F. R. Fosberg collection book # 42, begin with 36627, end with 36738

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### Collection and Field Note Book

**No. 42**

(Jan. 29, 1956 - Feb. 24, 1956)

(36627 ---- 36738)

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PLANTS OF THE MARSHALL ISLANDS
Rongelap Atoll

Locality Rongelap Islet, 3/4 mile west of village
Occurrence On eroded coral conglomerate near high tide level on lagoon shore.
Date Feb. 8, 1956 Alt. 1-4 m
Coll. F. R. Fosberg No. 36660
Remarks

Pacific Vegetation Project

PLANTS OF THE MARSHALL ISLANDS
Rongelap Atoll

Calymperes

Locality Gegen Islet
Occurrence Common on branches of trees
Date Feb. 15, 1956 Alt. 1-4 m
Coll. F. R. Fosberg No. 36733
Remarks

Pacific Vegetation Project

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Occurrence Common on branches of trees
Date Feb. 15, 1956 Alt. 1-4 m
Coll. F. R. Fosberg No. 36733
Remarks

Pacific Vegetation Project
F. R. Forsberg
Collection Book # 42
begin with 3 6 4 2 7
and with 3 4 7 3 8

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Jan. 27 - Flight from Washington to Tulsa to San Francisco.

In deciduous forest country a light snow fall brings out some differences that are much less striking without it. Open grass and cultivated land stands out sharply in white. Deciduous woods of varying densities show as gapes of varying density, showing relief as a pattern and patches of evergreen forest are very dark green.

In generally cultivated country large patches of gray may represent billy or dissected land, conspicuous examples 12-15 minutes (60 min?) east of Tulsa around an extensive winding and branched reservoir. Much more wooded land to south of route. Winding dark strips in snow represent ravine, and gallery forest along streams.

Dredger (9413) working east of Tulsa.
Jan. 30, 1956 - Honolulu
Cultivated on University Campus.
36672 Pseudaranthemum cananthusii

probably lost

Pseudaranthemum cananthusii
var. atrofuscinum

probably lost

Calm

Shrub, 6 m tall; leaves variegated green, gray, and cream; flowers with white corolla with many of fused purple dots in throat, upper two lobes erect, partly united, lateral one horizontal, lower one pointing downward.

Shrub, 6 m tall; leaves variegated dark purple, green, gray, cream; flowers deep magenta with white markings; upper two lobes erect, partly united, lateral one horizontal, lower one pointing downward.
Feb. 2 - Kwajalein Islet.

Hard rain for almost an hour 7:52-8:15 a.m.

Ants very small, seen in line climbing coconut turfs.

What seem to be same flies collected on refrigeration in guest house, attracted by liquid (carbonated) left in glasses on top.

Crimson anisium is used generally as ornamental.

Euphorbia thymifolia forms a conspicuous ground cover.

Cassava commonly planted as ornamental, seems to have come via spontaneous occasionally.

Euphorbus compressus still present near terminal, but uncommon. Also Heliotropium melodiosus.

Trichos. Phyllanthus, Bidentes, Euphorbia thymifolia are very abundant generally, black, tapheta indes, also. Pleurax indica has become fairly general. P. oedrata has decreased, but is still occasional.

Emilia sonarica is common.

Herba alba and Cenyza bomariscii seen once each.

Cenchrus echinatus common, but not abundant.

Kwajalein.

Seedling of Phyllanthus and Euphorbia thymifolia very abundant on bare coral sand and gravel.

Golden flower, common, very tame. Two terns seen near outer beach.

What appeared to be a large wild duck seen at 8:25 a.m. at end of islet in weedy ground. It was furnish with dark patches in wings. The neck was long and when in alert held very erect (like a crane). The head and throat with a large dark patch on each side. Flew off over sea and circled around island again on other side of air-strips.

Two frigate birds seen. Celloe a flock of nodding cormorant, fish, in distance. No rhinoceros seen yet.

"Brown widow" spider still very common around building, in loches, etc. acc. medical office, Col. White, who brought a specimen. No bites recently.

Feb. 4 - Libeck Island

In gardens and around dwellings in village.

36629 Bougainvillea glabra ching planted

30 Casuarina equisetifolia L. planted

1 Bougainvillea glabra ching planted

1' 3' Cycas cincinnati L. planted

2' 33 Aiptocarpus altillis (Park.) Fock. planted

2' 34 Digitaria crenata var. mexicana (Park.) Fock. common among trees

1 25 Aiptocarpus altillis (Park.) Fock. planted

36 Reneana glauca (L.) Hook. planted

37 Aciphylla amena var. willkerniana (M. A.) Fock. planted as hedge

38 Delonix regia (Bojen) Raf. planted

Bananas and Papayas commonly planted. The Papayas fruiting freely, especially chlorotic.

One enigma, variegata.

Libeck Atoll

Scandent shrub, with axillary spines; trunk dull orange-red.

Tree about 8 m. tall, said to have been scandent shrub with axillary spines; leaves crimson, magnes.

Tree 8 m. tall; said to have been brought from Ams. 3 trees seen. "Kahekuk"

Large tree, fruit said to be seedy.

Large tree, fruit said to be seedy.

Large clump of shrubby stems 4 m. tall; shrub 1.5 m. tall; leaves reddish but very chlorotic.

Old tree 5 m. tall, wide-spreading, sterile, almost leafless.

Tree seen in flower.

Two Pritchardia pacifica trees, quite tall (5 m.) in flower. Clumps of Russellia much larger than in 1946, somewhat chlorotic, becoming red.
1956

Marshall's

Stachytarpheta jamaicensis
still growing and flowering
in De Bruyn Garden.

Breadfruit, said to be
of about 6 varieties, some
are in fruit now, a very
few fruits almost ripe.

The leaves are badly
infected by mealy-bug.

Aphids, nematolopogyes, 
Helleborus, and Crinum.

zeuhamianum grown in

gardens.

Of weeds - Phylanthus
ehnans is very common,
everywhere in vacant
lots and side of paths.

Euphorbia hirta is
locally very common and
E. heterophylla fairly common.

Occasional in wasteland.

Eelgrass is very
common generally in
waste spots.

Cyperus also
very common locally.

Cordyline, thinning, thinning,

Eragrostis amabilis, is
also very common.

Libbeel Atoll.

One of the sisters has
brought young trees
from Honolulu and
planted them. There are
Mango (dead),
Figu
avocados
mountain apple
Surinam cherry
Quava.

They are only 3-4 feet
tall as yet, but the
outlook for them is
not good.

They have had
abundant rain for
a year and a half,
except for a drought of
1 week in a rather
dry spell of 1 month.
Wateer systems are on
and they are having to
use well water for
laundry. The sisters
do not know about
any of the wells becoming
salt water during
dry season.
Notes taken from aerial photos in Photo Lab on Kwajalein. (by atolls)

Ailinginae obliques 9-17-55
Knox 9. densely wooded.
Islet from Bokongwein with extensively developed erosion ramps on seaward side, a little sand on lagoon side.
Islet 9 of Bokongwein is a long strip of platform and erosion ramp with a tiny detached sand inlet toward lagoon.
Kuibus 9. eastern part wooded except for s.e. corner. Inlagoon
Forest has been stripped clean much as utilina
with a row of small dunes and brush along lagoon shore.
Rabinowic 9. wooded, possibly a very few coconuts.
Ennetakklu 9. (2) scattered trees on grassy island.
(Perhaps is actually islet east of Ennetakklu)
Erubula 9. largely planted in coconuts.
Mogini 9. wooded.
1956

Marshall 23.

Feb. 5 - Nursery in old terminal.
Plants growing in quantity in pots and frames some sheltered, some not.
Most healthy.

(Remember C. ornamental hybrid)
Cassia alata
Cordia sp.
Cyperus esculentus
Erythrina indica
Eugenia uniflora
Erythrina pulcherrima

Ismene sp.

Arum sp.

Acridium auriculatum
Pseudanthemum cannabinae
var. cannabinae var. purpureum
var. purpureum var. alba

Begonia sp.

Streptocarpus ramosus
Erythrina terminalis
Polyalthia scrophularia
Allamanda cathartica var.
Hibiscus mutabilis
Polyscias triangularis

Pentas lanceolata
Wanda Miss Joaquim

Gomphrena globosa

Angelonia (bipurple seeds)

Linnia elegans

Tania spalaya

Kuwajalin

Megaphyllum

Leucospermum ptilocarpum

Hedycomnium cannabinum

Loddonium lycopodioides

Canna indica

Brassia actinopoda

Theophrasia populnea

Mirabilis jalapa

Gasteria attenuata

Duranta repens

Cecropia urucuera

Hernandia zonora

Ravenala madagascariensis

Meninges asiaticus

Musa sapientum

Tabernaemontana cannabinae

Euphorbia-like plant

with small lanceolate leaves.

Alpinia purpurata

Aconitum moluccana

Cordyline-like plant

with small lanceolate leaves.

Cordyline australis

Phorion sp.

Cordyline equisetifolia

Ananas comosus

Asphodelus nidus

Cibotium sp.

Nephelephilus sp.

Chrysanthemum sp.
Phyllanthus nirurius
Delonix regia
Catharanthus roseus
Coffee arabica
Cinnamomum asiaticum
Rhoeo discolor spathes
Astrakhan altalis
Plumeria rubra
Plumeria sp.
Cocos nucifera
Anacardium palm?
2 unident. shrubs
Anthurium (common)
and sp. with large
scalloped lvs.
Palmaria crinitata (white)
Calophyllum inophyllum
Temphis acutula
Haminagraxis refens
Mounda citrifolia
Quettada species
Cyrtodima indica
Pandanus tecucius
Kansevia (broad, mottled)
Bryophyllum pinnatum
Euphorbia heterophylla
Ficus racemosa
Vitis trifolius
Solanum teubenthianum
Colless scutellaris
Polyscias fruticosa
Polyscias sp. (crumpled)
Rubelia longifolia
Tabebuia pentalophylla
Pedilanthus tithymaloides
Rubus tiliaceus
Clerodendrum inerme
Nuraya paniculata
Asparagus strengeri
Canavalia sp.? 
Thesidia peruviana
Euphorbia (large, spathulate
fleshy, low, hairy, stipit. stem)
Orchisia?, leathery leaves,
dep. glob. black
fleshy fruit about 1 cm. + long.
Ceratostigma gangeticum
Tropical alamanda
Cryptostegia grandiflora
Kigelia x Kathodes
Menegia tuberosa
Acalypha bigidea
Nerium oleander
Russelia equisetiformis
Dockly Fiddle (Anthurium x 
Tripartita)
Osterneas anthyllidifolia
Percn amerciana
Physalis oppositifolia?
Egera casei
Pilea microphylla
Podocarpus sp.?
Cucumis sativus (191)
Hybrid
Philodendrum sp.
Macadamia ternifolia
Cucumber?
Large shrub Euphorium
Peltsparrw guttata
Feb. 5 - Kwajalein Islet, weedy edges of air strip and roadsides.

Bidens pilosa var. indica Sch.; Dip. abundant locally

34439

Mimosa pudica L. very local or disturbed ground

n
341

Paspalum setaceum Michx. var. A. three very local or disturbed ground

3

Lepturus repens var. subulatus Feb. around old building

1

Phyllanthus compressus Schum. Thüm. very abundant

1

Paspalum filibratum H. B. K. common locally.

3

Nostoc commune Vau. det. Drumm abundant on bare soil sand

3

Coluzia canadensis (L.) Chorg. abundant locally

1

Euphorbia perulata A. thymifolia rare, in cracks in old concrete

47

Uromyces proeminentis (DC) Pers. det. D. P. parasite on Euphorbia thymifolia L. 36647

Feb. 5 - Cheye Islet - beach on south end, consider able pumice, rather fresh looking, has come ashore fairly recently.

Bag 200.

lans two black, mated turns flying on lagoon side of islet.

Kwajalein

carp white, disk yellow.

leaves sensitive, very chlorotic; flowers lavender.

culms spreading spreading

leaves somewhat glaucous beneath, greenish above earth is piled up, yellowish on level ground. culms spreading dark green

culms, flowers white purplish, prostrate.
Feb. 7 - Rongelap I.

The beach in front of the village is sand and small gravel. West of this is a rocky shore except for one short stretch of beach, as far as shore can be seen. Above the rocky platform is a stony beach, or beach, the top of which are scattered seagrass bushes in the edge of the coconut plantation, also a few Guettarda and Pandanus.

No birds seen while going ashore few there any. Plank anchored about 100 yards from beach with half an hour flies had found it. The flies there are a singularly persistent lot.

Plantation back of village has the trees rather widely spaced, crowns nowhere touching. The bases of the trees are almost all burned. The ground is generally grassy and is

Rongelap atoll, becoming generally overgrown with thickets of Ceratothamnus incanum and seedling coconuts 1 m tall. Lida foliosa is scattered here and there, with some patches of solid stands of it on sandy soil. Monada citrifolia is unusually abundant.

The soil in the plantation is mostly dark loam. The Annassol, some of it has a very high humus content. There are some Pisonia trees locally and burned stumps and logs of others. This observation rather supports the suggestion that the Annassol series may be derived from the fens series. No hardpan found, but little time spent in looking for it.

East of the plantation is a low forest of about 4-6 m tall of Monada, Guettarda, and some Pisonia (mixed appearance on photo).
East of this, to the coast, is a scrub of Scaevola, starting about 4 m., tall, sloping down to 2 m. at the beach. This is conspicuously wind scoured, and is fringed by a growth of Triumfetta, creeping down the beach. The east beach is of sand and gravel. Bay 302 is sand from just above high tide level. The erosion along here is very rough (showing black sand or yellow sand). The upper part is old, much eroded beach-rocks. Bay 301 is old, much eroded beach-rocks with an algal layer. On the beach are large quantities of pebbles, in places actually covering the sand, both on the upper part of the beach and on the flat, well back of the top of the beach. It is mostly small rounded fine-grained pebbles, but some larger pieces are much more bushy-looking (possibly from kauri barks).  Some of it is plain (Bay 305).

On the windward side the Scaevola scrub tapers down to the top of the beach. On the leeward side there is a flat of cobbles, with scattered bushes, mostly Scaevola, some Wilkesia, small patches of unhealthy-looking Lepidosira. Back of this is raised forest of Masseschmidia, Quettara, and Ulva. Along the beach Scaevola seedlings are very common in the sand. Lepidosira and Masseschmidia seedlings, too.  Some seedlings are open gravel and sand.
Feb. 7 Rongelap Islet

36 43 Digitaria pumicosa var. microrhachis
on black soil in small
opening in
cover in

51 Guettarda speciosa L.
common in

same - south side of islet,
just back of beach ridge
on rocky flat, shioya soil.

52 Lepturus repens var. septentrionalis
abundant m

53 Bothriaria tetrandra Font. et
local m

same - coconut plantation
west of village.

54 Pandanus tectorius
common in

Rongelap Atoll

(voucher for NRDL sample 100)

creeping. (voucher for
NRDL sample 101)

tree 15 m. tall, trunk 25 cm. thick.
(voucher for NRDL sample 102)
tree 10 m. tall, flowers white.
fragrant, limb of corolla
unusually small, about 1 cm. across.
(voucher for NRDL sample 103)

tufted. (voucher for NRDL
sample 104)

stems ascending, green;
leaves green, thick; flowers
white. (voucher for NRDL
sample 105)

tree 4 m. Tall, fruit cluster,
oval-oblong, flesh sweet.
(voucher for NRDL sample 500, 501)

Feb. 8 - Rongelap Islet

36.55

Cucurbita maxima L.

spontaneous around village

56. Carica papaya L.

common around village.

57. Crinum asiaticum L.

planted around village.

same, 3/4 mi. w. of village


on sandy soil in grassy opening in coconut plantation.

59. alg.

growing on soil surface.

60. alg.

on eroded coral enclosures near high tide level on lagoon shore.

Animal life, Feb. 7.

A 4. one large hermit crab found in plantation.

2 ghost crabs from top of sand ridge along lagoon (not sandal).

several Cucubitsa found eating Pandanus fruit at top of lagoon beach.

5. 2 grasshoppers attracted to light.

6. ants from ground.

roach from ground.

fly attracted by sweat (abundant and very persistent).

weevil picked up on clothing after going through smear.

Rongelap Atoll

prostrate extensive vine; leaves flecked with gray.

flowers orange - yellow.

the 3 m. tall others much taller; flowers cream white.

flower white except for purple filaments.

leaves fleshy, root enlarged, fleshy. (voucher for NRDL 107)

Birds seen, Feb. 7.

several chickens.

7 noddei, flying out to sea.

7 turnstones, seen on south beach.

toward evening;

7 noddei and 7 turnstones flying over lagoon.

otherwise, birds were conspicuously absent.
Feb. 8 - Rongelap Islet.

Along the lagoon shore the rock platform protrudes for some distance west of village at about 1.7 m. above low tide level. It ends in terraces, very narrow, at about 3-6 dm. intervals vertically. The uppermost terrace scarcely shows in some places. Locally it includes a small series of beach rocks dipping away from lagoon.

The margins of the other terraces are somewhat undercut and the layers they represent are evidently peeling off as undercut by lagoon waves. The second from the top is flat and finely fitted. The third is very rough. The lowest is uneven but edges and protrusions are rounded by abrasion. The lowest is slippery with an algal fuzz. The third is dark green with a fine algal fuzz. The two upper ones are the usual blue-gray color. Few animals of any sort are in evidence at this.

Feb. 9 - Eniaetolka?

(Eniaetolka means long island, Kabben 9. means main island, Bok 9 1948: sand island acc. Matan)

Lagoon beach on north part of islet lined with old beach rock, much eroded, in place well above high tide level. Back of the beach here is a double beach ridge perhaps 3-4 m. high of sand and fine gravel.

Bag 306 is beach sand from the lagoon beach here.

Bag 309 is beach sand from the seaward beach, the finer component only, as sample of place it came to concur with more shell fragments.

Rongelap Atoll time (9:30 a.m.).

There is a well developed sand ridge along the lagoon shore.

Bag 306 is a piece of beach rocks from the landward dipping series mentioned on p. 16.
Bay 203 contains representative material of large quantities of several kinds of humus lying on the seaward beach.

This seaward beach is of sand above a very rough eroded unit, reworked into remnants of a protruding platform.

In the northern part of the island there is much grassy terrain with sparse coconut, merinda, and patches of Cardia. The coconut trees are burned at the base.

Feb. 9 - Erinacole Islet, Pandanus tectifrons Base, top of seaward beach

62 Digitaria minuscula, microstachys, opening in coconut grove back of lagoon beach.

Rongelap Atoll.

Along seaward side is deciduous scrub with scattered Pandanus, edged with Furian, most of the latter is dead. The Pandanus (Eugenia) obviously reproduces vegetatively, as in several clumps of trees 4-5 m tall the bases are connected by stolones a foot or so off the ground, hanging, supported by stilt roots.

In places the platform protrudes from under the sand at extreme high tide level. It is very rough, has small plants, solution basins, much rutting and removal of layers by undercutting and collapse.

Clumps of small trees connected by "stolones", horizontal stems held above ground by stilt roots; heads globular.

(writen in N.R.D.C. sample #11)

Portulaca oleracea Sol.
opening in coconut grove back of lagoon beach.

Lepturus repens  Jan. 29th 1956 5 ft.
back of beach ridge in opening in coconut plantation.

Feb. 9 - Kabelle Islet
sand flat back of lagoon
with scattered Lecceola,
Quettarda, and Messerschmidia
bushes 2-3 m. tall, with
bare sand between with
a conspicuous algal crust,
Scattered tufts of Lepturus
and a few plants of Bracharia
tetrandra (this with
oblong oval glossy leaves,
white flowers) plants notably
infested by Albugo.

In openings of in the
coconut forest is another
abundant plant of another fun
(this with ground dull-
surfaced thinner leaves and
white flowers 15-20 cm) plant
less infested but some
infection apparent.

An apparent hybrid seen.

The opening line
mainly grassy, with
many dead kuraka bushes,
no line one seen.

Ringelap Atoll
(wrecker for NRDL sample
483 #110)
(wrecker for NRDL sample #109)

The coconut trees are
very yellow. In the
central part is rather
dense Pisonia forest,
almost leafless,
surrounded by open
sand forest of
Messerschmidia
Quettarda, Lecceola,
small Pisonia. Lida
gallax common locally.
Ground cover of 7 species
of Bracharia, Lepturus,
Triumpheca, locally firecracker
and a very little Portulacaceae.

This section obviously
used to be the lagoon
shore, as there is a high
sand ridge with a
depression behind it.
The wide sand flat
with scattered bushes
is now between it and
the lagoon.

Next to seaward beach is rather open beach with the margin wind-scalloped.

On the seaward beach is considerable furnissia. There is some, also, on the sand flat back of the lagoon beach.

On the Furnissia forest are poorly developed ferns soils. No sheet pan at all, was seen.

There are one to several inches of humus, often filled with fine living roots (bag 311-1, submitted to NRDL as sample 120).

Underlying this is a dark sandy layer a few inches thick (bag 311-2, submitted to NRDL as sample 121). In places where humus is thin this dark layer may be lacking. From here down is pale sand (bag 311-3, submitted to NRDL as sample 122). These submitted for analysis.

Rongelap Atoll.

Many A. gigis alba and a few A. robusta seen.

In Furnissia trees were 5 A. stolidi, nests loosely constructed from dried Furnissia leaves, and containing 4 eggs (found by the members of party), a few A. robusta nests seen and several nests smaller, of Furnissia leaves and compacted with excrement.

July 9 - Kabelo Islet
open sand flat with scattered bushes.

Lepturus repens var. septentrionalis
common

68 Borehavia tetrandra Font. &
generally common on island

69 Albugo platensis
commonly infecting
Borehavia tetrandra (*3608)

ame - open Pisonia forest.

70 Borehavia diffusa var.
common

71 Flevnia serularis (Fast.) Gaud. ex Wedd.
locally common

72 Pisonia grandis R.Br.
dominant tree

Rongelap Atoll

tufts. (voucher for NRDL sample #112)
prostrate, leaves fleshly, glossy above, flower pink.
many plants, infected with albugo. (voucher for NRDL sample #115)
causimg branches to be erect, with shortened internodes.

prostrate, leaves dull
above, thinner than in B. tetrandra; flower white.

73 erect, stems reddish
flowers greenish.

74 shrub 10 m tall, flowers green
(only this one seen flowering at this time, 20 m tall) almost leafless at this season.
(voucher for NRDL sample #116)

75 next islet west - Leersols
scrub with scattered
Pisonia. Several coconuts
on lagoon side.

76 one of islets on leeward side
no platform but much
beachrock.

77 Another leeward islet

Fev.

July 9 - flight over western
part of north reef of Rongelap. -

Rogen Islet - seaward third is Pisonia forest; the
rest seems to be a sand
forest with a few isolated
cocoanut trees on lagoon side.

fusing (?) dead (actually Unda * nuttallii)
Marshall Islands has typical crescent shape but with two curious strips just off north and south coast. These are possibly remnants of platform but should be checked on a photo on ground.

Islet in east reef south of Emaeela is one of many with various sand spits, somewhat vegetated especially along lagoon shore. There is just north of Long Island have considerable platform exposed to seaward.

Kwajalein Atoll has a low head in reef west of Roi Islet. Islet has a small closed sand bank well within lagoon opposite it. The fourth head has a considerable system of triangular or V-shaped reef pots inside but not quite so regular as that inside the south east channel. North side of island have remarkable patterns of reefs inside them should be photographed.

Kwajalein Atoll
Feb. 9 - Kwajalein Islet
Interviewed Chief Lee, Navy Chief in Public Works Dept. He has charge of nursery and truck garden. He says that a little commercial fertilizer has been used but not much. Soil has some sawdust and algae swept from catchment (Museum Museum) mixed with it before planting. Planting is in raised beds (6 inches). A little commercial fertilizer before planting. Mulch of algae from catchment helps plants turn yellow. Fertilize a little when transplanted start flowering. Mulch with grass cuttings when plants are 6" high (3" in garden).

In the Garden are:
- Citrus, Citrus vulgaris
- Parsley, parsley
- Lettuce, Tomatoes, zucchini
- Persian melon, honey dew melon
- Turnips, radishes, egg beets, sweet potatoes, cucumber,
1956 Marshall Is
Kwajalein atoll

Carrot, green onions, parsley, celery, pumpkin, sweet corn, cabbage, bell pepper.
The principal problem now is the abundance of root-knot nematodes (heteroderma marioni?).
The plants in the nursery have been fertilized a little with commercial fertilizers.
In addition to plants listed on pp. 12-15, the following were obtained:
Anacaria excelsa (?)
"bambus" (the clungate
Clylinia noted on p. 13.
"inal tree" from Australia.
Carabina sp.
Gymnostylis (a shrub?)
Vetinera atrovirens
Argyria ("small flowered
woodrose")

Mentioned as insect pests:
Philippine wood-borer in
Philippine Mahogany
and bamboo beetle.

Cilingina Atoll
Feb. 10 - flying over atoll - noted:
a reef patch inside the pass to the left
Leeward (west) reef margin drops off very abruptly to great depth.
Good surge channels in south reef margin opposite lift deck.
Northwest corner of reef has a great slope of reef (or sand?) extending into the lagoon.
On the north reef, near the middle, a small couple of
small strips of beach rock is the way from lagoon to sea, and many small
sand islands were exposed at low tide along lagoon
margin of reef, especially
on the south western
The inner northwest islet
has conspicuous beachrock
along lagoon side, brown
and orange sand.
The outer islet here has
an erosion ramp, but no
conspicuous beachrock.
1956 Marshall Islands

Feb. 10 - Ailinginae Atoll

(H.C. chart 20715 has life in many shape. Actually the shape given for Mashinham is about right for life. Mashinham is more irregular.)

Birds seen here were a bristle-thighed curlew, hundreds of Laysan albatross, a few Amous stilted, a few Amous ternlostici and mudly ternstone.

Much of this islet is covered by a scrub forest principally of Guettarda, Mezzeschmidia, Beaccola, Pipione and Boronia. In openings are Sehman, Tiomneta, with some Boronias and Tongula. There is very little Pandanus here.

Along the lagoon shore and hooking around both ends, and to some extent on seaward side is scrub. On the lagoon side it is mostly Beaccola about 7 m tall, a belt of it a few m wide.

Along the east half of the seaward side are two large pieces of old beachrock, separated from shore by water at high tide. West of this are rocks which seem to be remnants of an old platform in the East stages of erosion. However, this was not examined at all carefully and may well be reef debris torn by a storm out of the beach in the next edge just opposite.

The lagoon shore is largely lined with beachrock, mostly rather fresh-looking, all between tidal level and being eroded, especially by abrasion. Bag 317 is a sample of the youngest appearing part of this sea.

Part of the interior of this islet is covered by taller forest of Pisonia up to 15 m. tall and others up to 10 m. or more. Locally one on the other is more abundant. The Cemini, in addition to growing upward and forming a secondary canopy, sends out twisted bough branches running over near the ground. These form a tangle in places that is almost impenetrable and traversable. There is little undergrowth where this is thick, but in the openings and thin places Weedels form a blanket. Around openings, Sampago tuba is very common, festooning trees and bushes. There are several small groves of coconut in both the scrub and the taller forest. Under one of these in the taller forest is a good growth of Mivai's saplings, some Weedels and the new Dipteryx, and, as usual, Sampago tuba.

In the interior is a pronounced ridge 37 at least 2-4 m. tall. This is sand but with a high proportion of pebbles in the surface foot. The profile here is represented by Bag 313 1-5.
The soil in this Cardia-Pisonia forest is a peculiar brownish grey granular matrix in most places.

There is no well developed Jaws soil (though a phosphate rock was picked up on the beach). Some of the soils under the Pisonia trees have an inch or two of raw humus, but no harder. Perhaps the porosity of Cardia leaves is such that saprophytic activity is encouraged such as to destroy or alter the humus.

Feb. 10 - Lifvo Islet

74673 Pandanus tectonicus
   fruit, rocks of lagoon beach, in scrub, rare on islet.

74 Allophylus tinnensis (DC.) Bl.
   single clump in forest in center of islet.

75 Polypodium scolopendria
   rare local in scrub.

Clumps of stems 5 m. tall; fruit from ground. No ripe ones seen on tree. Tree 7-8 m. tall, flowers white; fruit immature.

Rhizomes creeping on surface of ground.

1. Portulaca cutera Sod. occasional in sandy openings.
2. Laccordia sericea Vahl Dominant in scrub at top of beach and to some extent inland.
3. Lepturus rhombus var. septentrionalis Fosb. scattered tufts in sandy openings.
4. Messorina argentata (L.) Del. very common tree in scrub forest.
5. Pistacia grandidia R. Br. Co. dominant tree in forest with Cordz.
6. Guettarda speciosa L. common in scrub, scrub forest and tall forest.
7. Triumfetta procumbens Forst. common in open forest and openings.
8. Terminalia amalgamensis R. Br. part in acracb.
9. Alluaudia platensis parasitic on Bracharia tetrandra (34685).
10. Bracharia tetrandra Forb. f. common on sand flats (also on cobbles, coastal flats).
11. Polyporus cinnabarinus in dead Pandanus trunks.

Ailinginae Atoll

12. stems ascending.
13. (voucher for NRDL sample #122)
14. rounded bush 2-3 m. tall, flowers white.
15. (voucher for NRDL sample #129)
16. small tree 4 m. tall, leaves glossy, flowers white, fragrant.
17. small tree (other up to 10-15 m. tall), sterile.
18. (voucher for NRDL sample #126)
19. small rounded tree 5 m. tall. (Voucher for NRDL sample #130).
20. prostrate, flowers yellow.
21. shrub 2 m. tall.
22. prostrate; flowers pink.
23. (voucher for NRDL sample #7)
24. (First fungus collected on Ailinginae)

Calepinia atoll
- shrub 3 m. tall, flowers white.
- wender for MRDH sample #133.
- stems greenish, yellow.
- shrub 1.5 m. tall, flowers yellow.
- stems red, fleshy.

Moirinda citrifolia L.
- common around coconut grove, not seen elsewhere on islet.

Digitaria spinosa var. microstachys
- very local, in one small opening in forest.

Cassia filiformis L.
- occasional parasitic on Guettarda.

Capparis montana L.
- common locally in scrub.

Fleurya aldehydei (Font.) G.Don
- common on rocky ground under trees.

Tecoma lempoloboides (L.) O.Kuntze
- common in forest and coconut grove.

Sporopachys velutina (Scheidt.) G.Don
- common in openings.

Wedelia biflora (L.) DC.
- common in openings and edges of forest.

Codiaeum subcordatum Lam.
- co-dominant in forest with Pisonia grandis.

Thyacra involuta (Font.) R.S.
- dominant in patches in open forest.

Cleodendrum inermis (L.) G.Don
- common in small openings in forest.

- tangled shrub (m. tall), sterile.

Feb. 11 - Kwajalein atoll
from air - Eniwetok
islet seems to have changed
shape somewhat since
1952. It has a short sand spit
to the south now and to
be roughly triangular.
(Check on recent and older
photos if possible)

Rigej Islet - The
strip across islet is
completely green now.

Nest Islet, is
mostly covered by
mixed forest, the
nest one by tangled
scrub.

On south reef are
several islets that look
from air like forests
with more algs completely
enclosed lagomelates.

Rongerik Atoll
Feb. 11 - Eniwetok islet,
Rongerik atoll.

This islet has an
enormous sand ridge
along the lagoon beach,
up to 3 m. high, at least
in places.

Much of the central
part of the islet is
covered by Pisonia - Cardia
forest. The Cardia is
bleak at the tips, the
Pisonia leafless and
in flower.

Birds seen were quite
a few Epygus alba, two
Anomalalidae, one
bistle-thighed curlew,
and two tattlers.

On the island.
geckos from the construction
crew working on new
rebuilding the radio
station. They have
dug a strip and
strip the top across
the center of the islet
where the radio station
is being built, and
have made a road the
full length of the slave side.
Eragrostis amabilis is the most abundant plant in the bare area, but is mostly dry.
On the seaward side, the eswaratum plants are very broad and flat, almost worn down to base level. Rubble tracts lie on it.
Algae and rocks on the bottom, like pumice, are common in the bottom, and a common feature of this camp.

Along the eswaratum shore is an almost continuous series of beachrock, some of it quarried by lagoon waves, and this run up in heaps on the beach.
At the west end is a very thick series of seaward-dipping old beachrock somewhat inland, forming a cove.
Inside this is a very sandy spot with several algae.

Construction of some sort is going on at each end of the islet, as well as in the middle.
The vegetation on the sand ridge is a mixed semi forest, open in places.
Pandanus is rare.
The Cardia forest — with scattered Pisonia — is about 3 km tall. The Cardia forest, with the bare of leaves and terminal branches, have a few putting out new growth. The Cardia forest has typically tangled lower branches, often only where they are numbers of Pisonia, no undergrowth except a few Pisonia shoots and an occasional sponge tube. There are many tiny Cardia seedlings, locally, with 3-5 leaves. Larger ones seen (this description, from eastern half of islet).
On the western part of the islet, the Cardia seems more thoroughly dead.
than eastward of the center. The lisme is almost leafless, but mostly in flower. Here Thuarea, Paeohavia tetradactyla, and leptumi form a continuous ground cover locally.

The soil in this Cordia forest is different from that seen elsewhere in the Marshalls (except on Lido, Kapingina). It has a surface layer of a brown fluffy loam, general inch thick, then a gray fine sand. The surface layer is a lighter, more sandy loam than on Lido. This must constitute a new soil series, but time was not available to study it adequately or to collect a good profile.

Rongelik Atoll

The west end of the islet is a continuous solid Pisonia forest. Here are poorly developed mesossols with no Chondrap, but with 2" of raw humus in places. Sand has blown in over the ground in most places and still looks quite fresh. In the eastern part of this forest is a dense ground cover of Thuarea.
Feb. 11. - Eniwetok Islet.

36673
Lida Falls Warls.

36678

very local in scrub forest

16700

Brehereya difussa ? var.

Brehereya tetrandra f.d.

V.3
Cordia subdentata Lam.

dominant forest tree, seedlings abundant under trees.

34
Thuya groenlandica (Ferd.) A. S.

locally common, forming ground cover under trees.

Pandanus vittatus Poo.

rare in cordia forest.

V.3
Soutilucea arenacea Lam.

small colony in Psoraria forest.

04 (Pan green algae) Phymidium crasphymum Tillet in bottom of brackish pool.


3

shrub 0.5 m. tall. flowers clear orange. Moss stadium in center.

prostrate. leaves short, green on above, white beneath. flowers white. Note conspicuously infected by albugo. Voucher for NRDL sample 131.

tree 10 m. tall, flowers green, fragrant, all tree seen were in flower. (Voucher for NRDL sample 131)

tetrandra.

tree 8 m. tall. sterile, tips of branches dead.

prostrate, forming a loose mat. (Voucher for NRDL sample 136)

tree 10 m. tall, young, fruiting head globular. (Voucher picked from ground)

small trees 1-4 m. tall.

gelatinous layer, brownish, pink.
1956

Marshall I.

Marshall Is.

Rongerik Is.

1956

Marshall I.

Rongerik Is.

Feb. 12 - Kwajalein atoll,
Kwajalein islet.

Litsea trifoliata,
planted as ornamental.

Lavender.

9

Feb. 13 - Utiriki atoll,
Utiriki islet.

Open coconut land back
of village & northeast
has scattered Pandanus
and ground-cover principally
of Digitaria, with some
Haplophyllum, Cassytha,
Triumfetta, Leptanus,
Zinii, Taccia, Yucca.
Young Taccia shoots
are just coming up,
2-3 dm. tall.

Some old tan-pits along
trail back of village with
coconuts at least 50 years
old in bottoms.

There has been much
burning in plantation
east of village, but few
trees badly burned. West
of village the area has
been burned, apparently
by fire.

There is practically no
underbrush in these
plantations - some
scattered Lily tassels
and several thickets
of India (mostly dead
and covered by former
trees - mostly coconut),
Scaevola, Piletaria, etc.

Many of the coconut trees
knocked down by 1951
typhoon have turned up at
the tips and are growing.
The others are pretty well
rotted.

Along a path to south
of village is planted
what appears to be Common
Bakari. It has white flowers,
lobes longer than tubers, the
rather crisped margin.
UTILE atoll

Suffice is much more abundant here than in 1951 but by no means as much as on Rongelap, Ailinginae, and Rongelab. Seeding of Leucoda, Keptum and Mesera schmidides common along beach close to water line, human seedlings back of beach on sand.

Along the west part of this south beach is a high cuesta of old beach-rock, reaching above high tide level, but swash of waves running over it, here and there. The water from this runs along back of cuesta, carrying sand with it, till it escapes through a breach in beach rock. Opposite this beach is a semi-circular indentation in beach, surrounding a pond.

Along south beach Lucania is abundant, growing in sand and gravel, very few dead or partly dead plants seen.
Westward, beginning about 300 yards off the end of the coconut, a great surf-rolled tract lies back of the cuesta partially submerged at high tide. Westward this thing ended and the rock platform shows at the surface in the outer 50 m of the spit. The cuesta has several more breaks here.

On the other side of the spit, the same ridge above the lagoon shelf is broad, somewhat lower, more firmly held by leftwing and casuarina, with a wider growth of bushes than in 1951. Some of the larger of these are dead.

Westward most extreme of plantation on spit has trees with very small crowns, no nuts, growth with no flowers. Few bushes on ground. Deep of burrowing bee. On seaward side of Islet vegetation very rough, leguminous sand with pot holes and abaxial channels. Capped with a very old layer of beach sand. A sand head behind this.

Birds seen:

- Several golden plovers in plantation
- One crested tern on seaward side
- One plover and one tern together in coconut grove
- Five terns on south beach
- Another flock in the part of spit back of lagoon, beach, ridge
- Wandering tattler on gulf, tattler on spit
- Three birds in spit
- Two hirundins (identified by call) and 3 hirundins

- Bristle-thighed curlew seen in interior of spit
- Some figs, chickens and dogs seen, one mandarin duck

Young breadfruit trees common, few old ones seen, a few fruits, almost ripe.

Musca capricornutus seen but not collected.
Feb. 13 Utirike Islet

1. Asclepias curassavica L. planted around buildings and cemetery.
2. Russelia equisetifolia L. planted around outbuilding.
3. Leptinum repens var. subulata F. M. very common on outer beach.
5. Centella asiatica (L.) Urb. several patches in coconut plantation.
7. Bougainvillea spectabilis rarely planted around houses.
8. Euphorbia hirta L. several plants near new landing.
9. Digitaria cymosa var. microstachya abundant component of ground cover in coconut plantation.
10. Leptinum repens var. subulata F. M. abundant in ground cover in coconut plantation.
11. Bougainvillea constricta (L.) Merr. out tree in pool in bomb crater, said to be planted.

Utirike Islet.

corolla vermillion, crown orange.

flowers scarlet.

flowers white, segment edges somewhat crisped; buds acuminate; lobes longer than tube; filaments purple; prostrate, rhizomes on surface of ground.

common on rocky ground in coconut plantation; stems reddish, leaves dull; flowers pink; shrub, floral bracts dehiscent.

Pseudantherum campanulatum

rem. atrorubens (Bull.) Brit.

planted as ornamental

Utirik Atoll.

shrub 3 m. tall, sterile

leaves purple.
Feb. 14 - Libbie Inlet

1. Hedystis bifida (L.) Lam. common in open coconut plantation. This specimen is from near seaward side.

2. Crinum latifolium var. zeelandicum (L.) Hook. f., planted in yard.

3. Peperomia obtusifolia (L.) A. Diet. planted in pot. spathulate.

4. Rhoeo discolor (L.) H. Mor. Home spontaneous, spreading vigorously.

5. Cynodon dactylon (L.) Pers. in lawn around church.

A healthy plant of Agave siskiana growing at DeBrum house.

Banana crisata growing in pot; white-flowered form, not very healthy.

Birds very rare.

One Gypsialis, 1 Ananas stolica, 1rrr Ananas terminifolia seen on seaward side.

27. Hypeastrum puniceum; commonly planted, flowering very well.

prostrate; chliristic.

peduncle 0.7 m tall, slightly compressed; flowers white with purple stripes; erect; leaves fleshy.

leaves purple beneath; flowers spiky; juice said to be irritating.

prostrate to ascending, sterile.

Asbied Cattie Capelli DeBrum if any larvae coconut disease known here. He did not know it as such. Mentioned a place where coconut trees looked very poor. People built a house among them and lived there for a time. The trees tended to pick up after people had lived there for a while.

peduncle hollow; flowering with or without leaves; calyx pale vermilion, strongly zygomorphic.
Feb. 15 - Gegen Islet

Beachrock extends along almost entire lagoon beach, the east end of this beach is prolonged somewhat into a sand lobe, from which a sandy beach extends about 100 yards to other angle of inlet. From about this point, a beach extending to extremity of inlet and around and along the third side is a remarkable series of beach rocks, the cliff of which is lagoonward and the strike perpendicular to the beach. In places, especially at the tip of the islet, the bedding is somewhat confused.

Back of the lagoon beach and parallel with it are two broad beach ridges of sand and small gravel. These have scattered vegetation, mostly shrubbery, of Leccida, Guettarda, a little Mesembryanthemum. Boehzia diffusa is common in the open places, B. diffusa var. rosea, tiny tufts of Lepturus repens, much

Rongelap Atoll

bare sand with a sparse algal crust. The Guettarda on these ridges is in very poor condition, dead at tips. The soil on these ridges is shiliga, but test holes dug the surface layer is somewhat darkened and underlain by a pink unaltered layer. About 20" down is an irregular cementation, Bae. 318, not very firm, of similar material to the pink layer.

Along the east shore is a dense Leccida scrub with the interior scrub and scrub forest approaching close to the edge here and there. The interior well back of the beach ridges is a dwarfed Pinnaud-Guettarda mixture with some Lehnia. It is in most places somewhat open, and has a ground cover of Boehzia diffusa with some Lepturus. A little Taceq, Cassytha, Achyranthes, and Pyrnophora tuba are the seen. There are a few scattered coconut trees, especially toward the lagoon beach, and a very
few Pandanus.

At this season, the Pisonia is nearly leafless but
flowering.

The soil is mostly bauxite but with some
weedy, developed ferns
under Pisonia but with
no hardpan.

The understock

Between the reasonably
well developed forest and
the open scrub of the
beach ridges is a belt
of rather open scrub
with Homalay guettarda
and Chong. In the openings
are Intulada lutea and
Lepturus.

The interesting feature
of this vegetation is its
current condition. The
Homalay and Messor-
shmidtia are the only
common woody plants
that seem to be in
really normal condition.

The Pisonia is mostly
leafless, as would be
expected in the dry season
in this climatic belt. However,
it has clumps of dark
green leaves that almost
resemble mistletoe from a

Longclap atoll

distance. The Leaders is mostly dead or almost
so. The Guettarda in
the forest is largely dead
and very severely dying
back from the tips. Where
in the fen it looks very
much damaged - leaf
from the tips.
The Lepturus, common
bark, generally back
of the beach ridges, is
entirely dead except
for a few tiny, scaly
tufts on the beach ridges.
Some coconut trees are dead.

Since this islet was
most strongly showered by
fall-out in March 1954 there
may be some connection.

Gogins alba abundant
but golden plumer seen.

Combilestone thistle curlew
seen on east slope - very tame.

Premice common but not
abundant (bag 322).

Jennings profile under Pisonia:
0-3" raw humus 10YR 7/1 7/2 (bag 319-1)
3-14" dark grey (10YR 7/2) salt and
pepper colored fine sand with
abundant coal gravel (bag 319-2)
(cake not dug deeper)
Feb. 15 - Gegen Islet

36728 Brechavia diffusa ? var. dominant in ground-cove in forest.

29 Brechavia tetrandria Forst. rare in open sand and grass

30 Achyranthes candelaria R. Br. - in Sarcia forest

31 Pisonia grandis, R. Br. dominant locally in forest and scrub.

fungus on dead Pisonia stub

Calyptris common on branches of trees.

34 Pandanus only 2 trees on island, in scrub forest.

35 Portulaca oleracea L. Sol. - local in sandy openings in interior scrub.

Terminalia ramossissima Reck. rare in Leucaena scrub on rocky soil.

37 Fleurya suberosa (Frut.) Gard. & Wedd. - and in open scrub forest on rocky soil.

Rongelys atoll

prostrate; leaves dull green above, white beneath; flower white. (voucher for NRDL sample #153)

prostrate; leaves glossy green above, white beneath; flowers pink. (voucher for NRDL sample #152)

1 m. tall; flowers magenta.

spreading tree 5 m. tall; almost leafless; flowers green. (voucher for NRDL sample #154) cream white.

tree 5 m. tall; fruit from ground beneath; immature fruiting heads on tree globe.

stems fleshy, ascending; flowers yellow, 1-15 cm.

across; stamens 15-25. (voucher for NRDL sample #156)

sterile shrub 1 m. tall.

appearing in very poor condition.
1. Animals:炉
2. Crenobita perlata
3. Crenobita perlata (Feb. 10)
4. Geckos: Rongeuia Atoll, Einoreta Islands (Feb. 11)
5. Insects attracted to light.
6. In village (can't see ground in light) house; but seemingly indifferent to light.)
7. Wiliu Atoll, Easter Island (Feb. 13)
8. Insects from Pisoina trunk: Lifeb. Atoll, Ailinginae Atoll (Feb. 10)
9. (Mosquito larvae in water in cavity in trunk)
10. (Grasshopper on trunk, probably merely accidentally)
11. Cat-wearing spider - Ailinginae Atoll, Lifeb. Atoll (Feb. 10)
12. Beetles and long-haired grasshopper - Ailinginae Atoll, Lifeb. Atoll (Feb. 10)
13. Rongeuia Atoll, Gigen Island (Feb. 15)
14. Xylocopa atoll, Kwajalein Atoll, Kwajalein Island (Feb. 16)
15. Lee in cave in old Nautilus shell on beach, Ailinginae Atoll, Lifeb. (Feb. 10)
Animals - See p. 14

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11

Insects attracted to light in village (ants on ground in lighted house, but seemingly indifferent to light).

Wings Atoll, Wewak Atoll, Feb. 11

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Animals - see p. 24

7. Ceroplastes peralta
   Ailinginae Atoll, Ehipus Islet, interin. Feb. 10

8. Geckos
   Kongela Island, Ewinge Islet
   Feb. 11

9. Insects attracted to light.

10. In village (ants on ground in lighted house, but seemingly indifferent to light.)
    Ningalol, Ningaloleck
    Feb. 13.

12. Insects from Pisonia trunk
    Lifi Island, Ailinginae Atoll
    Feb. 10.
    (mosquito larvae in water in cavity in trunk)
    (grasshopper on trunk probably merely accidentally)

13. Crab weaver spider -
    Ailinginae Atoll, Lifi Island
    Feb. 10.

14. Beetle and long-horned grasshopper - Ailinginae Atoll
    Lifi Island, Feb. 10.

15. Ceroplastes
    Kongela Atoll, Gigen Islet
    Feb. 17.

16. Xylocopa
    Attaching a man on Kwajalein Atoll, Kwajalein Island, Feb. 16.

17. Sea
    in can in old Nautilus shell on beach, Ailinginae Atoll, Lifi. Feb. 10.
Feb. 19 - Waikiki Beach, Honolulu

26738 Pseudorasthenum carthodii
  f. amicoreticulata
  planted as ornamental

Oahu

shrub 0.7 m tall; leaves with yellow vein
metathall; flowers white with a cluster of purple
dots in center; upper two corolla lobes partly fused.

Trace of snow on tops of even low peaks in central coast ranges, much on those in Ventura Co.

In Mojave Desert one of desert mountain ranges gave a clue to the history and former topography of the typical sharply rugged isolated desert ranges. It has the common skeletonized form but with remnants of a gently arched plateau on top ridges. Indicates that these ranges may be erosion remnants of gently rounded hill-like mountains a mountain masses.

Now in Kaibab area and all mountain masses of northern Arizona and New Mexico. In some places reflection of sun shows a surprising amount of surface water, evidently result of thawing.

Meteor Crater, near Winslow, has a rather squarish, sharp, shape seen from almost directly above.

An extensive dust storm extends from the Rio Grande Valley just west of Albuquerque eastward to Amarillo, Texas, and then faded out but some dust blowing almost to Tulsa.

Beautiful example of entrenched meanders just west of Tulsa - small streams.

1. Ants, collected in Guest house, Kwajalein Islet, Kwajalein Atoll.
   (attracted by liqueur left in glasses.)

2. "Brown widow" spider, found in house of Cdr. White, who says it is
   fairly common, but no bites reported recently. Kwajalein Islet,
   Kwajalein Atoll.

3. Long horned grasshopper nymph, found in bouquet of flowers on table,
   Likiep Islet, Likiep Atoll.

4. crabs from Rongelap I., Rongelap Atoll.

5. Two grasshoppers attracted to lights, Rongelap Islet, Rongelap Atoll.

6. Ants and roach from ground, fly attracted by sweat, weevil picked up on
   clothing while going through brush, Rongelap Islet, Rongelap Atoll.

7. Hermit crab from Ailinginae Atoll


9, 10, 11. Insects attracted to light in house in village, Uterik Islet,
   Uterik Atoll (ants on ground in house, seemingly indifferent to light).

12. Insects associated with Pisonia tree trunk (mosquito larvae in water in
    hole in trunk, grasshopper not especially associated with anything),
    Sifo Islet, Ailinginae Atoll.


14. Two beetles and adult grasshopper, Sifo Islet, Ailinginae Atoll.

15. Hermit crab, top of beach, Gigem Islet, Rongelap Atoll.

16. Xylocopa which stung a man on Kwajalein Islet, Kwajalein Atoll.

The numbers for crabs, geckos, etc., in () merely included to make the series
complete, but are being taken to Washington. Sometimes two numbers are in
same bottle, but I think from notes it will be easy to associate numbers with
proper insects.
113  Kabello
114  "
115  "
116  "
117  "
118  "
119  "
120  "
121  "
122  "
123  "
124  "
125  "
126  "
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133  "
134  "
135  "
136  "

Lepturus repens
Guettarda
Breobavotetrandra
Pisania grandi
Portulaca lutea
algae crust
heat barrier
black soil barrier
salt and sand barrier

108  Rongelap I.
101  "
102  "
103  "
104  "
105  "
106  "
107  "
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136  "

Digitaria
Thuara aenotila
Pisania
Guettarda
Lepturus repens
Breobavotetrandra
algae crust
Portulaca zamoensis