Panama

Notes.

Field. Chagres

Plants.

Notes

to a collection of Plants made in the vicinity of Chagres
on the Isthmus of Panama, from January, 5th - April, 5th 1850,
by Augustus Fendler.

N^o

The sign ^h stands for feet, ⁱ for inches.

1.

January - April. Low level tracts
near the sea. small tree 10-30'
high; flower yellowish-white; calyx
and corolla very thick, fugacious.

2.

Upocyaena
Febr. - April. Shrub 10-20' high,
corolla bright yellow; fruit bright
scarlet when ripe; shape
local margin of the woods fronting the sea.

3.

Febr. Shrub 10-12' high; bank of
a little stream; flower of a brownish
green color.

4.

March. Plant twining.

5.

Scoparia dulcis.

March - April, Near the sea-shore,
petals: 4, white; Stam: 4, altern.

6.

Viñia gu.
February 9th. Swampy places. Shrub
8-15' high; top: 5, green, apex some-
what dotted; Pet: 5, fugacious twice
as long as the top; green, finely dotted,
the inner side of the petals densely
pubescent; Stam: 5, altern.

7.

Viñia mexicana M. L. H.
March, 3rd. - Shrub 25' high; low
level ground.

8.

Panaia macrophylla H. & A.
Febr. - Tree 20-30' high. Shady woods.
Lignals: outside greenish with brown stripes

9.

Febr. - A small prostrate herb. Wet
meadows.

10.

January - April, - Moist and sheltered
places. Stem: reclining.

11.

February, 2nd. - Moist meadows.

12.

February. - Moist places near the sea.

13.

January - March. - Sea shore, low
level meadow. Flower yellow. A plant
of stunted growth; flower yellow;
carpels ~~not~~ armed with bristles;
lower surface of the leaves tomentose

14.

February. - Sea-shore. Growth of
the plant erect; flower yellow, nearly
 $\frac{1}{2}$ in diameter; fruit armed with
2 short stout bristles.

15.

March. - fruit nearly sessile; leaves
~~not tomentose~~ unlike those in R.
13 & 14, not tomentose, upper side
very slightly pubescent.

16.

March. - Local foot of a hill.

17.

February - April. - Low level meadow.
Flower: yellow; upper side of the leaves
tinged with red.

18.

Pida caucensis Cav.

Febr. - April. - Flower: yellow;
Fruit armed with long bristles.

19.

March. - Shady woods, moist low
land; flower pale purple.

20.

April, 6th. - Tree 20-25' high;
low level places in shady woods;
Flower: golden-yellow.

21.

March. - 3-4' high; low fertile
soil.

22.

February. - Shrub 5-8' h.; swampy
places; flower: pale-yellow.

23.

February. - 4-6' high; low fertile
soil.

24.

Byrronia verticillata Rich
March, 26th. - tree 20-30' h., small
hills; flower: yellow when more advanced
turning to orange color; lower sur-
face of the anthers blackish gray,
upper surface white pulverulent.

25.

Febr. - April. - Somewhat hilly region;
Flowers: yellow.

26.

Davilla rugosa Poir
Jan. & Febr. - Shrub 2-4' h. with
long slender somewhat decumbent
branches; hilly region.

27.

Kalanchoe volubilis
March. - 1-3' high; sheltered by
other shrubs in low shady woods.
Fruit: 3 angular, of a deep glossy green color.

28.

Miconia
March, 1st. - Shrub 8-12' h.; shady
woods.

29.

Miconia
January - April. - Shrub 7-12' h.;
low land as well as hilly region.

30.

Miconia
January - April. - Shrub 12-20' h.;
low land near the sea shore, along
the margin of woods; upper surface
of the leaves glossy. Pet: 5, white, obovate.
Stamens: yellow; anthers: conspicuous, brown.

- with yellow margin when old; ripe berry: bluish-black.
31. Feb. 28. - Shrub 15-20' high; damp shady woods; leaves: glabrous on both sides.
32. *Meibomia*
March, 4. - Shrub 10-18' high; damp shady woods; Leaf: dotted with translucent dots.
33. *Medemia*
January - March. - Shrub 8-18' h; damp shady woods, low land; Petals: 5, white; Stam: red; ripe berry deep blue.
34. *Medemia?*
January. - Shrub 10-15' h; moist low-land in the vicinity of the sea-shore.
35. *Medemia?*
Jan. - March. - Shrub 10-18' h; damp shady woods. Calyx: 5-toothed, fleshy, cylindrical; Pet: 5, white, retroflexed; Stam: projecting; Style: stout, persistent.
36. February. - Shrub 10-15' h; damp shady woods; in plant similar to No. 35, but the base of the leaf is not attenuated.
37. March, 4. - Shrub 8-15' high; damp shady woods; Pet: white. In some specimens of a more luxuriant growth the base of the leaf is attenuated into petiole form, while in others the leaves are sessile or nearly so.
38. March, 10. - Shrub 6' high; banks of a little stream; Fruit: when ripe of a scarlet color; inflorescence in the axils especially of the older part of the branches & stems from where the leaves have fallen off.
39. March, 15. - Shrub 8' high; margin of a small stream.
40. February. - Shrub 8-12' h; low wet ground; branches filled with pith; Flower: red, slender tubular, 1-1 1/2 inch long; berries: scarlet, numerous.
41. March, 1. - Small plant: 2' high; shady bank of a rivulet.
42. March 3. - 1-1 1/2' high; low humid places near a rivulet; Berries of a fine scarlet color.
43. *Serjania*
February 14. - Plant: climbing over shrubs at the foot of hills; Leaflets: sparingly toothed, teeth more or less rounded.

44. *Serjania*
March, 20. - Climbing over shrubs, similar to No. 43. Leaflets: entire; Flower: minute, white; Seeds: not so conspicuous as in No. 43; Climbing - Sprouts: stouter.
45. *Serjania*
February, 26. - Plant: climbing and overtopping shrubs; Fruit: wings surrounding the apex of the fruit also the part of the fruit that encloses the seeds armed with fine but stiff bristles, which like those of some *Quercus* species enter into and adhere to the fingers that touch them.
46. February 15. - Pl: recumbent on shrubs and trees; Creek-bank; Fruit: 3 Samaras together.
47. *Tigmaraphyllum*
February 18. - Plant: somewhat twining or resting on low shrubs; Flower: yellow; Fruit: when young in three samaras together, when older (by suppression of 1) in pairs.
48. *Heteroplexis?*
February 12. - In low moist places; flowers: yellow, rather showy, 1 1/2 inches in diameter; Pet: finely pinnate.
49. *Brachylepis borealis* A. N. S.
January - March. - Wet level places & marshes; Plant: somewhat climbing; Petals: 4, yellow, with claws; Fruit: naked, in pairs as well as solitary.
50. *Doliosarpus*
February 28. - Plant: twining; bank of a little river.
51. *Passiflora* sp. n.
January 24. - Tree 20-30' high; River-bank; Calyx: 4 inch long, 5-toothed; Corolla: 3 inch long, 5-toothed, silky pubescent; upper surface of the leaves glossy.
52. February 14. - Plant climbing by tendrils; hills.
53. *Hippocratea elliptica* H. & A.
Febr. & March. - Plant: twining; near a little river; Sep: minute; Pet: green, with 1 or 2 minute vessels at the inner side of the upper half of the petal.
54. *Meibomia?*
March, 8. - Shrub 15-20' high; damp shady places in the woods; Leaves: glossy; Sep: 6, white, minute; Pet: none.
55. *Piggala paniculata* L.
February, 3. - Low level meadow.
56. January, 28. - Hilly region; fruit: brown; seeds: black, smooth & glossy when ripe; leaflets: 5.
57. January, 26. - Hilly region, margin of woods; leaflets: 5, glabrous, deep-red; seeds when ripe: black, smooth & glossy.
58. March, 15. - Plant 2 feet high; margin of a small rivulet; Berry: scarlet when ripe.

59. *Psychotria*
February, 25. - 3-5' high; Alluvial of a creek; Flower: white.
60. *Psychotria*
March, 15. - Damp shady woods; Shrub 15-20' high.
61. March, 3. - Plant 1-1 1/2' h; damp shady woods; Sep: 5, greenish-yellow; anthers: white.
62. *Psychotria*
February 2. - Shrub 5-10' h; damp shady woods; Corolla: white, 5-lobed, easily falling off.
63. March, 20. - Shrub 8-15' high; Alluvial of a creek; Corolla: yellow, 5-lobed, lobes blue.
64. *Psychotria?*
February. - Shrub 15-20' high; damp shady woods; lower surface of the leaves grayish; flower: yellow.
65. *Salicourea*
January - March. - Tree 20-25' h; Alluvial of a creek; Calyx-tube: minutely toothed; flower: yellow.
66. *Rhynchosia phaeocolides* DC.
March. - Plant: twining; hilly region; seeds: smooth, black, glossy with scarlet eye.
67. March, 20. - The sweet pulp which surrounds the seeds is eaten by the Natives, I did not see the tree.
68. January, 22. - Low level ground, margin of woods; Plant sheltered by shrubs, twining or prostrate where not supported by shrubs; Leaflets: 3; Pod: 1-2' long, blackish, smooth; Pl: large, yellow.
69. March. - Plant: twining, in the midst of small bushes; Flower: white.
70. *Eutropeia Salzmannii* Benth.
March, 1. - Alluvial of a creek; Plant twining; fl: purple.
71. *Phacelia longistylis* H. & A. var. glabrescens
Febr. 2. - Alluvial-land; Plant: twining; Deciduum: pale-yellowish, wings: purple, keel yellowish.
72. *Rhynchosia*
January, 18. - Alluvial-land; Plant: twining; Pod: 2 seed.
73. February, 2. - Alluvial-land; Pl: twining.
74. March, 2. - Bank of a little river (creek); Plant: twining; flower: blue, in dense racemes.
75. *Pachyrhizus angulatus* Rich.
March, 5. - Hilly region; Pl: twining; Pods when dry, will open in a sudden and jerk the seeds from 10-15 feet high.
76. January, 21. - Hilly region; growth of the plant erect.

77. January, 16. - Low wet meadow.
78. *Desmodium* aff. *diversus* red distinction
Febr. & March. - Hilly region; Plant 2-3' high; growth erect; Flower when young: of violet color, when older: green.
79. *Stenolobium brachycarpum* var. *brachyladum*
January & Febr. - Margin of the woods on low level ground; Flower: small, bright blue.
80. *Canavalia obtusifolia* DC.
January - March. - Plant trailing along low moist soil of the sea-shore; flower: purple.
81. *Euphorbia glauca* Willd. (*Duckeringia* Vahl)
January, 20. Febr. 15. - Low swampy ground; tree 20-25' high; flower: orange-color; keel: extraordinary large; Stamens: projecting.
82. January, 20. - Foot of hills; tree 20-25' high; Petals: yellow; branches armed with short spines.
83. *Decalea* sp. n.
February, 10. - Bank of a creek (mud flat); Plant: twining up trees; flower: easily falling off, of a bluish-purple color; wings of a paler shade than the rest of the flower; Calyx: brownish, punctate.
84. *Desmodium torquatum* DC.
February, 18. - In patches on sandy soil near the sea-shore; Plant: somewhat creeping.
85. *Cassia occidentalis* L.
January, 18. - Moist places at the foot of hills, a spreading, little shrub, 2-3 feet high; Leaflets: 4-5 pair, thin, glabrous; Pods: 3-4' long, nearly straight, flat.
86. *Cassia viridinea* L. var?
March, 2. - Hilly region; Shrub 5-10' high; Leaflets: 2 pair; Petals: yellow with red ribs; Anthers: yellow.
87. *Pithecolobium (pauciflorum)* sp. n.
January, 11. - Foot of hills; Leaflets: 2 pair, (some 1 1/2" l, 1" wide); Petals: bright yellow; Pods: 12" long, straight, sometimes falcate, somewhat torrate; Shrub 10-15' high.
88. January, 27. - Hilly region; Pods: 10-12" long, somewhat falcate & torrate.
89. February, 15. - Damp shady woods. Plant of a depressed growth 15-20' h; Pods: transversely veined.
90. *Cassia puberula* H. & A.
February, 3. - Damp shady woods, low situations; Plant of a depressed growth, crooked growth, 15-20 feet high; Pods: netted-veined.
91. *Mimosa pedunculata* Mart.
February, 19. - Margin of woods; shrub 1-3' high with slender bent down branches; Leaflets: inequilateral; inclined towards each other in each pair; margin of the Pod armed with spines. Leaves two-branched, each branchlet containing two pair of leaflets of which the lower inner one is very minute.

92. *Cassia obtusifolia* L.
March, 24. - Foot of hills near low wet places; Shrub 1-2' high; Pods: falcate, 6-8" long.
93. *Gutierrezia gnavea* Merville aff.
March, 24. - Bank of a creek; Tree about 30' high; Sep: outside red; Petals: greenish-yellow; Leaves: punctate with pubescent dots.
94. April, 15. - Margin of woods near the sea-shore; Tree about 40' high; leaf & wings of the flower: of a fine brownish-purple color.
95. *Cassia velutina* Willd.
January, 12. - Foot of hills; shrub 8-15 feet high; Pet: yellow with red veins; Pods: flat, straight 4-5" long; flower & flower buds easily falling off in drying; very much crowded.
96. *Mimosa pudica* L.
January, 17. - Low moist meadow; plant 1-1.5' high; branches 2-3' long, slender mostly prostrate; growth in large patches; leaflets very sensitive to the touch; Pods in dense clusters, margin hairy.
97. January, 17. - Foot of hills; Plant 2-3' high; leaflets very sensitive; Seeds: 8 in number.
98. *Mimosa asperata* Willd.
January - March. - Margin of woods near a swamp; Plant 5-8' high; flower white; leaflets very sensitive; Pods 3-3.5" long, flat, covered with very stiff brown hair, somewhat adnate.
99. *Leptochloa ciliata* Vog.
Jan & Febr. - Swampy places; Plant 5-8' high; much branching; branches spreading, eaten by domestic animals; flower: leaf & wing yellow; racellum: outside deep yellow with red veins; stem & branches very viscid. Pods: somewhat falcate, consisting of 8 parts.
100. January, 10. - Margin of woods near swampy places; Plant 4-6' high; very sensitive, similar to No. 99, but stem, racellum & pods glabrous; margin of the pods sparingly hirsute. Flower: yellow.
101. January, 26. - Foot of hills; Plant 2' high; lower surface of the leaves silky pubescent.
102. January & Febr. - Hilly region as well as low moist meadows; Plant 1.5-2' high; flower: white.
103. March. - Hilly region; tree 25' high.
104. February, 20. - Foot of hills; shrub 15' h.
105. *Myrica*
January, 4. - Hilly region; shrub 5' high.
106. *Lactuca* sp.
March, 5-12. - Margin of woods; shrub 10-15 high; flower: white.
107. *Chrysothamnus ellipticus* Sol. var.
March, 20. - Moist shady woods; tree 20-25' h.
108. *Gouania corollifolia* Radl.
February - Margin of a creek; 6-10' high; flower: minute.
109. *Microtea debilis* Sw.
Febr. - Foot of a steep rocky hill, in moist shady places.

110. *Potamogeton*
March, 24. - Alluvion of a creek; shrub 1.5-4' high; corolla white; fruit a red berry.
111. March. - Margin of a creek; flower: deep purple.
112. Febr. - Between rocks, margin of a creek; Stamens projecting 1/2" above the persistent calyx; stem sparingly hirsute.
113. *Persea* sp.
January & February. - Foot of rocky steep declivities, margin of water; herb 3-18" h; flower purple.
114. January & Febr. - Margin of swamps; 3-6' high; flower yellow. Petal: 1/2" long.
115. *Passiflora* aff. *affinis*?
February, 9. - swampy places; Pet: yellow above, mostly 6, smaller than in the preceding No.; fruit: shorter, stouter, clavate when ripe; calyx: lobes: 5-7.
116. January. - Low moist meadow; Plant 2' high; leaves: linear, 1-2.5" long, sessile; plant not branched.
117. *Passiflora foetida* Cas.
January (flowering only in this month) - Plant bushy, on the wet sandy beach, a few rods from the margin of the water; flower open only in the morning, blue color.
118. *Tournefortia* *vaquensis* DC.
March. - Shady places amongst shrubs; Plant climbing by tendrils; flower: open at different times of the day, of a burning red; Petals 2-2.5" long; stem woody.
119. March. - Shady humid places in the woods; Plant climbing by tendrils; stem 4 angular, somewhat winged; flower: pendant, blue color; Stamens 5, greenish with brown dots; anthers: white; style purple spotted; stigma: white. Sepals 5, outer green, inside purple; Petals 5, altern: inside purple, outside of a paler hue; filaments: long slender, bluish-purple with white rings, base white to the height of about 3/4", apex whitish.
120. March. - Margin of a creek; Plant climbing by tendrils; flower: similar to No. 119, but smaller; Pet: bluish-purple.
121. *Passiflora* gn. aff. *P. biflora*
March. - Wet swampy places; Plant climbing by tendrils; outside of the sepals greenish.
122. *Passiflora (Pterocarpus)* sp.
March. - Swampy places; Plant climbing by tendrils.
123. *Melastoma*?
March, 17. - Low ground, margin of damp shady woods; flower: yellow; plant climbing by tendrils.
124. March. - damp shady woods; Plant: climbing.
125. March. - Ravines; Plant climbing by tendrils; flower of a burning red.
126. *Quercus ellagocarpa* Lemmon?
February. - Foot of hills in shady woods; Plant: climbing; Calyx teeth: red, long slender.
127. *Rourea elliptica* Bork et Arn.
March, 24. - Damp shady woods. Shrub somewhat twining or leaning; Petals: white, easily fading.
128. *Coumaria* sp.
January 7. - in flower, March in fruit; - Margin of woods near the sea-shore; Petals: yellow.

129. Febr., hilly region; 2-3' h; anthers conspicuous, bright yellow; &
130. *Condia peruviana* R. & S.
Jan. - March: low level ground near the sea shore; 15-20' h; fl: expanding first at the apex.
131. Febr., damp shady woods; 8' high. leaf: 3-12" l, margin beset with little warts.
132. *Hydrocotyle* *intermedia*? *Hedera aspera* in dry soil
Jan: 7. low wet places in the vicinity of the sea-shore.
133. *Eryngium foetidum* L.
Jan. - March; low moist meadow near the sea-shore; - 6-14" h.
134. *Viscum*?
Jan: 8. upon trees growing in low land. branches quadrangular; berries round, of a champagne color.
135. *Conium* sp.
Jan Febr.; upon trees, damp shady woods near the swamps; fr: in little spikes.
136. January; borders of the swamp; a small tree or shrub 12-20' h, 3" in diameter.
137. a flower of which I have not seen the tree; February. var. ovata
Chiococca racemosa (Poir.) Spreng. the sea shore
138. January; margin of the woods; fl: somewhat twining; berries round white when ripe.
139. *Cassia obovata* HBK.
Jan - March; margin of woods fronting the sea-shore. shrub 6-20' high, the part of the opposite to those preceding branches at right angles to the stem. stout stiff spines, flowers single in the axils of leaves & branches, sessile; berries white when ripe.
140. Febr. & March; margin of the river; tree 20-40' high.
141. *Sambucus*? *Spondias* aff. *S. lutea*
March 20. low margin of a small river, 20-25' high; fl: white.
142. Febr. 24; in and near the swamps, 1-3' h; fl: white; apex of the pistils purple.
143. Jan. - March; damp shady woods near low level meadow 1-5' h; upper surface of the leaves glabrous, lower one silvery tomentose.
144. *Bomarea spinosa* Ch. & Schl.
Jan. - March; margin of woods & moist level meadow; fl: 1-2' h;

145. *Spermacoce tenuis* L.
January 12. margin of swamps; fl: 1-2' h; pet: 4, white, plumate on the inner side.
146. *Dioclea scandens* Sw.
Jan & February; margin of swamps 2-4' h; amongst shrubs; branches several feet long prostrate, others erect 2-3' h.
147. Jan: 20. low level meadow; 1-2' high. stem quadrangular.
148. *Morinda*
Febr: 10. damp damp shady woods low ground; tree 20-30' high; pet: 5, white, lobes over 1/2" l, recurved; Stam: 5, altern: not much higher than the corolla throat; pist: projecting with (2) styles nearly 1/2" long.
149. *Prenanthes verticillata* - Chard.
Jan. - March; in low swampy places. 1-3' h; stem: quadrangular; branchlets 4 winged; pet: 4, white.
- Compositae.
150. Febr: 8. fl: margin of damp shady woods; fl: 5-10' h. flower: white, with 2 white curved pistils projecting above; flowers & far above the chaff.
151. Febr.; hilly region; fl: twining;
152. Febr: 20. hilly region and margin of damp shady woods. Stam: brownish yellow projecting above the chaff. fl: 5-8' h.
153. Febr: 25. hilly region; 5-10' h; leaves: very thin & linear.
154. February, 20; hilly region; 5-8' h;
155. Febr: 28. hilly region; 5-10' h; upper leaves 4-5" long, narrow, lower ones 2-3" long, the central division lobe is vastly predominant in size; fl: golden greenish yellow glabrous.
156. Febr: 20. low swampy region; 5-8' h; chaff: dense, binding very fine dense, binding the flowerets.
157. Febr 24; hilly region; 4-6';
158. Febr; hilly foot of hills; 1-3' h; branches: long slender; leaves: deep greenish green.
159. Febr.; fl: twining; hilly region.
160. Febr: 14; margin of damp shady woods. 5-8' h;
161. Febr: 10. margin of damp shady woods; 4-6' h;

162. Feb. & March; foot of hills; 6-15" h.
163. Feb. March; margin of woods in low moist places; 1-3' h.
164. Jan., 9'; low bottom-land; fl: 2-3' h;
165. March; creek-bottom; about 1' h.
166. Feb.; low places near the sea-shore, 6"-2' h.
167. March, 2'; low moist land; fl: 10-15" h. pet: bright yellow.
168. Jan & Feb.; fl: creeping in low places along the beach; flowers yellow, rays bright yellow.
169. Eclipta
Feb.; low swampy places; herb prostrate
170. January; hilly region; petals yellow.
171. Jan - February; hilly region margin of damp shady woods & open level places. fr: 4 parted.
172. March, 1'; damp shady woods in the neighbourhood of a little riv.; 3-5' h.
173. March; hilly region; 1 1/2-2 1/2' h;
174. January; high bank of a small river. 5-15' h; fl: fine red.
175. Jan. - March; low moist meadow; 1-2' h, fl: heads containing 4 white flowers.
176. February 4'; creek-bottom; 2-3' h;
177. Pinhaelis tomentosa Willd
Jan: & Feb.; hilly region; deep fiery red. fl: 3-8' h; fl: involucre, deep fiery or scarlet red; flowerlets: yellow.
178. January; fl: growing upon the lower part of the leaves of trees, venation of the leaves hidden; fr: a berry of a blue color when ripe.
179. Coccyzium aff. C. repens
January & Feb.; swampy places near the base of trees, and upon roots of trees. berries: fine deep blue color, glossy
180. Tabernaemontana
Jan & March; in low swampy places, twining amongst shrubs, twining; petals: 5, white; berries, in clusters in the axils of the leaves, blue when ripe.
181. Tabernaemontana
March; hilly region; erect or nearly so; 6-10' h, fl: white.
182. March; margin of damp, shady woods; shrub 8-8' h; fl: white, odoriferous;
183. Feb., 27'; damp shady woods; fl: pure white, odoriferous
184. Tabernaemontana
Jan & March; low swampy places, 10-30' h; fl: pure white. From the (nearly cut) branches there exudes from the center & around the cut (inside of the bark) a very sticky white substance which hardens on the atmosphere & can be drawn out into threads.
185. March; margin of damp shady woods; 3-8' h; fl: white. sepals: 4, white, reflexed, outside greenish white, inside white; pet: none; Stamens: 10 ascending; 10, alternate with the first; style: 3 parted.
186. January, 20'; shady wood; a slender shrub 5-8' h;
187. Feb. 12'; deep shady woods; tree 25-35' high; leaves to be found only at the apex of the branches and so rather crowded together; fl: white, of the size of situated around the stem & branches.
188. Feb., 8'; bank of a small river, 6-10' h. calyx green, 4 toothed, partly opened; Stam: projecting but very little; pet: none.
189. Jan January 15'; low bank near the mouth of a creek. shrub 3-5' h. with long slender straight branches, densely beset with leaves; 1-2 small berries in the axils of the leaves.
190. Feb.; damp shady woods; shrub 15-20' fl: greenish yellow.
191. Caripouea elliptica Pers
March, 11'; low land shady woods; shrub 5' h; sepals: 4-5, green, thick; open in flowering only in narrow slits, barely wide enough to let the style & some of the Stam: protrude.
192. Casearia (trouneana)
March; margin of damp woods in the more exposed localities; shrub 3-6' h; fl: white; berries: blue when ripe; pet: none; Stam: parallel with the axis of the fl.
193. Erythroxylon
Feb. 26'; damp shady woods, in low places; shrub 5-8' h; slender branches; fl: greenish white; fr: of a scarlet color, oval & smooth, seeds surrounded with a pulp, which when dried up, makes the fr: appear quite different and appear quite different.
April 1'; sep: green; pet: white
194. Placocolla sp.
Feb. 20'; margin of damp woods; tree 15-20' h, spreading very much, sep: green; pet: none. Stam: indefinite, yellow, giving the whole fl: a yellow appearance.
195. Cestrum
March, 5'; margin of damp woods, near swamps. shrub 8-12' high; fl: white
196. March, 1'; steep & wet banks of an creek over shadowed creek; 5-15' h. erect growth; fruit green.
197. Solanum
Feb. in fr; March in fl; shady woods margin of the swampy region. fl: long, greenish white, consisting of 2 parted or 2 divided sepals of a star-shaped body. Calyx: greenish yellow, 5 lobed, lobes connected by a thin film.
198. March; low places at bank of a small river.
199. Feb.; low swampy places, low herb.
200. Blechnum Tweedii Nees?
Feb. & March; low moist bottom-land; 2-2 1/2' high;
201. January; low woods; shrub 10-20' h, leaves in whorls 4; fl: yellow, large on short peduncles; throat of the corolla 1 1/2" long, narrow; corolla 1 1/2-2" wide at the apex, 2" long.
202. Feb.; low wet bank of a small riv.; fl: 2-4' h. stem: quadrangular, thickened at the nodes
203. March 16'; fallen off flowers from a tree 80-100' high, inaccessible to me, with the leaves & flowers high in the top, inaccessible to me; the grayish blue flowers were in such dense masses as to give the tree a very conspicuous amongst all the rest, by its blue hue; hilly region.
204. March 3'; low moist land among not far from a small river, 2-5' h, fl: red, transparent.
205. March, 10'; low moist region; fl: white with purple.
206. March, 26'; margin of a swamp, damp shady place, fl: climbing, fl: white.
207. Macfadyena
Jan - March; margin of the river, swampy places; fl: climbing by a 3-digitate curved & rather stiff firm appendage, terminating in sharp claws, able to take a firm hold.
208. March 13'; damp shady woods, low region. 8-10' h, fl: deep scarlet.
209. Feb.; low bank of a small river; shrub 8-12' h. corolla 2" h, fl: scarlet of the flower red; style: persistent, long & slender.
210. Feb. 10'; margin of damp woods; shrub 10-14' h, leaves: stout; flower: orange color.
211. Heperites repuliflora Nees
Jan - Feb.; swampy places; fl: 2-3' h; stem: quadrangular.
212. March, 2'; low moist meadow; low prostrate herb; fl: 8 fr: partly bud & between 2 smaller buds; fl: blue.
213. Heperites chamaedryoides, var. latifolia
March; upper part of a meadow near the sea-shore; low somewhat creeping herb, leaves glabrous; fl: yellow; fr: in between 3 leaflets.
214. January, 8'; low meadow;
215. Plauodia pasciflora L.
Jan: 8'; low flat ground near the sea-shore; stem 3-6' h; stem & young leaves white hairy; corolla white.
216. Plauodia sp.
Feb.; low locality the same with 215.
217. Heperites monnina HBK
March, 3'; low moist places near the sea-shore; corolla 5 lobed, light pink color; throat of the corolla tube brown. Stam: 4, 2 long & 2 short ones; anthers & stigma: greenish blue.
218. Feb. 1'; low meadow.
219. Stachytarpheta jamaicensis, Choisy
Jan 25'; low sea-shore; a prostrate plant with quadrangular stem; spike 16-24" h. fl: blue.
220. Leptin germinata HBK
January; low moist meadow; shrub 4-15' h. fl: yellowish white;
221. Hyptis verticillata L.
January & March; low meadow near the sea shore. fl: in small clusters around the nodes of stem & branches; calyx: oval, glabrous, minute; fl: minute.
222. Feb.; foot of hills; 3-2-3' h,
223. Feb.; between rocks of the exposed parts of a creek-bed, margin of the water, 1-2' h; fl: purplish,
224. January; foot of hills near rivulets; 1-2' h; fl: bright bluish purple.
225. Blechnum?
January - March, low meadow, margin of shady woods, 6-18" h; stem bent at the nodes into an angle.
226. Hyptis pinnata Pers. s. var. ovata
Feb. - March; hilly region near water courses, 5-10' h; fr: ascending.
227. March, hilly region; branch 2-2 1/2' h, stem & branches quadrangular.

228. *Rhytidoloma A. secunda* aff.
March; foot of hills; 2-3' h; branches of
a deep green, ~~color~~, contracted a little above the
nodes; corolla $1\frac{1}{2}$ " l.; ~~style~~ style $\frac{1}{2}$ " l.;
(~~fruit~~) 2" l., persistent ~~to the~~, calyx $\frac{1}{2}$ " l.

229. *Febr.* of hills; stem $1\frac{1}{2}$ -2' h; stem
quadrangular; fl. in little heads

230. *Cyrtium microcalyx* Willd.
March; margin of woods, low ground;
pl. 12-18" h; stem quadrangular;
fl. minute, bluish white.

231. *Hyptis capitata* Jacq.
January & Febr.; margin of woods;
pl. $2\frac{1}{2}$ ' h; fl. minute, white, irregular
as $\frac{1}{2}$ " l.; stem: quadrangular.

232. *Tournefortia laevigata* L. (herbaceous shrub)
March; margin of woods; (5-10' h;
corolla white, margin lapped together in 5
parts).

233. *Heliotropium* ?
Jan-March; level, moist meadow near
the sea-shore, 1-2' h; fl. blue.

234. *Tabernaemontana grandiflora* L.
Jan-March; margin of woods, fronting
the sea-shore; shrub 5-15' h; fl. yellow
twisted in aestivation, 2" in diam.; fruit: 2-3"
in pairs, broadly falcate, apex pointed downwards,
from the woody parts of the branches
a white viscid juice exudes.

235. *March*, 15'; margin of woods, fronting
the sea-shore; fl. somewhat turning &
pendant; fl. yellow; seems to be the same
with 201, but the stem branches & the
ribs of the leaves are not hairy like 201.

236. *Hydrocolea squarrosa* L.
Jan-March; low (swampy) places, ~~at the~~
at the foot of hills; shrub 2-5' h;
fl. bright blue on short peduncles in
the axils of the leaves.

237. *Convolvul.*
Cuscuta
January-March; low swampy places, low
wet places; fl. twining; fl. white,
1" wide; the apex of the leaves running out
into a bristle.

238. *Manettia cuspidata* Bert.
Febr.; & shady woods on low ground;
pl. twining; corolla: deep red, narrow
& lobed, ~~calyx~~ calyx: green, & lobed, lobes
2-divided.

239. *Sporoclea percapitata* L.
January 8-29'. Creeping in different
directions over the loose & wet sand of the
low beach; branches very tenacious and used
for tying bundles together or sometimes as
a substitute for rope by the natives. fl.
bright copper color, leaves: very somewhat fleshy.

240. *Palatula aetnaefolia* L.
Jan-Febr.; creeping over grassy ~~land~~ of
the beach; fl. white $1\frac{1}{4}$ " in diam.

241. *Sporoclea umbellata* A. L.
low ground in ~~the~~ banks of water
Jan-March; shady woods; in low pl. twining;
ing; fl. yellow; showy.

242. *Febr.*, low ~~low~~ swampy places, shady woods;
twining; fl. purple; calyx consisting
of scales.

243. *Febr.*, shady woods; fl. twining; leaflike
purple; calyx, consisting of soft, scales
the apex running out into an awn, involucre
below the calyx.

244. *March*; margin of shady woods;
pl. twining; fl. deep purple; calyx
of the fl. consisting of leaflike sepals.

245. *January*, 8'; low swampy places;
twining; ~~did not see either flower nor~~
leaves. & and overtopping

246. *January*; margin of woods, low level open
pl. 5-15' h; leaves upper surface glabrous,
lustrous, lower surf. yellowish white densely
tomentose.

247. *January*, low open places & fronting
the sea-shore. pl. 1-2' high; leaves
thin, ~~glabrous~~, 5-6 toothed, fl. $\frac{1}{2}$ " long,
yellow;

248. *Physalis*
January 8'; low sandy place near
the sea-shore; pl. 1-5' high; stem
& branches densely pubescent; corolla
yellow with black spots.

249. *January*; hilly region; pl. 1-2' h;
fl. yellow.

250. *Hamadryas* sp.
Jan. & March; low ~~marshy~~ places, margin
of the river and damp, shady woods.
pl. twining, ~~fl. in clusters~~ fl. in clusters; corolla: yellow
with a ~~slight~~ bright sulphur colored
ring around the apex of the tubular
throat.

251. *March*, 25'; ~~hilly~~ valleys to in the hilly
region; shrub; 10-20' h; fl. light
yellow, minute.

252. *March*, 20'; hilly region; shrub (limber)
pl. 5', white.

253. *March*; margin of damp woods
low ground; pl. 3-8' h; long slender branches
sometimes ~~are~~ somewhat climbing or reticulate;

inflor. cons. between the internodes, branches
stem & midrib of the leaves armed with
short recurved spines, upper surface
of the leaves rough (warty?) lower
surface: whitish; leaves 6-7 cornered
also entire. fl. blue.

254. *Blauum*
Febr. & March; margin of damp woods
& open places between them; shrub
8-12' h; ~~fl. in~~ corolla: bluish white
leaves: tomentose on both surfaces; inflor.
rescens between the internodes.

255. *Maripa all. caudata* Ruiz.
March; damp, shady woods; climbing by
and overtopping the shrubs & even
trees. ~~light~~ light place; planted in
aestivation; ~~the~~ of the corolla
which is outside in aestivation; velvet
pubescent.

256. *March*, foot of rocky hills; fl.
purple.

257. *January-March*; near or in the water
along ~~near~~ low banks of the river.
pl. twining; fl. white, funnel shaped;
2" l, 1" wide at the top when expanded;

258. *Jan-March*, low wet places near
the sea-shore, 2-3' h. fl. ~~reddish~~
yellowish red; pl. very difficult to
dry.

259. *January*; foot of ~~the~~ between rocks, ~~dry~~
hilly region; a small herb with deep-
green leaves.

260. *January*; hilly region; herb 2-4' h;
growth erect.

261. *January*; moist meadow; 8-16' h;

262. *January*; margin of the woods, in grassy
places; low herb.

263. *January*, 7'; low wet places near the sea-
shore.

264. *March*; ~~low~~ shady places low shady woods;
~~slightly~~ twining

265. *March*; ~~near~~ the base of halfrotten
trees, in damp shady places.

266. *March*; margin of low woods, shady place;
pl. 2-6' h; leaves bluish green; stem: deep
bluish green.

267. *March*; damp shady woods, 2-4' h;
sim. to 266, but differing in the fruit.

268. *March*; margin of woods, 3-6' h;

269. *March*; shady, low woods, 8-15' h;
pl. similar to 268, but leaves cordate
at the base; upper surface of the leaves
rough ~~and~~ to the touch; if passed over from
the apex towards the base.

270. *January-March*; margin of low shady
woods fronting the sea-shore; ~~leaves~~
leaves glabrous, of great moisture.
pl. 4-7' h.

271. *March*; foot of hills; 6-10' h; leaves
dotted with brown dots.

272. *March*; margin of wood, fronting the
sea-shore; pl. decumbent; fl. white.

273. *Febr. 25'*; meadow; margin of woods; ~~meadow~~ 8-
14' h; fl. minute green.

274. *January-March*; low places in near the
sea-shore; decumbent.

275. *Febr. 27'*; margin of woods fronting the
sea-shore; pl. ~~more~~ erect growth h;
fl. minute, white.

276. *Febr.*; margin of woods, fronting the
sea-shore; pl. adnate to the ground.
margin of the leaves mostly red.

277. *March*; margin of woods, fronting the
sea-shore; pl. decumbent; seeds ~~4~~
with little cavities.

278. *March*; local; with the preceding fl.
pl. adnate to the ground.

279. *Febr. & March*; damp shady woods, ~~and~~
banks of ~~small~~ little rivers; pl. twining.

280. *March*, ~~at the~~ steep bank of a small river;
shrub 10-18' h;

281. *March*, 1'; ~~low~~ ~~some~~ ~~marshy~~ ~~woods~~ margin
of openings in damp ~~low~~ woods, ~~the~~
ground; shrubs 10-20' h. Catkins:
greenish yellow.

282. *Febr. 29'*; shady, somewhat marshy
woods; shrub 8-15' h; Catkins: white.

283. *January*; moist banks of a small river;
herb $\frac{1}{2}$ -2' h; leaves in whorls of 4; fruit
in 2's facing each other.

284. *February*; bottom land ~~in~~ margin of a river,
shady places; leaves deep green.

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285. *Pinus*
March; damp marshy woods; tree ^{40-50'}
~~6-8'~~ bearing fr. in great abundance; which
is eagerly sought after by ants.
286. *Pinus*
March; damp shady woods; shrub, 15-20'
287. *Conoclinium unguiculatum*
Jan. & Feb.; low level land ^{at the} margin of
the woods fronting the sea-shore; tree
30-50' h., branching ~~for~~ near the base. ^{of the}
stem, fls. white. leaves: thick & stiff
often inclined & depressed.
288.
Feb.; margin of woods, shrub 5-8' h.,
fl.-spike 6-8" h.; corolla throat $\frac{1}{2}$ " l., narrow,
fl. white.
Gen. nov. *Rondeletiacarum*?
289. Feb. & March; ~~swampy~~ ^{too} margin of
swamps & near the river; shrub 4-8' h.
290. *Attalea pycnantha*
Jan., margin of woods near the sea-
shore; tree 25-30' h.; ~~in~~ flowers: white.
291. *Ruellia*
Feb. 10th; ⁱⁿ ~~shady~~ woods on a low swampy
region; ^a ~~tree~~ ^{erect} ~~arborescent~~ ^{flowering}
(tree) somewhat twining or leaning over other
trees with these slender branches somewhat
pendulous, sending out aerial rootlets;
peduncles 1-3' l., ~~at the~~ very stout, fl. hairy
at the lower part of the calyx a singular
appendage like 2 ears;
^{of greenish purple color}
They are red and somewhat
fleshy, the brk green; sep. in
2 rows, subnate; pet. 5, green, recurved
into a crown, stam. alt. 5, reddish color,
at right angles to the axis of the flower; an-
thers somewhat recurved, including a brownish
greasy mass.
292. *Coelocarpum*
March, 24th; hilly region, margin of woods,
sep. green; petals: minute, white.
293. *Boraginaceae*
March, 21st; ~~low~~ damp shady woods;
~~tree~~ shrub: 12-15' h.; lower part of
the corolla green, upper part pure white;
anthers: brown. - (fr. v. No 1st)
294. January; in swampy places, fl. white.
295. *Blakea* sp. n.
March, ~~in~~ damp shady woods ~~near~~ at
the margin of ~~swampy~~ with swampy places;
shrub, 10-20' h.
296. April, 2nd (in 8th)
near swampy marshy places in
shady woods, leaves ~~so~~ thick.
297. *Begonia humilis* Dryand.
March, 30th, April 15th, low wet places
in shady woods, fls. 6"-14" growth erect;
petals: 4-5, white, anthers: yellow.

298. March; damp, shady woods hilly region, bank of a rivulet; fl. ~~white~~ greenish white.
299. Feb.; margin of shady woods near swamps; shrub 8-12' h.
300. April, 3^d; margin of damp, shady woods fronting the seashore; shrub 2-3' h; calyx green; Corolla white.
301. Feb. 20th; creeping over fallen ~~branches~~ ^{trunks} of trees; in ~~moor~~ low moist places in the woods. Ants have injured the ~~flowers~~ fruit.
302. Peperomia pellucida HBK
Feb.; ^{low} grassy places, on the ~~low~~ near the sea-shore; a low herb semi-transparent; fl. ~~little~~ little globose bodies in spikes 1-1½' h.
303. ~~Mar~~ Feb.; hilly region, bank of a rivulet. fl. shrub 6-8' h; fl. in generally in 4's, leaves stout,
304. Quercus amara L. var. grandiflora
Jan & Feb; margin of shady woods, fl. fronting the sea shore; shrub 8-12' h; fl. scarlet 1-1½" l, not widely opened (expanded); base of the stamens tomentose; fruit: in 4 ^{inserted} around a ~~thick~~ ^{small} fleshy receptacle.
305. Doliviscopus
Feb.; shady woods; fl. somewhat twining. fl. yellow.
306. January, 8th; margin of little streams, shrub 10-20' h. ped. fugitive, fl. white.
307. Tachypleurum leucopodium DC.
Jan & Feb; margin of woods; tree 30-40' h; flowers yellow, 2½" in diam. when expanded.
308. Quercus occidentalis L.
January; margin of woods fronting the sea shore; ^{small} tree ~~10-15'~~ 10-20' high; petals: 5, narrow, greenish-white (with red ~~streak~~ lines along the centre, linear, acuminate, retroflexed; style projecting, green fruit giving out a greasy substance in being cut open. Receptacle or torus when full grown 2½" long 1½" in diam. at the end bearing the fruit at the opposite end, resembling in shape ~~a small~~ ^a kind of pear; fruit very hard of fine yellow colour, tinged with red at the sunny side, pendant, very mellow & juicy when ripe and sold as an eatable fruit, but to me it had a somewhat strong taste.
309. January; deep shady woods; tree 30' h; fl. yellow; sepals: brownish tomentose with black spots

310. Pachira
Feb. 8 March; margin of woods fronting
the sea shore; tree 70-80' ^{5 months} high; could
see no leaves on them during my stay at
Chagres. trunk armed with short but stout
spines; petals 3rd, narrow, inside white
outside brown & somewhat tannaceous; stem
as long as the petals.
April 1st a young leaf. (distrib. Soc. R. 1)
311. ^{low} Feb.; ^{5 months} swampy margin of the river;
tree 30-70' h; pet. 10-12" ^{5 months}, narrow
inside white, outside greenish yellow;
could not ~~reach~~ see any of the leaves.
312. Pachira
January, 6-15th; low on moist bank of
the river; tree 20-50' h; lower part of
the trunk coriaceous, bark of lively green;
petals 2 $\frac{1}{2}$ -3" long; inner ~~and~~ surface of
the pet. ~~from~~ white, outside greenish brown.
313. January; hilly region; shrub 5-8' h;
fl. white.
314. *Baccharis Andrica*
February, 20th; margin of
the salt-shore. 10-20' h;
pet. 5, white, much recurved
erect as in *Solanum*; ~~the~~
315. March; foot of hills;
316. *Moroneben globulifera*
March, 17th; deep shady
ground; tree 30-60' h
lvs. 3 of each pet. imbricate
one to the right; Stam: 5, near, coherent at
their bases as far as the anthers. anthers
adnate to the out-side of the Stamens, 3
to each Stam., in the bud yellow, but after-
wards black; pistils: 5, red, alternate
Corastocnemis discocarpa A. DC
317. March, 24th; small trees mar- 10-50'. Ch.
hilly region; small trees 15-
sepal. reddish yellow; pet.
yellow spec. ² tree, sending
lvs. up to
1 $\frac{1}{2}$ ft. very
at the base of
a singular
they are
and somewhat to
the weak green
not indurated; pet.
318. Gen. nov. *laurydiaphne*?
March, 18th; deep shady wood
a small tree 6" in diam.; 20-
green; corolla: none.
319. March, 5th; margin of woods; shrub
sep. pedicels, peduncles & sepals; purple,
petals: white tinged slightly with red; anthers
erect, acuminate.
320. April, 8th; ~~shrub~~ margin of woods; shrub;
fl. white.
321. January; hilly region;
322. ^{lower part of} February; ^(bark) bank of a creek, margin in moist
fertile soil.
23. Feb.; low ~~and~~ marshy river bank, in the woods.
tree 30-40' h.

324. January; ~~the~~ lower part of a ^{step} creek-bank, near the water.
325. January; local with the preceding; 2-3' h.
326. *Apeiba*
Feb. 4^c; hilly region; margin of woods; ~~shrub~~ 15-20 h. with ~~spreading~~ of crooked growth & with spreading branches; fruit: flattened.
327. February 28^c; hilly region; fl. twining; fr. a kind of a pod containing 1 greenish black seed with dimpled surface.
328. *Pipa ovellana* var. *pauciflora* Depaepe
January; margin of woods fronting the sea-shore, low sandy beach; ~~low~~ a low shrub, also trees 20-30' h; fr. covered with ~~some~~ ^{rather} ~~limber~~ ^{limber} spines.
329. January; damp shady woods, 15 & 20' h.
330. *Drepanocarpus*?
hilly region; A limber climber & resting upon other trees. not yet expanded, scodgledone.
-
-
331. *Drepanocarpus*?
damp marshy wet trunks of live trees above the ground; fl. pale yellow. I was unable to dry leaves most difficult to dry.
332. Jan. - March. (damp marshy woods)
on exposed roots & on the bases of the lower part of trees; flower red.
333. *Drepanocarpus*?
low grassy on ~~upper~~ damp marshy woods on roots & the bark of the trunks; fl. having fruit of the calyx pendulous like 2 and 3; fl. fleshy, on the ~~dead~~ dead trunks of trees; flower in damp shady woods; fr. yellowish green.
334. *Drepanocarpus*?
March; margin of woods; twining & climbing by petioles; fl. reddish brown.
335. *Drepanocarpus*?
March; local with 335.
336. *Drepanocarpus*?
March; ~~local~~ marshy places in shady woods; fl. 2-3' h. fl. white.
337. *Drepanocarpus*?
April, 6^c; marshy places in the woods near the river; 4-5' h. flower: white.

285. *March*, damp marshy woods; tree ^{40-50'}
~~60'~~ h. bearing fr. in great abundance; which
is eagerly sought after by ants.
286. *March*, damp shady woods; shrub, ^{15-20'}
~~10-15'~~
287. *Urtica dioica*
Urtica dioica L. var. *urens* L.
Feb. & March; low level land ^{at the} margin of
the woods fronting the sea-shore; tree
30-50' h. branching ~~for~~ near the base of the
stem fls. white. leaves: thick & stiff
often inclined & depressed.
288. *Feb.*; margin of woods, shrub 5-8' h.
fls. - spike 6-8" l.; corolla throat $\frac{1}{2}$ " l., narrow
fls. white.
289. *Jun. nov. Nondulicarium?*
Feb. & March; ~~swampy~~ margin of
swamps & near the river; shrub 4-8' h.
290. *Callaerythrum*
Jan., margin of woods near the sea-
shore; tree 25-30' h.; in flower white.
291. *Ruellia*
Feb. 10th, shady woods on a low swampy
region; ~~tree~~ ^{a shrub} ~~an arborescent tree~~ <sup>some-
times</sup> somewhat twining or leaning over other
trees with these slender branches somewhat
pendling, sending out aerial rootlets;
peduncles 1 $\frac{1}{2}$ " l. ~~at the~~ ^{the} very stout; fls. hairy
at the lower part of the calyx a singular
pendulous like 2 ears;
they are ~~red~~ ^{greenish purple} and somewhat
fleshy, the bark green; sep. in
2 rows, adnate; pet. 5, green, recurved
like a crown, Stam. alt. 5, reddish color,
at right angles to the axis of the flower, an-
thers somewhat recurved, exuding a brownish
grassy liquid.
292. *Calceol*
March, 24th; hill region, margin of woods,
sep. green; petals minute, white.
293. *Boraginaceae*
March, 21st; ~~low~~ damp shady woods;
shrub 12-15' h.; lower part of
the corolla green, upper part pure white;
anthers brown. - (fr. v. No 1 $\frac{1}{2}$)
294. *January*; in swampy places, fls. white.
295. *Blakea* sp.
March, ~~near~~ damp shady woods ~~near~~ at
the margin of ~~the~~ swampy places;
shrub, 10-20' h.
296. *April*, 2nd in 8th (near swampy marshy places in
shady woods, leaves thick.
297. *Begonia* *humilis* Dryand.
March 30th, April 1st, low wet places
in shady woods; fls. 6"-14" growth erect;
petals 4-5, white, anthers yellow.

298. March; ~~damp shady woods~~ hilly region,
bank of a rivulet; fl. ~~light greenish white~~.
299. Febr.; margin of shady woods near
swamps; shrub 8-12' h.
300. April, 3^d; margin of damp shady
woods fronting the seashore, shrub
2-3' h; calyx green; Corolla white.
301. Febr. 20th creeping over fallen ^{trunks}
of trees; in ~~more~~ low moist places
in the woods. Ants have injured
the ~~flowers~~ fruit.
302. *Peperomia pellucida* HBK
Febr.; ^{low} grassy places, on the ~~low~~ near
the sea-shore; a low herb semi-
transparent; fl. ~~very~~ little globose bodies
in spikes 1-1 $\frac{1}{4}$ ' h.
303. ~~Mar~~ Febr.; hilly region, bank of a
rivulet. fl. shrub 6-8' h; fl. in
generally in 4's, leaves stout,
304. *Quercus amara* L. var *grandiflora*
Jan & Febr.; margin of shady
woods, fl. fronting the sea shore; shrub
8-12' h; fl. scarlet 1-1 $\frac{1}{4}$ " l, not
widely opened (expanded); base of the
stamens tomentose; fruit, in 4 ^{inserted}
around a ~~thick~~ fleshy receptacle.
305. *Doliveria*
Febr.; shady woods; fl. somewhat
twining. fl. yellow.
306. January, 8th; margin of little streams,
shrub ~~tree~~, 10-20' h. ped. fugitive, fl. white.
307. *Aschlepias viridifolia* DC.
Jan & Febr.; margin of woods;
tree 30-40' h; flowers yellow, 2 $\frac{1}{2}$ " in diam.
when expanded.
308. *Anacardium occidentale* L.
January; margin of woods fronting
the sea shore; ^{small} tree ~~the shrub~~ 10-20'
high; petals: 5 narrow, greenish-white ^{with}
red ~~star~~ lines ~~in~~ along the centre, linear, acuminate,
retroflexed; style projecting; green fruit
giving out a greasy substance in being cut
split. Receptacle or torus when full grown
2 $\frac{1}{2}$ " long 1 $\frac{3}{4}$ " in diam. at the end bearing
the fruit at the opposite end, resembling in
shape a ~~kind of~~ pear; fruit very hard
of fine yellow colour, tinged with red at the
sewing side, pendant, very mellow & juicy
when ripe and sold as an eatable fruit, but
to me it had a somewhat strong taste.
309. January; deep shady woods; tree 30' h;
fl. yellow; sepals brownish tomentose with
black spots

310. Pachira
Feb. 8 March; margin of woods fronting
the sea-shore; tree 70-80' h; ^{3 months} could
see no leaves on them during my stay at
Chagres. trunk armed with short but stout
spines; petals 3¹/₂, narrow, inside white
outside brown & somewhat tomentose; stem
as long as the petals.
April 1¹/₂ a young leaf. (distrib. Soc. R. I.)
311. ~~low~~ ^{low} Feb.; swampy margin of the river;
tree 30-70' h; pet. ^{5 imbric} 10-12" ^{long}, narrow
inside white; outside greenish yellow;
could not ~~find~~ see any of the leaves.
312. Pachira
January, 6-15°; low & moist bank of
the river; tree 20-50' h; lower part of
the trunk coriaceous, bark of lively green;
petals 2¹/₂-3" long; inner ~~and~~ surface of
the pet. ~~pure~~ white, outside greenish brown.
313. January; hilly region; shrub 5-8' h;
fl. white.
314. ~~Pachira~~ *Ardisia*
February, 20°; margin of woods ^{to} fronting
the sea-shore. 10-20' h; sepals: minute
pet. 5, white, much recurved; anthers ^{bright yellow} ~~erect~~ ^{conspicuous}
erect as in *Solanum*; ~~to~~
315. March; foot of hills; 15-20' h; fl. white.
316. *Moroneben globulifera* Schlecht.
March, 17°; deep shady woods on swampy
ground; tree 30-60' h; petals: 5, red (young
leaves) ²/₃ of each pet. imbricated by the next
one to the right. Stam: 5, red, coherent at
their bases as far as the anthers, anthers
adnate to the out-side of the stamens, 3
to each stam., in the bud yellow, but after-
wards black; pistils: 5, red, alternate
Leontococcia discocarpa HBK.
317. March, 24°; small trees margin of woods
hilly region; small trees 15-20' h;
sepals: reddish yellow; pet. white with
yellow apex.
318. Gen. nov. *laurydin* sp. nov.
March, 18°; deep shady woods; ~~only~~
a small tree 6" in diam.; 20-30' h, calyx
green; corolla: none.
319. March, 5°; margin of woods; shrub
^{sep. pedicels, peduncles & sepals}; purple;
petals: white tinged slightly with red; anthers
erect, acuminate.
320. April, 8°; ~~shrub~~ margin of woods; shrub;
fl. white.
321. January; hilly region;
322. February; ^{lower part of} bank of a creek, ^{back} margin in moist
fertile soil.
23. Feb.; low ~~swampy~~ marshy river bank, in the woods.
tree 30-40' h.

324. January, ~~the~~ lower part of a creek-bank, ^{step} near the water.
325. January, local with the preceding; 2-3' h.
326. *Apocynum*
Febr. 4th; hilly region; margin of woods; shrub 15-20' h. with ~~specializing~~ of crooked growth & with spreading branches; fruit flattened.
327. February 28th; hilly region; fl. twining; fr. a kind of a pod containing 1 greenish black seed with dimpled surface.
328. *Pilea ovellana* var. *pauciflora* Deppe
January; margin of woods fronting the sea-shore, low sandy beach; ~~low~~ a low shrub, also trees 20-30' h.; fr. covered with ~~some~~ ^{rather} limber spines.
329. January; damp shady woods, 15-20' h.
330. *Drymonia* sp.
March, 20th; hilly region; ~~at~~ ^{limber} shrub leaning & resting upon other shrubs. flowers not yet expanded, fr. not seen.
Monocodyledon
331. Febr. & March; ~~on~~ damp marshy places, on ~~dead~~ trunks of live trees sometimes 15' above the ground; fl. pale yellow. I was ~~unable~~ ^{unable} to dry leaves most difficult to dry.
332. Jan. - March. ^(damp marshy woods) on exposed roots & on the bases of the lower part of trees; flower red.
333. March; ~~on~~ damp marshy woods on exposed roots & the ~~back of the~~ ^{lower part of} trunks of trees.
334. March; on ~~the~~ ^{dead} trunk of a tree; flower in damp shady woods; fl. yellowish green.
335. March; margin of woods; twining & climbing by petioles; fl. reddish brown.
336. ~~from~~ ^{specimen} of 335?
March; local with 335.
337. March; ~~in~~ ⁱⁿ marshy places, in shady woods; pl. 2-3' h. fl. white.
338. April, 6th, marshy places in the woods near the river; 4-5' h. flower white.

Cyperaceae

339. January, 9'; low sandy beach.
340. January; sandy beach.
341. Jan.; margin of swamps marshes.
342. Febr.; ^{with} low places on the ^{low} sandy beach. 6-12" h.
343. Jan. 9'; wet places on the low sandy beach.
344. Jan 9' ——— *cr.* ———
345. Jan: 9' ——— *cr.* ———
346. Jan: 20' ——— *cr.* ———
347. Jan: 15' ——— *cr.* ———
348. Febr.; bank of a small rivulet; 6-8" h.
349. Jan. - March; low sandy beach, wet places, 1-2' h.
350. Jan. - March; margin of ~~marshes~~ ^{swamps}.
351. January; margin of swamps; 1-1 1/2' h.
352. January; low sandy beach.
353. January, 10'; low shady places in the woods; 2 1/2 - 3 1/2' h.
354. March-February; damp shady woods; ^{low} ~~low~~ ^{pl. 3-4' h.}
355. Febr. - March-April; margin of swamps. pl. 1-2' h.
356. March; marshy places in ^{low} ~~low~~ ^{shady} woods; 3-4' h.
357. Febr. & March; low shady woods; 1-1 1/2' h.
358. January, 11'; wet shady places in the woods; 2-3' h.
359. March; wet places, in low shady woods, 3-5' h.
360. March; marshy places in the woods; 4-6' h.
361. Febr. - March; hilly region, margin of the woods, in dry places.
362. January; ^{grassy places} low sandy beach; creeping.
- Gramineae.*
363. January 10'; low meadow near the sea-shore.

364. January, 10'; low ^{moist} meadow near the sea-shore.
365. *Panicum Gus. Gobi.* January 20'; wet places on the beach. ~~about~~ 3-5' h.
366. *Paspalum* January; low moist meadow.
367. January; moist sandy beach; 6-12' h.
368. January; low moist meadow.
369. Jan: 9' *cr.* ———
370. Jan: ~~Febr.~~ March; low moist meadow.
371. March; hilly region.
372. Febr.; ~~swamp~~ ^{marsh} margin of the marshy bank of the river. 6-10' h.
- 372 *cr.* ———
373. Febr.; marshy places in the woods close to the exposed roots of trees.
374. Jan: 9'; low shady places in the woods.
375. January, on decayed trunks of trees, in shady woods.
376. March; margin of the woods, ^{low} ~~low~~ ^{grassy places}
377. March; *cr.* ——— *cr.* ———
378. Febr.; wet sandy places on the beach, 1-2' h.
379. March; ~~low bank~~ ^{margin of the river} 3-4' h.
380. ~~to~~ January; low moist places in shady woods; 1-6' h.
381. April 6'; low marshy region near the river. 10-18' h.
- Lycopodiaceae*
382. January - March; in damp shady places, on creek-banks; growth adnate to the ground.
383. February; lower part of the creek-banks; growth: erect, 6-14" h.
384. January; damp shady woods; pl. twining. leaves: opposite, but leaflets: alternate. leaflets: undivided, except in some rare cases of 3 div.

385. January; damp shady woods, in ^{low} ~~low~~ ^{pl. twining} stem & branches somewhat pubescent.
- Filices.*
386. (N. 2) Febr.; creek-bank; lower surface of the fronds white powdered.
387. March; damp shady ^{creek-bottom} ~~places in the~~ ^{on moist bank} ~~of branches~~ ^{of stems of trees}.
388. (N. 1) ~~with not creeping~~ ^{March; lower part of a moist creek-bank, fertile, roots not creeping} ~~2-3' h. (N. 1.)~~
389. (N. 3) March; loc. with the preceding one.
390. (N. 4) March; creek-valley.
391. March; *cr.* ———; fronds 1-2' long
392. (N. 5) February; along on the surface of live Palm-trees, sometimes 15-20 feet above the ground, also near the base of these trees; ~~fronds~~ ⁱⁿ damp shady woods. fronds 3-4' l. entire, acuminate. exceedingly slow in drying.
393. (N. 6) March; local: with the preceding N. 5. frond 2-3' h.; specimen dry exceedingly slow.
394. (N. 8) March; damp shady creek-bank.
395. (N. 7) March & April; damp shady woods marshy region, a parasite on the branches of trees; ~~fronds~~ ^{specimens} dry exceedingly slow.
396. (N. 9) January - March; ⁱⁿ marshes, ^{fronds} 5-8' h.
397. (N. 10) March; ~~for~~ margin of a creek, damp shady bank.
398. (N. 11) March; ^{wet} ~~damp~~ ^{places in the} shady woods; ~~fronds~~ ^{fronds} 2-3' h.
399. (N. 12) ^{hilly region} ~~in~~ ⁱⁿ damp shady creek-bank; fronds 2-3 1/2' long.
400. (N. 13) February; loc. with N. 399.
401. (N. 14) February; *cr.* ———
402. (N. 15) March; low creek-bank, shady woods, fronds 2-2 1/2' h.

403. January-March; locality with N. 402, low wet places in the woods, fronds 3-5' h.
404. March; steep shady creek-bank; fronds 4' long.
405. March; local: with N. 404, fronds 4-5' long.
406. (N. 19) January; damp shady creek-bank. fronds 2' long.
407. (N. 20) ~~Jan.~~ ^{Febr.} local: with N. 406, fronds 2-2 1/2' l.
408. February; hilly region, deep ravine, ~~fronds~~ ^{fronds} 1-2' h.
409. (N. 21) January-March; high bank of a rivulet; frond 1-2' h.
410. (N. 22) February; damp shady woods; fronds 1-1 1/2' long.
411. (N. 22) March; steep shady bank of a creek, fronds 4-5' long.
412. (N. 23) March; damp shady woods; ~~fronds~~ ^{fronds} 1 1/2 - 2' long.
413. January - March; high bank of a rivulet. damp shady places in the woods; 1-2' h.
414. March; high bank of a rivulet. ~~fronds~~ ^{fronds} 2' h.
415. March; *cr.* - *cr.* ; 8-16" h.
416. (N. 25) February; damp shady woods; frond 2 1/2' long.
417. February; low bank of a rivulet in shady woods; 4-5' h. ^{specimens} ~~specimens~~ ^{specimens} dry easily coming off.
418. (N. 26) March; damp shady places in the woods; on the trunks of ~~live~~ ^{live} Palm-trees; and on dead stumps. fronds 4-7' long, ~~trapped~~ ^{trapped} plants ~~very~~ ^{very} exceedingly difficult to dry.
419. March; damp shady woods, on ~~so~~ ^{so} stumps & exposed roots of trees.
420. (N. 28) January - March; wet shady places in the woods; 3-4' h. exceedingly difficult to dry.
421. (N. 29) January; low bank of a small river. pl. 4-7' high.

339.	Jan.	422.	January; shady banks of a creek in the woods; fronds 2-2½ long.
340.	Jan.	423.	March; damp, shady woods, marshy region, on branches of trees.
some Monocotyledonous.
341.	Jan.	424.	Cocoa-Nut
342.	Feb.	6-7,	February; low flat marshy region along the sea-shore; trees, 80-90' h.
343.	Jan.	425.	January; wet low bank of a river; fl. 5-10' h., spathe spotted greenish white.
344.	Jan.	426.	March; marshy places in damp shady woods; pl. 2-3' h.; spathe of the fl. white.
345.	Feb.	427.	February; margin of a rivulet in shady woods; pl. 8-10' h.; fr. purple red.
346.	Jan.	428.	Feb. 10'; "stumps also on the sides of low but steep palm-trees; fruit-spoke near 2' long; petiole about 3' long; leaf palmate by 9 divided; leaflets 2' long.
347.	Mar.	429.	February; on stumps & trees in shady woods.
348.	Feb.	430.	February; on dead trunks of trees logs, damp shady places
349.	Mar.	431.	Feb. & March; on the sides of short but stout Palm trees; spathe of the fl. greenish yellow.
350.	Jan.	432.	January; damp shady woods, marshy region; pl. growing on stumps & piles; stalk springing.
351.	Mar.	433.	February 12'; damp shady woods marshy region; pl. 10-20' high; densely armed with short but stout spines; stem without branches and without leaves except a tuft or bunch of leaves at the apex. It easily splitting
352.	Jan.	434.	January; damp shady woods.
353.	Jan.	435.	January; in marshes, at the margin of woods.
354.	Jan.	436.	January & February; in the water of marshy places.
355.	Feb.	437.	Feb.; on stumps (palm) trees; leaves very thick & difficult to dry; flower pure white.
356.	Mar.	438.	March; on spine tree; flowers greenish yellow.
357.	Mar.	439.	March; local: the same with 438. fl. purple.
358.	Mar.	440.	March, 4'; in marshy places margin of woods; shrub fl. shining. fl. greenish yellow with purple veinlets.
359.	Mar.	441.	March; steep moist banks of a narrow rivulet; pl. 4-6' h.
360.	Jan.	442.	January & Feb.; marshy places in shady woods. pl. 3-5' h.
361.	Jan.	443.	January; marshy places & low banks of rivers; pl. 5-8' h., greater part of the scape purple; fruit when ripe deep blue, lower part green;
362.	Mar.	444.	March; marshy places in shady woods; pl. 8-10' h.
363.	Feb.	445.	Feb.; wet places in shady woods. pl. 3-5' h.
364.	Jan.	446.	January; local: with 445; pl. 3-4' h.; seed fruit-scales purplish.
365.	Mar.	447.	March; in damp shady woods marshy region; pl. 8-14' h.; flower deep purple with white veins.
366.	Feb.	448.	Feb. 11'; high banks of rivulets shady woods; strong vines hang down from the stem branches of high trees and issue at their nodes (branches of leaves). Thorns frequently on ground.
367.	Mar.	449.	March; on the stems of Palm trees, stalks 1-1½ l.
368.	Mar.	450.	March; local: the same with 449; stalks ¾ - 1½ - 2½ l.
369.	Jan.	451.	January; wet sandy beach; plant creeping.
370.	Feb.	452.	Feb.; damp shady woods, moist places; 1-1¼' h.
371.	Mar.	453.	March; hilly region.
372.	Feb.	454.	February 4'; wet shady places in the woods.
373.	Mar.	455.	March, 8'; hilly region; plant climbing. wide stem next column.
374.	Mar.	456.	Leaves belonging to fruits too bulky to be laid in sets, therefore not distributed.
375.	Mar.	456.	March, 8'; margin of the woods fronting the sea-shore. A small tree, 15' high; the stem, especially the lower part of it densely armed with spines; fruit erect, on pedicels (1½ - 2' long), fr. compressed 1½" in perpendic. 2½" in horizontal direction; sep. 4, persistent, fleshy; adhering to the fruit; branches & twigs contain a great quantity of sap some what sticky viscid. The plant is called by the natives "Kavirga" and the seeds are said to be an excellent purgative.
376.	Mar.	457.	March, 13'; shady woods, low level ground near a rivulet; plant pend. ing; fruit somewhat compressed armed with soft feathered slender spines; from pl. exudes a milky sap.
377.	Mar.	458.	March, 20'; hilly region, high bank of a rivulet; tree, 60' high, fruit pendant, a pod 10-12" long, twisted, densely beset with brown bristly hair.
378.	Feb.	459.	Feb. 14'; damp shady woods, low banks near a rivulet. plant fruit pendulous turning?; fruit pendulous on long string like pedicels (15-20' l.) from the branches of trees; fr. armed with dark sharp bristles which adhere to the hands. Leaves

339. Jan. 1
340. Jan. 2
341. Jan. 3
342. Febr. 6th
343. Jan. 14th
344. Jan. 15th
345. Jan. 16th
346. Jan. 17th
347. Jan. 18th
348. Febr. 19th
349. Jan. 20th
350. Jan. 21st
351. Jan. 22nd
352. Jan. 23rd
353. Jan. 24th
354. March 1st
355. Febr. 2nd
356. March 3rd
357. Febr. 4th
358. Jan. 5th
359. March 6th
360. March 7th
361. Febr. 8th
362. Jan. 9th
363. Jan. 10th

[Faint, illegible handwritten notes and sketches on the right page]