



The image shows the front cover of a record book. The cover is light-colored with a dark, textured spine on the left. It features a decorative border composed of a repeating geometric pattern of small circles and lines. The border is divided into four quadrants by a central horizontal and vertical line, creating a large 'H' shape. The word "RECORD" is printed in a bold, black, sans-serif font in the center of the cover, positioned between the horizontal lines of the 'H' shape. The corners of the cover are rounded.

RECORD

F. R. Fosberg
 7001 W 64

Collected and Field Note Book

July 1, 1962 - July 31, 1962

(1962 - 1962)

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- 31 Florida
- 32 Cuba
- 33-34 Jamaica
- 35 Haiti
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- 38-39 Barbados, Guadeloupe, Puerto Rico, etc.

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- 39-40 Arjo Gardens #4232-4237
- 40-41 East of Jamaica #4238-4239
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- 45-46 Jamaica #4248-4249
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- 48-49 Arjo Great Gardens #4252-4253
- 49-50 Northwest of Grand Cayne ..
- 50-51 (St. Andrew Co.) #4254-4255
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- 55-56 Road to Carr River
- 56-57 Hills, downward #4259-4261
- 57-58 Garden below dam
- 58-59 Hillside #4262-4264

Collection and Field Note Book

No. 64

(July 1, 1962 - July 31, 1962)

(42513 --- 42972)

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F. R. Forberg
Book No 64

F. R. Forberg
7006 No 64

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A BOORUM & PEASE PRODUCT

1942

Florida

1

3

July 1 - flight from Miami
to Montego Bay, Jamaica.
(Viscount - st. side)

West of Miami airport some
land is cleared and grassy,
with much disturbance.

Then extensive gray-brown-
green areas (saw grass?) with
scattered greener spots and
small patches of trees,
mostly small and open.

Roads and cultivated
patches are light colored,
suggesting sand.

(Just west of airport the
ground seems to be coral
limestone)

Southward and back
toward the coast a large
proportion of the land is
occupied by subdivisions,
mostly somewhat inland.

The coast, itself is wooded,
even swampy. Some of it
seems to be cut up by streets
but no houses yet.

The bay seems to be a
lagoon behind a barrier
island or chain of islands.

Much of the bottom in the
lagoon is of submerged
reefs. The islands are
wooded but much cut with roads.
Outside the islands a shallow shelf, fairly
wide, with a great complex of submerged reefs.

Off to right, the chain of islands becomes the

Florida Keys.

The edge of the shelf is abrupt, and water immediately becomes deep and blue.

Islands off north coast - narrow outer barrier with a few sand cays. Then a complex of more extensive islands largely mangrove swamps with tidal channels, ~~swamps~~ and patches of higher thinly wooded sand, surrounding a very shallow lagoon with irregular sand cays, these thinly vegetated. Then deeper water with a few small islets.

9:14

Then the coast (only slight reef development here).

Narrow mangrove and some wooded land, then patches of cultivation and much savanna or pasture with some scattered trees.

9:16

An area of more intensive cultivation and a small patch of sand dunes (?) white patches.

Then an irregular but angular mosaic of cultivation and pasture - mostly green - soils dark purplish. Trees very sparse and irregularly distributed, narrow gallery along streams.

9:18

More relief, brownish rather than green, still largely cultivated, patches smaller, paler, sand color. Locally very light

9:20

Plantations dark purplish to somewhat reddish soils, pastures, soil purplish but apparently thin over a pale subsoil - at least roads and brown pits very pale.

9:21

(Marajibo - 75 mi. NW of Camaguey)

9:22

red soils - large cultivated or plantations, some pasture or savanna.

9:23

soil gradually darker red becoming purplish, more and more in plantation still some large blocks of savanna. Some seems to be pineapple plantation.

9:24

from color, but possibly not. rectangular pattern. Then sugar.

Then an irregular flat mosaic of burned areas, scrub or scrub forest or savanna.

9:26

South coast, with a narrow belt of coastal forest.

9:27

A series of small islands - wooded, one seems to have mangroves in interior, all have some ponds.

9:28

A larger very irregular island, mostly mangrove, with white sand peripheral strip. Then a whole complex

of islets and a very irregular barrier island with mangrove on the inner (north) side, a beach and beach ridge on outer side. A patch of rather shallow water, greenish, but mostly a dull blue, not the deep blue of the Pacific tropics.

9:30

9:33

Three more islands, and others westward, forming a chain. Interiors mostly mangrove, some patches of higher sand, apparently grassy (brown). Islands surrounded by beaches and beach ridges.

9:35

A scattering of tiny sand cays on submerged reefs. Some vegetation.

9:38

More extensive islands farther to right and one almost on course. Mostly mangrove with peripheral sand ridges. A large reef complex forming an atoll like structure, but rather irregular, surrounding a lagoon.

9:39

41

Another complex, perhaps a part of a general barrier but many mangrove cays and a few sand cays and a

shallow reef with submerged "tidal" channels surrounding a lagoon with a brighter green bottom (Thalassia?).

10:17

Then abrupt dropping off into deep blue water. Entering Montego Bay, Jamaica. Mts on s.w. sides irregularly wooded, much shifting cultivation and clearing.

S. of harbor a complex of mangrove islands.

Off airport a good coral reef. Hills s. of airport wooded, some clearing and houses on west part.

10:16

landed at Montego Bay airport. Plants seen

Delonix regia

Cyperus rotundus

Chloris inflata

Cynodon dactylon

Paspalum conjugatum

Catharanthus roseus

Hibiscus cf. rosa-sinensis

Casuarina equisetifolia

Coconut

Tidal flats, ~~with~~ ^{mostly} bare, some with scattered small mangroves, around an strip.

Reefs to east are very narrow; water deepens very rapidly. Left at 10:47 for Kingston

Coastal strip very narrow, hills begin almost immediately. These are karst-like, with scrub or scrub forest, green cultivation on moist gentle slopes and hollows between hills.

Southeastward the

Eastward the karst becomes less pronounced, more flat ground, less hills -

the hills still covered by spontaneous vegetation but this more savanna-like.

10:53

Karst again becomes more abrupt, hills densely wooded. Visibility becomes poor because of clouds.

10:55

In breaks in clouds a striking karst, all wooded, no significant amount of ground level enough for any sort of cultivation.

10:56

cross a dirt road shortly afterward, another and a village with in a broader valley, still karst, some clearing.

Then an intricate mosaic of clearing and tiny abrupt wooded hills with flat ground between them, but very narrow. Some scattered settlement here, soil red,

but general aspect green. Flat intervals become somewhat wide, more settlement, some roads.

10:59

11:01

but clouds very thick. A wide flat valley with a more important road briefly paralleling course.

Villages. Red badly eroded ridges perpendicular to course.

11:02

Rather thick settlement along a network of small roads.

Some savanna area, but landscape (so far as can be seen through clouds) still karst-like, but not so abrupt.

11:04

Drainage now dendritic and ~~more~~ vegetation mostly a green savanna, with some cultivation, relief still sharp.

11:05

becoming more wooded but still largely open, with network of roads on ridges, houses numerous along them. Clouds.

11:06

Topography gentler soil very red. General color green - mosaic of pasture, scrub, cultivation, savanna.

11:07

Some tendencies to karst,

- 11:03 Plantations and main road
A fair sized city.
More plantations.
A wide flat river valley.
River somewhat meandering,
lined with narrow gallery.
- 11:09 Flat plain, all in sugar
and banana plantations.
- 11:10 Area of dunes(?) then coastal
mangrove and mangrove
islets around Kingston
Harbor. This rather muddy
green. A few poor reef patches.
Kingston Airport on a
flat peninsula south of city.
Plants seen

Cynodon dactylon

Cyperus rotundus

St. Janseria guineensis

Cothurnocoryphus variegatus

Desmodium oleander

Cyperus americanus

Heliconia rostrata x *schryberiana*

Casuarina equisetifolia

- 12:02 Left Kingston for San Juan, P.R.
Lagoon south of an inlet, lined
on a side by mangrove, inland
on islet or peninsula is an
apparently deciduous scrub,
with scattered *Casuarina* forming
dark ~~at~~ spirelike emergents,
(possibly not *Casuarina*) (Cacti?)
(or both)

Causeway to shore ends
in a horrible tree-less
subdivision.

A small valley on the
south coast, east of the
causeway, is scarred from
quarrying.

Middle slopes of mountain
are wooded, upper slopes
mostly open - possibly
Gleichenia.

Lower slopes covered by
green scrub, with scrub forest
or forest in ravines.

12:07

Crossed an alluvial fan
in a valley mouth with
a wide bar gravel
dry river bed.

12:08

Mountain slopes are
a mosaic of clearing, grass,
and scrub. This is the coastal
range. The next one inland
has more clearing and less
scrub. On coast range
are patches of larger forest
in ravines and a few on
hill tops.

Clearings (recent) show
a white appearance - rock?

12:11

Crossed a valley with
a wide, braided gravel
river bed. Valley bottom
in bananas and pasture,
some coconut plantations.

Coconuts abundant on lower coastal slopes. A small bay - slopes here mostly is coconut patches of scrub. A small mangrove swamp at head of bay.

east of this a mosaic of cultivation and scrub & pasture. Along coast some swamp areas - mangrove, the front of them a dark gray - apparently burned recently. Next one green.

The general landscape of this ~~eastern~~ peninsula is green. The ultimate peninsula is wooded except for some savanna on the distal lobe. (Mount Point)

12.15

Opposite south ^{point of view} peninsula of Hispaniola.

This is brown with wooded ravines.

In distance a bare white river bed comes down to the sea.

On the peninsula a small mangrove swamp and small lagoon back of a festoon of barrier islands.

Large island east of peninsula - west ^{lowland} ~~lowland~~ dry and brown, wooded only in

ravines, eastern third wooded.

North of it a barrier reef encloses a large ~~sea~~ lagoon.

The eastern leg of this barrier reef, running straight n-s, is wide. A conspicuous surf is breaking all along east side. No cays on east side but one small one on lagoon side.

For some distance to south coast of Haiti is in view but too far away to see much of its vegetation. It is generally slopes rather steeply to the sea - seems to be brown rather than green. It has the aspect of scrub and savanna, rather than forest.

12.16

The coast swings south. The slopes ~~are~~ are brown, seem to be mostly savanna with small patches of wood. Well inland it seems to be forested on the mountain slopes.

170

at no point there is a tower of the mouth of a valley, as an alluvial fan of road goes directly inland.

southeast of this, along the coast - an extensive barrier is, apparently, dunes with scattered vegetation - very pale in bright red soil just inland and an extensive plain with open scrub ^{and} irregularly mottled with small patches of savanna. This plain gradually slopes up to the low hills inland and, irregularly, the forest becomes more closed, but large patches are still open, some even verging on savanna. Large lake in the distance to ~~the~~ left.

Some relief, but gentle hills, completely forested except for a few small clearings on the inland slope. This forest extends west to the mountains south of the lake which have a band of savanna from half ~~to~~ way up to near the top. Tops heavily wooded.

170
course
inland
west

173

Next range of hills ~~to~~ inland is mostly cleared & in course of shifting agriculture, with more wood up the slopes and on the higher ridges mostly forest. East slope almost entirely cleared and in shifting agriculture down to coast. ^{scattered} green forest. Some pasture.

Inland in distance a large plain, s.e. of lake, mostly in sugar plantation.

- Dry reef along this coast.

Interior of this south peninsula is a mosaic of clearings and wood, perhaps predominantly woods.

at head of bay in distance is left as a triangle savanna or bare hills - like area occupies north half of plain back of bay probably half irregularly wooded.

Range of mts just s.e. of this bay heavily forested, on south slopes, anyway.

Beyond this a dry plain,

101. 101

apparently mostly savanna,
but distance too great to
see - east half of this
apparently a dry scrub.
Perhaps the savanna
plantation, as there is a
rectangular pattern of
roads. This also extends
into the scrub part.

Inland the mountains are
steep and largely wooded.

Head of large bay
seems to be generally wooded.

East of it is a strip of
scrub again and becomes
dry, brown and a mixture
of savanna and scrub.
Eastward becoming more
downy scrub. A large
braided rather large river
bed coming down out of
mountains and swinging
west to mouth on a peninsula.
South of this a fresh water
lake peninsula enclosing
a lagoon - seems sandy
partly grass partly thick
scrub. A cleared area on inside
west of lagoon - sandy.

East of this a flat coastal
plain - perhaps a sugar beet
cane rather than a rectangular
pattern of roads.

Broad coastal area and

flat valley south of
top of this - a mosaic of
cultivation, small patches
of wood, some large
sugar plantations, some
scrub and to a small
point scrub seems to be
dominant.

Then coast swings slightly
northwest - rather flat,
some plantation, some
scrub & forest. Distance
becomes is great.

1153

Peninsula east of bank
to mangroves - wooded.
East of it a narrow
strip, rather wide, is
wooded, but inland a
large area is either savanna
or sugar cane - no trees
to be seen. Probably cane.

787

East of a large river
mouth east of this a
considerable wooded
area and back of it large
areas of sugar cane.
Small island off coast -
almost entirely wooded.
East of it, savanna,
plantation and some woods.
In some several beautiful
wood mangroves on from or made
from a rectangular pattern

San Juan Airport

Plants seen

Casuarina equisetifolia

Pterocarpus papuanus

Mimosa paniculata

Cordia variegata

Acacia robusta

Albizia leucacantha

Alpinia purpurata

Chromolaena odorata

Calophyllum

Nyctanthes

Vernonia cinerea

Rhinacanthus

Cantharanthus

Ficus

Leucaena

Cycas

Passiflora

Polypodium

Coccoloba

Cocos

Polypodium

347
Culebra Island - largely
deserted, but has a
small islet by east of it
green wooded, slope irregular

348
St. John's, satellite
green, mostly wooded.
cloudy

generally wooded, almost

no flat ground.

Reefs very narrow.

mostly in bay

shaped extremely

irregular.

spurs truncated,

with low sea cliffs

these mostly low.

to north, bay of island

is immediately beyond

a chain of small

islands extends

partly east

low all seen when low

sea cliffs, reefs not prominent.

521

right? I think it should

be to the left

narrow in places.

517

Martinique - completely

cloud-covered except a

small hole or two through

the clouds - slopes of

mountain largely grassy

great ravines, clearings

& bays.

sections.

much of city & bay westward

is mainly cultivated land.

some mangrove at head of bay

A number of villages, small

apart as a rule.

southward land becomes

more intensively cultivated.

islets small and irregular

separated by bridges very
few small bits of forest,
houses numerous.

538

Another small lagoon,
just before south end of
island.

Several lagoons at south end
some barrier islands and
reefs, but not well developed.

539

Another island to left,
but not very visible.

Little lagoon! In detail visible
except very irregular addition.

543

North point of Barbados
on left.

Tox daria, see usual.

Sloping plateau
with shallow, deep ravines.
Many small villages.
Land almost completely
cultivated. Close network
of roads.

Development all along
south coast. Bar reef
on east side.

747

(847)

Light of Tobago on
left.

July 2 - University Farm

Thompson Flowers H. G. Corp Co

42513 ~~weed in cultivated pasture~~
Cleome rutidosperma

flowers buds white.

1 in cultivated plot

1 14 *Microtes debilis*

flowers white.

2 15 ~~weed in edge of pasture~~
Vranyia subterranea

weed in pasture plot

July 3 - *Utricularia* savanna.July 3 - just north of Cumuto,
south east of Arima, St.
in open wet savanna
on gray silt35 m.
Andrew Co.2 16 *Chrysobalanus icaco* var.
common, scatteredshrub 1 m. tall,
flowers white.1 17 *Spernococe capitata*
common on roadside

erect, flowers white.

1 18 *Lauvageria*
commonstems depressed to ascending,
flowers pinkish white.1 19 *mis) Perama hirsuta* Aubl.
common

erect, flowers yellow.

1 20 *Spiranthes*
occasional, isolated

erect, flowers white.

2 21 *Rhynchospora scabrata*
abundant

tufted

2 22 *Ctenium*
very common

loose tufts.

in edge of island of trichet
in wet savanna, on silt1 23 *Cassytha filiformis* L.
occasionalstems greenish, turning
yellow, flowers white, fruit green.1 24 *Scleria bracteata* Cav. det. Strong 1980
abundant

Is. 11. 28

July 2 - Trip to ~~the mountains~~
 lowland vegetation is
 a tangled forest with a
 large component of *galvan*
 esp. *lucy*. Locally *Banana*
 is dominant. *Acropis*
 frequent. Bamboo persists
 for commercial plantation

Large open area - once known
 as old U.S. airbase. Mainly
 grassy (*Andropogon* sp.) but
 with scattered trees
 and thickets of various
 sizes.

Station

Acropis foveata (1000 ft.)

Open area of the
 grass or wet very forest soil
 or soil, grayish part in
 upper 10 cm, then brown
 gray, then mottled with
 red, the red branching
 or nodules & concretions, the
~~soil~~ is of nodules
 by clay. The mottling
 will harden to brick-like
 concretions when exposed
 to air.

Scattered shrubs
 on a thin low grass - largely
Rhynchospora and
Cyperus, *Paspalum*, etc.

A patch of tall
 thicket in the ravine
 is on ground perhaps a
 few inches higher, a
 soft gray silt that
 seems to be cracked
 into polygons by
 cracks at couple of
 inches or more wide
 polygons between
 like. On this is a
 growth of *Mauritia*
 mixed with tall &
 short trees of various
 broad leaved sorts

Undergrowth of *Bocconia*
 and various shrubs

Edge is a band of
Pennisetum sp. an awful
 saw-grass type, climbing
 through shrubs, on
 the ground is a rather
 dominant *glaberrima*
Coccoloba

Road s.e. of Valencia

Swamp forest, with
broad channels and
hummocks, flooded
part of year, but not
at present. Soil a
gray silt, underlain

This forest is largely
palms of several
sorts, Myrsineae,
and various other
broad-leaf trees. Under-
growth 3-5 m tall
of shrubs, small
palms, etc. - several
layers 1 m or more high
of young palms.

Little vegetation in
channels, mostly on
hummocks.

An enormous sedge
common, as well as a
small one - leaves of the
large one almost *Pandanus*
like 2-3 cm or more wide,
up to 3 m or more long, stiff.

Isomonas occasional.
Ardis not very common.

Leaves of *Leucaena*, common,
+ *epiphytes* - *Trichostema*
lichens.

4252 *Coccoloba*
abundant on ground

28

July 3 - just east of Valencia 30 m.
St. Andrew Co.

1 26 *Palicourea*
in swamp forest with many palms
along narrow road

2 27 *Spermacoce*
along narrow road

2 28 *Cyperus*
common on large hummocks

2 29 *Heisteria pumila*
abundant on trunks of *Mimosa* *salmon.*

3 30 *Cephaelis tomentosa* Willd.
common along road

2 31 *Palicourea*
occasional along road

1 32 *Lacistema*
rare along road

1 33 *Calliandra guildingii* Benth.
occasional along road

3 34 *Isertia paviflora* Vahl
occasional along road

2 35 *Palicourea*
occasional along road

decumbent to ascending,
flowers purplish,
fruit bright blue.

low shrub, thyrses
red, corolla dull mag. red.
erect; corolla white.

1 m. tall; bracts
scarlet, flowers pale yellow.
shrub 0.8 m. tall,
flowers whitish,
thyrses green, turning
bright purple in fruit.
slender tree 4 m. tall;
fruit maroon.

shrub, 2 m. tall
light red.

shrub 3 m. tall; corolla
pale pink, tube darker.
shrub 2.5 m. tall;
thyrses green, fruit
black when ripe.

July 11 - La Cabaña Rd.
Blanchet's scene here.

Ridge top forest
locally, fairly undisturbed.
July 20 - in tall up to
double width to 70 ft.
Canopy almost complete,
rather uneven. No
second tree layer
a shrub layer 20 ft or
fairly well developed.
A lower one with some
100 ft layer largely young
palms some broadleaf
decid.

100 ft layer gingerbread,
tree ferns, palms, nutmeg
Heliconia. Many ant
some birds, some
on ground a rather
sparse cover of seedlings
a few ferns etc.

Many lianas on
tree trunks - some
Blechnum. Many grasses
some ferns.

Many epiphytic
which fall on branches
on trunk, branch, leaf.

On top of ridge, and
highest peak, a clearing,
and around this some
disturbed, apparently

1700 -

200

previously cleared
area. Clearing remains
standing down the
south slope, rather than
the north. Disturbed
and thickly grown
with Clusia, with
a few trees.

The valley up which
the road goes, on the
north slope of the
ridge, is almost
entirely cacao plantation
with some native
trees as shade. Only
near the top is there
any native forest. This
is real montane
rare forest.

On the opposite side,
except for a little cacao
and coffee right near
the top, the forest goes
down to a fairly
low altitude - but with
the larger trees fairly
well logged out. *Wraygizia*
is abundant.

At low altitude coconut
is dominant, all along
the coast westward to
Chubasco Point, at least.

strand plant
Wedelia triloba
Paspalum distichum
Coccoloba muricata
Cordia sp.
Pithecolobium radiata
Persea caroliniana
Cyperus sp.
Scaevola plumieri
Ipomoea
Clusia rosea
Laportea
Ficus cf. *unifoliata*

July 4 - Point Chuparra,
 west of Blanchisseuse, St.

4253c *Pithecolobium*
 1 abundant on rocky
 bluffs above sea beach

July 4 - Blanchisseuse Pass,
 Northern Range west of
 Morne Plein, St. George Co
 in montane rain forest
 on ridge top.

3 37 *Cephaelis*
 occasional

3 38 *Ipomoea*
 epiphytic on tree trunk

2 39 *Adiantum*
 common, terrestrial

land flat back of
 beach planted
 to coconuts, but there
 is mostly young
Wedelia and *Paspalum*
 dominant - few patches
 of *Coccoloba*

On rocks, *Styphelia*,
Wedelia, *Clusia*, *Clusia*,
Woodsia, *Clusia*, *Ficus*

4 m
 St. George Co.

flowers scarlet.

500 m

shrub 1 m tall, flowers
 white, fruit purple.
 - bracts white.
 climbing, rhizome close to base
 - of tree
 rhizome creeping, young
 broad pink.

42540 sedge
2 common

2 41 fern
common

3 42 *Cephaelis*
occasional

July 5 - Caroni Swamp
along old canal in
~~the~~ Rhizophora swamp

3 43 *Rhizophora*
abundant

2 44 *Rhizophora*
abundant

2 45 *Rhizophora*
~~common~~ abundant

2 46 *Rhizophora*
abundant

1 47 *Laguncularia racemosa*
common, especially
toward head of canal

1 48 *Rhizophora*
abundant

1 49 *Cyperus articulatus*
locally abundant in
open marshes

1 50 *Digitaria*
occasional in ^{muddy} ~~bill~~
near bridge

scap. erect.

shrub 1.5 m tall,
fruits lavender.

0 m
Caroni Co.

tree 5 m tall. flowers
pale yellow, 2-4 on an
inflorescence.

small tree, buds green.

small tree, ~~flowers~~
buds pale yellow.

small tree; flowers
pale yellow.

shrub 2 m tall;
corolla white.

small tree; buds green.

erect, ~~scap. erect~~
several stems from base

July 5 - Carson's Swamps
by boat

Inland end of canal -
Rhyzophora mangrove, Scaevola
racemosa, Avicennia.

Cyperus ligularis
Sida acuta
Paspalum distachnum
Spermatophytes or more a few
ft. above water level -

Avicennia more common
in these flats than along
channel.

several vines in openings

Aerial roots on Rhyzophora
hanging down from mangrove
branches but most about half
just above high tide level.

Westward Rhyzophora
becomes completely dominant
along channel.

Well toward west the
general height of the trees
is 5-10 m., mostly Avicennia
slender, max. 10 cm dbh mostly
much less. Trees perhaps smaller
on north side.

large flock of scarlet bee
(had specimens of red K.?)

found a few other kinds
of birds.

Off to south of canal
are large areas of open water,
with islands and borders
of mangroves.

Going landward the
proportion of Avicennia
and Scaevola steadily
increases.

One type of Rhyzophora,
rather uncommon ~~is~~ has
red nodules.

Large areas of marsh
on south side toward head
of canal.

July 7 - trail up Mt.

El Tucuche

Lower part through
Cacao plantation

Main ridge, from saddle
west to El Tucuche

Slope, part west of saddle,
covered with montane
rain forest up to 250 m (800')
under to 400' dm alt.
Canopy uneven, more
or less closed, layering
not very distinct.

Various intermediate
sized saplings & small
trees, a few small palms
about 1-2 m
ground. On ground
Adiantum common on
ground. much bare
ground, covered by leaf
sedges, seedlings,
bromeliads on ground.
with Liana (aroid)
common. Mangrove
forest thin, but up
to at least 45' deep.

Measured a place -
27' x 45' to bedrock.
of slender Symplocos occ.
trees of 1 dm + about
2-3 m apart.

Wahlbergia aphylla
saprophytic relict
beside the path.

going up the mountain
the forest the spacing
becomes closer. The
stems lower. The
ground layer and
the shrub layer
become very dense
Epiphytes become
very abundant
Finally, on the ridge
there is a dense scrub
about 2-3 m tall.

Summit is a dense
grassy spot, with such
weeds as *Sambucus*,
Borreria, etc.

In the ridge top scrub or
elfin forest *Melastomaceae*
are abundant, *Vernonia*,
Tournefortia.

Tallest trees perhaps 6 m tall,
general average perhaps half
that, rapidly becoming more
on west slope, lower on east
slope.

Cleared banks and sides of
trail covered by abundant
Selaginella (also shown in
forest below along trail).

Bromeliads ferns epiphytes
and terrestrial; ^{some small epiphytes} and orchids with

great leaves, climbing on trees,
all very common. The whole
a tangled mass with
Chusquea, small palms,
occasional emergent
tree, some *Sclera*.

On the east slope a tangled
mat, 1-2 m deep, of *Passiflora*,
etc. with occasional
emergent palms and other
small trees.

In forest a dense under
growth of *Cycanthaceae*
and a palm that looks like
Cardinalis with shrubs
of *Palaemon*, etc.

On west slope just below
summit ridge trees are
larger, well bedecked
with *Bromeliads*, *Clusia*,
etc. *Clethra* grows
to tree size.

July 7 - fourth slope
of El Tucuche, St. George Co.
in montane rain forest

#2551 *Grammitis serrulata*
on roots of tree along trail

2 52 *Psychotria elegans* (L.) Hitchc. & Maguire
occasional

5 53 *Trichomanes Hymenophyllum*
on bank above trail

1 54 *Trichomanes*
on bank above trail

1 55 *Alchemilla Telioctachya alopecuroides*
(Vahl) Nees
along trail

July 7 - main ridge
of northern range just
east of El Tucuche
(incl. #2553-5) St. George Co.
in montane rain forest.

2 56 (ridge)
on ~~open~~ open bank along trail

3 57 *Trichomanes trigonum* Desv. var.
on banks along trail

1 58 *Hymenophyllum*
on tree root along trail

1 59 *Grammitis serrulata*
on tree root along trail

1 60 *Wohlschlegelia aphylla*
rare on bank with humus
along trail

2 61 *Borreria oeymoides*
common along trail

1 62 *Marssonina subacaulis* (Fries) Urb.
common on wet cliffs

serrulata

erect, unbranched
shrub 1 m. tall, fruit red.
hirsutum (L.) Sw.

Lillig, 1943

det. D. Wasshausen

950 m.
1000 m.

limbiatum (Bachh.) Proctor

white

flowers white

leaves appressed to
rocks, flowers lavender.

42563 *Trichomanes pinnatum* Hedw.

7 abundant in mossy bank

1 64 *Trichomanes crispum* L.
common on rock

2 65 *Coccyzium*

July 7 - summit ridge
of El Tuche, P. Jorge Co.

1000 m.

in wet dwarfed ridge - to scrub

1 66 *Tourubia eggersiana*
occasional

small tree; fruits
pendulous, fleshy,
black when ripe.

67 *Tourubia eggersiana*
occasional

small tree, staminate

~~2 68 *Borcia verticillata*~~

1 68 *Grammitis* ["*Xiphopteris*"] *taeniifolia* (Jenm.) Proctor
on base of tree trunk

1 69 *Utricularia alpina* Jacq.

tuber translucent,
flower white,
shading to pale yellow
within.

2 70 *Nephrrolepis rivularis* (Vahl) Mett. ex Krug
cordifolia
epiphytic on tree trunk
(others terrestrial)

fronds erect

3 71 *Clethra baldwiniana*

small tree (others to 20 m.)

1 71a occasional

2 72 *Oblanda trinitensis* Maxon det G.R.P.

rare, on tree trunk

Chusquea
along trail, climbing

2 73 *Vismia*
occasional

same - grassy summit

1000 m.

1 74 *Trimeria martiniquensis*
occasional

flowers yellow

2 75 *Borcia verticillata*
common

erect; flowers white.

July 7 - Trail from Maracas
to top of Northern Range
along trail in cacao
plantation

- 42576 *Phyllanthus*
common
- 77 *Wedelia*
rare
- 78 *Borreria laevis* (Lam.) Griseb.
common
- 79 *Chelypteris dentata* (Forsk.) E.
very local
- 80 ~~common~~
occasional, edge of clearing
- 81 *Scleria*
edge of clearing
- 82 *Polypodium astrolepis* Liebm.
epiphytic on cacao branches
- 83 *Polypodium polypodioides*
common, epiphytic on cacao
branches
- ~~83~~ *Peperomia*
epiphytic on cacao branches
July 7 - trail about 1 mile
below Maracas Falls, at
roadside
- 84 *Borreria laevis* (Lam.) Griseb.
common
- 85 *Phyllanthus*
common

H. George Co.
125 m.

radix (branchlet) notably
- thick.
flowers yellow

flowers white, corolla
- lobes pubescent within
fronds erect.

St. J.

sculpto

det. *Peperomia rotundifolia* (L.) Kunze ^(Ger) *Griseb. Mythica*
Nov 2005

100 m.
George Co

flowers white; corolla
- lobes pubescent within,
erect, unbranched, to 0.8 m,
flowers reddish.

July 8 - A ripe savanna
 (photo finished roll 27) (part is
 but overexposed)

A large area of savanna
 with very few woody
 plants, showing
 much evidence of
 burning. In most
 parts there are mounds
 of gray soil about the
 size of gopher mounds.
 Very compact wall
 support ones except
 the channels between
 them are wet and
 oozy. They give the impres-
 sion that there is a water-
 filled cavity beneath them
 as water seeps from several
 places along the channel
 when it is stepped on.

The woody vegetation
 around the savanna
 and in islands is at
 shows dead places around
 the edges, a plant that
 are partly dead, doubtless
 resulting from recent fire.

Forest around savanna
 has a strong component of
 palms, both in canopy
 layer and in undergrowth.
 Canopy very irregular and

Mounds
 apparently
 composed
 of
 Tamarix
 blackhead
 at base

incomplete, there are few
 large trees and trail are
 open into the forest.

Undergrowth of palm
 seedlings, small palms, large
 sedges, Melastomaceae, rubiacae,
 other broadleaf shrubs and
 saplings. In some parts
 trees with stilt roots,
 probably smooth bushes, are
 common. Many bananas.
 Ground is rather hummocky
 but not as much so as
 in forest examined on July 8.
 Edges almost impenetrable,
 further in much more
 open. Spacing averages perhaps
 9 or more meters.

In savanna itself there
 very few woody plants.
 Both phytosociology and
 composition variable.
 Vases of fire very obvious in
 savanna. Clumps of sedges
 to base, reaching up tufts of leaves.

Flora on mounds differ significantly
 on mounds and in channels. Lycopodium
 on mounds.

In the area studied on July 1
 the channels make up a
 coarse network, smooth
 trending in one direction.
 In places a partly broken down
 tubular burrow is evident.
 Channels marked by dense vegetation

July 8 - The fore-bills
of the Northern Range
are fairly clear on the
western half, most
and more wooded
eastward.

Probably these hills are
today for areas planting.
They are said to be burned
each year.

July 2 Large areas at the base
of the Northern Range are
in pasture and miscellaneous
cult. The central part
of the plain is a vast
area of sugar cane
with a few scattered trees
near along secondary roads
etc.

East of this an area of
coconut plantation - rather
sparse, much replanting.

Then open country, some
pasture, some sugar cane.
(probably all is done at one
time or other)

Then suddenly, just before we reach
the flat country, becomes
wooded. Some open areas
remain. In places
predominantly open. *Bambusa*
parviflora *persea* common.
Bamboo said to be spontaneous

From a mile or so before
Carrizal Rd. the landscape
is a mosaic of savanna
(or at least open cleared land)
and thicket and patches
of poor forest, patches
of bamboo etc.

Cecropia, *Laguncularia*
persea, *inga* (?) common.
guava.

The eastern half of
the Northern Range
appears to be wooded
to base.

Beyond Valencia
local plantation of
Colophyllum sp. but
mostly a ragged
secondary forest, ~~rather~~
palm abundant,
locally dominant.
few large trees left.
Gradual change to
thicket & considerable
clearing, some areas
still rather densely
wooded.

Sanqui Grande.
Fair sized city.
Beyond some citrus
orchards.

July 8 - ~~swamp~~ just south
east of Valencia, St. Andrew Co.
in swamp forest

- 42586 *Heliconia*
occasional in undergrowth
especially at edges of forest
- 2 87 ~~Heliconia~~ *Amaranthus* ~~complanatus HBK.~~
complanatus
- 2 88 *Ilex*
- 3 89 *Mapania?*
common on hummocks
- 1 90 ~~Mapania~~ *Amaranthus* ~~complanatus HBK.~~
occasional
- 1 91 *Hirtella*
rare
- 4 92 ~~Alcornoque~~ *Alcornoque* *articulata* (Sw.) Presl (1 to Prostr.)
very local

July 8 - Aripo Savanna
St. Andrew Co.

open wet grassland
on gray silt soil.

- 4 93 *Thoninia*
in low grassy wet places
- 1 94 *Sprengelia*
occasional in moist places
- 2 95 *Aeschynomene* *densiflora* L.
occasional in wet places
- 2 96 *Saurauia*
common

30 m.

climbing, extensively
branched. dangerous "see-gone"

fruit reddish black

flowers white

erect.

slender shrub

flowers white.

tall slender shrub,

racemes pendent.

flowers blue-lavender,

stamens maroon.

epiphytic rhizome ^{young}

~~erect~~ climbing on ^{tree} trunk.

35 m.

flowers yellow with
dark red-brown markings,
roots very ^{spongy} spongy.
petals white

- 42597 Buchnera
occasional
- 3 98 Rhynchospora
occasional
- 2 99 Cladium?
abundant (mostly not flowering)
- 42600 ~~abundant~~ Juncus
abundant, especially
in shallow pools.
- 3 01 Panicum
generally abundant
- 1 02 Polygala aegyptia Benth.?
occasional
- 1 03 Lycopodium carolinianum
occasional, in silt
mounds formed by earthworm castings
- 3 04 Paspalum
abundant, generally
- 2 05 Panicum millegrana
common
- 2 06 Rhynchospora
occasional
- 1 07 Polygala timontoni Aubl.
rare, in edge of small pool
- 1 08 Utricularia
common in dense grass.
- 1 09 Utricularia
common in dense grass
- 2 10 Drosera capillaris L.
abundant in bare mud
and in water
- 11 Xyris
common locally in thick grass

leaves purple beneath;
- corolla rose pink.
culm erect, head white.

culm erect

plant purplish,
- flowers rose purple.
stems brittle, closely
appressed to soil,
leaves mostly on ~~the~~ ^{upper}
side of stem. (sterile?)
leaves and culms erect.

culms decumbent to
- ascending.
culms erect, solitary.

plant purple, flowers
- purplish green
flowers white with
yellow median mark
- on palate.
flowers bluish with
- yellow median mark on palate.
plant reddish, flowers white.

flowers yellow.

47012 *Viordia*
rare in dense
grass

erect, flowers white.

July 9 - Arena Forest Reserve,
about 2 miles west of Cumuto

35 m.
St. Andrew Co.

2 13 *Paspalum longistylum*
abundant on wide
shaded path in forest

3 14 *Pisonia eggersiana* Heimerl
rare

2 15 *Trema micrantha* (L.) Bl.
in cleared area in forest

4 16 *Ryania speciosa*
occasional in
thinned forest

3 17 *Spermacoce*
common along trail

slender shrub 2 m. tall,
limb of perianth reddish.
slender shrub 2.5 m.
tall.
slender shrub 3
m. tall.

July 9 - 4 miles northeast of
Rangre Grande, St. Andrew Co.
in dense high rain-forest
dominated by *Mora*

10
St. Andrew Co.

1 18 *Lebizaea elegans* (Vahl) Sw.
infrequent on forest floor

3 19 *Jussiaea foliolobata* Murray
locally abundant in
disturbed muddy place
along logging road

3 20 *Palicourea*
in semi-open place
along logging road

shrub 1.5 - 2 m. tall,
petals yellow, notably
clawed.

shrub 1.7 m. tall,
thyrse scarlet.

1.5 m.e. of large gaps
Beyond Croquet &
fence tall forest - Mora
Palms not abundant.

Mora trees reach 150' tall.
2-4 dbh.

A few vines.

Beyond this ~~the~~ forest
has been destroyed - clear cut.

Mora forest - partly
logged.

Large trees - all
very conspicuous
buttresses up to 4' or
high. Apparently the
entire canopy layer
at 20-40 m. in height.

Scattered second story
trees of several species,
then an almost pure
layer from 0.5 to 3 m. of
Mora seedlings. A few
scattered palm seedlings.
Marantaceae locally
common ^{or abundant} on ground.

Locally a few sedges
(*Hypolytrum*?). Really
large trees 40-100 m. apart,
those over 10 m. 7-10 m.
apart.

(Photos on 62-2 after
savanna)

Great mounds of
litter against the
bases of trees, between
the buttresses.

Surface of ground
irregular, with
pits and some hummocks.
Litter on higher parts,
only a few in thick on
gray soil. In pits to
1 dm. on gray soil.

Large moras loaded
with birds, a high
crooked, also *Siphylum*.

Classic *Tacca* (?) sending
large roots down, and
sending masses of small
roots. (Photo)

Very few tree trunks
but occasional *Acacia*
ones. (Photo)

Very few ferns on
ground even less on
epiphytes. *Brachyotum* &
Leptocarpus than but abundant
in the undergrowth
less common. Some leaf
to *Stiphodon* or *Sida*
shrubs.

Locally the above layer,
mostly Mora seedlings,
some other shrubs. ^(Photos on 62-2)
is really closed. _{but di-1}

In undisturbed
Mara forest, (see forest)
the Mara would be
even more dominant
and undergrowth
thinner.

Here the canopy is
not quite complete
and the thicket of
is the denser the shrub
layer.

The pits called "hog
wallows" are not very
satisfactorily accounted
for, though they blame
burrowing by earthworms.

The soil is a fine
gray sand, quite deep.

Mara said it
is deep water.

Some bromeliads
do call in places.

July 8 - Elvira Reserve
2 mi. N of Curacao
Forest being thinned
to a shelterwood, 20-30
medium trees per acre,
to promote natural
regeneration.

Part of the 20 years
old. 25 m tall, 20 to
20-25 cm dbh. A very
dense understorey 5-7 m
tall. Canopy not closed
where no thinning has
been done, the canopy is
almost closed but
trees mostly about 8-11 m tall.

July 12 Bugand Hill

weeds in Cadrela
plantation
Heliconia
Bidens
Guzalaguania.

Clearing to establish
teak - best time in
December.
also for other types
of planting

3 photos of young Teak showing
the disease

Mr. Harris area.

Legh in bare ground

longer than
diameter
in diameter

which, through ~~the~~ they
4 months without leave

Teak shades almost
everything out - ground
is bare. This is perpetuated
by annual burning - this
not deliberate but accidental
& best erosion. There
are conspicuous columns
of earth 3-4 ft. or so
much as 1/2 inch high,
when prodded by a stick
or even a leaf.

A few teak seedlings
here and there also clumps
of shrubby sprouts from the ground.
But this seems not very
effective.

Some natural
shelterwood regeneration
in wet areas.

10 years old about 30-40 cm
tall 15-20 cm dbh.

very clear patches.
This on sandy soil
that on clay. Teak does not
do well on sand.

part of the ~~the~~ area -

Blackfield (Boothers Road)
in Central Range (Road up
1st 3 + 4000 acres of land)

A nature reserve of 240 acres
around rest house

(Riquelme - Mousa plantation)

Another nature reserve
near Henriques house
on sandy ground

Ornamentals & other plants

Albizia leonensis

Cycas circinalis

Codiaeum variegatum

Theobroma cacao

Citrus sinensis

Zea mays

Coffea robusta

Antocarpus altalis

Fegestruemia indica

P. speciosa

Sida casei

Cordyline fragrans

Moribot esculenta

Musa sapientum

Musa paradisiaca

Chrysobolodocarpus luteus

Laranea saman

Mangifera indica

Bambusa arundinacea (young)

Polypodium quillifolia

Carica papaya

Saccharum officinarum

Ipomoea fistulosa
Coccoloba muricata
Terminalia catappa
Euphorbia tirucalli
Ascaecium occidentale
Hymerocallis latifolia
Antigonon
Alchornea
Zinnia elegans
Cassia grandis
Dalmanella
Nerium indicum
Mirabilis jalapa
Simarouba chinensis
Roystonia olivacea
Alaucaea commersonii
Choea spathulata
Thunbergia grandiflora
Zostera grandis
Roystonia olivacea
Catharanthus roseus
Odontadenia grandiflora
Cordyline fruticosa
Caryota urens

Isona williamsonii - described
~~from~~ and illustrated from
 material sent from Trinidad
 by Curagrove to Sandwith
 but in 1960. *Curat. Bot. Mag.*

Isona williamsonii
Isona chinensis

July 11 - air trip Trinidad
 Barbados, Antigua, San Juan, Anguilla
 (Vasquez, left side)

E. of leaves a block of sugar
 cane, patches of pasture,
 but mostly secondary
 forest, with perhaps
 10% pasture. A network
 of roads in forest

extends far to the south.
 Curacao Airport site largely
 open, grassy, but some
 roads in bushy woods.

Slope of mountain
 up from Curacao are
 solidly wooded, no
 clearing or shifting
 agriculture at all.

No apparent decaying
 of forest on crests
 and summit. The
 forest would repay
 investigation.

The coast is wooded
 to the beach. A very few
 clearings on one or two
 lower ridges and a village
 on one point - undoubtedly
 Matelot.

Fog in distance and
 clouds tonight

July 10 - Mt. Harris Forest Reserve

- 42421 (~~not~~) *Acnistus arvensis* (L.) Hook & G.
 2 common in edge of forest
 1 22 *Fevillea cordifolia* L.
 edge of forest
 1 23 *Pentaclethra macroloba* (Willd.) Ktze.
 common in second story
 of forest
 3 24 *Euphorbia glomerifera*
 common
 on bare soil beside road
 2 25 *Bidens ~~radicata~~ leucanthus* Wedd.
 common in weedy roadside
 in forest.
 2 26 *Wedelia fruticosa* Jacq.
 common in opening
 on hill in forest planting
 4 27 *Gonzalagunia*

July 10 - St. Augustine
 St. George Co.

- 4 28 *Passiflora caerulea* (L.) Hance
 cultivated in garden

- shrub; fruit yellow.
 - plant aromatic.
 - veins, flowers dull yellow.
 tree 10 m. tall; ~~flowers~~ ^{filaments}
 white.
 - plants arching,
 - glands white.
 - rays white.
 - scrambling extensive
 herb; flowers yellow
 - shrub 1-2 m tall,
 leaves with prominent
 veins above; flowers
 white, fruit light blue.

shrub 2 m tall,
 flowers scarlet; fruit
 black when ripe. From
 same clone as type of
Passiflora williamsii Hance.

Barbados has low
sea-cliffs and a rather
wide fringing reef on the
southeast coast, becoming low
and porous toward, and about the
land, near

Leucaena spp.
Casuarina equisetifolia
Delonix regia
Coco nucifera
Santana yellowiana
Cordia alliodora
Buddleia (white, long raceme
- in racemes)

Nephrolepis brennata on fungus
Acalypha wilkesiana
Catharanthus roseus
Pectis spp.
Euphorbia pulcherrima
Philodendron (in garden
cut leaf)

Clusia spp.
Neem spp.
Agave americana
Conium maculatum
Pilea microphylla

Small excarpments bounding
terraces have a bit of natural
woody vegetation. The sea cliffs
have ^{not} more except bank of black.

Soil near airport black
a little yellow sand along bottom
of ravine this side and in places
a little adjacent land grassy. Interiors

scarp also grassy
Soil in interior and toward
west mostly dark red to
chocolate.

Projected ground on west
side mostly cultivated
in gardens, scrub which
is killed down to rock. One
patch of woods left low
land immediately around
villages and buildings &
gardens. The remainder
is low scrubby in cane
scattered trees. Some banana
obviously planted.

Marine Galants - some
corals, secondary scrub
and cultivation. No coral
great bank of black and
a large grassy area behind
that with mosaic of large
patches of scrub and of
cultivated patches.

Guadeloupe ^{is a peninsula,} in distance to
left, mostly cloudy.
Passing over east peninsula -
small mosaic of cult. fields
patches, patches of scrub or
woods, and grass
Liqueur and west air strip
behind it. Sugar plantations

or northern part to north
appears to have a mostly
dismerged beach with
reefs all numerous in
places extending northward
along coast of north peninsula
as a barrier reef with
only in a few deep lagoons
with some basalt and in
other cases in it.

North peninsula largely
grass (in case) in low but
slope basaltic.

Utrique - ^{west side} mountains
mostly thin scrub to grass,
denser wood in ravines.
Cultivation part of mountains
some grass patches of scrub
especially in ravines. Cave
on flat ground and gentle
slope.

Flora

Scaevola

Polypodium

Conocarpus

Calceolaria

Agrostis

Hibiscus

Phoenix

Thespesia

Chromolaena

Abundant at least
Scaevola *conocarpus*
Cyrtosperma *dactyloides*
vegetation in area of
highland area slightly
cryptic character, mostly
with thin scrub some
cultivation.

Wide, mostly rather
highly submerged reef
of northeast coast, form
a barrier reef off east
coast.

St. Kitts - ^{mountain} south
low - ^{east} low - ^{east} low
are north slopes cultivated
or as pasture - wood only,
in vegetation none.
Low sea cliffs - scrub,
apparently wooded
but mostly in clouds.

Thin grassy patches, then
a corner of St. Thomas (wooded)
and a small irregular
scrub-covered island. A rather
low wall in distance to left.

Some small islands
in distance to left and
a ^{mountain} low ahead,
probably ^{mountain} low. Two
lagoons on east peninsula
not ⁱⁿ lagoon. A belt

of forest ^{wind plantation} along coast to west, sugar cane plantations on gentle slopes. A large canal narrows inland. More coconut plantation with scrub behind it and two large ponds and mangrove swamp with much open water, common along coast and inland.

There is a rather muddy looking reef running across a shallow bay & has juncos. Better reef part in part of east part of city. Large lagoon with mangrove swamps between city and airport.

San Juan

Melaleuca leucodendron
Asparagus sprengeri

Part way west on the Puerto Rican coast is a large area of typical karst. The hills are heavily wooded. Every square foot of the flat ground between them is cultivated in grass. Through this meander

a broad flat stream valley with an interrupted stream meandering through it.

The karst forms a deep, broad belt parallel to the coast and almost contiguous with the base of the mountains. The density varies greatly in places. There is no flat ground.

There is another stream valley into which it flows with a meandering stream.

The soil of the flat intervalley is brownish red.

The karst becomes more irregular westward, but part is dense, in fact large areas are quite dense.

A fairly dense area extends well west of any central mountains at all. South of it is country with rather low relief. Too cloudy to see much of it. North of the karst is flat plain completely planted to sugar cane or in pasture. The only

The plain stretches across
near the west tip of the island
but a suggestion of the
Mant's ground almost to the
top

Some what small & small
islands, some with a small
island, some with a small
island, a small one, some with
one or two, some with
slopes rather than vegetated.

Chrysanthemum lutescens
Plumieria obtusa
Casuarina obtusifolia
Olea europaea
Pithecellobium dulce
Cacalpuria pulcherrima
Ternstroemia oblonga
Conyza tomentosa
Malvaria
Hibiscus schizopetalus
Eugenia jambosa
Bignonia sapida
Bambusa
Geacalypha leucopoda
Lipera aduncum
Hibiscus roseo-aurantius
Ficus aurum officinalis
Geacalypha subsopifera
Lilavanda cathartica
Ochroma pyramidale

July 17 - ~~Java~~ Kingston
plants seen

Cassia javanica
C. fistula
Sesuvium rigida
Antigonon leptopus
Artocarpus altilis
Lagerströmia indica
Mangifera indica
Cocos nucifera
Pithecellobium pacificum
Sporobolus fistulosus
Glossaria macrocarpa
Plumbago auriculata
Guaiacum officinale
Calotropis procera
Jamunus indicus
Petraria volubilis
Crossandra undulata
Setcreasea purpurea
Ficus pumila
Clerodendrum speciosissimum
Holmskioldia sanguinea
Vilfa brachyloba (L. & P.) (H. & A.)
Euphorbia pulcherrima
Thunbergia laevis
Cordia sebestena
Pithecellobium unguis-cati
Chrysophyllum curvirostratum
Leucaena leucocephala
Tuberosa cordata
Setcreasea purpurea
Ternstroemia littoralis
Adansonia digitata

July 12 - trip to Cano River Falls

Long Mt. back of Kingston Park - covered by a closed somewhat thorny microphyllous scrub with scattered small trees. Coastal flat, also where not built up, covered by thorn scrub. Prosopis.

Hope River bed is a wide dry gravel wash.

Clark River, also, has a trickle of water.

Rhizophora swamps alternating with Prosopis scrub

Turned up ^{R.} canyon with steep limestone walls covered by microphyllous scrub. Delonix abundant in bottom.

Cane River falls -
 stream goes down
 a limestone gorge to
 waterfall. Below waterfall
 is a river in the gorge
 called gravel - the bottom
 of it is all the most beautiful
 flowers, vegetation, etc.
 scrub of upper bank
 of water.

found to be no record of
 water in spring

Catalpa longissima

Tecoma stans

Ficus spp.

Euphorbia lactea (Ledger)

Hills bet. Cane R. & Hope R.
 (Mt. Dallas)
 scrub changes to scrub
 forest and forest upward
 yellow hills grass
 (at top of & begin to 2-3
 across upper Cane R. drainage
 from on slope Dallas Mt)
 Rhoeo estuaries

700 -
 750

July 12 - road to Cane River
Falls Newstead.

in supereruptive
scrub on top of limestone at old.

- 42627 *Cordia alliodora*
occasional
- 30 *Morinda* ~~rostrata~~ L.
occasional
- 31 *Phyllanthus nutans*
occasional

July 12 - Canyon below
Cane River Falls
in deep limestone gorge

- 32 *Berberis diffusa* L.
occasional along path
- 33 *Phyllanthus*
occasional on bare rock ledge
- 34 *Adiantum tenerum*
common in crevices
- 35 *gemma* *Hippuris* ~~repens~~
common in crevices on cliff on
east side, not seen on
west side.
- 36 *Phyllanthus amarus* L. Th.
occasional along trail
- 37 *Spermo-carpus* ~~suffruticosus~~ Jacq.
common in crevices, and on
talus
- 38 *Euphorbia glomerata* (Mill.) Wheeler
common along trail

small tree, flowers
dull greenish ~~white~~
(flowering out of season)
slender shrub 2.5 m.
tall; fruits greenish yellow.
shrub 1 m. tall; flowers
reddish green.

stems decumbent,
panicles ascending,
leaves pale beneath.
erect shrub 0.7 m. tall
flowers reddish.

small shrub; flowers
bronz-color.

plant spreading; flowers
pinkish, closed in afternoon.

- 42039 *Lycianthes*
rare in crevices
- 1 40 *Conchocarpus*
rare along trail
- 1 41 *Spermacoce* *suffruticosa* Jacq.
rare along trail
- 1 42 *Emilia sonchifolia* (L.) DC.
occasional along trail
- 2 43 *Cuphea*
rare in rock crevices
- 2 44 *Pteris longifolia* L.
occasional in rock crevices

July 12 - Cane River Falls
in limestone cliffs and boulders

- 1 45 *Rondeletia*
occasional
- 2 46 *Cissus trifoliata*
common
- 2 47 *Heliotropium*
in crevices
- 2 48 *Muntingia calabura* L.
occasional
- 3 49 *Cissus*
common
- 1 50 *Cestrum divaricatum* L.
occasional

small shrub, flowers
clear yellow, almost
completely regular.
sect

flowers pale purple

small shrub, flowers
reddish.

shrub; flowers dull
yellowish.

^{vine}
vine, flowers red.

sub-shrub, flowers
white, minute.

small tree; flowers
white.

vine; flowers ^{or} yellow-
green.

shrub; fruit immature.

July 13 - trip from Kingston
to Castellon

North of divide - steep
slope, mostly on a purple
conglomerate, non-calcareous
on the moist part.

Very little natural
vegetation. Mostly a
mosaic of small cult.
patches, thickets, coconut
groves, bamboo clumps and
thickets, brown sites with
roadfruit, bamboo, etc. Thicket
with a few plants
cultivated. *Cecropia* common.

Castellon gardens -
a very well kept botanical
garden with a good
department of plant
and numerous
individuals of each.
Many good palms.

H. Mary Parish

Way water, A - a scene
nowhere in thicket of
purple rock & *Panicum*
62-3. Eds: the David grass
(Down P.)

Sugar cane in flat bottom
of Waywater R.

Grass fallow - *Panicum*
maximum.

grass
fallow

On lower slopes
west of Port Maria,
coconuts are, about the
most prominent cult.
plants, but the plantation
is quite irregular. grassy
slopes common also.

Port Galina

rough limestone terrace
outer edge with no
vascular plants. about
1000 ft. high

then *Ralstonia*, very
depressed, then a few
Strepitaria, a few *Conoclinium*
very depressed, then
Tournefortia
thunbergii become abundant

At base of limestone
cliffs, well back of
shore and perhaps 20'
alt, striking, well
preserved up, 5 mi. W.
of Port Maria.

Mouth of Dunn's River,
just west of Ocho Rios
Wooded sea cliff
of limestone with
river of salt water
cascading down it a

— plants seen (old fr.) (8)

Barringtonia asiatica
Glencidia sepium
Panicum maximum
Apothodes campanulata
Veliveria
Thunbergia grandiflora
Qualypha waltkeana
Peperomia lanceolata
Scindapsus aureus
Caladium bicolor
Glossis angustata
Cochlospermum borbonicum
Alternanthera versicolor
Peperomia podocarpa
Portulaca grandiflora
Jatropha podagracea
Peperomia aquatica
Carex papaya
Coccoloba urtica
Polypogon monspeliensis
Antennaria heterophylla
Argemone mexicana
Psidium guajava
Sida nodiflora
Veronica linearis
Lantana camara
Cassia alata
Euphorbia tirucalli
Mimosa citrifolia
Polyscias guilfoylei
Persea americana
Cananga odorata
Riveria communis

Pachira aquatica
Jatropha multifida
Pedilanthus tithymaloides
Citrus aurantifolia
Citrus sinensis
Cranthemum pulchellum
Callistephus chinensis
Ficus pumila
Tabernaemontana divaricata
Barleria pruriens
Haematoxylum
Coluca scutellaria
Clerodendrum unguiculatum
Dalmanella splendens
Morinda tomentosa
Swartzia macrocarpa
Amorpha canescens
Polypogon monspeliensis
Polypogon monspeliensis californicus
Albizia lebbekii
Cleome spinosa
Epistima unifolium
Sansevieria zeylanica
Gerbera jamesonii
Moringa oleifera
Panicum maximum
Ficus carica
Thunbergia grandiflora
Bocconia
Riveria
Salvia coccinea
Azadirachta indica (orange)

series of "center basins"
depositing travertine
on trees, etc.

at base of cliff a number
of interesting plants, e.g.
Sobelia mundifera, *Arcto-*
Cochia sp. etc.

Above Ocho Rios &
Fern Gully, a winding
limestone gorge, deep
densely wooded, with
numerous ferns on the
sides (25 ft. or more).

Along coast near
Ocho Rios is an open
field or savanna of
Pimentia dioica. This is
native and would have
fruit as harvested from that.

Plateau above Fern Gully
to the Moreshead, old
harst with barrels
between hillsides.

Mt Diablo is a
limestone mass with
a karst-like topography.
Densely wooded all
over. Not too well known
botanically. A large
sink hole is used as a
dump for waste (Feb. 1901).
Large ^{nothing} ~~plant~~ ^{is} on
Mt Diablo the banana
concentrating plant. The
plain ^{is} ~~is~~ banana
Open woody planted
-vegetation - breadfruit,
coconut, *Blighia*, *Persea*,
etc.

Canyon of Rio Copie -
steep wooded limestone
walls, below Bog Walk.
Very viny scrubby forest.

Opens out after some miles
or a plain mostly in
sugar cane. Beyond the
sugar is rather dry savanna
with a little irrigated cane.
Prosopis, *Myrsine*, etc.
Spanish ~~town~~.

Beyond, a partly cult.
plain - *Bacca*, *Prosopis*, mango
& other trees scattered. Some
sugar + bananas - more and more
east toward Kingston.

A magnificent open forest of Jamaica with short grass. A great leathery tree fern with low Prosopis, merging into Prosopis scrub.

July 13 - south ^{west} of Waller, St. Ann's Parish

500 m

42651

Spermofoce suffruticosa Jacq
road embankment

corolla pink

July 13 - Mouth of Dunn's River, North coast, St. Ann's Parish

100

52

Lobelia viridiflora
base of limestone cliff at top of beach

stem unbranched, 1 m tall, leafy ~~in~~ top half; flowers light green.

July 13 - Galina Point ^{North Coast} north of Port Maria

7 m

St. Mary's Parish

on pitted limestone flat back of low ~~cliff~~

sea cliff

3

53 *Cassia*
occasional in open scrub

dwarf shrub; flowers yellow.

7

54 *Croton*
occasional in open scrub

low shrub.

1

55 *Cyperus ligularis* L.
occasional in open low scrub

3

56 *Rachicallis*
very common in open dwarf scrub

dwarf shrub up to 2.5 m tall, flowers yellow.

3

57 *Echites umbellata* L.
common in open scrub

- vine, twining over bushes; flowers white

- 42658 *Tournefortia graphalodes*
1 local in scrub
- 2 59 *Morinda royoc* L.
common in scrub
- 2 60 *Spermocera verticillata*
common in scrub
- 1 61 *Solanum racemosum*
occasional in scrub
- 1 62 *Morinda royoc*
rare in exposed dwarf scrub
in spray zone
- 1 63 *Ernodea ~~substantia~~ citralis*
common in dwarf scrub
in spray zone
- 2 64 *Croton*
occasional in scrub
- 3 65 *Styrrhphia maritima*
abundant in dwarf
scrub in spray zone
- 2 66 *Citharexylum*
occasional in scrub
- 1 67 *Luriana maritima*
occasional in dwarf
scrub in spray zone
- 3 68 *Conocarpus erectus*
rare in ~~dwarf~~ scrub
- 3 69 *Eritralis fruticosus*
common in dwarf scrub
in spray zone
- 3 70 *Jacquinia*
occasional in dwarf
scrub in spray zone
- 1 71 *Wedelia trilobata*
common on flats back of scrub zone

- round bush 1.5 m tall
- shrub; fruit green
- shrub, 1 m tall; flowers
- white
- suffrutescent, corolla
- purple.
- dwarf scrub, prostrate.
- dwarf shrub; sterile
at this season.
- small shrub.
- dwarf shrub, flowers
trilocular white, fruit white,
- fleshy.
- shrub 1.5 m tall, spikes
pendent, flowers white.
- emergent shrub
1 m tall; sterile
- shrub 0.7 m tall.
- dwarf shrub, 1-2 m
tall; flowers white.
- shrub 3-4 dm tall,
flowers white.
- prostrate, flowers yellow.

42672

along path near buildings

flowers white

July 3 - Between Golden Valley and Noland Hill, Waqwater River, St. Andrew Parish, 300 m

1 73

Zinnia
roadside bank in purple conglomerate rock area

July 14 - Eaton Hall, on Runaway Bay, North Coast, St. Ann's Parish, 100 m

2 74

Canavalia rosea
commonvine, climbing in
- tricket flowers rose pink
plant purple, prostrate

2 75

Euphorbia prostrata det.
occasional on open sand and rock

- erect flowers maroon.

76 *Phaseolus lathyroides*
rare, roadside

4 77

Cassia lanceolata
occasional at top of beachplant much branched
- fleshy, flowers white.
erect shrub 1 m tall

4 78

Desmodium
common on sand flat

dwarf shrub.

1 79

Euphorbia meumbiantherifolia
rare on sand flat

4 80

Spermo-cov. suffulscens Jacq.
common back from beachplant spreading,
- buds pinkish.
- stems ascending; heads white.

1 81

Spilanthes
locally abundant

3 82

Caesalpinia bonduc (L.) Rob.
in edge of tricket- scrambling vine stems,
- collected to show compound stipules.

1 83

Sesuvium portulacastrum
common on sand flatprostrate, very fleshy,
leaves not very glossy; flowers pinkish

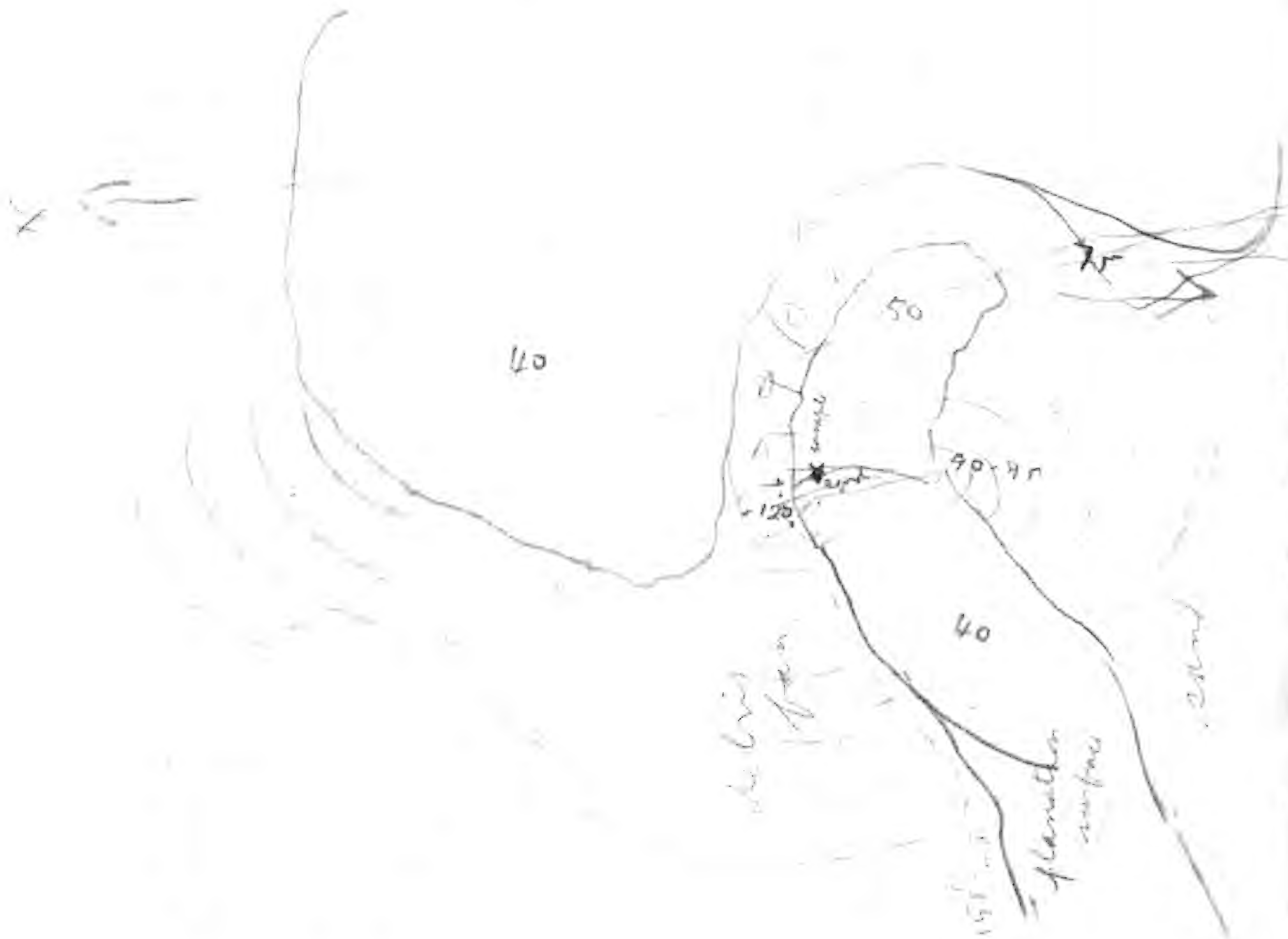
Eaton Hall
is just
part of
Parsonage
Bay

July 14 - Gulf Kingston to
Eaton Hall - same
route as return yesterday
from Duane's Cove

Reef in front of bay -
a shelf out about
400 m from shore at about
15 m depth, with
scattered ~~small~~ corals
a little ~~more~~ sponges

Rock mostly
a very elongate, attenuate
form, some sponges, etc.
but not a ~~solidly~~ solid formation
A deep channel cuts
the ledge. Back of this
platform is a depression
parallel to the reef front,
about 100 m across down
into the channel. The
channel forms an
outlet for the sediments
accumulated in
the depression and on the
reef shoreward of it

Platform of pitted limestone
at about 20 ft above mean
low tide line a good part
of the shore. Collected
a sample of the pitted
surface just about at a
somewhat below high tide
level



July 14 - Trip Kingston to
~~East~~ Eaton Hall - same
 route as return yesterday.
 From Luning River.

Reef in front of bay -
 a shelf out about
 400 m from shore at about
 15 m depth, with
 scattered ~~corals~~ corals
 a little ~~scattered~~ scattered

of a very elongate, attenuate
 form, some sponges, etc.

but not a closed formation.
 A deep channel cuts
 the ledge. Back of this

platform is a depression

parallel to the reef front,
 which funnels down

into the channel. The
 channel forms an

outlet for the sediments
 accumulated in

the depression, and on the
 reef shoreward of it.

Platform of pitted limestone
 at about right above mean
 low tide line a good part
 of the shore. Collected
 a sample of the pitted
 surface just about at a
 somewhat below high tide
 level.

Eaton Hall
 is part of
 Richmond
 Park
 Rocks sample
 taken near
 entrance
 to tunnel
 from side
 of road
 at 3:15
 indicated

Basins between

2 grains ~~parallel~~ parallel
 to each other
 parallel to beach
 coming close enough
 to surface to exhibit
 strong currents from
 scum and seaweed
 plant fragments, and
 a few ~~thalassia~~ ~~algae~~ algae
 some ~~bar~~ ~~algae~~ algae with
 a few balls and lots
 of ~~algae~~ algae
 Forest part of basin
 collects ~~thalassia~~ ~~algae~~ algae
 ledge to form a ~~soup~~
 in this as the most
 numerous ~~algae~~ algae
 wave action continuously
 rolls material in from
 of basin back and forth.

Corallina subulata

Cladophora sp.

Triglopora sp.

Galaxaura sp.

Limonium sp.

Galaxaura marginata

Lyothamnion ligusticum (Griff.) Griseb.

Vegetation along shore is
 mixture of herbaceous strand
 and low shrubs, with
 second plantation back of
 all on the sand flat.

- 42484 *Thalassia testudinum*
forming sod in shallow water
- 3 85 *Philoxerus vermicularis*
common on sand
- 3 86 *Borreria*
local on limestone rocks
- 3 87 *Colubrina asiatica*
local on limestone rocks
- 3 88 *Halimeda gracilis*
in deep water
- 1 89 *Halimeda goreaui* Tarter
in deep water
- 90 *Bryothamnion triquetrum* (Fensholt) Howe
on reefs in shallow water
- 2 91 *Padina*
on reefs and flats in
very shallow water
- 1 92 *Turbinaria turbinata*
on rocks in very shallow
water

July 15. At the back of Henderson Hill, above Green Bay, St. Catherine Parish
in dense microphyllous scrub on bare limestone

- 2 93 *Canellia*
occasional
- 2 94 *Guaiacum officinale*
common
- 3 95 *Crotona caribaea*
rare
- 3 96 *Bursera simplicifolia*
occasional
- 1 97 *Rhacoma*
~~occasional~~ occasional

(to m. 102)

- sterile
- prostrate, sub-fleshy
shrub up to 1 m. tall;
- grayish; heads yellow.
forming tangled thicket
3 m. tall, leaves & lvsy;
flowers yellow-green.

100 m.

- fragrant shrub 1 m. tall,
- sterile
- small tree 4 m. tall,
- fruit orange-yellow.
- ~~at~~ shrub 2.5 m. tall,
- almost leafless at this time
- small tree 4 m. tall (others
larger), fruit green.
- shrub; ripe fruit red.

July 15 - Trip to Port Henderson
area.

Flats n. of Port Henderson
Hill - originally, came more
out more dry and saline
as coast is approached.
Batis, then

On hill itself the
vegetation is relatively
undisturbed - a spiny
scrub on bare rock -
Cassia sp. - perhaps
most common shrub
Acacia, Capparis
fendleri, Schaefferia
Purdiea, Convolvulaceae
velutina (very poisonous)
Grewia, Grewia,
Taberna, Heliotropis
- farcographalis Burchard (1841),
Pavlovina, Oplismenus,
Drosera, Tournefortia,
Agave, Croton ~~sp.~~
Agave sp., Carex, Bromelia
Anellia, Burmannia
Heliotropium, Metopium ^{borneo}
Rhinorea, Cassipoula
Heliotropis - low & bushy
- not bot. of same reef
(Palau)
Cassipoula haematomma
Passiflora perfoliata

This is a predominantly
- area

- 42698 *Piscidia*
1 common
- 5 99 *Sarcophalis*
common
- 42700 *Tabebuia*
2 occasional
- 1 01 *Beurria occidentalis* (DC) Guille
occasional
- 1 02 *Passiflora*
rare
- 1 03 *Tournefortia*
rare
- 4 04 *Cissus*
common, climbing in
arborescent *Cereus*

July 15 - Kingston

- 3 05 *Bauhinia*
cultivated

July 16 - Stewart - Watley Park
Road, grade above River head, etc.
roadside in scrub forest on steep
limestone slope.

- 1 06 *Anemia*
common on
- 2 07 *Faleria*
common on
- 4 08 *Guettarda*
occasional on

small tree, 4 m. tall.

- small tree, 4 m. tall;
- flowers yellow green.
- shrub 3 m. tall,
- fruit green.
- shrub 2 m. tall,
- flowers white;
(other seen, sterile, with
- leaves much larger)
- vine climbing in
bushes, flowers maroon.
- shrub, fruit green.
climber; fruit green.

small tree, flowers
salmon colored.

400 m

Catherine Parish

culms almost erect.
shrub 3 m. tall, buds white
collars with red.

July 10 - Trip to Mason River
Lavanne

near Spanish Town - Prosopis
scrub and scrub forest on
small hills. scattered
Prosopis, Lavanne, etc. on
flat land. Coconuts, mango
etc. along roads. Tubularis
cristoides very abundant
on roadside.

Canyon below Pigg Wall
is densely wooded. Much
breadfruit on floor of valley.
Mambles and Cecropia common
on lower slopes. also some
coconuts locally. Less disturbed
forest on upper slopes and cliffs
of limestone.

Parent plant near ^{Cayman}
concentrate, ~~parent~~ alumina from
terra rossa that accumulated
in depression in heart.

Water Park Valley is a large
flat, covered by sugar plantation
surrounded by high forest.
Served by a river that
goes underground through
the mountains to River Head
then joins R. of the Lake.

Hills bet. Llanos Vale
and Crofts Hill. -
Llanos Vale hills
partly cleared - much
flora in thickets on
steep places.

Mason River Lavanne
a rolling flat ~~to~~
surrounded by hills of
limestone on north and west
sides. ~~to~~ other side.

A closed mosaic
of many species of
sedges, grasses, ~~and~~
several ferns, Costella
etc. herbaceous in
places, in other places
shrubby, the shrubs
mostly Melastomaceae
in some areas scattered
Cyrtia, ~~Jamaica?~~
Clethra, Cordia jamaicensis
Eugenia, Cecoloba, etc.

Low areas are boggy
with hummocks of Sphagnum
with deep channels between
them. Sphagnum in channels
Sphagnum is dominant on bog.

Apparently underlain
by a claypan
(Road above Pigg Wall - W. of Water Park)
photo (Wed. from Hill of Worthy Park
- looking across Worthy Park V.)

some cultivation -
 pigs, mares, etc
 pigs, goats, donkeys
 are wandering around.
 Mr. Libbe now, owner of
 the area, is buying
 the area for a road.

July 14 - Hills between
 Bluidas Vale and Croft Hill
 Clarendon St. Catherine Parish
 in thicket on steep
 limestone slope.

- 42709 *Lantana camara* L.
 roadside
 7 10 *Portlandia* ~~sp.~~
 on cliff
 3 11 *Croton* ~~sp.~~
 3 12 *Sporoxea hospallia* ~~sp.~~
 climbing in tree tops
 1 13 ? *Sp. ...*
 2 14 *Brysonima* ~~sp.~~
 3 15 (Wood) *...*
 occasional
 1 16 *Salvia* ~~sp.~~
 occasional

1700'

- shrub 1 m. tall; flowers
 orange, fruits turning blue.
 shrub 1 m. tall.
 slender shrub 4 m. tall.
 twines; corolla deep
 maroon purple, firm
 glossy.
 small tree,
 flowers bright yellow
 small tree; petals
 white, stamens yellow.
 aromatic, subfrutescent.
 flowers blue.

- 42719 *Lasianacis*
rare
- 3 20 *Boueria*
common on roadside
- 2 24 *Heliconia*
common on roadside
- 1 22 *Cheilanthes*
rare at base of cliff above road
- 4 23 *Cordia jamaicensis*
occasional
- 2 29 *Psychotria dura*?
rare
- 1 25 *Stachytarpheta jamaicensis*
occasional on roadside
- 8 26 *Eugenia acutisepala* Proctor
occasional

~~July 16 - Maroon River~~

- 1 77 *Panicum pulchrum* Britton
occasional

July 16 - Kellits, Clarendon Parish

600 m.

- 1 28 *Senecio discolor*
roadside thicket

shrub, flowers lued.

July 16 - Maroon River Savanna
west of Kellits, Clarendon Parish
on rolling open ground

2300 m.

- 6 29 *Ipomoea*
climbing on small shrubs
in savanna

- 2 30 *Panicum polycaulon* Nash
common in moist savanna

prostrate, forming mat.

(42720)
Psychotria
suffruticosa
Jacq.

spreading plant;
flowers pinkish

shrub; flowers white.

shrub; flowers white.

flowers medium purple,
- not very pale.

small tree; flowers
inconspicuous, white.
(being described as new by Proctor)

shrub

- 42731 *Panicum* ^{occasional in moist savanna}
- 3 32 *Coccyzselum* ^{common in moist savanna}
- 1 33 *Cuphea* ^{rare in savanna}
- 1 34 *Sauvagesia* ^{common in moist savanna}
- 1 35 *Agalinis* ^{*albicans* (Guss.) Small} ^{occasional in moist savanna}
- 2 36 *melast.)* ^{common in moist savanna}
- 1 37 *Paspalum* ^{*retatum* (L.) Steud.} ^{occasional in moist savanna}
- 38 *Scleria* ^{occasional in moist savanna}
- 2 39 *Scleria* ^{common in moist savanna}
- 1 40 *Scleria* ^{in moist savanna}
- 2 41 *Utricularia* ^{*pusilla*} ^{common on open mud.}
- 2 42 *Scleria* ^{common in ^{well drained} savanna}
- 3 43 *Cyrtia* ^{occasional in well drained savanna}
- 3 44 *Cyrtia* ^{same}
- 2 45 *Centella* ^{*repanda*} ^{abundant generally in savanna and scrub}
- 1 46 *Spermacoce* ^{common in ^{well drained} savanna}

- procumbent & ascending
- prostrate; flowers purple.
- flowers pink
- flowers white.
- flower whitish.
- flowers rose pink.
- depressed.
- erect. flowers ~~yellow~~ yellow.
- erect
- shrub 2 1/2 m tall, flowers white, ~~fruit~~ young fruit greenish.
- same, but ~~fruit~~ young fruit reddish.
- leaves erect. fruiting stems erect.
- flowers ~~purple~~ white.

- 42747 *Desmodium* *barbatum* (L.) Benth.
rare in well drained savanna
- 1 48 *Polygala* *sp.* L.
rare in well drained savanna
- 2 49 *Panicum* *sp.*
common in well drained savanna
- 3 50 *Fimbristylis* *sp.*
common in well drained savanna
- 2 51 *Hypoxis* *sp.*
common in shady spot
- 3 52 *Scleria* *sp.*
locally abundant in well
drained savanna.
- 3 53 (grass) *Panicum* *sp.*
abundant locally in savanna
- 1 54 (sedge?) *Cyperus* *sp.*
common in savanna
- 4 55 *Eleocharis* *sp.*
~~in bog~~ local in open water in bog
- 2 56 *Fuirena* *sp.*
local in ~~top~~ open water in bog
- 3 57 *Osmunda cinnamomea*
local in hummocks in bog
- 2 58 *Panicum* *sp.*
local in bog
- 2 59 *melast.* *sp.*
common in bog
- 3 60 *Mayaca* *sp.*
common in open spots in bog
- 1 61 *Burchardia* *sp.*
rare in edge of bog
- 1 62 *Iris* *sp.*
occasional in edge of bog

flowers purple.

roots have wintergreen
odor when crushed; flowers
purplish.

culms solitary, erect.

^{bulbs}
bulbs leafy buried;
flowers yellow

culms sharply trigonous

strictly erect, sterile at
this season.

flowers white.

flowers white.

flowers pink.

flowers yellow

- 42767 Eleocharis
1 common in mud at edge of bog
- 2 64 Panicum
in and between hummocks
in bog.
- 4 65 Andropogon
common locally in savanna
- 2 66 Tournefortia hirsutissima
rare in stream thicket
- 1 67 Rhynchospora polyphylla
common in scrub
- 3 68 Rhynchospora
common in shrub savanna
in wet spots
- 2 69 Rhynchospora
common in shrub savanna
- 1 70 Blechnum serrulatum
abundant generally,
dominant in bogs.
- 2 71 Eleocharis
local in muddy places
- 1 72 Equisetum giganteum
local in low thicket or scrub
- 1 73 Panicum glutinosum
rare in scrub
- 1 74 Eriolaena javanica (Burm. f.) Rob.
occasional in dry disturbed
savanna.
- 1 75 Buxus
rare in scrub
- 3 76 Cordia jamaicensis
rare in well drained savanna
- 3 77 Lycianthes essecta
rare in well drained savanna

erect, 1.5 m. tall.

shrub; flowers white.

fronds strictly erect.

shrub 2 m. tall.

shrub 1 m. tall,
flowers yellow

- 42778 *Sphagnum*
 1 in ~~the~~ deep channels
 between hummocks in
 shrub swamp.
- 4 79 *Lindsaya*
 common in shrub swamp
- 2 80 *Funaria* *Melochia villosa*
 local on small knoll in
 savanna.
- 2 81 *Cordia*
 occasional in well drained
 savanna.
- 4 82 *Eugenia*
 local in ~~at~~ savanna
 and scrub.
- 3 83 *Clethra*
 rare in savanna

- with
 full notes July 16 - Mason River,
 Northwest of Hellier, St. Ann's Parish
 on wooded limestone hilltop
- 3 84 *Phyllanthus arbuscula*
- 2 85 *Croton laurinus*

flowers purple.

shrub 1.5 m. tall

shrub 1.5 m. tall;
 fruit immature.

shrub 2 m. tall;
 flowers white

shrub 2 m. tall,
 flowers red.

shrub 3 m. tall, spikes
 pendent, flowers white.

July 18 - Northeast Cay

Plants noted

Sesuvium portulacastrum
Tournefortia argentea
Cyperus ligularis
Suriana maritima
Portulaca oleracea
~~*Paspalum distichum*~~

The key has a beach ridge around sides and a shallow depression in central portion. This has some salt water and is mostly covered by *Sesuvium*. This extends up almost to the top of the inner slope.

Set a graduated stake, with marks at inch intervals in a small pool near north end of depression.

Date	Time	Water Level
July 18 - 12 noon		6"
	5 p.m.	5½"
	7 p.m.	5"
	9:30 a.m.	7½"
	1:00 p.m.	7"
July 19	7:00 p.m.	6½"
	10:00 a.m.	6½"
	7:15 a.m.	8"
	5:30 p.m.	6½"
July 20	7:30 a.m.	7"

Birds

Large flock of frigate birds, ~65
~~lots of~~ Terns, many scattered
 Noddies, several seen

2 laughing gulls

6 royal terns

Bridled terns mainly resting, flying up and coming to rest again.

Boulder ridge on northeast side of corals up to 1 m. or more in greatest length. Largest noted (64 x 34 x 22") mostly apparently single colonies. Sand in interstices in lower layers.

Littorina sp. scattered on these boulders to the inner edge of the layer of large boulders. Most abundant in B-C-D unit.



Depression with water said to have resulted from phosphate excavation. Cyanophyceae abundant in water forming a coating on bottom which is loosening, rising toward top.

Frigate birds arrived about 3:30 a.m. soaring mostly just to windward of island. Numbers increased, then fell off till at about 6:50 a.m. there were only 18 left.

4 left
at 6:30
more at 7

Sooty terns nested on rocks, bushes etc. facing into wind, mostly on windward side of island especially on boulder ridge. When approached they seemed a bit reluctant to leave.

Royal terns congregated on a beach rock point at south end of islet. With them were two laughing gulls which soon left. The terns stayed sitting for a time.

Rocks on beach ridges are notably barren (by algae?). *Portulaca* seedlings growing in pits in rocks.

Sesuvium generally very green and healthy, but in places where it is growing at about 500 water table has the leaves dead, stems still green.

The beach ridge on the ^{north part of} west side is broad and of sand. On the south part of east side a boulder ridge has been covered by sand.

Great slabs of beachrock have been thrown up onto or over the top of the beach ridge on the southeast shore.

In about the middle of the west side is a stretch of boulder ridge.

At night land crabs are quite numerous, but not very large. seem to be more abundant back of the beach. Scarcely any seen on beach proper, and none going down to the water. Both land and hermit crabs seem a bit more numerous toward the south, especially hermit crabs. Only one ghost crab seen, at south point.

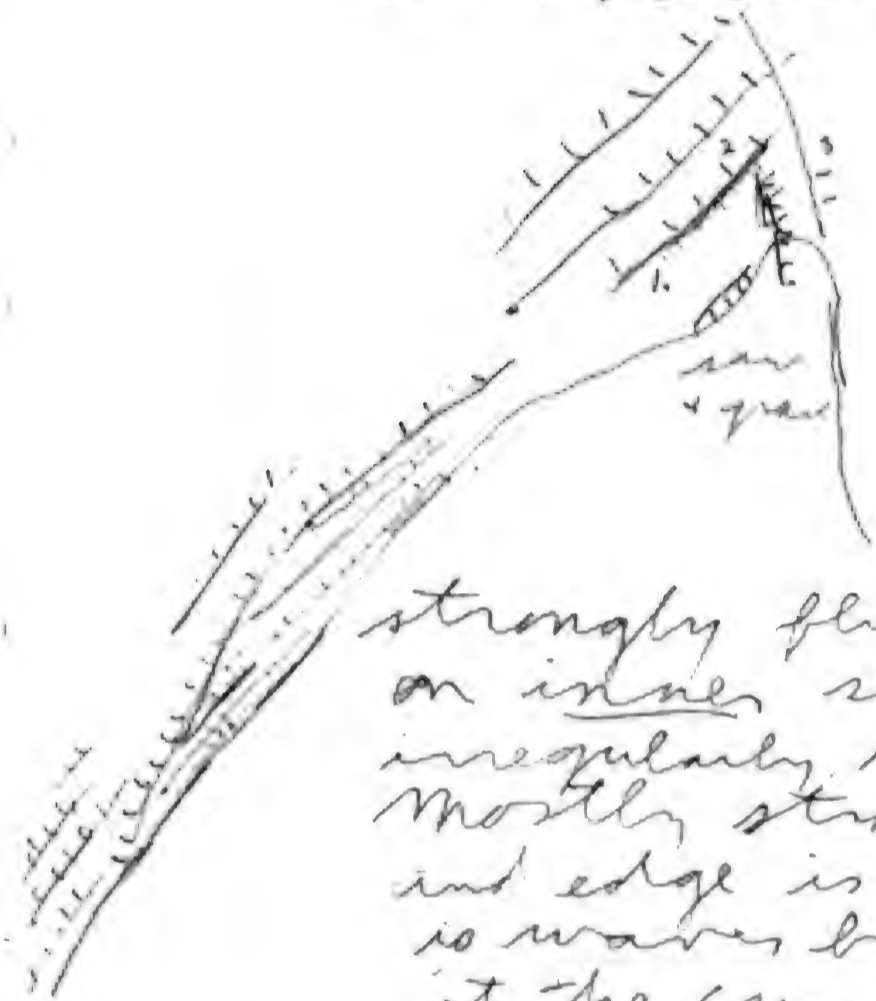
Portulaca has 20-30 stamens
fls 7-10 mm. across.

July 19 - N E Cay

- 4 noddies near s. end
 2 sandwich terns
 (light back large blackbill)
 on s. point
 1 frigate bird at 8:30
 4 at 10:30 25 at 11:00
 increase rapidly after that.
 sand samples. to well over 100

- 1 south point windward
- 2 " " leeward
- very close together (2 m).
- 3 150 paces n. on east shore
 intertidal below a
 small gravel beach
- 4 same, storm beach
 above small gravel
 beach. (also incl.
 Tournefortia fruits
 from nearby plant).
- 5 from about 100 paces
 farther north, north
 of last Louisiana -
 sand from back of
 crest of boulder ridge.
- 6 - n westside, 150 paces
 from point, intertidal
- 7 same, well above
 h.t.
- 8 150 paces farther
 north, ~~near~~ just
 below extreme
 swash.
- 9 from top of intertidal beach
 opposite tent.

North extension of
 s. point has been removed
 by storm, leaving beach
 rock within



1. more
 series of
 beach
 rock
~~at~~ former
 sharp
 crests
 This is

strongly fluted or channeled
 on inner side, rather
 irregularly, but sharply
 mostly strongly undercut
 and edge is toothed.
 as waves break over
 it the current is very
 strong downward, mud,
 less water goes back
 Channels are covered by
 algal film.

2. An irregular eroded
 snag of higher beach rock
 from which a sample
 was collected for surface
 examination. arrow indicates
 upper surface. Lower was
 certainly protected from
 mud abrasion.
3. Pebble from accumulation
 in foot hole for surface examination

Bottles jars, etc.

1. insects spiders, etc. collected in tent and immediate vicinity - tent pitched on Sesuvium mat on sand. N. Cay
2. Bottom layer from sweeping burians
top layer from sweeping Sesuvium
N. Cay
3. Sand shell from surface of ground at south tip of N. Cay.
4. Hermit crabs from w. side of N. Cay - on land.
Land crabs from w. side NE. Cay on land.
Ghost crabs from south point of N. Cay on beach - above high tide level - only seen here.
Littorina - from top of boulder ridge on east side of Cay.
5. nests from Tournefortia
6. Insects etc. found on beach (Halobates) and in

low cliff in boulder ridge back of beach rock on w. side of south point.

7. Insects from root crowns of *Cyperus ^{plagioides} ~~bracteatus~~* back of beach ridge at south point.
(large black beetle running on ground.)
8. Insects from *Tournefortia graphalodes*. Southwest Cay
9. Crabs, etc. from Middle Cay.
10. Insects, etc. from under rocks in occasionally flooded depression with *Cyperus ^{plagioides} ~~bracteatus~~* Middle Cay.
11. Lizard from under stones as in 10. Middle Cay
12. grasshoppers from *Tournefortia* scrub on sand flat, Middle Cay
13. Spiders, etc. from *Tournefortia*, Southwest Cay.
14. N. Cay, under ^{rocks} stones in low wet *Sesuvium*

15. Lizard, N. Cay

Two large swallows very dark blue, almost black on back, light tan beneath, tail dark but lighter toward end, forked. They were skimming the low terraces and ponds. (Bunker said he saw a number of them last evening, can you follow?)

Clumps of Cyperus near south point all or practically all have ants in the root crowns - some of them at least 2 species, a yellow one and a black smaller one which varies greatly in size. Both run rapidly when aroused and the black one bites vigorously and painfully. A few other insects also found in these root crowns - a beetle or two, collembola, etc. ~~swarm~~ worms. Small crickets not caught.

Along the west shore of south point, perhaps 50 yards north, or more is a low cliff cut in a beach ridge of small boulders. Many soil pans, etc. In this, in the

Vial #7.

interstices, is a fairly diverse fauna - 2 spp. of Lepismids, 1 of Machilis, 1 or 2 beetles, spiders, a pseudoscorpion (not caught). (These in vial #6)

The open water areas in the central depression are lined with a friable mud - greenish above with considerable organic matter (argal?) in the upper inch and a half, turning to gray, strong fetid odor, at least partly #25, for one or two inches, then changing gradually to brownish and becoming pale downward, also becoming more sandy. (sample #1 sample is a mixture from upper 5 inches.)

The areas of terrarium tend to be rocky.

The central parts of the islet, especially in the south part, have many irregular heaps of stone. Perhaps remain from phosphate mining - waste material!

Practically no insects attracted to a strong Coleman camp.

Line leveled with boards
from post with stake to
high tide mark on beach. E-W.

0	-	+ 9"
19	-	+ 11"
2'	-	+ 84"
14	-	+ 27"
17	-	+ 11"
7	-	- 28"
7	-	- 41"

July 20 - Southwest Cay
 Longitudinal depression
 almost the length of the cay
 surrounded by slopes
 covered by luxuriant
 Scaevola mat
 Piles of rock scattered
 generally.
 Land lobe on northwest
 corner.

Tournefortia on beach
 mostly around north
 half. scattered plants
 of it around the south
 half.

Cyperus scattered
 irregularly, especially
 in central part of
 north slope, base
 of sand slope
 Paspalum scattered, also,
 and toward central depression
 forms sizeable clumps
 in which nodules of

A bare mound of sand
 on W side has many
 holes a few tiny tufts of
 Paspalum

Birds

over
 2
 (1/2)

more locally when in basins
 up to 3-4 m across, 1-2 m thick

List of animals collected on Pedro Cays

by F. R. Fosberg, July 1962

1. Insects, spiders, etc., collected on North East Cay around camp site, on Sesuvium mat on well drained ground, some attracted to lights or to food. The area is a wide sand ridge on the leeward side. July 18-24 '62.
2. The insects in the layer above the cotton obtained by sweeping Sesuvium. Those on the bottom collected by sweeping Suriana maritima (mostly not in flower). North East Cay, July 18 '62.
3. Land shell found on surface of the ground under Suriana maritima scrub on flat ground inland from beach near south tip of island. July 18 '62.
4. Large jar, North East Cay; Land crabs from broad sand ridge on west side, burrowing. Ghost crabs from top of beach above high tide level, near south tip of islet, only seen here. Littorina, common on high boulder ridge, up to 10-12 feet, clinging to boulders--apparently most abundant on highest part of ridge. Hermit crabs from back of beach on south half of west side of cay.
5. Insects obtained by beating Tournefortia gnaphalodes, south end of North East Cay. July 18, 1962.
6. Insects, spiders, etc., found in interstices of low cliff in boulder ridge just above high tide level on west side of south end of North East Cay, July 19, 1962.
Also Halobates and Lygia from beach on east side of south end of cay.
7. Insects, etc. from root crowns of Cyperus ligularis, back of beach ridge north of south point of North East Cay, in rocky ground. Each clump had ants, usually both black and yellow (the black beetle was running on the ground). July 19, 1962.
8. Insects ~~and spiders~~ from Tournefortia gnaphalodes on ~~Southwest~~ North East Cay, July 20 '62. 20
9. Crabs, hermit crabs, lizard~~s~~ and grasshoppers from southeast side of Middle Cay, July 21, 1962. All were under stones in low spot except grasshoppers which were in Tournefortia scrub on beach on west side.
10. → Insects, spiders, etc. from under rocks in occasionally flooded depressions with a sparse stand of Cyperus ligularis, dark gray soil. On southeast side of Middle Cay, July 21, 1962.
11. Lizard from under stones, southeast side of Middle Cay, July 21, 1962.
12. Grasshoppers from Tournefortia scrub (same as # 9).
13. Spiders and insects from Tournefortia gnaphalodes, Southwest Cay, July 20 '62.
14. Insects, spiders, millipeds, earthworm~~s~~, etc., from under low heap of stones and conchs in low wet saline area, in Sesuvium portulacastrum vegetation, near middle of North East Cay, July 22, 1962.
15. Lizard from Sesuvium portulacastrum on low sand ridge, North East Cay, July 22, 1962.

After these have been examined, please retain any that are of special interest for the Institute of Jamaica museum and forward the rest to

F. R. Fosberg
Pacific Vegetation Project
% National Research Council, Washington 25, D.C., U.S.A.

I would very much appreciate names for any or all of these, associated with the lot numbers.

July 20 - Southwest Cay
 Longitudinal depression
 almost the length of the cay
 surrounded by slopes
 covered by luxuriant
 Sesuvium mat
 Piles of rock scattered
 generally.
 Land lobe on northwest
 corner.

Tournefortia on beach
 mostly ~~at~~ around north
 half. scattered plants
 of it around the south
 bay.

Cyperus scattered
 irregularly, especially
 in central part of
 north slope, ~~in~~
 island and slope.

Paspalum scattered, also,
 and toward central depression
 forms sizeable clumps
 in which noddies nest.

A bare mound of sand
 on W side has many
 holes a few tiny tufts of
 Paspalum.

Birds

Multitudes of sooty tern
 some with eggs, not
 very few.

large flock of frigate
 birds soaring over
 windward side.

crowded colony of nests.

Brown booby

hundreds nesting on
 flat ground on east
 and south parts of cay.

Noddies

nests with eggs, small
 accumulations of Sesuvium
 and shells in clumps of Paspalum

laughing gull

many, flying
 around protections
 with noddies when
 nests of noddies
 are disturbed.

both royal ^{and} smaller
 royal terns? very pale
 above, black head, rump,
 beak - but smaller than
 sooty tern - sitting on floors
 around the ponds.

handwich terns - with
 royal ~~terns~~ and sooty.

Noddy nests all seem
 to be made of Sesuvium
 more bulky when in burrow
 up to 3-4 inches, 1-2 inch thick.

phyto-
 food.
 6+10

common
 tern
 (Hanna
 birds)

Clump of cordia on
w. side about 5 m. away
only a stump left of central
tree, peripheral ones
badly wind-beaten.
Several other clumps
scattered to north
end.

Sample of sand from
under noddy nest
in *Lescuria* mat
on inner slope.

Many noddy nests
in *Tournefortia* bushes
a few on ground. All made
of *Lescuria*
Tournefortia has been
chopped away to some
extent (photos)

Three *Lescuria* across roads
one *Lescuria* in north
end

Several of sand hole
and several *Tournefortia*,
end of road belt of
Tournefortia scrub on
sand flat, at north
end. *Lescuria* is low 1.5 m.
high, closed to almost all

Photos

panoramic series south,
from same edge of scrub
near north end showing
sooty terns, belts of
vegetation, & pond.

Locally much *Portulaca*
on sandy places on east
beach ridge which is a
mixture of sand and
cobbles. Also on a
consolidated phosphate
platform just inland
from beach ridge perhaps
2 m. above pond level

(photos) (samples)
Perhaps half an acre -
multitude of ^{birds} sooty terns
a few sandwich tern.
A few of the sooties have
eggs.

Colony of 30-40 frigate
bird nests with almost
grown young - bluish
white heads, can fly a
little. Nests are mounds
of guano supported by
broken *Tournefortia* branches,
but definitely on ground
colony perhaps 15 x 30 m.
in *Tournefortia* on windward
side. (photos)

Wide *Portulaca* flats
on e. side with many

brown boobies nestings
ground, nests in Portulaca
with occasionally, Sarcocornu
(photos), 1 or 2 eggs, these
greenish-white, scarcely
spotted. Many birds
all except one seen in adult plumage.

A few burrows clumps
scattered on this flat.
(photos). Some mats of
Sarcocornu mixed with
Portulaca, or Paspalum.

Patches of phosphate
platform common here,
somewhat south of area
from coconut tree.

See large circular patches
of Sarcocornu many among
Portulaca on both lower
sand and on consolidated
or semi-consolidated phosphatic
conglomerate.

Around south end a
very high, very steep. Boulder
ridge possibly, partly or
wholly, into sea.

Low vegetation on outer slope
(photos)

In s.w. corner a small
pond enclosed by a cobble
ridge. Small grass
inside ridge. Dead Tournefortia
& some ~~grass~~ seedlings + Sarcocornu

in bar photo)
Just north of this
on inner edge of the
beach ridge another
overhanging phosphate
platform (sample) (photos)

Noddies seen nesting
in all plants except
Sclerophorum, also on
ground and in mass
of sea fan, etc. Always
at least some semblance
of a nest, but when on
ground very little
almost always some
shell.

Principal vegetation
type a Sarcocornu mat,
Tournefortia scrub, and
Portulaca flats. Ponds
in depressions - water
blue green - algae

Paspalum is scattered
on beach ridges and
inner slopes, also
Cyperus but more
local. One coconut tree
on a mound of sand.

Photos 64 + finished here, 1-5
started and mostly used
here. Finished on 17 Aug, some other photos
had not finished some on 15, finished on 16.

July 19 - North East Cay

on flat calcareous soil

- 42786 *Cabrita lanceolata*
 a few seedlings only back
 of beach on west side
- 87 *Lescurium ~~ace~~ portulacastrum*
 abundant, covering
 most of the islet
- 88 *Cyperus ^{plurifolium} ~~biguttatus~~* L. R. & R.
 locally abundant
 on sandy or gravelly beach
 ridges
- 89 *Paspalum distichum* L.
 common on leeward beach
 ridge of sand
- 90 *Portulaca ~~lanceolata~~ ^{lanceolata}* L. Swartz
 common on sandy places
- 91 *Tournefortia graphalodes*
 common on beach ridges
- 92 *Suriana maritima* L.
 locally abundant on
 beach ridges

July 20 Southwest Cay
 on flat calcareous, mostly
 phosphatic soil.

- 93 *Suriana maritima* L.
 a few scattered clumps
- 94 *Heliotropium curassavicum* L.
 no plant on flat ground
 inland from east side.

leaves fleshy, flowers white

prostrate, forming
 dense mat, leaves
 fleshy, subglabrous,
 stems somewhat reddish,
 flowers rose-purple.

~~Caespitose~~ Caespitose, forming
 discrete clumps. culms
 erect; leaves glaucous

depressed plants all
 seen sterile.

prostrate, fleshy,
 flowers yellow 8-10 mm.
 across, stamens 20-30.

rounded gray bush,
 flowers white, fragrant.
 bush to 45 m. tall
 flowers bright yellow.

shrub 1.5 m. tall; flowers
 bright yellow.

glaucous fleshy, flowers
 white.

- 42775 *Tournefortia gnaphalodes* L.
abundant on sand
beach ridges less so on
rocky ones
- 5 76 *Cordia sebestena* L.
a few clumps on
north west beach ridge
- 2 97 *Cyperus ligularis* L.
scattered locally on
inner slopes and tops
of sand ridges
- 2 98 *Paspalum distichum* L.
scattered generally
in island but not abundant
- 2 99 *Heliotropium urassavicum*
on ledges of phosphatic
conglomerate on south
end of islet
- 42800
3 *Lesquerium portulacastrum* L.
abundant on inner
slopes above ponds and
locally on flats
- 3 01 *Portulaca oleracea* L.
abundant on flat
sandy areas

July 21 - Middle Cay
on flat calcareous, possibly
phosphatic soil.

- 2 02 *Cyperus ligularis* L.
pure stands locally

10/21/62

low rounded bushes
1 m tall, gray.

shrubs 1-2 m tall,
flowers scarlet.
(said to have been
introduced)
erect clumps,
leaves glaucous.

spreading when young,
forming erect clumps
when older, all seen sterile.

prostrate, fleshy,
forming extensive mats,
stems reddish green,
leaves sub-glossy, flowers
rose-pink
prostrate fleshy.

erect clumps,
leaves glaucous.

samples (collected) from 11-187

- 10 - mud from bottom of small pool in central depression of N.E. Cay (see p. 127)
- 11 - sand (phosphatic?) from under noddy nest in descurvium mat on inner slope of S.W. Cay
- 12 - similar sand from 0.5 m. away from nest under descurvium.
- 13 - Phosphatic conglomerate from n.e. side of S.W. Cay from edge of ledge
- 14 - similar sample from S.W. corner of S.W. Cay.

~~July 11 - North East Cay~~
(top 145)

July 21 - Northeast Cay

Several sandwicks and royal terns resting on south point.

Several swallows flying over lagoon.

Along east coast beachrock is continuous and comes up to the edge of the boulder beach and extends under it. There are a scattering of fairly large boulders generally lying on the beachrock surface and generally a belt a meter or so in width that is abraded white, almost free of the algae that cover it farther out, probably from the rolling back and forth of the boulders when the waves are rough. This area is covered by fairly smooth. In some places a conspicuous joint cracks, with a shaded groove formed by the strike ~~and~~ more or less dove's feet

Boulder ridge has very large corals and coral fragments. But most seem to be single colonies or pieces of single colonies, rather than of consolidated detritus or reef frame.

photos not begun

6/2-6 begun

Point 12: end of boulder ridge, boulders brown zone with faint growing and a mass of consolidated detritus with Littorina southward along wall are a number of large blocks of consolidated detritus (photo) lying at the bottom of the boulder beach.

Descurainia seedlings, in sandy pockets on top of the

seedlings of Tournefortia, Portulaca, fairly common mostly on sand, but some Portulaca also on rubble.

ctd. from p. 113

12:30 am 6 1/2'

12:30 - 6 1/2'

2:10 am 6'

July 12 1892 - 7-

Well 207

2-20 pale dry sand
some shells - pebbles
(sample 15)

20-53 moist pale sand
similar to above
perhaps more reds
sample 16

53-63 gravel, with much
heropora cerucomis
becoming looser
sample and with large
17 interstices downward.

63-72 gravel with
little sand.

72" water (at 3 p.m.)

72-76+ gravel
under water

water sample 18
(2 bottles)

(now ctd. from p. 144)

July 21 - Middle bay
great flat area with
only a small depression
near northeast corner.

Sesuvium around
depression on slopes
down to it. Another
patch of *Sesuvium*
half way to other end.
Patches of *Cyperus* between.
Most of islet covered
by a pure, open to closed
stand of *Portulaca*.

Surrounded with *Tournefortia*
except a small stretch on
southeast.

Several dozen blue
faced boobies here
on ground a few brown
boobies also.

Some *Portulaca* in the
Tournefortia scrub which
is rather open. In recent
deposited beach to west
around W end. are
numerous *Tournefortia*
seedlings (photos)

(photos in notes in end)
No black ridges or sand
in notes. Cobble ridge,
not very high. There
is a red flat with
lines of beachwood out
some rocks and a - *Tournefortia*

(noddy ground)
(Laughing gull eggs)
a number of rusty terns
(one downy chick) (one egg)
south beyond point
suggesting that here
the islet is eroding away
On the other side it is
being added to.

The cobble ridge has
a clipped seaward edge
and has some sand
in it about 4 dm below
crest. The whole ridge
is not 1 m above h.t.

Inland from beach
ridge a depression
with brown soil and
Cyperus. Many crabs,
hermit rats, a lizard
etc. This area is visited
occasionally.

Patches of *Cyperus*
occasional between
Sesuvium and beach ridge.

Blue faced booby
feeding a fully grown
fully feathered north
dark gray-brown young.
Many

beach rock in northern
part of Cay



- old from 138
- 42803 *Sesuvium*
pure stands in low spots.
- 2 04 *Portulaca oleracea*
dominant, pure stands
over large areas where
boobies nest.
- 2 05 *Suaeda maritima* L.
very local in *Tournefortia* strip
- 2 06 *Tournefortia graphalodes*
forming low scrub
around periphery

July 22 - Northeast Cay

- 2 07 (blue-green)
gelatinous layer on
bottom of highly saline pond

The largest part of
the Cay is covered by *Portulaca*
flat - a flat of sand ^{or lower} and
very slightly higher than
the belt of *Tournefortia*
along the shore. The sand,
though white on top, is
yellow-brown below (sample 19).
Blue faced boobies nest
here in great numbers.
In mid-afternoon there were
a couple of dozen, by 5 pm.
there were hundreds. *Portulaca*
mats 2-4 dm across
are now almost touching to
almost their diameters apart, ^{forming}
prostrate, forming mats,
fleshy, leaves sub-
glossy; flowers rose purple.

shrub 1 m. tall

July 22 - Marly bottom
of extremely saline
ponds in depression

soils
relativous layers
hard crust
sample 20
1 specimen no. 42807

soft somewhat - green
layer with much
humus
dark brown
or brown or mottled,
even cracks,
strong H₂S odor
2-5 cm.

below this a stiff
clay-like marl,
becoming harder
and more granular
downward, a few
shell and coral
fragments, very
easily broken or fused
at about 8-10: numerous
coral, algal, and shell
fragments embedded
in the marl (sample 22)

1 core taken with
a can is sample 21
Water sample from pond 23.

Crust suggests consolidation under
these conditions.

Small shower at
about 1:30. At the first
few drops the land
crabs came out of
their burrows in swarms
and crawled about
in the herbarium,
apparently taking
drops of water from
the leaves and putting
them in their mouths.
They stayed out as
long as any water
remained on the leaves,
a few hermit crabs also
were seen with the
land crabs.

Turned over stones in
low pit in wet marl
in herbarium flat half
way to south end from tent.
Several big lycosids, black
ants living with them
the small white isopod-like
millipeds with bush tail
(these move rather rapidly and faintly),
a small gray isopod, a fly (11) on
scenthorn, and a land crab.
(not coll.)

July 23 → Kingston to Green Hills, up Hope River Valley
 Slope up from Kingston has open vegetation varying on one hand to savanna, on the other to closed thicket or forest esp. in ravines. The more open areas are on slopes and ridges. *Panicum maximum* is dominant in the grass layer.

Montane sclerophyll from about 1700' to 4-5000'. Lower part largely dominated by *Acacia villosa*. Strong Andean affinity. *Baccharis*, *Latureja*, *Verbesina* (*Chaenocephalus*), etc. Where undisturbed forms a dense closed scrub, but here much burned and opened.

Above 2100' *Nelium* and *Tithonia* abundantly naturalized. *Gleichenia* local. *Erigeron Karwinskianus* common, naturalized. Higher up *Cecropia*, *Chusquea*

Lida rhombifolia
Vienna lolo
Arundo donax

Plantago lanceolata
Art. m. n. bipidum?
Impatiens adenophorum
Cyperus nevadensis
Rhynchos obtusifolius

Widespread species:
Erigeron Karwinskianus
Eugenia javanica
Catalpa longifolia
Cinchona
Lonicera japonica
Cytisus scoparius
Hydrangea
Tibouchina semidecandra
Hedyclium coronarium
H. flavum
Tropaeolum majus
Penstemon peruvianus
Impatiens sultana
Cuphea platycentra
Asparagus plumosus
Drymonia cordata
Tritoma crocosmaeflora
Selaginella Kraussiana
Adiantum raddeianum ^{Presl} (*cuneatum*)
Verbena bonariensis
A. cuneatum L. + 7 not Fust. =
A. raddeianum Presl, Tent. Pter. 158, 1836.
Palargonium zonale var. off.
Dahlia variabilis
Coleus scutellarioides
Plantago major
Lupinus repens
Youngia japonica
Graphalium purpureum
Thelypteris torresiana
Buddleia japonica
Datura arborea
Salvia splendens
Asapanthus tomentosus

Along Newcastle, to divide is excellent undisturbed montane sclerophyll.

At divide much reforestation with various pines and podocarps, etc.

Hardware gap

On north slope - rather undisturbed montane rain forest - mostly on steep slopes. Trees 5-8 m. tall, one tree layer. A dense but indistinct shrub layer. Epiphytes abundant, incl. orchids, bromads, ferns, mosses, hepatics. Tree ferns common, also Clusqueas, but not abundant enough to form tangles.

(photos - Kodak 62.7 begin.)

Gleichenia common

Trees taller in ravine

Podocarpus

Dendropanax

Miconia very common, some aroids

Phyllodendron sp. 1.

Ravine
bet
Rose Hill
and
Caledonia
Peak

Leptalium

a brown irregular tubes 1-1.5 dm. across, with numerous branches which are deflexed and have erect clavate to crimson inflorescences, both staminate and pistillate, mostly pistillate, covered by large fleshy scale-like caducous bracts; the seeds exserted from the fruiting masses, have a white fleshy caruncle, and carried off by ants, which eat the caruncle and leave the seed. A large colony of ants lives in the mass of plants. The whole mass is 3-4 dm. across. (photos)

Photos of Rose Hill practically untouched montane rain forest, from S.E. slope of Caledonia Peak. (Portland Por.)

July 23 - Green Hills, east of Handover Gap
on moist road cut in
montane rain forest

1750'

42808

Coccoloba

under low shrubs

2

09 *Phyllanthus*

common on talus

2

10 *Eleocharis*

in seepy place

1

11 *Youngia japonica*

common

1

12 *Spermatocoele*

common

1

13 *Lycopodium*

occasional

1

14 *Grammitis serrulata*

common locally

1

15 *Dyblia*

local

same - roadside

1

16 *Juncus bufonius*

same - in garden

1

17 *Lonicera japonica*

spontaneous

1

18 *Cardamine hirsuta*

spontaneous

July 27 - along Newcastle Road
below Hightown, St. Andrew Par

2200'

1 *Polypodium*

epiphytic on tree in montane rain forest

prostrate, branches
ascending, flowers
purple

culms terete, shorter
ones erect, longer pendent

flowers white,
hairy within.

creeping downward on
vertical banks.

twines, flowers
white, turning yellow,
- very fragrant.
flowers white.

July 4 - 7 ran up Mt
Horeb from Hardwar Gap

Ridge with scrub
forest, gnarled and
massy 4-8 m tall
Podocarpus, Hedysmum,
Cyrtilla, Melastomaceae,
etc., very irregular.
Dense irregular shrub
layer, tangled with
gleichenia.

Many Vriesea tanks,
many ferns, a few Cyathea
Thrasa and other
mosses on ground.
Selaginella abundant.

SCIENTIFIC
THE INSTITUTION
KINGSTON

PLANTS OF TRINIDAD

Caroni Co.

Cyperus articulatus

Locality Caroni Swamp

Occurrence Locally abundant in open marshes
along old canal in Rhizophora swamp

Date July 5, 1962 Alt 0 m

Coll. F. R. Fosberg No. 4254g

Remarks Erect, several stems from base

Miss M. - H. Sachet
Pacific Vegetation Project
c/o National Research Council
2101 Constitution Ave., N.W.
Washington 25, D.C.
U.S.A.

Dear Marie-Hélène,

July 24 - Trail up Mt
Horeb from Hardwar Gap

Ridge with scrub
forest, gnarled and
mossy 4-8 m. tall
Podocarpus, Hedysmum,
Cyrilla, Melastomaceae,
etc., very irregular.
Dense irregular shrub
layer, tangled with
Gleichenia.

Many Vriesea tanks,
many ferns, a few Cyathea
sp. - they
v. no
be seat

D
ICES

SCIENCE MUSEUM
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KINGSTON, JAMAICA

PLANTS OF TRINIDAD
St. Andrew Co.

Utricularia

Locality Arlipo Savanna

Occurrence Common in dense grass in open
wet grassland on gray silt soil

Date July 8, 1962 Alt. 35 m

Coll. F. R. Fosberg No. 42608

Remarks Flowers white with yellow median
mark on palate

Miss M. - H. Sachet
Pacific Vegetation Project
c/o National Research Council
2101 Constitution Ave., N.W.
Washington 25, D.C.
U.S.A.

Dear Marie-Hélène,

July 24 - 7 car up Mt
Horeb from Hardwar Gap

Ridge with scrub
forest, gnarled and
mossy 4-8 m. tall
Podocarpus, Hedysmum,
Cyrilla, Melastomaceae,
etc, very irregular.
Dense irregular shrub
layer, tangled with
Gleichenia.

Many Vriesea tanks,
many ferns, a few Cyath
! other
moss
moss

Miss M. - H. Sachet
Pacific Vegetation Project
c/o National Research Council
2101 Constitution Ave., N.W.
Washington 25, D.C.
U.S.A.

Dear Marie-Hélène,

SCIENCE MUSEUM
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KINGSTON, JAMAICA, W.I.

20 May 1963

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THE INSTITUTE OF JAMAICA
KINGSTON, JAMAICA, W.I.

20 May 1963

Miss M. - H. Sachet
Pacific Vegetation Project
c/o National Research Council
2101 Constitution Ave., N.W.
Washington 25, D.C.
U.S.A.

Dear Marie-Hélène,

Thanks for your recent letter. The Jamaican plants are now being sent; the delay was due to my slowness in completing the identifications, which in turn was caused by too many other things to do! The list of name is enclosed; I have indicated a few of which we would appreciate having duplicates. In one case (#42779) I have actually withheld a specimen needed for study, so for this perhaps you could just send a label.

Generally speaking, these plants were not dried as well as they should have been, and in some cases the leaves are detached. This would not ordinarily have happened, but at the time I was too occupied to supervise the drying as I should have, considering that the two boys were new to the work. They failed to realize that 40-watt bulbs did not provide enough heat, and I didn't find out they were not using the right (75-watt) bulbs until most of your material was already dried.

One thing that kept me very busy last fall was our acquisition of 36 new steel herbarium cases, thanks to a Rockefeller grant. This meant reorganizing the entire collection. The old wooden cases are still in good use for storage of unmounted material, duplicates, and supplies. A large additional room has been made available for this purpose, and for the first time we are really adequately housed, with plenty of space for expansion. The next major objective is air-conditioning! This is badly needed.

We have mounted and accessioned more than 4,000 sheets since you were here. One of the interesting collections that came in was a set of Bro. Alain's Puerto Rican plants.

I'm sorry not to have acknowledged receipt of the elephant books. They were very slow in coming, but in due course the boys got them and were delighted.

So far my summer plans are uncertain, but I may possibly come up to Washington and New York in August or September. I hope you will be around if I do. Please give my regards to Ray.

Sincerely yours,

Dick

George R. Proctor
Botanist.

GRP/zl
Encl.

* = duplicate requested.

JAMAICAN PLANTS COLLECTED BY F. R. FOSBERG

July, 1962

Det. by G. R. Proctor

42629. *Cordia collococca* L.
30. *Morinda roio* L.
31. *Phyllanthus nutans* Sw.
32. *Boerhaavia erecta* L.
33. *Phyllanthus latifolius* Sw.
34. *Adiantum melanoleucum* Willd.
35. *Heppiella corymbosa* (Sw.) Urb.
36. *Phyllanthus amarus* Schum. & Thonn.
37. *Borreria laevis* (Lam.) Griseb.
38. *Euphorbia hypericifolia* L.
39. *Lisianthus cordifolius* (L.) Griseb.
42640. *Anthehora hermaphrodita* (L.) Ktze.
41. *Borreria laevis* (Lam.) Griseb.
42. *Emilia*
43. *Cuphea ciliata* (Sw.) Koehne
44. *Pteris longifolia* L.
45. *Rondeletia trifolia* Jacq.
46. *Cissus microcarpa* Vahl
47. *Heliotropium angiospermum* Murray
48. *Muntingia calabura* L.
49. *Cissus sicyoides* L.
42650. *Cestrum*
51. *Borreria laevis* (Lam.) Griseb.
52. *Lobelia viridis* McVaugh
53. *Cassia clarensis* (Brit.) Howard ? *
54. *Croton discolor* Willd.
55. *Cyperus planifolius* L.C. Rich.
56. *Rachicallis americana* (Jacq.) Ktze.
57. *Echites umbellata* Jacq.
58. *Mallotonia gnaphalodes* (L.) Brit.
59. *Morinda roio* L.
42660. *Borreria verticillata* (L.) G.F.W. Meyer
61. *Solanum racemosum* Jacq.
62. *Morinda roio* L.
63. *Ernodea littoralis* Sw.
64. *Croton discolor* Willd.
65. *Strumpfia maritima* Jacq.
66. *Citharexylum fruticosum* L.
67. *Suriana maritima* L.
68. *Conocarpus erecta* L.
69. *Erithalis fruticosa* L.
42670. *Jaquinia keyensis* Mez
71. *Wedelia trilobata* (L.) Hitchc.
72. *Parthenium hysterophorus* L.
73. *Lourea vespertilionis* (L.f.) Desv.
74. *Canavalia maritima* (Aubl.) Thou.
75. *Euphorbia blodgettii* Engelm. ex Hitchc.
76. *Phaseolus lathyrioides* L.
77. *Cakile lanceolata* (Willd.) O.E. Sch.
78. *Desmodium tortuosum* (Sw.) DC.
79. *Euphorbia buxifolia* Lam.
42680. *Borreria laevis* (Lam.) Griseb.
81. *Spilanthes urens* Jacq.
82. *Caesalpinia*
83. *Sesuvium portulacastrum* L.
84. *Thalassia testudinum* König
85. *Philoxerus vermicularis* (L.) R.Br.
86. *Borreria arborescens* (L.) DC.
87. *Colubrina asiatica* (L.) Brongn.
88. *Halimeda gracilis* Harvey ex J. Ag.
89. *Halimeda goreauii* Taylor
90. *Bryothamnion triquetrum* (Gmel.) Howe
91. *Padina sanctae-crucis* Berg.
92. *Turbinaria turbinata* (L.) Ktze.
42693. *Gymnanthes elliptica* Sw.
94. *Guaiacum officinale* L.
95. *Exostema caribaeum* (Jacq.) R. & S.
96. *Bursera simplicifolia* DC.
97. *Rhacoma crossopetalum* L.
98. *Piscidia piscipula* (L.) Sarg.
99. *Sarcophagus laurinus* Griseb.
42700. *Tabebuia riparia* (Raf.) Sandw.
01. *Borreria*
02. *Passiflora perfoliata* L.
03. *Torrubia discolor* (Spreng.) Brit.
04. *Cissus trifoliata* L.
05. *Bauhinia galpinii* N.E. Br. ?
06. *Anemia adiantifolia* (L.) Sw.
07. *Scleria lithosperma* (L.) Sw.
08. *Guettarda argentea* Lam.
09. *Lantana camara* L.
42710. *Portlandia grandiflora* L.
11. *Croton corylifolius* Lam.
12. *Ipomoea horsfalliae* Hook.
13. *Gymnanthes elliptica* Sw.
14. *Byrsonima coriacea* (Sw.) DC.
15. *Tetrazygia pallens* (Spreng.) Cogn.
16. (not found)
17. (not found)
18. *Salvia serotina* L.
19. *Lasiacis divaricata* (L.) Hitchc.
42720. *Borreria laevis* (Lam.) Griseb.
21. *Scleria lithosperma* (L.) Sw.
22. *Cheilanthes microphylla* Sw.
23. *Cordia jamaicensis* I.M. Johnston.
24. *Psychotria aff. dura* Griseb.
25. *Stachytarpheta jamaicensis* (L.) Vahl
26. *Eugenia* sp. nov.
27. *Palicourea*
28. *Senecio discolor* (Sw.) DC.
29. *Ipomoea rubella* House
42730. *Panicum*
31. *Panicum aciculare* Desv.
32. *Coccocypselum herbaceum* Aubl.
33. *Cuphea parsonsia* (L.) R.Br.
34. *Sauvagesia brownei* Planch.
(= *S. erecta* L. ?)
35. *Gerardia albida* (Brit. & Penn.)
36. *Acisanthera quadrata* Juss. ex Poir.
37. *Paspalum*
38. *Rhynchospora rariflora* (Michx.) Ell.
(No Jamaican specimen in IJ !)
39. *Scleria hirtella* Sw.
42740. *Scleria ciliata* Michx.,
var. *elliottii* (Chapm.) Fern.
{ *Rhynchospora cyperoides* (Sw.) Mart.
41. } *R. microcephala* (Brit.) Brit.
 } *R. fascicularis* (Michx.) Vahl
42. *Scleria pterota* Presl
43. *Cyrtilla racemiflora* L.
44. " " "
45. *Centella erecta* (L.f.) Fern.
46. *Borreria laevis* (Lam.) Griseb.
47. *Desmodium barbatum* (L.) Benth.
48. *Polygala paniculata* L.
49. *Panicum parvifolium* Lam. ?

(Nos. 88-92 det. L. Green)

42750. *Fimbristylis complanata* (Retz.) Link
 51. *Hypoxis decumbens* L.
 52. *Scleria georgiana* Core
 53. *Panicum stenodes* Griseb.
 54. *Rhynchospora oligantha* A.Gray
 var. *breviseta* Gale
 55. *Eleocharis mutata* (L.) R. & S.
 56. *Fuirena umbellata* Rottb.
 57. *Osmunda cinnamomea* L.
 58. *Panicum zizanioides* H.B.K.
 59. *Nepsera aquatica* (Aubl.) Naud.
 42760. *Mayaca fluviatilis* Aubl.
 61. *Buchnera elongata* Sw.
 62. *Xyris jupicai* L.C.Rich.
 63. *Eleocharis retroflexa* (Poir.) Urb.
 64. *Panicum parvifolium* Lam.
 65. *Andropogon bicornis* L.
 66. *Tournefortia hirsutissima* L.
 67. *Paspalum fimbriatum* H.B.K.
 68. *Rhynchospora robusta* (Kunth) Boeck.?
 (imature)
 69. *Rhynchospora polyphylla* Vahl *
 42770. *Blechnum indicum* Burm.
 (*B. serrulatum* L.C.Rich.)
 71. *Eleocharis elegans* (H.B.K.) R. & S.
 72. *Equisetum giganteum* L.
 73. *Panicum maximum* Jacq.
 74. *Emilia javanica* (Burm.f.) C.B.Rob.
 75. *Buxus laevigata* (Sw.) Spreng.
 76. *Cordia jamaicensis* I.M.Johnst.
 77. *Lisianthus exsertus* Sw.
 78. *Sphagnum*
 79. *Lindsaea portoricensis* Desv. (* -
 specimen withheld - please send label)
 42780. *Melochia villosa* (Mill.) F. & R.
 81. *Casearia arborea* (L.C.Rich.) Urb.
 82. *Eugenia wilsonella* F. & R., vel aff.
 83. *Clethra occidentalis* (L.) Steud.
 84. *Phyllanthus arbuscula* (Sw.) Gmel.
 85. *Croton laurinus* Sw.
 86-92 (not found)
 93. *Suriana maritima* L.
 94. *Heliotropium curassavicum* L.
 95. *Mallotonia gnaphalodes* (L.) Brit.
 96. *Cordia sebestena* L.
 97. *Cyperus planifolius* L.C.Rich. *
 98. *Paspalum vaginatum* Sw.
 99. *Heliotropium curassavicum* L.
 42800. *Sesuvium portulacastrum* L.
 01. *Portulaca oleracea* L.
 02. *Cyperus planifolius* L.C.Rich. *
 03. *Sesuvium portulacastrum* L.
 04. *Portulaca oleracea* L.
 05. *Suriana maritima* L.
 06. *Mallotonia gnaphalodes* (L.) Brit.
 07. (?)
 08. *Coccoypselum herbaeum* Aubl.
 09. *Phyllanthus tenellus* Roxb.
 42810. *Eleocharis elegans* (H.B.K.) R. & S.
 11. *Crepis japonica* (L.) Benth.
 12. *Borreria laevis* (Lam.) Griseb.
 13. *Lycopodium reflexum* Lam.
 14. *Grammitis serrulata* (Sw.) Sw.
 15. *Dichaea pendula* (Aubl.) Cogn.
 16. *Juncus bufolius* L.
 17. *Lonicera confusa* DC.
 18. *Cardamine hirsuta* L.
 19. *Polypodium plumula* auctt., non H.B.W.
 42820. *Pilea grandifolia* (L.) Blume
 21. *Cobaea scandens* Cav.
 22. *Pilea weddellii* F. & R.
 23. *Nephrolepis pectinata* (Willd.) Schott
 24. *Calceolaria chelidonioides* H.B.K.
 25. *Galinsoga ciliata* (Raf.) Blake
 26. *Cyperus* (Kyllinga) *tenuifolius*
 (Steud.) Dandy
 27. *Calceolaria* (sp. indet. - please
 send name if possible !)
 28. *Oxalis corniculata* L.
 29. *Besleria lutea* L.
 42830. *Isachne arundinacea* (Sw.) Griseb.
 31. *Cionosicyos pomiformis* (Macf.) Griseb.
 32. *Selaginella denudata* (Willd.) Spr.
 33. *Hymenophyllum lanatum* Fée
 34. *Hymenophyllum polyanthos* (Sw.) Sw.
 35. *Panicum glutinosum* Sw.
 36. *Elaphoglossum latifolium* (Sw.) J.Sm.
 37. *Palicourea alpina* (Sw.) DC.
 38. (not found)
 39. (not found)
 42840. *Coccoypselum pseudotontanea* Griseb.
 41. *Psychotria corymbosa* Sw.
 42. *Grammitis graminea* (Sw.) Ching
 43. *Hymenophyllum polyanthos* (Sw.) Sw.
 44. *Thelypteris deltoidea* (Sw.) Proctor
 45. *Asplenium alatum* H. & B. ex Willd.
 46. *Ctenitis villosa* (L.) Copel.
 47. (not found)
 48. *Peperomia swartziana* Miq.
 49. *Piper fadyenii* C.DC.
 42850. *Polypodium repens* Aubl.
 51. *Peperomia alata* Ruiz & Pavon
 52. *Polytaenium lineatum* (Sw.) J.Sm.
 53. *Uncinia hamata* (Sw.) Urb.
 54. *Grammitis cultrata* (Willd.) Proctor
 55. *Trichomanes crispum* L.
 56. *Danaea jamaicensis* Underw.
 57. (lichen)
 58. *Urera elata* (Sw.) Griseb.
 59. *Trichomanes scandens* L.
 42860. *Trichomanes rigidum* Sw.
 61. *Peltapteris peltata* (Sw.) Morton
 62. *Grammitis asplenifolia* (L.) Proctor
 63. *Lobelia assurgens* L.
 64. *Rhynchospora polyphylla* Vahl
 (sens. lat.)
 65. *Ilex macfadyenii* (Walp.) Rehder
 66. *Podocarpus urbanii* Pilger
 67. *Dendrophthora opuntioides* (L.) F. & R.
 68. *Schradera involucrata* (Sw.) K.Schum.
 69. *Haenianthus incrassatus* (Sw.) Griseb.
 42870. *Clusia havetioides* (Griseb.) Pl. & Tr.
 71. *Eugenia biflora* (L.) DC., juvenile
 72. *Eupatorium critoniforme* Urb.
 73. *Hedyosmum arborescens* Sw.
 74. *Relbunium* (*Galium*) *hypocarpium*
 (L.) Hemsl.
 75. *Fragaria vesca* L.
 76. *Juncus platyphyllus* (Wieg.) Fern.
 77. *Ageratum houstonianum* Miller
 78. *Nephrolepis exaltata* (L.) Schott
 79. *Urechites lutea* (L.) Brit.

42880. *Piper discolor* Sw.
 81. *Cheilanthes microphylla* Sw.
 82. *Polypodium plumula* auctt., non H.B.W. 43
 83. (fungus on dead insect)
 84. *Adiantum fragile* Sw.
 85. *Guazuma ulmifolia* Lam.
 86. *Digitaria sanguinalis* (L.) Scop.
 87. *Bunchosia media* (Ait.) DC.
 88. *Borreria laevis* (Lam.) Griseb.
 89. *Pilea microphylla* (L.) Liebm.
42890. *Scleria lithosperma* (L.) Sw.
 91. *Polypodium heterophyllum* L.
 92. *Lasiacis divaricata* (L.) Hitchc.
 93. *Rauvolfia nitida* Jacq.
 94. *Tillandsia setacea* Sw.
 95. *Chiococca alba* (L.) Hitchc.
 96. *Polypodium latum* (Moore) Sodiro
 97. *Portlandia grandiflora* L.
 98. *Piper discolor* Sw.
 99. *Ocotea robertsonae* Proctor (ined.) *
42900. *Psychotria nervosa* Sw.
 01. *Guettarda argentea* Lam.,
 var. *glabrata* Urb.
 02. *Borreria laevis* (Lam.) Griseb.
 03. (not found)
 04. *Drymaria cordata* (L.) Willd. ex R. & S.
 05. *Euphorbia hirta* L.
 06. *Tragia volubilis* L.
 07. *Forsteronia floribunda* (Sw.) A. DC.
 08. {*Pilea grandifolia* (L.) Blume
Polypodium "pectinatum" X "plumula"
 09. (not found)
42910. *Gyrotaenia spicata* (Wedd.) Wedd.
 11. {*Cheilanthes notholaenoides* (Desv.) Max.
Cordia bullata (L.) R. & S.
 12. *Polypodium piloselloides* L.
 13. *Pilea crassifolia* (Willd.) Blume
 14. *Anthurium scandens* (Aubl.) Engl.
 15. *Borreria laevis* (Lam.) Griseb.
 16. *Asparagus plumosus* Baker
 17. *Cynoglossum amabile* Stapf & Drum.
 18. *Anemia adiantifolia* (L.) Sw.
 19. *Thelypteris reptans* (J.F. Gmel.) Morton
42920. *Geaeris acaulis* Sw.
 21. *Thelypteris serra* (Sw.) R. St. J.
 22. *Rondeletia cymulosa* Proctor (ined.)
 23. *Rondeletia sylvestris* S. Moore
 24. *Rondeletia cymulosa X sylvestris* ? ined.
 25. *Hippobroma longiflora* (L.) G. Don
 26. *Polystichum echinatum* (J.F. Gmel.) C. Chr.
 27. *Phyllanthus arbuscula* (Sw.) Gmel.
 28. *Acrosynanthus jamaicensis* Howard & Proctor
 29. " " " "
42930. *Eugenia axillaris* (Sw.) Willd.
 31. *Alvaradoa jamaicensis* Benth.
 32. *Portlandia coccinea* Sw.
 33. *Psychotria asiatica* L.
 34. *Eugenia monticola* (Sw.) DC.
 35. *Erithalis harrisii* Urb.
 36. *Rhytidophyllum tomentosum* (L.) Mart.
 37. *Pilea* sp. nov.
 38. *Tectaria heracleifolia* (Willd.) Underw.
 39. *Cheilanthes notholaenoides* (Desv.) Max.,
 intergrade toward *C. microphylla* Sw.
42940. *Asplenium erosum* L.
 4241. (?) *lichen*
 42. *Adiantum cristatum* L.
 43. " " "
 44. *Polypodium angustifolium* Sw.
 45. *Guettarda argentea* Lam. *
 46. *Portlandia coccinea* Sw.
 47. *Lonchocarpus*
 48. *Coccoloba krugii* Lindau
 49. *Solanum (Lycianthes) stellatum*
 Jacq.
42950. *Pavonia scabra* (Vogel) Stehle &
 Quent.
 51. *Chiococca parvifolia* Wulfschl.
 52. *Eugenia* sp. nov. ? (would like
 to borrow this)
 53. *Asplenium jamaicense* Jenm.
 54. *Polystichum harrisii* Maxon
 55. *Ayenia laevigata* Sw.
 56. *Acideton urens* Sw.
 57. *Selaginella hispida* (Willd.) A. Br.
 58. *Mandevilla torosa* (Jacq.) Woodson
 59. *Eugenia clarendonensis* Urb.
42960. *Tournefortia maculata* Jacq.
 61. (Myrtaceae - gen. & sp. indet.)
 62. *Lagetta lintearia* Lam.
 63. *Neea nigricans* (Sw.) F. & R.
 64. *Daphnopsis occidentalis* (Sw.) Kr.
 & Urb.
 65. *Nephrolepis exaltata* (L.) Schott
 66. *Piper arboreum* Aubl., sens. lat.
 (*P. verrucosum* Sw. ?)
 67. (not found)
 68. *Mimosa bimucronata* (DC.) Ktze.
 69. *Stachytarpheta jamaicensis*
 (L.) Vahl
42970. *Digitaria horizontalis* Willd.
 71. *Stachytarpheta mutabilis*
 (Jacq.) Vahl
 72. *Emilia javanica* (Burm.f.) C. B. Rob.

July 7 - 1st
1962

at

man,
car,
in
local
ity

gather
they
not
last



MAP OF
TRINIDAD

With Roads showing Distances
Telephone Pay Stations
Gas Stations
etc

TRINIDAD ADVENTURERS ASSOCIATION,
99 FREDERICK STREET
PORT-OF-SPAIN
TRINIDAD
B.W.I.
TELEPHONE 1445

July 24 - 7 - 1 - 1 mt
 29ab



YOU CAN BE SURE OF SHELL.

Goreau collected *Halophils*
Baillonis to a depth of sand
 240 ft on ~~smooth~~ ^{eroded} ~~bottom~~
 on both coasts of Jamaica
 on outer slopes.

July 24 - Trail up Mt
Horeb from Hardwar Gap

Ridge with scrub
forest, gnarled and
massy 4-8 m. tall
Podocarpus, Hedyscymum,
Cyrtia, Melastomaceae,
etc., very irregular.
Dense irregular shrub
layer, tangled with
Gleichenia.

Many Vriesea tanks,
many ferns, a few Cyathus
Sphagnum and other
mosses on ground.
Selaginella abundant

Goreau collected Halophila
Baillonis to a depth of ~~240~~ ²⁴⁰ ft on ~~crossing~~ ^{crossing} ~~bottom~~
on both coasts of Jamaica
on outer slopes.

July 24 - Between Green Hill and
Hardwar Gap, along road.
in montane rain forest

42820 *Pilea* (n. sp. m. + by Proctor)

21 *Cobaea scandens*

22 *Pilea* (n. sp. m. + by Proctor)
on steep road cut

23 *Nephrrolepis pectinata*
on steep road cut

24 *Calceolaria* (n. sp. m. + by Proctor)
on wet roadside

25 *Galinsoga parviflora*
common on roadside

26 *Cyperus brevifolius*
occasional on roadside

27 *Calceolaria pennata*
rare on wet roadside

28 *Oxalis* (n. sp. m. + by Proctor)
common on roadside

July 24 - ravine on north side
of Hardwar Gap, Portland Parish
in montane rain forest

29 *Besleria lutea*
common

30 *Trachne*
occasional

31 *Calceolaria* (n. sp. m. + by Proctor)
rare on wet roadside

3500-4000'

Portland Parish

unbranched suffruticose
herb, m. tall; leaves
strongly bullate, purple
beneath.

extensive vine, climbing
over bushes; flowers
purple.

stems fleshy, red,
leaf veins strongly
impressed above.

nodes enlarged,
corolla light yellow
rays white.

heads green

erect; corolla pale yellow.

shrub 1.5 m. tall,
calyx pale orange; corolla
white, fruit deep orange.

stem elongate, sprawling,
herbaceous vine, flowers white.

- 42832 *Selaginella denudata* (L.) Dur.
- 3 abundant on banks
along trail
- 1 33 *Hymenophyllum polyanthum*
epiphytic on tree trunks
- 3 34 *Hymenophyllum lanatum*
epiphytic on tree trunks
- 2 35 *Hymenophyllum* ~~dissectum~~ ~~hook~~
epiphytic on tree trunks
- 1 36 *Plex* (sub. sp. nov.) *puberula* Hooker
~~rare~~ rare
- 1 37 *Panicum glutinosum*
rare
- 1 38 *Claphroglossum latifolium*
epiphytic on tree trunks
- 3 39 *Palicourea alpina* (L.) DC.
occasional
- 6 40 *Coccyzselum pseudotantanea*
occasional on bank above trail
- 2 41 *Psychotria* (a *palicourea*)
occasional
- 1 42 *Grammitis*
rare, epiphytic on tree trunks
- 1 43 *Hymenophyllum polyanthum*
common, epiphytic on tree trunks
- 3 44 *Thelypteris* ~~deltoidea~~ ~~hook~~
occasional on bank
above trail

July 24 - Ravine between
Rose Hill and Caledonia Peak
in montane rain forest

- 3 45 *Asplenium alatum* (L.) Dur.
local

procumbent, plane
parallel to ground surface.

~~small tree~~
small tree 4 m. tall,
sterile.
culms, scabrous, glabrous,
spikelets glutinous.

small tree 5 m. tall;
thyse orange red, buds
yellow, corolla whitish
prostrate; flowers
white, fruit blue.
shrub, thysees purple,
corolla whitish.

fronds curved downward

north of Hardwar Gap.

Portland Parish

4000

10/11/62

- 42846 *Ctenitis*
occasional
- 3 47 *Scybalium*
occasional, root parasite.
- 3 48 *Peperomia*
epiphytic on tree trunk
- 7 49 *Piper*
occasional
- 1 50 *Polypodium*
occasional, epiphytic on tree trunk
- 1 51 *Peperomia*
epiphytic on tree trunk
- 3 52
epiphytic on tree trunk
- 1 53 *Uncinia hamata*
common on banks along trail
- July 24 - ~~south~~ slopes
of Caledonia Peak, north of Handover Gap,
Portland Parish
in montane rain forest
- 1 54 *Grammitis mollis*
epiphytic on tree trunk
- 1 55 *Trichomanes*
terrestrial, on bank along trail
- 1 56 *Danaia*
terrestrial, locally abundant
- 1 57 *Parmelia*
epiphytic on tree trunk
- 3 58 *Urera*
occasional
- 4 59 *Trichomanes scandens*
epiphytic on tree trunk
- 1 60 *Trichomanes*
terrestrial

frond very large,
— stems hollow.
(copy label 22 on p. 129)

forming loose mat,
— leaves subfleshy,
shrub ~~2~~ 3 m tall; spikes
erect.

leaves rather thin.

pendant.

slender, small tree or shrub
4 m. tall, stems and
— leaves stinging somewhat.

- 42861 *Peltandra peltata*
 rare, epiphytic on fallen tree trunk
 4 62 *Grammitis*
 common, epiphytic on tree trunks

July 24 - Trail up Mt. Hocho ^{4400-4500'}
 from Hardwar Gap, St. Andrew's Par.
 in low gnarled
 montane rain forest on ridge

- 1 63 *Lobelia assurgens*
 rare in open spot
 2 64 *Rhynchospora*
 common
 3 65 *Ilex*
 rare
 4 66 *Podocarpus*
 common
 3 67 *Dendrothoa thunbergii* (L.) Fawc. & Rend
 occasional, parasitic on *Cyrtia*
 3 68 *Schradera* *exotica* (Gmel.) Standley
 occasional, epiphytic in
 trees
 2 69 *Palicourea* *psychotria* var. *umbellata*
 occasional
 3 69a *Haemianthus*
 occasional or rare
 70 *Clusia*
 occasional
 1 71 *Eugenia bicolor* var.
 rare
 1 72 *Eupatorium*
 rare

- erect, unbranched herb
 1 m. tall, stems and
 main leaf veins purple;
 - corolla dull dark purple
 stems weak, ascending
 - at least distally.
 slender tree 5 m. tall,
 leaves larger on leading
 - shoots; fruit black.
 small tree, bushy in
 - appearance, 8 m. tall.
 joints somewhat 13 marked?
 - flattened, fruit red.
 shrub, somewhat
 vine-like, fruit immature,
 - disks strongly rugose
 shrub, thyrses purple,
 - corolla whitish.
 tree 2 m. tall, corolla
 - white, mostly fallen.
 small tree.
 shrub 1.5 m. tall; sterile.
 shrub 3 m. tall.

412373 *Hedyosmum*
 3 very common

~~74 *Galium hypocarpium*~~

July 24 - Hardwar Gap
 St. Andrews Par.

4 74 *Galium hypocarpium*
 occasional on road cuts

2 75 *Fragaria*
 common on roadside banks

3 76 *Juncus tenuis* Willd. 5' high
 common on ~~road~~ grassy
 road cut

2 77 *Ageratum houstonianum*
 common on road sides

July 26 - Maggoty, on
 Black River, St. Elizabeth Par.
 on steep hill of rough
 limestone

3 78 *Nephrolepis*
 common on road cut

2 79 *Eclipta*
 common in secondary scrub

4 80 *Piper*
 in open secondary scrub

1 81 *Cheilanthes*
 in rock crevices in opening

3 82 *Polypodium*
 common in shade

1 83 (fungus)
 on old fern rachis

aromatic
 shrub 3 m. tall, ripe
 fruit translucent
 white.

2950'

tangled vine, flowers
 pale green; fruits orange,
 fleshy.

flowers white; fruit
 red, achenes in shallow
 pits.

small tufts

1100'

aromatic; flowers
 mauve.

150 m

fronds erect.

scandent twiner; flowers
 bright yellow.

shrub 1.5 m. tall;
 berries white.

fronds arcuate

July 27 - Fair trip from
Kingston to Maggoty
just out of Kingston -
open scrub forest of *Prosopis*
for a short way, then
a village with houses-
gardens - trees landscape.
Then open pasture with
scattered bamanas. Then
along harbor saline flats,
locally marshy on seaward
side of track, on other side
partly village part
pasture. Then on left low
mangrove with locally
Batis flats, a bit of
mangrove on right but
mostly sugar cane. Then
sugar cane on right also,
locally with rows of
coconuts and bamanae.

Gregory Park.

Banana plantation on left
sugar on right. Then even
moor of large blocks of
cane and bananas, rows of
Musa testilis as wind breaks.
Small patches of bamanae.
Then ~~extensive~~ extensive area of
solid banana - some thickets
along tracks and near scattered
house.

More cane fields, scattered
trees - bamanae, *Artocarpus*, mango.

10:40

Vestibula merillii
Jacquinum sp. *argyrium* (infolia)
Pachyphyllum *trorum*

Aeneis (camp)
Alocasia macrorrhiza
Nepenthes exaltata
Suterea *purpurea*
Anthurium (common)
Caladium bicolor

Widespread plants -

Mambot esculenta
Ricinus communis
Musa testilis
Moringa oleifera
Panicum maximum
Zinnia elegans
Acalypha wilkesiana
Xanthosoma sagittifolia
Euphorbia hirta
Erigeron spinosus?
Cynodon dactylon
Amaranthus viridis
Sida acuta
Tecoma stans
Euphorbia sp. *corniculata*
Pedem. radiata
Parthenium hysterophorum?
Chloris inflata
Carica papaya
Pithecolobium dulce
Ipomoea batatas
Malva viscosa arborea?
Kalanchoe pinnata
Thevetia peruviana
Tabernaemontana divaricata
Cordyline fruticosa
Colocasia esculenta
Psidium guajava
Spathodes campanulata
Securium edule
Amaranthus spinosus
Cenchrus echinatus
Gomphrena globosa

Villages with autocarpus, Prosopis, Delonix, Mangifera
 Small fields, fallow or
 in Maubot, Maize, bananas, grass, etc.
 scattered trees, thickets, hedgerows.
 Edge of Spanish Town, with low Prosopis scrub, scattered
 Samanea, Prosopis and several other large spreading trees. Xanthosoma along ditches.
 W. of Spanish Town - mainly sugar cane. Rows of coconut and other trees. On left a large block of Prosopis scrub, then more cane. B. block of Prosopis savanna on it. The more cane. block of savanna on left, cane south of it.
 Hartlands station. More cane. Cane is in all stages, but mostly rather young, some just planted.
 scrub forest in distance on left and on low hills far to right, then closer on flat ground on right, then still closer, then an extensive area on it. of a mosaic of scrub forest, open scrub forest, and savanna. cane still on left. savanna of Samanea and Prosopis.

Bushy Park

Open forest of Prosopis and occasional Samanea with fairly luxuriant grass, fading to savanna. Some cane locally. Little grazing in savanna. Some almost closed Prosopis scrub forest. Savanna and ~~to~~ flat topped scrub forest more ~~less~~ general. Villages with gardens. Prosopis scrub.

Old Harbour

The grass in all this lowland is a coarse bunchy type, possibly Panicum maximum, but grazed down. Some cane, bananas, and citrus. Then more open Prosopis forest and savanna. Some fields on left.

Bodley Pt.

Hills on right with scrub forest - wooded bottomland just before them. Then tall Prosopis or Acacia scrub with scattered trees. Route climbs around base of hills. Some clearing partly overgrown in scrub forest. Rolling low hills with dense scrub and clearings with pasture and cultivation.

Mosaic of patches of scrub, fields, various stages of regrowth, pasture etc. on left extensive very poor sized plantation. Hills are limestone but relief is low, rounded. Fiscal extends several miles on left savanna and scrub on it.

Then generally irregularly scrub-covered low limestone hills both sides.

More fiscal on both sides.

More low hills with dense scrub and clearings. The scrub and scrub forest on these hills is broad-leaf, no *Prosopis* or *Acacia*, except on ^{very} flat areas between hills.

Hills are lower, more cleared, with many *Bliquis*, *Cocos*, *Artocarpus*, *Delonix*, mango, etc. Then a large river, Rio Minho. May Pen, a fair sized town.

Gallery forest and bamboo along river, cultivation on flood plain, scrub forest on bluffs - then low rounded hills with sugar cane on left, scrub on right, dense to open. Then flat ground

pasture and scrub savanna.

Muirhead Avenue and intersection with new highway scrub forest and savanna. local cultivation of maize, etc.

Gallery forest along stream. Pasture and savanna. large citrus orchard on it. young trees planted very close.

Pasture with many large trees, broad leaf.

Four Paths.

Cleared low hills, broad valley with citrus orchard with scattered *Cocos*, then savanna.

Higher limestone hills to north. Maize fields, scrub, pasture, scattered *Cocos*, ragged second growth on flat ground.

Rock Halt. Hills come closer to track. Bamboo. *Pithecellobium*, young regrowth and pasture, scrub forest mosaic.

Track follows foot of limestone hills. These mostly wooded - many fan palms, *Cecropia*, maize, bananas, then large

cane plantation on flat ground
 leave base of hills. Pastures
 + canefields. ~~limestone~~
~~hills on top~~, junction.
 Clarendon Park &

Sugar cane on it.
 Small river. Sugar cane
 with many trees - citrus,
 Cecos, Blighia, etc.

Tree and garden landscape
 Artocarpus, Miconia, mango,
 Blighia, citrus, Theobroma,
 Chrysophyllum, Cecos,
 Mangifera, Calba, Cereus,
 Spondias, Samanea, some
 coffee, etc.

Limestone hills with
 tunnels, above fruit tree
 assemblage between them.
 Artocarpus abundant.

Epiphytes, esp. Rhipsalis
 on bananas. Caecropia common
 higher mountains on right
 Mts. on left, also, (May Day 2004)

rather wide valley of
 rolling low hilly ground
 bet. mts. dominated by
 this fruit tree landscape.

~~Pointe Peres~~

Valley with cultivation, fruit
 trees. Track climbs around
 hills on it. Clearings,
 pastures, thickets.
 Fruit tree landscape in

valley on left.

Climbing up into limestone
 hills - partly wooded,
 partly cleared, fruit
 trees abundant around
 houses.

Pteris longifolia is very
 abundant on all
 limestone cuts.

Valley opens on right
 generally wooded in
 bottom, slopes cleared
 in a shifting agriculture
 patchwork.

Track skirts this, up
 onto a rolling, hilly upland
 here pasture, some thickets,
 some fruit trees, incl. Cecos.

Mango, yams, banana, etc
 in gardens.

Track skirts south
 top of lower part of
 the valley noted above
 where it is narrower,
 more or less V shaped. ~~Track~~
 sides in shifting cult
 and pasture. Where
 bottom is fairly wide it
 is grassy or in poor citrus
 orchard. Thickets.

Panicum maximum
 covers much of slopes,
 but weedy and tending to
 grow up to scrub. The

gentler slopes here are red, probably basaltic soil. The rock is limestone. Slopes on both sides a mixture of grass, sparse scrub, thicket. Cultivation of maize, yams etc. local on lower gentle slopes, also on gentle places on higher slopes. Thickets and scrub broadleaf with strong microphyllous tendency, some *Bumera sumariba*.

North side becomes steeper, more densely forested, with side gentle slope and mostly grass (*Panicum maximum*) and secondary regrowth, scattered some large trees, mostly scattered - *Ceiba*, *Ficus* etc. locally forming a forest, mostly open. Epiphytes conspicuous on some trees.

Valley widens and track goes down into it. Mostly cultivated and in pasture. some fruit trees. Cult. esp. maize Williamsfield.

Citrus orchards on gentle north slope, ~~Track crosses~~ to north side. Mosaic of thicket and grassy clearing. Large basaltic works, some mining. Kendal.

Grassy slopes with many large trees. Then rather gentle karst mostly grassy with some cultivation and thicket, higher hills forested. Stones piled up ~~as a~~ in cult fields and pastures. Some stone walls.

Nephrolepis cf. bisinata abundant locally. Patches of sweet potato.

Large pastures on gently rolling broad valley bottom. Some thicket, bamboo, heliconias, scattered trees.

Hills on south partly wooded, mt. on north also. Track climbs up this rolling valley bottom. Citrus orchard. Grass and wooded hill landscape. Some large trees, thicket.

Very green. Quite a few cattle. Valley a broad strip of mostly grass, hills on each side forested.

Grove place.

Valley becomes narrower and more wooded.

Track goes north into a more pronounced karst.

Mosaic of wood, pasture
regrowth, cultivation -
maize, yam, citrus. Hills
wooded. Stone walls and
stone piles common. Much
sparse scrub. More gentle
topography. Maize, citrus,
banana, sweet potatoes, yam.
Green Vale

Then a mostly wooded
hairst, some gentler slope
in pasture or maize. Small
citrus orchards.

Higher limestone ranges
on either side.

Becomes more gentle and
more open. Large Ciba trees.
Cecropia common. Fianas
abundant in forest. Many
epiphytes, esp. borerliads on
some trees. Bocconia common
in hedge rows, etc.

Green Hill

Hibiscus elatus (matse)
common in valley. Breadfruit
also. Pithecolobium dulce
where valley gets broader.
Becomes a rolling plateau or
basin. Breadfruit abundant.

Duck Pond Halt.

Fruit tree association. Cocon.
open forest appearance.

Open terrace - cult. citrus orchard
then scrubby forest and thicket

partly microphyllous. 7 come
abundant.

Wide valley with rolling
hills, some small cane fields,
valley mostly open. maize,
rice.

Balaclava.

Citrus orchard. ~~to~~ large
trees in valley. Cocon.
bananas.

Valley widens to north -
large flat ~~bottom~~ bottom
is sugar plantation.

Hilly country along track
to west. clearing, culti-
vation. large flat valley
bottom on left in
cane plantation. 7 each
skirts hills on right of
valley, then across flat
plantation. Small moats
in north part. Heavily wooded
Union Halt. and tangled with vine.
Valley bottom very flat.
Clumps of bamboo scattered
in cane fields.

Then pasture and then
fruit tree landscape, ground
rather rolling.

Silvoh. Soil very yellow.

More flat cone sand on
right several small knolls.

Rolling pasture on left.

Surrounding limestone hills

mostly wooded, but
some clearing

Valley bottom becomes
rather rolling. Canals, lowest
Appleton. flat land.

Guavas common. *Spathodes*
also. *Gynerium* along canal,
but not abundant.

Track follows narrowing
flat valley bottom.

Rolling grassy hills on left
Mogote hills high on right.

Valley pinches out between
grassy karst hills. Some
canals on left. Mostly
pasture.

Black River. Then broad rolling
grassy valley bottom
with river meanders
in it. Guava thickets.

July 27 - Maggoty

limestone hill above
river. Secondary scrub
of ~~Guajava~~ ^{Guajava}, *Santana*, *Beemotrypa*
etc. with many vines
incl. *Trapa* sp. which
stings painfully.

Adiantum and *Polypodium*
common on rocks.

Kalanchoe, *Digitaria*
on soil on ledges.

July 28 - Maggoty

Rough limestone hill -
low forest, trees up to about
8 m. tall, 15 cm dbh. canopy
incomplete and irregular.
Vines very abundant -
Chiococca ~~radicans~~ ^{alba} is
a woody scrubber
with backward pointing
branchlets, sometimes
almost spinescent.

Ferns common on ground
and on tree trunks. Shrub
layer 1-3 m, of "Codiaeum"
Piper, etc. *Vriesea* and
Tillandsia on rocks and
in trees. Limestone is very
pitted and dissected.

This is evidently
secondary vegetation, as
there are remains of stone
walls and a house on
the opposite slopes, as
some small corn patches
and recent clearing
on equally steep rock
slopes. There seems to be
no soil at all.

- 42884 *Adiantum*
4 abundant ~~in~~ shade
in pits and crevices
- 4 85 ~~*Quazuma*~~ *Quazuma ulmifolia*
common in secondary forest
- 3 86 *Digitaria horizontalis*?
common in openings
- 2 87 *Hippocratea*?
1 88 *Spermacoce*
rare in openings *S. confusa* *S. confusa* *S. confusa*
- 1 89 *Pilea microphylla*
common on earth on ledges
- 2 90 *Scleria*
occasional in openings

July 28 - Maggoty, St. Elizabeth Parish 400m
in thick second growth

forest on rough limestone hill
very common tree trunks

- 4 91 *Polypodium heterophyllum* L.
7 92 *Lasiacis*
occasional
- 4 93 *Croton wilsoniana* *C. wilsonii* *C. wilsonii*
most abundant shrub in undergrowth
- 1 94 *Tillandsia tenuifolia*
common, epiphytic
- 6 95 *Chlorococca alba*
abundant

96 *Polypodium phyllitidis*
occasional

small tree; fruits
immature.
decumbent to ascending

erect flowers pinkish
white.

creeping, closely appressed
to bark.

culms sprawling on
bushes, up to 2 m. or more long.
shrub 1-2 m. tall (or more).
staminate flowers white,
somewhat caespitose,
flowers white.

extensive woody vine,
branchlets somewhat
reflexed, becoming somewhat
spinose on old wood; ripe
fruit fleshy, thick, immature
ones flattened.
fronds erect or almost so.

July 12 - Glasgow area,
above Auchtermuchty
in Cockpit country
tangled low forest
with many lianas,
some ferns, on rough
limestone. More vertical
than horizontal surface
(photos)

July 13 - Christiansia
In waste places in town
and in garden
Cynoglossum cf. amabile
Trochoclan waja
Paspalum conjugatum
Petunia
Impatiens balsamina

Morum indicum
Pennisetum purpurascens
Canna spectabilis
Paspalum limbatum
Caprium frutescens
Dioscorea alata

mouthed
Mimosa pudica
Cycas revoluta
Foeniculum vulgare
Melinis minutiflora
Grevillea robusta
Stachytarpheta mutabilis
Cordia javanica
Clerodendrum fragrans
Thunbergia alata
Rangoat Cave 1500'

Barbecue Bottom
1750'

July 17 ref. Christiansia - Albert Town,
Barbecue Bottom.
route ~~is~~ over incline of
shales & conglomerate -
almost completely
denuded.

Tony Town (photos) 2750'

Just south of Stetten (photos)
crossing 2250'
Albert Town
breadfruit, mangoes
barronae, coffee

Burnt Hill - Barbelaney
Extremely dissected
karst, made up of
pinnacled limestone
1900-2000, extreme
solution features
cockpits - sinks with
red soil in them (photos)
covered by a low tangled
forest extremely rich
in ~~st~~ Euphorbiaceae, Myrtaceae
etc. Clusia 2 sp. Quercus,
ferns, Rubiaceae.
Hard agglomeration
of iron oxide weathered
out in coral. Like chaper
cliffs but with good
strong footholds and
hand holds. Myriad of
land shells.

4 2817 *Portlandia grandiflora* L.
rare

3 98 *Piper amatagi*
common

4 99 *Canthium* (1967)
rare

~~42900~~ same - edge of tangled
scrubby forest

4 2900 *Psychotria nervosa*
rare

5 01 *Guettarda argentea*
common

4 02 *Spermacoce suffruticosa* Jacq.
common

2 04 *Drymaria cordata* (L.) Willd.
common in grass

(see next page for nos. 42905 + 06)

July 27 - Glasgow area, above
Anchtembeddie,

in tangled forest on rough limestone bluff

4 07 *Fosteria floribunda* (L.)

4 08 *Pilea grandifolia* (L.) Jacq.
common

2 09 *Polypodium*

3 10 *Ipomoea*

4 11 *Cordia bullata* (L.) Jacq.
common on road cut

1 12 *Cheilanthes notholucoides*
occasional on road cut

shrub 3 m. tall, leaves
- glossy.

- shrub 2 m. tall,
- spikes pendent.
- small tree; fruit
immature.

shrub 1 m. tall, flowers
- white; fruit immature
- shrub 2 m. tall, ripe
fruit purple, fleshy (mostly
immature)

ripe fruits caducous
on sticky pedicels.

400 m.

vine, climbing in trees;
- flowers white.

- branched shrub, stems
thick, green leaves bullate
- glossy; panicles red.
- fronds erect

- (said to be apogamous triploid form)

- shrub; ^{fruiting} bracts

- white, fleshy.
- shrub 1 m. tall; corolla
white; fruit red.

- same - open ~~to~~ rocky pasture
 42905 *Euphorbia hirta*?
 rare in
 3 06 *Tragia volubilis* -
 common in

July 28 - Christians, Manchester Parish
 on dissected limestone hills 900'

- 429120
 3 13 *Polygonum pilosella*
 shaded in fissure
 3 14 *Anthurium standens*
 on cliff
 2 15 *Spermacoce* - *diffusa*
 in shade of cliff
 1 16 *Asparagus plumosus*
 naturalized around cliffs

same - vacant lot, limy soil

- 2 17 *Cynoglossum*
 naturalized
 2 18 *Anemone adiantifolia*
 roadside bank

July 29 - Barbecue Bottom 1250'
 6 mi. n. of Albert Town, Cockpit Country, Trelawny Par. Trelawny
 on limestone cliff

- 7 19 *Thelypteris repens*
 roadside banks, abundant,
 7 20 *Gesneria acaulis*
 abundant on vertical faces
 6 21 *Thelypteris serrata*
 locally common on rock bank
 4 22 *Rondeletia*
 occasional on vertical faces

prostrate

twining; stinging hairs

climbing on limestone
 rocks

shrub much-branched,
 stems brown; leaves firm
 rugose; panicles red.

caespitose, clumps
 of short erect stems,
 spike ~~flowers~~ purple
 scrambling, flower white.

climbing to several
 meters; fruit green.

flowers bright blue.

flowers scarlet

shrub up to 1 m. tall,
 flowers whitish.

- 42923 *Rondeletia* (syn. *Protea*)
occasional on vertical face
- 24 *Rondeletia*
occasional on vertical face
- 25 *Hippobroma longifolia*
common along roadsides
- 26 *Polystichum echinatum*
rare, in shade below road
- 27 *Phyllanthus*
occasional in fruit below road

July 29 - Ramgoat cave
n. of Albert Town, Trelawny Parish
on steep embankment below road on
limestone cliff

- 28 *P. ...*
occasional
- 29 "
occasional
- 30 *Eugenia ...*
rare
- 31 *Albizia ...*
occasional
- 32 *Portlandia coccinea*
rare
- 33 *Psychotria asiatica*
rare
- 34 *Eugenia ...*
rare
- 35 *Rondeletia ...*
occasional
- 36 *Phytidophyllum ...*
common in open

erect shrub 1 m. tall.

shrubs; ~~erect~~ perhaps a
hybrid bet. 42922 + 42923 acc. of *Protea*
flowers white
locally called "Madame Fats".

small tree 4 m. tall;
flowers red.

erect shrub 3 m. tall.

erect shrub 3 m. tall.
flowers white, ~~red~~

shrubs, flowers white

erect sparsely branched
shrub 1.5 m tall, fruit red
bark very bitter

shrubs
shrub fruit immature

shrub 3 m tall; fruit
immature

shrub, 3 m. tall; flowers white

shrub about 1 m. tall;
leaves rugose;
fls. greenish yellow.

- 42937 *Pilea* sp.
 2 common
 2 38 *Tectaria* *trichomanes* (L.) Mett.
 occasional
 4 39 *Cheilanthes* *volucaeoides* (L.) Mett.
 common on rocks along road

July 29 - Braintree Hill,

Cockpit Country, Treasury Parish
 on hill of deeply dissected

1800-
 2000

hard limestone

- 1 40 *Asplenium* *crossinii*
 rare
 1 42 (*lichen*)
 rare
 2 43 *Adiantum* *tectum*
 occasional
 1 44 *Polypodium* *sp.*
 occasional
 5 45 *Quettarda* *argentea* Lam.
 rare & local
 1 46 *Portlandia* *coccinea* Lam.
 occasional on cliff
 5 47 *Lonchocarpus* (*sp.*)
 common
 2 48 *Calceolaria* *sp.*
 occasional
 4 49 *Solanum* *strobilatum* Willd.
 rare
 1 50 *Pavonia* *sp.*
 common
 2 51 *Chiococca* *parvifolia* (Willd.)
 occasional

leaves rugose, glossy,
 panicle red.

- ~~sh~~ small tree 5 m tall,
 fruit branching
 conspicuously terminaloid,
 fruit immature
 - shrub
 extensive leaves
 flowers bright purple
 - fruit immature
 vine
 shrub, fruit not quite
 - mature
 small tree
 twines; fruit immature

- 42952 *Eugenia sachetiae* (Walter) (type)
occasional
- 2 53 *Asplenium jamaicense*
common in rock pits and crevices
- 1 54 *Polystichum boninense*
occasional in shaded limestone crevices
- 1 55 (new from *Euphorbia* acc. *P. rotundifolia*)
rare *Myrsine laevigata* L.
- 2 56 *Asplenium* *ursum* L.
common
- 1 57 *Belaginello* *hispida* (L.) W. & A.
rare in pit in rock
- 1 58 *Echites?* *Manducella* *lanceolata* (Jacq.)
local
- 4 59 *Eugenia laevigata* (L.)
occasional
- 3 60 *Heliotropium* *peruvianum* L.
rare
- 3 61 *Pimenta obscura* (L.) Nees (1978)
rare
- 1 62 *Myrsine laevigata* L.
rare
- 4 63 *Neea jamaicensis* (L.)
rare
- 5 64 *Daphnopsis* *undulata* (L.)
occasional
- 2 65 *Nephrolepis hirsutula*
common in wet open places
- 1 66 *Piper* *sp.*
rare
- July 29 - just south of Stettin
Trelawny Parish
- 1 67 *Paspalum fimbriatum*
roadside

shrub; fruit immature

bluish green

proliferating at tips.

shrub

slender tree; stinging.

pale green

flowers yellow, conspicuously
contorted

shrub

shrub; fruit green.

~~small~~ shrub, aromatic
when broken.
steals shrub.~~small~~ small tree;
fruit scarlet.

shrub, flowers green

fronds erect

shrub, steels

198

1962 Jamaica

42968 *Mimosa* ~~lucida~~ ~~sp.~~
very common on eroded land

July 29 - Tony Truen, northwest of
Wait-a-Bit, Trelawny Parish
on eroded road bank on
non-calcareous soil

42969 *Stachytarpheta* (L.) Vahl
occasional

70 *Digitaria* (L.) Pennell
common

71 *Stachytarpheta monticola* (L.) Vahl

72 *Ipilipia jamaicensis* (Burm.f.) Rob.
common

199

shrub 4 m. tall, diffusely
branched, flowers white.

much-branched;
flowers dark purple.
sprawling

flowers

turning
with age.Standard Form 63
November 1961

USA Gen. Reg. No. 27

MEMORANDUM OF CALL

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 PLEASE CALL WAITING TO SEE YOU WILL CALL AGAIN WISHES AN APPOINTMENT RETURNING YOUR CALL IS REFERRED TO YOU BY:

LEFT THIS MESSAGE:

Received By-

42968 *Mimosa biuncinata* (DC.) Ktze.
very common on eroded land

July 29 - Tory Turn, northwest of
Wait-a-Bit, Trelawny Parish
on eroded road bank on
non-calcareous soil

42969 *Stachytarpheta jamaicensis* (L.)
occasional

70 *Digitaria longicaulis* Willd.
common

71 *Stachytarpheta mutabilis* (L.)
common

72 *Ernilia jamaicensis* (Burm.f.) Rob.
common

shrub 4 m. tall, diffusely
branched, flowers white.

2750'
840 m

Valid

much-branched;
flowers dark purple.
sprawling

Valid

branched herb; flowers
old-rose pink
flowers brick red, turning
~~purplish~~ purplish with age.

1962 Jamaica

July 31. Air-leaving Jamaica
 Patch reefs and cays outside
 the Palisades - a long and
 slightly complicated spit
 extending out from ~~west~~^{west} of
 mouth of Hope River, made
 up almost entirely of
 river sand and gravel.
 Has mangroves along harbor
 side beyond airport, and
 covering wider lobes.
 Sandy places near
 airport covered by a
 pure stand of *Tribulus*
cistoides with unusually
 large flowers.

West of Kingston harbor,
 inside the spit that
 extends out to enclose it,
 is a very low saline
 flat, partly bare, partly
 covered by *Batis*, and
 with considerable
 mangroves, extending
 well inland in the north
 part of the west shore.

Toward north coast
 is a considerable area
 of "semi-cockpit" country,
 where the mogotes are
 definitely separated by
 flat bauxitic(?) areas which
 form a sort of network (this
 must be near Clarendon) of
 grassy ground.

The reefs along this north
 coast are narrow, except
 at indentations, and fall
 off rapidly seaward but
 with considerable sandy
 bottom between broken
 reef ridges parallel to shore.

Reefs in Montego Bay
 w. of end of air strip
 have outer parts of striking
 parallel grooves & ridges \perp to
 coast.

21
E. L. ...

