JANUARY 14, 1946

The 481st meeting was held at the H.S.P.A. Experiment Station on Monday, January 14, at 2:00 p.m., with President Krauss in the chair.


Mr. J. Guy Lewis was elected to membership in the Society.

NOTES AND EXHIBITIONS

Achaea janata (L.)—Mr. Van Zwaluwenburg reported for Mr. Bianchi that during a visit to the island of Lanai, December 14-19, the latter had observed an adult of this agrotid moth at light at Lanai City, a new island record. Mr. Pemberton added that Mr. Look recently told him that the caterpillars of this moth were very abundant in the Kau district, island of Hawaii, stripping Ricinus bushes.

Eurytoma attacking Latrodectus eggs—It was reported for Mr. Bianchi that a high percentage of eggs of Latrodectus geometricus Koch, collected in pineapple fields on Lanai, proved to be attacked by Eurytoma sp. This is the first time this wasp has been reported from that island. An almost entirely black variety of geometricus was abundant in the Lanai fields, while very few of its brown form were found. No L. mactans (Fabr.) were seen.

Litomastix floridana (Ashmead)—Mr. Van Zwaluwenburg reported that caterpillars of Plusia chalcites (Esper) parasitized by this encyrtid were recently sent to Iwo Jima. Adult parasites issued en route, and were released on December 28 by R. E. Bertram of the Army's hydroponics unit stationed there.
Thoracaphis fici (Takahashi)—Mr. Zimmerman reported finding, with Dr. Jensen, winged forms of the banyan aphis in Honolulu. This is the first record of winged forms of this species in these islands.

Scotorythra paludicola (Butler)—Mr. Fullaway reported an outbreak of this moth on Acacia koa on Maui recently. The caterpillars were heavily parasitized by the ichneumonid Hyposoter exiguae (Viereck). He also exhibited a large undetermined prionid beetle reared from logs from the south Pacific, and a recently introduced parasite of the potato tuber moth, Chelonus phthorimaeae Gahan, described from Colorado (Proc. U. S. Nat. Mus., 53: 199, 1917). This parasite is not known to be established here yet.

Anacamptodes fragilaria (Grossbeck)—Dr. Williams reported finding a few caterpillars of this geometrid feeding on soybean foliage in his garden. Mr. Fullaway exhibited specimens of an undescribed species of Apanteles parasitic in larvae of Anacamp- todes, released on Oahu, but not yet established, which Mr. Krauss found in California.

New thrips records from Hawaii—Mr. Sakimura reported the following new island records from Hawaii, all the result of Mr. Look’s collecting:

Taeniothrips xanthius (Williams). Hilo; Cattleya flowers, etc., Dec. 13, 1945.

Frankliniella fusca (Hinds). Hilo; narcissus flower buds, Nov. 26, 1945. This is also the first record of this species in the Hawaiian Islands. A fairly large colony was found under circumstances which suggest it may have been introduced with narcissus bulbs.

Phlyctaenia rubigalis (Guenée)—Dr. Swezey exhibited a specimen of this pyralid moth reared from celery from California, which was intercepted by Mr. Look at Hilo. The shipment was condemned because of the presence of soil. One caterpillar was found, which Mr. Look reared, the moth issuing November 11. In California it is called the celery leaf-tier, while in the eastern states it is known as the greenhouse leaf-tier. It attacks many kinds of garden and greenhouse plants.

Xystus brassicae (Ashmead)—Dr. Swezey exhibited specimens of this cynipid reared from the cabbage aphid (Brevicoryne brassicae [L.]) on Quarantine Island, Honolulu, March 15, 1920, and only recently identified. This is the first record of this parasite in Hawaii. It was described from Florida (U. S. Bur. Ent. Bull, 14: 14, 1887) as Allotria brassicae and was retained in that genus by Dalla Torre and Kieffer in the “Genera Insectorum” (1902). It has a wide range: Florida, Connecticut, New York, Ohio, California and Washington, though few records of its occurrence are to be found in literature. Herrick (Jl. Econ. Ent., 4: 222, 1911)
mentions *X. brassicae* as an effective parasite of the cabbage aphis. Spencer, however (Ann. Ent. Soc. America, 19: 148, 1926), considers it to be a hyperparasite, and demonstrates that it parasitizes the larva of the braconid *Diaeretus rapae* (Curtis). Mr. Fullaway said that he had recorded *Eucoila* sp. (?) (Ann. Rept. Hawaii Agr. Expt. Sta. for 1912, p. 29) from *Macrosiphum* sp. and *Aphis sacchari* Zehntner. Some years later he recorded *Eucoila* sp. from *Diaeretus rapae*. (Proc. Haw. Ent. Soc., 8: 115, 1932). Recent examination of the specimen on which this last record is based, shows it to agree with Dr. Swezey's specimens of *X. brassicae*.

---

**FEBRUARY 11, 1946**

The 482nd meeting was held at the H.S.P.A. Experiment Station on Monday, February 11, at 2:00 p.m., with President Krauss in the chair.


The following resolution was adopted:

*Whereas:* in the death of Dr. Alastair Martin Adamson on December 24, 1945, the Hawaiian Entomological Society has lost a member of long standing, therefore,

*Be it resolved:* that the Society hereby records its loss, and expresses its appreciation of his interest in natural science and his contributions to entomology, and

*Be it further resolved:* that a copy of these resolutions be sent with expressions of sympathy to his bereaved family.

[A biographical sketch, with a portrait, of the late Dr. Adamson appears in *Tropical Agriculture*, January 1946, pp. 3-4].

**NOTES AND EXHIBITIONS**

*Scotorythra paludicola* (Butler)—Mr. Fullaway reported further on the recent outbreak of this selidosemid moth on Maui. On February 4 the outbreak in the forest at Waikamoi was estimated to have completely defoliated from 200 to several hundred acres of koa, and another severe outbreak was observed at Kipahula. The broad-leaved variety of koa, introduced from the island of Hawaii, seemed to be little or not at all attacked. Other host plants on which the larvae were feeding were *Tristania* and *Grevillea*. Parasitism by *Hypsoter exiguae* (Viereck) was very heavy, and uniden-
tified birds also were reported feeding on the caterpillars. The infestation is now declining, but it is questionable if the trees will recover from the severe defoliation.

_Euscepes postfasciatus_ (Fairmaire)—Dr. Swezey exhibited a large tuber of the Kuhio vine (_Ipomoea horsfalliae_) heavily infested by the larvae of this sweet potato weevil. This is possibly the first record of this host plant for this weevil.

_Achaea janata_ (L.)—Dr. Swezey reported that Dr. Lyon has brought in a caterpillar of this agrotid moth found hanging by a thread from an avocado tree. When given fresh tender avocado foliage for three days, the larva refused to eat it. It had probably fed upon another adjacent tree rather than on the avocado on which it was found. Further observations on _Achaea_ were reported for Mr. Look: The larvae were very abundant and injurious—at Pahala, Hawaii during December and January. With few exceptions every castor bean plant was completely defoliated, while “wong bok” cabbage growing at Pahala school was skeletonized within a short time. Larvae were also seen by Mr. Look attacking leaves of _Macadamia_, daikon, cowpea, and _Euphorbia geniculata_.

_Volucella_ sp.—Mr. Van Zwaluwenburg exhibited for Dr. Williams specimens of a new immigrant syrphid fly determined by Dr. Williams as _Volucella_ sp. Both sexes were taken February 3, 1946 on blossoms of _Dracaena_ in Dr. Williams’ garden on Keeaumoku St., Honolulu, at about 6 p.m. of a heavily overcast, sultry day, when _Plusia_ and other moths were already on the wing. Ten specimens were taken in fresh condition, and show some variation in intensity of coloration.

_Latrodectus_ sp.—Mr. Keck remarked on the unusual abundance of black widow spiders about bee hives at Ft. Shafter, Honolulu, recently, when three or more spiders could be found under every hive stand.

_Lema trilineata californica_ Schaeffer—Mr. Krauss reported finding an adult of this chrysomelid beetle in October at Riverside, Calif., on “tolguacha” (_Datura meteloides_). Numerous adults and some larvae were collected at Indio on November 15, on the same host plant. A tachinid fly, _Stomatolydella infernalis_ Townsend, described from New Mexico, was bred from a larva from Indio, and determined by D. G. Hall of the U. S. National Museum.

---

**MARCH 11, 1946**

The 483rd meeting was held at the H.S.P.A. Experiment Station on Monday, March 11, at 2:00 p.m., with President Krauss in the chair.


PAPER

On behalf of G. F. Augustson, Mr. Zimmerman presented a paper entitled: "Xenopsylla Fleas of the Hawaiian Islands (Siphonaptera: Pulicidae)."

NOTES AND EXHIBITIONS

Ophiomyia lantanae (Froggatt)—Mr. Krauss reported breeding this agromyzid fly from lantana berries collected in October and early November at Pasadena, Hollywood and Santa Barbara, Calif. This is the species established in Hawaii from Mexico by the late Albert Koebele in 1902.

Vanessa cardui (L.)—Dr. Swezey exhibited parasites from pupae of this butterfly. Three caterpillars from Oahu Sugar Co. yielded one tachinid (Frontina archippivora [Williston]) and one ichneumonid (Pterocormus rufiventris [Brullé]), a parasitism of 66 per cent.

Amyna natalis (Walker)—Dr. Swezey reported the discovery of the caterpillars of this new immigrant agrotid moth, previously known only from adults collected in light traps on Oahu. In sweeping Sida cordifolia among kiawe (Prosopis) trees in the Ewa-Waimanalo district along the Waianae road, several green larvae were obtained, from which adult Amyna were reared on March 11. From four of the larvae Meteorus laphygmae Viereck issued. Some days later Amyna caterpillars were also found on Sida rhombifolia, Abutilon incanum and Waltheria americana, at various points at Aiea, Waipio, Waipahu and Barber’s Point.

Mexican beetles intercepted—Dr. Williams reported for Mr. Look that last August several twigs used in imported crates of pottery from Mexico, were found at Hilo heavily infested by coleopterous larvae. The material was destroyed, but two of the beetles obtained were sent to the U. S. National Museum for determination. A scolytid was identified by W. H. Anderson as (or near) Renocis mexicanus Blackman, and a bostrichid by W. S. Fisher as Micrapate labialis Lesne.

Hercothrips fasciatus (Pergande)—Mr. Bianchi reported that on February 20, Mr. Rosa and he found colonies of this bean thrips feeding on leaves of Heliotropium curassavicum at Barber’s Point, Oahu. This is a new host and island record for the species. The
site of the find, like that on Molokai where Mr. Krauss found the species last year, is near an Army establishment, suggesting the probability that the infestation originated from specimens imported on oranges or other produce.

*Hymenia recurvalis* (Fabr.)—Mr. Bianchi spoke of the great abundance at Barber’s Point of larvae of the Hawaiian beet webworm, or amaranth worm, on leaves and stems of *Sesuvium portulacastrum* and *Batis maritima*. Among the caterpillars were found a few cocoons of the introduced braconid, *Apanteles marginiventris* (Cresson).

*Volucella* sp.—Dr. Williams reported that an earlier record for this recent immigrant syrphid fly than his, reported last month, is supplied by a specimen taken by Charles Hoyt on January 1, 1946, in Honolulu.

*Polydesma umbricola* Boisduval—Mr. Fullaway reported finding the larva of this agrotid moth feeding on rose buds at Kahala, Honolulu. Mr. Pemberton reported that Mr. Van Zwaluwenburg and he had under observation the conspicuous damage being done currently by *Polydesma* larvae to monkey pod trees (*Samanea saman*). In many cases the unopened leaf buds are completely eaten out.

*Eucelatoria armigera* (Coquillet)—Mr. Rosa reported rearing this tachinid fly from the larva of *Hymenia recurvalis* (Fabr.), a new host record.

---

**APRIL 8, 1946**

The 484th meeting was held at the H.S.P.A. Experiment Station on Monday, April 8, at 2:00 p.m., with Vice-president Sakimura in the chair.


**PAPER**

On behalf of Dr. R. L. Usinger, Dr. Swezey presented a paper entitled: “Notes on Graptostethus in Hawaii (Hemiptera: Lygaeidae).”
NOTES AND EXHIBITIONS

Scatopse fuscipes Meigen—Mr. Wirth reported that Dr. Alan Stone of the U. S. National Museum determined as this species a scatopsid fly taken at lights in July, 1946, at Hickam Field and in Honolulu. It is widespread, and was formerly known as Rhegmoclema atrata Say. However, Duda considers atrata to be a synonym of fuscipes, and as Rhegmoclema is of doubtful validity, he sinks it under Scatopse. Bryan (Proc. Haw. Ent. Soc., 8: 406, 1934) reported that “Rhegmoclema atrata was captured in a parasite cage from California in 1915. It is not known to be established.”

Psychoda phalaenoides (L.)—Mr. Wirth reported that specimens swept from vegetation and on an overhanging ledge on the west slope of Mt. Tantalus, Oahu, in October 1945, were determined as this species by Dr. Wm. F. Rapp of the University of Illinois. This is a widespread species occurring in sewage sprinkler beds and other decaying organic matter throughout North America and Europe. It is not surprising that it has spread to Hawaii; its spread was probably effected by commerce as in the case of several other species of psychodids.

Haplothrips sesuvi Priesner—Mr. Bianchi reported finding this thrips in great numbers on Sesuvium portulacastrum near the beach at Barber’s Point, Oahu, on March 12, 1946. This is a new record for the species in the Territory. It was described from the same plant host from Java (Rec. Indian Mus., 35: 363, 1933).

Hercothrips fasciatus (Pergande)—Mr. Sakimura reported another isolated infestation by this bean thrips, April 7, on Heliotropium curassavicum and Sonchus oleraceus on the leeward side of Kaena Point, Oahu. This habitat is an extremely dry, rocky coast with a limited number of low littoral plants. Many of the Heliotropium and Sonchus plants were heavily infested within a small area about 50 by 10 feet. Other plants present, but not found infested, were Jacquemontia sandwicensis, Sida fallax, Atriplex semibaccata, Opuntia megacantha and wild tomato. Only the one infestation was seen along the two-mile-long beach between Kaena light and Keawaula valley.

Anagrus yawi Fullaway—Mr. Fullaway reported that this egg parasite of the bean capsid, Pycnoderes quadriramaculatus Guérin, introduced from Mexico and established in 1943, was again recovered in Kaimuki, Honolulu.

Haematopinus suis (L.)—Dr. Alicata reported that DDT used at 2 and 5 per cent, either as dust or spray, was successful in controlling hog lice on pigs. The lice began dropping from the host animals about three hours after treatment.
MAY 13, 1946

The 485th meeting was held at the H.S.P.A. Experiment Station on Monday, May 13, at 2:00 p.m., with President Krauss in the chair.


Dr. C. L. Ritchie was nominated for membership in the Society.

NOTES AND EXHIBITIONS

Dacus dorsalis Hendel—Mr. Fullaway exhibited specimens of a trypetid fly new to the Territory, determined by Dr. Williams as this species. It was reared May 10, 1946 from mango fruits collected on Dole St., Honolulu, by Miss Mabel Chong.¹

Pulvinaria psidii Maskell—Mr. Fullaway exhibited specimens of this coccid collected on leaves of Anthurium.

Isodontia harrisi Fernald—Dr. Swezey exhibited a specimen of this wasp, reared about May 6 from a cocoon in a burrow of the carpenter bee (Xylocopa). The burrow was found by George McEldowney in a dead branch of Vitex at Wahiawa, Oahu, March 22.

Tendipedid notes—Mr. Wirth presented the following: Penetaneura sp. This appears to be the first record of the subfamily Tanypodinae from the Hawaiian Islands. The first specimen, a female, was taken in July 1945 in a light trap at the Marine Corps Air Station dispensary, Ewa, Oahu. Two females were taken in January 1946 at the Kahuku Army air base. On March 25, about a pint of water and algae was taken from a nearly dry pond about 50 yards from the beach at the end of the Marine Air Station runway, and brought into the laboratory. The peculiar tanypodine larvae and pupae were noted, and during the six weeks the water was under observation, about 50 midges emerged. Both the Kahuku and Ewa areas are characterized by shallow, marshy, algae-choked ponds, rich in aquatic insect life.

¹ Subsequently, among some 22,500 fruit flies collected or reared in Honolulu by O. C. McBride between April and July 1945, a single female specimen of Dacus dorsalis was found. This advances the earliest known date of its presence here by about one year. No dorsalis was found among an additional 50,000 flies collected by Mr. McBride between November 10, 1942 and April 1945. It is the belief of some of the local entomologists that the introduction of dorsalis into Hawaii was effected from Saipan; that it was probably brought by combat troops returning to rest camps here; and that possibly it arrived as early as the late summer of 1944. From observations by Dr. Jensen and others, relative to damaging infestations, and from complaints by gardeners and growers, it is suggested that dorsalis came first to the island of Hawaii, and a few months later to Oahu. [Ed.].
Also of interest was the rearing of the “plain-legged” *Tendipes* sp. and the “spotted-winged” *Polypedilum* sp., from the same Ewa ponds. Adults of these tendipedine midges, as well as the heleid, *Dasyhelea hawaiensis* Macfie, and two undetermined species of Orthocladiinae, were collected in numbers by sweeping grassy pond margins.

*Anacamptodes fragilaria* (Grossbeck)—Mr. Rosa reported finding this geometrid larva feeding on mint, a new host plant for the species. Mr. Krauss reported finding in California, two ichneumonid parasites of *Anacamptodes* larvae: *Campoplegidea flavescens* Walley, reared from larvae on willow at Riverside, and an undescribed species of *Phobocampe*, reared from a larva on *Acacia* at Pasadena. The parasites were determined by Dr. H. K. Townes.

*Achatina fulica* (Férussac)—Mr. Krauss reported observing the giant African snail in two areas on Guam last April. The snail is believed to have been introduced into Guam on sweet potato plants from Rota in 1943. An eradication program is under way. Other islands in the Marianas where the snail is established are Tinian and Saipan, where it is sometimes very destructive to crops; it also occurs on Ponape. Dr. Merino stated that this snail has recently been found near Manila, in the Philippines.

*Johnston Island insects*—Mr. Krauss reported that during a short stop-over on May 1 on Johnston Island, a coral islet some 800 miles southwest of Honolulu, he had collected the following insects: *Sympherobius barberi* Banks (Btemerotoidae); *Nysius terrestris* Usinger (Lygaeidae); *Frankliniella sulphurea* Schultz (Thysanoptera); the coccid parasite *Aenasius advena* Compere (Encyrtidae); and the flies *Desmometopa m-nigrum* Zetterstedt, *Ischiodon scutellaris* (Fabr.), *Musca domestica* L. and *Sarcophaga barbata* Thomson.

*Mealybug parasites*—Mr. Sakimura reported that the following hymenopterous parasites of *Pseudococcus comstocki* (Kuwana) were recently imported from the U. S. Bureau of Entomology laboratory at Charlottesville, Va.: *Pseudaphycus* sp. near orientalis Ferrière, *Allotropa convexifrons* Muesebeck, *Allotropa burrelli* Muesebeck and *Claussenia purpurea* Ishii. With the exception of *A. convexifrons*, all failed to oviposit in *Pseudococcus brevipes* (Cockerell); *convexifrons* failed to develop on the *brevipes* host.

*New publication*—Dr. Holdaway announced that the University of Hawaii is sponsoring a new quarterly periodical, *Pacific Science*, and will welcome original articles on the biological and physical sciences concerning the Pacific Ocean area. The publication will appear in January 1947; Dr. A. Grove Day of the University is the editor.

*Insects infesting red squill*—Dr. Holdaway reported that a dermestid, *Bucnocerus anthrenoides* Sharp (?), and a booklouse
tentatively identified as *Liposcelis divinatorius* (Muller), were found in Honolulu attacking red squill rat baits. Identification of the beetle was made by Dr. Swezey by comparison with material determined tentatively some years ago.

*Tribolium confusum* Jacq. du Val.—Dr. Holdaway exhibited a taro flour-skim milk product manufactured in Honolulu which was infested by *Tribolium confusum*. Infestation occurred in the factory.

*Enallagma* sp.—Dr. Williams presented the following: In the Puupukea forest, Oahu, April 11, both sexes of this immigrant damselfly were observed catching the tiny water-running veliid bug, *Microvelia vagans* White, from the surface of a pool, and then alighting on some convenient object to devour their prey. The damselflies would inspect the surface of the water, picking up flotsam here and there, and with a well-aimed pounce, seize a *Microvelia*.

*Protoparce quinquemaculata blackburni* (Butler)—Dr. Williams spoke of finding 11 eggs of this large sphinx moth on *Nicotiana glauca* near Mapulehu, Molokai on January 10. Eight proved to be parasitized by *Trichogramma*, one of the eggs producing 57 of the tiny wasps, mostly males. One sphinx larva was reared to maturity, requiring 56 days from hatching to adult.

**JUNE 10, 1946**

The 486th meeting was held at the H.S.P.A. Experiment Station on Monday, June 10 at 2:00 p.m., with Vice-president Sakimura in the chair.


Dr. C. L. Ritchie was elected to membership in the Society, and Messrs. Samuel Beller, O. K. Courtney, J. A. Duggins, K. L. Maehler and O. O. Stout were nominated for membership.

**NOTES AND EXHIBITIONS**

*Solindenia* sp.—Mr. Fullaway exhibited a eupelmid wasp new to the Territory, captured by Mr. Rosa recently in the H.S.P.A. Experiment Station building. It is quite different from the species
of *Solindenia* previously known there, particularly in the shape of the head, which is shagreened and colored brassy green; the body is smooth and is yellow marked with black.

*Chrysoplatycerus splendens* (Howard)—Mr. Fullaway exhibited still another insect new to these islands, the above species, reared from *Pseudococcus citri* (Risso) and *P. maritimus* (Ehrhorn) collected on monkey pod (*Samanea saman*) foliage on Judd St., Honolulu, June 3, 1946. This encyrtid parasite was originally described from California in the genus *Rileya* (*Entom. Americana*, 4: 80, 1888; *Canadian Ent.*, 20: 194, 1888).

*Dacus dorsalis* Hendel—Mr. Fullaway reported that this newly introduced trypetid fly is now known on Oahu from Koko Head to Waianae, and on the windward side from Waimanalo to Kahaluu. It has been taken at Wahiawa, but has yet to be found in the Waialua-Mokuleia district. On the outer islands it is known from Hawaii and from a single specimen caught in a trap at Lahaina, Maui. For Mr. Look he reported that the fly is generally spread on Hawaii from Kona to Hilo, and from Kohala to Naalehu. *D. dorsalis* was especially numerous at Kohala, where 174 males were trapped in ten minutes, and at Kawaihæ, where 115 were taken in the same length of time. Mr. Look bred it from fruits of waiawi (*Psidium* sp.) collected November 18, 1945, and later from mountain apple (*Eugenia malaccensis*), as well as from ripe bananas. On Oahu Mr. Fullaway has bred *D. dorsalis* from pomelo, and Mr. Van Zwaluwenburg reported rearing it from rose apple (*Eugenia jambos*).

Insects attacking *Cordia* fruits—Dr. Swezey reported rearing the following insects from fruits of *Cordia subcordata* collected at Barber's Point, Oahu, February 26 and March 6: *Pyroderces rileyi* (Walsingham); *Decadarchis* sp.; *Sybra alternans* Wied. and *Catorama sharpi* Pic². There were ten of the last-named species, an insect hitherto raised abundantly from old pods of *Acacia farnesiana*. *Cordia subcordata* appears to be a new host for this anobiid. *C. sharpi* has been taken in light traps in the Pearl Harbor area in large numbers.

*Gelis tenellus* (Say)—Dr. Swezey reported rearing this ichneumonid from a cocoon of *Hyposoter exiguae* (Viereck) collected in the Hawaii National Park, May 23. He had previously bred it from cocoons of lacewing flies.

*Copris* and *Onthophagus*—Dr. Swezey exhibited specimens of *Copris incertus prociduus* Say and *Onthophagus incensus* Say, collected at Kapapala ranch, Kau, Hawaii, May 25. They were abundant in horse manure and cow droppings and had so thoroughly

---

² Pic (Bull. Soc. ent. France, 1912, p. 265) points out that the name *C. pusilla*, given by Sharp to the species in Hawaii, is preoccupied by that of a North American species described by LeConte in 1858. [Ed.].
worked this material that it was too dry for the hornfly maggots, none of which were present. It is apparent that these two beetles, introduced from Mexico in 1923 for this purpose, can be very effective, particularly in dry regions such as the Kau district. *Chrysobothris* sp.—Mr. Hoyt exhibited a buprestid beetle belonging to this genus, which was taken alive on June 8, 1946 on a lawn near a mango tree on Thurston Ave., Honolulu. According to Dr. Williams, it is probably a Philippine species.

*Tarsonemus latus* Banks—Mr. Pemberton said that a hedge of the plant known locally as mock orange (*Murraya exotica*) had the tips of the branches stunted and the leaves distorted as a result of a heavy infestation by the broad mite.

*Hawaiina perkinsi* (Swezey)—Mr. Bianchi mentioned rearing a specimen of this rare native sphinx moth from a larva found feeding on a native *Euphorbia* on Mt. Kaala, April 17. In the laboratory the larva fed readily on the beach *Scaevola* (*S. lobelia*) as well as on the mountain species, *S. chamissoniana*. Feeding on the *Euphorbia* was extensive, but careful search failed to reveal more than the one specimen. This suggests that birds, numerous on Mt. Kaala, may prey heavily on the caterpillars.

**JULY 8, 1946**

The 487th meeting was held at the H.S.P.A. Experiment Station on Monday, July 8, at 2:00 p.m., with President Sakimura in the chair.


*Visitor:* Mr. Leo Kartman.

It was announced that the Executive Committee had elected Kay Sakimura President, to complete the unexpired term of N. L. H. Krauss, temporarily absent from the Territory, and that Dr. D. D. Bonnet had been chosen Vice-president.

Messrs. Samuel Beller, O. K. Courtney, J. A. Duggins, K. L. Maehler and O. O. Stout were elected to membership in the Society. Mr. Marshall Ross was nominated for membership.

**PAPER**

Dr. Swezey presented a paper entitled: “*Elaphria nucicolora* (Guenée), a recent Immigrant to Hawaii (Lepidoptera: Agrotidae: Acronictinae).”
NOTES AND EXHIBITIONS

*Dacus dorsalis* Hendel—Mr. Fullaway reported for Mr. Look: The mango fly has been bred from peaches at Waimea, Hawaii, from oranges at Mountain View, and from pepino (*Solanum muricatum*) and rose apple at Hilo. Figs and loquats also appear to be stung by *D. dorsalis*. Adult males were observed on gardenia, on Cattleya blossoms and on carrot plants. Both sexes were collected from flowers of *Vanda Miss Joaquim*. Mr. Pemberton spoke of a recent letter from Dr. Alan Stone concerning the identity of this fly. Dr. Stone is of the opinion that *Dacus dorsalis* Hendel should be used, not *D. ferrugineus* (Fabr.) var. *dorsalis*. The species described by Fabricius in 1794 as *Musca ferruginea* becomes a primary homonym and invalid because preoccupied by *Musca ferruginea* Scopoli 1763. Thus, according to Dr. Stone, *dorsalis* is apparently the next available name. Mr. Beller stated that in Siam the following fruits are hosts of *Dacus ferrugineus*: *Psidium guajava*, *Eugenia sp.*, *Diospyros packmannii*, eggplant, banana, mango, *Sandoricum indicum* and *Zizyphus jujuba*.

*New eriophyids*—The two new species of eriophyid mites reported by Mr. Look last year (Proc. Haw. Ent. Soc., 12: 473, 488) have now been described by H. H. Keifer. The one on hibiscus (reported earlier as *Epitrimerus* sp.) is named *Tegonotus hibiscellus*, and the one on mango, *Oxypleurites mangiferae*. The descriptions appear in the Monthly Bulletin of the California State Board of Agriculture, 35: 42, pl. 202; and *idem*: 43, pl. 203, 1946.

*Melophagus ovinus* (L.)—Mr. Pemberton exhibited 11 specimens of this hippoboscid collected from a wild sheep in June at Puu Laau on the west slope of Mauna Kea, Hawaii by L. W. Bryan, at an elevation of 8000 feet. Mr. Bryan stated that it is common on wild sheep in that locality. Previous records of this species are by Muir (Proc. Haw. Ent. Soc., 7: 4, 1928) who took a single specimen from a bag of forest seeds adjacent to a sheep run at Honohina, Hawaii in December 1926, and by Swezey and Williams (Proc. Haw. Ent. Soc., 8: 188, 1932) who found one specimen in the saddle room at Keanakolu, Hawaii in October 1931 at an elevation of 5250 feet.

*Trissolcus murgantiae* Ashmead—Mr. Fullaway exhibited specimens of this scelionid described (U. S. Nat. Mus. Bull., 45: 163, 1893) as a parasite of *Murgantia histrionica* (Hahn). This was recently introduced from California and is being propagated by the Board of Agriculture and Forestry. It is said to be a more effective parasite of the harlequin cabbage bug than *Ooencyrtus johnsoni* (Howard), previously introduced and established here.

*This encyrtid enemy of *Murgantia* eggs was introduced from California in 1940 by the Board of Agriculture and Forestry, but has until now escaped notice in these Proceedings despite the fact that it is now well established here. It was described in 1898 from Maryland as *Encyrtus johnsoni* (Canadian Ent., 30: 18).*
It completes its development in the egg in 11 days.

New insect records—For Mr. Davis, Dr. Swezey reported the following insects new to the Territory; the aphids were determined by Prof. E. O. Essig, and the drosophilid by Dr. Gordon Mainland:

- *Rhopalosiphum prunifoliae* (Fitch); on leaves and stems of *Cynodon dactylon*; Kilauea ranger station, Hawaii, 3900 ft., May 17, 1945, C. J. Davis, coll.
- *Macrosiphum granarium* (Kirby); on seed heads of *Deschampsia hawaiensis*; crater floor, Haleakala, Maui, 7000 ft., Sept. 3, 1945, A. L. Mitchell, coll.
- *Drosophila busckii* Coquillett; in trap, nursery, Kilauea, Hawaii, 4000 feet, Nov. 25, 1945, C. J. Davis, coll.

*Polydesma umbricola* Boisduval—Dr. Williams reported that he had been told of typical *Polydesma* damage observed on monkey pod trees at Kukuihaele and Kona, Hawaii. Mr. Fullaway said that Mr. Look had found *Polydesma* larvae on monkey pod at Kona and at Hilo last June.

AUGUST 12, 1946

The 488th meeting was held at the H.S.P.A. Experiment Station on Monday, August 12, at 2:00 p.m., with President Sakimura in the chair.


Mr. Marshall Ross was elected to membership in the Society.

**PAPER**

Dr. Swezey presented a paper entitled: "Neoclytarlus on Chenopodium on the Island of Hawaii (Coleoptera: Cerambycidae)."

**NOTES AND EXHIBITIONS**

*Herclothrips fasciatus* (Pergande)—Mr. Sakimura reported for Mr. Look that large numbers of the bean thrips were collected from prickly poppy (*Argemone alba glauca*) at Puu Waawaa, Kona, Hawaii, September 18. As many as five adults and 50 nymphs were observed on a single leaf. Nearby plants of *Sonchus oleraceus* were examined, but no thrips were found on them. Under dry conditions a light infestation by this species was found on
S. oleraceus on the saddle road between Mauna Kea and Mauna Loa, Hawaii, at 6500 feet, July 2.

Rhinocorus pyrrophytus Boheman—Mr. Zimmerman exhibited specimens of this ceutorhynchine weevil, new to the Territory. It was swept by him from grass and low herbage at the sheep station, Huumula, Hawaii, August 3 and 7, 1946. It is widespread in Europe and North America, and is reported by Blatchley to feed on Rumex, Polygonum and Euphorbia.

Dacus dorsalis Hendel—Mr. Fullaway reported that Mr. Look had reared this new trypetid from avocado, loquat and fig at Hilo, Hawaii. D. cucurbitae Coquillett also issued from the figs. Mr. Pemberton added that dorsalis has been found to lay its eggs in cracks, stem holes and injuries in avocados.

Gnorimoschema operculella (Zeller)—Mr. Look reported breeding the potato tuber moth from Physalis peruvianum found at 6500 feet on the Mauna Loa-Mauna Kea saddle road.

Triatoma rubrofasciata (Degeer)—Dr. Bonnet exhibited a jar containing 18 specimens of this cone-nose in various stages. They were reared from eggs from a single female obtained from Mr. Bianchi October 16, 1945. The female laid 12 eggs on October 17. Fertile egg production continued until February. The eggs hatched in about 28 days at room temperature (76° F.). The eggs are a creamy white when laid, later changing to yellow, to orange, and finally to pink just before hatching.

The first instar did not take a blood meal before from four to six days after hatching. The time required for repletion was from eight to 15 minutes. The bite of the early instars was usually painless, with a delayed itching sensation; only a slight red mark is left unless the area is scratched. The female usually, but not always, defecates immediately prior to conclusion of the blood meal. Cannibalism was observed on two occasions. The bite of the later instars is increasingly severe, and when several bugs are biting at once the pain and tickling becomes almost unbearable. No untoward effects were noted at any time as a result of the bites. There are five nymphal instars, and the total time for development to adult in this instance was 277 days. This will vary with frequency of blood meals, for the insect does not moult unless fed to repletion.

Moth larva at high altitude—Dr. Swezey reported that Mr. Davis had found a nearly mature larva of an unidentified agrotid within a cave on Mauna Kea at an elevation of about 12,000 feet. The surroundings were exceedingly barren, and no sign of any food plant could be discovered.

However, enough suitable vegetation must have been present to bring the larva through its earlier instars, and it may have wandered into the cave in search of further food or for a place in which to pupate. The larva was not reared to adult. Dr. Swezey reported
having once found three adults of *Euxoa mesotoxa* (Meyrick) in a nearly empty soda water bottle at Lake Waiau, 13,000 feet, Mauna Kea. Possibly a moth of this, or some other native species, the larvae of which are unknown, took shelter in the cave and found some vegetation in the vicinity for oviposition.

*Ethmia colonella* Walsingham—Dr. Swezey reported that Mr. Davis in March found larvae of this moth defoliating kou (*Cordia subcordata*) on the Kona coast of Hawaii between Kailua and Keauhou. This is the first record of this insect from the island of Hawaii.

*Kalotermes immigrans* Snyder—Mr. Fullaway exhibited live wood of *Leucaena glauca* from Ulupalakua ranch, Maui, in which this native termite was feeding.

*A new centipede*—Mr. Pemberton exhibited a centipede new to the Territory, taken in July 1946 in Nuuanu valley. According to Dr. Williams it appears to be a species of *Otostigmus*.

SEPTEMBER 9, 1946

The 489th meeting was held at the H.S.P.A. Experiment Station on Monday, September 9, at 2:00 p.m., with President Sakimura in the chair.


**PAPERS**

For Mr. Wirth, Dr. Williams presented two papers: “Notes on *Thalassomyia* Schiner, with Descriptions of two new Species (Diptera: Tendipedidae),” and “*Ephydra gracilis* Packard, a recent Immigrant Fly in Hawaii (Diptera: Ephydridae).”

**NOTES AND EXHIBITIONS**

*Murgantia histrionica* (Hahn)—Dr. Holdaway called attention to increasing numbers of reports of infestations by this bug in various parts of Honolulu, particularly in the vicinity of the University and at Kalihi. Hosts attacked have been nasturtium, head cabbage, Chinese cabbage, “tender green” (a green mustard), broccoli, Brussels sprouts and kale mustard cabbage.

*Subsequently determined by Dr. R. V. Chamberlin as *Otostigmus scaber* Porat, described from China (Sv. Ak. Handl., 4 [7]: 20, 1874 [1876]).*
Araecerus fasciculatus (Degeer)—Mr. Bianchi exhibited five adults of this anthribid beetle reared from flower buds of gardenia at Kukuihaele, Hawaii in August. The larvae had bored tunnels through the basal portions of the unopened buds, feeding and eventually pupating there, and in most cases completely ruining the flowers. This is a hitherto unreported habit for this species, which usually develops in dead, dry vegetable matter. It was reported that practically no perfect blossoms were obtained this year from the 15 or 20 bushes on which the beetles were found.

Achaea janata (L.)—Mr. Bianchi reported that on a recent visit to Hawaii in early August he had seen evidence that populations of this agrotid have not greatly diminished on that island. This is in contrast to conditions on Oahu. At Pahala, Hawaii, where great numbers of larvae were found in June 1945, heavy defoliation of castor bean has continued intermittently throughout the present year, and is now still apparent, although the caterpillars themselves have disappeared.

Eurytoma on Latrodectus—Mr. Bianchi reported that he had reared this parasite from egg cases of *Latrodectus mactans* (Fabr.) and *L. geometricus* Koch, collected at South Point, Hawaii in August. *Eurytoma* was liberated in this locality in June 1945, and this is the first record of its recovery on that island. Four out of nine egg cases of *mactans* were parasitized, while out of 19 *geometricus* cases only two were attacked. However, this difference is not reflected in the relative incidence of the two spiders, both of which are very scarce compared with their abundance in former years, although not scarcer than they are in general on Oahu. Conversely, the food of the spiders (several species of cockroaches and tenebrionids) is strikingly more abundant than it has been since 1939 when Mr. Bianchi first visited the region.

Dacus dorsalis Hendel—Mr. Keck reported rearing this new trypetid from fruits of the canistel (*Lucuma nervosa*).

Mealybug parasites—Mr. Sakimura reported that a small shipment of *Tetracnemus peregrinus* Compere and three unidentified encyrtids, all parasitic on mealybugs, was received in August from Dr. Carter from Rio de Janeiro. None of them was observed to oviposit in *Pseudococcus brevipes* (Cockerell). A shipment of *Leptomastix dactylopti* Howard was also received recently from Dr. S. E. Flanders from Riverside, Calif. Oviposition by this species in *P. brevipes*, though infrequent, was observed, and further trials with *Leptomastix* will be made when further material arrives.

Barypolynema saga (Girault)—Dr. Swezey called attention to a change in the generic name of this mymarid parasite of the eggs of the cicadellid, *Euscelis stactogallus* (Amyot). It is recorded locally (Proc. Haw. Ent. Soc., 7:224, 340, 1931) as *Polynema*

*Perkinsiella saccharicida* Kirkaldy—Dr. Swezey exhibited a small white cocoon on a bit of leafsheath of sugarcane, collected at Ewa Plantation. The cocoon had a tiny hole where a parasite had issued. He explained that this particular cocoon, with the parasite exit hole, was positive evidence that three species of insects had been present: the sugarcane leafhopper, a dryinid parasite (*Pseudogonatopus hospes* Perkins) of the leafhopper, and a parasite of the dryinid, *Helegonatopus pseudophanes* Perkins, which had made the exit hole in the dryinid cocoon. None of the three insects was observed in the field, indicating their relative scarcity.

*Typhlops braminus* (Russel)—Mr. Van Zwaluwenburg exhibited a specimen of this burrowing snake captured September 2 on Seaside Ave., in the Waikiki district of Honolulu, while moving over the surface of the ground. This marks a considerable extension of the local range of this snake, which hitherto has been found most often in the Kalihi district, and a few times on Pacific Heights and in Makiki.

*Olfersia aenescens* Thomson—Mr. Pemberton exhibited for Mr. Maehler, 28 specimens of this hippoboscid fly collected on rocks on Rabbit Island, windward Oahu, August 28, 1946. Apparently the species has not been collected before on Rabbit Island, and there are no records of its occurrence on nearby Oahu. On August 30 Mr. Maehler returned to the island and collected the fly from young shearwaters and noddy terns. According to Bequaert (Occ. Papers B. P. Bishop Mus., 16 [11]: 277-279, 1941), *aenescens* is widely distributed over tropical seas and occurs on many different marine birds. Previous records from the Hawaiian archipelago include only Laysan and Lisiansky.

*Blattella lituricollis* (Walker)—Mr. Zimmerman reported that Dr. A. B. Gurney of the U. S. National Museum had recently determined as this species the field cockroach which until now has been confused with *B. germanica* (Linn.), which also occurs here. Mr. Zimmerman’s suspicions of the accepted identification were based on the field habits of this cockroach, which differ markedly from the well-established domesticity of *germanica*.

*Iwo Jima insects*—Mr. Van Zwaluwenburg presented the following list of insects collected on Iwo Jima by Robert E. Bertram during his stay on the island in late 1945 and early 1946. The Lepidoptera were identified by Dr. Swezey, and the other orders by Dr. Williams:

**Orthoptera**

Blattidae: undetermined cockroach nymph.

Mantidae: *Tenodera sinensis* Saussure.
Acridiidae: *Locusta migratoria danica* (L.).

**Homoptera**

**Heteroptera**
- Pentatomidae: *Nesara viridula* (L.).

**Neuroptera**

**Lepidoptera**
- Pyralididae: *Hymenia recurvalis* (Fabr.).
- Plusiidae: *Plusia chalcites* (Esper).
- Agrotidae (Noctuidae):
  - *Achaea janata* (L.).
  - *Amyga octo* (Guenée).
  - *Cirphis loreyi* (Dup.).
  - *Heliothis armigera* (Hübner).
  - *Mocis undata* (Fabr.).
- *Prodenia litura* (Fabr.).
- Lycaenidae: *Cosmolyce boetica* (L.).
- Various: one or more species of microlepidoptera too badly rubbed to identify.

**Coleoptera**
- Nitidulidae: *Carpophilus humeralis* (Fabr.).
- Coccinellidae:
  - *Nephus* sp.
  - *Coccinella septempunctata bruckii* Mulsant.
- Scarabaeidae:
  - *Anomala orientalis* (Waterhouse) (This species was taken earlier on Iwo Jima by Major J. E. Webb, AUS.).

**Diptera**
- Muscidae: *Musca prob. domestica* L.

**Miscellaneous**
- Parasitic worms occurred about the roots of tomato; these were not submitted for identification, but undoubtedly were nematodes.
- Mites affected the foliage of tomato plants, but were not identified.

---

**OCTOBER 14, 1946**

The 490th meeting was held at the H.S.P.A. Experiment Station on Monday, October 14, at 2:00 p.m., with President Sakimura in the chair.


Mr. Wirth presented a paper entitled: "A Review of the Genus Telmatogoton Schiner, with Descriptions of three new Hawaiian Species (Diptera: Tendipedidae)." Mr. Bianchi presented a paper entitled: "Thysanoptera Hawaiensis-I."

**NOTES AND EXHIBITIONS**

**New aphid records**—Dr. Swezey presented, for Mr. Davis, the following notes on some aphids new to the Territory, collected in Hawaii National Park, island of Hawaii, and identified by Prof. E. O. Essig:

*Amphorophora vaccinii* Mason; on terminal shoots of *Vaccinium reticulatum*; end of Mauna Loa truck trail, 6500 ft., May 22, 1946, C. J. Davis, coll.

*Pterochlorus saligna* (Gmelin); on terminal twigs of *Osteomeles anthyllidifolia*; old Peter Lee road, 5 m. west of Volcano House, 3500 ft., May 26, 1946, C. J. Davis and O. H. Swezey, colls. [Subsequently it was discovered that this species was taken by Giffard, 4000 ft., Kilauea, Hawaii, Aug., 1911; and by Giffard and Muir, Kahuku, Kau, Hawaii, Jan. 15, 1917.]

*Phorodon menthae* (Buckton); on ventral surface of leaves of *Mentha sp.*; Paio (prison camp), 3900 ft., June 6, 1946, C. J. Davis, coll.

*Dacus dorsalis* Hendel—Dr. Swezey reported rearing this new immigrant fly from breadfruit. A large proportion of the fruits on his tree in Manoa were heavily infested. The maggots seemed to congregate in the center of the fruit around the core, so that the infestation was not always detected by external softness of the fruit.

Mr. Fullaway reported that Mr. Look on Hawaii, had bred *D. dorsalis* from the following: coffee berries, plum (*Prunus*) (from Kilauea, a new locality), passion fruit (*Passiflora*) and *Terminalia catappa*.

Mr. Pemberton told of trapping male *D. dorsalis* in a coffee jar of water containing a few drops of citronella oil. In his garden on upper Keeauumoku St., in 59 consecutive days of trapping, 33,105 male *dorsalis* were caught. The trap was placed under an avocado tree which at the time bore no fruit; no fruits of any kind were seen in the vicinity.

**Notes on Kauai Diptera**—Mr. Wirth reported on some observations made during a recent trip to Kauai:

*Clunio* sp. At Wailua Falls, about four or five miles from the sea, about a dozen males with the wingless females attached, were captured while flitting just above the water's edge at the rapids immediately below the falls. This genus has never before been
taken except between tide marks on the seashore; it is problematical whether these individuals migrated this distance up the swift stream, or whether they are breeding in fresh water. As most of the males were in copulation with females, the latter is suggested.

*Thalassomyia setosipennis* Wirth⁵. This species, known previously only from Hilo, was found in numbers at Nawiliwili bay and at Kilauea bay. Immature stages were taken in rock pools between tide marks at Nawiliwili. This indicates that the species prefers habitats where the sea water is freshened by stream effluents, promoting growths of the algae, *Ulva* and *Enteromorpha*.

*Corynoneura* sp. One specimen of this orthocladine tendipedid was taken on rank growth of nasturtium in a boggy area at Kokee. It is of minute size, the wing venation quite characteristic, with a “stigma” on the costal margin.

*Lonchoptera* sp. These small flies of the family Lonchopteridae, with characteristically pointed wings, were abundant on nasturtium in a boggy area at Kokee.

*Scatella* sp. This ephydrid differs from other Hawaiian *Scatella* in having the wings rather light, with a prominent, infuscate, pre-apical patch. Most of the other species have dark wings with light spots. This is by far the dominant species of *Scatella* at all streams in the Kokee region. An earlier specimen was collected at Kokee by Dr. Williams in 1931.

*Diptera new to Hawaii*—Mr. Wirth reported that the following identifications of flies, none of them previously known in Hawaii, were received from the U. S. National Museum; the first four were determined by C. T. Greene, the last three by C. W. Sabrosky:

*Tethina albula* (Loew) (Opomyzidae). First taken in January 1946 at Waianae, Oahu; later at Waimanalo, Lanikai and Kailua, all on Oahu.

*Mumetopia* sp. (Opomyzidae) (previously determined only to family). First taken at light trap in August 1945 at Kunia, Oahu. Later taken also at Honolulu and Ewa, Oahu, and at Hilo, Hawaii.

*Napomyza* sp. (Agromyzidae). Taken on window near beach, Kailua, Oahu, June 1, 1946.


*Conioscinella* sp. (Chloropidae).

*Hecamede femoralis* Malloch (Ephydridae). First taken at Waianae beach, Oahu, January 1946; later at Waimanalo, Oahu.

⁵ This species is described on p. 121 of this issue of the Proceedings.
Chaetoscatella sp. (Ephydridae) (probably endemic).

*Some name changes among Diptera*—Mr. Wirth reported the following identifications made by C. W. Sabrosky, of flies submitted from Hawaii:

- *Cadrema pallida* (Loew) (Chloropidae) (previously in *Prohippelates*).
- *Rhodesiella scutellata* (Meigen) (Chloropidae) (? *R. tar- salis* Adams).
- *Copromyza equina* ( Fallen) (Borboridae) (previously in *Borborus*).

*Eumenes pyriformis* (Fabr.) *petiolaris* (Schulz)*a*—This large vespid, first found in September at Makalapa, Oahu by Dr. Townes, seems to be extending its range on this island. Mr. Maehler reported capturing one recently at Hickam Field. Mr. Bianchi observed a jug-shaped nest of what may be this species in the forest reserve of Poamoho, above Wahiawa, on September 21; Mr. Weber saw an adult at Punalu'u on October 7.

*Liris aurata* (Fabr.)—Mr. Weber exhibited a specimen of this oriental larrid wasp which he captured at John Rodgers airport, Oahu, on September 9, 1946; on the same day he saw another specimen at Ft. Kamehameha. This is the first record of this species in Hawaii. Identification was made by Dr. Williams. This wasp preys on *Gryllus* and *Gryllodes* crickets. It is known from China, Japan, Formosa, the Philippines, India and Africa. Recently Dr. Townes reported that it is common about airports in the southwest Pacific.

*Tarsostenus* and *Tillus*—Mr. Weber reported rearing the clerid beetles, *Tarsostenus univittatus* (Rossi) and *Tillus notatus* Klug, from *Leucaena glauca* wood infested by various bostrichids and lyctids. The Cleridae are generally predaceous in both larval and adult stages. *T. univittatus* is reported by Clausen to prey upon the genus *Lyctus* ("Entomophagous Insects," p. 547, 1940).

*Sierola* sp.—Mr. Sakimura reported rearing a bethylid belonging to this genus from a pupa found within the eye of a pineapple fruit from Molokai. The host is believed to have been *Pyroderces rileyi* (Walsingham).

*Mealybug parasites*—Mr. Sakimura reported that three shipments of parasites of *Pseudococcus brevipes* (Cockerell), collected at Rio de Janeiro and Campinas, Brazil, have been received from Dr. Carter. Good numbers of *Anagyrus* sp. and ? *Pseudaphycus* sp. have emerged and are now being propagated on Hawaiian *brevipes*. The *Anagyrus* introduced from Brazil about ten years ago, and known here as *A. coccidivorus* Dozier, has been found to be neither this species nor *A. pseudococci* Girault; its identity

---

*a* See p. 105.
is still not known. *Leptomastix dactylopii* Howard, received from the Riverside, California laboratory, failed to oviposit on the local *P. brevipes*.

"Tidal" wave note—Mr. Look reported that at Keaukaha, Hawaii, an unidentified scolytid (*Xyleborus* sp.) was breeding in great numbers in mango trees dead or dying as a result of salt water damage caused by the tsunami of April 1. The beetles were observed to be very numerous in houses, along with the oedemerid beetle, *Ananca bicolor* (Fairmaire).

*Lema enemies in California*—Mr. Van Zwaluwenburg reported for Mr. Krauss on some enemies observed on *Lema californica* Schaeffer at Riverside, Calif. in June and July. This species, identified by H. S. Barber of the U. S. National Museum, is the insect formerly known in Hawaii as *L. nigrovittata* Guerin and *L. trilineata californica* Schaeffer. Mr. Krauss reared several *Spilochalcis delumbis* (Cresson) from its larvae. Adult dasytid beetles (*Dasytastes* sp.) and coccinellids (*Hippodamia 6-signata ambigua* LeConte) were seen feeding on *Lema* eggs, and four *Chrysopa* sp. (*florabunda* group) were reared from larvae feeding on *Lema* eggs.

*Uropoda* sp.—Uropid mites, found by Mr. Krauss abundant on live dung beetles (*Copris incertus prociduus* Say) in March 1946 in Manoa, Honolulu, have been identified by Dr. E. W. Baker as probably belonging to this genus.

*Parasite of black widow spider*—Mr. Pemberton reported that from a number of egg sacs of *Latrodectus mactans* (Fabr.) collected by Dr. Williams at Kanoa, Molokai, on September 17, 1946, many of the recently known parasite, *Eurytoma* sp., had been reared. The parasite was released at Kanoa, the previous year, on September 6. It is now well established on all of the main Hawaiian islands and is apparently accountable for a definite decrease in the abundance of the spider.

---

**NOVEMBER 18, 1946**

The 491st meeting was held at the H.S.P.A. Experiment Station on Monday, November 18, at 2:00 p.m., with President Sakimura in the chair.


Mr. Leo Kartman was elected to membership in the Society.
Messrs. J. W. Balock and P. W. Weber were nominated for membership and Mr. M. Matsuura, of Maui, was nominated for corresponding membership.

PAPERS

Dr. Bonnet presented a paper entitled: "The Distribution of Mosquito Breeding by Type of Container in Honolulu, T. H." Mr. Van Zwaluwenburg presented a paper: "Some Elaterid Beetles from Australia and New Guinea."

NOTES AND EXHIBITIONS

_Dacus dorsalis_ Hendel—Mr. Van Zwaluwenburg reported that, following an earlier observation by E. L. Caum, Dr. Williams, Mr. Caum and he found numerous adult mango flies attracted to the foliage of a small bay tree (Eugenia acris) in the Manoa arboretum on October 24. At first no flies were present, but as soon as the sun came from behind a cloud, well over 100 flies settled on the foliage within a few minutes. Only male _D. dorsalis_ were seen.

He further reported finding _D. dorsalis_ on Molokai, a new island record. On November 13 ten male _dorsalis_ were caught within two hours in a citronella oil trap in the mango planting at Mapulehu; by 10 the next morning a total of 185, all males, had been caught. A similar trap at Kawela yielded about 50 flies after 20 hours exposure, and one at Kaunakakai, approximately 200 after 22 hours; all were males. Traps set out last July by Mr. Pemberton in the mango planting at Mapulehu failed to attract any _D. dorsalis_ at that time.

Mr. McBride presented the following list of field-collected host fruits of _D. dorsalis_, determined by the staff of the Honolulu laboratory of the Bureau of Entomology and Plant Quarantine and Foreign Plant Quarantines:

<table>
<thead>
<tr>
<th>Fruit</th>
<th>Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avocado</td>
<td>Persea americana</td>
</tr>
<tr>
<td>Banana</td>
<td>Musa sapientum</td>
</tr>
<tr>
<td>Cactus</td>
<td>Opuntia megacantha</td>
</tr>
<tr>
<td>Chebula</td>
<td>Terminalia chebula</td>
</tr>
<tr>
<td>Dates</td>
<td>(Arabian seedling)</td>
</tr>
<tr>
<td>Fig</td>
<td>Picus carica</td>
</tr>
<tr>
<td>Guava (common)</td>
<td>Psidium guajava</td>
</tr>
<tr>
<td>Guava (strawberry)</td>
<td>Psidium littorale</td>
</tr>
<tr>
<td>Kamani</td>
<td>Terminalia catappa</td>
</tr>
<tr>
<td>Lime</td>
<td>Citrus aurantifolia</td>
</tr>
<tr>
<td>Orange (sweet)</td>
<td>Citrus sinensis</td>
</tr>
<tr>
<td>Sour orange</td>
<td>Citrus aurantium</td>
</tr>
<tr>
<td>Mango</td>
<td>Mangifera indica</td>
</tr>
<tr>
<td>Mountain apple</td>
<td>Jambos (Eugenia) malaccensis</td>
</tr>
</tbody>
</table>
To complete the host list to date, the following field-collected host fruits of *D. dorsalis*, previously reported at earlier meetings of the Society, are added:

- Waiawi (Psidium sp.)
- Pomelo (Citrus grandis)
- Peach (Prunus vulgaris)
- Pepino (Solanum muricatum)
- Loquat (Eriobotrya japonica)
- Plum (Prunus sp.)

*Genophantis leahi* Swezey—Mr. Van Zwaluwenburg reported that in October Mr. Rosa and he found very heavy infestations of this native phycitid moth on *Euphorbia bifida*, a new host plant, on the Ewa coral plain. Previously only *Euphorbia cordata* and *E. pilulifera* had been known as hosts. From the larvae the following parasites, identified by Dr. Swezey, were reared: the braconid, *Chelonus blackburni* Cameron, and the two ichneumonids, *Cremastus flavo-orbitalis* (Cameron) and *Pristomerus hawaiiensis* Perkins.

*An eriophyid new to Hawaii*—Mr. Nishida reported a mite on mango, previously unrecorded here, collected in Manoa, Honolulu. It has been identified by H. H. Keifer as *Aceria mangiferae* (Hassan), a species reported to cause damage to mango buds in Egypt. It is found between the layers of leaf scales at the growing point; a heavy infestation causes blackening of the leaf scales, and at times prevents development of normal new growth. Mr. Keifer writes that it is not to be confused with the eriophyid found by Mr. Look on mango (*Oxypleuralites mangiferae* Keifer; see p. 13). The two are very different in habit; *Aceria* is a bud mite and is restricted to the enclosed spaces between the leaf scales, while *Oxy-
pleurites is found on the exposed surfaces of the young stems and leaves, according to a personal communication from Mr. Look.

Recent determinations of Diptera—Mr. Wirth presented the following recent determinations of flies, the first two by C. T. Greene, and the third by C. W. Sabrosky:

- **Omphralidae (Scenopinidae)**
  - *Omphrale lucidus* (Becker) (Scenopinus lucidus [Kröber] Bryan, 1934)

- **Agromyzidae**

- **Ephydridae**
  - Two black spots on veins at apex of the wings.

- **Tendipes (Chironomus)**
  - Mr. Wirth exhibited a female specimen of this fly, apparently the same as that reported by Dr. Williams (Proc. Haw. Ent. Soc., 12: 158, 1944) from high elevations on Molokai, which he found among light trap collections made by C. J. Davis at Hawaii National Park, Kilauea, Hawaii, in November. The color is dark brownish gray throughout, including the wings. The mesonotum is narrower and more highly arched than in *T. hawaiiensis* (Grimshaw).

- **Pseudaphycus**
  - Mr. Sakimura reported that a new species of *Pseudaphycus* sent by Dr. Carter from Brazil, had been successfully bred on local *Pseudococcus brevipes* (Cockerell). Field liberations have just begun.

- **Heliotis armigera** (Hübner)—Dr. Holdaway exhibited a photograph of a corn earworm larva found by Dr. R. C. Lindner within a small, immature papaya fruit. When the fruit was cut open the well-developed larva was found within, but there was no evidence of any hole whereby the insect had entered. Discussion led to the suggestion that at an earlier stage of the fruit's growth the young caterpillar might have entered the fruit between the stigmas at the blossom end.

- **Otostigmus scaber** Porat—Dr. Holdaway exhibited living and preserved specimens of this centipede, first reported here in August (see p. —). The specimens were collected at Kalihi-uka, Honolulu, at a location with comparatively high rainfall and luxuriant vegetation. Living specimens exhibit a blue banding of the caudal appendages which is lost in preserved material. According to Leonard Bishop he had seen this species in abundance some ten years ago at Punchbowl and in Manoa, as well as in Nuuanu and Kalihi. The
specimens collected by Dr. Holdaway were present in large numbers, and were associated with *Scolopendra subspinipes* Leach and with a short brown species.

*Coptotermes formosanus* Shiraki—Dr. Holdaway exhibited a queen of this termite taken from timber of the elevator-housing, three floors above the street, in a downtown Honolulu office building.

*Caryoborus gonagra* (Fabr.)—Dr. Holdaway exhibited a pine bureau drawer which showed shallow borings made by larvae of this bruchid. Some of the borings contained the beetles' cocoons. Adults were present, and on the outside, at the back of the drawer, eggs were present. The drawer had contained cardboard and sheets of paper, the former exhibiting shallow beetle borings.

A *Eumenes* new to Hawaii—Mr. Maehler exhibited specimens of a *Eumenes* new to the Territory, collected October 16, 1946 at Hickam Field nursery, Oahu. It was identified by K. V. Krombein as *E. campaniformis* (Fabr.), from the Malayan and Australian regions. Dr. Bequaert (Ann. Mus. So. Africa, 23[3]:541, 1926) records *campaniformis* from Java, the Philippines, Queensland and Yule Is., New Guinea. There are several varieties of *campaniformis*.

*Oxytheira* sp.—Mr. Sakimura reported that during October he had collected specimens of this small, moth-like trichopteron swarming over grass near a reservoir at Kunia, Oahu. Dr. Swezey remarked that the same insect was occasionally taken in light traps operated by the Navy last year in the Pearl Harbor area.

---

DECEMBER 9, 1946

The 492nd meeting was held at the H.S.P.A. Experiment Station on Monday, December 9, at 2 p.m., with President Sakimura in the chair.


J. W. Balock, M. Matsuura and P. W. Weber were elected to membership in the Society, and Edmond Dennery was nominated for membership.
This being the annual meeting, the following slate of officers to serve during the coming year was presented:

President: David D. Bonnet
Vice-President: D. T. Fullaway
Secretary-Treasurer: F. X. Williams
Additional members of Executive Committee:
- C. B. Keck
- Kay Sakimura

There being no further nominations, the above nominees were elected to office.

President Sakimura relinquished the chair to Dr. Bonnet, the President-elect, and presented the annual presidential address: "Thrips in Relation to Gall-forming and Plant Disease Transmission: A Review."

PAPERS

Dr. Swezey presented two papers: "Synonymy of two common Moths," and "Two new Hawaiian Moths on Chenopodium oahuense." Mr. Zimmerman presented a paper entitled: "A new Phanerostethus from the New Hebrides (Coleoptera: Curculionidae)." For Dr. H. K. Townes, Mr. Van Zwaluwenburg presented a paper entitled: "A Eumenes Wasp and six adventive Ichneumonidae new to Hawaii (Hymenoptera)." Mr. Fullaway presented a paper: "Niihau Insects."

NOTES AND EXHIBITIONS

Coleotichus blackburniae White—Mr. Weber reported that Mr. Maehler and he had collected this pentatomid bug breeding on Acacia confusa at Kunia, Oahu on September 30. Former records for this species, all from Oahu are: Tantalus, Manoa arboretum, Konahuanui, "near coast" and "Honolulu, on flowers, mountains." Hosts previously recorded are: Acacia koa, Dodonaea viscosa and "imported acacias."

Oxypleurites sp.—It was reported for Mr. Look that a heavy infestation of this eriophyid mite was noted on naio (Myoporum sandwicense) at Honuapo, Hawaii, and a lighter one on alahee (Canthium odoratum). Mr. H. H. Keifer identified the mites.

Pteromalus puparum (L.)—This pteromalid parasite of the pupa of the cabbage butterfly (Pieris rapae [L.]), identified by Mr. Fullaway, was recovered for the first time since 1904 by Mr. Look, who reared it in September from material collected at Kilauea, Hawaii.

Graptostethus servus (Fabr.)—Dr. Williams said that Dr. Swezey and he had observed this lygaeid bug feeding on buds and flowers of the wood rose (Ipomoea tuberosa) at the Experiment
Station, H.S.P.A., Honolulu, on November 29. At the base of the calyx of one opened blossom four Graptostethus were seen, and at least one had its beak deeply inserted in the fleshy tissue. Other calyces had from one to three bugs upon them, and one bug was found on a bud. Others occurred on the foliage; all were adults.

*Dracaulacephala* sp.—Dr. Williams reported that he and Mr. Van Zwaluwenburg had found the eggs of this cicadellid in water-cress (*Roripa nasturtium*) and *Eleusine indica* collected at Wai-pahu, Oahu on November 25. Small egg clusters of not more than three or four eggs were found deep in the stem tissue of the water-cress, but oviposition scars were hardly, or not all, discernible in the watery tissues. In *Eleusine* stems also, collected at the very edge of the watercress patch, egg clusters were found, the egg scars in the grass stems being quite obvious in some cases. The eggs were deeply inserted, and Dr. Williams found a row of seven in one cluster, while another (perhaps more than one oviposition) showed 17. In sugarcane the eggs are often laid in the leaf blade, shallowly inserted. Mr. Pemberton reported finding *Dracaulacephala* eggs in Job’s tears, and Mr. Van Zwaluwenburg, in the leaf blade of *Chloris inflata*.

Probable parasites of *Ephydra gracilis* Packard⁷—Dr. Williams reported for Mr. Wirth that two pteromalid wasps found crawling over puparia of this ephydrid fly at Iriquois Point, Oahu, had been determined by A. B. Gahan of the U. S. National Museum. They are *Urolepis rufipes* (Ashmead) and *Cytogaster near glasgowi* Crawford. This is the first record from the Territory for *Urolepis rufipes*.

*Metioche* and *Trigonidomorpha*—Dr. Williams reported that some small crickets collected on Oahu were recently determined by Dr. L. Chopard of the Paris Museum. The immature specimens and all the adults with tegmina about as long as the body (but evidently without hind wings) were determined as *Trigonidomorpha sjöstedti* Chopard, originally described from Australia (Ark. Zool., 18a [6]: 40, 1926). The single fully winged specimen in the lot was identified as *Metioche vittaticollis* Stål.

Recent rearings of these insects by Dr. Williams seem to show that but one species is involved here, namely *Metioche vittaticollis*. Field-collected male and female adults with short tegmina, as well as a large immature male which apparently developed into an adult with short tegmina, were placed in a breeding jar on May 8. They were fed grass pollen, flowers of *Euphorbia* and *Portulaca*, and various odds and ends such as bits of papaya, bread, peanut butter, etc. Young appeared in due time and matured rapidly, so that on July 8 (the field-collected parents having previously been removed

---

⁷ Mr. Wirth’s finding of this ephydrid fly is recorded on p. 141.
from the jar) three freshly developed long-winged adults were found. On July 12 there were present in the jar four long-winged adults (one male and three females) and, in addition, one young female with the tegmina neatly rounded at the apex and extending over the abdomen nearly to the base of the cerci. Its ovipositor was relatively short, and the inner wings, or secondaries, showing mesad, were half the length of the tegmina. On about July 21 this individual moulted into a long-winged adult. No other individuals were reared, nor were the parents preserved. The parent crickets lived in captivity up to two months or more, while the young matured in roughly 50 days or less. The egg stage was not determined.

**Phytomyza spicata** Malloch—Mr. Van Zwaluwenburg exhibited an adult and the work of this agromyzid leaf miner in grass leaves. Its work was first noticed about November 20, 1946, and this is the first record of the species in the Hawaiian Islands. Dr. Swezey captured the first adult on December 8. The fly is widespread on Oahu, having been found from Lanikai to beyond Ewa. It has been found here breeding in the following grasses: corn, *Setaria verticillata*, Johnson grass (*Holcus halepensis*), sorghum, *Eragrostis amabilis*, sour grass (*Valota insularis*), *Eleusine indica*, *Echinochloa colonum*, a hybrid (*Johnson grass X 4n Sudan*), *Digitaria sanguinalis*, *Digitaria henryi*, *Chloris inflata*, *Panicum purpureascens*, cat-tail millet (*Pennisetum glaucum*), Bermuda grass and redtop (*Tricholaena repens*). Phytomyza spicata was first described from Formosa (Ann. Mus. Nat. Hung., 12:334, 1914) and is known also from Guam, Samoa and Fiji. Dr. Swezey found it in Guam breeding in corn, *Miscanthus* and Job's tears.

Material collected on Oahu is heavily parasitized. Mr. Fullaway examined these parasites and found three species present: (1) an eulophid, *Hemiptarsenus semialbiclavus* (Girault), the most numerous of the three; the males have branched antennae; (2) another eulophid, *Achrysocharis fullawayi* (Crawford), previously reared from *Liriomyza pusilla* (Meigen) and from several species of microlepidoptera (see Timberlake: Proc. Haw. Ent. Soc., 5:440, 1924); and (3) a pteromalid bred from the puparium of spicata, assigned with some doubt by Mr. Fullaway to the genus *Merisus*. *Hemiptarsenus semialbiclavus* is here recorded from Hawaii for the first time; Dr. Swezey reared it from *P. spicata* in Guam. It was described from Australia in the genus *Hemiptarsenoides* (Mem. Queensland Mus., 5:220, 1916).

**Additional hosts of Philaenus spumarius** (L.)—Mr. Davis submitted the following list of plants on which nymphs of the spittle bug were found feeding at Hawaii National Park. This supplements an earlier list presented last year by Mr. Davis and A. L.
Mitchell (Proc. Haw. Ent. Soc., 12: 515, 1946). All collections recorded in the present list were made in 1946; asterisks indicate indigenous plant species.

<table>
<thead>
<tr>
<th>Host</th>
<th>Part Attacked</th>
<th>Locality</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Ipomoea congesta</td>
<td>Leaves; stems</td>
<td>Kipuka Puaulu</td>
<td>Jan. 11</td>
</tr>
<tr>
<td>Loniceria japonica</td>
<td>Leaves</td>
<td>Residential area</td>
<td>Jan. 22</td>
</tr>
<tr>
<td>Brassica oleracea</td>
<td>Leaves</td>
<td>Quarters 22</td>
<td>Feb. 3</td>
</tr>
<tr>
<td>var. gummifera</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>*Styphelia tameiameiae</td>
<td>Terminal shoots</td>
<td>Park nursery</td>
<td>Feb. 4</td>
</tr>
<tr>
<td>*Vaccinium reticulatum</td>
<td>Terminal shoots</td>
<td>Park nursery</td>
<td>Feb. 4</td>
</tr>
<tr>
<td>Oxalis corniculata</td>
<td>Leaves</td>
<td>C.C.C. camp</td>
<td>Feb. 4</td>
</tr>
<tr>
<td>*Kokia rockii</td>
<td>Leaves</td>
<td>Park nursery</td>
<td>Feb. 14</td>
</tr>
<tr>
<td>Sambucus sp.</td>
<td>Flowers; leaves</td>
<td>Quarters 22</td>
<td>Mar. 25</td>
</tr>
<tr>
<td>Acanthospermum australe</td>
<td>Leaves</td>
<td>Sulfur banks</td>
<td>Apr. 11</td>
</tr>
<tr>
<td>Tropaeolum sp.</td>
<td>Leaves</td>
<td>Quarters 22</td>
<td>Apr. 12</td>
</tr>
<tr>
<td>(nasturtium)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rosa sp.</td>
<td>Leaves</td>
<td>Quarters 22</td>
<td>May 15</td>
</tr>
<tr>
<td>*Pipturus sp.</td>
<td>Leaves</td>
<td>Quarters 22</td>
<td>May 15</td>
</tr>
<tr>
<td>Sesuvium</td>
<td>Leaves</td>
<td>Quarters 5</td>
<td>May 15</td>
</tr>
<tr>
<td>portulacastrum</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lycopersicon esculentum</td>
<td>Petioles</td>
<td>Quarters 22</td>
<td>May 18</td>
</tr>
<tr>
<td>*Alyxia olivaeformis</td>
<td>Stems</td>
<td>Kipuka Puaulu</td>
<td>May 19</td>
</tr>
<tr>
<td>*Fragaria chiloensis</td>
<td>Leaves</td>
<td>Kipuka Puaulu</td>
<td>May 19</td>
</tr>
<tr>
<td>Fuchsia arborecens</td>
<td>Leaves</td>
<td>Quarters 22</td>
<td>May 19</td>
</tr>
<tr>
<td>Beta sp. (Swiss chard)</td>
<td>Leaves</td>
<td>Quarters 22</td>
<td>June 3</td>
</tr>
<tr>
<td>Hedychium coronarium</td>
<td>Leaves</td>
<td>Quarters 22</td>
<td>June 16</td>
</tr>
<tr>
<td>Pelargonium graveolens</td>
<td>Leaves</td>
<td>Quarters 5</td>
<td>June 16</td>
</tr>
<tr>
<td>Chrysanthemum sp.</td>
<td>Leaves; stems</td>
<td>Quarters 22</td>
<td>June 16</td>
</tr>
<tr>
<td>*Sideroxylon sp.</td>
<td>Terminal shoots</td>
<td>29 Miles</td>
<td>Nov. 22</td>
</tr>
</tbody>
</table>

CORRECTION: *LEPIDOSAPHES NOXIA* McKENZIE

In May, 1946, the author published a description and illustration of *Lepidosaphes noxia* in the Proceedings of the Hawaiian Entomological Society (12[3]: 611-613). Mention was made in the article of a "one-spined" antenna in *Lepidosaphes noxia* which, as now interpreted, is an error. The specimen from which the illustration was made had the additional setae brushed off during the mounting procedure, and two other examples showed a similar condition. Examination of an extended series of paratype specimens indicates at least two unequal antennal setae and in some instances a third more slender one. The correction should be noted in connection with the original description of the species.

As originally described *Lepidosaphes noxia* may be readily separated from closely allied forms now known in the possession of a small dorsal macroduct located slightly anterior to the second pygidial lobes.

Howard L. McKenzie.