

## THE INSECTS OF ST. CROIX, V. I.

By HARRY A. BEATTY

A study of Orthoptera and Isoptera have considerable interest, not only in the presence of several undescribed forms, but especially in the absence of species otherwise quite common on neighboring islands. Lepidoptera has received scant attention from entomologists. W. P. Comstock records 33 forms of the suborder Rhopalocera in "Scientific Survey of Puerto Rico and Virgin Islands," Vol. XII, part 4. My collection adds 10 forms, most of them common, to his list, and questions the occurrence of *Urbanus dorantes cramploni* on St. Croix as no specimens have been taken, while *U. proteus* is an extremely abundant form. The status and economic value of the parasitic Hymenoptera is badly in need of determination. Some field work has been revealing and several very interesting observations would indicate that parasitization of many forms, in the Orthoptera, Diptera and Lepidoptera for example, apparently maintain them at a low status that is of economic importance. The absence of fruit infecting species of Diptera is quite marked. There are no records of occurrence of fruit-flies, *Anastrepha* species, in nispero (*Sapota achras*), papaya (*Carica papaya*), guavas (*Psidium guajava*).

The capture of six specimens of a Reduviid of the *Triotoma* family is of importance, since it established the presence of a genus that is well known to medical science as the host to *Trypanosoma*, which is a blood parasite of man. A great amount of time was devoted to research on Diptera, in particular the *Culicidae* and certain other species which infest flesh wounds. So far, *Cochliomyia americana* has not been taken on St. Croix. The study of *Culicidae* centered around a malaria and filaria control project sponsored by the Department of Health: The writer was in charge of the work for eight years and considerable laboratory and clinical experimentation was probed.

The writer devised a net which was extremely successful in capturing flying insects at dusk. By its use, many rare things were taken, and it will, no doubt, prove itself in other presumably well collected islands. The thing is simply a strong wire frame three feet long and one foot wide, fitted with a baggy fine-mesh netting, attached securely on the back of the seat and extended about one foot above the chauffeur's head on a topless roadster, also minus a windshield. Moving along at from five to ten miles per hour, at every half mile a stop was called and the catch collected, using a flash-light and aspirator; for speed is required to capture the active insects such as Staphylinidae.

## THYSANURA

Determinations by Ashley B. Gurney

1 *Nicoletia* sp.

Taken in rotting log, Jealousy streamway. April 1938.

2 *Lepismatidae*. Genus?"Clearly a different genus to *Nicoletia* because of head shape and the presence of eyes." Taken in rotting stump, Jealousy streamway. April 1938.3 *Lepismatidae*Probably *Nicoletia* sp. "A somewhat unusual Thysanuran and apparently belongs to *Nicoletia*."

## ORTHOPTERA

The following records are based on material determined by Ashley B. Gurney, and deposited in the U. S. National Museum.

## FORFICULIDAE

1 *Doru albipes* F.

Under decomposing vegetable matter. May 1938.

2 *Labia curvicauda* Motschler

Taken at light. January 1936. Under decomposing vegetable matter. October 1936.

## LABIDURIDAE

1 *Euborellia plebeja* Dohrn

Under rubbish heap. January 1939.

## BLATTIDAE

1 *Aglaopteryx* n. sp.

Common in rotting stumps and under dry-scaling bark, in mats of dry vegetation draping over branches. May 1936.

2 *Supella supellectilum* ServilleA common species, at night on flowers of *Calyptrocordia alba*. October 1936. Attracted by light to houses. February, November, December, 1937. Under rubbish heaps. In sugar cane straw. March 1938.3 *Cariblatta antiguensis* S. & Z.Common under heaps of rubbish. Attracted by light to houses. September 1936. On fruit of *Calyptrocordia alba* and on leaves of *Terminalia catappa*. May & October, 1938.

- 4 *Ichnoptera rufa* DeGeer  
Common under rubbish and on shrubbery at night. On fruit of *Calyptrocordia alba*. April 1938.
- 5 *Symploce bilabiata* R. & H.  
Common. Attracted by light to houses. Under rubbish. On shrubbery at night. On fruit of *Calyptrocordia alba*. May and November, 1938.
- 6 *Symploce hospes* Perkins  
Common. Under rubbish. On shrubbery at night. Attracted by light to houses. On fruit of *Calyptrocordia alba*. May 1938.
- 7 *Symploce* n. sp.  
Uncommon. Under rubbish and on shrubbery at night. May 1938.
- 8 *Periplaneta americana* Linn.  
Very common in buildings. Ootheca parasitized by *Tetrastichus hagenowi*. 1935.
- 9 *Periplaneta brunnea* Burm.  
Uncommon. In buildings. 1935.
- 10 *Periplaneta australasiae* F.  
A common species in sugar cane fields and in woodlands, uncommon in buildings. 1935.
- 11 *Eurycotis improcera* Rehn  
Common in rotting stumps, under scaling bark. 1935.
- 12 *Leucophaea maderae* F.  
Not common. Local, in buildings. Feed on meat scraps and fruits. The ootheca is retained within the body of the female and the living nymphs extruded. 1935.
- 13 *Pycnoscelus surinamensis* Linn.  
Common under rubbish. Frequently seen around chicken roosts feeding on droppings. Is host to the eye-worm, *Oxyspirura masoni*.
- 14 *Hemiblabera* n. sp.  
This species is confined to the arid, eastern end of the island where small colonies can be turned up under heaps of rubbish. Not common. Specimens taken at Tagus. 1935.
- 15 *Plectoptera infulata* R. & H.  
Rare. Only five specimens taken from foliage of *Lantana involucrata*. Constitution Hill. February 1939.
- 16 *Holocampsa nitidula* F.  
Rare. Only three specimens were taken from a cellar, Mt. Pleasant. January 1941. One specimen collected from a shrub, June 1941, at River.

## MANTIDAE

1 *Callimantis* sp.

Specimens were taken on foliage of *Lantana involucrata*. Barren Spot. May 1937. Rare.

## PHASMIDAE

1 *Clonistria* sp.

Sept. 1937.

## ACRIDIDAE (LOCUSTIDAE)

1 *Schistocerca americana* Drury

An uncommon locust. 1935.

2 *Schistocerca columbina* Thunberg

Uncommon. 1935.

3 *Scyllina* (*Plectrotettix*) *gregarius* Saussure

1935.

## TETTIGONIIDAE (LOCUSTIDAE)

1 *Neoconocephalus triops macropterus* Redt.

Common. September to Jan. 1935.

2 *Neoconocephalus triops fuscostriatus* Redt.

Less common. 1935.

3 *Heterocous* sp. allied to *dubius* Caudell

In rotting logs. November 1935.

## GRYLLIDAE

1 *Scapteriscus vicinus* Scudder

Rare, four specimens were collected in backyard soil in Christiansted where fruits imported from Porto Rico are distributed and the species may have been brought in. 1939.

2 *Anurogryllus muticus* DeG.

Common. July 1937.

3 *Gryllus assimilis* Fabr.

Uncommon. July 1937.

4 *Orocharis* sp.

Uncommon. In rotting branches. October 1937.

5 *Orocharis* sp. near *saltator* Uhler

Rotting wood. October 1937.

6 *Amphiacusta caraibea* Saussure

Common. October 1937.

7 *Oecanthus niveus* DeG.

Common on weeds. November 1935.

## ISOPTERA

The writer is grateful to T. E. Snyder and H. R. Johnston for determination of all species of termites. There seems to be no account given in the literature on the manner in which termite colonies go about enlarging their nests. I have watched this procedure on several occasions and give here a brief history. The work is done at night. Tiny holes one sixteenth of an inch and about one inch apart are cut through the outer shell of the nest and from these apertures a greater part of the entire colony of soldiers and workers emerge. At once the workers trail off in several directions in columns sometimes five and six abreast and so closely packed as to be treading on each other's heels. Once these trails are established the workers may be observed traveling in both directions; the heavy laden returning to the nest with material or supplies. At the nest construction goes ahead at an energetic pace. Before daylight is heralded each tiny hole has a roof and the nest is at least one cell larger in diameter.

## KALOTERMITIDAE

1 *Kalotermes* (K) *bequaerti* Snyder

In a rotting log, near Crique streamway. April 1938. Det. H. R. J.

2 *Kalotermes* (K) *snyderi* Light

A small colony in a dry-rotting log, winged adults, Prosperity Garden. April 1938. Det. H. R. J.

3 *Kalotermes* (K) *incisus* Silv.

Workers and soldiers from a decaying log, Crique. September 1938. In a dry branch on the ground, Estate Fountain. January 1939. Det. H. R. J.

4 *Kalotermes* (*Cryptotermes*) *cavifrons* Banks

A small colony in a decaying mango stump (*Mangifera indica*), La Grange. March 1938. Det. H. R. J.

5 *Kalotermes* (*Cryptotermes*) *brevis* Walker

Winged adults taken at light. May 1938. Small colonies in wood-work and furniture. Det. T. E. S.

6 *Kalotermes* (*Cryptotermes*) sp.

Taken from rotting stump of *Hippomane mancinella*, South Gate Farm beach. April 1935. Det. T. E. S.

## RHINOTERMITIDAE

1 *Heterotermes convexinotatus* Snyder

In a dry-rot pine board, tunnels on soil, Coakley Bay (semi-arid region). May 1938. Some workers and soldiers taken from be-

neath dry cattle droppings, Barren Spot. September 1940. Det. H. R. J.

2 *Heterotermes* sp.

Taken from a rotting stump, Prosperity Garden March 1938. Det. T. E. S.

TERMITIDAE

1 *Nasutitermes* (N) *acajutlae* Holmgren

Nest on *Hippomane mancinella*, Shoys, April 1938. In dry branch of *Spondias mombin*, Estate Collins, March 1938. Rotting stump of *Cocoloba wifera*, Tagus. March 1938. Also taken on Green Cay Islet. Det. H. R. J.

2 *Nasutitermes* (N) *costalis* Holmgren

A small nest placed in a small tree. Three queens, macropterous and physogastric, were removed from a queen-cell. Crique. April 1938. Det. H. R. J.

3 *Termes* (T) *panamaensis* Snyder

Winged adults were taken at light. Constitution Hill. June 1938. Det. H. R. J.

4 *Mirotermes* n. sp.

Winged adults taken at light. Western suburbs of Christiansted. May 1935. Det. T. E. S.

EMBIIDINA

OLIGOTOMIDAE

Determinations were made by Ashley B. Gurney. Specimens in the U.S.N.M.

1 *Oligotoma saundersii* Westwood (= *O. latreillei* Rambur)

Taken under rubbish near Lower Love streamway. October 1940. Taken at light. Golden Grove. October 1939.

2 *Oligotoma* sp. taken at light, Golden Grove. October 1940.

OLIGEMBIIDAE

1 *Oligembia brevicauda* Ross

Taken under rubbish near Castle Burke streamway. August 1940. Endemic, TYPE "under rubbish", Lower Love, August 1940.

CORRODENTIA

Determinations by Ashley B. Gurney.

## PSOCIDAE

- 1 *Lachesilla pedicularia* L.
- 2 *Peripsocus* sp.

## MALLOPHAGA

## PHILOPTERIDAE

- 1 Philopteridae gen & sp.  
Taken off ground dove (*Columbigallina passerina nigrirostris*), thrasher (*Margarops f. fuscatus*), kingbird (*Tyrannus d. dominicensis*).
- 2 *Lipeurus gallipavonis* Geoffroy  
Taken off turkey.
- 3 *Lipeurus tropicalis* Peters  
Off domestic fowl.
- 4 *Lipeurus* sp.  
Off thrasher (*Margarops f. fuscatus*).
- 5 *Goniodes dissimilis* Nitzsch  
Taken off domestic fowls.
- 6 *Goniodes meliagris* Linn.  
Off domestic turkey.
- 7 *Goniodes numidae* Mjoberg  
Taken off guinea-fowl (*Numida meleagris galeata*).
- 8 *Esthiopterum crassicorne* Scopoli  
Taken off the Bahama pintail (*Anas bahamensis*).
- 9 *Columbicola* sp.  
Off ground dove (*Columbigallina passerina nigrirostris*), scaled pigeon (*Columba squamosa*).
- 10 *Rallicola bisetosa* Piaget  
Off clapper rail (*Rallus longirostris caribaeus*).
- 11 *Philopterus* sp.  
Off the ani (*Crotophaga ani*), thrasher (*Margarops f. fuscatus*).
- 12 *Trichloectes* sp.  
Off hummingbird (*Sericotes h. holosericeus*).
- 13 *Physconelloides zenaidurae* McGr.  
Off ground dove (*Columbigallina passerina nigrirostris*), scaled pigeon (*Columba squamosa*).
- 14 *Proctophylloides* sp.  
Off hummingbird (*Sericotes h. holosericeus*)

## TRICHODECTIDAE

- 1 *Felicola subrostrata* Nitzsch  
Taken off cat.

## MENOPONIDAE

- 1 *Menopon gallinae* Linn.  
Off domestic fowl.
- 2 *Menopon numidae* Giebel  
Off guinea-fowl (*Numida meleagris galeata*).
- 3 *Eomenacanthus stramineus* Nitzsch  
Parasite on domestic fowls.
- 4 *Menacanthus* sp.  
Taken off ground dove (*Columbigallina passerina nigrirostris*).
- 5 *Myrsidea incerta* Kellogg  
Off thrasher (*Margarops f. fuscatus*).
- 6 *Trinoton querquedulae* Linn.  
Off Bahama pintail (*Anas bahamensis*).
- 7 *Neocolpocephalum flavescens* Nitzsch  
Off red-tailed hawk (*Buteo j. jamaicensis*).
- 8 *Colpocephalum* sp.  
Off ani (*Crotophaga ani*).
- 9 *Colpocephalum* sp.  
Off domestic turkey.
- 10 *Heterodoxus longitarsus* Piaget  
Occasionally found on dogs. Det. J. C. Bequaert.

## GYROPIDAE

- 1 *Gyropus ovalis* Nitzsch  
Off guinea-pig (*Cavia cobaya*).

## ODONATA

The dragonfly material which has served as a basis for the present paper was brought together over a period of years. Finding and rearing nymphs was one feature that received much attention but did not yield any important results since all of the species thus obtained were sooner or later taken as adults by net. A representative collection of Odonata was sent to Clarence H. Kennedy and I am indebted to him for many of the determinations used in this paper.

## Suborder ANISOPTERA

## AESCHNIDAE

## AESCHNINAE

- 1 *Anax junius* Drury  
Uncommon. Taken at Orange Grove stream. January 1936.  
Crique Dam. November 1938. Rust-op-twist Pond. March 1941.



## LIBELLULIDAE

## LIBELLULINAE

- 2 *Orthemis ferruginea* F.  
Common along streams and at ponds and watering troughs. 1936.
- 3 *Perithemis donitia* Drury  
Common on streams. 1936.
- 4 *Micrathyria* sp.  
Adult taken at Jealousy stream. November 1937.
- 5 *Erythrodiplax umbrata* Linn.  
Uncommon. October 1938.
- 6 *Erythrodiplax berenice naeva* Hagen  
Common on coastal marshes. 1935.
- 7 *Erythrodiplax connata justiniana* Selys  
Common on streams. February 1936.
- 8 *Cannacria herbida* Gundlach  
Orange Grove stream. November 1938.
- 9 *Lepthemis vesiculosa* Fabr.  
Common on streams. 1936.
- 10 *Macrothemis celeno* Selys  
Common on streams and ponds. 1936.
- 11 *Dythemis rufinervis* Burm.  
Annaly stream. October 1936.
- 12 *Tamea abdominalis* Ramb.  
Orange Grove stream. November 1938.
- 13 *Pantala flavescens* Fabr.  
Orange Grove stream. December 1938.

## Suborder ZYGOPTERA

## CAENAGRIONIDAE

## CAENAGRIONINAE

- 1 *Telebasis dominicanum* Selys  
Crique Dam. January 1936.
- 2 *Ischnura ramburii credula* Calv.  
Common on ponds. October 1936.
- 3 *Enallagma caecum* Hagen  
Common on streams and ponds. August 1936.

## NEUROPTERA

## CHRYSOPIDAE

Determinations by Ashley B. Gurney.

1 *Chrysopa* sp.Abundant on plants *Cryptocordia alba* at night. October 1936.2 *Myrmeleon insertus* Hagen

Adults taken at light. April 1936.

3 *Vella* sp.

Taken at light. April 1936.

## THYSANOPTERA

## THIRIPIDAE

1 *Frankliniella difficilis* Hood

Det. D. Moulton. 1937.

2 *Frankliniella insularis* FranklinIn flowers of *Tabebuia pentaphylla*. 1937. Det. F. Andre.3 *Heliothrips rubrocinctus* Giard

On avocado tree. April 1937.

## PHLAEOTHIRIPIDAE

1 *Liothrips* sp.

Swarming over rocks on Buck Island. January 1939. Det. F. Andre.

## ANOPLURA

## HAEMATOPINIDAE

1 *Linognathus* sp.

Taken off goats.

2 *Haematopinus* sp.

Common parasite on swine.

3 *Haematopinus tuberculatus* BurmeisterTaken off donkey (*Equus asinus*).

## PEDICULIDAE

1 *Pediculus humanus capitis* DeGeer

Taken from the scalp of man. Det. J. C. Bequaert.

## PHTHIRIDAE

1 *Phthirus pubis* Linn.

Taken off man.

## HOMOPTERA

## CICADIDAE

1 *Proarna hilaris* Germar

Det. J. S. Caldwell.

## CICADELLIDAE

- 1 *Carneocephala sagittifera* Uhler  
Det. J. S. Caldwell.
- 2 *Sanctanus* sp.  
Det. P. W. Oman.
- 3 *Deltocephalus flavicostus* Stål  
Det. P. W. Oman.
- 4 *Deltocephalus sonorus* Ball  
Det. J. S. Caldwell.
- 5 *Exitianus obscurinervis* Stål  
Det. J. S. Caldwell.
- 6 *Acinopterus angulatus* Lawson  
Det. J. S. Caldwell.
- 7 *Chlorotettix minimus* Baker  
Det. J. S. Caldwell.
- 8 *Chlorotettix tethys* Van D.  
Det. P. W. Oman.
- 9 *Nesosteles bisinuatus* DeL.  
Det. J. S. Caldwell.
- 10 *Nesosteles calcarus* DeL.  
Det. J. S. Caldwell.
- 11 *Nesosteles neglectus* DeL. & D.  
Det. P. W. Oman.
- 12 *Nesostelus incisus* Mats.  
Det. P. W. Oman.
- 13 *Protalebra brasiliensis* Baker  
Det. P. W. Oman.
- 14 *Empoasca* sp.  
Det. J. S. Caldwell.
- 15 *Hortensia similis* Walker  
Det. P. W. Oman.

## FULGORIDAE

1. *Catonia* sp.  
Det. P. W. Oman.
- 2 *Bothriocera* sp.  
Det. P. W. Oman.
- 3 *Oliarus complectus* Ball  
Det. J. S. Caldwell.
- 4 *Thionia* sp.  
Det. P. W. Oman.

- 5 *Colpoptera flavifrons* Osborn  
Det. P. W. Oman.
- 6 *Colpoptera maculifrons* Muir  
Det. P. W. Oman.
- 7 *Ormenis marginata* Brunnich  
Det. P. W. Oman.
- 8 *Ormenis quadri-punctata* F.  
Det. J. S. Caldwell.
- 9 *Flatoides* sp.  
Det. P. W. Oman.
- 10 *Perigrinus maidis* Ashmead  
Det. P. W. Oman.
- 11 *Sogata furcifera* Horvath  
Det. J. S. Caldwell.
- 12 *Delphacodes propinqua* Fieber  
Det. J. S. Caldwell.

## APHIDIDAE

- 1 *Aphis rumicis* L.  
Det. P. W. Mason. On *Samanea saman*. 1936.
- 2 *Aphis gossypii* Glover  
On mellon, okra, cotton. 1936.
- 3 *Aphis maidis* Fitch  
Corn. 1939.

## COCCIDAE

The following species were determined by L. O. Howard in 1921.

- 1 *Margarodes formicarum* Guilding  
In the soil in sugar cane fields.
- 2 *Conchaspis angraeci* Cockerell
- 3 *Orthezia praelonga* Douglas
- 4 *Asterolecanium pustulans* Cockerell
- 5 *Pseudococcus nipae* Maskell  
On *Cocos nucifera*, *Psidium guajava*, *Mangifera indica*, *Annona muricata*.
- 6 *Pseudococcus virgatus* Cockerell  
On beans, beets, carrots, cassava, yams, sweet potatoes, tomatoes, cotton, eggplant.
- 7 *Pseudococcus calceolariae* Maskell  
On sugar cane.
- 8 *Pseudococcus citri* Risso  
On citrus, corn.

- 9 *Pseudococcus bromeliae* Bouché  
 10 *Pseudococcus sacchari* Cockerell  
 On sugar cane.

## COCCINAE

- 1 *Pulvinaria psidii* Maskell  
 On *Psidium guajava*.  
 2 *Pulvinaria urbicola* Cockerell  
 On beans, carrots, sweet potatoes.  
 3 *Ceroplastes floridensis* Comstock  
 On avocado, *Anacardium occidentale*, *Musa* sp., *Psidium guajava*,  
*Annona muricata*, *Annona squamosa*.  
 4 *Ceroplastes denudatus* Cockerell.  
 On *Annona squamosa*, *A. muricata*.  
 5 *Vinsonia stellifera* Westwood  
 On *Mangifera indica*.  
 6 *Eucalymnus tessellatus* Signoret  
 7 *Coccus hesperidum* L.  
 On *Ficus* sp., *Mangifera indica*, *Carica papaya*.  
 8 *Coccus mangiferae* Green  
 On *Mangifera indica*.  
 9 *Coccus viridis* Green  
 On *Mammea americana*, *Zapota achras*.  
 10 *Saissetia hemisphaerica* Targioni  
 On beans, eggplants, okras, *Ficus* sp.  
 11 *Saissetia nigra* Nietner  
 On *Persea gratissima*, *Ficus* sp., *Annona muricata*, *Psidium guajava*,  
*Mammea americana*, *Manihot manihot*.  
 12 *Saissetia oleae* Bernard  
 On *Anacardium occidentale*, *Persea gratissima*, *Musa* sp., *Psidium guajava*,  
*Ficus* sp. *Mammea americana*, *Annona muricata*, *Zapota achras*.

## DIASPINAE

Determinations by L. O. Howard.

- 1 *Chionaspis citri* Comstock  
 On citrus.  
 2 *Howardia biclavis* Comstock  
 On *Mammea americana*.  
 3 *Diaspis boisduvalli* Signoret  
 On *Musa* sp.

- 4 *Diaspis echinocacti opuntiae* Cockerell  
On cactus.
- 5 *Aulacaspis pentagona* Targioni  
On numerous plants.
- 6 *Hemichionaspis minor* Maskell  
On *Lantana involucrata*.
- 7 *Aspidiotus destructor* Signoret  
On sugar cane, *Cocos nucifera*.
- 8 *Aspidiotus lantaniae* Signoret  
On *Zapota achras*, *Ficus* sp.,
- 9 *Targionia sacchari* Cockerell  
On sugar cane.
- 10 *Targionia hartii* Cockerell  
On *Dioscorea* sp.
- 11 *Lepidosaphes beckii* Newman  
On citrus.
- 12 *Lepidosaphes alba* Cockerell  
On *Manihot maniot.*
- 13 *Ischnaspis longirostris* Signoret  
On *Cocos nucifera*, *Ficus* sp.

## ALEYRODIDAE

Determinations by L. O. Howard.

- 1 *Aleurodicus cocois* Curtis  
On *Cocos nucifera*, *Musa* sp.
- 2 *Bemisia inconspicua* Quaintance  
On cabbage.
- 3 *Aleurothrixus floccosus* Maskell  
On *Psidium guajava*, citrus.

## HEMIPTERA

Harry G. Barber determined the bulk of *Hemiptera* in the collection, J. Bequaert reported on the *Polyctenidae*. Specimens are in U.S.N.M.

## CORIXIDAE

- 1 *Trichocorixa pygmaea* Fieber  
At light. February 1936. In brackish water, marsh, La Grange.  
May 1936.
- 2 *Trichocorixa kollari* Fieber  
In brackish pools, May 1936; Slob Pond, September, 1937.

## BELOSTOMATIDAE

- 1 *Belostoma boscii* Lepeletier & Serville  
Specimens were found hibernating in a dried out mud hole in six  
[ ] inches of moist mud. October 37.

## NOTONECTIDAE

- 1 *Notonecta indica* L.  
Taken in Slob pond. October 1937.  
2 *Buenoa femoralis* Fieber  
Taken in Rust-op-twist pond. August 1936.  
3 *Buenoa pallipes* F.  
Taken in Slob pond. October 1937.  
4 *Buenoa pallens* Champion  
Taken at dusk by net. September 1937. In Slob pond. October  
1937.  
5 *Buenoa albidus* Champion  
By car net at dusk. October 1937.

## VELIIDAE

- 1 *Microvelia robusta* Uhler  
By car net at dusk. September 1937.

## GERRIDAE

- 1 *Limnogonus franciscanus* Stal  
Taken in Slob pond. July 1937.

## MIRIDAE

- 1 *Reuteroscopus ornatus* Reuter  
By car net. October 1937.  
2 *Cyrtopeltis varians* Distant  
By car net at dusk. October 1937.  
3 *Dolichomiris linearis* Reuter  
Swept from grass. November 1937.  
4 *Rhinacloa forticornis* Reuter  
Swept from grass. November 1937.  
5 *Sixeonotus* sp.  
Swept from grass. November 1937.

## ANTHOCORIDAE

- 1 Paratriphleps pallidus Reuter  
By car net at dusk, October 1937.
- 2 Asthenidea picta Uhler
- 3 Asthenidea sp.
- 4 Cardiaestethus cubanus Popp  
By car net at dusk. October 1937.
- 6 Cardiaestethus sp.  
By car net at dusk. October 1937.
- 7 Lasiochilus divisus Champion  
By net at dusk. October 1937.
- 8 Lasiochilus pallidulus Reuter  
By car net at dusk. October 1937.

## POLYCTENIDAE

- 1 Hesperoctenes sp.  
Det. J. Bequaert. Taken off free-tailed bat, *Molossus major*. January 1945.

## CIMICIDAE

- 1 Cimex hemipterus F.  
Det. J. Bequaert. Human habitation, October 1935.

## REDUVIIDAE

- 1 Stenopoda cinerea Laporte  
Swept from grass. November 1936.
- 2 Stenopoda culciformis F.  
Swept from grass. September 1937.
- 3 Zelus longipes Linn.  
Swept from shrubbery. October 1936.
- 4 Empicoris armatus Champion  
Specimen taken in house. November 1937.
- 5 Ploiaria bispina McAtee & Malloch
- 6 Emesopsis nubilus Uhler  
At light. December 1936.
- 7 Triatoma rubrofasciata DeGreer  
Six specimens taken, caught inside dwellings at night. July 1939, August 1940, September 1942, September 1943, November 1944, March 1945. Microscopic examinations revealed the presence of protozoan parasites of the form *Trypanosoma* in each.



## TINGIDAE

- 1 *Corythucha gossypii* Fabr.  
On cotton.
- 2 *Corythaica planaris* Uhler  
On eggplant. April 1938.
- 3 *Teleonemia sacchari* F.  
Swept by net from grass. July 1936.

## PYRRHOCORIDAE

- 1 *Dysdercus andreae* Linn.  
On cotton. October 1940.

## LYGAEIDAE

- 1 *Oncopeltus fasciatus* Dallas  
Swept from shrubbery. 1937.
- 2 *Oncopeltus aulicus* Fabr.
- 3 *Lygaeus pulchellus* Fabr.
- 4 *Ortholomus jamaicensis* Dallas
- 5 *Ischnorhynchus championi* Distant
- 6 *Blissus leucopterus insularis* Barber
- 7 *Paromius longulus* Dallas
- 8 *Pachybrachius vinctus* Say
- 9 *Pachybrachius bilobatus* Say
- 10 *Ozophora* sp.

## NEIDIDAE

- 1 *Metacanthus decorus* Uhler

## COREIDAE

- 1 *Leptoglossus gonagra* Fabr.  
On *Psidium guajava*. October 1935.
- 2 *Leptoglossus stigma* Herbst  
On *Psidium guajava*. October 1936.
- 3 *Phthia picta* Drury  
On watermelons. October 1936.
- 4 *Spartocera fusca* Thunberg  
On *Leucaena glauca*, Mt. Victory. March 1943.
- 5 *Chariesterus gracilicornis* Stal
- 6 *Catorhintha guttula* Fabr.
- 7 *Anasa scorbutica* Fabr.
- 8 *Megalatomus rufipes* Westwood

- 9 *Corizus hyalinus* Fabr.
- 10 *Corizus sidae* Fabr.
- 11 *Jadera rufofusca* Barber

## PENTATOMIDAE

- 1 *Mormidea cubrosa* Dallas
- 2 *Solubea pugnax* Fabr.
- 3 *Euschistus crenator* Fabr.
- 4 *Euschistus* sp.
- 5 *Proxys victor* Fabr.
- 6 *Thyanta casta* Stal
- 7 *Thyanta perditor* Fabr.
- 8 *Loxa* sp.
- 9 *Nezara viridula* L.
- 10 *Acrosternum marginatum* P. B.
- 11 *Piezodorus guildingi* Westwood
- 12 *Arvelius albopunctatus* DeGeer
- 13 *Podisus sagitta* Fabr.

## CYDNIDAE

- 1 *Aethus indentatus* Uhler
- 2 *Amnestus pusio* Stal  
By car net at dusk. November 1937.
- 3 *Amnestus*, probably n. sp.  
By car net at dusk. November 1937.

## SCUTELLERIDAE

- 1 *Tetyra antillarum* Kirk
- 2 *Pachycoris torridus* Scop.  
On wild croton. August 1937.
- 3 *Diolcus boscii* Fabr.
- 4 *Diolcus disjunctus* Barber
- 5 *Diolcus irroratus* Fabr.
- 6 *Augocoris illustris* Fabr.  
On *Sapota achras*, Constitution Hill. June 1935.

## COLEOPTERA

## CICINDELIDAE

- 1 *Tetracha sobrina infuscata* Mannerheim  
Det. L. L. Buchanan. Under debris in a coconut grove, Concordia.  
October 1936.

- 2 *Cicindela boops* Dejean  
Det. J. M. Valentine. Taken on the sandy border of a small marsh,  
Granard. August 1937.
- 3 *Cicindela trifasciata* Fabr.  
Det. J. M. Valentine. Taken on the sandy border of Salt Pond.  
October 1936.
- 4 *Cicindela trifasciata tortuosa* Dejean  
Det. J. M. Valentine. Taken on the sandy flats of Krause Lagoon.  
October 1937.

## CARABIDÆ

- 1 *Calosoma granulatum coxale* Mots.  
Det. J. M. Valentine. Observed feeding abundantly on the pupae  
*Laphygma frugiperda* in a field of *Panicum maximum*. August 1938.
- 2 *Dyschirius* sp.  
Det. L. L. Buchanan. 1937.
- 3 *Clivina insularis* Duval  
Det. J. M. Valentine. October 1937.
- 4 *Clivina* sp.  
Det. L. L. Buchanan. By net. October 1937.
- 5 *Tachys* sp.  
Det. L. L. Buchanan. By net. October 1937.
- 6 *Micratopus insularis* Darlington  
Det. J. M. Valentine. By net. 1937.
- 7 *Micratopus* sp.  
Det. L. L. Buchanan. By net. September 1937.
- 8 *Pseudaptinus* sp.  
Det. L. L. Buchanan. By net. October 1937.
- 9 *Apenes pallipes* Fabr.  
Det. L. L. Buchanan. By net. October 1937.
- 10 *Apenes marginalis* Dejean  
Det. L. L. Buchanan. By net. October 1937.
- 11 *Perigona nigriceps* Dejean  
Det. L. L. Buchanan. By net. October 1937.
- 12 *Pentagonica flavipes* Leconte  
Det. L. L. Buchanan. By net. October 1937.
- 13 *Solenophorus pubifer* Putzeys  
Det. L. L. Buchanan. By net. October 1937.
- 14 *Stelenophorus* sp.  
Det. L. L. Buchanan. By net. October 1937.
- 15 *Stelenophorus* sp.  
Det. L. L. Buchanan. By net. October 1937.

## HALIPLIDAE

1 *Haliplus* sp.

Det. L. L. Buchanan. By net. October 1937.

## DYTISCIDAE

Determinations by L. L. Buchanan. Specimens were taken by car net at dusk. October 1937.

- 1 *Rhantus calidus* Fabr.
- 2 *Laccophilus* sp.
- 3 *Canthydrus* sp.
- 4 *Copelatus* sp.
- 5 *Thermonectes* sp.
- 6 *Megadytes*, probably *fraternus* Sharp
- 7 *Celina* sp.
- 8 *Pronoterus* sp.
- 9 *Notomicrus* sp.
- 10 *Bidessus* sp.
- 11 *Eretes sticticus* L.

## GYRENIDAE

1 *Dineutes americanus* L.

Det. L. L. Buchanan. By car net. October 1937.

## HYDROPHILIDAE

Determinations by L. L. Buchanan.

- 1 *Enochrus* sp.  
In pools. October 1937.
- 2 *Berosus* sp.  
In Slob Pond. October 1937.
- 3 *Hydrous insularis* Castelnau  
In Slob pond. October 1937.
- 4 *Hydrous ater* Olivier  
In rain pools, October 1936.
- 5 *Neohydrophilus medius* Brullé  
"Appears to be this species".
- 6 *Tropisternus lateralis* Fabr.  
In rain pools. October 1937.
- 7 *Oosternum costatum* Sharp  
By car net. October 1937.
- 8 *Phaenonotum estriatum* Say  
By car net. October 1937.

- 9 *Cercyon* sp.  
On fungus. January 1939. By car net. October 1937.
- 10 *Cercyon* sp.  
By car net. October 1937.
- 11 *Cercyon* sp.  
By car net. October 1937.
- Paracymnus* sp.  
By car net. October 1937.

## STAPHYLINIDAE

All of the Staphylinidae were determined by Richard E. Blackwelder exclusive of a few species which were determined by Edward A. Chapin as indicated. Many of the recorded species were taken by the compiler during the years from 1935 to 1939. An additional number of species were discovered by Blackwelder during a visit to the island from October 23 to December 6, 1936.

Blackwelder, Richard E.: "Monograph of the West Indian Beetles of the Family *Staphylinidae*." United States National Museum Bulletin 182. Washington, D. C., 1943.

*Oxytelinae*

- 1 *Carpelimus fulvipes* Erichson  
By car net at dusk. November 1936.
- 2 *Carpelimus sericeus* Cameron  
In bat guano. October.
- 3 *Carpelimus correctus* Blackwelder
- 4 *Carpelimus beattyi* Blackwelder  
In bat guano. November.
- 5 *Carpelimus imitator* Bierig  
Under debris. November.
- 6 *Carpelimus flavipes* Erichson  
By car net at dusk. September.
- 7 *Carpelimus haplomus* Blackwelder  
Flying to light. November.
- 8 *Apocellus ustulatus* Erichson  
In dung. August.
- 9 *Oxytelus insignitus* Gravenhorst  
In dung. October.
- 10 *Oxytelus incisus* Motschulsky  
In dung. November. By car net. October.
- 11 *Bledius beattyi* Blackwelder  
"Collected the type under a stone at the edge of a small stream."  
Crique. October.

*Osoriinae*

- 1 *Thoracophorus brevicristatus* Horn  
Under rotting log. November. By car net at dusk. November.
- 2 *Paralispinus exiguus* Erichson  
In fungus. Annaly.

*Steninae*

- 1 *Stenus* sp.  
Det. E. A. Chapin. Under debris, Caledonia. June 1938.

*Paederinae*

- 1 *Lithocharis sororcula* Kraatz  
In dung, flying at dusk. October.
- 2 *Lithocharis secunda* Blackwelder  
In dung. By car net at dusk. November.
- 3 *Lithocharis limbata* Erichson  
In decaying fruit. November.
- 4 *Lithocharis dorsalis* Erichson  
By car net at dusk. November.
- 5 *Stilomedon audanti* Blackwelder  
By car net at dusk. November.
- 6 *Sunius debilicornis* Wollaston  
By car net at dusk. October.
- 7 *Scopaeus* sp.  
Det. E. A. Chapin. In flowers. August, 1938.
- 8 *Lobrathium nitidum* Erichson  
By car net at dusk. November.

*Staphylininae*

- 1 *Philonthus hepaticus* Erichson  
Under beached seaweed. November.
- 2 *Philonthus ventralis* Gravenhorst  
By car net at dusk. November.
- 3 *Philonthus discoidens* Gravenhorst  
In dung. August.
- 4 *Cafius subtilis* Cameron  
Under moist seaweed on beach. November.
- 5 *Cafius caribeus* Bierig  
Under moist seaweed.
- 6 *Cafius bistriatus* Erichson  
Under moist seaweed.
- 7 *Erichsonius humilis* Erichson  
By car net at dusk. October.

- 8 *Diochus nanus* Erichson  
In rotting fruit. By net at dusk. November.
- 9 *Xantholinus humeralis* Erichson  
In dung. August.
- 10 *Xantholinus beattyi* Blackwelder  
In dung.
- 11 *Leptacinus* sp.  
Det. E. A. Chapin. In debris, Caledonia. June 1938.

*Tachyporinae*

- 1 *Coproporus rutilus* Erichson  
By car net at dusk June 1938.

*Aleocharinae*

- 1 *Gyrophaena* sp.  
Det. E. A. Chapin. In rotting log, Prosperity. April 1938. In fungus, Annaly. November 1938.
- 2 *Atheta* sp.  
Det. E. A. Chapin. In dung. December 1937.

## SCAPHIDIIDAE

- 1 *Baeocera* sp.  
Det. H. S. Barber.

## HISTERIDAE

- 1 *Hister confinis* Er  
Det. H. S. Barber. In debris. December, 1937.
- 2 *Hister* sp.  
Det. H. S. Barber.

## LYCIDAE

- 1 *Thonalmus* sp.  
Det. H. S. Barber. On shrubbery. August 1936.
- 2 *Leptolycus* sp.  
Det. H. S. Barber. On shrubbery. April 1935.

## LAMPYRIDAE

- 1 *Pyractomena galeata* E. Olivier  
Det. H. S. Barber. East End. July 1935.

## CANTHARIDAE

- 1 *Belotus* sp.  
Det. H. S. Barber. By car net at dusk. October 1937.

## OEDEMERIDAE

- 1 *Oxacis* sp.  
Det. H. S. Barber. By car net at dusk. October 1937.
- 2 *Ananca vittata* Fabricius  
Colony in house, Cane Bay. April 1936.

## MELOIDAE

- 1 *Zonitis annulicornis* Chevrolat  
Det. H. S. Barber. By net at dusk. October.

## ELATERIDAE

- 1 *Chalcolepidius virginalis* Candèze  
Det. J. M. Valentine. At night. October.
- 2 *Aeolus* sp.  
Det. W. S. Fisher. On mangrove bush. October 1937.
- 3 *Conoderus bifoveatus* Beauvois  
Det. W. S. Fisher. Under scaling bark. October.
- 4 *Conoderus lividus* DeGeer  
Det. J. M. Valentine.

## BUPRESTIDAE

- 1 *Polycesta thomae* Chevrolat  
Det. W. S. Fisher.

## DERMESTIDAE

- 1 *Globicornis fulvipes* Guérin  
Det. H. S. Barber. By car net at dusk. November 1937.
- 2 *Attagenus* sp.  
Det. H. S. Barber. By car net at dusk. October 1939.

## NITIDULIDAE

Determinations by Edward A. Chapin.

- 1 *Carpophilus* sp.  
By car net at dusk. November 1938.
- 2 *Haptoncus luteolus* Erichson  
In ripe fruit of *Anacardium occidentale*. July.
- 3 *Stelidota geminata* Say  
On fruit of *Spondias purpurea*. May 1935.
- 4 *Stelidota* sp.  
By car net at dusk. October 1937.



5 *Lobiopa insularis* Castelnar

In ripe fruit of Mango, *Spondias mombin*, *Spondias purpurea*. September 1941.

6 *Eपुरaea* sp.

## MONOTOMIDAE

1 *Europs* sp.

Det. W. S. Fisher. By car net at dusk. October 1937.

## CUCUJIDAE

1 *Monanus concinnulus* Walker

Det. W. S. Fisher.

2 *Telephanus pallidulus* Chevrolat

Det. W. S. Fisher. By car net. October.

## CRYPTOPHAGIDAE

Determinations by W. S. Fisher.

1 *Cryptophagidae* Gen & sp.?2 *Loberus testaceus* Reitter

By car net at dusk. September 1937.

3 *Loberus* sp.

By car net at dusk. September 1937.

4 *Ephistemus* sp.

By car net at dusk. September 1937.

5 *Hapalips* sp.

By car net at dusk. September 1937.

## MYCETOPHAGIDAE

1 *Typhaea stercorea* L.

Det. W. S. Fisher. By car net at dusk. November 1937.

## PHALACRIDAE

1 *Phalacrus* sp.

Det. W. S. Fisher. By car net at dusk. September 1939.

## COCCINELLIDAE

Determinations by Edward A. Chapin.

1 *Scymnus* sp.

On shrubbery. October 1937.

2 *Decadiomus* sp.

On shrubbery. November 1939.

- 3 *Scymnillodes* sp.  
By car net at dusk. October 1939.
- 4 *Psyllobora lineola* F.  
By car net at dusk. November 1939.
- 5 *Coleomegilla cubensis* Casey  
By car net at dusk. October 1939.
- 6 *Cycloneda sanguinea limbifer* Casey  
By car net. October 1937.
- 7 *Azya* sp.
- 8 *Naemia seriata* Melsheimer

## ALLECULIDAE

- 1 *Hymenorus* sp.  
Det. E. A. Chapin.

## TENEBRIONIDAE

- 1 *Opatrinus anthracinus* Mulsant  
Det. R. E. Blackwelder.
- 2 *Opatrinus gemellatus* Olivier  
Det. E. A. Chapin. By net. October 1939.
- 3 *Blapstinus* n.sp.  
Det. E. A. Chapin. By net. October 1937.
- 4 *Blapstinus* n. sp.  
Det. E. A. Chapin. By net. October 1939.
- 5 *Phaleria variabilis* Quedenfeldt  
Det. E. A. Chapin. By net. October 1939.
- 6 *Diaperis maculata* Olivier  
Det. R. E. Blackwelder.
- 7 *Tribolium castaneum* Herbst  
Det. E. A. Chapin. By net. October 1939.
- 8 *Alphitobius diaperinus* Panzer  
Det. R. E. Blackwelder.
- 9 *Alphitobius piceus* Olivier  
Det. R. E. Blackwelder.
- 10 *Alphitobius* sp.  
Det. R. E. Blackwelder.
- 11 *Eutomus* sp.  
Det. E. A. Chapin.
- 12 *Zophobas morio* F.  
Det. E. A. Chapin.
- 13 *Prateus* sp.  
Det. E. A. Chapin. By car net at dusk. October 1939.

14 *Trachyscelis* sp.

Det. E. A. Chapin. By car net at dusk. October 1939.

## PTINIDAE

1 *Gibbium psylloides* Czemp.

Det. W. S. Fisher.

2 *Ptinus* sp.

Det. W. S. Fisher. By car net at dusk. October 1937.

## ANOBIIDAE

## 1 Anobiidae Gen &amp; sp.

Det. W. S. Fisher. By car net at dusk. October 1937.

## BOSTRYCHIDAE

Determinations by W. S. Fisher.

1 *Apate monachus* F.

By car net at dusk. September 1937.

2 *Tetrapriocera tridens* F.

Under log. September 1937.

3 *Xylomeira torquata* F.

## CISIDAE

1 *Cis hirtellus* Jacq. Duval

Det. J. M. Valentine.

2 *Cis* sp.

Det. W. S. Fisher. By car net at dusk. October. On fungus.  
January 1939.

3 *Ceracis* sp.

Det. W. S. Fisher. On fungus. November 1938.

## SCARABAEIDAE

Determinations by E. A. Chapin.

1 *Aphodius lividus* Olivier

In dung. December 1937.

2 *Aphodius cuniculus* Chevrolat

In dung. April 1941.

3 *Pleurophorus parvulus* Chevrolat4 *Ataenius frater* Leconte

In dung. April 1941.

5 *Ataenius edwardsi* Chapin

In dung. June 1939.

- 6 *Ataenius gracilis* Melsheimer  
By car net at dusk. October 1939.
- 7 *Ataenius miamii* Cartw.  
By car net at dusk. October 1939.
- 8 *Ataenius darlingtoni* Hntn.  
By car net at dusk. October 1939. In manure. December 1937.
- 9 *Ataenius imbricatus* Melsheimer  
In dung. April 1941.
- 10 *Ataenius strigicauda* Bates  
By car net at dusk. September 1937.
- 11 *Ataenius beattyi* Chapin  
In dung. April 1938.
- 12 *Trox suberosus* F.  
Under debris. August 1936. At light. November 1944.
- 13 *Phyllophaga microphylla* Moser  
Feeding at night on leaves of *Terminalia catappa*. September 1938.  
On leaves of *Genipa americana*. August.
- 14 *Ligyris tumulosus* Burmeister  
At light. September 1936.
- 15 *Ligyris cuniculus* F.  
At light. September 1936.
16. *Strataegus barbigerus* Chapin  
At light. October 1936.

## CERAMBYCIDAE

Determinations by W. S. Fisher.

- 1 *Methia necydalea* F.
- 2 *Chlorida festiva* L.
- 3 *Eburia decemmaculata* F.  
At light. September 1936.
- 4 *Elaphidion insulare* Neuman  
Larvae in branch of *Annona squamosa*. August 1935.
- 5 *Heterachthes cylindricollis* F.
- 6 *Heterachthes quadrimaculatus* F.  
At light. September 1936.
- 7 *Stizocera vanzwaluwenburgi* Fisher
- 8 *Cylindera flava* F.  
At light. September 1936.
- 9 *Lagochirus araneiformis* Linn.
- 10 *Leptostylus testaceus* Froelich  
At light. September 1936.

- 11 *Lepturges guadeloupensis* Fleutiaux & Sallé  
 12 *Ataxia alboscuteolata* Fisher  
 By net. September 1936.  
 13 *Estola* sp.  
 "Probably a new species but do not like to describe it on a single specimen."

## CHRYSOMELIDAE

Determinations by H. S. Barber.

- 1 *Lema* sp.  
 2 *Nodonota* sp.  
 By car net at dusk. November 1937.  
 3 *Cerotoma ruficornis* Olivier  
 By car net at dusk. October 1937.  
 4 *Homophoeta albicollis* F.  
 By car net at dusk. October 1939.  
 5 *Oedionychis bicolor* L.  
 6 *Podagrica* sp.  
 7 *Altica*, near *purpurescens* Suffrian  
 On shrubbery. September 1938.  
 8 *Altica* sp.  
 On shrubbery. September 1938.  
 9 *Chalepus sanguinicollis* L.  
 By car net at dusk. November 1937.  
 10 *Phyllotreta fallax* Suffrian  
 11 *Deloyala guttata* Olivier  
 Swept from shrubbery. October 1937.

## BRUCHIDAE

- 1 *Callosobruchus maculatus* F.  
 Det. H. S. Barber. November 1939.

## BRENTIDAE

- 1 *Brentus volvulus* L.  
 Under scaling bark of decaying tree. November 1939.

## CURCULIONIDAE

Determinations by L. L. Buchanan.

- 1 *Artipus* sp.  
 September 1937.  
 2 *Diaprepes abbreviatus rohrii* F.  
 On shrubbery. September 1937.

- 3 *Lachnopus curvipes* F.  
On acacia bush. November 1938.
- 4 *Apodrusus*, near *argentatus* Wolcott
- 5 *Anthonomus* sp.  
Reared from larvae in ripe fruit of *Malpighia puniceifolia*. May 1941.
- 6 *Anacentrinus* sp.  
By net. September 1937.
- 7 *Sternechus* sp.
- 8 *Chalcodermus* sp.  
Eaten by frog *Eleutherodactylus lentus*. August 1936.
- 9 *Chalcodermus ebeninus* Boheman  
On corn. July 1938.
- 10 *Euscepes batata* Waterhouse  
In sweet potatoes. February 1936.
- 11 *Anchonus* sp.  
On shrubbery. September 1937.
- 12 *Cassonus canaliculatus* F.  
On shrubbery. September 1937.
- 13 *Metamasius hemipterus* Linn.  
On shrubbery. September 1938. Specimens were infested with *Analgasid* mites attached to thorax.
- 14 *Cosmopolites sordidus* Germar  
January 1936. From roots of banana.
- 15 *Calendra (Calandra) oryzae* Linn.  
In stored corn.
- 16 *Cryptorhynchinae*  
"Genus not found."

## SCOLYTIDAE

Determinations by M. W. Blackman.

- 1 *Hypothenemus flavipes* Hopkins  
In seed pod of *Albizia lebbek*. April 1936.
- 2 *Coccotrypes* sp.  
By car net at dusk. October 1937.
- 3 *Xyleborus affinis* Eichoff  
By car net at dusk. October 1937.
- 4 *Xyleborus confusus* Eichoff  
By car net at dusk. October 1937.
- 5 *Xyleborus sacchari* Hopkins  
Car net at dusk. October 1937.
- 6 *Xyleborus propinquus* Eichoff  
Car net at dusk. October 1937.

## DIPTERA

I am greatly indebted to Alan Stone for his determinations in the *Culicidae* at a time when I was engaged in Malaria control and *Filaria* studies with the Department of Health. The *Culicoides* were examined by the late W. A. Hoffman. The bulk of Diptera was determined by C. T. Greene and D. G. Hall. A small collection of *Hippoboscidae* and *Streblidae* was determined by J. Bequaert.

## TIPULIDAE

Determinations by Alan Stone.

- 1 *Limonia* (*Rhipidia*) *domestica* Osten Sacken  
December 1937.
- 2 *Limonia* (*Geranomyia*) *antillarum* Alexander  
At light. December 1937.
- 3 *Limonia* (*Geronomyia*) *virescens* Loew  
December 1937.
- 4 *Limonia* sp.  
December 1937.
- 5 *Limonia* sp.  
December 1937.

## PSYCHODIDAE

- 1 Psychodidae Gen & sp.  
Det. C. T. Greene.

## CHIRONOMIDAE

- 1 Chironomidae Gen & sp.  
Det. C. T. Greene. October 1935.
- 2 *Chironomus* sp.  
Det. A. Stone. October 1935.
- 3 *Chironomus redeuns* Walker  
Det. C. T. Greene. August 1935.

## CERATOPOGONIDAE

- 1 *Culicoides furens* Poey  
Det. W. A. Hoffman. A vicious feeder. July 1935.
- 2 *Culicoides laughnani* Edwards  
Det. W. A. Hoffman. Found breeding in fresh water puddles near streams. May 1936, August 1936.
- 3 *Culicoides* sp. near *laughnani*  
Det. W. A. Hoffman. August 1938.

- 4 *Culicoides* n. sp.  
Det. W. A. Hoffman. Taken at Crique Dam. January 1936.  
Constitution Hill. May 1936, January 1937. Diamond. Sep-  
tember 1938.
- 5 *Forcipomyia propinqua* Williston  
Swarming at dusk. October 1937. Det. Alan Stone.
- 6 *Forcipomyia raleighi* Macfie  
Det. H. K. Townes. October 1936.
- 7 *Forcipomyia* sp.  
Det. A. Stone. December 1937.
- 8 *Dasyhelea* sp.  
Det. A. Stone. Peters Rest School. December 1937.
- 9 *Bezzia setulosa* Loew  
Peters Rest School, December 1937. Det. A. Stone.

## CULICIDAE

Determinations by Alan Stone.

- 1 *Corethrella appendiculata* Grabham  
Rearing from larvae in tree holes. October 1935.
- 2 *Anopheles albimanus* Wiedemann  
Larvae found wherever there are collections of fresh water, preferably  
in unshaded situations. October 1935.
- 3 *Anopheles grabhamii* Theobald  
Strictly a fresh water species, the larvae found in shaded pools and  
sluggish streams. October 1935.
- 4 *Uranotaenia loewii* Theobald  
Uncommon. Larvae collected in fresh water pools. September 1935.
- 5 *Uranotaenia cooki* Root  
Rare, larvae found in shaded pools. October 1936.
- 6 *Psorophora jamaicensis* Theobald  
Larvae in fresh rain pools in pasturelands. August 1935.
- 7 *Psorophora pygmaea* Theobald  
Rain pools and near the coast in slightly brackish pools. October  
1935.
- 8 *Psorophora insularia* Dyar & Knab  
Adults were taken by net at Williams Pond. November 1935.
- 9 *Psorophora coffini* Dyar & Knab  
Adults by net. Christiansted. October 1935.
- 10 *Aedes taeniorhynchus* Wiedemann  
Larvae in fresh water pools. Adults biting by day. September 1935.



- 11 *Aedes mediovittatus* Coquillett  
Larvae in water holes in trees, adults biting by day. Common in jungles. October 1935.
- 12 *Aedes aegypti* L  
Common about dwellings. Breed in fresh water. 1935.
- 13 *Aedes scapularis* Rondani  
Larvae in rain pools. September 1936.
- 14 *Aedes sollicitans* Walker  
Larvae in slightly brackish rain pools at Liaka. November 1936.
- 15 *Aedes tortilis* Theobald  
Larvae in rain pools. East End. August 1935.
- 16 *Culex bahamensis* Dyar & Knab  
Larvae in black masses in brackish pools near the coast. August 1935.
- 17 *Culex habitator* Dyar & Knab  
Common. Breeds in fresh water. September 1935.
- 18 *Culex nigripalpus* Theobald  
Breeds in fresh water and sometimes the larvae are found in slightly brackish pools. May 1935.
- 19 *Culex quinquefasciatus* Say  
Breeds in fresh water, rarely in slightly brackish pools. September 1935.
- 20 *Culex atratus* Theobald  
Larvae found in fresh and slightly brackish pools. March 1935.
- 21 *Culex erraticus* Dyar & Knab  
Larvae in fresh water pool. December 1935.
- 22 *Culex infictus* Theobald  
In fresh water pools. January 1937.
- 23 *Culex americanus* N. L.  
Adults were taken from a rotting palm trunk which had become hollowed out. Crique. 1938.
- 24 *Culex chrysonotum* Dyar & Knab  
Larvae from fresh water pool. September 1935.
- 25 *Culex* sp.  
Captured on arm, Fairplain. February 1936. Crique. August 1938.
- 26 *Deinocerites cancer* Theobald  
Breeds in slightly brackish water, preferably down in large land-crab holes. November 1935.

## MYCETOPHILIDAE

- 1 *Mycetophila insipiens* Williston  
Det. A. Stone. 1935.

- 2 *Sciara* sp.  
Det. A. Stone.

## CECIDOMYIDAE

- 1 *Diplosis* sp.  
Det. C. T. Greene. From sorghum. April 1936.  
2 Cecidomyidae gen. & sp.  
Det. C. T. Greene. 1936.

## SIMULIIDAE

- 1 *Simulium quadrivittatum* Loew  
Adults taken on arm biting man. Not a common species. Crique.  
1936.

## STRATIOMYIDAE

- Determinations by C. T. Greene.  
1 *Hermetia illucens* Linn.  
Preyed upon by *Stictia signata*. January 1936.  
2 *Neorondania chalybea* Wiedemann 1936  
3 *Cyphomyia marginata* Loew  
Resting on orange leaves. May 1937.  
4 *Cyphomyia lasiophthalmus* Williston  
September 1938.  
5 *Euryneurasoma slossonae* Johnson  
August 1937.

## TABANIDAE

- 1 *Stenotabanus stigma* F.  
Det. A. Stone. Taken on dog. August 1941.

## BOMBYLIIDAE

- Determinations by C. T. Greene.  
1 *Anthrax aedipus* Fabr.  
August 1936.  
2 *Anthrax* sp.  
August 1936.  
3 *Hyperalonia cerberus* Fabr.  
August 1936.  
4 *Villa fauna* Fabr.  
May 1938.  
5 *Bombylius* sp.

## ASILIDAE

- 1 *Leptogaster* sp.  
April 1938.
- 2 *Ommatius marginellus* Fabr.  
April 1936.

## DOLICHOPODIDAE

Determinations by C. T. Greene.

- 1 *Chrysotus* sp.  
April 1936.
- 2 *Gymnopternus* sp.  
"Shining green." May 1936, August 1936, June 1941.
- 3 *Plagioneurus univittatus* Loew  
On swamp grass. May 1936.
- 4 *Pelastoneurus unguiculatus* Aldrich  
On swamp grass. May 1936.
- 5 *Dolichopodidae* gen & sp.  
"Near *Mesorhaga*." On grass. May 1936.
- 6 *Sciapus graenicheri* Van Duzee  
September 1940.

## EMPIDIDAE

- 1 *Drapetis* sp.  
Det. C. T. Greene.

## PHORIDAE

- 1 *Megaselida scalaris* Loew  
February 1936. Det. C. T. Greene.
- 2 *Megaselida* sp.  
Det. C. T. Greene. Reared from larvae in rotting fruit of  
*Anacardium occidentale*. June 1937.
- 3 *Puliciphora* sp.  
September 1936.

## SYRPHIDAE

Determinations by C. T. Greene. Specimens swept from grass.

- 1 *Baccha clavata* F.  
March 1937.
- 2 *Baccha conformis* Loew  
November 1936.
- 3 *Baccha cylindrica* F.  
August 1936.

- 4 *Baccha dimidiata* F.  
August 1936.
- 5 *Baccha latiusculus* Loew  
April 1936.
- 6 *Baccha stenogaster* Williston  
August 1936.
- 7 *Toxomerus geminatus* Say  
September 1941.
- 8 *Toxomerus politus* Say  
August 1938.
- 9 *Toxomerus* sp.  
"Banded abdomen." Grove Place. January 1941.
- 10 *Allograpta fuscisquama* Curran  
September 1936.
- 11 *Allograpta venusta* Curran  
August 1936.
- 12 *Volucella unipunctata* Curran  
September 1937.
- 13 *Eristalis vinetorum* Fabr.  
October 1940.

## TACHINIDAE

- Determinations by D. G. Hall.
- 1 Tachinidae gen & sp.  
August 1936.
  - 2 *Trichopoda haiiensis* Desvoidy  
October 1936
  - 3 *Trichopoda* sp.  
Preyed upon by *Stictia signata*. November 1936.
  - 4 *Lydella bigeminata* Curran  
August 1936.
  - 5 *Ocyptera* sp.  
August 1936.
  - 6 *Nemorilla maculosa* Macquart  
October 1938.
  - 7 *Phorocera divisa* Aldrich & Webber  
Adults in dwellings. May 1941.
  - 8 *Argyrophylax* sp.  
April 1936, August 1936.
  - 9 *Ormia* sp.  
April 1936.

- 10 *Gonia* sp.  
May 1941.

## SARCOPHAGIDAE

- 1 *Sarcophagula occidua* Fabr.  
January 1936. Det. D. G. Hall.  
2 *Sarcophaga hillifera* Aldrich  
Det. M. T. James. October 1943.  
3 *Sarcophaga* sp.  
Det. D. G. Hall. November 1936.  
4 *Helicobia surrubea* V. de W.  
March 1936.

## MUSCIDAE

- 1 Muscidae  
Genus uncertain. Det. D. G. Hall. October 1938.  
2 *Cochliomyia macellaria* F.  
Reared from larvae taken off dead animals. Det. D. G. Hall.  
3 *Lucilia eximia* Macquart  
Det. M. T. James. August 1936.  
4 *Lucilia* sp.  
Det. D. G. Hall. Preyed upon by *Stictia signata*. November 1936.  
5 *Pyrellia* sp.  
Det. D. G. Hall. August 1936.  
6 *Morellia scapulata* Bigot  
Det. D. G. Hall. March 1936.  
7 *Orthellia* sp.  
Det. D. G. Hall. September 1937.  
8 *Synthesiomia nudiseta* V de W.  
Det. M. T. James. October 1938.  
9 *Musca domestica* L.  
Det. D. G. Hall. November 1936.  
10 *Haematobia irritans* L.  
Annoying domestic animals. Det. D. G. Hall. 1941.  
11 Muscinae gen & sp.  
Det. D. G. Hall. On fruit of *Calyptrocordia alba*. 1936.

## ANTHOMYIIDAE

Determinations by D. G. Hall.

- 1 Anthomyiidae gen & sp.  
Swept from grass. August 1936.

- 2 *Anthomyiidae* gen & sp.  
August 1936.
- 3 *Anthomyiidae* gen & sp.  
Hovering about dead horse. April 1936.
- 4 *Anthomyia* sp.  
Swarming. June 1941.
- 5 *Atherigona orientalis* Schiner  
September 1938.
- 6 *Lispa* sp.  
August 1936.
- 7 *Phaonia* sp.  
April 1936.
- 8 *Fannia femoralis* Stein  
November 1936.

## BORBORIDAE

- 1 *Leptocera* sp.  
Det. D. G. Hall. July 1938.
- 2 *Leptocera discalis* Malloch  
October 1937.

## SAPROMYZIDAE

Determinations by D. G. Hall. Material swept from vegetation.

- 1 *Sapromyzidae*  
Probably *Camptoprosopella* sp. August 1936.
- 2 *Carpolonchaea pendula* Bezzi  
June 1941.
- 3 *Neogriphoneura sordida* Wiedemann  
September 1938.
- 4 *Sapromyza* sp.  
June 1941.
- 5 *Minettia* sp.  
April 1941.
- 6 *Minettia slossonae* Coquillett  
April 1941.

## ORTALIDAE

Determinations by C. T. Greene. Material swept from vegetation.

- 1 *Acrosticta* n. sp.  
"Red abdomen." June 1941.
- 2 *Euxesta annonae* Fabr.  
June 1941.

- 3 *Euxesta spoliata* Loew  
June 1941.
- 4 *Euxesta thomae* Loew  
June 1941.
- 5 *Euxesta stigmatias* Loew  
June 1941.
- 6 *Euxesta sororcula* Wiedemann  
June 1941.

## TRYPETIDAE

- 1 *Anastrepha mombinpraeoptans* Sein  
Det. A. Stone. Reared from larvae in *Spondias mombin*, August-October, 1940. Reared from *Spondias purpurea*.
- 2 *Ensina piccicola* Bigot  
Det. C. T. Greene. September 1942.
- 3 *Trypanea dacetoptera* Phillips  
Det. C. T. Greene. June 1943.

## SEPSIDAE

- 1 *Sepsis pusio* Schiner  
Det. D. G. Hall. August 1936.
- 2 *Sepsis* sp.  
Det. D. G. Hall. August 1936.

## EPHYDRIDAE

Determinations by D. G. Hall. Material swept from grass.

- 1 Ephydridae gen & sp.  
May 1937.
- 2 *Discomyza dubia* Williston  
November 1939.
- 3 *Discomyza maculipennis* Wiedemann  
November 1939.
- 4 *Paralimna obscura* Williston  
September 1938.
- 5 *Psilopa nigrimana* Williston  
May 1937.
- 6 *Psilopa* sp.  
June 1941.
- 7 *Ceropsilopa* sp.  
December 1940.
- 8 *Plagiops nitidifrons* Cresson  
June 1940.

- 9 *Scatella* sp.  
November 1946.

## CHLOROPIDAE

- 1 Chloropidae gen & sp.  
Det. D. G. Hall. October 1939.
- 2 *Hippelates apicata* Malloch  
On sores. Det. C. W. Sabrosky. October 1939.
- 3 *Hippelates peruanus* Becker  
On dogs. Det. C. W. Sabrosky. November 1939.
- 4 *Hippelates lutzii* Curran  
Det. C. W. Sabrosky. On sores. October 1939.
- 5 *Hippelates currani* Aldrich  
Det. C. W. Sabrosky. October 1939.
- 6 *Hippelates* sp. near *impressus* Becker  
On sores. Det. D. G. Hall. October 1939.
- 7 *Pseudogaurax lancifer* Coquillett  
Det. D. G. Hall. Reared from egg sacs of spider. August 1941.
- 8 *Conioscinella mars* Curran  
Det. C. W. Sabrosky. October 1939.
- 9 *Oscinellinae* gen & sp.  
Det. D. G. Hall. April 1936.
- 10 *Oscinella forbesi* Curran  
Det. C. W. Sabrosky. April 1936.
- 11 *Oscinella sicatrix* Curran  
Det. C. W. Sabrosky. April 1936.
- 12 *Oscinella* sp  
Det. D. G. Hall. April 1936.

## ASTEIIDAE

- 1 *Sigaloessa*  
"Possibly this genus." Det. C. W. Sabrosky. November 1939.

## DROSOPHILIDAE

- Determinations by C. T. Greene. Material swept from shrubbery.
- 1 *Drosophila melanogaster* Meigen  
June 1941.
- 3 *Drosophila repleta* Wollaston  
July 1935.
- 4 *Drosophila busckii* Coquillett  
August 1936.



- 5 *Drosophila similis* Williston  
September 1941.
- 6 *Drosophila* sp.  
April 1936.
- 7 *Drosophila* sp.  
March 1941.
- 8 *Cladochaeta nebulosa* Coquillett  
July 1939.
- 9 *Leucophenga* sp. near *varia* Walker  
September 1936.

## AGROMYZIDAE

- 1 *Agromyza viridula* Coquillett  
Det. C. T. Greene.
- 2 *Agromyza virens* Loew  
Det. C. T. Greene.
- 3 *Agromyza longicauda* Curran  
Det. C. T. Greene.
- 4 *Agromyza* sp.  
Det. C. T. Greene. June 1941.

## MILICHIIDAE

- 1 *Milichiella lacteipennis* Loew  
Det. D. G. Hall. March 1939.
- 2 *Milichiella* sp.  
Det. C. T. Greene. August 1939.
- 3 *Desmometopa M-nigrum* Zetterstedt  
Det. C. T. Greene. March 1939.

## HIPPOBOSCIDAE

- 1 *Ornithoetona erythrocephala* Leach  
Taken off Red-tailed Hawk, *Buteo j. jamaicensis*. Det. J. Bequaert.  
1937.
- 2 *Pseudolynchia maura* Bigot  
Off Ground Dove, *Columbigallina passerina nigrirostris*. Det. A.  
Stone. 1936.
- 3 *Microlynchia pusilla* Speiser  
Off Ground Dove, *Columbigallina passerina nigrirostris*. Det. A.  
Stone. 1936.
- 4 *Olfersia aenescens* Thompson  
Off White-bellied Booby, *Sula leucogaster*. Det. J. Bequaert. 1936.

- 5 *Olfersia fossulata* Macquart  
Taken by net from bush. Det. J. Bequaert. 1936.
- 6 *Olfersia spinifera* Leach  
Off Frigate-bird, *Fregata magnificens rothschildi*. Det. J. Bequaert. 1936.
- 7 *Olfersia erythrospis* Bigot  
Off Blue-faced Booby, *Sula d. dactylatra*. Det. A. Stone. 1936.
- 8 *Olfersia sordida* Bigot  
By net on shrubbery. Det. A. Stone. April 1936.
- 9 *Melophagus ovinus* Linn.  
Off domestic sheep. 1936.

## STREBLIDAE

Determinations by J. Bequaert.

- 1 *Trichobius truncatus* Kessel  
Off fruit bat, *Brachyphylla cavernarum*. 1938.
- 2 *Trichobius mixtus* Curran  
Off fruit bat, *Artibeus jamaicensis*. 1945.
- 3 *Trichobius sparsus* Kessel  
Off fruit bat, *Artibeus jamaicensis*. 1945.
- 4 *Pterellipsis aranea* Coquillett  
Off fruit bat, *Artibia jamaicensis*. 1945.

## SIPHONAPTERA

## TUNGIDAE

- 1 *Tunga penetrans* Linn.  
Taken from man.
- 2 *Echidnophaga gallinacea* Westwood  
Off rat (*Rattus fatus alexandrinus*).

## PULICIDAE

- 1 *Pulex irritans* Linn.  
Taken off man.
- 2 *Xenopsylla cheopis* Rothschild  
Off gray rat (*Rattus r. alexandrinus*).
- 3 *Ctenocephalides canis* Curtis  
Common on dogs, mongoose (*Herpestes birmanicus*), and occasionally on man.
- 4 *Ctenocephalides felis* Bouché  
Taken off cats, dogs and mongoose (*Herpestes birmanicus*).

## LEPIDOPTERA

The compiler made determinations in the Rhopalocera after Comstock, and a few species also in *Arctiidae*, *Sphingidae* and *Noctuidae*. However a collection of the microlepidoptera was examined by W. T. Forbes and he has identified the Lesser Antillean form of the monarch butterfly. The bulk of the material was worked over by W. D. Field, C. Heinrich, J. F. Gates Clarke and H. W. Capps and I am indebted to them all for their labors.

## Suborder RHOPALOCERA

## DANAIDAE

- 1 *Danaus plexippus leucogyne* Butler  
November 1936.
- 2 *Danaus plexippus megalippe* Hubner  
Det. W. T. Forbes. November 1944.

## NYMPHALIDAE

- 1 *Heliconius c. charithonius* L.  
February 1936.
- 2 *Heliconius charithonius punctatus* Hall  
February 1936.
- 3 *Dione vanillae insularis* Maynard  
November 1936.
- 4 *Junonia evarete zonalis* C. R. Felder  
This is the common form. October 1936.
- 5 *Junonia evarete incarnata* C. R. Felder  
This species is restricted to the coastal area where it is not uncommon in the salt marshes, but is extremely active and difficult to capture.  
November 1936.
- 6 *Anartia jatrophae intermedia* Munroe  
Common. November 1936.
- 7 *Metamorpha stelenes stelenes* L.  
Common in woods. October 1936.
- 8 *Biblis hyperia hyperia* Cramer  
Common in the woods. October 1936.
- 9 *Hypolimnas missippus* L.  
Rare. Only six specimens have been taken and all of these were in the fall of the year. October 1936.
- 10 *Eunica tatila tatilista* Kaye  
A rare fly. August 1937.

11 *Anaea troglodyta astina* Fabr.

A rare butterfly which has been taken only four times and in the fall of the year. August 1935.

## LYCAENIDAE

1 *Thecla acis mars* Fabr.

December 1936.

2 *Thecla angelia boyeri* Comstock & Huntington

November 1936.

3 *Thecla simaethis simaethis* Drury

January 1936.

4 *Thecla bubastus ponce* Comstock & Huntington

October 1936.

5 *Thecla antiqua* Comstock & Huntington

November 1936.

6 *Leptotes cassius catilina* Fabr.

November 1936.

7 *Hemiargus ammon woodruffi* Comstock & Huntington

September 1936.

8 *Hemiargus hanno watsoni* Comstock & Huntington

September 1936.

## PIERIDAE

1 *Phoebis (Phoebis) sennae sennae* L.

September 1936.

2 *Eurema (Eurema) दौरा ebriola* Poey

October 1937.

3 *Eurema (Eurema) elathea* Cramer

September 1938.

4 *Eurema (Pyrisitia) lisa euterpe* Ménétries

February 1936.

5 *Appias (Glutophrissa) drusilla boydi* Comstock

A rare species. January 1936.

6 *Ascia monuste eubotea* Latreille

Common. October 1936.

7 *Ascia monuste virginia* Latreille

Common. September 1936.

## PAPILIONIDAE

1 *Papilio polydamus thymus* Rothschild & Jordan

January 1936.

## HESPERIIDAE

- 1 *Polygonus lividus* Hübner  
August 1936.
- 2 *Urbanus proteus* L.  
A common species, larvae parasitized by *Apanteles leucostigma*.  
November 1936.
- 3 *Urbanus proteus cramptoni* Comstock  
This species has not been collected here.
- 4 *Pyrgus syrichtus* Fabr.  
Common. August 1935.
- 5 *Achlyodes papinianus minor* Comstock  
January 1936.
- 6 *Ephyriades arcas* Drury  
October 1936.
- 7 *Wallengrenia otho mutchleri* Watson  
November 1937.
- 8 *Choranthus vitellius* Fabr.  
September 1936.
- 9 *Lerodea tripuncta* Herrich-Schaffer  
October 1936
- 10 *Calpodus ethlius* Cramer  
November 1937.
- 11 *Panoquina nyctelia* Latreille  
October 1936.
- 12 *Panoquina sylvicola woodruffi* Watson  
December 1937.
- 13 *Panoquina p. panoquinoides* Skinner  
September 1938.

## Suborder HETEROCERA

## AMATIDAE

- 1 *Mollodeta partheni* F.  
Det. W. D. Field. February 1937.
- 2 *Cosmosoma achemon tyrrhene* Hübner  
Det. W. D. Field. November 1937.
- 3 *Horama* sp.  
Det. W. D. Field. February 1937.

## ARCTIIDAE

- 1 *Epantheria icasia* Cramer  
February 1936.

- 2 *Utetheisa ornatix ornatix* L.  
November 1935.

## NOCTUIDAE

- 1 *Heliothis obsoleta* F.  
Det. L. O. Howard. Experiment Station collection.
- 2 *Heliothis virescens* F.  
Det. C. Heinrich. December 1936.
- 3 *Xanthopastis timais* Cramer  
December 1936.
- 4 *Leucania humidicola* Guenée  
Det. C. Heinrich. December 1936.
- 5 *Leucania multilinea* Walker  
Det. C. Heinrich. December 1936.
- 6 *Perigea cupentia* Cramer  
Det. C. Heinrich. December 1936.
- 7 *Perigea concisa* Walker  
Det. C. Heinrich. December 1936.
- 8 *Catabena vitrina* Walker  
Det. C. Heinrich. December 1936.
- 9 *Prodenia ornithogalli* Guenée  
Det. L. O. Howard. Exp. Station coll.
- 10 *Laphygma frugiperda* Smith & Abbot  
Det. C. Heinrich. December 1936.
- 11 *Xylomiges sunia* Guenée  
Det. L. O. Howard. Exper. Station collection.
- 12 *Micrathetis triplex* Walker  
Det. C. Heinrich. December 1936.
- 13 *Atethmia subusta* Hübner  
Det. C. Heinrich. December 1936.
- 14 *Atethmia oula* Dyar  
Det. C. Heinrich. December 1936.
- 15 *Cobubatha quadrifera* Zeller  
Det. C. Heinrich. December 1936.
- 16 *Paectes obrotunda* Guenee  
Det. C. Heinrich. December 1936.
- 17 *Paectes* sp.  
Det. C. Heinrich. December 1936.
- 18 *Pelamia repanda* F.  
Det. J. F. Gates Clarke. September 1936.
- 19 *Phytometra ni* Hübner  
Det. L. O. Howard. Exp. Station collection.

- 20 *Phytometra* oo Cramer  
Det. L. O. Howard. Exp. Station collection.
- 21 *Melipotis contorta* Guenée  
Det. C. Heinrich. December 1936.
- 22 *Erebus odora* Linn.  
Det. C. Heinrich. November 1936.
- 23 *Concana disgrega* Möschler  
Det. C. Heinrich. December 1936.
- 24 *Concana* sp.  
new? Det. C. Heinrich. December 1936.
- 25 *Noropsis hieroglyphica* Cramer  
Det. C. Heinrich. November 1936.
- 26 *Alabama argillacea* Hübner  
Det. L. O. Howard. Exp. Station collection.
- 27 *Gonodonta nitidimacula* Guenée  
Det. C. Heinrich. December 1936.
- 28 *Anticarsia gemmatalis* Hübner  
Det. C. Heinrich. December 1936.
- 29 *Epidromia pannosa* Guenée  
Det. L. O. Howard. Exp. Sta. collection.

## SPHINGIDAE

- 1 *Herse cingulata* Fabr.  
November 1936.
- 2 *Phlegethontius rusticus rusticus* Fabr.  
November 1936.
- 3 *Phlegethontius sextus jamaicensis* Butler  
November 1936.
- 4 *Erinnyis alope* Drury  
November 1936.
- 5 *Erinnyis ello* Linn.  
November 1936.
- 6 *Pholus vitis vitis* Linn.  
November 1936.
- 7 *Xylophanes pluto* Fabr.  
November 1936.
- 8 *Xylophanes tersa* Linn.  
November 1936.
- 9 *Celerio lineata lineata* Fabr.  
November 1936.

## GEOMETRIDAE

- 1 *Semiothisa paleolata* Guenée  
Det. H. W. Capps. January 1937.
- 2 *Racheospila* sp.  
Det. H. W. Capps. January 1937.

## PYRALIDAE

*Pyraustinae*

- 1 *Zinckenia fascialis* Cramer  
Det. L. O. Howard. Exp. Sta. coll.
- 2 *Syngamia florella* Cramer  
Det. C. Heinrich. November 1936.
- 3 *Pilocrocis tripunctata* F.  
Det. C. Heinrich. November 1936.
- 4 *Mesocondyla concordalis* Hübner  
Det. C. Heinrich. December 1936.
- 5 *Dichogramma fernaldi* Möscher  
Det. C. Heinrich. November 1936.
- 6 *Sylepta onophasalis* Walker  
Det. C. Heinrich. December 1936.
- 7 *Sylepta gordialis* Guenée  
Det. L. O. Howard. Exp. Sta. Coll.
- 8 *Sylepta patagialis* Zeller  
Det. L. O. Howard. Exp. Sta. coll.
- 9 *Lygropia flavofuscalis* Smellen  
Det. L. O. Howard. Exp. Sta. coll.
- 10 *Margaronia phlegia* Cramer  
Det. L. O. Howard. Exp. Sta. coll.
- 11 *Margaronia elegans* Möscher  
Det. L. O. Howard. Exp. Sta. coll.
- 12 *Margaronia immaculalis* Guenée  
Det. L. O. Howard. Exp. Sta. coll.
- 13 *Margaronia hyalinata* Linn.  
Det. L. O. Howard. Exp. Sta. coll.
- 14 *Margaronia costata* F.  
Det. C. Heinrich. November 1936.
- 15 *Ommatospila marcaeusalis* Walker  
Det. L. O. Howard. Exp. Sta. coll.
- 16 *Sameodes mopsalis* Walker  
Det. C. Heinrich. December 1936.



- 17 *Psara phaeopteralis* Guenée  
Det. L. O. Howard. Exp. Sta. coll.
- 18 *Psara bipunctalis* F.  
Det. L. O. Howard. Exp. Sta. coll.
- 19 *Noctuelia thalialis* Walker  
Det. L. O. Howard. Exp. Sta. coll.
- 20 *Leucinodes* sp.  
Det. C. Heinrich. December 1936.
- 21 *Loxostege bifidalis* Fabr.  
Det. L. O. Howard. Exp. Sta. coll.
- 22 *Hapalia vinotinctalis* Hampson  
Det. L. O. Howard. Exp. Sta. coll.
- 23 *Pyrausta phoenicealis* Hübner  
Det. L. O. Howard. Exp. Sta. coll.

*Chrysauginae*

- 1 *Pachymorphus subductellus* Möschler  
Det. C. Heinrich. November 1937.

*Crambinae*

- 1 *Diatraea saccharalis* F.  
Det. C. Heinrich. September 1936.
- 2 *Argyria diplomachalis* Dyar  
Det. C. Heinrich. November 1936.

*Phyctinae*

- 1 *Hyalospila* sp.  
Det. C. Heinrich. November 1937.
- 2 *Plodia interpunctella* Hübner  
Det. L. O. Howard. Exp. Sta. coll.
- 3 *Ephesiodes* sp.  
Det. C. Heinrich. October 1936..

## HYBLAEIDAE

- 1 *Hyblaea puera* Cramer  
Det. C. Heinrich. September 1936.

## YPONMEUTIDAE

- 1 *Plutella maculipennis* Curtis  
Det. L. O. Howard. Exp. Sta. coll.

## COSMOPTERYGIDAE

- 1 *Pyroderces rileyi* Walsingham  
Det. L. O. Howard. Exp. Sta. coll.

## BLASTOBASIDAE

- 1 Blastobasidae gen & sp.  
Det. C. Heinrich. November 1936.

## APOSTEGIDAE

- 1 *Apostega* sp. probably *trinidadensis* Busck  
Det. J. F. Gates Clarke. 1937.

## GELECHIIDAE

- 1 *Sitotroga cerealella* Olivier  
Det. L. O. Howard. Exp. Sta. coll.  
2 *Aristotelia* sp.  
Det. C. Heinrich. August 1936.  
3 *Pectinophora gossypiella* Saunders  
Det. L. O. Howard. Exp. Sta. coll.

## HYMENOPTERA

*Ichneumonoidea*

## BRACONIDAE

- 1 *Opius* (*Utetes*) *anastrephae* Viereck  
Det. F. W. Muesebeck. Reared from larvae of *Anastrepha mombin-praeoptans*. August 1939.  
2 *Apanteles leucostigma* Ashmead  
Det. F. W. Muesebeck. Reared from larvae of *Urbanus proteus*.  
September 1936.  
3 *Apanteles* n. sp.  
Det. F. W. Muesebeck. Reared from larvae of Lepidoptera in seed  
pod of mangle (*Rhizophora*). August 1936.  
4 *Chelonus* sp.  
Det. A. B. Gahan. January 1938.

## EVANIIDAE

- 1 *Evania appendigaster* Linn.  
Det. R. A. Cushman. Reared from egg-case of *Periplaneta americana*. October 1938.  
2 *Hyptia* sp.  
Det. R. A. Cushman. Swept from shrubbery. August 1937.

## ICHNEUMONIDAE

Determinations by R. A. Cushman.

- 1 *Labena* sp.  
Swept from grass. LaGrange. July 1936.
- 2 *Labena* n. sp.  
Collected by light on coco leaves. Crique. July 1936.
- 3 *Labena* n. sp.  
Swept from shrubbery. LaGrange. July 1936.
- 4 *Enicospilus concolor* Cresson  
At light. August 1936.
- 5 *Enicospilus* sp.  
August 1936.
- 6 *Ophion ancyloneura* Cameron  
At light. August 1936.
- 7 *Ophion* sp.  
At light. August 1936.
- 8 *Eiphosoma annulatum* Cresson  
Swept from grass. September 1936.
- 9 *Carinodes phavanensis* Cameron  
Swept from grass. August 1936.
- 10 *Pristomerus* sp.  
Swept by net. September 1937.

*Cynipoidea*

## CYNIPIDAE

- 1 *Hexacola* sp.  
Det. L. H. Weld. Swept by net. July 1940.
- 2 *Pseudeucoila* sp.  
Det. L. H. Weld. Swept by net. July 1940.

## FIGITIDAE

Determinations by L. H. Weld.

- 1 *Dicerataspis* sp.  
On rotting fruit. Fountain, July 1938.
- 2 *Eucoila* (*Hexamerocera*) *atriceps* Ashmead  
Reared from larvae of *Anastrepha mombinpraeoptans*, LaGrange.  
July 1938.

## TETRASTICHIDAE

- 1 *Tetrastichus hagenowi* Ratzeburg  
Det. A. B. Gahan. August 1937.
- 2 *Tetrastichus* sp.  
Det. A. B. Gahan. Reared from a spider egg-case. October 1938.

## ENTEDONTIDAE

- 1 *Horismenus* sp.  
Det. A. B. Gahan. Reared from its pupae attached to a leaf of *Rhizophora* (mangle). Krause Lagoon. December 1938.

## PTEROMALIDAE

- 1 *Neocatalaccus* sp.  
Det. H. K. Townes. Reared from galls of *Cocoloba wifera*. July 1938.

## ENCYRTIDAE

- 1 *Hunterellus hookeri* Howard  
Det. A. B. Gahan. Reared from female nymphs of *Rhipicephalus sanguineus*. October 1937.

## EUPELMIDAE

- 1 *Eupelmus* sp.  
Det. A. B. Gahan. Reared from seed pod of *Rhizophora*. June 1938.

## CHALCIDIDAE

Determinations by A. B. Gahan.

- 1 *Chalcis robusta* Cresson  
Swept from grass. July 1937.
- 2 *Brachymeria ovata* Say  
Swept from grass. September 1937.
- 3 *Brachymeria robustella* Wolcott  
Swept from grass. September 1937.
- 4 *Spilochalcis femorata* F.  
Swept from shrubbery. September 1937.
- 5 *Spilochalcis* sp.  
Swept from grass. December 1937. Reared from pupa attached to leaf of *Rhizophora*. Krause Lagoon. December 1938.

*Formicoidea*

Determinations by M. R. Smith. Specimens in the U.S.N.M.

*Ponerinae*1 *Platythyrea punctata* F. Smith

In decaying log. Foraging on tree trunk at night. Colony under scaling bark, 150 adults and some eggs, La Grange. March 1935.

2 *Ponera opaciceps* Mayr

A colony of 25 adults, eggs and pupae, under a large rock, Orange Grove. September 1938.

3 *Ponera ergatandria* Forel

Foraging. June 1938. Colony of 125 and 1 winged adult in decaying log, Prosperity. April 1938.

4 *Ponera* sp.

Adults taken foraging. December 1937.

5 *Anochetus mayri* Emery

Adults inside a dead palm trunk, Crique. 1938. Under a decaying log, Caledonia. November 1938. Foraging, Jealousy streamway. July. In moist pith of rotting log, Prosperity. April 1938.

6 *Odontomachus haematodes* Linn.

Colony of 50 adults and 20 winged forms, eggs and pupae, in a mass of rotting vegetable matter accumulated in a tree hole. When held between the fingers the adult would audibly snap its mandibles viciously. Mt. Victory. April 1935. Foraging on tree trunk at night. August 1935.

7 *Odontomachus haematodes insularis* Guérin

Colony of 4 winged adults, 50 workers and brown pupae beneath a board resting on the ground, Coakley Bay (semi-arid region). May 1938. A colony in a mound nest in the fork of two large branches, Collins. July 1938. Foraging at night. July 1938. A colony of 50 and 15 winged adults, pupae and eggs, under loose bark, Mt. Victory. November 1943.

8 *Odontomachus* sp.

Winged adults taken at light. Annas Hope. August 1937.

*Myrmicinae*1 *Monomorium carbonarium ebeninum* Forel

Adults foraging on decaying lilly bulbs, Oxford. 1935. Winged adults at light. December 1937. Colony of 15 winged adults, 150 workers, pupae and eggs, under the scaling bark of a tree stump, Jealousy streamway. January 1937. Colony of 500 adults, eggs and pupae in a decaying stump. September 1938. A colony of approximately 2000 adults, eggs and pupae, in a dry length of *Cecropia*. October 1938.

**2 Monomorium destructor** Jerdon

Attracted to food, Coakley Bay (semi-arid). At light, winged adults. December 1937.

**3 Monomorium floricola** Jerdon

Among rotting debris, Caledonia. March 1938. Adults were observed carrying off the eggs of *Aedes aegypti* from a tub. July 1935. A colony of 300 adults, eggs, and pupae, in the dry branch of avocado tree, Kingshill. July 1935.

**4 Cardiocondyla emeryi** Forel

Adults foraging, Prosperity. June 1935. Adults beneath dry cattle dung, Butler's Bay. March 1937. On flowers of cactus, *Opuntia* sp., Sight. May 1938.

**5 Cardiocondyla venustula** Wheeler

July 1936.

**6 Solenopsis corticalis** Forel

A small colony beneath a large rock, Prosperity. 1938.

**7 Solenopsis geminata** Fabr.

Tunnels in sandy soil, Krause Lagoon. April 1935. Winged adults at light. August-December, 1937. Under a log on the sea shore. A ground nest of approximately 2000 workers and 100 winged adults, besides eggs and pupae, Oxford. March 1938.

**8 Solenopsis globularia borinquenensis** Wheeler

Foraging on gravelly soil Oxford. April 1935. Winged adults swarming at dusk, Lower Love. January 1941.

**9 Solenopsis** sp.

Adults foraging, Christiansted cemetery. June 1935. Winged adults at light. June 1935. Winged male and female were taken in copula in flight at dusk, Sight. November 1935. Winged adults at light, Mary's Fancy. February 1936. Colony in decaying stump, eggs. September 1938. Winged adults swarming at dusk, La Grange. June 1941.

**10 Pheidole fallax jelskii** var. *antillensis* Forel

A colony of approximately 700 workers and 26 winged forms in a ground nest. They have a predominantly fecal odor. Prosperity. April 1938.

**11 Pheidole flavens sculptior** Forel

Colony of 150 adults, pupae and eggs, in pith of rotting log, Prosperity. April 1938. Foraging on moss, Caledonia. December 1940.

**12 Pheidole flavens thomensis** Emery

Colony beneath a large rock, Crique. May 1937. Winged adults at light. December 1937.

- 13 *Pheidole moerens* Wheeler  
Adults under dry cattle dung, Butler's Bay. March 1937. Colony in gravelly soil beneath a large rock, Concordia. May 1938.
- 14 *Pheidole megacephala* Fabr.  
Colony in a hole in wall, several queens were noted. These ants emit an audible squeak while actively foraging. At dusk swarms were flying against a light breeze and were being captured and eaten by Kingbirds, *Tyrannus dominicensis*, and Anis, *Crotophaga ani*. Beeston Hill. February 1936. Winged adults at light. December 1937.
- 15 *Pheidole* sp. *flavens* group  
Adults foraging, Prosperity. June 1935. Male and female in copula taken in flight, Constitution Hill. December 1935. Winged adults taken in flight. February 1936.
- 16 *Crematogaster steinheili* Forel  
Colony of 200 adults, pupae and eggs, in dry tree branch, and when disturbed they ran around with the gaster held erect, Oxford. April 1935. Winged adults at light, Mary's Fancy. February 1936. Colony in rotting branch, Annaly. February 1935.
- 17 *Tetramorium guineense* Fabr.  
Adults were foraging on water-hyacinth plants in Annas Hope stream. July 1935.
- 18 *Tetramorium lucayanum* Wheeler  
Adults taken foraging, Caledonia. December 1937 and December 1940.
- 19 *Tetramorium simillimum* Nylander  
Foraging. December 1937. Adults in rotting stump, Oxford. April 1937.
- 20 *Wasmannia auropunctata* Roger  
Colony in cavity of dry branch, Mt. Eagle. June 1935. Colony of 200 adults, pupae and eggs, under scaling bark, La Grange. March 1936. Adults, Caledonia. December 1940.
- 21 *Leptogenys puniticeps vincentensis* Forel  
Adults were taken foraging at night, Morning Star pump. July 1938.
- 22 *Strumigenys eggersi* Emery  
Winged adults were taken in a house in Christiansted. June 1935.
- 23 *Strumigenys rogeri* Emery  
Adults taken foraging on moss, Caledonia. December 1940.
- 24 *Mycocepurus smithi borinquensis* Wheeler
- 25 *Epitritus emmae* Emery
- 26 *Cyphomyrmex rimosus minutus* Mayr  
Colony of 200 adults, pupae and eggs, in moist soil near a water

hole, Lower Love. February 1936. Colony beneath a large rock, 150 and 15 winged adults, pupae and eggs. March 1937. Colony of 50 adults, pupae and eggs, in moist soil beneath a large stone. When disturbed the adults play possum and remain quiet for several minutes. April 1938.

*Dolichoderinae*

1 *Tapinoma melanocephalum* Fabr.

Pests in insectory stealing everything. However, it is not widely distributed. July 1935.

2 *Iridomyrmex melleus* Wheeler

A small colony taken from a dry branch, Mt. Eagle. June 1935.

3 *Dorymyrmex pyramicus niger* Pergande

A colony of 600 adults, pupae and eggs. Very active when disturbed, tunneling in soil. Several mounds that were five feet apart were connected by overland trails and the ants were seen moving from one to the other. Slob Bay (semi arid area). May 1935. Colony in the cavity of a dry branch. March 1938.

*Formicinae*

1 *Brachymyrmex heeri* Forel

A colony of 3 winged adults and 35 workers in a root-node cavity, Christiansted, September 1935. Adults foraging, Oxford. April 1935. Small colony beneath a rock, Grange streamway. A small colony beneath scaling bark, Collins. July 1938.

2 *Brachymyrmex* sp.

Swarming winged adults in flight at dawn, Blessing. February 1936. Adults foraging, LaGrange. June 1943.

3 *Prenolepis (Nylanderia) fulva* Mayr

Foraging adults were taken about the edge of a small pool, Blessing, July 1935. Feeding on fruit of *Cactus inortus*, Sight. July 1936.

4 *Prenolepis (Nylanderia) vividula* Nylander

Foraging adults. July 1935.

5 *Prenolepis (Nylanderia) longicornis* Latreille

Colony of 50 winged adults and 500 workers beneath a log on the sandy beach, Watch Ho. September 1938.

6 *Prenolepis (Nylanderia)* sp.

Adults taken foraging, La Grange. December 1937.

7 *Camponotus sexguttatus* Fabr

Colony of 300 adults, eggs and pupae, in the cavity of a dry branch, Constitution Hill. April 1935. Colony of pupae and eggs, 75 workers and 18 winged adults, beneath scaling bark. September 1938.



- 8 *Camponotus* sp.  
Colony of 300 in a hollow stump, Green Cay Islat. January 1936.  
Colony in decaying log, Prosperity. May 1937. A colony of pupae and eggs, 200 workers and 18 winged adults, beneath a rotting log resting in sand, Coakley Bay (semi-arid). May 1938.
- 9 *Myrmelachista ramulorum* Wheeler  
Adults taken foraging on mangroves, Krause Lagoon. May 1935.
- 10 *Rhizomyrma* sp.  
Winged adult captured in flight at dusk, Constitution Hill, October 1937.

*Sphecoidea*

## BEMBECIDAE

Determinations by G. A. Sandhouse.

- 1 *Bembex muscicapa* Handlirsch  
Taken at tunnels in sandy soil. August 1936.
- 2 *Stictia signata* Linn.  
Predaceous on *Hermetia illucens*, *Trichopoda* sp, *Lucilia* sp. Tunnels in sandy soil. September 1936.

## SPHECIDAE

- 1 *Notogonidea trifasciata* Smith  
Det. K. V. Krombein. September 1936.
- 2 *Notogonidea vinulenta* Cresson  
Det. K. V. Krombein. September 1939.
- 3 *Notogonidea* sp.  
Det. K. V. Krombein. September 1939.
- 4 *Tachytes argentipes* Smith  
Det. K. V. Krombein. July 1937.
- 5 *Prionyx thomae* Fabr.  
Det. K. V. Krombein. August 1936.
- 6 *Tachysphex* sp.  
Det. G. A. Sandhouse. August 1937.
- 7 *Ammobia singularis* F. Smith  
Det. G. A. Sandhouse. Males and females taken from tunnels in soil, Adventure. August 1936.

*Vespoidea*

## SCOLIDAE

- 1 *Myzine ephippium* Fabr.  
Det. G. A. Sandhouse. August 1937.

2 *Campsomeris dorsata* Fabr.

Det. G. A. Sandhouse. September 1937.

## PSAMMOCHARIDAE

1 *Pepsis rubra* Drury

Det. J. Bequaert. Tunnels in limestone cliffs. August 1935.

2 *Batazonus mundiformis* Rohwer

Det. K. V. Krombein. July 1936.

3 *Planiceps* sp.

"Probably new." Det. K. V. Krombein. September 1937.

## VESPIDAE

1 *Polistes crinitus insulicola* Beq. & Sal.

Det. J. Bequaert. Predaceous on small lepidopterous larvae. Nesting in October 1935.

2 *Mischocyttarus phthisicus* Fabr.

Det. J. Bequaert. Nests October 1935.

## EUMENIDAE

1 *Pachodyneurus (Monobiella) cinerascens* Fabr.

Det. J. Bequaert. Tunnels in limestone cliffs, July 1935. Predaceous on lepidopterous larvae.

2 *Odyneurus* sp.

Det. K. V. Krombein. July 1935.

*Apoidea*

## HALICTIDAE

1 *Halictus busckii* Cockerell

Det. K. V. Krombein. June 1936.

2 *Halictus* sp.

Det. K. V. Krombein. July 1936

3 *Halictus* sp.

Det. K. V. Krombein. July 1936.

## ANTHOPHORIDAE

1 *Centris poecila* Lepelletier

Det. G. A. Sandhouse. October 1937.

2 *Centris versicolor* Fabr.

Det. K. V. Krombein. October 1937.

3 *Exomalopsis globosa* Fabr.

Det. K. V. Krombein. September 1936.

4 *Anthophora krugii* Cresson

Det. K. V. Krombein. August 1936.

## EUCERIDAE

1 *Melissodes trifasciata* Cresson

Det. K. V. Krombein. June 1935.

## MEGACHILIDAE

Determinations by G. A. Sandhouse.

1 *Coelioxys abdominalis* Guérin

July 1936.

2 *Megachile binotata* Guérin

On flowers. August 1936.

3 *Megachile flavivittata* Smith

On flowers. August 1936.

## XYLOCOPIIDAE

1 *Xylocopa brasilianorum* Linn.Det. K. V. Krombein. Tunnels in dry stump of *Hippomane  
mancinella*. September 1935.