1987: 62. N. Puluwat, HIM & EM 143.

***Zoysia matrella* (L.) Merr.**

Abundant grass localized to village areas only. Local name: *fatil*. Often planted as a ground cover. Puluwat, HIM & EM 181. New record.

CYPERACEAE

***Cyperus brevifolius* (Rottb.) Hassk.**

Common sedge of the *maa* in the cultivated swamps. Local name: *pwukaringah*. Sometime used as a medicinal ingredient because of its pleasant smell. The stems are often used in leis. Puluwat, HIM & EM 137. New record.

Cyperus odoratus L.

A frequently occurring sedge of the cultivated swamps and moist habitats. Local name: *pwukarimwarh*. Local uses the same as *C. brevifolius*. Puluwat, HIM & EM 120. New record.

Cyperus polystachyos Rottb.

Commonly occurring sedge in the cultivated swamps and moist habitats. Local name: *kurukurilaang*. No local use. Puluwat, HIM & EM 138, 289. New record.

Eleocharis geniculata (L.) R. & S.

Frequently occurring sedge in the cultivated swamps. No local name. Puluwat, HIM & EM 139, 141. New record.

Fimbristylis cymosa R. Br. (sensu lato).

Abundant trailside and lawn sedge. Local name: *pukarirhap*. E: *pukareraap*. Puluwat, HIM & EM 191. New record.

Fimbristylis dichotoma (L.) Vahl (sensu latissimo).

Common sedge in village and disturbed sites. Local name: *fatil*. Puluwat, HIM & EM 170. New record.

Unknown Cyperaceae

Collected from log on strand at Alei. Provisionally classified as a native plant although it may be a drift species. No local name. Alei, HIM & EM 174.

ARECACEAE

**Cocos nucifera* L.

Abundant tree on all islets. Local name: *nu*. An extremely useful plant, all parts of which are used by the Puluwatese and other Pacific Islanders. The fibrous leaf sheath (*un*) is used as a wrapper for medicinal and magic amulets, toilet paper, a fire starter, and a "cheesecloth" for expressing coconut cream from the grated coconut meat. New flower sheaths (*ouwal*) were used for setting broken bones, while old and dry flower sheaths are excellent fire starters. Leaves are also used as fire starters, roofing thatch, basketry, ground coverings and bedding, personal adornment, men's purses, decoration, food platters, and fishing nets. Young leaves can be used as "feathers" on fishing lures. Whole fronds are used to cover canoes from the direct rays of the sun, and the woven fronds are used as a

mulch on the *maa*. When these fronds decompose, they serve as a fertilizer. Young flowers are used in medicinal preparations, and are often eaten by children. The flower sheath is cut for coconut toddy (*tuba*). Dried flower stalks serve as brooms and fuel. The shell is a hot, sometimes flaring fuel, and serves as a cup. A magic spell was recited over a ripe coconut, after which the patient was rubbed with coconut flakes to ensure a safe birth (Elbert, 1975, p. 279). The meat is eaten, dried as copra for cash, an ingredient for different foods and medicines, fish bait, and the source of coconut cream. Earrings and other ornaments were carved from the shell. The oil from the meat is often used to oil the body. Presently, the most important use of the meat is pig and chicken feed. The sweet and oily sponge-like mass (*aton*) of a sprouted coconut is eaten and is used to control bubbling in the preparation of "yeast beer." The water from young nuts provides a refreshing drink. The trunk provides house posts and construction material, and spear handles. Sections of the trunk are anchored in the excavated depressions to form the base and circumference of the *maa*. The roots provide medicines and fish trap parts. The husk is a source of sennit, and the husk of the *yotool* variety was chewed as a remedy for diarrhoea (Elbert, 1975, p. 293). The Puluwatese recognized 11 varieties of *C. nucifera*, based on the color of the young husk and size of the nut. Elbert (1975) listed the following varieties: *nu cca (cha)*, *nuhehhah*, *numoowo*, *numuul*, *nupwool*, *nuun Kirinis (nuun minaato)*, *nu yeraw*, *nuyool*, *yaap*, *yeeraan*, *yotool*. The varieties *nupwool* and *yeeraan* are not present on the atoll today. E: *nu*. D&S: *lu*. FSO 1987: 82. N 1961. Not collected but seen on all islets.

ARACEAE

**Alocasia macrorrhiza* (L.) G. Don var. *macrorrhiza*

Common aroid found along village paths. Rarely cultivated. Local name: *fine*. Corm is sometimes eaten, and the leaves are used as an earth oven (*um*) covering and a food wrapper during cooking. Elbert (1975) listed three varieties of *fine*: *finen Yaap*, *mwaring*, *raalu*. E: *fine*. D&S: *fine*. FSO 1987: 89. Puluwat, HIM & EM 282.

**Colocasia esculenta* (L.) Schott

Abundant aroid, cultivated mainly on the *maa*, but also next to homesites on Puluwat Islet. Local name: *woot*. The corm is eaten. The petioles are often cooked with coconut toddy syrup (*liir*), and the leaves are sometimes used as an earth oven covering and food wrapper. The plant is also useful as a medicine. Elbert (1975) listed the following varieties which are still present on Puluwat: *aimaimw*, *namoluk*, *nenniku*, *rangasei*, *tawa*, *wenea*, *wotocca*, *wotokucc*, *wotokuuh*, *wotomarewuw*, *wotonmeripwa*, *wotoorhaar*, *wotopei*, *wotopwer*, *wotopwul*, *wotowupwuupw*. Varieties introduced to Puluwat since 1967 are: *faitacha*, *kariingan*, *otorhol*, *allinga*, *waaniko*, *kaaka*, *annipo*, *wenea*, *autun-uur*, *rhimek*, *marepwa*, *hamal*, *rhal*. Elbert (1975) listed the following varieties which are no longer on the atoll and are presumed to be extinct: *haroway*, *kannipwo*, *karaatik*, *kiriim*, *lipweringo*, *luukiyo*, *mwaat*, *nafeeyirek*, *raangooy*, *riip*, *tikilep*, *took*, *wotoniyaap*, *wotoroolinpolowat*, *yamelangeer*, *yariimaar*, *yawutunuur*. E: *woot*. D&S: *wodj*. FSO 1987: 91. N 1961. Puluwat, HIM & EM 307.

****Cyrtosperma chamissonis* (Schott) Merr.**

Abundant aroid grown on the *maa* and in natural depressions. Local name: *pwula*. The corm is eaten, the leaf is used for covering the earth oven (*um*) and as a food wrapper. The petioles are sometimes used in medicinal preparations. Despite its abundance, Niering (1961) did not record this species. Elbert (1975) listed the following varieties which are still present on Puluwat: *fanaal*, *haariy*, *halingelap*, *hamwol*, *kalleyaar*, *liyongomwer*, *maanukoowkoow*, *mwareey*, *pononopaar*, *pononopwer*, *pwulaapwer* (light petioles), *pwulamaarewow*, *simitel*. Varieties introduced to Puluwat since 1967 are: *elaisong*, *lirau*, *lipaunu*, *limwaingaawo*, *pwula rais*, *paachol*, *pwulamwaai*, *apiirhan*, *fainingahangah*, *pwulahalingaling*, and *wonow maram*. Elbert (1975) listed the following varieties which are no longer on the atoll and are presumed to be extinct: *horopwel*, *kanipenik*, *likuyel*, *lipeeyinu*, *liroow*, *liyaayinu*, *maniitee*, *paarool* (dark petioles), *perenyoong*, *pwulafjir*, *pwulaakuyel*, *reelapanleeyinu*, *reerikin leeyinu*, *roor*, *saakamwaan*, *toocin (toocc)*, *yannayrimwo*, *yapiiraan*, *yayito*, *yepoon* (Ebon Island). E: *pwula*. D&S: *bula*. FSO 1987: 91. Puluwat, HIM & EM 288.

****Xanthosoma sagittifolium* (L.) Schott**

Occasional aroid growing in waste places in the village. Local name: *wotopwula*. This aroid is rarely eaten. The leaves are used to cover the earth oven. E: *wotopwula*. Puluwat, HIM & EM 283. New record.

BROMELIACEAE

****Ananas comosus* (L.) Merr.**

Occasional fruit, usually planted on coconut stumps in the village or coconut woodlands. Local name: *pwayinaper*, *pinga*. The mature fruit is eaten. E: *pwayinaper*, *pinga*. Not collected but observed on Puluwat Islet. New record.

COMMELINACEAE

****Rhoeo spathacea* (Sw.) Stearn**

Locally abundant, although restricted to one house garden. Introduced from Moen, Truk. No local name. Puluwat, HIM & EM 209. New record.

LILIACEAE

****Cordyline fruticosa* (L.) Chev.**

Rare ornamentals, restricted to two house sites. No local name. Two varieties have been introduced from Moen, Truk. Fosberg, et al. (1987) lists this species as native to Micronesia. Puluwat, HIM & EM 236, 252. New record.

**Crinum asiaticum* var. not det.

Occasional ornamental in village, and rarely on the *maas*. Two varieties are recognized locally. Local names: *kiopw*, *mwootiw*, *kiopw pwuniwal*. *Kiopw mwootiw* has deep lavender flowers. E: *kiopw*, *mwootiw*. D&S: *giob*. Puluwat, HIM & EM 270, 274, 285. New record.

**Crinum* sp.

An unidentified *Crinum* is listed by Fosberg et al. (1987) for Puluwat. This may be the same as *C. asiaticum*. FSO 1987: 104; N 1961.

**Hippeastrum puniceum* (Lam.) Voss

Rare ornamental growing in Hapewou village. Local name: *liirio par*. Puluwat, HIM & EM 226. New record.

**Hymenocallis littoralis* (Jacq.) Salisb.

Abundant, lining paths throughout Puluwat Islet, but rare on Alei. Local name: *liirio*. E: *liiriyo*. FSO 1987: 104. N 1961, 772. Puluwat, HIM & EM 238.

**Zepharanthes rosea* Lindl.

Common herb of paths and lawns in villages, sometimes planted as an ornamental. Local name: *philip*. E: *flip*. Puluwat, HIM & EM 142. New record.

TACCACEAE

Tacca leontopetaloides (L.) O. Ktze.

Occasional in coconut woodlands. Local name: *mwakumwak*. The tuber is sometimes eaten, and the stem is used in medicinal preparations. The roots are used as preparation against venereal diseases. E: *mwakomwak*. D&S: *magumag*. Observed on all islets. Puluwat, HIM & EM 158, 279. New record.

DIOSCOREACEAE

**Dioscorea alata* L.

Rare cultivated yam, growing next to house site in Rewow village. Local name: *eep*. Marshall (1975) lists ep as *D. alata* for Namoluk Atoll. E: *yeep*. Puluwat, HIM & EM 247. New record.

**Dioscorea* sp.

Occasional yam collected from the Pwolihapewou cultivated swamps. Provisionally listed as an introduced species. Local name: *palaai*. No local use. Puluwat, HIM & EM 131. New record.

Dioscorea bulbifera L.

Rare cultivated yam collected at Hapelong, across from the dispensary. Local name: *pwerh*. Corm eaten. Marshall (1975) lists *pereka* as *D. bulbifera*. Fosberg et al. (1987) record this species as present on many of the adjacent atolls. E: *pwer*. Puluwat, HIM & EM 241. New record.

MUSACEAE

**Heliconia latispatha* Benth.

Ornamental planted at gravesite in Rellong village. Local name: *aruru ponape*. As suggested by its local name, this species was probably introduced from Ponape. Puluwat, HIM & EM 295. New record.

**Heliconia* sp.

Rare ornamental collected at Hawewou village. Local name: *mwakumwak*. Puluwat, HIM & EM 248. New record.

**Musa x sapientum* L.

Abundant. Bananas and plantains are grown mainly near houses. Local name: *urh*. The fruit is eaten. Elbert (1975) listed these varieties of *Musa*: *fasiic*, *foorool*, *hanga-langal*, *keere*, *kuupe*, *kuuwelin*, *leketaan*, *lukiisa*, *mehapak*, *merike*, *nomwoneer*, *palluw*, *punger*, *reeyap*, *saamoa*, *taaraka*, *tayiwani*, *wurhaal*, *wuriiletow*, *wurukacc*, *wurunikuwop*, *wurupaaw*, *wurupwer*, *wururoor*, *wururuwat*, *wurutopw*, *wuur pwuk*, *wuur ruuwoumw*, *yeeyii*, *yipaar*. *Musa* varieties listed by Elbert (1975) but not present today: *foorool*, *keere*, *kuupe*, *kuuwelin*, *nowoneer*, *punger*, *reeyap*, *wurupwer*, *wururoor*, *wururuwat*, *yeeyii*. *Musa* varieties introduced since 1967: *fiji*, *urhual*, *achiin*, *liketan*, *urucccha*, *wurhunwoon*. E: *wuur*. D&S: *us*. FSO 1987: 110. N 1961.

ZINGIBERACEAE

**Alpinia purpurata* (Viell.) K. Schum.

Occasional ornamental planted in Rewow village. No local name. Puluwat, HIM & EM 200. New record.

****Curcuma australasica* Hook. f.**

Abundant ginger cultivated on the *maa*. Local name: *rheenyong*. The whole plant is made into *mwaramwars*, and the root is a source of yellow color which people paint on their bodies. The plant is also used in love magic (Elbert, 1975: 153). E: *reeniyoong*. Puluwat, HIM & EM 127. New record.

****Hedychium coronarium* Koen.**

Common ginger grown on the *maa* and moist, shaded habitats. Local name: *tolon*. The flowers are woven into *mwaramwars* and are used as decorations. E: *tolon*. Puluwat, HIM & EM 126. New record.

CANNACEAE

****Canna indica* L.**

Occasional ornamental grown on the *maa*. Three varieties are grown by the Puluwatese. Local names: *apeellap*, *oruuru*. The flowers are used as a decoration and in *mwaramwars*. E: *yapellap*, *yoruuru*. Puluwat, HIM & EM 128, 129, 130. New record.

ORCHIDACEAE

***Corymborkis veratrifolia* (Reinw.) Bl.**

Rare ground orchid of moist breadfruit woodlands. Local name: *yan keerh nuu*. No local use. Literally means rat's coconut. On Namoluk, Marshall (1975) notes that the local name for *Laportea ruderalis* is *an ukech nu* which means ant's coconut palm. Alei, HIM & EM 175. New record.

***Dendrobium* sp.**

Occasional epiphytic orchid found on coconut trees in the cultivated depressions at Rellong. No local name. Puluwat, HIM & EM 311. New record.

Dicotyledonae

CASUARINACEAE

***Casuarina equisetifolia* L.**

Occasional tree at Rewow village. Local name: *weeku*. The wood is used for axe handles and canoe parts. Puluwat, HIM & EM 265. New record.

PIPERACEAE

Piper fragile Benth.

Frequently occurring vine in villages and woodlands. Local name: *oto*. A specimen was collected by Niering (1961) in 1954 which Fosberg and Sachet (1975) have identified as *P. fragile*, and listed its Satawalese name as *atobuei*. This species is called *adogobwe* on Namonuito (Stone, 1959). Elbert (1975) writes that *woto* was used for medicine, *mwaramwars*, and love magic. E: *woto*. D&S: *odowosas*. FSO 1979: 50. N 1961, 764. Observed on all islets. Puluwat, HIM & EM 164.

Piper ponapense C. DC.

Frequently occurring vine on the *maa* and moister woodlands. Local name: *anah*. Elbert (1975, p. 241) notes that *yaneh* leaves were used for *mwaramwars* and love magic. This specimen was collected and listed as *Piper betle* L. (?) by Niering (No. 768) and later identified as *P. ponapense* by Fosberg and Sachet (1975). E: *yaneh*. Puluwat, HIM & EM 124.

MORACEAE

**Artocarpus altilis* (Park.) Fosb.

Abundant tree of islet interiors, some exceed 30 m in height. Common in villages. Local name: *mai rhoyang*, a variety of *mai fawu*. Seedless breadfruit. This is an important staple food on many atolls. The wood makes an excellent firewood and is used in the construction of small canoes. This tree was noted by Freycinet (1826). Elbert's (1975) listed the following varieties which are still present on Puluwat: *fayinomw*, *hariir*, *ha-waan*, *leefe*, *leeyo*, *lepeeyre*, *lesooso*, *lewaar*, *loworoor*, *lukineme*, *luukanimw*, *maayhoolap*, *maaykooor*, *maaylaar*, *maaynikaraw*, *maaypwopw*, *maayraan*, *rooyiyang*, *tunawuw*, *weeyiraan*, *wenipwula*, *wuhap*, *wurokaay*, *yamehaapwut*. Varieties introduced to Puluwat since 1967 are: *mai wot*, *mai chon*, *omohopwut*, *inaanifot*, *mai rhal*. Elbert (1975) listed the following varieties which are no longer on the atoll and are presumed to be extinct: *leeker*, *maawuun*, *maay fawu*, *maaynohook*, *peeranpaac*, *reemoon*, *wiliwil*, *wupwurool*, *yaanget*, *yaperen maay*, *yinanefot*, *yohuukopaar*. E: *maay fawu*. D&S: *mai fai*. FSO 1979: 52. N 1961, 765. Puluwat, HIM & EM 225.

Artocarpus mariannensis Trec.

Abundant cultivated tree of islet interiors, also exceeding 30 m in height. Common in villages. Seeded breadfruit. Local name: *maiyah*. The fruit and seeds are eaten. The wood is used in the construction of large canoes, carved into plates, or used as fuel. The sap is used as a glue and caulk. The Puluatese recognize the following varieties of *mai-yahs*: *kumuwwur*, *mahaapwer*, *mahaarool*, *mahaawuu*, *maharang*, *reemoon*, *rooyiyang*

maiah and *maiah*. Reported by Freycinet (1826) for the Western Caroline islands. E: *maayah*. D&S: *mai as*. Puluwat, HIM & EM 202, 294.

Ficus prolixa Forst. f.

Large, frequently occurring tree of islet interiors and moist habitats. Local name: *yaaw*. E: *yaaw*. FSO 1979: 55. N. 767. Puluwat, HIM & EM 125; Alei, 177.

Ficus tinctoria* var. *neo-ebudarium (Summerh.) Fosb.

Common tree of interiors and woodlands. Local name: *awan*. The fruit is eaten and the wood is used as canoe and fishtrap parts. The aerial roots were used as rope in *laale* (fish drives) fishing (Elbert, 1975: 222). E: *yawan*. D&S: *auwan*. FSO 1979: 56. N 1961, 766. Elengelap, HIM & EM 185.

URTICACEAE

Laportea ruderalis (Forst. f.) Chew

Abundant herb of trails and recently cleared areas. Local name: *afanafananikerh*. D&S: *ani*. FSO 1979: 60. Puluwat, HIM & EM 152.

Pipturus argenteus (Forst. f.) Wedd. var. *argenteus*

Common shrub/low tree of coconut/breadfruit woodlands. Local name: *yoroma*. The leaves are used as imitation feathers on fishing lures. A bark thread from this species was used for fishing lines and attaching fish hooks (Elbert, 1975, p. 272). E: *yeroma*. Previously identified by Damm & Sarfert (1935) as *P. incanus*. Alei, HIM & EM 302.

POLYGONACEAE

Polygonum minus* var. *procerum (Danser) Steward

Frequent herb of the cultivated depressions. Local name: *teerow*. Puluwat, HIM & EM 290. New record.

AMARANTHACEAE

Achyranthes aspera L.

Occasional herb in breadfruit woodlands. Local name: *seetan*. This plant is used as a decongestive and is administered with magical songs. Elbert (1975) lists this plant as *likakeeke*. Puluwat, HIM & EM 145. New record.

Alternanthera sessilis (L.) R. Br. ex DC.

Common herb collected from the *maa* at Pwolihapewou. No local name. Puluwat, HIM & EM 134. New record.

**Gomphrena globosa* L.

Occasional, introduced ornamental planted in house gardens and on the *maa*. Local name: *wairhirhicha*. The flowers are used in *mwaramwars*. Puluwat, HIM & EM 219. New record.

NYCTAGINACEAE

**Bougainvillea spectabilis* Willd.

Rare, planted ornamental near houses. No local name. Flowers used as decorations. Puluwat, HIM & EM 232. New record.

**Mirabilis jalapa* L.

Occasional ornamental of house sites. Local name: *pilooris*. The flowers are used in *mwaramwars*. E: *pilores*. Puluwat, HIM & EM 251. New record.

Pisonia grandis R. Br.

Commonly found tree of moist woodlands. Local name: *mweek*. E: *mweek*. D&S listed *mok* as a *Cordia* (Karolinenpappel). Observed on To and Hao. Alei, HIM & EM 211. New record.

PORTULACACEAE

Portulaca australis Endl.

Succulent prostrate herb. Rare occurrence. Specimen collected at the Puluwat Junior High School. Local name: *opw*. The plant was often eaten as a green vegetable. E: *wopw*. Puluwat, HIM & EM 183. New record.

**Portulaca grandiflora* Hook.

Rare succulent collected from a *maa* at Rellong. Cultivated for its brilliant, reddish pink flowers. Local name: *opw*, *opwileekilel*. E: *wopw*. Puluwat, HIM & EM 286. New record.

Portulaca oleracea var. *granulato-stellulata* v. Poelln.

Occasional succulent of village areas. No local name. Puluwat, HIM & EM 234. New record.

Portulaca sp.

Frequent, yellow flowering form listed by Niering (1961). This specimen may be either *P. lutea*, *P. australis* or *P. oleracea* var. *granulato-stellulata*. D&S: *ob*.

ANNONACEAE

**Annona muricata* L.

Occasional tree grown around house sites. Local name: *saasaf*, *saasap*. The fruit is eaten. E: *saasaf*, *saasap*. Puluwat, HIM & EM 240. New record.

**Cananga odorata* (Lam.) Hook. f. & Thoms.

Occasional ornamental tree in the villages grown mainly for its perfumed flowers, which are used in *mwaramwars*. Local name: *pwalang*. E: *pwalang*. Puluwat, HIM & EM 235. New record.

LAURACEAE

Cassytha filiformis L.

Abundant parasitic epiphyte of the strand. Local name: *elaw*. The fruit is used as a medicine, and by children in popguns (Elbert, 1975: 268). FSO 1979: 79. N 1861. Puluwat, HIM & EM 144.

HERNANDIACEAE

Hernandia sonora L.

Fairly common strand tree. Local name: *orhal*. The fruit is used as a medicine. E: *yoral*. D&S: *odjal*. Alei, 176; Puluwat, HIM & EM 280. New record.

CAPPARIDACEAE

Crateva speciosa Volk.

Abundant understory tree of the breadfruit woodlands and localized clearings in the villages. Local name: *yafuurh*. The fruit is eaten and the flowers are used in *mwaramwars*. E: *yafuurh*. D&S: *jafus*. Puluwat, HIM & EM 250, 319. New record.

CRASSULACEAE

**Kalanchoe pinnata* (Lam.) Pers.

Abundant in a few village gardens and waste places. Local name: *peekoonia*. The flowers are used in *mwaramwars*. HIM & EM 217. New record.

ROSACEAE

**Rosa* sp. hort. var.

White miniature rose growing in house gargen. No local name. Rare. HIM & EM 205. New record.

LEGUMINOSAE/CAESALPINIACEAE

**Caesalpinia pulcherrima* (L.) Sw.

One of the most abundant ornamental shrubs on the atoll. This shrub is restricted to the villages. There are two varieties: one has orange flowers and the other has pink ones. Local name: *warepik*. The flowers are used in *mwaramwars*. The wood is used as coconut husking stakes. E: *warepik*. Puluwat, HIM & EM 215, 246. New record.

**Cassia alata* L.

Rare shrub growing on the *maa*. Local name: *arekak*. The leaves are used to treat ringworm. E: *yarakaak*. Puluwat, HIM & EM 268. New record.

**Delonix regia* (Boj.) Raf

Rare tree growing in villages. Local name: *meei flower*. The flowers are used as decorations. Puluwat, HIM & EM 310. New record.

Intsia bijuga (Colebr.) O. Ktze.

Occasional tree of the strand. Local name: *pakureng*. Used as firewood. Alei, HIM & EM 172; Elengelap, 189. New record.

LEGUMINOSAE/FABACEAE

Canavalia rosea (Sw.) DC.

Rare vine of the strand. Local name: *arepwal*. The plant is used as a fertilizer and mulch. E: *yarapwal*. Elengelap, HIM & EM 186. New record.

Canavalia sericea A. Gray

Listed by Fosberg et al. (1979) and Niering (1961) as present on the atoll. FSO 1979: 105; N 1961, 769. Need to compare with *C. rosea*.

Desmodium umbellatum (L.) DC.

Rare shrub/small tree growing at Hapelong village. No local name. Puluwat, HIM & EM 146. New record.

Erythrina variegata var. *orientalis* (L.) Merr.

Very rare tree growing near the sheltered lagoon at Rewow village. Local name: *paar*. Its orange flowers are used as decorations. E: *paar*. Puluwat, HIM & EM 257. New record.

Sophora tomentosa L.

Rare shrub of the strand. Local name: *pihhinomw*. Elengelap, HIM & EM 188. New record.

Vigna marina (Burm.) Merr.

Abundant trailside and strand vine. Local name: *ooluwu*. The leaves are used in traditional medicine. Elbert (1975, p. 24) says that a "concoction of pounded *wooluwu* leaves mixed with grated coconuts" was "blown with water through a papaya tube into the anus" as an enema. E: *wooluwu*. Puluwat, HIM & EM 147. New record.

RUTACEAE

**Citrus aurantifolia* (Christm.) Swingle

Occasional tree of the villages. Local name: *laimis*. The juice is used as a “viniger”. E: *layimes*. FSO 1979: 122. Note: Damm and Sarfert (1935) report the presence of *guregur* and Elbert (1975) lists *kurekur* for Puluwat which Marshall (1975) records as *C. aurantium*. Puluwat, HIM & EM 224.

SIMAROUBACEAE

Soulamea amara Lam.

Abundant shrub of the coastal forests and coconut woodlands. Local name: *marah*. The wood is used for canoe and house parts. E: *merah*. Puluwat HIM & EM 178. New record.

MELIACEAE

Xylocarpus granatum Koen.

Only one tree is believed to be growing on the atoll at Rewow village. Local name: *pwulopwul*. Puluwat, HIM & EM 155. New record.

EUPHORBIACEAE

**Acalypha hispida* Burm. f.

Rare planted ornamental growing near the Protestant church at Lugaph. Local name: *luhuealen kaatu*. Puluwat, HIM & EM 262. New record.

**Codiaeum variegatum* (L.) Bl.

Rare ornamentals growing in Rewow and Hapewou villages. Two varieties recognized. Local name: *millere*. Puluwat, HIM & EM 210 (*millere*), 229 (no local name). New record.

Euphorbia chamissonis (Kl. & Gke.) Boiss.

Frequently occurring euphorb of the strand. No local name. FSO 1979: 136; N 1961, 770. Alei, HIM & EM 317.

****Euphorbia hirta* L.**

Relatively common in waste places and trailsides. Local name: *likotokoot*. Puluwat, HIM & EM 193. New record.

****Euphorbia thymifolia* L.**

Rare euphorb of village paths. Collected at the Puluwat dock. No local name. Puluwat, HIM & EM 184. New record.

****Jatropha integerrima* Jacq.**

Occasional ornamental of house lots. No local name. Puluwat, HIM & EM 206. New record.

****Manihot esculenta* Crantz**

Rare plant found on Puluwat Islet growing only in an abandoned house site. Local name: *tapioka*. E: *tapiyoka*. Observed and photographed, but not collected. New record.

****Phyllanthus amarus* Sch. & Th.**

Common weed of waste places. Local name: *walumo*. This weed is used as a fertilizer and mulch in the *maa*. E: *walimo*. Puluwat, HIM & EM 194. New record.

ANACARDIACEAE

****Mangifera indica* L.**

Rare, only two trees on the atoll. Local name: *mangko*. The fruit is eaten. Puluwat, HIM & EM 249. New record.

BALSAMINACEAE

****Impatiens balsamina* L.**

Rare herbaceous ornamental of house sites. Local name: *pee-cha*. E: *pee cca*. Puluwat, HIM & EM 231. New record.

SAPINDACEAE

Allophyllus timoriensis (DC.) Bl.

Common tree in coconut woodlands. Local name: *nge*. The crushed leaves are mixed with other ingredients and used to treat sick infants. E: *nngé*. FSO 1979: 151; N 1961. Puluwat, HIM & EM 162; To, HIM & EM 300.

Dodonaea viscosa (L.) Jacq.

Rare. Only one tree, 5 m high, growing at the edge of the strand forest is known to exist on the atoll. Local name: *rhaal*. E: *raal*. To, HIM & EM 304. New record.

TILIACEAE

Triumfetta procumbens Forst. f.

Abundant shrub of the strand. Local name: *ara*. Crushed leaves are used to clean and defog facemasks. The woody stems are used as toothbrushes. The plant was used in *mwaramwars* and love magic (Elbert, 1975, p. 250). E: *yara*. FSO 1979: 159; N 1961. Observed on all islets. Puluwat, HIM & EM 148.

MALVACEAE

**Hibiscus rosa-sinensis* L. var *rosa-sinensis*.

Common ornamental of house sites. Local name: *hana*. The flowers are used in *mwaramwars*. E: *hana*. Puluwat, HIM & EM 216. New record.

Hibiscus tiliaceus L.

Abundant only in the swampy depressions on Alei, occasional on other islets. Local name: *kilife*. The long poles are used to pick breadfruit. The Puluwatese often hang these pluckers (*yyiah*) from a tree with a weight tied to the end so that the poles remain straight. The wood is used as floats for fishing nets. The bark was a source of thread for weaving clothing (Elbert, 1975: 274). E: *kilife*. D&S: *gilifou*. FSO 1979: 162; N 1961. Puluwat, HIM & EM 258.

**Malvastrum coromandelianum* (L.) Garcke

Rare weed in Rewow Village. No local name. Puluwat, HIM & EM 167. New record.

**Malvaviscus arboreus* var. *penduliflorus* (DC.) Schery

Ornamental shrub commonly planted housesites in villages. Local name: *hana*. The flowers are used in *mwaramwars* and as decorations. Puluwat, HIM & EM 214. New record.

**Side acuta* Burm. f.

Occasional weed restricted to villages. No local name. Puluwat, HIM & EM 267. New record.

Thespesia populnea (L.) Sol. ex Correa

Common strand and lagoon shore tree. Local name: *pene*. The wood is used for canoe parts. E: *peene*. D&S: *bono*. Observed on all islets. Puluwat, HIM & EM 256. New record.

GUTTIFERAE

Calophyllum inophyllum L. var. *inophyllum*

Observed but not collected. Frequently found along strand. Local name: *rakirh*. The wood is used for canoe parts, the flowers are used in *mwaramwars*, and the fruit is eaten. E: *rakir*. FSO 1979: 170; N 1961.

Mammea odorata (Raf.) Kosterm.

Common tree of woodlands. Local name: *weengu*. The wood is used for canoe parts. Puluwat, HIM & EM 263, 308. New record.

CARICACEAE

**Carica papaya* L.

Common fruit tree in villages and breadfruit woodlands. Local name: *pwaipwai*. The fruit is eaten. The plant is used in the treatment of ringworm and tooth decay. E: *pwayipway*. D&S: *baibai*. FSO 1979: 175; N 1961. Puluwat, HIM & EM 196.

CUCURBITACEAE

**Cucurbita pepo* L.

Rare, collected from a house garden at Rewow Village. Local name: *kalamaasa*. Its local name suggests that this species was introduced from either Guam or Moen where

there are a number of Filipino laborers, or it may have been introduced directly from Guam by the Puluwatese who are reknowned navigators. The Chamorro name for this species is *kalamasa*. The fruit is eaten. E: *kalamaasa*. D&S: *baikin*. Puluwat, HIM & EM 204. New record.

**Cucurbita* sp.

Recorded by both Niering (1961) and Fosberg et al. (1979) as present on the atoll. FSO 1979: 177; N 1961.

LYTHRACEAE

Pemphis acidula Forst.

Common shrub of the lagoon shores and raised beaches. Local name: *engiy*. The extremely hard wood is used as coconut huskers, canoe and fishtrap parts, and coconut husk pounder for sennit production (Elbert, 1975, p. 291). The bark was used to treat diarrhoea (Elbert, 1975, p. 265). E: *yeengiy*. Elengelap, HIM & EM 187; Puluwat, 315. New record.

RHIZOPHORACEAE

Bruguiera gymnorrhiza (L.) Lam. f. *gymnorhiza*

Occasional tree of lagoon shores. Abundant in swamp depressions on Alei Islet. Local name: *eong*. The wood is used for coconut huskers; a dye is made from the bark, and the flowers are used in *mwaramwars*. E: *yoong*. Puluwat, HIM & EM 179. New record.

Rhizophora mucronata var. *stylosa* (Griff.) Schimper

Common lagoon tree. Local name: *rhia*. The wood is used as coconut huskers, fish-trap parts and firewood. The wood is used for fishing spears (Elbert, 1975, p. 157) and the leaves are used in traditional medicines. E: *riiya*. D&S: *zia*. Note: *R. mucronata* var. *mucronata* is recorded by Fosberg et al. (1979) as present in some of the atolls of Yap and Truk. An unspecified mangrove species is listed by Niering (1961) as present on the south lagoon cove. Puluwat, HIM & EM 264. New record.

COMBRETACEAE

Lumnitzera littorea (Jack) Voigt

Rare tree of the swamp depressions. Local name: *weei*. The wood is used to form part of the outrigger. Puluwat, HIM & EM 316. New record.

Terminalia catappa L.

Rare tree. Only one specimen seen. Local name: *ahaah*. The nut is sometimes eaten. D&S: *asas*, which is the vernacular name for this species in other parts of Truk. Puluwat, HIM & EM 259. New record.

Terminalia samoensis Rech.

Common shrub low tree of the strand. Local name: *kin*. The nut is sometimes eaten. E: *kkin*. D&S: *gin*. Fosberg, et al (1979) list this species as present on adjacent atolls. To, HIM & EM 303; Alei, HIM & EM 173. New record.

LECYTHIDACEAE

Barringtonia asiatica (L.) Kurz

Common large tree of mesic to moist habitats. Local name: *kuul*. The fruit is used in traditional medicine. Elbert (1975: 58) states that "fish are stupified with its large fruits", although it is unclear whether this applies to Puluwat. E: *kuul*. D&S: *gul*. Fosberg et al. (1979) list this species as present in adjacent atolls. Puluwat, HIM & EM 253; Alei, HIM & EM 301. New record.

MYRTACEAE

**Eugenia malaccensis* L.

Common cultivated tree of breadfruit woodlands. Occasional in villages. Local name: *faniyap*. The fruit is eaten, and the wood is used as outrigger parts. E: *faaniyaap*. D&S: *faniob*. Puluwat, HIM & EM 309. New record.

ONAGRACEAE

Ludwigia octovalvis (Jacq.) Raven

Common weed of the cultivated swamps. Local name: *eeo*. E: *yeeyo*. Puluwat, HIM & EM 136. New record.

ARALIACEAE

**Polyscias filicifolia* (Moore) Bailey

Occasional ornamental shrub in villages. No local name. Puluwat, HIM & EM 207. New record.

UMBELLIFERAE

Centella asiatica (L.) Urb.

Occasional herb with very localized distribution. Collected from Hapelong Village. Local name: *likotekoot*. This species is used in traditional medicine (Elbert, 1975: 68). E: *likotokot*. Puluwat, HIM & EM 149. New record.

OLEACEAE

**Jasmimum samba* (L.) Ait.

Rare ornamental shrub growing at housesite in Rewow Village. Local name: *ulo*. The flowers are used in *mwaramwars*. Puluwat, HIM & EM 222. New record.

APOCYNACEAE

**Allamanda cathartica* L.

Rare, ornamental shrub planted on the *maa*. No local name. Puluwat, HIM & EM 296. New record.

**Catharanthus roseus* (L.) G. Don

Rare ornamental planted at housesites and on the *maa*. Local name: *pee-pingek*. The flowers are used in *mwaramwars*. Puluwat, HIM & EM 132. New record.

Cerbera manghas L.

Very rare tree of moist habitats. Local name: *raatta*. Alei, HIM & EM 297. New record.

Neisosperma oppositifolia (Lam.) Fosb. & Sachet

Common tree of moist habitats. Often found behind ridge crests of raised beaches. Local name: *umwo*. Paddles are made from the wood (Elbert, 1975, p. 209) and the fruit is eaten. E: *wumwo*. Puluwat, HIM & EM 271. New record.

**Nerium oleander* L. var. *oleander*

Occasional shrub planted around homesites in villages. Local name: *wiliancher*. Puluwat, HIM & EM 220. New record.

****Plumeria rubra* L.**

Abundant ornamental tree in villages. Local name: *eur*. The flowers are used in *mwaramwars*. E: *yeerwur*. FSO 1979: 217; N 1961. Puluwat, HIM & EM 255.

****Thevetia peruviana* (Pers.) K. Schum.**

Common ornamental tree of village grounds. Local name: *kanneeta*. Puluwat, HIM & EM 242. New record.

ASCLEPIADACEAE

****Asclepias curassavica* L.**

Occasional, localized herb growing in gardens or waste places. Local name: *wanuailiyos*. The flowers are used in leis. Elbert (1975, p. 193) lists *wanuway liyos* as *Lantana*. Puluwat, HIM & EM 151. New record.

CONVOLVULACEAE

****Ipomoea aquatica* Forsk.**

Nonfertile specimen growing in the cultivated depressions. Occasionally planted vine. Said to have been introduced by the Japanese before WWII. Local name: *seri*. Seldom eaten as a vegetable. *Seri* is listed by Elbert (1975) as a kind of introduced watercress. Puluwat, HIM & EM 284. New record.

****Ipomoea batatas* (L.) Lam.**

Cultivated at house sites. Locally abundant. There are two varieties on the atoll. Local name: *omwuti*. The leaves and tubers are eaten. E: *yomwuutiy*, *komwuutiy*. Puluwat, HIM & EM 254; HIM & EM 260. New record.

***Ipomoea littoralis* Bl.**

Common in woodlands and trailsides. A cultivated variety is grown in the cultivated swamps. Local name: *rhaiwal*. The boiled leaves are eaten as a vegetable, and the fresh leaves are used as a poultice on boils. Elbert (1975, p. 150) states that the leaves are used in love magic, fed to pigs, and was eaten during typhoons. Fosberg et al. (1979) record this species as present in the atolls of Yap and Truk. E: *raaywall*. D&S: *seiwel*. FSO 1979: 221. Puluwat, HIM & EM 122.

***Ipomoea macrantha* R. & S.**

Occasional vine of the strand. Local name: *afaarmarh*. E: *yafaamar*. Note: Fosberg and Sachet (1979) list *afamach* as *I. macrantha* and *afaamac* as *O. turpenthum* (L.) Manso. Puluwat, HIM & EM 306. New record.

***Ipomoea pes-caprae* spp. *brasiliensis* (L.) v. Ooststr.**

Rare vine of the strand. Collected from the beach at the dock in Rewow Village. Local name: *arepwalunimataw*. Observed on Alei. Puluwat, HIM & EM 203. New record.

BORAGINACEAE

***Cordia subcordata* Lam.**

Common strand tree. Local name: *aluw*. The nut is eaten, the wood is used for bowls and canoe parts; the flowers are used for leis, and according to Elbert (1975), love magic. E: *yeluw*. FSO 1979: 230; N 1961. Puluwat, HIM & EM 269; Alei, HIM & EM 299.

***Tournefortia argentea* L. f.**

Common strand tree. Local name: *chen*. Listed as *Messerschmidia argentea* (L. f.) Johnst. by Niering (1961). E: *ccen*, *yamolehat*. D&S: *djen*. FSO 1979: 231; N 1961. Puluwat, HIM & EM 165.

VERBENACEAE

***Clerodendrum buchananii* var. *fallax* (Lindl.) Bakh.**

Rare, shrub with scarlet flowers. Local name: *apwii*. Puluwat, HIM & EM 213. New record.

***Clerodendrum inerme* var. *oceanicum* A. Gray**

Shrub collected at the Rewow cultivated swamp. Local name: *ulo*. The wood is used for fishing net frames, the flowers are used in *mwaramwars* and love magic (Elbert, 1975, p. 205). Listed by Fosberg et al. (1979) as present in many of the atolls of Yap and Truk. E: *wulo*. D&S list *ula* for Satowal and *abot* for Puluwat. Puluwat, HIM & EM 320. New record.

***Premna serratifolia* R. Br.**

Abundant shrub of coconut and breadfruit woodlands. Local name: *yoor*. The small and inconspicuous flowers are used in *mwaramwars*, the leaves are used in traditional

medicine, and the wood is used in canoe, paddle, and house construction. E: *yoor*. D&S identify *umugau* as *P. integrifolia*. FSO 1979: 237; N 1961. Puluwat, HIM & EM 123; HIM & EM 281.

Vitex negundo var. *bicolor* (Willd.) Lam.

Small tree growing in an abandoned house site. Local name: *rhaal*. Puluwat, HIM & EM 156. New record.

LABIATAE

Ocimum sanctum L.

Occasional herb of house gardens. Local name: *teipwo*. The flowers are used in leis, and a medicine used to treat *hafei aihat*, is made from the plant. In 1826, Freycinet listed *O. basilicum* as present in the Western Caroline Islands. E: *teeypwo*. Puluwat, HIM & EM 223. New record.

**Plectranthus scutellaroides* (L.) R. Br.

Rare ornamental herb in village. No local name. Puluwat, HIM & EM 230. New record.

SOLANACEAE

**Capsicum frutescens* L.

Occasional shrub of home gardens, grown for its bright red fruits which are used to spice foods. Local name: *amwiik*. The plant is also used as a medicine for wounds. E: *yammwiik*. Puluwat, HIM & EM 228. New record.

Physalis minima L.

Rare herb of home gardens. Local name: *chi*. The fruit is eaten mainly by children. Puluwat, HIM & EM 221. New record.

SCROPHULARIACEAE

**Bacopa procumbens* (Mill.) Greenm.

Small yellow flowering herb of village paths. No local name. Puluwat, HIM & EM 276. New record.

BIGNONIACEAE

**Tabebuia heterophylla* Miers

Rare, introduced tree growing near the German missionary's house in Rewow Village. Chlorotic. No local name. Puluwat, HIM & EM 198. New record.

**Tecoma stans* (L.) Juss. ex HBK.

Commonly planted ornamental in villages. Local name: *peeal*. Puluwat, HIM & EM 261. New record.

ACANTHACEAE

**Barleria cristata* L.

Rare shrub growing along paths. Local name: *forget*. The plant is an ornamental. Puluwat, HIM & EM 245. New record.

**Blechnum brownei* var. *puberulum* Leonard

Small herb of trailsides. No local name. Puluwat, HIM & EM 277. New record.

**Pseuderanthemum carruthersii* var. *carruthersii* (Seem.) Guill.

Rare ornamental shrub in house gardens. Local name: *ulo*. The flowers are used in *mwaramwars*. E: *wulo*. Puluwat, HIM & EM 210. New record.

**Pseuderanthemum carruthersii* var. *atropurpureum* (Bull) Fosb.

Rare ornamental shrub in house gardens. No local name. Puluwat, HIM & EM 237. New record.

RUBIACEAE

**Dentella repens* J. & G. Forst.

Prostrate white flowering herb found trailside. No local name. Puluwat, HIM & EM 190. New record.

**Gardenia* sp.

Cultivated ornamental in village. No local name. The flowers are used in *mwaramwars*. Puluwat, HIM & EM 244. New record.

****Gardenia taitense* DC.**

Rare, ornamental shrub cultivated on maa. No local name. The flowers are used in *mwaramwars*. Puluwat, HIM & EM 292. New record.

***Guettarda speciosa* L.**

Abundant tree of woodlands. Local name: *mwohor*. The wood is used for a coconut husker and in the construction of canoe and house parts. E: *mohor* D&S: *mosor* FSO 1979: 265; N 1961. Observed on all islets. Puluwat, HIM & EM 266.

***Hedyotis biflora* (L.) Lam.**

Rare, small white flowering herb in school grounds and the cultivated depression in Rellong. Local name: *olloowaisiip* FSO 1979: 266; N 1961, 762. Puluwat, HIM & EM 161; HIM & EM 182.

***Ixora casei* Hance**

Occasional shrub in woodlands, also grown as an ornamental in the village. The species has also been re-introduced from Moen. Local name: *arhiow*. The flowers are used in *mwaramwars* and according to Elbert (1975; p. 254), in love magic and leis. The wood is used for fish traps and coconut huskers when mature. E: *yariiyow*. FSO 1979: 270. Niering (1961) lists *Ixora* sp. for Puluwat. Puluwat, HIM & EM 218; HIM & EM 243.

Morinda citrifolia* L. var. *citrifolia

Abundant shrub of woodlands. Local name: *neen*. The fruit is seldom eaten, and the wood is used for firewood and house parts. E: *neen*. D&S: *nan*. FSO 1979: 271; N 1961. Observed but not collected.

***Morinda pedunculata* Val.**

Occasional shrub in coconut and breadfruit woodlands on all islets. Local name: *neen*. The fruit is seldom eaten, and the wood is used for firewood and house parts. Puluwat, HIM & EM 239. New record.

****Spermacoce ernstii* Fosb. & Powell (ined.)**

Rare, found alongside Rewow Village path. No local name. Puluwat, HIM & EM 208. New record.

CAMPANULACEAE

**Hippobroma longiflora* (L.) G. Don

Common herb in localized areas in Rewow and Rellong villages. Local name: *am-wiik*. Puluwat, HIM & EM 150. New record.

GOODENIACEAE

Scaevola sericea Vahl

Abundant shrub found on all islets, on strand and in the coconut woodlands. Local name: *nat*. E: *nmat*. D&S: *nat*. FSO 1979: 281; N 1961. Puluwat, HIM & EM 157.

COMPOSITAE

**Ageratum conyzoides* L.

Occasional weed, collected from the *maa* of the cultivated depressions. Local name: *olloowaisiip*. Puluwat, HIM & EM 133. New record.

**Eclipta alba* (L.) Hassk.

Occasional white flowering herb collected at the Rellong *maa*. Local name: *soopal*. Puluwat, HIM & EM 291. New record.

**Tagetes erecta* L.

Rare cultivated plant of home sites. Local name: *peerang*. The flowers are used as leis and decorations. E: *peerang*. Puluwat, HIM & EM 227. New record.

Vernonia cinerea (L.) Less.

Common weed of the *maa* and disturbed places. No local name. FSO 1979: 292; N 1961. Puluwat, HIM & EM 197.

**Wedelia trilobata* (L.) Hitchc.

Introduced locally abundant ground cover in village. Local name: *atiat*. Puluwat, HIM & EM 153. New record.

Wollastonia biflora (L.) DC. var. *biflora*

Abundant shrub of the coconut woodlands and raised beaches. Local name: *atiat*. E: *yatiyat*. D&S: *adiat*. FSO 1979: 293. N. Found on all islets. Puluwat, HIM & EM 154.

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