ONE SHILLING THE NUMBER.

JAMAICA NATURALIST.

VOLUME 1. SEPTEMBER, 1927. NUMBER 1.

Charles Russell Orcutt, Editor, Publisher, Proprietor.
No. 54 Barry St., Kingston, Jamaica, British West Indies.

———o———

Greetings 1

An old woman says "Good Morning Papa," as we pass; an old man says "Good Morning, Massa," a chorus of school children says, "Good Morning, Sir." Old ways are passing in Jamaica. In walking a mile on market day (Saturday in Jamaica) a hundred greetings may be exchanged; if one is missed, a possible friend may be hurt.

Greetings to all who read—to-day, or a thousand years hence.

———o———

Our Contributors 2

Every naturalist in Jamaica that we have yet met has promised to aid us in the enterprise we are launching, and we hope the results may finally justify the ambitious title selected, the **Jamaica Naturalist!**

The list begins with the name of Dr. M. Grabham, an authority on ants and mosquitoes, the only writer on natural history yet known to us in the island. We already feel familiar with the subjects he has selected as specialities, having dined with many of the ants on many occasions, while the mosquitoes have probably all sampled the editor—and "come back for more!"

Miss Lilly G. Perkins has collected some snails for us, which have been contributed to the U. S. National Museum, and we have received useful information from her and hope she will use her pen in behalf of the **Jamaica Naturalist.**

Mrs. Ella Roberts has contributed from Balaclava a specimen of the Brown Beauty Moth, determined at the U. S. National Museum as Pachylia ficus L.

R. W. Bryant, Esq., of the firm of Vendryes and Bryant, Solicitors, Kingston, has contributed a valuable collection of marine, land and fresh water shells formed by the late Henry Vendryes, who died in 1908, the only resident conchologist Jamaica has yet had. This collection now forms a part of the large West Indian series in the U. S. National Museum, now receiving critical study.

———o———

Hospitality 3

I am tempted to make my own, what a writer has said in Blackwood's Magazine, *** "I experienced the greatest downright kindness and cordial courteousness from people of all classes whom it was my privilege to meet. I was not aware there was so much of it to be found anywhere." This would not be wholly true, in my case, since in each of the United States of America where I have travelled, and in all parts of Mexico that I have visited, I have been equally surprised at the consideration given the stranger. The old time hospitality of Jamaica is dead, as it is in California and most parts of the world visited by tourists, but we have to acknowledge samples of it from R. E. Cooke, and R. C. Mais, whose plantations have yielded richly to the national collection at Washington, D. C.

Editorial 4

Why the **Jamaica Naturalist** may be a pertinent question? Having been invited, in the interests of the U. S. National Museum, to hunt over the island for the numerous varieties of land snails known to exist in Jamaica, and with various other commissions to fill, geological, zoological, and botanical, we have become a resident for a year, more or less. Finding no scientific work apparently in progress in the island, an inadequate working library for a naturalist, meagre and ill-kept museum material, it has seemed imperative to review all that has been accomplished in the past, and desirable to record the results of my own work. The Institute of Jamaica having ceased to publish anything, and the Department of Science and Agriculture likewise, we have decided upon the present modest beginning.

In botany we have not yet found in Jamaica, accessible to our use, such indispensable works as the Index Kewensis; Britton and Rose: Cactaceae; Fawcett, William: A provisional list of the indigenous and naturalized flowering plants of Jamaica; Britton, N. L.: Studies of West Indian plants; etc. Fawcett and Rendle: Flora of Jamaica, not yet completed, I have seen two of the four volumes already issued.

About 2,000 species of flowering plants have been reported from Jamaica as indigenous; over 500 species of ferns have been recorded; 200 species of lichens; of mosses, fungi and algae we have seen as yet no records approximating completeness. A check list of the mosses is in preparation for us.

Of birds 219 species and varieties (now in part extinct); a few indigenous mammals, including Homo sapiens, the form called Arawak Indians, now all good Indians (dead), the mammals otherwise chiefly bats; 197 species and varieties of fishes; reptiles ((including the alligator, iguana, now extinct, many other lizards, and a few small snakes —(none known to be poisonous); insects (census not yet completed); 727 species and varieties of land and fresh water shells; 269 species and varieties of clams; 117 Decapod Crustacea; and numerous scattered papers published in Germany, France, England and the United States, indicate what is known of the fauna of Jamaica.

Jamaica is particularly rich in fossils—the records of the past, and we have already found a score of localities previously unknown. Our readers will confer a favour whenever they can report localities where fossils may be obtained, especially those of Cretaceous age.

We wish also to obtain any books or pamphlets on Jamaica, especially such as relate in part to its fauna and flora. Instructions will be given, when desired, on collecting in any branch of natural history, and full credit will be given for any material received—everything of value will be sent to the U. S. National Museum with the name of the collector (exact localities, date of collection, and notes as full as can be given are desired). Small snakes, lizards, many insects, should be preserved in rum. Write first and we will arrange to pay for rum, containers and transportation on what seem desirable. Alcohol is preferable, where it can be obtained.

———o———

Gosse, Philip H. 5

Author of Birds of Jamaica, 1847, and Journal of a naturalist in Jamaica, 1851, two classical works long out of print.

Theobald, F. V. et M. Grabham 6

Mosquitoes or Culicidae of Jamaica, 1905. Enumerates about 25 species of mosquitoes, as occurring in Jamaica.

Jordon et Rutter 7

Fishes of Jamaica, 1897. Enumerates 187 species and varieties.

Cockerell, Theodore D. A. 8

A list of the Brachiopoda, Pelecypoda, Pteropoda, and Nudibranchita of Jamaica, living and fossil, 1894.

Adams, C. B. 9

Contributions to Conchology (Mollusca of Jamaica, etc.) Vol. 1 (all published). New York, 1849—1852. 260 pp. No copy of this classical work seems to exist in Jamaica.

Vendryes, Henry 10

Systematic catalogue of the land and fresh water shells of Jamaica, 1889.

It is a part of our plan to reprint such portions of the above and other works on the natural history of Jamaica as may seem desirable or practical, until the whole subject has been reviewed, the original description of each species reprinted, and other notes compiled from every source accessible to us. This is, of course, impossible for one person to accomplish alone in a lifetime, but much can be done with the encouragement and co-operation of many.

———o———

Coralliochama sp. 11

The type of this genus was found by the writer in Lower California, and later it was reported further north in the State of Washington. A second species was discovered in the State of Tamaulipas, Mexico, and considered as an indication of oil.

Specimens in the Museum of the Institute of Jamaica are labelled "Upper Cretaceous," with no other data as to locality, presumably Jamaica. We should be glad of more definite information, and to obtain good specimens.

Barrettia multilirata Whitfield 12

Haughton Hall, Green Island, Parish of Hanover. In museum of Institute of Jamaica, but omitted from Cockerell's list.

Ostrea giganteum 13

Specimens labelled as from St. Ann in museum of Institute of Jamaica, not in Cockerell's list—probably (?) wrongly determined.

Cerithium giganteum Lamarck 14

Parishes of Portland and St. Ann, in museum of Institute of Jamaica.

Carcharodon megalodon 15

A tooth of this extinct shark, labelled from Westmoreland Parish, is in the museum of the Institute of Jamaica.

———o———

Tachornis phoenicobia phoenicobia Gosse 16

A mumnified specimen of this, the Jamaican Palm Swift, was found at Balaclava, and determined by J. H. Riley, of the U. S. National Museum. "A common resident species that breeds in the palms,"—Bangs and Kennard. Occurs also in Haiti.

———o———

The following Crustaceans appear new to Jamaica, as far as accessible literature shows:—

Mithrax acuticornis Stimpson 17

Orcutt 1320. Jamaica.

Mithrax forceps Milne-Edwards 18

Mithrax pilosus Rathbun 19

Orcutt 1321. Jamaica.

Portunus (Achelous) **spinimanus** Latr. 20
Orcutt 114. Kingston.

Sesarma (Sesarma) **Jarvisi** Rathbun 21
Orcutt 28, Santiago de Cuba, Cuba.
Orcutt 451, Balaclava, Jamaica.

Uca pugnax rapax (Smith) 22
Orcutt 120, Kingston.

———o———

The following Echinoids were all determined by Austin H. Clarke, of the U. S. National Museum:—

Clypeaster rosaceus (L.) 23
Jamaica (Henry Vendryes) through R. W. Bryant.

Echinoneus cyclostomus (Leske) 24
Orcutt 1307, Jamaica.

Echinolampas sp. 25
Tertiary of Manchester (Henry Vendryes through R. W. Bryant).

Eucidaris tribuloides (Lamarck) 26
Orcutt 1308, Jamaica.

Echinometra lucunter (L.) 27
Orcutt 1287, Jamaica.
Grand Cayman (collected by Arthur L. Vendryes, January, 1894, and contributed by R. W. Bryant, part of the Henry Vendryes collection.)

Lytechinus variegatus (Leske) 28

———o———

The following insects from Jamaica have been determined at the U. S. National Museum:—

Historis orion Fabr. 29

Pachylia ficus L. 30
Brown Beauty Moth. Contributed from Balaclava by Mrs. Ella Roberts.

Pholus labruscae Mer. 31
A large green moth given me at Balaclava by party unknown.

Phaeneus sulcatus. Drury 32
This black beetle, commonly called Tumble-bug or Tumble-dung beetle, may frequently be seen at Balaclava and elsewhere, flying about two feet above the surface of travelled roads, or industriously moving masses of dung many times its own size, or often two cooperating on the job. Apparently the same insect, from the same locality, and from the parish of Trelawny, is shown in the museum of the Institute of Jamaica, under the name of Phaeneus belzebul (a synonym.) Its round cells or nests, two inches or less in diameter, just below the surface of the red clay soil, are also shown.

———o———

Lovenia cordiformis 33

Mellita testudinata 34

Texopneustes variegatus A. Ag 35
The above three echinoids are credited to Jamaica.

ONE SHILLING THE NUMBER.

JAMAICA NATURALIST.

VOLUME. I. FEBRUARY, 1928. NUMBER 2.

Charles Russell Orcutt, Editor, Publisher, Proprietor.
No. 54 Barry St., Kingston, Jamaica, British West Indies.

———o———

Our thanks are extended to all who have rendered service in the past year, usually wholly without solicitation, many unknown to us by name; the following deserve especial mention by name:—

Mrs. E. S. Aicheson, Mr. and Mrs. William Beswick, Mr. and Mrs. Roy Bradley, Ted Byles, Capt. and Mrs. Cuffe, H. G. Delisser (of Nashville), A. H. Gosset, C. C. Gowdy, Mrs. Susan Hudson, J. Roy Johnson, A. Knox-Wight, Mr. and Mrs. W. H. Lansdale, Dr. W. Lofthouse, L. B. Melville, Mr. and Mrs Harold Moulder, E Stewart Panton, Charles Pringle, Miss M. S. Savariau, James Geward Scott, Robert Stott, Frank Tennant, George Gordon Watson, and others. Contributions of specimens will be mentioned in the place of their treatment.

Readers are requested to report any errors they may observe in these pages, that suitable corrections may be made before the volume is closed. Many changes in nomenclature may be expected.

———o———

MOSSES OF JAMAICA.

[The following mosses, collected by the editor, have been determined by Edwin B. Bartram, who has furnished the accompanying notes.—Editor.]

Micromitrium Schlumbergeri Schp. 37

This seems to be the first record of this species in Jamaica. It was described from Mexico and has recently come in from Costa Rica. The thick, subulate leaf points are very fragile, and evidently serve as a means of vegative reproduction. Balaclava, St. Elizabeth.

Leucomium compressum Mitt. 38

Orcutt 2171c: Sweetwater, St. James 14th July 1927.

While this species has not been reported from Jamaica before, the plants under this number seem to be essentially identical with the type material from San Gabriel, marked "co-type" in the Mitten Herbarium, Spruce 803 b.

Thuidium schistocalyx (C. M.) Mitt 39

Orcutt 2290: Near Balaclava, St. Elizabeth, 5th Aug. 1927.

The plants in this collection are well fruited, and show the inner perichaetial leaves long ciliate. This character, in connection with the bipinnate branching, serves to distinguish the species from T. involvens (Hew.) Mitt., to which it is closely allied.

Rhynchostegium frondicola (C. M.) Jaeg. 40

Orcutt 456a, 506, 2145d: Balaclava, St. Elizabeth, 1927.

These collections match very closely the type material from Cuba, in the herbarium of the New York Botanical Garden, which was examined through the courtesy of Mrs. N. L. Britton. The branching is rather more diffuse than in R. serrulatum of the United States, but the differences are not at all clean cut and it is questionable whether they are specifically distinct.

Papillaria appressa (Hsch.) Jaeg. 41

Orcutt 2200: Sweetwater, St. James, 14th July, 1927.

This specimen has the short leaf cells and the flagellate branches characteristic of the species, but these characters are not always clearly marked, and some collections are hard to differentiate from P. nigrescens.

Trichostomium bachydontium Bruch. var. **Antillarum** Bartr. var. nov. 42

Orcutt 3184: Arntully, 30th Sept. 1927.

Distinct from the species in the colorless, papillose peristome teeth.

This collection is in good fruit and is surely very close to the typical European plant in everything but the peristome. The European manuals all describe the peristome of T. brachy dontium as yellow or orange and smooth, while the peristome of the Jamaica plants is whitish and distinctly coarsely papillose. I have had no opportunity to compare this plant with T. quitense Hamp. from western South America, but this species is reduced to a synonym of T. mutabile Bry. Eur. (T. brachydontium Bruch.) fide C. M. in the Paris Index Supplement, page 325.

T. brachydontium is apparently a rather cosmopolitan species known from Europe, Africa, Asia, Japan and New Zealand, but this seems to be the first record of its occurrence in the West Indies.

Erythrodontium longisetum (Hook.) Par. 43

Orcutt 3038: Arntully, on coffee, 21 Sept., 1927.

This seems to be the first record for this genus in the West Indies, although it is rather abundantly represented on the mainland from Mexico southward through Central America.

Rhynchostegiopsis flexuosus (Sull.) C. M. 44

Orcutt 2041a: Cuna Cuna Gap, St. Thomas, 29th June, 1927.

Previously known only from Cuba and Costa Rica.

Zygodon Reinwardtii (Hornsch.) A. Br. 45

Orcutt 3166: Blue Mountain Peak, 7th September, 1927.

This species is recorded from Mexico and South America in Dr. Malta's recent monograph of the genus, but this seems to be the first record of any member of the genus in the West Indies.

Oligotrichum erosum (Hamp.) Lindl. 46

Orcutt 2910: Blue Mountain Peak, 6th September, 1927.

Costa Rica and Columbia: this seems to be the first record of the genus in the West Indies.

Anomodon rostratus (Hedw.) Schp. 47

Orcutt 2854: Blue Mountain Peak, 6th September, 1927.

A cosmopolitan species that does not seem to have been reported from Jamaica before.

Gowdey, C. C. 48

Coccidae of Jamaica. Bull 1. 1921.

Principal agricultural pests of Jamaica. Bull. 2. 1923.

White flies (Aleurodidae) of Jamaica. Bull. 3. 1923.

Catalogus Insectorum Jamaicensis. Bull. 4, parts 1 and 2, 1926.

This series of collections by the Government Entomologist, and published by the Department of Science and Agriculture of Jamaica, were a surprise to the editor, after having been told by a high official that nothing had been published of late years, confirmed on inquiry at the Institute of Jamaica, that no list of Jamaica insects was known. Over 2,000 species are listed in the Catalogus. It is yet a long way from the estimated 100,000 species that may be expected to occur in Jamaica. The last bulletin includes "New Diptera from Jamaica," by C. H. Curran.

SNAKES OF JAMAICA 49

Only about half a dozen species of snakes have been recorded from Jamaica; one writer says "none venemous, many small species" occur in the island. Herbert T. Thomas, the author of "Untrodden Jamaica," and "The Story of a West Indian Policeman," writes that fifty years ago snakes swarmed in the island; in twenty-five years he reports having seen two that were eight or nine feet long. The records we have consulted mention only five species by their scientific names, as follows:—

Dromicus ater 50

"Black snake," or "Black and Grey Snake." Slender, very active, two to three feet long. Four varieties have been described,—var. a, colour uniform polished black; var. b. colour uniform dead black, with two rows of large white spots; var. c, colour uniform brownish black; and var. d, colour greyish brown or grey.

Epicrates inornatus 51

"Yellow boa;" "Nanka" of the negroes (fide Dr. W. Lofthouse). This seems to be the largest species found in Jamaica, the maximum size that seems to have been recorded being 10½ feet in length, with a girth of ten inches. One eight feet long, about four inches in diameter, was reported killed in 1927, near Manchioneal. The *Gleaner*, 10th May, 1920, reports one 12 feet long.

Leimadophis callilaemus 52

Liophis callilaema of most Jamaica literature.

"Spotted Chinned snake." One to one and a half feet is given as the length of this species, but one from Goat Island is said to have measured 6½ feet in length. Gosse is said to have described it as reddish brown above, white below, with a brown stripe along the middle of the back, and a row of black dots on each side; chin and throat spotted and marbled with dark brown.

Dr. Barbour (Mus. Comp. Zool. bulletin 52: 300—301) stated that the specimens collected by him in Mandeville and Port Antonio were olive or dark brown, but that all the Kingston specimens were brick red, both the adults and the young.

James Gordon Watson reports a red snake in the Blue Mountains, about a foot long, which may be this species. Dr. W. Lofthouse has collected this at Balaclava, but the specimens have faded, and do not show the natural colour.

Robert Stott reports a red snake in the Blue Mountains, very rapid in movement, apparently about 3½ feet long. It may belong here. This seems to be perhaps the most abundant snake in Jamaica, though for a while supposed to be extinct. It is a useful species to agriculture, destroying rats and other vermin, but the introduction of the mongoose seemed at one time likely to have completely exterminated the species. It is said to still exist in some abundance on Goat Island.

Typhlops Jamaicensis 53

"Two-headed snake," rather a misnomer in that it has only one head, but the tail is scarcely distinguishable from the head as to size and shape. It is incapable of biting and can be handled with impunity, occurring generally under stones and decaying leaves, more nearly resembling a large earth worm than a snake. It is recorded from Sav-La-Mar, and it has been seen about Balaclava, and one was caught near Constant Spring by the writer (Orcutt 1779, Det. by Miss D. M. Cochran).

It is probably well distributed through Jamaica, but is rarely collected.

Typholps lumbricalis we assume is a synonym.

Tropidophis maculata 54

"Pardaline snake." Thisis said to make its home in the nests of the termite ants, in trees throughout Jamaica. This seems to be the Ungalia maculata of Jamaica literature. Orcutt 2424: Balaclava, was received from Dr. W. Lofthouse, det. by Miss D. M. Cochran.

Jamaica Whip Snake 55

"A very deadly species." The *Gleaner* (16th July, 1927) publishes an account of one killed in London over two feet long. No snake of this name has been found in the records as occurring in Jamaica.

Dr. W. Lofthouse reports this as under one foot in length. We have found no mention in the literature of this species.

Black snake 57

Brown writes of a large black snake twelve feet long, more slender and active than the yellow boa, the tail more tapering and larger, as occurring in Jamaica. It is supposed to have become extinct since the introduction of the mongoose, along with possibly other species.

Trigonocephalus lanceolatus 58

A native of the tropical forests of South America, is the most dreaded and deadly of the snakes of America, the Fer-de-lance. It is said to have been introduced into the islands of Santa Lucia, Martinique and Trinidad in the wars against the Caribs, and these islands are said to be the only ones of the West Indies where poisonous snakes now occur. Still one or more are credited to Cuba. One Fer-de-lance has been seen in Jamaica—in a glass jar—originally from Trinidad!

The U. S. National Museum is particularly glad to get the lesser known kinds of reptiles, such as the small burrowing snakes, frogs, or lizards. These should be preserved in pure grain alcohol where obtainable, otherwise in proof rum or formalin, and the editor will be glad to forward any such material that our readers may be able to secure.

Zebra snake 59

Purdie (London Jour. Bot. 4: 18) thus speaks of a Serpent which he saw near Agley Gap, in the eastern part of the island: "On a loose rock I observed a large and remarkable snake striped like a zebra; but on my attempting tocapture the creature, it disappeared among the rocks." (Quoted from Gosse, Nat. Soj. in Ja. 324.

———o———

Crested snake 60

There are two living attractions in the Blue Mountains, a crested snake, and a sweetly mysterious singing bird called the Solitaire. The snake is identical with one I was told of in Spanish Haiti, having a red crest and wattles, very much resembling the head of a cock.—Hill Nat. Soj. Ja. 374.

At Drummond Castle, in St. David's Parish, a snake was seen by Dr. Palmer, not more that 4 ft. long, the thickest snake he has ever seen, with the bulk of a yellow boa 7 ft. long. It has a sort of galeated head, with a crest like that of a guinea-fowl. Its colour was that of a dull ashy ochre, having large well defined spots along the back. He states that the negroes, in speaking of its habits, represented it as making a noise, not unlike the crowing of a cock, and as being addicted to preying on poultry. (Gosse, 375).

Hill suggests this may be allied to Acontias meleagris of South Africa, a limbless lizard with truncated tail. This crested snake is reported also from Santo Domingo and Haiti, as well as Bath, Parish of St. Thomas, and other parts of Jamaica Occurs in the far east of Haiti in the Caciquedom of Higuey, etc. (quotations from Gosse).

ONE SHILLING THE NUMBER.

JAMAICA NATURALIST.

VOLUME. I. MARCH, 1928. NUMBER 3.

Charles Russell Orcutt, Editor, Publisher. Proprietor.
No. 54 Barry St., Kingston, Jamaica, British West Indies.

———o———

The following insects seem not to have been reported in Gowdey's Catalogue:—

Kalotermes Schwarzi Banks 61
Blue Mts., Jamaica,—Orcutt (determination by T. E. Snyder).

Diaprepes vittatus L. 62
Jamaica (Orcutt, from Blue Mts.?). Determination by E. A. Chapin.

Camponotus Wilburdi Forel 63
Jamaica: Blue Mts. probably (Orcutt). Det. by W. M. Mann.

Peripatus Swainsonae Ckl. 64
Near Maggotty, St. Elizabeth (Orcutt).

Peripatus Jamaicensis G. & C. 65
We reproduce (thru the kindness of the U. S. National Museum) the original description of this species below, from Nature (29th September, 1892):—

PERIPATUS RE-DISCOVERED IN JAMAICA.

Mrs. E. M. Swainson has been so fortunate as to find on Beacon Hill, near Bath, three specimens of **Peripatus,** which she has sent to the Institute of Jamaica. The species is doubtless identical with that found by Gosse many years ago at the other end of the island. Of the two specimens which we have studied, one has 36 pairs of legs, and is dark pinkish-brown, with the ends of the antennae pure white, in striking contrast; the other is smaller and darker, without white ends to the antennae, and with only 29 pairs of legs. The third example, which we have still alive, is larger, but dark in colour. Full details will be given elsewhere later on, and it may suffice for the present to state that the species is very closely allied to **P. Edwardsii** from Venezuela, as described by Sedwick, but differs in the greater number of legs and the white-tipped antennae of certain individuals (probably the females), in the only slightly curved (not hooked) claws, in the differentiation of the papillae into two distinct kinds on the dorsal surface, and apparently in other minor matters. There is no dark dorsal line. The genital orifice is between the penultimate pair of legs; and the jaws are almost precisely as in **Edwardsii.** The Jamaican species being evidently new, it is proposed to call it **Peripatus jamaicensis.**

M. GRABHAM.
T. D. A. COCKERELL.
September 5th.

Two varieties have later been published by Cockerell, from Jamaica, but the descriptions we have not seen. This species has been erected into a genus by Clark, as below:—

Plicatoperipatus A. H. Clark, Proc. Biol, Soc. Washington, vol 26, 1913, p. 17. 66

Genotype.—Peripatus jamaicensis Grabham and Cockerell, 1892.

Diagnosis.—The dorsal transverse folds number 24 to each segment, and are always very indistinct as a result of the numerous and irregular anastomosings of the furrows which separate them; the

primary papillae of the back are small and subequal; accessory papillae are rare or absent; crural tubercles occur on the two pregenital pairs of legs in the male.

Distribution.—Known only from the island of Jamaica.

Included species.—**Plicatoperipatus jamaicensis** (Grabham and Cockerell).

———o———

Wright, R. G. 67

Wild life in Jamaica, 1927.

A new edition of this little book, designed for popular reading, is already in preparation. The illustrations of animal and plant life is a pleasing feature.

———o———

Tripneustes esculenta (Leske), 68
Diadema antilarum (Philippi), 69
Brissus brissus (Leske), 70

These three echinoids, from Jamaica, are det. by A. H. Clark, as also the following starfishes:—
Oreaster reticulatus (Linne) 71
Ophiocoma echinata L. Agassiz 72

Cow Bay, St. Thomas, 14 Ap 1927 (Orcutt 1309), "O. aethiops"of Port Henderson.

———o———

Plicatoperipatus Jamaicensis **Bouvieri** Ckl. 73
Plicatoperipatus Jamaicensis Gossei Ckl. 74

Type locality of all three forms of this genus (and of item 64) is said to be Bath, St. Thomas, but we have not seen descriptions, except as above reprinted (or even citations as to where published).

We shall be glad to secure specimens of any of the four forms peculiar to Jamaica (or from any West Indian island), and wish one hundred or more of each, preserved in alcohol or formalin (or rum, where the other preservatives are not readily available).

———o———

Pseudemys palustris 75

Orcutt 3956: Runaway Bay, St. Ann (Ted Byles, donor).

The fresh-water pond-turtles of Jamaica are mentioned under various names (Emys decussata, Emys rugosa, Pseudemys decussata, Trachemys decussata, etc,) in local literature, and two or more distinct species have been recognized by some writers. Those from the islands of Cuba, Haiti, Jamaica and Porto Rico are now believed to represent different species, but the paucity of material has prevented necessary study. Any one able to secure for us a dozen or so specimens from any locality (in all sizes, from the young up to the fully adult) will please write to the editor, as they would help to clear up the present confusion. **Small snakes,** frogs, lizards are also desired (write first before sending).

———o———

Pimento snake 56, 76

The "devil" kindly deleted the above line after our last proof reading, which should have appeared above the last two lines under item 55, to make any sense.

———o———

MAMMALS OF JAMAICA 77

"No distinctively native species occur in Jamaica." This is not true as to bats, etc. Seals, whales, many bats, and other introduced rodents exist, not here mentioned.

Alco 78
"A mute dog-like creature," a household pet of the Arawaks, now said to be extinct.
Capromys brachyurus Hill 79
Coney. About the size of a rabbit, short tailed, now very rare, said to be found only in the John Crow Mts., but its bones "occur in all the kitchen-middens of the island."
Manatus australis, Manatee 80
Mus saccharivorus, Gosse 81
Mus decumanus 82
Mus rattus 83
Mus rattus alexandrinus 84
Chilonycteris Macleayi Gray 85
Molossus glaucinus 86
Molossus obscurus 87
Nyctinomus Brasiliensis Geoff. 88
Reithronycteris aphylla 89
Descr. of this genus et species peculiar to Jamaica appears in Jour Inst Ja 2: 625-627.
Herpestis mungo 90
Mongoose. Introduced from India in 1872 by W. Bancroft Sopent. Orcutt 4707: Kingston, Jamaica, 10 F 1928.

———o———

SHELLS OF JAMAICA (Fresh Water) 91
Amnicola crystallina Pfr. 92
And its var. coronata Shuttl, appears as Jamaican in Vendryes' list.
Ampullaria fasciata Lam. 93.
Jamaica (Ad.); "said to occur in several other parts of tropical America," but Adams used a question mark as to the determination of this species. Vendryes treated the Jamaican shells as two varieties (dilatata and elongata) of this species. Material in hand seem to indicate more than one species These snails are collected for food by the negroes. One Eye river! Black river, Swift river (Gosse), Dornock river (Miss L. G. Perkins).
Ancylus chittyi Ad. 94
"Ancylus obliquus. Shell subovate, somewhat arcuate, very convex; translucent, pale horn color: extremely thin, with microscopic radiating raised lines, and less distinct striae of growth: apex very prominent, elevated, extending very far to one side and posteriorly, and projecting nearly over the margin. Lg 0.075, Di 0.05, Hi 0.028."—Ad, 132.
On p. 204, on account of the priority of A. obliquus Brod. (of Chile), this shell is named in honor of its discoverer, the Hon. Edward Chitty, in whose collection the unique type rested (now, we understand, in the British Museum). Adams suggests it "may belong to a new genus."
Ancylus obliquus Ad. (see above); non Brod, Zool Soc London pr 1832: 204 (Chile). 95
Ancylus obscurus Hold. 96
Doubtfully determined by Ad., who says that it is not distinguishable from the Pennsylvania shell.
Cyclas pygmaea Ad. 97
"Shell oval; color [o living or fresh]; not very thin proportionately to its size, with microscopic striae of growth; valves somewhat inequilateral, with a very convex disk; anteriorly short but high and scarcely truncate; posteriorly long but much lower, somewhat tapering to a well rounded extremity; beaks wide, not prominent; cardinal

teeth small and lamellar; lateral teeth moderately developed, not remote. Lg 0.083, Hi 0.075, Di 0.05."—Ad. 44.

Now Psidium Jamaicensis Prime (fide Cockerell?)

Cyclas Veatleyi Ad. 98

"Shell oval; horn color with a tinge of brown; extremely thin, with fine striae of growth; valves very inequilateral, with a moderately convex disk; anteriorly both short and low, with a well rounded margin; posteriorly very high and subtruncated; beaks small but prominent; cardinal teeth small; lateral teeth moderately developed, somewhat remote. Very rare. Lg. 0.21, hi up to middle of posterior side 0.15, di 0.105."—Ad. 44 (Now genus Sphaerium).

Limnaea umbilicata Ad. 99

Ad. says the Jamaica shell "is not distinguishable from Cuban species, nor from L. umbilicata of Massachusetts." (L. caperate Gay and Cubensis Ph).

Melania spinifera Ad. 100

Jamaica. (?Potamopyrgus spiniferus of Vendryes' list.)

Melanopsis lineolata Gray. 101

Jamaica. We assume this is the common species found in Black river, and in Indian Kitchen-Middens in St. Elizabeth or Manchester, collected for food by the negroes today. (Semisinus lineolatas of Vendryes' list.)

Neritina Jamaicensis Ad 102

"Shell obliquely ellipsoidal, rather thin: white near apex: otherwise covered with violet, which is sometimes tinged with dark gray, with lighter and darker shades in spiral bands, and is more or less interrupted by lines of growth and irregular white spots: surface smooth and shining: apex rather prominent: spire convex: whorls nearly 3, with a fine but well impressed sutural line: labium smooth, moderately thickened. Lg of spire 0.07, hi 0.3, di 0.32."—Ad. 175. Fluviatile.

Neritina ornata Ad 103

"Shell obliquely ellipsoidal: rather pale greenish or livid brown, ornamented with numerous rather small irregular spots of bright red: rather thick and solid, with fine unequal striae of growth, and crowded microscopic spiral lines: spire small, not very prominent: whorls more than 3, with a subcanaliculate suture: labium smooth, obsoletely toothed. Operculum divided into 2 concave regions by an acute ridge, which is curved in the direction of growth, Lg of spire 0.07, total lg 0.32, di 0.24."—Ad. Marine.

Neritina punctulata Lam. 104

Jamaica (fluviatile).—Ad. 175. ?St. Domingo.

Neritina pusilla Ad. 105

"Neritina (?) pusila. Shell transversely ovate: white, translucent: vitreous, smooth and shining: spire scarcely elevated: whorls 1½, with an indistinct suture; last whorl very large, concavely depressed above: operture very large, semiorbicular: labrum very thin: labium tumid, covered with a large tumid smooth deposit. Obviously this species can scarcely be included in Neritina. Hi 0.04, greatest di 0.068"—Ad. 112. Marine.

(To be Continued.)

———o———

NOTE: Md—mean divergence (degrees); di—breadth; hi—height; lg—length. All measurements in inches. The marine species described by Adams of Neritina are here included with the fluviatile species. This list is based on Adams (item 9), with a few names from Vendryes' list (item 10).

ONE SHILLING THE NUMBER.

JAMAICA NATURALIST.

VOLUME. 1. AUGUST, 1928. NUMBER 4.

Charles Russell Orcutt, Editor, Publisher, Proprietor.
No. 54 Barry St., Kingston, Jamaica, British West Indies.

—o—

SHELLS OF JAMAICA (Fresh Water) 91

(*Concluded from Page* 12.)

Neritina tenebricosa Ad. 106

"Shell obliquely, ellipsoidal, rather thin: black, with numerous angular translucent spots of horn color: white on the labium, blue within the aperture: with numerous excessively fine spiral and incremental striae: apex quite prominent: spire convex; whorls 2½, with a very fine but well impressed sutural line: labium smooth, moderately thickened. Inhabits Black river. Lg of spire 0.06, hi 0.36, di 0.41."—Ad. 175.

Paludina Jamaicensis Ad. 107

"Shell ovate-conic; translucent or subtransparent; green, sometimes with a tinge of brown; very smooth; spire with the outlines nearly rectilinear; apex acute, persistent; whorls 6, quite convex, very regularly rounded; aperture ovate, acute above; with an umbilical groove between the left side of the lip and the last whorl. Md 60; lg 0.15, greatest di 0.1, least di 0.08"—Ad 42.

Paludina rivularis Ad. 108

Jamaica.

Physa Jamaicensis Ad. 109

"Shell long ovate, acuminate: brownish horn color: with microscopic striae of growth, and some lightly impressed microscopic spiral striae: apex acute: spire well lengthened, with the outlines slightly curvilinear, with a well impressed suture: aperture long ovate: lip thin, Lg of aperture 0.32, total lg 0.48, di 0.25."—Ad. 174 (Apr. 1851). In a tank at Malvern, over 1000 ft. alt. in St. Cruz Mts., St. Elizabeth.

Physa acuta Drap. 110

Given in Vendryes' list as Jamaican.

Physa Souverbyana Orb. 111

"Probably," of Cuba also. Also spelled Physa Sowerbyana by Ad. (Seems to be Aplecta Sowerbyana Orb. of Vendryes' list.)

Pisidium Adamsi Desh. 112

Pisidium Jamaicensis Prime 113

Pisidium pygmaeum Ad. 114

Cockerell treats all these three as one species (?) sub P, Jamaicensis (see Cyclas).

Planorbis affinis Ad. (non Cpr.) 115

"Shell discoidal; horn color: with coarse striae of growth; spire wide and moderately concave on both sides; apex very deeply depressed into a minute pit and invisible on the right side, conspicuous on the left side; whorls about five and one-third, convex with a deep suture on the right side, on the left side angular, with the suture at first on the angle for nearly 3 whorls and then descending into an acute angular channel; last whorl rather large, moderately turned to the left; aperture semioval; labium moderately advanced on right side Very similar to P. lentus Say, of which it may possibly be a variety. Its

altitude is less and the right side is more uniformly concave. Perhaps this is a case of specific identity with plural origin. Greatest di 0.68, least 0.525; hi of last whorl 0.21."—Ad 44.

Planorbis affinis var. a. Ad. 116

"Brownish red, with coarse striae of growth, the outer whorl more sharply angulated, and higher. Greatest di 0.57, least 0.455; hi of last whorl 0.22"—Ad 44.

Planorbis angulatus Ch. 117

Appears in Vendryes' list as Jamaican.

Planorbis decipiens Ad 118

"Shell discoidal; pale horn color; with fine striae of growth and finer microscopic spiral striae; spire wide, a little concave on both sides; apex moderately depressed, more so on the right side; whorls 5. rather convex on the right side, subangular on the left, with a well impressed suture; last whorl not large, with the subangular periphery nearer to the right side; aperture semioval; much advanced at the right extremity. This species resembles P. pallidus Ad., which has a less number of whorls, of which the last is much wider; that shell is also higher. Greatest di 0.365, latest 0.32; hi of last whorl 0.99'—Ad 44.

Planorbis dentiferus Ad. 119

Ad, Bost Soc pr (1 Ja. 1845). Hatfield, Westmoreland with following var.

Planorbis dentiferus edentatus Ad. 120

Teeth 0.

Planorbis Haldemani Ad. 121

"Shell subdiscoidal; brownish brown color; striae of growth very fine, and several spiral series of microscopic punctures; spire very narrow; apex deeply sunk on both sides; whorls 5, rather convex, more convex on the right side, with a well impressed suture margined on the right side; last whorl very wide on both sides and high, with a slightly angular periphery on the left side; aperture lunate, with the labium most advanced at one-third of its length from the right extremity. Greatest di 0.14, least 0.125; hi of last whorl 0.07"—Ad 43.

Planorbis humilis Ad 122

"Shell subdiscoidal: color?: striae of growth coarse: apex and spire moderately depressed on the right side: whorls 2½; last whorl with a very acute periphery nearly in the plane of spire, moderately dilated around umbilical region: aperture large, subtriangular, acutely angled at periphery of last whorl: umbilical region abruptly excavated, with the concavity about two-thirds as wide as last whorl. Greatest di 0.06, least 0.045; hi 0.025."—131. "Probably immature, but quite distinct."

Planorbis lentus Say 123

Suggests P. affinis may be a var.

Planorbis lucidus Pf. 124

Appears as Jamaican in Vendryes' list.

Planorbis Mac Nabianus Ad 125

"Shell discoidal and excessively flattened like P. vortex; brownish horn color; with microscopic crowded tranverse striae of growth; spire a little more concave on right than on left side; apex conspicuous on both sides: whorls 6, with a well impressed suture on both sides, planulate on left and a little convex on right side; last whorl 0.04 hi, with an angular periphery in plane of left side; aperture very oblique, right half of labium being advanced very far and abruptly beyond left half, especially in old shells, in which the advance is

equal to twice the diameter of aperture. Greatest di 0.27, least 0.25." —Ad. 43.

Planorbis pallidus Ad. 126

See P. decipiens for comparison.

Planorbis Redfieldi Ad 127

"Shell discoidal; horn color; smooth, with a few microscopic interrupted spiral striae; spire more widely and deeply concave on left than on right side; apex visible on both sides; whorls nearly 4, wider on left side, with a well impressed and margined suture on both sides, subplanulate on the left, convex on the right, last whorl 0.065 hi, spreading much through a regular curve from right to left side, where it has a subangular periphery, narrow on left side; labrum with its right half advanced beyond its left by a space equal to the diameter of aperture. Greatest di 0.185, least 0.16."

Valvata inconspicua Ad. 128

"Shell subdiscoidal: pale horn color? with striae of growth microscopic: spire convex, moderately elevated: whorls 3, very rapidly increasing, with a deep canaliculate suture: aperture large, not much advanced above: umbilicus, about half as wide as the penult whorl. Greatest di 0.07, least 0.05; hi 0.04"—Ad. 131.

Valvata pygmaea Ad. 129

"Shell convex above; concave below; color?; striae of growth fine; spire convex, moderately elevated; apex subacute; whorls 3½, with a very deep suture, very accurately rounded and rather rapidly increasing in diameter, so that the shell resembles an elongated cone wound in a spiral manner; aperture large, with upper end of labrum advanced far below lower extremity; umbilicus as wide as penult whorl. Greatest di (of a large specimen) 0.075, least 0.06; hi 0.05"—Ad. 42.

———o———

Pilsbry, Henry A. 130

Revision of the Ampullariidae of Jamaica and Cuba. Phila ac pr 79: 247-253 (10 S 1927). From the author.

This confirms the editor's opinion, expressed sub item 93, that more than one species of Ampullaria exists in Jamaica.

Ampullaria fasciata Roissy 131

This is older than Lamarck's species, which is not Jamaican. This and the next are only known from Jamaica.

Ampullaria Gossei Reeve 132

The type of this may be the Swift river, east of Carlisle bay, tho Dr. Pilsbry cites as "probably a rapid stream called Sweet River, Bluefields, near and east of Savanna-La-Mar."

This is an indication of what will happen to this list of the fresh water shells of Jamaica, when a large series of the shells are critically examined, and the nomenclature revised.

———o———

MOSSES OF JAMAICA 133

[The following mosses, collected by the editor, have been determined by Edwin B. Bartram, who has furnished the accompanying descriptions, notes and drawings. See items 37-47.—Editor.]

Gymrostomiella Orcutti Bartr. sp. nov. 134 (Fig. 1, A—F).

Dioicous? Delicate, minute plants in dense, short, sordid green mats. Stems filiform, 2-3 mm. high, simple or proliferous by innovations, flexuose, reddish below, paler above; lower leaves rather distant, the upper in rosulate tufts, variously spreading and more or less shrivelled when dry, erect spreading from a concave clasping base when moist, stem leaves obovate to orbicular, comal leaves oblong-

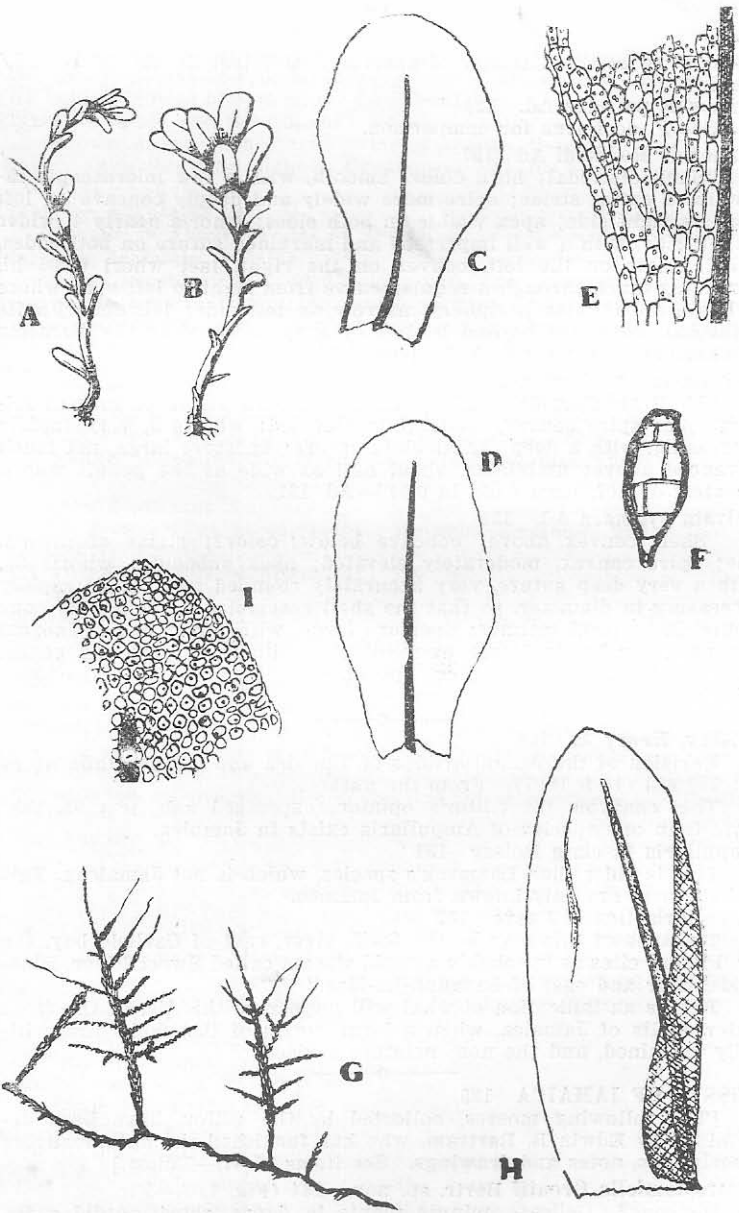

Fig 1.

A—F. Gymnostomiella Orcutti Bartr. n. sp.
A & B. Moist plants X 22.
C & D. Leaves X 80.
E. One side of leaf base X 160.
F. Axillary gemma X 160.

G—I. Pinnatella jamaicensis Bartr. n. sp.
G. Plant X 1.
H. Stem leaf X 80.
I. Apex of leaf X 160.

spatulate, broadly rounded at the apex, 0.4—0.5 mm. long; margin plane, coarsely crenulate by projecting papillae nearly to the base; upper leaf cells hexagonal, 12-18 u in diameter, turgid, thin walled, coarsely papillose with 3-6 large, conical papillae, toward the base rectangular, pellucid, with fewer papillae; costa weak, yellowish, ending in the upper third of the leaf. Vegetative reproduction by means of numerous ovoid, axillary gemmae which occur on the sterile stems in the axils of reduced leaves. Sporophyte unknown.

Type: Sherwood Forest, St. Thomas Parish, Jamaica, September 1927, C. R. Orcutt, No. 2786, on concrete walls of reservoir near the "Great House."

The occurrence of this species in Jamaica presents a rather baffling problem in geographical distribution, as the only two species credited to this genus are confined to the Phillippines and the East Indies. At any rate Mr. Orcutt's keen eyes have added a very unique element to the moss flora of North America. The vegetative characters are very similar to those of **G. vernicosa** (Hook.) Fl., minutely described and figured in the Laubmoosflora von Java, Vol. 1, p. 309, but the leaf cells average somewhat larger, are more densely papillose above and more or less papillose clear to the base.

Pinnatella Jamaicensis Bartr. sp. nov. 135 (Fig. 1, G—I).

Primary stems filiform, creeping, sparsely foliate with scattered small, appressed or slightly spreading leaves less than 0.5 mm. long, radiculose; secondary stems erect, dull yellowish green, up to 4 cm. high, pinnately or more often bipinnately branched, stems and branches compressed and usually extended into long, flagellate tips; lower stem leaves rather crowded, erect appressed, acutely pointed, the upper stem and branch leaves spreading, concave, lightly plicate when dry, about 0.75 mm. long, oblong-ovate, rounded at the apex; margin plane, rather sharply erose-denticulate toward the apex and erose-crenulate to the base; costa strong, tapering, ending well below the apex; upper leaf cells irregular, round-hexagonal, up to 10 or 12 u in diameter but averaging smaller, smooth or with a minute papilla over the lumen, incrassate, lower cells toward the costa elongate, about 1: 6, pellucid, 3 or 4 rows on the margins abruptly smaller and similar to the upper ereolation forming a more or less distinct border. Sporophyte unknown.

Type: Balaclava Jamaica, August 5, 1927, C. R. Orcutt No. 2352e.

This interesting moss belongs to a rare genus in the North American flora and is clearly distinct from **P. minuta** (Mitt.) Broth., of Cuba, in the more robust, bipinnately branched secondary stems and the flagelliform branches. **P. piniforme** (Brid.) Fleish., from Guadeloupe is not represented in the Mitten Herbarium at the New York Botanical Garden but the broadly ovate-lanceolate leaves credited to this species by Mitten in the key (1) and the acute branch leaves mentioned in the description (2) seem to preclude the Jamaica plant. These characters seem to have been taken from Muller's description (3) which differs in several particulars from the original description by Bridel (4). Until the type of **P. piniforme** can be examined the exact status of the Jamaica plant must remain uncertain, but from the evidence at hand I am inclined to believe that it is a distinct species.

(1) Jour. Linn. Soc. Vol. 12: 459.
(2) l. c. page 465.
(3) Syn. Musc. Frond. II: 228.
(4) Bryol. Univ. II: 260.

Anoectangium incrassatum Broth. 136

Orcutt 2779: Arntully, St. Thomas, 2500 ft. alt.

Mr. Williams, of the New York Botanical Garden, has been kind enough to compare this with the original description and figure of the plant collected by Borgesen in the Blue Mts. and reports that it fits these so closely that it can be nothing else than the above species. The original description was made from sterile plants and as the sporophyte has never been seen or described it might be well to add the following to your notes:

Perichaetium erect, 1.1 mm. high, of about 6 broadly ovate, acuminate leaves sheathing at the base, the outer a little shorter; upper cells incrassate, quadrate to 3 or 4 times as long as broad, more elongate and hyaline toward the concave hyaline base; costa percurrent or ending just below the apex; seta yellow, 5-7 mm. long, flexuose, twisted to the right when dry; capsule (old and empty) erect, pale brown, ovoid, about 1 mm. high, gradually contracted to a short neck; spores smooth, 10 in diameter. Lid and calyptra unknown.

Gyroweisia cubensis Broth. 137

Orcutt 528,529: Balaclava, St Elizabeth, 1000 ft. alt.

Orcutt 3445: Farm Hill, St. Thomas, 3700 ft. alt.

A rare species known previously only from Cuba.

Catharinaea angustata Brid 138

Orcutt 3367,3392: Farm Hill, St. Thomas, Oct. 1927.

This species does not seem to have been reported from the West Indies before but I can find no tangible characters to separate this collection from the common plant of the Eastern United States.

Stereophyllum cultelliforme Sull. 139

Orcutt 4136, 4142, 4211, 4265: Gray's Inn, St. Mary, 21D 1927.

A Cuban species which does not seem to have been found in Jamaica before.

Pireella cavifolia (Card. & Herz) Card. 140

Type locality: Mirador, Vera Cruz, Mexico (H. Ross).

Orcutt's Jamaica plant is an exact match of a bit of the type received from Paris, hitherto only known from the type locality.

Acroporium pungens (Su.) Broth. 141

Orcutt 2366d: Accompong,, St. Elizabeth.

Adelothecium Bogotense (Hamp.) Mitt. 142

Orcutt 2943: Blue Mt. Peak, 6S 1927.

Anomobryum chlorosum (C. M.) Broth. 143

Orcutt 3378: Claremont, St. Ann, D 1927.

Barbula Crugeri Sond. 144

Orcutt 527: Balaclava, St. Elizabeth.

Barbula recurvicuspis C. M. 145

Orcutt 3175: Arntully, St. Thomas, 21S 1927

Barbula sublifolia Sull. 146

Orcutt 2981: Arntully, St. Thomas.

Brachymenium Jamesoni Tayl. 147

Orcutt 3164: Blue Mt. Peak, 7S 1927.

Breutelia Jamaicensis (Mitt.) Jaeg. 148

Orcutt 3755: Farm Hill, St. Thomas, 31 O 1927.

Breutelia tomentosa (S. W.) Schp. 149

Orcutt 1475: Cuna Cuna Gap, 14 June 1927.

Bryum argenteum L. 150

Orcutt 375a: Mandeville, Manchester.

Bryum argenteum lanatum B. & S. 151

Orcutt 3620: Farm Hill, St. Thomas, 27 O 1927.

Bryum coronatum Swaegr. 152

Orcutt 449: Balaclava, St. Elizabeth.

Callicostella depressa (S. W.) Jaeg. 153

Orcutt: Cuna Cuna Gap, St. Thomas.

Calymperes Donnellii Aust. 154
Orcutt 1194d: Balaclava,—1978a: Bath.—2366a: Accompong.
Calymperes Richardii C. M. 155
Orcutt 2016: Bath, St. Thomas.
Campylopus arctocarpus (Hsch.) Mitt. 156
Orcutt 2941b: Blue Mt. Peak, 6S 1927.
Campylopus cygneus (Hedw.) Brid. 157
Orcutt 3161: Blue Mt. Peak, 6S 1927.
Campylopus fragilis (Dicks.) B. S. G. 158
Orcutt 3318: Farm Hill, St. Thomas, 8 O 1927.
Cathahinaea synoica C. M. 159
Orcutt 2913: Blue Mt. Peak, 6S 1927.
Cryphea filiformis (S. W.) Brid. 160
Orcutt 615: Balaclava, St. Elizabeth.
Cyclodictyon Antillarum (Mitt.) Broth. 161
Orcutt 2145c: Sweetwater, St. James, 11 Jl. 1927.
Cyclodictyon Olfersianum (Hsch.) Broth. 162
Orcutt 3677: One Eye river, Manchester, 9 Mr 1927.
Dicranella Harrisii (C. M.) Broth. 163
Orcutt 3738: Farm Hill, St. Thomas, 29 O 1927.
Dicranella Perrottetii (Nonv.) Mitt. 164
Orcutt 2910: Blue Mt. Peak, 6S 1927.
Dicranella rubra (Huds.) Kindb. 165
Orcutt 3591: Farm Hill, St. Thomas, 27 O 1927.
Dicranella subinclinata Lor. 166
Orcutt 2144: Sweetwater, St. James, 11 Jl 1927.
Ditrichum rufescens (Hamp.) Broth. 167
Orcutt 2941: Blue Mt. Peak, 6S 1927.
Ectropothecium apiculatum (Hsch.) Mitt. 168
Orcutt 2171a: Sweetwater, St. James, 11 Jl 1927.
Ectropothecium globitheca (C. M.) Mitt. 169
Orcutt 2789: Sherwood Forest, St. Thomas.
Entodon Hampeanus C. V. 170
Orcutt 818b: Balaclava St. Elizabeth.
Entodon macropodus (Hedw.) C. M. 171
Orcutt 819: Balaclava, St. Elizabeth.
Erpodium Domingense Brid. C. M. 172
Orcutt 289: May Pen, Clarendon.
Fabronia Jamaicensis Lor. 173
Orcutt 2686: Arntully, St. Thomas, 25 Ag 1927.
Fissidens asplenioides (Sw.) Hedw. 174
Orcutt 3251: Abbey Green, St. Thomas, 27 O 1927.
Funaria Bonplandii (Brid.) Broth. 175
Orcutt 3363: Farm Hill, St. Thomas, 8 O 1927.
One or two plants only, doubtfully referred to this species.
Funaria calvescens Schwaegr. 176
Orcutt 821: Balaclava, St. Thomas.
Haplocladium microphyllum (Sw.) Broth. 177
Orcutt 290: May Pen, Clarendon.
Helicodontium capillare (Sw.) Jaeg. 178
Orcutt 517: Balaclava, St. Elizabeth.
Helicophyllum torquatum (Hook.) Brid. 179
Orcutt 4505: Cheapstone, Portland, 4 Ja 1928.
Homalia glabella (Sw.) Mitt. 180
Orcutt 3472: Farm Hill, St. Thomas.
Hyophila Tortula (Schwaegr.) Hamp. 181
Orcutt 532: Balaclava, St. Elizabeth.

Eypnum polypterum (Mitt.) Broth. 182
Orcutt: Cuna Cuna, St. Thomas.
Isopterygium tenerum (Sw.) Mitt. 183
Orcutt 503: Balaclava, St. Elizabeth.
Lepidopilum polytrichoides (Hedw.) Brid. 184
Orcutt 2171: Sweetwater, St James, 11 Jl 1927.
Lepyrodontopsis trichophylla (Sw.) Broth. 185
Orcutt 1873: Cuna Cuna Gap, St. Thomas.
Leucobryum Antillarum Schp. 186
Orcutt 2760: Arntully, St. Thomas, 25 Ag 1927.
Leucodontopsis Floridana (Aust.) E. G. B. 187
Orcutt 456b: Balaclava, St. Elizabeth.
Leucoloma albulum (Sull.) Jaeg. 189
Orcutt 2041c: Cuna Cuna Gap, St. Thomas.
Marcromitium apiculatum (Hook,) Brid. 190
Orcutt 2772: Arntully, St. Thomas, 27 Ag 1927.
Macromitrium cirrhosum (Hedw.) Brid. 191
Orcutt 1876: Cuna Cuna Gap, 14 Je 1927.
Macromitrium Harrisii Par. 192
Orcutt 3167: Arntully, St. Thomas, 21S 1927.
Macromitrium mucronifolium (H. & G.) Schw. 193
Orcutt 3946c: Moneague, St. Ann, 2D 1927.
Macromitrium perichaetiale (H. & G.) C. M. 194
Orcutt 2938: Blue Mt. Peak, 6S 1927.
Macromitrium punctatum (Roddi) Brid. 195
Orcutt 3652a: Farm Hill, St. Thomas, 22 O 1927.
Marcromitrium praelongum Mitt. 196
Orcutt 2860: Blue Mt. Peak, 6S 1927.
Marcromitrium stratosum Mitt. 197
Orcutt 3607b: Farm Hill, St. Thomas, 27 O 1927.
Meteoriopsis patula (Sw.) Broth. 198
Orcutt 817: Balaclava, St. Elizabeth.
Meteorium illecebrum (C. M.) Mitt. 199
Orcutt 2768: Arntully, St. Thomas, 27 Ag 1927.
Micromitrium fragile (Mitt.) Jaeg. 200
Orcutt 3036: Arntully, St. Thomas.
Microthamnium minusculifolium C. M. 201
Orcutt 3652b: Farm Hill, St. Thomas.
Microthamnium reptans (Sw.) Mitt. 202
Orcutt 3672: Farm Hill, St. Thomas.
Microthamnium thelistigum (C. M.) Mitt. 203
Orcutt 509: Balaclava, St. Elizabeth.
Mnium rostratum Schrad. 204
Orcutt 2930: Blue Mt. Peak, 6S 1927.
Neckeropsis disticha (Hedw.) Fleish. 205
Orcutt 2068: Cuna Cuna Gap, 29 Je 1927.
Neckeropsis undulata (Palis) Broth. 206
Orcutt 2352: Balaclava, St. Elizabeth.
Octoblepharum albidum (L.) Hedw. 207
Orcutt 1863: Bath, St. Thomas.
Octoblepharum erectifolium Mitt. 208
Orcutt 2041: Cuna Cuna Gap.
Octoblepharum pulvinatum (Doz. & Molk.) Mitt. 209
Orcutt: Cuna Cuna Gap.
Orthostichopsis tetragona (Sw.) Broth. 210
Orcutt 3921: Lumsden, St. Ann, 26 N 1927.