Contributions of Clarence Y.C. Wong and Current Updates on the Flora of Romonum Island, Chuuk Lagoon, Federated States of Micronesia

Harley I. Manner

Research

Abstract

Recent field work on Romonum (Ulalu) Island, a small volcanic island in Chuuk Lagoon, Federated States of Micronesia, found 44 new accounts of vascular plants. Fosberg, Sachet and Oliver's (1979, 1982, 1987) geographical checklists listed only 30 species for the island, although in 1965, Stone (1967) found 124 species of vascular plants there. This study acknowledges the work of Clarence Y.C. Wong, who in 1947 collected 136 species of vascular plants and discusses the botanic history of Romonum Island. For unexplained reasons, his work has been largely ignored. Much remains to be discovered in defining the biotic diversity of the Pacific Islands. Finally, this study suggests that digital images may be a very appropriate tool for documenting the diversity of the islands.

Introduction

Beginning in September 1947, Romonum or Ulalu Island was a study site for a project called the Coordinated Investigation of Micronesian Anthropology (CIMA). This effort by the United States was aimed at investigating Micronesian culture, land tenure, and social relations, in order to best administer the region. CIMA researchers from Harvard, Yale and other institutions lived on the island and included Frank M. LeBar, George Murdock, Ward H. Goodenough, Isadore Dyen, Thomas Gladwin, and the botanist, Clarence Y.C. Wong. Goodenough returned to the island in 1965 to conduct further studies of Chuukese linguistics accompanied by Ruth Goodenough who studied adoption practices. Other research efforts on Romonum Island include: B.C. Stone who conducted a botanic survey and collection in 1965 (Stone 1967); Ann Fischer spent six months in 1949 studying the physical care and development of children within the Chuukese socio-cultural context (Fischer 1950); and in 2010, Mary Spencer conducted child studies on cognition and everyday life in home and school in the indigenous context, including the community goals for children's futures (Spencer 2011).

This paper details the botanic history of Romonum Island and highlights the work of Clarence Y.C. Wong, who made the first significant collection of plants from the island. By contrast, B.C. Stone who visited the island in 1965 and is credited with publishing the first flora of vascular plants made no reference to Wong's work. This paper also presents the results of field observations of new plant accounts found during a six-week (between February and March 2010) research trip to the island in support of Spencer's study and recommends using digital photographs to document the botanical diversity of islands.

Romonum Island is located in the Western Pacific Ocean, in Chuuk State of the Federated States of Micronesia. The island which is also known as Ulalu Island lies in the western part of Chuuk Lagoon at 7º 24' 25" N, 151º 40' 41" E, approximately 40 minutes by speedboat, when calm, from Weno (Moen) where the capital of Chuuk is located (Figure 1, Figure 2). Chuuk Lagoon is an almost atoll, and

Correspondence

Harley I. Manner, Geography and Micronesian Studies, University of Guam, UOG Station, Mangilao, Guam 96923, USA.
hi80865inlado@yahoo.com

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Romonum, as well as many of the islands of the lagoon is the drowned volcanic mountain top of a previously much larger island. The island is small, only 0.75 m^2 (184.5 acres) and rises to a height of 58 m above sea level (Figure 3). The population in 2000 numbered 1011 (FSM, 2002) with most people on the island earning their living through subsistence agriculture and fishing, although almost all families on the island receive remittances (money, food, clothes) from island relatives who have migrated to Weno, Guam, Hawai'i, and other parts of the United States (Spencer 2011). The island has also been known as Nichiyo To or Sunday Island (Higuchi 2011), and alternative names and spellings of the island are Oulala, Ulala, Romanum, Romalum, Remalum, Romolum and Rumarumum (Bryan, Jr. 1971).

Clarence Y.C. Wong and the Significance of the CIMA Team

The first known botanic survey of Romonum Island was conducted by Clarence Y.C. Wong, a member of the CIMA team that was stationed on the island in the latter half of 1947. The CIMA project reflected the US Navy's priority of anthropology (Kroll 2003) as evidenced by its membership. Of the 41 people who participated in the CIMA, 25 were cultural anthropologists (one of whom was also a psychiatrist). The remainder included four physical anthropologists, four linguists, three geographers, two sociologists, one filmmaker, one other psychiatrist, and a botanist (Kiste and Marshall 1999). Most of these researchers produced highly regarded studies of the Chuukese. However, as Wong did not publish the results of his research, his efforts as a botanist are not well known. There are at least three references to Wong's participation in the CIMA and his work on Romonum. The first is simply a listing of Wong's participation in the CIMA projects on both Romonum and Yap in Kiste and Marshall (1999). Wong is mentioned by Lebar (1964) and Goodenough (1951) who were members of the Truk (Chuuk) CIMA project on Romonum. LeBar (1964:iii) wrote: "I lived on Truk as one of a team of six investigators from July 1947 until January 1948. The other members of the group were George P. Murdock, Isidore Dyen, Ward H. Goodenough, Thomas Gladwin, and Clarence Wong." Furthermore, Lebar (1964:v) notes: "The floral identifications were made by Clarence Wong and subsequently checked by F.R. Fosberg." With respect to their responsibilities, Goodenough (1951:6) wrote: "A tentative division of labor, subsequently somewhat modified in the field, was worked out whereby Dr. Dyen was to concentrate upon linguistics, Mr. Wong upon ethnobotany, Mr. Lebar upon the technological and economic aspects of the culture, Mr. Gladwin upon the life cycle and personality, Mr. Goodenough upon interaction

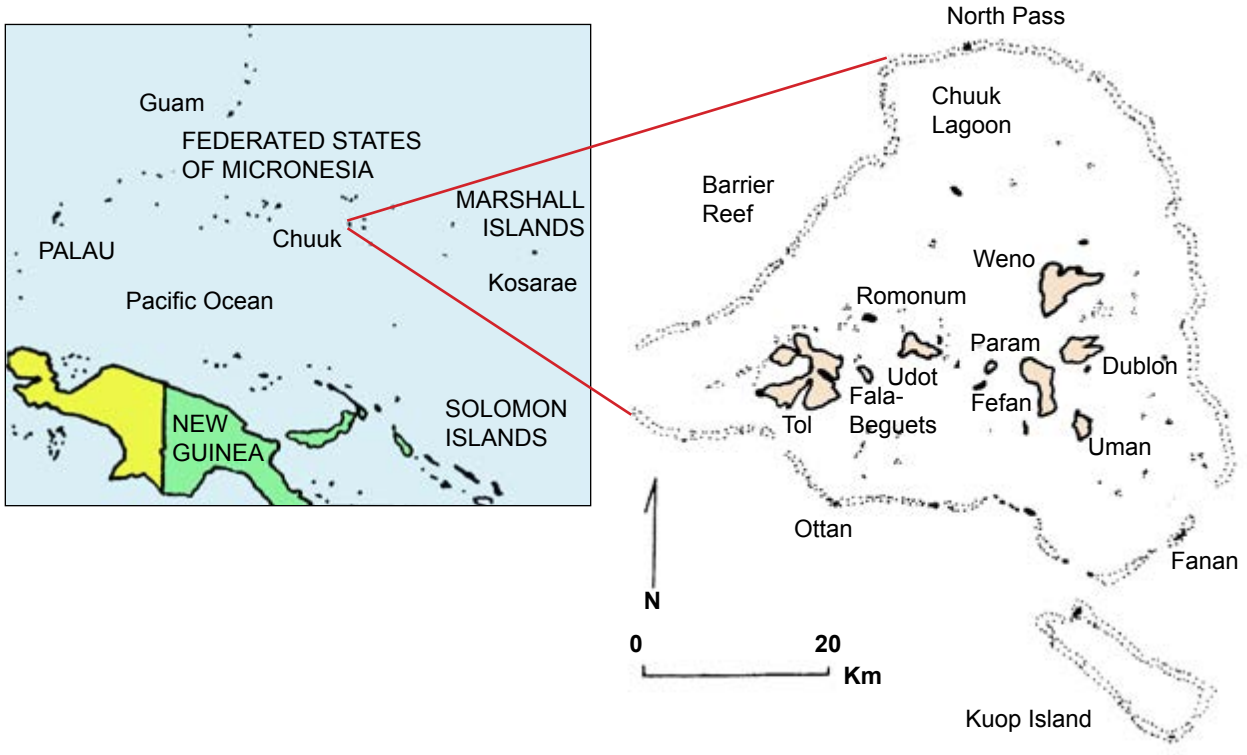

Figure 1. Western Pacific Ocean, the Federated States of Micronesia, and the Islands of Chuuk Lagoon. Romonum is located in the western part of Chuuk Lagoon.

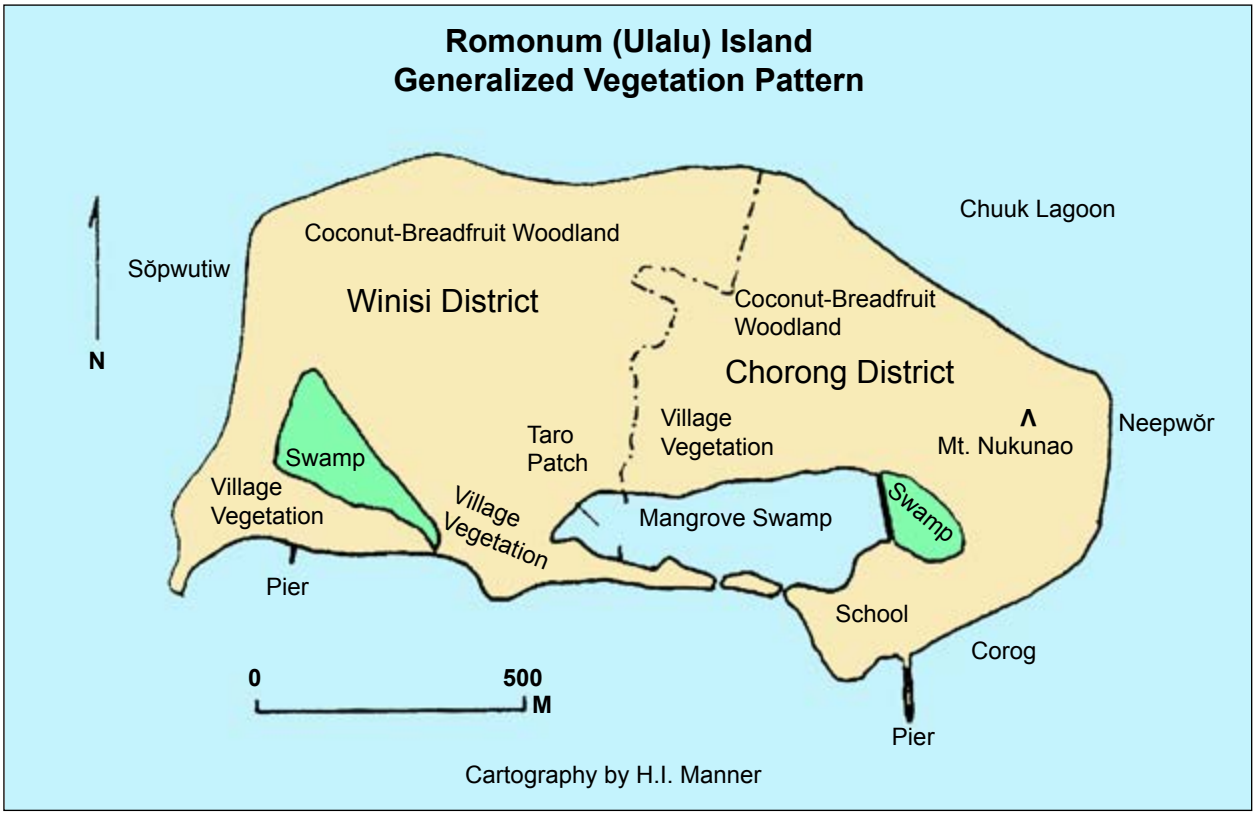

Figure 2. Vegetation and landuse map of Romonum Island.

Figure 3. The pattern of vegetation and landuse is depicted in this airphoto of Romonum Island. The view is from the east and looking towards the west. The large mangrove swamp (in Chorong District) is clearly seen near the bottom left of the photo. Permission to use the airphoto courtesty of P. Colin, Director, Coral Reef Research Foundation.

patterns and religion, and the writer upon social organization and property."

Lebar's and Goodenough's comments aside, little else is known of Clarence Wong. Kiste and Marshall (1999) list Wong's affiliation with Harvard and Yale, while Goodenough (1951:6) said that Clarence Wong was from Honolulu. The University of Hawai'i Records Office indicated that Wong began his studies there in September 1939 and was awarded a Bachelor of Arts degree in botany on June 10, 1947 (Nakama 2011). Information in Wong's plant database at the B.P. Bishop Museum Herbarium (BISH), shows that Wong made a collecting trip to Micronesia during the previous year. In the summer of 1946, Wong collected plant species under the sponsorship of the United States Commercial Company (USCC) Expedition to Utagal Islet, Woleai Atoll in Yap (July 28), Kolonia, Pohnpei (August 9) and Lelu, Kosrae (August 19). Clarence Wong died in Honolulu, Hawai'i, on March 15, 1995 at the age of 75 (Honolulu Advertiser 1995). Wong's obituary stated that he was a retired State of Hawai'i agricultural inspector. Wong is survived by his wife Dora, age 92 in 2011, and younger offspring and relatives who know little of his work in Micronesia after WWII. Wong's photograph is shown in Figure 4.

Significance of Benjamin Stone's Collection

Benjamin C. Stone conducted botanic and vegetation fieldwork on Romonum Island in January 1965. Of his visit to the island, Stone (1967:98) wrote: "At that time Prof. Ward Goodenough of the Department of Anthropology, University of Pennsylvania, was engaged in a lengthy restudy of the people of Romonum Island, and he invited me to stay for a time there." Interestingly, given Goodenough's earlier relationship with Wong in 1947 and various interactions between Stone and Goodenough in 1965, Stone's paper makes no reference to Wong's earlier work on the island. As examples, according to Stone (1967), Goodenough allowed him (Stone) "to make use of his map, to which I have added some indications of the vegetation" and "He has also provided his critical ear, a knowledge of Trukese dialects and the orthography for most of the plant names given herein. Most names were verified by Dr. Goodenough" (Stone 1967:98). Stone spent three days (January 28-30) on Romonum and one day (January 31) on the adjacent island of Tol. He deposited his collection in the University of Guam Herbarium (GUAM), and sent duplicate specimens to BISH and the U.S. National Herbarium at the Smithsonian Institution (US).

Materials and Methods

Previous information on the botany and flora of Romonum Island were located and analyzed in order to ascertain the significance of Wong's collection. These materials included the following: 1. Stone's 1965 study; 2. A Filemaker© listing of Stone's Romonum specimens in the GUAM database; 3. Electronic copies of Stone's Micronesian collections from BISH and US databases; 4. Wong's electronic database and digitized specimens in the US herbarium; 5. A species identification list by Fosberg of Wong's 1947 to 1948 Micronesian collection in the BISH herbarium (Anon n.d.); and, 6. An electronic spreadsheet of Wong's accessions in the BISH database. Details of these items are presented below.

Stone's 1965 Study

This study, which was published in 1967, lists 117 species of vascular plants of which 47 were listed as collected and 70 observed. Each of these listings is presented in Appendix 1.

Figure 4. Clarence Y.C. Wong, circa 1970. Photograph courtesy of Eden Lee, Pearl City, Hawaii, April 6, 2011.

Filemaker© Listing of Stone's Romonum Specimens in the GUAM Database

The collection in the GUAM herbarium was reviewed manually for Stone's specimens from Romonum. The collection numbers, accession numbers and other information for those species are listed in Appendix 1. There are 57 species represented by 58 numbers.

Stone's Collections in the BISH and US Herbaria

The BISH database of Stone's collection consists of 725 entries. Nineteen Romonum Island and seven Tol Island specimens are listed in this database. Stone's collection in the US herbarium contains 368 entries. Only two specimens from Tol Island are listed.

Wong's US Herbarium Electronic Database and Digitized Secimens

The database of Wong's collection in the US herbarium lists 258 entries of which 236 numbers were collected in Micronesia between July 28, 1946 and March 4, 1948. Ninety four numbers list Truk (Chuuk) as the collection site. It should be noted that 13 of the entries were made before 2012, with the earliest occurring in November 2002. The remaining 81 entries were added to the database in 2012 as a part of the Smithsonian's Flora of Micronesia Project (Khan 2013), and of that number, 12 listed Romonum (Ulalu) as the specific collection site. Five of the 12 specimens collected on Romonum had duplicate specimens and collection numbers which listed Truk as the collection site. Four species listed Tol Island as the collection site and one entry was collected on Udot Island. In August 2010, 15 high resolution (TIFF images averaging 3900 x 5000 pixels and 55 MB) digitized specimens of Wong's 1947-1948 CIMA project from the US herbarium were examined for collection site information. The labels entitled "Flora of the Caroline Islands, Plants of Truk" do not list the specific island of collection. An example of this label and specimen is shown in Figure 5 and Figure 6. In January 2013, a TIFF image of Wong's specimen 159 bearing a label entitled "Yale CIMA Expedition to Truk (1947)" was made available for viewing. This specimen listed Romonum (Ulalu) Island as the collection site and is shown in Figure 7. An additional nine JPEG images averaging 2.5 MB were also viewed for their collection site data.

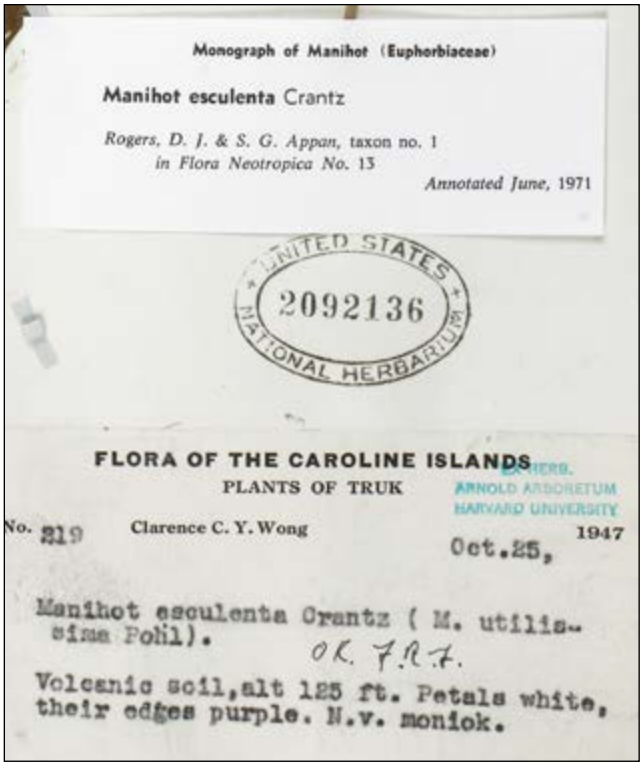

Figure 5. Label of Clarence Wong's # 219, Manihot esculenta specimen from the US herbarium. Most of the labels do not specify the collection site. Thus the collection date and other notes were critical in determining that this and other specimens were from Romonum Island.

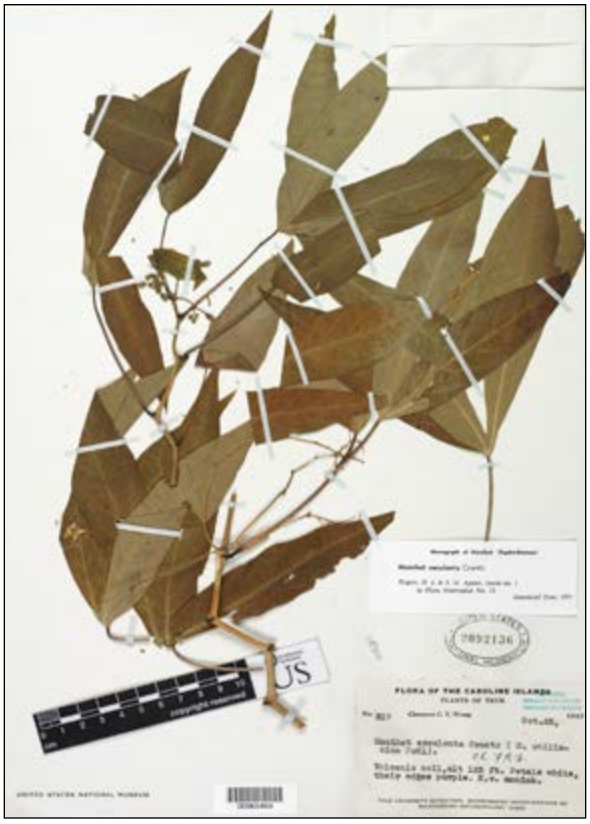

Figure 6. Specimen sheet of Clarence Wong's # 219, *Manihot esculenta* Crantz from the US herbarium. The original image was 55 Mb in resolution.

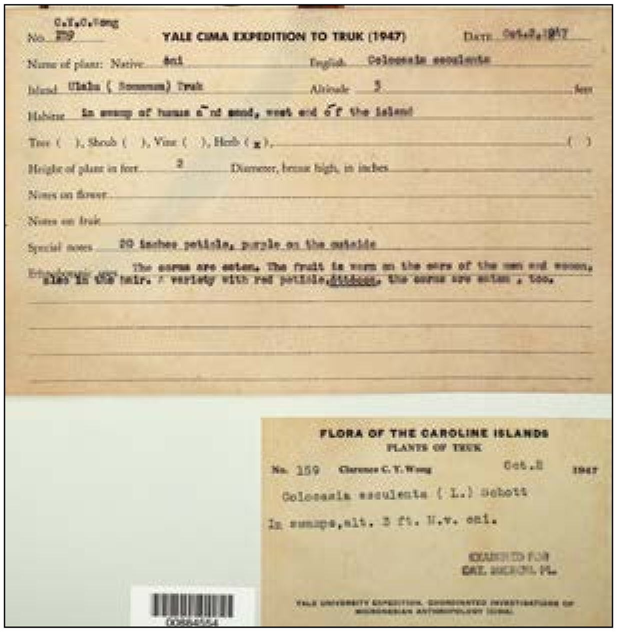

Figure 7. An example of a label that identifies Romonum (Ulalu) Island as the collection site. The original specimen sheet was 55 Mb is resolution. Most of the specimens with this label -Yale CIMA Expedition to Truk (1947) – are culturally important to the Romonum Islanders and other Chuukese.

The Species Identification List by Fosberg of Wong's 1947 to 1948 Micronesian Collection

This listing is a carbon copy of a typed document at BISH. The listing is entitled "Wong's Micronesian Collections: Determinations by F.R. Fosberg September 1949." The author of this list is referenced here as Anon (n.d.) although in all likelihood it was produced by Fosberg in 1949. The list is simply that: a list of identified species (including their authorities) and their collection numbers. The list begins with number 113 [*Vigna marina* (Burm.) Merr.] and ends with number 564 [*Catharanthus roseus* (L.) G. Don]. There are no identifiers such as date and island of collection. The numbers run consecutively. There are a few non-vascular plants such as fungi. This listing of determinations is in all likelihood that which LeBar (1964) referenced earlier.

Wong's Accessions in the BISH Database

Wong's Micronesian database in BISH lists the accessions from his work with USCC between July 28 and August 19, 1946, and CIMA between September 24 and March 5, 1948. Wong's name in the database for the USCC collection is given as Wong, C.Y.C., while his name for the CIMA collection is given as Wong, C.C.Y.

Various papers, for example Fosberg and Oliver (1980, 1982), and others, which cited Wong's Micronesian specimens were reviewed for collection site information. Additionally, the GUAM database was manually reviewed for Wong's specimens from Micronesia, particularly Romonum. Three geographical checklists of Micronesian plants (Fosberg *et al.* 1979, 1982, 1987) were reviewed for species presence on Romonum Island and compared with the species lists of both Stone and Wong.

During the 2010 fieldwork period, reconnaissance trips were made on a daily basis in order to gain an impression of the island's vegetation, in particular the abundance and occurrence frequency of its species. The results of these observations are presented in the species list in Appendix 1 expressed in relative terms: rare, occasional, common, and abundant. In addition, high resolution digital photographs were taken with an Olympus C5050 to document the island's vegetation and previously unrecorded species. and for identification with known specimens if needed. These digital images (JPEGs, 1920 x 2160 pixels) averaged between 2 - 6 megabytes in size. The use of photography and digital images in field research has its advocates. For example, McClatchey, *et al.* (2008:171) wrote: "Photographic recordation of objects is an essential element of modern field research. Digital photography has become relatively cheap and is the best means for rapidly sharing data among the local group of researchers as well as the global community." Further discussion of the validity of using digital images is presented later in this paper.

Results and Discussion

Identification of Wong's Romonum Collection Numbers

Comparison of Wong's CIMA accessions in the BISH and US against the list of identifications by Fosberg (discussed above) suggests that No. 113 to 305 (approximately 190 species) were collected in Chuuk between September 24 and November 19, 1947, while Nos. 306 to 564 were collected in Yap starting January 8, 1948. Analysis of Wong's collections in the US and BISH databases indicate that only a few of the specimens that Wong collected in Truk listed Romonum Island as the specific collection site and that many of the Truk specimens that Wong collected were missing from either database. Moreover, as Truk is composed of many islands, it was necessary to first determine which of the approximately 190 species Wong collected from Romonum and the other islands of Truk by cross-referencing each of the above materials (Items 4-7) with each other and by making a number of inferences.

First, as the CIMA project was located on Romonum and unless otherwise indicated, it was assumed that most of the Chuuk specimens came from that island. A second inference was predicated on the fact that while travel between the islands was possible, it was very unlikely that Wong would have made collections on two different is-

lands on the same day. For example, one specimen (No. 237 and 237A) in Wong's BISH database listed Ulalu (Romonum) Island as the collection site. As this species [*Acalypha amentacea* var. *trukensis* (Pax & Hoffm.) Fosberg] was collected on Ulalu (Romonum) on November 1, 1947, it is very likely that Nos. 235 to 246, which bore the same collection date, were also collected on Ulalu Island.

The 12 specimens in the US database (and some of the digital images viewed in 2013) clearly indicated that Wong collected plant specimens from Romonum Island on the following dates: October 2, 13, 23 and 25, 1947; and, November 1 and 19. 1947. Therefore, Nos. 159-177, 178-195, 196-225, and 237-246 were collected on the island.

According to the US database, Wong collected specimens on Udot Island on November 10 and on Tol Island between November 12-14, 1947. As a result Nos. 254-296 were excluded from the species listing for Romunum Island. Further evidence to exclude these numbers were the collection elevation. Twelve of the 17 specimens were collected between 200 and 400 m, well above Romonum's maximum elevation of 58 m.

Other research papers on the botanic literature of Micronesia were also helpful in deciding whether a particular species was collected on Romonum or elsewhere. In their taxonomic studies of the Compositae and Goodeniaceae, Fosberg and Sachet (1980) examined two specimens that Wong collected in Truk wherein under the section "Geographic Records and Specimen Examined for Truk," Ulalu is listed as the collection site for *Vernonia cinerea* (L.) Less., (Wong 145, BISH and US) and *Scaevola taccada* (Gaertn.) Roxb. (Wong 162, US and BISH). Both of these specimens were missing from the BISH and US databases but based on the consecutive sequencing of collection numbers and dates were probably collected on Sept. 26 and October 2, 1947 respectively. As there are very few replicated species between Nos. 113 and 305 and given the inferences cited earlier, the information presented above strongly suggests that all specimens collected by Wong between September 24 and November 97 (Nos. 113 to 253) and November 19, 1947 (Nos. 297 to 305), totaling 135 species in all, were from Romonum Island. Unfortunately, only 81 of the 135 species from Romonum can be found in the BISH database and at present, only 75 are listed in the US database.

The Vascular Flora of Romonum Today

Today, Romonum Island has a vascular flora of 231 species. Stone (1967) collected and observed a total of 124 species from Romonum, and despite the lack of collection site information, it is very likely that Clarence Wong found 136 species there. The 2010 fieldwork found 44 new species records for Romonum Island, presumably introduced after 1965. Appendix 1 presents details of the vascular plant species found by Stone in 1965, Wong in 1947, and the author of the present study in 2010. Two species (*Dioscorea alata* L. and *Trichosanthes cucumerina* L.) were recorded by Fosberg *et al.* (1987 and 1979, respectively) as present on the island and are also listed in Appendix 1. Introduced species are identified by an asterisk (*). Previously unrecorded species are presented in boldface print. For the most recent study of Romonum plants, observations and digital photographs were taken of the plants and vegetation. The identification numbers of these photos and the relative abundance of each species are also given in Appendix 1. The Chuukese names, using the orthography of Goodenough and Sugita (1980, 1990), and traditional uses of these species are also presented in Appendix 1. The comparative contributions of the three studies to understanding the vascular flora of Romonum Island are summarized in Table 1.

Table 1. Comparative data on vascular plants of Romonum Island. Data for Stone from GUAM, BISH and US databases and Stone 1967. Data for Wong from Anon n.d., BISH, US and GUAM databases. US database last accessed 2/8/13. Data for Manner from 2010 field study.

No. of Species		Author		
		Stone	Wong	Manner New Records Only
Collected		57	136	
Observed		67		44
Totals		124	136	44
Common to Stone and Wong		78		
No. of species in databases	BISH	19	74	
	US	0	65	
	GUAM	43	1	

In his 1967 paper, Stone listed 117 species of vascular plants, of which 47 were listed as collected and 70 observed. However, examination of Stone's Micronesian collection in GUAM lists 57 collection numbers, seven (7) of which were not listed in his 1967 paper. These species were the ferns (*Trichomanes humile* G. Forst., *Antrophyum reticulatum* (G. Forst.) Kaulf., *Asplenium laserpitiifolium* Lam., *Davallia heterophylla* Sm.), *Scleria polycarpa* Boeckeler, *Maesa carolinensis* Mez, and *Rhus taitensis* Guillem. Three species (*Blyxa aubertii* Rich., *Thalassia hemprichii* (Ehrenb. ex Solms) Asch., and *Cordyline fruticosa* (L.) A. Chev.) as evidenced by their GUAM herbarium collection numbers which Stone listed as observed were actually collected. Thus, in contrast to the 117 species listed in his 1967 paper, Stone collected 57 species, observed 67 instead of 70 species and found a total

of 124 species of vascular plants on the island. It is not known why Stone did not list all of his collected species in his 1967 paper. Unfortunately, 14 of Stone's Romonum accessions in the GUAM database are no longer present, reducing the number of current accessions to 43. Only 19 of Stone's Romonum specimens are listed in the BISH database; some have yet to be entered (Imada 2010, email communication). None of Stone's Romonum specimens are currently entered into the US database.

As for Wong's collection in BISH, of the 136 species that Fosberg identified in 1949 (Anon n.d.), 74 are still listed in the database. It is not known what happened to the other 62 specimens. Further research of the herbaria records could reveal whether they were borrowed and never returned, misfiled upon return, discarded because of space considerations, destroyed because of user or other damage, not entered into the database, or other reasons.

Currently, 65 of Wong's collection from Chuuk are listed in the US database. This number is very likely to increase because the Smithsonian Institution is compiling an online database for its Ethnobotany project and another for its Flora of Micronesia project. The Ethnobotany project was started in November 2011 by adding some data from a previous database, while 81 new entries were added to the Flora of Micronesia project when it was started in April 2012 (Khan 2013). It is very likely that all of Wong's Truk collection will be entered into the US electronic database.

Figure 8. A close-up of *Sphagneticola trilobata* (L.) Pruski. The original digital image was a jpeg at 1920 x 2160 pixels and 2 megabytes in size. Such close-ups provide the necessary details for accurate identification. Romonum Island, Chuuk State, Federated States of Micronesia.

In the recent 2010 study of the botany of Romonum, a total of 44 previously unrecorded species were found. Two were indigenous, none were endemic. The majority of species were introduced ornamentals and food plants introduced by Romonum Islanders or the FSM Department of Agriculture. Twenty one species were trees, shrubs or herbs valued mainly for their flowers which Romonum Islanders use in creating **mwarmwars** (flower headbands), while 12 species were food or fruit trees. Prominent food plants include *Xanthosoma sagittifolium* (L.) Schott, *Rungia* sp., and *Abelmoschus manihot* (L.) Medik.. Seven species were easily dispersed pantropical weeds and the remaining four were groundcovers. A few species, for example *Clerodendrum quadriloculare* (Blanco) Merr.

Figure 9. *Cuscuta obtusiflora* Kunth (center right) and *Phymatodes scolopendria* (Burm.f.) Ching (bottom and left). These two species are readily identifiable even at a distance. Romonum Island, Chuuk State, Federated States of Micronesia.

and *Syngonium angustatum* Schott are potentially invasive. Betel nut or *Areca catechu* L. is a highly prized recent introduction. Digital images of previously unrecorded species are listed in Appendix 1 and are available upon request. A few images are presented as examples in Figure 8 and Figure 9.

Of the 231 species found on Romonum Island, 103 (44%) are introduced or non-native species. Throughout the Pacific Islands the high proportion of introduced to native species is not uncommon. Many of the introductions are food, timber or ornamental plants; a few are weedy, accidental introductions. For example, on Puluwat Atoll in Micronesia, of the 182 species found there, 87 are introduced species of which 70 are considered purposeful introductions (Manner & Mallon 1989). On the upraised limestone island of Nauru which has a vascular flora of 493 species, only 59 species are indigenous; the vast majority of species (420) are recent post-European introduced garden plants (Thaman *et al.* 1994). The remaining 14 species are either aboriginal introductions or extinct. Even more striking is the number of cultivated varieties of food plants. For Woleai Atoll, Alkire (1974) listed 19 varieties of *Colocasia esculenta* (L.) Schott (taro). Romonum Islanders can describe and name 8 varieties of bananas (*Musa* spp.), 3 varieties of coconut (*Cocos nucifera* L.), and 10 varieties of the seedless breadfruit (*Artocarpus altilis* (Parkinson) Fosberg) (Manner 2010). These high numbers of introduced species and varieties may be conscious attempts by Pacific Islanders to increase the biotic (and food) diversity of their islands.

The Significance of Wong's Romonum Collection

The importance of Wong's Romonum collection is reflected by its utility as shown in Table 2. Of the 30 species listed by Fosberg *et al*. (1979, 1982, and 1987) for Romonum Island, 23 of those listed species were probably collected by Wong and 8 of the 30 were collected by Stone. Five of the species listed by Fosberg *et al*. (1979, 1982, and 1987) were collected by both Stone and Wong. Furthermore, while Wong did not publish the results of his collections, his specimens have been examined and cited for taxonomic purposes. Fosberg and Sachet (1980) cited two of Wong's specimens from Romonum in their taxonomic analysis of the Compositae and Goodineaceae. On the Poaceae, Fosberg and Sachet (1982) listed Wong 182 (*Oplismenus compositus* (L.) P. Beauv. var. *compositus*) and Wong 245 (*Paspalum cartilagineum* var. *biglumaceum* Fosberg & Sachet) for Chuuk and three other Yapese specimens that Wong collected in 1948. Koyama (1964) also lists no less than 13 specimens that Wong collected from Chuuk and Yap between 1947 and 1948. Tsuda *et al.* (1977) list one of Wong's seagrasses [No. 150, *Enhalus acoroides* (L. f.) Royle)] from Chuuk. St. John (1952) cited one of Wong's specimens (No.129, *Fimbristylis cymosa* R. Br.) from Chuuk. In his taxonomic review of the grass species *Lepturus*, Fosberg (1955) lists from Truk, *Lepturus repens* var. *subulatus*, n. var. Wong 114 (US, BISH). Fosberg and Raulerson (1990) list Wong 320 (*Oxalis corniculata* var. *repens* (Thunb. Masam.) from Yap. Finally, in his notes of the Araliaceae, Stone (1965) examined *Polyscias grandifolia* Volkens (Wong 328, BISH) from Yap but not a *Polyscias fruticosa* (L.) Harms from Chuuk (Wong 189, BISH) or Yap (Wong 360, BISH). At the very least, this citation documents Stone's knowledge of Wong's presence in Yap, but not Wong's work in Chuuk. These various citations suggest that Clarence Y.C. Wong's work in Micronesia should be acknowledged as significant to the understanding of the botany of Romonum, as well as Yap.

Table 2. Wong's Contributions to the flora of Romonum. Data for Stone from GUAM herbarium and his 1967 paper. Data for Wong from Anon (1949). FSO: Fosberg, Sachet and Oliver (1979, 1982, 1987).

No. of Species	Author		
	Stone	Wong	Referenced by FSO
Collected	57	136	30
Observed	67		
Referenced by FSO	8	23	
Found by both Stone and Wong, and cited by FSO	5		

Was Stone Familiar With Wong's Work?

Aside from Stone's 1967 paper on the flora and vegetation of Romonum Island, Wong's 1947 botanical collection of the island must be considered a benchmark. Thus, it is puzzling why Stone did not reference Wong's collection and for a number of reasons. First, as noted previously Ward Goodenough and Clarence Wong were part of a CIMA team that resided on Romonum Island in 1947 and Goodenough was aware of Wong's work as an ethobotanist. As noted earlier, Goodenough verified the Chuukese plant names for the specimens that Stone collected, which incidentally, are identical or similar to the Chuukese names found on Wong's collection labels in the US herbarium. With these interactions, Goodenough's previous acquaintance with Wong, and Stone's objective of collecting plants, it was highly unlikely albeit possible, that Goodenough did not inform Stone of Wong's earlier survey and collection of the island.

Second is the University of Hawai'i connection. Both Stone and Wong received their degrees in botany at the University of Hawai'i, albeit at different time periods, and were in all likelihood, both associated with Harold St. John, a prominent figure in the University of Hawai'i's Botany Department

between 1928 to 1958 (Anon 1979). During that time St. John served as department chair twice (1929-1940 and 1943-1954), led many research expeditions to the islands of the Pacific, SE Asia, and the Indian Ocean (Anon 1979). Stone received his Ph.D. in Botany from the University of Hawai'i in 1960 (Raulerson 1994) and had served as an assistant to St. John in their studies of Pandanus throughout Oceania where they "discovered from two to five times as many kinds of Pandanus as were known from earlier explorations" (Wooten n.d.).

It should also be noted that F.R. Fosberg had worked under St. John and received a Masters in Botany there in 1935 (Stoddart 1994). Clarence Wong matriculated at the University of Hawai'i in 1939 and graduated with a BA in Botany in June 1947, just three months before embarking on his stint with the CIMA project. It is also certain that St. John was aware of Wong's botanical surveys having cited one of Wong's specimens (*F. cymosa*, No. 129) from Truk (St. John 1952). It is very likely that St. John had a role in Wong's appointment to the USCC in 1946 and the CIMA in 1947, as he was the chairman of the department during that period.

Figure 10a. Breadfruit is a starchy staple on Romonum Island, Chuuk State, Federated States of Micronesia. Pounded breadfruit is a traditional way of serving breadfruit. Pounding cooked breadfruit (*Artocarpus altilis* (Parkinson) Fosberg) to make **kon**. The pounder (**po**) is made from coral imestone rock and the pounding board called a **nif** is from the root buttresses of *Heritiera littoralis* Aiton.

Third, as pointed out earlier, Stone's (1965) study of the Araliaceae is evidence that he knew of Wong's collection in the BISH. However, it is possible that Stone was unaware of Wong's specimens of *P. fruticosa* from Chuuk (Wong 189, BISH) or Yap (Wong 360, BISH). It is thus, difficult to understand why Stone did not extend his study of the Araliaceae to include *P. fruticosa* and why he seemed to be unaware of Wong's work on Romonum Island.

Interestingly, Wong was the only other botanist affiliated with the CIMA project. The reasons why Wong, who had received his undergraduate degree in botany only a few months earlier, was selected for the CIMA project in contrast to more senior botanists may never be known, although he may have been the right person in the right place at the time (known as a reliable botanist by members of the

Figure 10b. Pounded breadfruit is wrapped in breadfruit leaves (*Artocarpus altilis* (Parkinson) Fosberg) for storing. **Kon** is often eaten with coconut milk. Romonum Island, Chuuk State, Federated States of Micronesia

Figure 10c. Parcels of **kon** for presentation or transporting. Romonum Island, Chuuk State, Federated States of Micronesia

Figure 11. Coastal landscape. A view of the southern coast of Romonum Island, Chuuk State, Federated States of Micronesia, looking eastwards.

Figure 12. Small patch of *Cyrtosperma merkusii* (Hassk.) Schott, taro, growing in a coconut-banana agroforest. *C. merkusii* is one of four species of taro grown on Romonum Island, Chuuk State, Federated States of Micronesia.

Pacific Science Board who were partly responsible for the makeup of the CIMA teams). Without doubt, Wong was very familiar with the vegetation and plants of Micronesia, having collected there in 1946 with F.R. Fosberg and the USCC. It should also be noted that Micronesia was a Strategic Trust during the American administration of Micronesia and that access to the region was controlled by the US Navy for reasons of military security (Hezel 1995). Visitors to Micronesia, except those on official duty needed security clearances to travel to the Micronesian Islands until its lifting in 1963. Thus, Wong's earlier inclusion may have made him attractive as a practical choice from the security perspective.

Digital images as evidence of species presence

For the 2010 fieldwork on Romonum Island, digital photographs were taken to document the island's vegetation, landuse, people and plant species. The digital photographs for 41 of the 44 previously unrecorded species were compared with online plant image databases (for example, Smithsonian National Museum of Natural History, Missouri Botanical Garden) to confirm or reconfirm species identifications. Each digital image measured between 2 and 6 megabytes, with identifying characteristics in sufficient detail for identification purposes. The digital images for three readily recognized species, *Polygala paniculata* L. (a commonly found small herb), *Citrullus lanatus* (Thunb.) Matsum. & Nakai (watermelon), and *Syzygium malaccense* (L.) Merr. & L.M. Perry (kavika apple) could not be found. The process of identifying the Romonum species using downloaded online database images was a lot simpler and faster than using herbarium voucher specimens.

The advances in high resolution digital photography, high speed transmission of images via the Internet, and large computer hard drive storage capacities have fostered the use of digital images in species identification for experts. Practically every major herbarium in the world has, in addition to developing electronic databases of their collections, created "virtual herbaria" for educational and scientific purposes. They have found that using digital images is faster, cheaper and reduces the handling of sometimes fragile or rare plant specimens. The efficacy of electronic databases and virtual collections has been fostered by the concurrent development of protocols which define the way (size, resolution, formats) plant specimens are digi-

Figure 13. Abandoned raised beds now dominated by *Tectaria fernandensis* C. Chr. In the 1940s, *Ipomoea batatas* (L.) Lam. was cultivated on these mounds. The water is brackish because of a breach in the seawall barrier. In the background, coconuts, breadfruit and a large *Ficus* sp. can be seen. This area is shown as the eastern segment of the swamp in Chorong District, Romonum Island, Chuuk State, Federated States of Micronesia.

Figure 14. Trunk of *Pandanus tectorius* Parkinson stripped of its leaves for weaving. The surrounding area is being cleared for a subsistence garden. The leaves have been used for weaving baskets and mats. Romonum Island, Chuuk State, Federated States of Micronesia.

Figure 15. Recently painted house. Houses on Romonum Island are very modest as construction materials for modern houses are expensive and can only be transported by small boats to Romonum Island, Chuuk State, Federated States of Micronesia.

tized for archives or dissemination, the hardware (scanners, cameras, computers), software programs, the structure and syntax of accompanying metadata, and a host of other information which may be important in the use of digital photographs for species identification (Schmidt 2007). Such protocols are readily accessible on the Internet for the National Herbarium of the Netherlands, the New York Botanical Garden, and the Australian Virtual Herbarium.

Nyugen (2005:13) has suggested that carefully prepared digital images can be "a satisfactory alternative to the traditional mailing of herbarium sheets" to experts for identification purposes, but does not advocate using photographs alone as vouchers. Similarly, Malek (2000) has stated that: "By looking at the detailed pictures of these few plants, and reading the detailed descriptions of the selections, one should be able to decide on the final name for the plant at hand." Citing Hodel *et al.* (1999) who used digital photography exclusively to record species in a study, Nguyen (2005:13) says that, "This is not recommended because a photograph, while convenient for sharing information, does not provide the level of information available from the real plant. Information that can be used to verify the identity of the plant, review or assess a study, or provide material for additional studies (*e.g.*, anatomical, chemical, molecular)."

This paper suggests that digital images of the majority of plants found in the Pacific Islands may be sufficient evidence of a species presence and should be accepted as such. At the species level, medium to high resolution images can easily show the distinctive characteristics for identification purposes. Such photographs are more substantive than a species occurrence denoted by "observation." For example, no one has questioned the presence of the 67 species that Stone observed on Romonum Island. In the case of new, previously undiscovered or unknown species, however, appropriate plant materials should be required as voucher specimens.

Figure 16. An older house on higher ground near the center of Romonum Island, Chuuk State, Federated States of Micronesia, surrounded by the mixed tree garden (traditional agroforest) of breadfruit and bananas.

Conclusions

Currently, Romonum Island has a vascular flora of 231 species. Stone is acknowledged as the first person to publish a paper on the flora of the island. However, Clarence Y.C. Wong, as a member of the CIMA project team was the first scientist to collect plant species from Romonum Island. Unfortunately, most of the species that Wong collected in 1947 did not indicate a specific collection site. However, by cross-referencing a database of his collection in BISH with other sources of information, I suggest that Wong found 136 vascular plant species on Romonum Island. Furthermore, Wong should be considered an important contributor to the botany of Micronesia as some of his specimens have been referenced for taxonomic purposes (Fosberg *et al.* 1976, 1982, 1987; Fosberg & Sachet 1980, 1982; Stone 1965).

Despite personal interactions and academic commonalities, it is not known why Stone did not reference Wong's work from Romonum Island. Goodenough, a colleague of Wong on the 1947 CIMA project, was Stone's host in 1965. Both Stone and Wong were graduates of the University of Hawai'i's botany program, albeit at different times and levels, and Stone did access and reference Wong's 1948 collection of *P. grandifolia* from Yap (Wong 328, BISH). Whether Stone came across Wong's specimen of *P. fruticosa* from Romonum is not known.

Of the 44 new records for Romonum, the majority were introduced, ornamental or food plants. More likely than not, Romonum Islanders will probably introduce more like species to the island as the need or desire arises.

High resolution digital photographs were useful for identifying newly recoded species from Romonum Island and may be appropriate for new records citations. The development of electronic databases, digital image collections and their protocols throughout the world indicates their growing appreciation, need and use.

Figure 17. A section of a mixed tree garden or traditional agroforest. Using slash and burn techniques, clearings in the agroforest are planted with a range of plants. The cultivated plants in the foreground are pineapple, papaya and *Alocasia macrorrhizos* (L.) G. Don (taro). In the background, identifiable trees are mango and breadfruit. Romonum Island, Chuuk State, Federated States of Micronesia.

Figure 18. In 2010, Romonum and other parts of Chuuk State, Federated States of Micronesia experienced six months of drought. Wells in the western half of the island (Winisi District) ran dry. Children were tasked with collecting water from wells in Chorong District in the eastern half of the island. Here they are poling a boat with a large barrel to transport water.

Wong made his Romonum collection in 1947. Today it no longer lies in obscurity because of the digital revolution. Whether digital images will be accepted as evidence of presence remains to be seen. Their acceptance will depend upon their function and the standards that botanical authorities adopt. After all, digital photography did not exist when the requirement for voucher specimens was first written.

Figure 19. Two boys with their containers on a water collecting task. Such activities took place in the late afternoon to early evening. This photo was taken in March 2010 on Romonum Island, Chuuk State, Federated States of Micronesia..

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Figure 20. Young woman carrying firewood home on Romonum Island, Chuuk State, one of many small islands in the Federated States of Micronesia that does not have electricity. Firewood for cooking is a cheaper and sustainable alternative to using kerosene or electricity.

Figure 21. Young man carrying *Cyrtosperma merkusii* (Hassk.) Schott (giant swamp taro) stem/corm seedlings to plant in his garden. Many Romonum Islanders are subsistence farmers or fisherfolk. Romonum Island, Chuuk State, Federated States of Micronesia.

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I dedicate this publication to Clarence Yeu Choy Wong of Honolulu, the botanist, who as a member of the Harvard-Yale group, Coordinated Investigations of Micronesian Anthropology (CIMA), first collected plants from Romonum Island, Chuuk Lagoon between September 24 and November 19, 1947.

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Appendix 1. Detailed listing of the vascular plants of Romonum Island, Chuuk State, Federated States of Micronesia (FSM). FSO: Fosberg, Sachet and Oliver (1979, 1982, 1987). Scientific name entries in red are new records for Romonum Island. Orthography of Chuukese plant names after Goodenough and Sugita (1980, 1990). * = Introduced species to Micronesian region according to FSO (1979, 1982, 1987). x = Observed but not collected by Stone. xx = Recorded species by FSO (1979, 1982, 1987) on Romonum Island.

Family / Scientific Name	Chuukese Name	Collection & Herbarium Accession Numbers					FSO Reference	Digital Image No.	Relative Abundance	Comments
		Stone		Wong						
		Coll. No.	GUAM Acc. No.	Coll. No.	BISH Acc. No.	US Acc. No.				
PTERIDOPHYTES										
Aspleniaceae										
Asplenium laserpitiifolium Lam.		5359	06607						Occasional	Collected in 1965, but not presented in Stone (1967).
Asplenium nidus L.	**núk**	x		121	Missing	Missing		P1010290	Common	
Davalliaceae										
Davallia heterophylla Sm.		5323	05112					P1010285		Collected in 1965 but not presented in Stone (1967).
Davallia sinensis (Christ) Ching	**pecheen attu**	5281	Missing	171	Missing	Missing			Occasional	Collected by Wong, October 2, 1947.
Nephrolepis biserrata (Sw.) Schott				122	Missing	Missing		P1010066	Common	Collected by Wong, September 24, 1947.
Nephrolepis hirsutula (G. Forst.) C. Presl	**ámááre**	5275	05113					P1010285	Common	FSO (1982) says this species is not in Micronesia except as a cultivated plant.
Dennstaedtiaceae										
Microlepia speluncae (L.) T. Moore	**sichón**			204	Missing	Missing			Occasional	Collected by Wong, October 2, 1947.
Hymenophyllaceae										
Trichomanes humile G. Forst.		5360	05387 05167							Collected but not presented in Stone (1967).

Family / Scientific Name	Chuukese Name	Collection & Herbarium Accession Numbers					FSO Reference	Digital Image No.	Relative Abundance	Comments
		Stone		Wong						
		Coll. No.	GUAM Acc. No.	Coll. No.	BISH Acc. No.	US Acc. No.				
Polypodiaceae										
Phymatosorus scolopendria (Burm. f.) Pic. Serm.	**wénnúmey**	5273	05240	116	Missing	Missing	xx	P1010166	Abundant	Recorded for Romonum Island by FSO (1982). Plant used in love magic and traditional medicine.
Pteridaceae										
**Antrophyum reticulatum* (G. Forst.) Kaulf.		5363	05380							Collected by Stone in 1965, but not presented in Stone (1967).
Tectariaceae										
Tectaria fernandensis C. Chr.	**ááppásew**	x		134	Missing	Missing	xx	P2010162 P3120243	Abundant	Abundant fern of swamps and abandoned taro patches. Recorded for Romonum Island by FSO (1982).
Thelypteridaceae										
Thelypteris interrupta (Willd.) K. Iwats.		x							Common	
SPERMATOPHYTES										
Acanthaceae										
**Asystasia gangetica* (L.) T. Anderson								P1010091	Common	Said to be a recent introduction from Hawai'i.
**Blechum brownei* Juss.	**fetinin nómwochchek**	x		241	1274459	Missing		P3170195	Occasional	
**Rungia* sp. Nees	**david**							P3140102	Occasional	Introduced leafy vegetable in early 1990s by FSM Agriculture. Generally known as *Rungia klossii* S. Moore although this name is unaccepted.
Amaranthaceae										
Alternanthera sessilis (L.) R. Br. ex DC.				214	128450	Missing		P3140089	Occasional	Said to be a Japanese introduction.

Family / Scientific Name	Chuukese Name	Collection & Herbarium Accession Numbers					FSO Reference	Digital Image No.	Relative Abundance	Comments
		Stone		Wong						
		Coll. No.	GUAM Acc. No.	Coll. No.	BISH Acc. No.	US Acc. No.				
Amaranthaceae continued										
Celosia argentea L.				234	128484	Missing		P1010088	Occasional	Found in village sites. A Japanese introduction. Grown for its flowers.
Gomphrena globosa L.	**tonenchuko**							P1010239	Occasional	Found in village sites. Grown for its flowers.
Amaryllidaceae										
Crinum asiaticum L.	**siipw**	x		201	Missing	2092126	xx	P3120236	Common	Coastal village planting. Grown along borders and paths for its flowers.
Pancratium littorale Jacq.		x						P3120244	Common	Coastal village planting. Grown along borders and paths for its flowers.
Zephyranthes rosea Lindl.		x							Common	Lawn herb.
Anacardiaceae										
Mangifera indica L.	**kangngit**	x		223	128834	2092139		P2280100	Abundant	Four varieties recognized. Fruit eaten.
Rhus taitensis Guillem.		5327	06806						Occasional	Collected but not presented in Stone (1967).
Annonaceae										
Annona muricata L	**saasaf**	x						P3140086	Common	Found in secondary forests and around homes. Fruit eaten.
Cananga odorata (Lam.) Hook. f. & Thomson	**pwanang pwuur**	x						P3140087	Abundant	Flowers used in headdresses and a source of fragrance.

Family / Scientific Name	Chuukese Name	Collection & Herbarium Accession Numbers					FSO Reference	Digital Image No.	Relative Abundance	Comments
		Stone		Wong						
		Coll. No.	GUAM Acc. No.	Coll. No.	BISH Acc. No.	US Acc. No.				
Apiaceae										
Centella asiatica (L.) Urb.	**nikótókót**	x		180	129761	Missing			Rare	Used as a traditional medicine for a number of ailments.
Apocynaceae										
Asclepias curassavica L.	**simwmweta**			173	Missing	2092114			Occasional	Trailside plant.
Cerbera manghas L.				188	130472	2092120			Rare	Flowers and fruit are used as garlands.
**Lochnera rosea* (L.) Rchb. ex Endl.								P3170207	Common	Found in garden sites.
**Plumeria acutifolia* Poir.	**sééwúrún wóón**			299	Missing	2608427		P1010181	Common	Flowers use in **mwarmwar** (garland for the head). A reddish- orange flowering variety is common.
**Plumeria obtusa* L.	**sééwúr**							P1010260	Rare	Two trees seen. White flowers used in garlands.
Araceae										
**Alocasia macrorrhizos* (L.) G. Don	**ká**, **pwerik**	x		215	101967	3290244		P1010066	Abundant	Third most important aroid food plant. A dryland taro.
**Colocasia esculenta* (L.) Schott	**oni**, **woot**	x		159	102106	3290220	xx	P1010163	Abundant	Recorded for Romonum Island by FSO (1987). One of 12 specimens in the US herbarium listing Romonum as the collection site.
**Cyrtosperma merkusii* (Hassk.) Schott	**pwuna**	x		158	102149	Missing		P2280099	Abundant	Collected by Wong on Sept. 26, 1947.The most important taro species cultivated on the island.

Family / Scientific Name	Chuukese Name	Collection & Herbarium Accession Numbers					FSO Reference	Digital Image No.	Relative Abundance	Comments
		Stone		Wong						
		Coll. No.	GUAM Acc. No.	Coll. No.	BISH Acc. No.	US Acc. No.				
Araceae continued										
Syngonium angustatum Schott								P1010159	Occasional	Two small patches near homesites found. Introduced for it distinctive leaves.
Xanthosoma sagittifolium (L.) Schott	**woten sapan**							P1010072	Common	Corms are used for food. As indicated by its native name, this is most likely a Japanese introduction.
Araliaceae										
Polyscias fruticosa (L.) Harms	**áchenechen**	x		189	123131	2608475			Occasional	Ornamental shrub and hedge plant found in village areas.
Polyscias guilfoylei (W. Bull) L.H. Bailey	**achenechen**							P3210042 P3190056	Rare	Ornamental shrub and hedge plant found in village areas.
Polyscias scutellaria (Burm. f.) Fosberg	**achenechen**	x							Occasional	Ornamental shrub and hedge plant found in village areas.
Polyscias tricochleata (Miq.) Fosberg	**achenechen**	x							Occasional	Ornamental shrub and hedge plant found in village areas.
Arecaceae										
Areca catechu L.	**pwpwu pu**							P3170231	Rare	Recent introduction. Cultivated, for its psychoactive nuts.
Cocos nucifera L.	**núú**	x						P1010235	Abundant	There are at least four native-named varieties on the island. An important part of the material culture of the Pacific Islands.
Metroxylon amicarum Becc.	**rúpwúng**	x		244	109398 752581	2608513 3612910		P1010243	Rare	Found in the Chorong swamp. Fronds used for wall thatching.

Family / Scientific Name	Chuukese Name	Collection & Herbarium Accession Numbers					FSO Reference	Digital Image No.	Relative Abundance	Comments
		Stone		Wong						
		Coll. No.	GUAM Acc. No.	Coll. No.	BISH Acc. No.	US Acc. No.				
Arecaceae continued										
Nypa fruticans Wurmb	**kiyá**	x		155	109405 725850	2608515	xx	P3130064	Occasional	Recorded for Romonum Island by FSO (1987). Fronds used for thatching.
Asparagaceae										
**Cordyline fruticosa* (L.) A. Chev.	**tiin**	5329	05447	181	112829	Missing		P1010163	Common	A multiple use plant of which a red-leafed variety is most common. Collected by Stone in 1965, but not numbered in his 1967 paper.
Asteraceae										
**Ageratum conyzoides* L.	**omusiip**			197	131015 574919	2608503		P1010240	Occasional	Cited in Fosberg and Sachet (1980:18-19). Collected on October 25, 1947.
**Bidens pilosa* L.								P3130041	Common	Common along trail sides.
**Emilia sonchifolia* (L.) DC.				213	131951	Missing			Occasional	Cited in Fosberg and Sachet (1980:40).
**Eupatorium odoratum* L.								P1010168	Rare	Only one specimen seen.
**Sphagneticola trilobata* (L.) Pruski								P3170195	Common	A ground cover in village areas.
**Synedrella nodiflora* (L.) Gaertn.	**appwöneppwya**			242	Missing	Missing		P3170241 P3170239	Common	Cited in Fosberg and Sachet (1980:53). Collected by Wong on November 1, 1947 from edge of a grassy field.
Vernonia cinerea (L.) Lees.	**enen chukó**	x		145	Missing	Missing			Occasional	Wong's Specimen No. 145 is cited in Fosberg and Sachet (1980) as collected from Ulalu. Collection date is September 26, 1947.

Family / Scientific Name	Chuukese Name	Collection & Herbarium Accession Numbers					FSO Reference	Digital Image No.	Relative Abundance	Comments
		Stone		Wong						
		Coll. No.	GUAM Acc. No.	Coll. No.	BISH Acc. No.	US Acc. No.				
Asteraceae continued										
Wollastonia biflora (L.) DC.	**étúwét**	5296	07495	115	133431	Missing			Common	Wong 115 is cited in Fosberg and Sachet (1980:64). Recorded for Romonum Island by FSO (1979).
Bignoniaceae										
**Tecoma stans* (L.) Juss. ex Kunth								P3160151	Rare	Four small trees in Winisi Village. Ornamental tree with yellow flowers used for garlands.
Bixaceae										
**Bixa orellana* L.								P3140108	Rare	One tree seen at mayor's home.
Boraginaceae										
Cordia subcordata Lam.	**anaw**, **anné**	5312	07135	153	134086	2608463			Occasional	Tree of coastal forests. Wood used in construction.
Tournefortia argentea L. f.	**néét**			224	135548	2092140			Rare	Strand tree.
Bromeliaceae										
*Ananas comosus (L.) Merr.	**pweyinapor**	X		206	109561	2666011	xx	P1010277	Abundant	Recorded for Romonum Island by FSO (1987). Cultivated for its fruit.
Calophyllaceae										
Calophyllum inophyllum L.	**rekich**	x		187	136121	2092171			Occasional	
Capparidaceae										
Crateva religiosa G. Forst.	**apuuch** **afuch**			156	Missing	Missing		P2270093 P3130059	Common	Tree in coastal village sites. Fruit eaten. Flowers used in garlands.

Family / Scientific Name	Chuukese Name	Collection & Herbarium Accession Numbers					FSO Reference	Digital Image No.	Relative Abundance	Comments
		Stone		Wong						
		Coll. No.	GUAM Acc. No.	Coll. No.	BISH Acc. No.	US Acc. No.				
Caricaceae										
Papaya carica Gaertn.	**kipwpwaaw**	x		184	Missing	2665993		P2020025	Abundant	Cultivated. Fruit eaten. Flowers used in garlands.
Combretaceae										
Lumnitzera littorea (Jack) Voigt	**weey**	5293	07274	127	Missing	2608466			Occasional	Mangrove tree species.
Terminalia litoralis Seem.	**aas**, **aasaas**	x		164	Missing	2666013	xx	P1010233	Common	Recorded for Romonum Island by FSO (1979). Nuts eaten.
Commelinaceae										
**Tradescantia zebrina* Heynh. ex Bosse								P3110155	Rare	Herb found along trails and near house sites.
Convolvulaceae										
**Cuscuta obtusiflora* Kunth								P3140085 P1010166	Occasional	Introduced species; also noted for Yap (FSO 1979).
**Ipomoea aquatica* Forssk.	**seri**			210	148462	2092131		P3130080	Occasional	Introduced by the Japanese as a food plant. Leaves eaten.
**Ipomoea batatas* (L.) Lam.	**kómwa**, potato			209	148506	2092130 3302271		632008	Common	Tubers and leaves eaten.
Ipomoea indica (Burm.) Merr.		x							Occasional	Occasional vine in coastal sites.
Ipomoea littoralis Blume	**ruke**			163	Missing	2638004			Occasional	Leaves used to treat illnesses.

Family / Scientific Name	Chuukese Name	Collection & Herbarium Accession Numbers					FSO Reference	Digital Image No.	Relative Abundance	Comments
		Stone		Wong						
		Coll. No.	GUAM Acc. No.	Coll. No.	BISH Acc. No.	US Acc. No.				
Convolvulaceae continued										
Ipomoea macrantha Roem. & Schult.	**ööröpön**			179	148553	Missing			Occasional	Wong 179 is cited in Fosberg and Sachet (1977:17-18)
Ipomoea mauritiana Jacq.	**eteniten**	5367	07557	124	148582	Missing			Occasional	Wong 124 is cited in Fosberg and Sachet (1977:19) as I. mauritiana Jacq.
Ipomoea brasiliensis (L.) Sweet	**öröpwöjn**			247	Missing	Missing			Occasional	Wong 247 is cited in Fosberg and Sachet 1977:22). Collected on November 2, 1947.
Operculina turpethum (L.) Silva Manso	**afaamac**			253	140407	2092157			Occasional	Wong 253 is cited in Fosberg and Sachet (1977:29).
Costaceae										
**Costus woodsonii* Maas	**tunun hawaii**							P2280132	Rare	Two specimens seen at Namochuuk. Introduced for its red flowers.
Cucurbitaceae										
**Citrullus lanatus* (Thunb.) Matsum. & Nakai	**senniya**								Occasional	Cultivated by Ken Joseph in his upland garden.
**Cucurbita pepo* L.	**pangkiin**							P2280129	Occasional	Cultivated.
**Luffa cylindrica* M. Roem.	**mororof**			297	140123	Missing	xx		Rare	Cultivated and spontaneous vine.
**Momordica charantia* L.								P3170195	Common	Found in fallowing fields and trailsides.

Family / Scientific Name	Chuukese Name	Collection & Herbarium Accession Numbers					FSO Reference	Digital Image No.	Relative Abundance	Comments
		Stone		Wong						
		Coll. No.	GUAM Acc. No.	Coll. No.	BISH Acc. No.	US Acc. No.				
Cucurbitaceae continued										
**Trichosanthes cucumerina* L.							xx		Occasional	Recorded for Romonum Island by FSO (1979).
Cyperaceae										
Cyperus brevifolius (Rottb.) Endl. ex Hassk.	**nikamóirer**			246	110516	Missing			Common	Listed in Koyama (1964) using US and BISH specimens.
Cyperus javanicus Houtt.	**nikasafasaf nikaúnoún**	x		125	110564	2092089	xx	P1040246	Occasional	Recorded for Romonum Island by FSO (1987). Listed in Koyama (1964) using US and BISH specimens. Found in swamps and taro patches.
Cyperus kyllingia Endl.	**enenikké**, **pwerik**	x							Common	Found In moist sites and taro patches.
Cyperus odoratus L.		5305	Missing						Occasional	Found In moist sites and taro patches.
Cyperus sp.		x								
Eleocharis ochrostachys Steud.		5300	05600						Occasional	Sedge of the taro patches.
Fimbristylis cymosa subsp. umbellato-capitata T. Koyama	**enenikké**	5314	05655 05658	129	Missing	2092090			Common	Citing Wong 129 (BISH), Koyama (1964) identified this as ssp. spathacea (Roth) T. Koyama stat. nov.
Rhynchospora corymbosa (L.) Britton	**móirer**	5306	05670						Occasional	

Family / Scientific Name	Chuukese Name	Collection & Herbarium Accession Numbers: Stone Coll. No.	Stone GUAM Acc. No.	Wong Coll. No.	Wong BISH Acc. No.	Wong US Acc. No.	FSO Reference	Digital Image No.	Relative Abundance	Comments
Cyperaceae continued										
Scleria polycarpa Boeckeler	**nikasafasaf**	5333	05707	250	111720	Missing			Occasional	Collected but not presented in Stone (1967). Stone used the same collection no. for specimens collected on Tol Island. Koyama (1964) erroneously listed Wong 250 (US) from Yap Is.
Dioscoraceae										
**Dioscorea alata* L	**eep**, **kááp**			298	Missing	2665980	xx		Occasional	Recorded for Romonum Island by FSO (1987). Cultivated food plant.
Dioscorea dodecaneura Vell.	**pwereka**	5366	05732	140	112030	2092096	xx	P1010066	Common	Recorded for Romonum Island by FSO (1987). Bulbils - a famine food.
Tacca leontopetaloides (L.) Kuntze	**mwéék**	5309	06414	168	716409	2092111	xx		Common	Recorded for Romonum Island by FSO (1987). Found in fallowing fields and agroforests. Starch extracted from rhizomes.
Euphorbiaceae										
**Acalypha amentacea* Roxb.	**mónnow**			203	137699	Missing		P3160170 P3169168	Common	Handwritten amendment to Anon (n.d.) list changing specimen contents from *Pteris quadriaurita* to *A. amentacea*.
Acalypha amentacea var trukensis (Pax & Hoffm.) Fosberg	**mónnow**	5270	07685	237, 237A	137696 137697	Missing		P1010067	Common	The only one of Wong's specimens in BISH that specifies Romonum as the collection site.
**Chamaesyce hirta* (L.) Millsp.		x		146	142538	Missing			Common	Weedy herb of lawns and trailside.
**Cnidoscolus aconitifolius* (Mill.) I.M. Johnst.	**chaya**							P1010172	Occasional	Introduced by FSM Agriculture as a food plant in the 1990s.
**Codiaeum variegatum* (L.) Rumph. ex A. Juss.	**soon kurutong**			185	Missing	965460			Abundant	An ornamental plant in village areas.

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		Stone		Wong						
		Coll. No.	GUAM Acc. No.	Coll. No.	BISH Acc. No.	US Acc. No.				
Euphorbiaceae continued										
Euphorbia chamissonis (Klotzsch & Garcke ex Klotzsch) Boiss.		5213	Missing	165	142454	Missing			Abundant	Wong collected this species on October 2, 1947.
**Euphorbia heterophylla* L.		x		166	142518	Missing		P3180276	Abundant	Weed of open sites.
**Euphorbia prostrata* Aiton				147	Missing	Missing			Common	Small weed in village areas.
Excoecaria agallocha L.	**owusuus**	5294	Missing	132	142729	2092092				Common in mangrove swamps.
**Jatropha integerrima* Jacq.	**kachchinia**							P1010261	Occasional	Flowers used in garlands.
Macaranga carolinensis Volkens	**tuupw**, **ttupw**	5271	07906	139	143557	Missing			Common	Strong wood used for many purposes.
**Manihot esculenta* Crantz	**mwoniok**			219	Missing	2092136		P1000279	Abundant	Cultivated food plant.
Ricinus communis L.				235	697229	2092146			Rare	A Japanese introduction.
Fabaceae										
**Abrus precatorius* L.		x								Not seen in 2010.
**Acacia mangium* Willd.								P3120237 P3120238	Rare	Only one 5 m high tree seen in Winisi Village.

Family / Scientific Name	Chuukese Name	Collection & Herbarium Accession Numbers					FSO Reference	Digital Image No.	Relative Abundance	Comments
		Stone		Wong						
		Coll. No.	GUAM Acc. No.	Coll. No.	BISH Acc. No.	US Acc. No.				
Fabaceae continued										
*Caesalpinia pulcherrima (L.) Sw.	**simwetta**							P3160155	Occasional	Flowers used for headresses.
Canavalia cathartica Thouars	**wénúka**			207	Missing	Missing			Occasional	
Canavalia rosea (Sw.) DC.	**cééchón**	5272	08438						Occasional	Leaves used for various illnesses.
Cassia fistula L.								P1010258 P1010259	Rare	One tree seen at the mayor's house. An ornamental shade tree.
Cassia occidentalis L.	**afanafan**	x		222	Missing	2092138		P3200027	Common	Weedy shrub of waste and trailside sites.
Crotalaria pallida Aiton	**afanafan**	5283	08458	238	Missing	Missing	xx		Occasional	Recorded for Romonum Island by FSO (1979). Found in fallowing fields. A Japanese introduction.
*Delonix regia (Bojer ex Hook.) Raf.								P3180275	Occasional	A few trees seen throughout the island. Flowers used in garlands.
Derris elliptica (Roxb.) Benth.	**wuup**	5276	05481					P1010285	Abundant	Pounded roots are used as a fish poison.
Derris trifoliata Lour.	**wunenipot**, **wupenipot**	x		117	Missing	2092085		P1010167	Abundant	Stems used for cordage.
Desmodium triflorum (L.) DC.				211	Missing	2608489		P1010164	Common	A weedy ground cover.

Family / Scientific Name	Chuukese Name	Collection & Herbarium Accession Numbers					FSO Reference	Digital Image No.	Relative Abundance	Comments
		Stone		Wong						
		Coll. No.	GUAM Acc. No.	Coll. No.	BISH Acc. No.	US Acc. No.				
Fabaceae continued										
Desmodium umbellatum (L.) DC.	**ópór**	x		176	Missing	Missing			Common	A weedy ground cover.
Erythrina variegata (L.) Merr.		paar		198	Missing	2092125	xx			Occasional
Pongamia pinnata (L.) Pierre				195	Missing	Missing			Rare	
**Vigna adenantha* (G. Mey.) Maréchal, Mascherpa & Stainier	**choochón**						xx		Occasional	Recorded for Romonum Island by FSO (1979). Occasional herb.
Vigna retusa (E. Mey.) Walp.	**wénúka**	x		113	Missing	2092084	xx	P3120229	Abundant	Found mainly in coastal sites.
Goodeniaceae										
Scaevola taccada (Gaertn.) Roxb.	**nét remes**	x		162	Missing	Missing	xx		Occasional	Recorded for Romonum Island by FSO (1979). Wong's No. 162 is cited in Fosberg and Sachet (1980:11) as collected from Romonum.
Hernandiaceae										
Hernandia sonora L.	**ékúrang**	x		133	Missing	Missing			Common	Coastal tree.
Hydrocharitaceae										
Blyxa aubertii Rich.		5301	06148						Common	Listed by Stone (1967) as *Blyxa octandra* (Roxb.) Planch. ex Thw. without its collection number.
Enhalus acoroides (L. f.) Royle	**ónóót achékken**	x		150	112311	2092101			Common	Wong's No. 150 is cited by Tsuda *et al.* (1977) as from Chuuk but without a specific location. Black fibers used for fish nets.

Family / Scientific Name	Chuukese Name	Collection & Herbarium Accession Numbers					FSO Reference	Digital Image No.	Relative Abundance	Comments
		Stone		Wong						
		Coll. No.	GUAM Acc. No.	Coll. No.	BISH Acc. No.	US Acc. No.				
Hydrocharitaceae continued										
Thalassia hemprichii (Ehrenb. ex Solms) Asch.	**mwúch**	5315	06170						Common	Listed by Stone (1967) without its collection number (5315).
Lamiaceae										
Callicarpa candicans (Burm. f.) Hochr.	**áákún**			135	Missing	Missing			Occasional	Occasional.
**Clerodendrum inerme* (L.) Gaertn.	**apwech**	x		119	Missing	Missing			Common	Common in swampy areas.
**Clerodendrum quadriloculare* (Blanco) Merr.								P1010228	Occasional	Occasional shrub/hedge plant.
**Hyptis suaveolens* (L.) Poit.	**nokonok**			220	150563	3312061 2092137	xx		Occasional	
Ocimum tenuiflorum L.	**warúng**	5278	Missing					P1010176	Abundant	Common around homes and villages. Leaves used as a food flavoring and love magic.
Premna serratifolia L.	**niyóór**	5307	11007	192	Missing	Missing			Abundant	Wood used in some construction and for firewood.
Lauraceae										
Cassytha filiformis L.	**ótik**, **anaw**	x		118	151248	2608455			Occasional	Vines used to treat various ailments.
Lecythridaceae										
Barringtonia asiatica (L.) Kurz	**kuun, wawáánúúw**	x		208	Missing	2666001			Occasional	Crushed seeds used to stupefy fish.

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		Stone		Wong						
		Coll. No.	GUAM Acc. No.	Coll. No.	BISH Acc. No.	US Acc. No.				
Lecythridaceae continued										
Barringtonia racemosa (L.) Spreng.	**sóón**	5202	Missing	174	Missing	2608423		P1010234	Occasional	Tree of swamps. Seeds used as a soap.
Lythraceae										
Pemphis acidula J.R. Forst. & G. Forst.	**eengi**	x		154, 231	157428 157430	2608473 2608465			Rare	Sharpened wood stakes used as a coconut husker. A hard wood.
Sonneratia alba Sm.	**saaras taaras**	5295	10517 10518	126	182946	Missing	xx		Occasional	Recorded for Romonum Island by FSO (1979). Wood used for house posts.
Malpighiaceae										
Ryssopterys abutifolia A. Juss.				177	Missing	Missing			Rare	Not seen in 2010
Malvaceae										
**Abelmoschus manihot* (L.) Medik.	**bele** (Fijian)							P3160166	Rare	Introduced food plant in 1990s by M. Emmis and FSM Agriculture. One plant seen.
**Ceiba pentandra* (L.) Gaertn.	**kóton, katon**			175	133956	Missing		P1010148 P2270091	Occasional	At least three tall trees seen. Photo of seed pods on file.
Commersonia bartramia (L.) Merr.				249	183150	2092154			Occasional	
Heritiera littoralis Aiton	**chéépwech**	5299	10543 10544	120	Missing	Missing			Occasional	A mangrove species. Plank buttresses used to make breadfruit pounding boards.
**Hibiscus abelmoschus* L.	**nikonokoon**	5288	Missing	212	157681	Missing		P3160172	Rare	

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		Stone		Wong						
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Malvaceae continued										
Hibiscus rosa-sinensis L.	**rowus**							P3170182	Common	Many varieties observed. A valued flowering ornamental shrub.
Hibiscus rosa-sinensis var. *rosa-sinensis*	**rowus**							P3130060	Common	Common ornamental shrub in village areas.
Hibiscus schiztopetalus (Dyer) Hook. f.	**rowus**							P1010237	Rare	Introduced shrub valued for its flowers.
Hibiscus tiliaceus L.	**sinifé ayipiskas**	5290	08995	193	158085	Missing			Common	Usually found in coastal forests and sites. Inner bark used as cordage.
Malvaviscus penduliflorus DC.								P1010077	Rare	Ornamental shrub valued for its red flowers.
Malvastrum coromandelianum (L.) Garcke	**siyóyinen**	5286	09000						Abudant	Weedy shrub along trails.
Sida rhombifolia L.	**siyóyinen**			217	158852	2092134 3356260		P1010251	Abundnt	Weedy shrub along trails.
Thespesia populnea (L.) Sol. ex Corrêa	**péné**	x		131	Missing	2092091		P3100117	Common	Coastal shade tree. Wood used for construction.
Triumfetta bartramia L.	**sachawer**	5280	10746		Missing	Missing			Occasional	
Triumfetta repens (Blume) Merrill & Rolfe		5308	10737 10738	167	Missing	2092110			Common	Weed of lawns and trail sides.
Urena lobata L.	**nokonok**			205	158770	Missing			Rare	Usually found in fallowing sites.

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		Stone		Wong						
		Coll. No.	GUAM Acc. No.	Coll. No.	BISH Acc. No.	US Acc. No.				
Moraceae										
**Artocarpus altilis* (Parkinson) Fosberg	**mááy**, **maay**, **meey**	x		218	Missing	2092135		P1010278	Abundant	10 seedless varieties recognized on the island. Cultivated for its starchy fruit.
Ficus microcarpa var. *latifolia* (Miq.) Corner		5291	09295, 09296, 09285						Occasional	
Ficus prolixa G. Forst.	**aaw**			151	Missing	Missing			Common	Bark leaves and fruit used in traditional medicine.
Ficus tinctoria var. *neoehudarum* (Summerh.) Fosberg	**éwéén**	5298, 5310	09272	227		Missing	2092143	P3130071	Common	
Musaceae										
**Musa balbisiana* x *acuminata* Colla	**wuuch**	x						P3010140 P3010142	Abundant	6 native-named varieties found on island.
Myrtaceae										
**Psidium guajava* L.	**kuafa**							P3170228	Occasional	Fruit tree in village areas.
**Syzygium malaccense* (L.) Merr. & L.M. Perry	**fááriyap**								Occasional	Fruit tree in village areas.
**Syzygium samarangense* (Blume) Merr. & L.M. Perry	**apen**							P3160162	Occasional	Fruit tree in village areas.
Nyctaginaceae										
**Bougainvillea glabra* Choisy	**irááfénúfén**, **irááttong**			300	Missing	2092171		P1010149	Occasional	Ornamental shrub prized for its flowers.

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		Stone		Wong						
		Coll. No.	GUAM Acc. No.	Coll. No.	BISH Acc. No.	US Acc. No.				
Nyctaginaceae continued										
Mirabilis jalapa L.				161	Missing	Missing			Occasional	Ornamental shrub/small tree.
Onagraceae										
Ludwigia octovalvis (Jacq.) P.H. Raven	**choyiro**	5304	Missing	137	Missing	Missing		P1010245	Occasional	Herb of taro swamps. Leaves- a dye fixative.
Orchidaceae										
Robiquetia lutea (O.H. Volk.) Schltr.	**nikohopwuchopw**	5282	06262,06243, 06244	169	114670	2092112	xx			Recorded for Romonum Island by FSO (1987).
Pandanaceae										
Pandanus tectorius Parkinson	**faach**	x		232	542364 543160	Missing		P3010139	Common	Leaves used for weaving mats, baskets and other items.
Passifloraceae										
Passiflora foetida var. *hispida* (DC. ex Triana & Planch.) Killip	**pwomwpwomw**	5279	Missing						Common	Occasional weedy vine of fallowing fields. Fruit eaten by children.
Turnera ulmifolia L.								P1280104	Common	Ornamental shrub grown for its small yellow flowers.
Phyllanthaceae										
Glochidion ramiflorum J.R. Forst. & G. Forst.	**afór ofór**	5365	Missing						Common	Wood used for firewood and some construction.
Phyllanthus amarus Schumach. & Thonn.	**nikémméwúr**	x		141	144017	Missing		P1010248	Common	Weedy forb.

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		Stone		Wong						
		Coll. No.	GUAM Acc. No.	Coll. No.	BISH Acc. No.	US Acc. No.				
Phyllanthaceae continued										
Securinega flexuosa (Müll. Arg.) Müll. Arg.	**afór**						xx		Occasional	Recorded for Romonum Island by FSO (1979).
Piperaceae										
Peperomia pellucida (L.) Kunth	**enes**	x		178	Missing	Missing		P3010139	Common	Small herb of shaded forest sites.
Piper carolinense Hosok.	**enes**			170	Missing	Missing			Common	The only one of Wong's specimens from Romonun in the GUAM database. Plant used as a magic medicine.
Piper sp.				152	169742	Missing				Identified in Wong's BISH database as *Piper ponapense* C. DC.
Piper sp.	**enes**	5274	Missing							Specimen missing from GUAM database.
Poaceae										
**Cenchrus echinatus* L.	**seetan**	x		149	115287	1939320		P3160157	Occasional	Collected by Wong on Sept. 26, 1947. Occasional.
Centotheca lappacea (L). Desv.	**fetinin wumwune**	5284	05787				xx	123671	Common	Stone (1967) did not list the collection number in his paper.
Chrysopogon aciculatus (Retz.) Trin.	**pwuker**	x		243	123816	Missing	xx	P3180281	Common	Lawn grass in village areas.
**Coix lacryma-jobi* L.	**getin umuno**			248	699974	Missing				Not seen in 2010.
Cyrtococcum patens (L.) A. Camus				251	123982	Missing				Not seen in 2010.

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Poaceae continued										
**Dactyloctenium aegyptium* (L.) Willd.		x							Occasional	Found in moist sites.
Digitaria radicosa (J. Presl) Miq.	**fetin**			186	124313	Missing			Occasional	Wong's collection no. incorrectly entered in BISH as 166.
Digitaria setigera Roth		x							Occasional	
**Eleusine indica* (L.) Gaertn.	**tipweek pwukerimwéch**	x		142	642549	Missing			Common	Found in village and trailside.
Eragrostis amabilis (L.) Wight & Arn.	**nemetan**	x		143	124799	Missing		P3160157	Common	Small grass in village lawns.
Ischaemum muticum var. *muticum*	**fetin niyap**	5285	05958	240	125171	Missing	xx		Common	Listed by Fosberg and Sachet (1982) for Chuuk.
Lepturus repens (G. Forst.) R. Br.	**máchew**	x		114	125468 571498	Missing			Common	Strand grass.
Oplismenus compositus (L.) P. Beauv.		x		182	125790	Missing		P1010284	Common	Cited in Fosberg and Sachet (1982).
**Paspalum conjugatum* P.J. Bergius	**fetin umuno**			144	126283	Missing		P1010245	Abundant	Grass of fallows and semi-moist sites.
Paspalum longifolium Roxb.				245	126276	Missing			Occasional	Cited in Fosberg and Sachet (1982).

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Poaceae continued										
Paspalum orbiculare var. *orbiculare*		x							Common	
Paspalum paniculatum L.	**fetininwumwuné**							7682	Occasional	Tall grass along pathways.
Phragmites australis (Cav.) Trin. ex Steud.	**woowo**	5289.	Missing	136	126526	Missing			Abundant	Tall grass of swamps and fallowing taro patches. Split stems used as a thatch for house walls.
**Saccharum officinarum* L.	**sápúk**, **woow**	x		239	126716	Missing		P1010283	Common	Cultivated, in gardens and around home sites for a sugary sweet.
Saccharum spontaneum var. *insulare* (Brongn.) Fosberg & Sachet							xx	P1010268	Common	Recorded for Romonum Island by FSO (1987). Common in swamps and old fallow sites.
Sporobolus virginicus (L.) Kunth	**rasaras**			130	126966	Missing		P1010165	Occasional	
Thuarea involuta (G. Forst.) R. Br. ex Sm.	**unom fetin**	x		172	127158	Missing		P3140083	Occasional	A grass of in lawns along coastline.
**Zoysia matrella* (L.) Merr.	**sipa**							P3180258	Abundant	A lawn grass introduced by the Japanese during the Mandate.
Polygalaceae										
Polygala paniculata L.									Occasional	Small herb with a root smelling of peppermint.

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Polygonaceae										
Polygonum kawagoeanum Makino		5303	Missing	160	Missing	2092105		P3140084	Rare	Herb used as a mulch in taro patches.
Portulacaceae										
Portulaca oleracea L.	**kupwphrosón**							P3180253	Common	Found in gardens and home sites. Used as a famine food.
**Portulaca quadrifida* L.	**kupwphrosón**			236	Missing	Missing		.	Occasonal	Found in gardens and home sites.
Portulaca sp.	**kupwphrosón**							.	Rare	One specimen found at a home site.
Primulaceae										
Maesa carolinensis Mez		5320	09348 09349						Occasional	Stone (1967) collected but did not list in his paper. Species also collected on Tol Island on January 30, 1965.
Rhamnaceae										
Colubrina asiatica (L.) Brongn.		x						P2010159	Common	Shrub found at edge of mangrove swamp.
Rhizophoraceae										
Bruguiera gymnorhiza (L.) Savigny	**chiya**	x							Abundant	Mangrove species. Wood used for house posts and rafters.
Bruguiera gymnorhiza fo. *alba* (Stone) Fosberg	**chiya**	x							Common	Mangrove species. Wood used for house posts and rafters.
Rhizophora apiculata Blume	**chiyaaniimw**	x							Common	Mangrove species. Wood used for house posts.

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Rhizophoraceae continued										
Rhizophora mucronata Lam.	**chiyaan wuumw**	5297	09809, 09810	128	Missing	2608411	xx		Common	*R. mucronata* var. *mucronata* is listed In FSO (1979) as recorded on Romonum Is. This variety is not recognized by Tropicos.
Rubiaceae										
**Gardenia jasminoides* J. Ellis	**kadenia**							P1010178	Rare	Small ornamental shrub with white flowers.
Guettarda speciosa L.	**mwoosor**	x		228	Missing	2608492				Recorded for Romonum Island as *Morinda citrifolia* L. var. *citrifolia* by FSO (1979).
Hedyotis biflora (L.) Lam.	**opwowusón**	5367-a	09897	183	Missing	Missing			Common	Stone used the same collection number for this species found on Tol Island on January 30, 1965. Ornamental tree said to bring good luck to the house.
Morinda citrifolia L.	**nopwur**	x		191	Missing	2608495		P1010283	Abundant	Small tree throughout the island. Fruit a famine food.
Rutaceae										
**Citrus aurantium* L.	**náyimis**	5277	10200					P1010252	Common	Fruit tree in village areas.
Sapindaceae										
Allophylus ternatus (J. R. Forst. & G. Forst.) Radlk.	**ngo**	5311	10300	196	Missing	2092124			Occasional	Wood used as firewood.
Allophylus timoriensis (DC.) Blume	**ngo**			226	Missing	2092142			Occasional	Wood used as firewood.

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Simaroubaceae										
Soulamea amara Lam.	**maras**			225	Missing	1046722			Occasional	Leaves used in traditional medicine.
Solanaceae										
**Capsicum annuum* L.	**mwiik**			157	181584	2092104	xx	P1010150	Occasional	Recorded for Romonum Island as *Capsicum frutescens* L. by FSO (1979). Food plant.
**Nicotiana tabacum* L.	**suupwaan chuuk**			190	Missing	3427349 2092121			Occasional	Cultivated for its tobacco leaves
Physalis minima L.	**pwoona**			148	Missing	2092100	xx		Abundant	A fallow field herb. Fruits eaten.
Surianaceae										
Suriana maritima L.				230	Missing				Occasional	Coastal shrub.
Urticaceae										
Procris pedunculata (J.R. Forst. & G. Forst.) Wedd.	**kirnmwit**	5292	10867	123	Missing	2092087			Occasional	
Verbenaceae										
**Lantana camara* L.								P2020013	Occasional	Flowering shrub introduced by the Japanese.
**Stachytarpheta indica* (L.) Vahl	**sakúra**	5287	Missing						Common	
Zingiberaceae										
**Alpinia purpurata* (Vieill.) K. Schum.		x								Not seen in 2010.

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Zingiberaceae continued										
**Alpinia speciosa* (Blume) D. Dietr.				233	716427	2092147				Not seen in 2010.
Curcuma australasica Hook. f.	**áfán óngin**			252	716388	2092156			Occasional	Rhizome powder is used as a body ornamentation. Leaves used as a food wrapper.
**Hedychium coronarium* J. Koenig	**sinser**							P1010242	Occasional	Flowers valued for its aroma.
**Zingiber zerumbet* (L.) Roscoe ex Sm.	**fitun**			216	127384	3481582 2092133	xx			Recorded for Romonum Island by FSO (1987). Used as a shampoo, hair conditioner and medicine.