

PROCEEDINGS
OF THE
Hawaiian Entomological Society

VOL. V, No. 2.

FOR THE YEAR 1922.

SEPTEMBER, 1923

JANUARY 5, 1922.

The 195th meeting of the Hawaiian Entomological Society was held at the experiment station of the Hawaiian Sugar Planters' Association. Members present, besides Vice-President Fullaway, who presided, were Messrs. Bissell, Bryan, Ehrhorn, Giffard, Illingworth, Muir, Rosa, Swezey, Soon, Timberlake, Wilder, and Willard.

Minutes of the previous meeting were read and approved.

The Secretary reported that the Executive Committee had made the following appointments: Curator of Insects and Librarian, Mr. P. H. Timberlake; Editor of the Proceedings, Mr. O. H. Swezey.

PAPER READ.

"The Leaf-Miners of *Pipturus* (Lepidoptera)."

BY O. H. SWEZEY.

NOTES AND EXHIBITIONS.

Exhibition of a large collection of insects from Kokee, Kauai, August, 1921, by O. H. Swezey.

Fossil Insects.—Mr. Muir exhibited a pamphlet, entitled "Mesozoic Insects of Queensland," by Dr. R. J. Tillyard. He called attention particularly to the excellence of the photographs, in which the veins and even the hairs on the insect wings were easily discernible.

Supella supellectilium (Serv.).—Mr. Bryan exhibited a specimen of this recently introduced Australian roach, which was

captured January 3, 1922, in the cottage of Colonel Clark at the Kamehameha Boys' School, Honolulu, by Miss Clark.

Plagithmysus munroi (a correction).—Mr. Swezey called attention to Nos. 5 and 6 in Dr. Perkins' paper on Plagithmysids (Proc. Haw. Ent. Soc., IV, 996, 1921), and to the fact that the name of the species had been omitted in the manuscript. A surmised determination as *P. munroi* was supplied in a footnote. Recently the specimens were returned by Dr. Perkins, and these, Nos. 5 and 6, were found to be labeled *P. concolor*, hence, this is the name to be supplied for notes 5 and 6 in the paper.

FEBRUARY 2, 1922.

The 196th meeting of the Hawaiian Entomological Society was held at the experiment station of the Hawaiian Sugar Planters' Association, and was presided over by Vice-President D. T. Fullaway. Other members present were Messrs. Bissell, Bryan, Ehrhorn, Giffard, Illingworth, Muir, Rosa, Soon, Swezey, Timberlake, and Willard. Mr. W. H. Cowdry was a visitor.

The minutes of the previous meeting were read and approved.

PAPERS.

"The Erythrina Twig-Borer (*Terastia meticulosalis*) in Hawaii (Pyralidae, Lepidoptera)."

BY O. H. SWEZEY.

"Notes on Diptera Occurring in Hawaii."

BY J. F. ILLINGWORTH.

"Description of Two Flies Attacking Lantana (Diptera)."

BY DR. J. M. ALDRICH.

(Presented by Mr. Swezey.)

*** "Preliminary Notes on Pseudoscorpions."**

BY E. H. BRYAN, JR.

ENTOMOLOGICAL NOTES.

Synthesiomysia brasiliiana.—Mr. Illingworth exhibited speci-

* Withdrawn from publication. [Ed.]

mens of this fly, and masses of its pupa cases. He called attention to its peculiar habit of pupation, consisting of forming its puparia among the hair on the carcass of its host, so near together that, after their emergence, the holes resemble honey-comb.

Scymnus sp.—Mr. Timberlake reported the discovery of a new Coccinellid, which has been confused in collections with the so-called *Rhyzobius ventralis*, which it resembles in size and coloration. This species agrees in many respects with the Australian species *Scymnus varipes* (Blackburn), but is apparently distinct. It is almost unquestionably one of the species introduced by Koebele years ago from Australia, and may have been confused at the time of introduction with the so-called *ventralis*. The specimens exhibited were all taken in the mountains back of Honolulu from Pacific Heights and Konahuanui to Kuliouou. The earliest collected specimen seen was taken January 1, 1905, on Tantalus, by Mr. Giffard.

Lindorus sp.—Mr. Timberlake called attention to the fact that the Coccinellid, passing under the name of *Rhyzobius ventralis* in both California and the Hawaiian Islands, is evidently not the species described by Erichson. Both it and the true *ventralis* belong to the genus *Lindorus*.

Sinoxylon conigerum.—Mr. Fullaway exhibited specimens of this beetle, which is doing damage to lead cables on the islands of Maui and Hawaii.

Epagoge infaustana.—Mr. Swezey exhibited a series of this Tortricid moth, reared from larvae on *Pipturus*, collected in Makaleha Valley, January 8, 1922. Dr. Perkins collected this moth abundantly on Kauai, Maui, Molokai, and Hawaii, but not on Oahu. Mr. Swezey had previously reared a few specimens from larvae boring in the tips of twigs of *Pipturus* on Tantalus. One tree was found in Makaleha Valley on which were hundreds of the larvae. They were feeding on the leaves, skeletonizing them, and hiding in webbed-together leaves at the tip, or a bit of the turned-over edge. They pupated in similar places. A score or so of leaves with larvae were collected, and from these twenty-two moths issued January 19 to 28, and two of the para-

site, *Cremastus hymeniae*. This adds another to the large number of hosts of this parasite.

Lantana Flies.—Mr. Swezey exhibited paratypes of two flies as recently returned to him by Dr. Aldrich. One of the flies is the lantana stem gall-fly, *Eutreta xanthochaeta* n. sp., the other the lantana seed fly, *Agromyza lantanae* Froggatt.

Kelisia paludum.—Mr. Swezey exhibited this little Delphacid, collected by him at Honaunau, Hawaii, August 13, 1919. Quite a series were collected at the time from a low sedge in a brackish place at about sea-level. The specimens had recently been determined by Mr. Muir. It is the first record on any other of the Hawaiian Islands except Oahu and Laysan.

Asya luteipes.—Mr. Swezey reported observing this lady beetle very abundant on a hau tree at the sea coast south of the Magnetic Station at Sisal, Oahu, January 29, 1922. A score or more could be seen at one time resting on the under side of the leaves of an isolated tree. He had never seen so many of this lady beetle before.

Chrysopa sp.—The immigrant lace-wing fly, which has been known the past two years on Oahu, was reported by Mr. Swezey as being very numerous on wiliwili trees on the Ewa coral plain south of Sisal. Their cocoons were most abundant, being found on the leaves, and also in the opened pods, many of which were hanging on the tree. Two to six of the cocoons were found together in some of the pods. A few larvae were also seen, and an adult has issued from the cocoons brought in, which proves the identity of the insect. *Pseudococcus virgatus* was present and had probably been the food of the insect.

North American Trypetidae.—Mr. Bryan exhibited specimens from this family with the following note: In order to have authentic specimens of *Eutreta sparsa* Wied. to compare with our lantana gall-fly, several mainland entomologists were appealed to. A series of ten specimens were received at the Bishop Museum from Dr. C. W. Johnson, Dr. W. E. Britton, and the United States National Museum, the specimens having been collected in Massachusetts, Connecticut, White Mountains, North Carolina, and California.

Dr. Johnson forwarded also a collection of typical eastern Trypetidae, with notes as follows: "*Eutreta sparsa* Wied. infests *Solidago*, forming swellings on the new shoots near the ground. The galls are figured in Thompson's 'Illustrated Catalogue of American Insect Galls,' p. 55, pl. 10, fig. 315. I enclose a California specimen. The western examples seem to differ somewhat from the eastern, and I sometimes wonder if they are really the same. *Eutreta diana* O. S. form galls on *Artemesia*. In the allied genus *Eurosta*, two closely related species will form very different galls or attack two species of plants. *Eurosta solidaginis* (Fitch) forms a large, globose gall on the stalks of *Solidago*, far above the ground. *Eurosta reticulata* Snow makes an elongate gall at the base of new growth. *Eurosta comma* (Wied.) makes a peanut-like gall on the roots of *Solidago rugosa*. *Eurosta elsa* makes about the same shaped galls on the roots of *Solidago juncea*, according to Daecke, Ent. News, v. XXI, p. 341, pl. 10, 1910."

In addition to specimens of these species, Dr. Johnson forwarded to the Museum specimens of *Straussia longipennis* (Wied.); *Acidia fratria* (Loew); *Oedaspis atra* Loew; *Rhagoletis pomonella* (Walsh), the apple maggot; *Aciura insecta* (Loew); *Ictericaria seriata* (Loew); *Tephritis albiceps* Loew; *Euaerista bella* (Loew); and *Trypeta palposa* Loew.

Mr. W. H. Cowdry, a visitor, made a few remarks. He stated that, although he had not attended an entomological meeting for fifty years, he was one of the first members of the Entomological Society of Canada. He had been to North China collecting botanical specimens, and found that the lack of forests there made the number of species of insects very small.

MARCH 2, 1922.

The 197th meeting of the Hawaiian Entomological Society was held at the experiment station of the Hawaiian Sugar Planters' Association, with Vice-President Fullaway presiding. Other members present were Messrs. Bissell, Bryan, Giffard, Illingworth, Muir, Rosa, Swezey, Timberlake, Wilder, and Willard.

The minutes of the previous meeting were read and approved.

PAPERS.

* "Some of the Early References to Hawaiian Entomology."

BY J. F. ILLINGWORTH.

EXHIBITS.

Stomatoceras hakonense Ashmead.—Mr. Timberlake exhibited two females of this species, which were collected by Mr. Whitney in a log from Japan during the course of his quarantine work. The specimens had apparently crawled into crevices of the log to hibernate, and their discovery after the log reached Honolulu is another illustration of the many ways that insects may be widely distributed by commerce.

Eutreta sparsa and *Eutreta xanthochaeta*.—Mr. Muir exhibited mounted genitalia showing the distinctive characters of these two flies.

Plagithmysus perkinsi Sharp.—Larvae of this beetle taken in *Myoporum sandwicense* in the region of the volcano in August, 1920, were brought to Honolulu in the wood and kept until February, 1922, when three specimens emerged, which were exhibited by Mr. Giffard. One was a perfect specimen, and another partially so, portions of the elytra having been eaten by the ant, *Pheidole megacephala*. The third specimen was quite eaten by ants, excepting one elytra and part of one hind leg.

Cane-borer caught by English sparrow.—Mr. Swezey reported having observed an English sparrow fly up and catch something on the wing, and take it to the ground to eat it. He succeeded in frightening away the sparrow and secured the remains of its feast, which proved to be an adult cane-borer beetle. Score another for the sparrow!

Heliothis obsoleta.—Mr. Swezey exhibited two moths reared from caterpillars found feeding on the blossoms of *Sida cordifolia* at Kaimuki, January 31, 1922. Ten of the caterpillars were found, but eight of them yielded parasites instead of moths, giving 80 per cent parasitization. Twenty-seven of the parasites, a Tachinid fly (*Frontina archippivora*), issued February 16-23. The moths issued February 24 and 28.

* * Withdrawn from publication.

The caterpillars of this moth are known as the cotton boll worm and corn ear worm in the Southern States; but in Hawaii they have not been recorded as injurious to these plants. Mr. Swezey reported that he tried the above caterpillars on green sweet corn and the corn was voraciously eaten by them. It is not understood why corn in the field has not been reported attacked by these caterpillars. The fact that they are so highly parasitized as above, indicates that they are sufficiently controlled by the Tachinids. No doubt the eggs are also somewhat attacked by *Pentarthron flavum*.

Gitonides perspicax Knab and *Titanochaeta ichneumon* Knab.—Mr. Swezey mentioned for record that these two flies had been described by Knab in *Ins. Inse. Menstruus* in 1914 from specimens sent him by Swezey. These had escaped being entered in Hawaiian literature.

Monopis meliorella (Walk.) and *Crypsithyris enixa* Meyrick.—Mr. Swezey exhibited these two moths which he had had determined by Mr. Meyrick, from specimens sent him recently. They had been collected in Kaimuki by Timberlake and Swezey, and are immigrants of which this is the first record.

Megastigmus sp.—Mr. Fullaway reported the capture, February 13, 1922, on the window of the laboratory at Government Nursery of a species of *Megastigmus*. Some of the species of this genus of Chalcid flies are seed-eating in the larval state.

Introduced Staphylinid.—Mr. Fullaway reported also the recovery on February 12, 1922, at Moanalua Dairy of the Staphylinid, *Creophilus erythrocephalus*, introduced by Mr. Illingworth from Australia in September, 1921, and since multiplied and distributed in the Territory.

Recently determined Coleoptera.—Mr. Fullaway also reported receiving the following identifications of introduced Coleoptera from Mr. G. E. Bryant of the British Museum.

Carabidae.

Bembidium sp.

Perigona nigriceps (Dej.).

Hydrophilidae.

Cercyon sp.

Trogositidae.*Lophocateres pusillus* (Klug).**Cleridae.***Thaneroclerus buqueti* (Lefèvre).

 APRIL 6, 1922.

The 198th meeting of the Hawaiian Entomological Society was held at the usual place, and was presided over by Vice-President Fullaway. Other members present were Messrs. Bissell, Bryan, Ehrhorn, Giffard, Illingworth, Muir, Rosa, Soon, Swezey, Timberlake, and Willard. Mr. N. H. Cowdry was a visitor.

The minutes of the previous meeting were read and approved.

PAPERS.

"The Insect Fauna of Hen Manure."

BY J. F. ILLINGWORTH.

"On the Classification of the Fulgoroidea (Homoptera)."

BY F. MUIR.

NOTES AND EXHIBITIONS.

Diocalandra taitensis.—Mr. Bissell exhibited the pupal chamber and channels of a beetle, which were made in the husk of a dry coconut, and were evidently the work of *D. taitensis*. He stated that this coconut had been found at the home of Mr. Charles H. Bellina on Waialae Bay, April 2, 1922. This beetle has been previously found in the Hawaiian Islands only on the island of Hawaii, and this record would indicate that it is now on the island of Oahu.

Allograpta obliqua.—Mr. Swezey reported finding this new immigrant Syrphid fly abundant in the Hamakua district of Hawaii in March, 1922. Specimens were secured in several places: Honokaa; on hibiscus at the manager's house at Paauhau; and along roads where there was guava and lantana, 500 to 1000 feet elevation at Ookala.

Xiphidiopsis lita.—Mr. Swezey reported seeing four speci-

mens of this new Locustid in the clubhouse at Olaa, March 13, 1922. This indicates that it is becoming numerous outside of Hilo, where it has been known for three years, Olaa being about eight miles from Hilo. He also reported that Matthias Newell had told him of finding a male at light in Hilo. This is the first time the male has been observed, although the females have been seen by scores at lights at the Hilo Hotel.

Anisolabis eteronoma.—Mr. Swezey reported finding this large earwig common in cane fields on Hawaii in March, 1922. It was usually under trash, but was also found in the soil while digging for wire worms. They were found at Hilo Sugar Company, Laupahoehoe, and Honokaa. At the latter place they were also found in a rotten log above the cane fields at an elevation of about 2000 feet.

Exillis lepidus.—This Anthribid was found very abundant in dead Kukui twigs at Kaimuki by Mr. Swezey, March 15, 1922. The larvae were feeding in the pith of the dead twigs. A few pupae were found, and one had matured already, thus demonstrating what the insect was.

Aræocerus fasciculatus.—Mr. Swezey reported on the dissection of eggs from a female of this beetle, and that they agreed with the description given of them by Mr. R. T. Cotton in Journal of Agricultural Research, XX, No. 8, p. 607, 1921. They were different from the description given by Mr. Swezey in Proc. Haw. Ent. Soc., IV, No. 3, p. 452, 1921. This latter description was from eggs that Mr. Swezey had found, and surmised them to be those of *A. fasciculatus*, from the circumstances of finding, and the fact that there was no other known species of beetle to which they could be referred. Now it is certainly known that the aforementioned eggs belong to something else, and just what, remains to be discovered.

Lasioderma serricorne.—The cigarette beetle was reported by Mr. Swezey as having been reared from a larva feeding in the pulp of a dried litchi nut handed to him by Dr. Lyon.

Agromyza lantanae.—Mr. Swezey reported results of germination of lantana seeds that had been infested with maggots of this Agromyzid. From 100 infested seeds, retained until after emergence of flies, and then planted December 20, 1921, between

February 18 and April 5, 1922, eighty-two seedling plants were obtained.

As a check, 100 non-infested seeds were similarly planted, and ninety-five seedlings were secured. This is a further demonstration of the fact that the Agromyzid does not thoroughly destroy the embryos of the lantana seeds.

Note on fumigation with carbon bisulphid.—Mr. Ehrhorn exhibited a dry limb of *Paulownia imperialis* from Japan, which was imported for use as floats for fish-nets. Upon its arrival, this limb contained a nest of ants, and was fumigated with carbon bisulphid. He called particular attention to the fact that the hollow center of the limb, used by the ants as a nest, had a very small entrance hole at one end, through which the carbon bisulphid fumes successfully penetrated and killed all of the ants during an exposure of forty-eight hours.

*An undetermined fly.**—Mr. Illingworth reported the finding of a new fly at Kaimuki. He noticed them flying in a group like Syrphid flies, but he had not yet established their identity.

MAY 4, 1922.

The 199th meeting of the Hawaiian Entomological Society was held at the experiment station of the Hawaiian Sugar Planters' Association, with Vice-President Fullaway in the chair. Other members present were Messrs. Bissell, Crawford, Bryan, Ehrhorn, Giffard, Illingworth, Swezey, Timberlake, Rosa, Willard, and Williams.

The minutes of the previous meeting were read and approved.

Mr. Swezey reported the receipt from the printers, of the new indexes for Vols. I and IV of the Proceedings.

PAPERS.

“*Halobates* in Hawaii (Hemiptera).”

BY E. H. BRYAN, JR.

NOTES AND EXHIBITIONS.

Tinea pelionella.—Mr. Swezey exhibited a specimen of this

* Later determined by Dr. Aldrich as *Limnophora arcuata* Stein. [Ed.]

Tineid reared from a larval case on an old woolen cap, April 7, 1922. Several of the cases were found, four of them containing larvae. Moths reared from these April 27 to May 1, 1922. This moth was recorded in the Fauna Hawaiiensis, but collections here contain no specimens. The present specimen belongs to this species.

Carabid new to Hawaii.—Mr. Timberlake exhibited a small Carabid beetle captured by Mr. Muir at Puuloa, Oahu, April 10, 1922, on the ground among sugar-cane. It is an immigrant not heretofore seen here.

Glyptocolastes bruchivorus.—Mr. Bissell exhibited specimens of this Braconid, reared from *Mylabris sallaei* in *Acacia farnesiana*, collected on Ewa coral plain, April 21, 1922. This is the first recovery of this Bruchid parasite, since its introduction from Texas in the summer of 1921.

Nut grass borers.—Mr. Williams mentioned two borers in nut grass (*Cyperus rotundus*), taken in the Philippines. One of the borers is the larva of a Tortricid moth, determined by Mr. Swezey as belonging to the genus *Bactra*. The other is the larva of a small beetle, apparently related to the "bill bugs" in the United States. Both species of larvae bore in the stems and the corm, but are not an effective check on the nut grass in the Philippines.

Scutigera straba (Wood), The Hawaiian house centipede.—Mr. Bryan gave the following synonymy and note on this centipede:

Cermatia straba Wood, Jour. Acad. Nat. Sci. Phila., (2), V, p. 11, 1862.

Scutigera straba Silvestri, Fauna Hawaiiensis, III, p. 323, 1904.

A specimen was captured in the Bishop Bank, April 29, and presented to the Bishop Museum by Mr. Garvie, teller. It fits the description of this, the only *Scutigera* recorded from Hawaii, a translation of the description of which follows:

"Ferruginous *Cermatia* (*Scutigera*); single median line; head broad, densely, minutely punctated, and appendages sparsely pilose; broad and long longitudinal depressions in the middle and

on both sides (of the head), the one curved, before the eyes, the other transverse, indistinct, between the eyes; the scuti roughened with small spines and minute, close punctures, scarcely scaly, posterior edge emarginate, with the margins strongly elevated, spiny and crenulate; the legs ferruginous, first joint of the metatarsus equal in length to the following seven."

It is closely allied to *Scutigera forceps* Raf., the mainland house centipede, recorded in U. S. Dept. Agr. Circ. 48.

JUNE 3, 1922.

The 200th meeting of the Hawaiian Entomological Society was called to order at 2:30 p. m. by Vice-President Fullaway, at the usual place. In the absence of the Secretary, Mr. Timberlake was appointed by the Chair to act as Secretary pro tempore. Other members present were Messrs. Bryan, Crawford, Ehrhorn, Giffard, Illingworth, and Rosa.

The minutes of the previous meeting were read and approved.

PAPERS.

"New or Little-Known Crane-Flies from the Hawaiian Islands."

BY CHARLES P. ALEXANDER.

(Presented by Mr. Bryan.)

NOTES AND EXHIBITIONS.

Dolichopodidae.—Mr. Timberlake exhibited a small collection of local Dolichopodidae. Eight species are apparently of immigrant origin and of these, three belong to *Psilopus* (*patellifer* Thoms., *pachygyna* Macq., and *pallidicornis* Grimsh.), and one each to *Hydrophorus*, *Medeterus*, *Asyndetus*, *Dolichopus*, and *Hypocharassus*. The recently described *Dolichopus exsul* Aldrich (Proc. U. S. Nat. Mus. 61, Art. 25, p. 15, May, 1922) is very abundant in favorable places in the mountains such as Pauoa flats, on Tantalus, and also has been taken in Honolulu. It is widely distributed throughout the Islands and has been collected on Kauai, Oahu, Maui, Molokai, and Hawaii. Of the endemic species about twelve were shown, none of which agrees with those described by Grimshaw.

Nesopimpla naranyae.—Mr. Timberlake called attention to a recent paper by Cushman (Proc. U. S. Nat. Mus. 61, Art. 21, p. 9, May, 1922) in which *Itoplectis immigrans* Timb. is synonymized with *Nesopimpla naranyae* Ashmead, which was described from Japan in 1906. The parasite may possibly be one of those introduced by Koebele in 1896, from Japan, and was first collected on Oahu by Dr. Perkins in 1901.

Syagrius fulvitaris.—Mr. Fullaway reported the discovery of the fern weevil on Maui by Mr. C. S. Judd, Territorial Forester, on May 22, 1922. It was found on the Amaumau fern on the lower side of Nahiku ditch between Makapipi and Hanawi streams for a distance 300 feet along the ditch, and also in one spot at Kapaula near the Nahiku camp. Later, the infestation was found to extend about a mile between the Government road and the ditch, and to points above the ditch.

A discussion followed concerning the probable means of inter-island dispersion of the fern weevil, with the general agreement that it must have been carried by travelers to Hilo from Honolulu, and probably from Hilo to Maui in potted ferns, fern leis, etc.

JULY 6, 1922.

The 201st meeting of the Hawaiian Entomological Society was held at the experiment station of the Hawaiian Sugar Planters' Association. Owing to the absence of the president and vice-president, Mr. Swezey was chosen as chairman. Other members present were Messrs. Bissell, Bryan, Ehrhorn, Illingworth, Rosa, Timberlake, Wilder, and Willard. Mr. R. Ewart was a visitor.

The minutes of the previous meeting were read and approved.

PAPERS.

"Notes on Diptera."

BY E. H. BRYAN, JR.

Mr. Bryan presented also the following paper, "Undescribed Species of Australasian and Oriental Crane-Flies," by Charles P. Alexander.

NOTES AND EXHIBITIONS.

Xanthoencyrtus fullawayi.—Mr. Timberlake reported the discovery of this parasite of *Pseudococcus calceolariae* Maskell, on Oahu, two females having recently appeared in a collection of the host made in upper Manoa Valley in June, 1922, by Swezey and Fullaway. This species has formerly been known only on Hawaii.

Trypoxylon philippinensis.—Mr. Swezey reported that he had recently received the identification of this wasp from specimens sent to Mr. S. A. Rohwer of the United States National Museum. This *Trypoxylon* was first collected in Honolulu by Dr. H. L. Lyon, December 6, 1913. It is first recorded in Proc. Haw. Ent. Soc., III, p. 66, 1915, where Mr. Swezey reports having found its nest in folds of corrugated paper in a packing-box at Kaimuki, October, 1914. Specimens reared from this nest are reported on page 90 of the same publication. On page 458 is mention of a nest in glass pipette in chemical laboratory which was of this wasp. It was first reported in Hilo, Hawaii, by Swezey in September, 1918, recorded in Proc. Haw. Ent. Soc., IV, No. 1, p. 75, 1919. On page 458 of the same volume Mr. Williams reported the finding specimens of the same *Trypoxylon* in the Experiment Station, H. S. P. A. collection, that were collected in the Philippines (Williams) and Hongkong (Terry).

Sisyrophyta gomphias.—Mr. Swezey exhibited a specimen of this moth reared from a caterpillar collected by Mr. Ehrhorn on a *Pisonia* tree on Mount Tantalus, April 30. He stated also that he had reared two moths from pupae found in soil at the base of a *Bobea* tree in the forest above the cane fields at Kukaiau, Hawaii, May 30, 1922. The food plant of this species had not previously been known. Apparently it is not confined to one tree.

Micromus vinaceus.—Mr. Swezey reported the recovery of this introduced Australian Hemerobiid at Paauilo, Hawaii, May 29, 1922; Niulii, Hawaii, June 6, 1922; Pololu Valley, Hawaii, June 8, 1922; and Opaepala, Oahu, April 10, 1921. Mr. Bryan has collected it recently on the Na Pali coast of Kauai.

Polycaon stoutii.—Mr. Swezey exhibited a specimen of this

large Bostrychid beetle sent in by Mr. William Searby, May 22. It had issued from an oak table. Another beetle had issued from this table a short time previously and had been destroyed. This is a California beetle which attacks live oak, maui oak, eucalyptus, and almond. It has not been taken previously in Hawaii.

Chaetospila elegans.—Mr. Swezey reported finding this parasite in a small package of sorgham seed infested with *Calendra oryzae* at his house in Kaimuki. The package was what was left from planting and had been undisturbed for about six weeks. When examined October 28, it was found to be badly infested with the weevils, many adults being present. Sixteen adults of the parasite were secured; also a brachypterous Anthocorid bug not seen before.

Holcobius glabricollis.—Mr. Swezey exhibited this Anobiid and reported that fourteen beetles had issued from branches of dead koa tree brought in by Mr. Williams from the Manoa cliffs trail, Tantalus, August 29, 1920. In the Fauna Hawaiiensis, this beetle is recorded as scarce, a very few specimens having been taken on Haleakala, Maui, by Mr. Blackburn, and on Oahu by Dr. Perkins. In both instances on koa trees. Possibly it is attached to this tree.

Chrysomyia dux Esch. in Australia.—Mr. Bryan exhibited a male specimen of this Muscid fly, which was captured at Port Hacking near Sydney, November 4, 1914, by Musgrave; and which was loaned to the Bishop Museum for examination by the Australian Museum at Sydney.

Holocompsa fulva Burm.—Mr. Bryan exhibited another specimen of this little roach, which was captured in Hilo on dry moss by Mr. Matthias Newell. Mr. Illingworth stated that Mr. Newell had observed this roach as common about Hilo for a number of years.

Diocalandra taitensis Guer.—Mr. Bissell exhibited a specimen of this coconut weevil which was bred from the base of a dry coconut leaf from the grove of Mr. Charles H. Bellina at Kuliouou, Oahu. This leaf was collected the latter part of April, 1922, and the beetle emerged during June, being the first specimen collected on Oahu.

Culex sp.—Mr. Ehrhorn called attention to specimens of a mosquito which he collected at Kahala. He reported that this species does not make any sound when attacking at night, whereas *Culex quinque^{fasciata}maculata* does make a sound; and inquired if any member of the society had made the same observations.

Importation of birds.—Mr. Ehrhorn reported that the Board of Agriculture and Forestry had permitted the landing of six peewees for liberation on the Parker Ranch on Hawaii. He stated that these birds included in their diet certain soft snails in which the liver fluke passes part of its life cycle.

SEPTEMBER 7, 1922.

The 202d meeting of the Society was held in the usual place, with Vice-President Fullaway presiding. Other members present Messrs. Bissell, Crawford, Giffard, Rosa, Swezey, Timberlake, and Wilder. In the absence of the Secretary, Mr. Swezey was appointed secretary pro tem.

Minutes of the previous meeting were read and approved.

PAPERS.

* "A Study of the Male Genitalia of the Hawaiian Cixiidae (Homoptera). Part I. *Iolania Kirkaldy*."

BY WALTER M. GIFFARD.

NOTES AND EXHIBITIONS.

Exillis lepidus Jordan.—Mr. Fullaway reported that he had recently received a letter from Dr. K. Jordan giving this as the name for this immigrant Anthribid beetle. It had recently been described in *The Entomologist*, Vol. LV, p. 152, 1922. It is the insect mentioned as "A New Anthribid" on page 273, Vol. III of *Proc. Haw. Ent. Soc.*, 1917; and as "*Lawsonia* sp.," *Proc. Haw. Ent. Soc.*, V, pp. 38 and 75, 1922.

Pheidole megacephala.—Mr. Crawford reported the apparent scarcity of this ant during the past eight months in Manoa Valley. It has been replaced by the tiny yellow ant, *Plagiolepis*

* Withdrawn for publication elsewhere. [Ed.]

exigua. But lately *Phaidole* has again become prevalent, and Mr. Crawford wondered if the present greater abundance of the house-fly was connected with the previous scarcity of the ant, as the latter is known to have some control of the house-fly maggots. Mr. Giffard also had noticed the prevalence of one or another of these ants at various times. Mr. Timberlake mentioned similar observances, and that at one time when he was living on Lunalilo Street, the guinea ant was the most prevalent. Mr. Fullaway reported the presence in great abundance of the yellow ant on mealy-bug material used in breeding lady-beetles, but that it caused no interference or injury, it merely living on sweets—the honeydew in connection with the mealy-bugs.

Synonymy of the Fuller's Rose Beetle.—Mr. Muir, at present in England, sent the following note on the synonymy of this beetle: In Bull. Soc. Ent., France, 1922, No. 8, p. 100, Hustache points out that our Fuller's rose beetle (*Aramigus fulleri* Horn) is the same as *Pantomorus godmani* (Crotch). Both Mr. Chapman and Dr. Marshall have examined Crotch's type and agree with Hustache. Our species must, therefore, be known in future as *Pantomorus godmani* (Crotch). The following synonymy and distribution is given by Hustache:

***Pantomorus godmani* (Crotch).**

Asynonychus godmani Crotch, Proc. Zool. Soc. Lond., 1867, pp. 388, 389, pl. 23, fig. 9.

Aramigus fulleri Horn, Proc. Am. Phil. Soc., XV, p. 94, 1876.

Pantomorus olindae Perkins, Fauna Hawaiiensis, I, p. 130, 1900.

Pantomorus fulleri Champion, Biol. Cent. Amer., IV, 3, p. 333, pl. 15, fig. 19, 1911.

Naupactus ovulum Iek. in litt.

? *Naupactus subvittatus* Fairm. and Germ., Col. Chili, II, p. 7, 1861.

Distribution: California, Mexico, Brazil, Chili, Azores, Portugal, Sicily, and Hawaiian Islands. It is considered of American origin, and was evidently introduced into the other regions named.

Mr. Fullaway called to attention that this synonymy is given by Champion in the Entomologist's Monthly Magazine, (3) VIII, p. 161, 1922.

Perkinsiella saccharicida and *P. insignis*.—Mr. Muir sent this

note on these leafhoppers, from examination of material in the British Museum: In looking through unworked material at the British Museum, I found three specimens of *Perkinsiella* Kirk. Two of the specimens are *P. saccharicida* Kirk., one from Merebank, Natal (C. P. V. D. Merwe, I-2-18), and the other from Mauritius (J. E. M. Brown). The third specimen is *P. insignis* (Dist.) from Accra, Gold Coast (J. W. Scott Macfie, November, 1920). It is possible that *P. saccharicida* has been taken to Mauritius and Natal with sugar-cane. As no damage due to this insect has ever been reported from those regions, we must presume that parasites keep it in check.

Allograpta obliqua (Say).—Mr. Giffard reported that in July and August he captured a large series of both sexes of this Syrphid fly flying over the flowers of Sweet Alyssum at twenty-nine miles, Olaa, near Kilauea, Hawaii. This fly was recorded on February 5, 1920, by Timberlake (Proc. Haw. Ent. Soc., IV, 3, p. 456, 1921) as a new immigrant on Oahu. In October, 1920, Swezey also reported it from Kauai. It has not yet been reported from other islands than the above. Other Syrphids taken at the same time at or near Kilauea were: *Volucella obesa* Fab., *Eristalis tenax* L., *E. punctulatus* Macq., and *Xanthogramma grandicorne* Macq. *E. tenax* was very abundant everywhere in the neighborhood, but the others were only seen occasionally.

Scotorythra hyparcha Meyr.—Mr. Giffard remarked on the overabundance of this nocturnal moth at lights in the Kilauea region for the past four or five months. The verandahs and porches of the Volcano House and residences in the neighborhood have been overrun by this moth, possibly 90 per cent of the number seen nightly being males. At the hotel, the nightly flight was so annoying to guests that the servants were called upon to use the vacuum cleaner to sweep the ceilings and walls free of these pests. During twelve years and frequent visits he had never seen such an invasion of that or any other species of moth as occurred this summer.

Kelisia paludum.—Mr. Giffard reported the collecting of a large series of both sexes and nymphs of this Delphacid on a patch of *Juncus* sp. near the beach at Naapoopoo, Kealakekua,

S. Kona, Hawaii, August 1, 1922. The male genitalia agree perfectly with the Oahu form, but the coloration of this Kona form is much darker than those from Oahu, and is nearer in color to the Fijian form described by Muir. Mr. Swezey reported having collected this same Delphacid in August, 1919, on a small swamp sedge at Honaunau, which is only a few miles further south than where Mr. Giffard's specimens were collected.

Mediterranean fruit-fly.—Mr. Wilder exhibited some small green apples grown on a tree near the Territorial prison at Kālihi, which he suspected were infested with the Mediterranean fruit-fly. So far nothing but Drosophilids had been bred from them. Mr. Crawford mentioned that there appeared recently in a California horticultural journal the report that larvae and pupae of the Mediterranean fruit-fly had been found in a package containing avocados, but marked "groceries," that had been received at Los Angeles through the mail from Honolulu. This was followed by a general discussion on fruit-flies and the methods of quarantine against them prevalent in California.

Pink Boll-worm.—Mr. Fullaway stated that what was apparently this pest had been reported by Simmonds in Fiji.

Zoraptera sp.—Mr. Fullaway reported collecting this remarkable insect at Kokee, Kauai, where Mr. Swezey first discovered it last year. He secured what he took to be a winged form of it.

Pontia rapae.—Mr. Swezey reported seeing one or more cabbage butterflies flying on board the steamship "Wilhelmina," September 4 and 5, being the last two days of the voyage of the steamer from San Francisco to Honolulu. A butterfly was seen on four different occasions, but it could not be determined whether there were that many different individuals or if it was the same individual observed that many times. As there were crates of cabbages on the deck of the steamer, it is inferred that the butterflies seen had issued from chrysalids that were among the cabbage leaves. This demonstrates how some of the immigrant insects could have arrived, and it is very probable that the Syrphid fly, *Allograpta obliqua*, came in just this way, as its larvae feed on plant lice, and cabbages are often infested with them.

OCTOBER 5, 1922.

The 203d meeting of the Hawaiian Entomological Society was held at the experiment station of the Hawaiian Sugar Planters' Association. Vice-President D. T. Fullaway occupied the chair. Other members in attendance were Messrs. Bryan, Crawford, Ehrhorn, Illingworth, Rosa, Swezey, Timberlake, and Willard.

The minutes of the previous meeting were read and approved.

It was with deep regret that the members learned of the death, on August 27, 1922, of Dr. David Sharp, of London, England, who was an honorary member of this society.

Upon motion of Mr. Swezey, it was unanimously voted to appoint Mr. Giffard as a committee to draft proper resolutions on the death of Dr. Sharp.

PAPERS.

"Insects from the Summit of Mauna Kea."

BY E. H. BRYAN, JR.

"Review of Dr. Heinrich Karny's *Der Insektenkorper und seine Terminologie.*"

BY E. H. BRYAN, JR.

NOTES AND EXHIBITIONS.

Diptera.—Dr. Illingworth gave further notes on *Diptera*, explaining corrections by Dr. Aldrich and Major Patton in the determinations of several species of *Diptera* mentioned in a paper, entitled "Notes on *Diptera* Occurring in the Hawaiian Islands," and which has been previously recorded in these Proceedings.

Diocalandra taitensis (Guern.)—Mr. Ehrhorn reported the occurrence of this coconut weevil at Lahaina on the island of Maui. This information came from Mr. George Compere, who found this insect in a coconut sent from Lahaina to San Francisco by mail. Mr. Compere found many holes like shot-holes in the husk, and cutting into the husk, found larvae, pupae, and adults, a sample of which he sent to Mr. Ehrhorn.

Rhinoceros beetle from Guatemala.—Mr. Swezey exhibited a

monstrous horned beetle handed him by Mr. William Weinrich, who had collected it on a tree in Guatemala in August of this year.

Oligota sp.—Mr. Swezey exhibited a tiny Staphylinid beetle probably of this genus, which he had found feeding on the sugar-cane leaf-mite and its eggs in the cane fields of Oahu Sugar Company, and also at the Sugar Planters' Experiment Station grounds. The larvae were also found feeding on the mites. This is apparently the first record of this immigrant beetle in the Islands. A similar beetle occurs feeding on red spiders in California. It may turn out that this is the same species. The mite that they were feeding on here is *Tetranychus exsicicator*, the cane leaf-mite occurring in Java. Apparently this has never been recorded in Hawaii, though it has been known for a long time that mites were occasionally found on cane-leaves.

Ereunetis flavistriata.—Mr. Swezey mentioned that, while in San Francisco in August at the Plant Inspector's office, he inquired about the *Hyposmocoma* sp., which had been reported as occurring on coconuts from Honolulu, as per printed reports in the California Monthly Bulletin. A more recent identification had been made by Mr. Busck as *Ereunetis* sp. On being shown a specimen of the moth concerned, Mr. Swezey was able to identify the species as *Ereunetis flavistriata*, the sugar-cane bud-moth, whose larvae are found also on banana bunches, pine-apples, and various other plants, chiefly feeding on the dead tissues.

Heterospilus prosopidis.—Mr. Swezey reported rearing this Braconid quite plentifully from *Bruchus chinensis* in pigeon peas at Kaimuki, September 16, 17, 1922. The peas had become infested by the bruchids while still on the bushes. Males predominated in those reared, there being nine males and three females.

Pediculoides ventricosus.—Dr. Illingworth stated that kerosene was very helpful in relieving the irritation caused by the bites of this mite on the bodies of human beings.

Pseudaphycus sp.—Mr. Fullaway exhibited specimens of this Encyrtid, introduced from Mexico in April and May, 1922. It

is a primary parasite of *Pseudococcus nipae* and has already become established here.

Anagyrus antoninae.—Mr. Timberlake exhibited a small series of this species from Japan, consisting of two specimens from Nagasaki collected by Mr. T. Ishii, and three specimens collected by Mr. C. P. Clausen, California State Insectary, No. 1261a.

Magachile.—Mr. Timberlake exhibited specimens of *Megachile fullawayi* and *M. timberlakei* collected at Kaimuki, September, 1922, at flowers of *Cosmos*.

Pleistodontes imperialis.—Mr. Timberlake reported that this fig-wasp, caprifier of *Ficus rubiginosa*, has become established from specimens liberated in January, 1922. A few specimens of the wasp were reared from a fig collected by Dr. H. L. Lyon on July 16 from a tree at the Federal Experiment Station grounds in Honolulu.

NOVEMBER 2, 1922.

The 204th meeting of the Hawaiian Entomological Society was held at the usual place, and was presided over by Vice-President D. T. Fullaway. Nine other members were present, as follows: Messrs. Bissell, Bryan, Ehrhorn, Giffard, Illingworth, Rosa, Swezey, Timberlake, and Willard.

The minutes of the 203d meeting were read and approved.

Mr. Giffard, chairman of the committee on finances, reported that the Hawaiian Sugar Planters' Association had voted to donate to the society the sum of \$300 to meet the deficiency in the cost of printing the Proceedings for the year 1921.

Upon motion of Mr. Giffard, it was unanimously voted that the Secretary write the Hawaiian Sugar Planters' Association, conveying to them the thanks and appreciation of the society for their continued support.

In response to a request from Mr. Giffard (appointed at previous meeting), Mr. Crawford was appointed to assist him in drafting a resolution on the death of Dr. David Sharp. This committee submitted the following resolution:

"The Hawaiian Entomological Society feels with deep regret

the loss it has sustained in the passing of a distinguished honorary member, Dr. David Sharp. But much greater, however, is the loss to Entomological Science which has been so much advanced by the devoted work of this great man. To the loved ones who survive Dr. Sharp, this Society extends its sincerest sympathy and Aloha."

Upon motion of Mr. Swezey, it was unanimously voted that this resolution be adopted and a copy sent to the bereaved widow.

Mr. Fullaway stated that Mr. Muir had informed him by letter that he would later on write up an obituary of Dr. Sharp.

PAPERS.

"Records of Introduced Beneficial Insects."

BY O. H. SWEZEY.

"A List, With Notes, of Insects Found at Waimea, Hawaii, in June, 1922."

BY J. F. ILLINGWORTH.

"House-Flies."

BY J. F. ILLINGWORTH.

NOTES AND EXHIBITIONS.

Pheidole megacephala Fabricius.—Mr. Giffard observed a swarm of queens and males of this ant in flight over his premises on Keeaumoku Street about 6:30 in the morning of one day in October. He stated that the swarm was about four feet wide and forty to fifty feet long. Mr. Ehrhorn stated that he had observed smaller swarms of these ants on several occasions, and that they usually swarmed after a rain-storm.

Anicetus annulatus.—Mr. Timberlake exhibited one specimen of this species reared by Mr. H. Compere from *Coccus hesperidum* on *Aralia*, taken in quarantine at San Francisco from the steamship "Taiyo Maru." Also two females from *Coccus hesperidum* collected at Sacramento, California, in 1912; a small series collected by Mr. Muir at Chin San, Macao, China, in December, 1906; and a few from China reared by Mr. Koebele under his number 1225. The species was described in 1919 from specimens collected on Oahu and Kauai.

Labels.—Mr. Bryan called attention to the method of making insect and locality labels by photographing sheets of paper upon which the desired information had been typewritten. He stated that he had found this method very satisfactory, where the number of labels desired was too small to pay for printing.

Micromus vinaceus.—Mr. Swezey exhibited cocoons of this introduced Hemerobiid, situated between ribs at base of papaya leaf, and reported that they were found there quite abundantly at the United States Experiment Station grounds.

Agrotis neurogramma Meyr.—Mr. Swezey exhibited a specimen of this Noctuid moth collected at light by Mr. Giffard at Kilauea, Hawaii, in August, 1922. This is only the second specimen of this moth that has been collected, so far as known. It was described in the Fauna Hawaiiensis on a single specimen collected at Kilauea by Dr. Perkins in August (the year not recorded in the Fauna, though it was probably 1895) and apparently none have been collected since until now.

Pantomorus godmani.—Mr. Swezey reported on the abundance of the eggs of this beetle in koa pods hanging on the trees on Sugar Loaf Mountain, October 29, 1922. Of fifty-five pods examined, forty-five had from one to seven batches of the eggs inside. There was a total of 103 batches. The pods had many perforations made by the larvae of the Tortricid which destroys most of the koa seeds. Apparently the beetles had oviposited inside the pods by inserting the ovipositor into the holes, as the egg-batches were always near these openings and in the place where a koa seed had been eaten.

Cylas formicarius.—Mr. Ehrhorn exhibited photographs of a basket of sweet potatoes, imported from Shanghai, China, and of cut-open individual potatoes, showing a very severe infestation by this sweet potato weevil. Sweet potatoes are imported as food from the Orient by the Chinese, but importations are less than they were six or eight years ago.

Urosigalphus bruchi Cwfd.—Mr. Bissell exhibited specimens of this Bruchid parasite, and reported that eleven individuals had been reared from Bruchidae in algaroba pods collected between September 21 and October 25, 1922. This parasite was introduced from Texas in July, 1921, and this is the first record of its recovery since its liberation at that time.

DECEMBER 7, 1922.

The 205th meeting of the Hawaiian Entomological Society was held at the experiment station of the Hawaiian Sugar Planters' Association, with Vice-President D. T. Fullaway presiding. Other members present were Messrs. Bissell, Bryan, Crawford, Ehrhorn, Giffard, Illingworth, Rosa, and Willard. Messrs. Syuti Issiki and Tadashi Okumi, Japanese entomologists from Formosa, were visitors.

The minutes of the previous meeting were read and accepted.

The treasurer's report, showing a cash balance on hand of \$78.50, was accepted subject to the approval of Mr. Crawford, who was appointed auditor.

Officers were elected as follows for the year 1923:

President	F. Muir
Vice-President	O. H. Swezey
Secretary-Treasurer	H. F. Willard
Additional members of Executive } D. L. Crawford	
Committee	W. M. Giffard

* ANNUAL PRESIDENTIAL ADDRESS.

"Notes on the Mealy-Bugs of Economic Importance in Hawaii."

BY D. T. FULLAWAY.

PAPERS.

"Descriptions of Two New Mexican Species of Encyrtidae Introduced into Hawaii (Hymenoptera)."

BY P. H. TIMBERLAKE.

† **"Review of the Hawaiian Genera Dyscritomyia and Prosthetochoeta, With Description of New Species (Diptera)."**

BY E. H. BRYAN, JR.

* In the continued absence of the president, H. T. Osborn, throughout the year (being on parasite exploration in Mexico), the vice-president, D. T. Fullaway, occupied the chair for the year and also presented the Annual Address. [Ed.]

† Withdrawn from publication. [Ed.]

"New Records, Identifications, and Synonymy of Diptera in Hawaii."

BY E. H. BRYAN, JR.

"Insects Attracted to Carrion in Hawaii."

BY J. F. ILLINGWORTH.

*** "A Study of the Male Genitalia of the Hawaiian Cixiidae (Homoptera). Part II. Oliarus Stal."**

BY W. M. GIFFARD.

NOTES AND EXHIBITIONS.

A new fly.—Mr. Fullaway exhibited a small fly, not previously known to occur in the Islands. It was taken on a window-pane of the quarantine room at the Government Nursery, and is supposed to have come into the room with cow manure. The fly has a pair of caudal hooks, is black with a white transverse band on the abdomen, and has white halteres. It appears to be close to the species of *Milichia* (Agromyzidae) represented here.

Coccus elongatus.—Mr. Ehrhorn exhibited a limb of a Cosmos tree heavily infested with this scale, which had been killed by a white fungus. He called attention to the varieties of fungi attacking Coccidae and other Homoptera here and on the mainland and stated that this limb showed an exceptional attack of fungus on *C. elongatus*.

* Withdrawn from publication. [Ed.]