

PROCEEDINGS
OF THE
Hawaiian Entomological Society

VOL. XIV, No. 1

FOR THE YEAR 1949

MARCH, 1950

JANUARY 10, 1949

The 517th meeting was held at the H.S.P.A. Experiment Station on Monday, January 10, at 2:00 p.m., with President Balock in the chair.

Members present: Alicata, Balock, Bianchi, Flitters, Hardy, Hinman, Inada, Joyce, Keck, Mainland, Nishida, Pelot, Pemberton, Rosa, Sakimura, Schwabe, Swezey, Tanada, Tuthill, Van Zwaluwenburg and Zimmerman.

Visitors: I. M. Newell and Walter Thomsen.

Dr. I. M. Newell was nominated for membership.

PAPER

Dr. Swezey presented his paper: "Morganella longispina (Morgan) on Avocado in Hawaii (Homoptera: Diaspididae)."

NOTES AND EXHIBITIONS

VANDUZZEA SEGMENTATA (Fowler)—Mr. Pemberton reported finding, on January 9, large numbers of this membracid in all stages on *Erigeron canadensis* and on *Casuarina equisetifolia*, at Kawela, Oahu. It was definitely breeding on both plants, and in both cases was heavily attended by the ant, *Pheidole megacephala* (F.).

GRAPHOMYIA MACULATA (Scopoli)—Mr. Joyce reported capturing three females of this muscid fly, hovering around blossoms of *Pluchea indica* near Moanalua Gardens, on January 6. This indicates that this fly is now well established on Oahu. The only previously recorded capture was of a single male at Ft. Armstrong, Honolulu, in March 1948; at the time it was thought the fly might have come from a ship in harbor.

CHRYSOPA MICROPHYA McLachlan—Dr. Tuthill told of rearing this chrysopterid last August from a larva feeding on nymphs of the psyllid, *Hevaheva* sp., taken at Kuliouou, Oahu. Like other chrysopterids, the insect piled the nymphal remains of its victims on its back.

DACUS DORSALIS Hendel—Mr. Nishida reported rearing this fruit fly in considerable numbers from tomatoes. Occasional specimens have been reported from tomatoes in the past, but Mr. Nishida now gets as many *dorsalis* as *D. cucurbitae* Coquillett from some lots of tomatoes. Mr. Pemberton said that last October he reared 25 *cucurbitae* and 10 *dorsalis* from 11 tomatoes.

TRICHINELLA SPIRALIS Owen—Dr. Alicata gave a preliminary report on the effects of radiation with an isotope of cobalt on trichina in muscle fiber of experimental animals. Comparatively low radiation for rather short periods of time resulted in sterilization of the reproductive cells of the parasitic worm. The work was done in cooperation with Dr. George O. Burr of the H.S.P.A. Experiment Station. [For a detailed account of these experiments see "Science," 109:595-596, June 10, 1949.]

FEBRUARY 14, 1949

The 518th meeting was held at the H.S.P.A. Experiment Station on Monday, February 14, at 2:00 p.m., with President Balock in the chair.

Members present: Alicata, Balock, Bess, Bonnet, Bryan, Hinman, Inada, Ito, Look, Mainland, Newell, Pelot, Rosa, Sakimura, Tanada, Tuthill, Van Zwaluwenburg and Zimmerman.

Visitor: John R. Blalock.

Dr. I. M. Newell was elected a member of the Society, and J. R. Blalock was nominated for corresponding membership.

NOTES AND EXHIBITIONS

DACUS DORSALIS Hendel—Mr. Look reported the coco plum (*Chryso-balanus icaco*) as a new field host of the oriental fruit fly. Three fruits collected in Manoa Valley in December by Mr. McGuire of the Board of Agriculture and Forestry, yielded 16 *dorsalis* adults.

Dr. Bess reported that, following a call from a nurseryman in Manoa Valley, he and Mr. Nishida found dozens of *Vanda* blossoms and buds in the field with oviposition punctures, as well as eggs and first instar larvae of what appeared to be *Dacus dorsalis*. From about 15 flowers and buds Miss Pelot obtained 27 eggs and five larvae, all of which she transferred to papaya. Subsequently four of the larvae pupated on February 21, and four adult *dorsalis* flies emerged on March 7; none of the eggs hatched.

PSYCHODID AT LIGHTS—Dr. Tuthill reported great numbers of a psychodid fly (either *Psychoda alternata* Say or *P. pseudoalternata* Tonnoir) attracted to lights on the University campus.

EUPHRANTA LEMNISCATA (Enderlein)—Dr. Bess reported that Dr. Hardy had determined as this tephritid species, two females and a male taken by Mr. Maehler at Kobler Field, Saipan, on January 13, 1949. This is the first record of its occurrence in the Marianas; the fly was described from Formosa.

EUMENES LATREILLEI PETIOLARIS (Schulz)—Dr. Henry Townes in a recent letter said that he had seen, in a Washington collection, a female of this wasp obtained through Dr. Sam Munson, collected in Honolulu, August 6, 1944. This antedates by two years the earliest previous capture of this species in Hawaii by Dr. Townes in September 1946 (Proc. Haw. Ent. Soc., 12:105, 1947).

MARCH 14, 1949

The 519th meeting was held at the H.S.P.A. Experiment Station on Monday, March 14, at 2:00 p.m., with President Balock in the chair.

Members present: Balock, Bess, Bonnet, Bryan, Chong, Clancy, Hardy, Hinman, Hu, Inada, Joyce, Look, Newell, Nishida, Pelot, Pemberton, Rosa, Sakimura, Schmidt, Schwabe, Stout, Swezey, Tanada, Tuthill, Van Zwaluwenburg, Weber and Zimmerman.

Visitors: R. P. Owen and A. B. Weir.

John R. Blalock was elected a corresponding member and R. P. Owen was nominated for membership.

PAPER

Dr. Swezey presented his paper: "Notes on the Life Cycle of Certain Introduced Cerambycid Beetles."

NOTES AND EXHIBITIONS

MUSCA SORBENS Wiedemann—Mr. Joyce exhibited a specimen of this muscid taken at Waianae, Oahu, September 18, 1949, apparently a recent immigrant to the Islands. Other specimens were seen, but not captured at Hanauma Bay, Oahu. Identity of the fly was confirmed by C. W. Sabrosky. Though not previously known in Hawaii, this fly was frequently intercepted on planes during the war, according to Mr. Pemberton.

M. sorbens is a common household pest in the tropics and subtropics, from the Mediterranean basin eastward throughout southern Asia. It breeds in a variety of situations similar to those in which *Musca domestica* L. breeds: cowdung and human excreta. It is somewhat smaller than the house fly and can be distinguished by the two black vittae on the mesonotum. In the female these vittae are divided in the form of a Y in front of the suture.

COMPERIELLA BIFASCIATA Howard—Dr. Swezey exhibited a slide mount of a female of this encyrtid, reared from the scale, *Morganella longispina* (Morgan), on avocado leaves in Honolulu, January 20. It is a striking species distinguished by two conspicuous longitudinal dark fasciae on the apical half of the forewing of the female. The female is figured by Compere (Univ. Calif. Ent. Publ., 4:46, 1926). The male is quite different, with the wings clear and not fasciated. *C. bifasciata* has been reared in Hawaii from *Aspidiotus* sp., *Hemiberlesia rapax* (Comstock), *Chrysomphalus ficus* Ashmead and *Saissetia hemispherica* (Targ.-Tozz.). This is the first record from *M. longispina*, and the fourth parasite from this host in Hawaii, the others being: *Prospaltella koebelei* Howard, *Archenomus perkinsi* (Fullaway) and *Aphytis chrysomphali* (Mercet).

STICTOPTERA SUBOBLIQUA (Walker)—Dr. Swezey remarked on the work of caterpillars of this recent immigrant agrotid moth on *Calophyllum inophyllum* on the University campus. The tender new leaves were all

much eaten and in ragged condition; only a single caterpillar could be found.

Mr. Van Zwaluwenburg remarked on finding larvae of this moth on *Calophyllum* on Molokai on February 16, a new island record. The species almost certainly occurs also on Maui and Hawaii, where its characteristic damage is common, although no caterpillars have been found.

EUMENES NEST—Dr. Swezey reported seeing an unusually large mud nest of one of the new immigrant *Eumenes* wasps, either *latreillei petiolaris* (Schulz) or *pyriformis* Bequaert. It consisted of 25 cells in a horizontal line; heretofore all the nests he had observed have had the row of cells vertical.

ENCEPHALITIS ON GUAM—Dr. Hu said that Dr. W. McD. Hammon of the Hooper Foundation recently reported that Type B encephalitis, a form of sleeping sickness with high case fatality, has been found on Guam. Two of the mosquitoes in Hawaii, *Culex quinquefasciatus* Say and *Aedes albopictus* (Skuse), are possible carriers of this virus, as they were found experimentally to be susceptible to infection. Referring to the anopheline recently found established on Guam, *Anopheles subpictus* Grassi, Dr. Hu said that under favorable conditions it is an extremely rapid breeder. Dr. Bonnet added that it is rarely collected on humans, but can be caught in numbers in a horse-baited trap.

PSEUDOCOCCUS ADONIDUM (L.)—Mr. Van Zwaluwenburg reported a previously unrecorded hostplant of the long-tailed mealybug. Foliage of the so-called Galphimia vine (*Tristellateia australasica*) from Kahala was infested by it. Several of the mealybugs were parasitized by the encyrtid, *Bothriencyrtus insularis* (Cameron) (det. by C. E. Pemberton), a parasite previously recorded apparently, only from *Ferrisiana virgata* (Cockerell), although Dr. Swezey reared it from *P. adonidum* ("longispinus") in 1938.

MANSON'S EYEWORM—Mr. Schwabe said that he had found *Oxyspirura mansoni* (Cobbold), the common eyeworm in poultry, survived as infective larvae for at least 48 hours in the intermediate host, the burrowing roach, *Pycnoscelus surinamensis* (L.), after the host had been killed by a 2 per cent mixture of chlordane and sodium fluoride. This was the maximum period over which observations were made. The significance of this observation is that birds must not be allowed access to dead *Pycnoscelus* or they may contract eyeworm, even though the roaches may be subject to effective chemical control.

APRIL 11

The 520th meeting was held at the H.S.P.A. Experiment Station on Monday, April 11, at 2:00 p.m., with President Balock in the chair.

Members present: Alicata, Balock, Bess, Blalock, Bonnet, Carter, Chong, Clancy, French, Hardy, Hu, Inada, Joyce, Keck, Lewis, Look,

Mainland, Nishida, Pelot, Pemberton, Rosa, Sakimura, Schmidt, Schwabe, Stout, Swezey, Tanada, Tuthill, Van Zwaluwenburg and Weber.

Visitors: A. C. Baker, J. C. Bequaert, P. E. Marucci, H. I. Rainwater, Harry S. Smith, W. E. van Steenburgh, Donald Weedmark and A. B. Weir.

R. P. Owen was elected a member of the Society, and Philip E. Marucci and Wesley R. Nowell were nominated for membership.

PAPERS

The following papers were presented: "The Biology of the Mariana Coconut Beetle, *Brontispa mariana* Spaeth, on Saipan, and the Introduction of Parasites from Malaya and Java," by W. Harry Lange, Jr.; "Field Studies on the Parasites of *Brontispa mariana* Spaeth," by Richard L. Doutt; and "Homoneura vs. *Sciomyza* in Hawaii (Diptera)," by D. Elmo Hardy.

NOTES AND EXHIBITIONS

TRICHOPLAGA TAPETZELLA (L.)—Dr. Swezey reported that specimens of this tineid moth were obtained from a pelt received from Sweden. The insect has been known here for several years, having been bred from rabbit skins in 1944, and in 1945 taken in light traps.

CALLIPHORA VICINA (Robineau-Desvoidy)—The presence of this European bluebottle fly was reported in Hawaii for the first time by Mr. Joyce. One specimen was taken in a mosquito light trap at the Public Health Service quarantine station in Honolulu, June 11, 1947, and another in a fly trap on September 30, 1948. Possibly specimens will be found in collections made prior to the above dates, since there has been considerable confusion in literature concerning the differentiation of *C. vicina* and *C. vomitoria* L. The latter has been reported here a number of times.

In *C. vicina* the bucca is reddish on the anterior half or more, and the basicosta is yellow to yellow-orange; in *vomitoria* the bucca is black, and the basicosta and the hairs on the posterior part of the bucca, orange. Adults of *C. vicina* occur commonly in houses during the cooler seasons in temperate regions. The normal breeding medium is carrion, although the eggs are occasionally found on tainted meat. Though uncommon, the maggots have been known to cause severe myiasis in man by entering diseased tissue. The species is widespread throughout the temperate parts of the world.

PALMYRA ISLAND MOSQUITOES—Dr. Hu reported that a mosquito survey of Palmyra Island, made April 4-7, shows the only species present to be *Culex quinquefasciatus* Say. The larvae were found in rainwater in coconut shells, as well as in artificial containers. Before the war the island was free of mosquitoes.

ENEMIES OF ACHATINA—Dr. Joseph C. Bequaert of the Museum of Comparative Zoology at Harvard University, presented some notes, based on observations by Dr. F. X. Williams, on the enemies of the giant

African snail in its East African home. These are summarized as follows: The most efficient enemies appear to be other carnivorous snails of the family Streptaxidae. Two of the larger species were exhibited, *Edentulina affinis* C. R. Boettger, and *Gonaxis kibweziensis* E. A. Smith. Both of these were brought alive to Honolulu by Dr. Williams about a year ago, and kept in quarantine, a few specimens surviving to the present day, being fed on local *Achatina fulica* Férrusac. Several East African beetles are also voracious and exclusive snail-eaters, either as adults (Carabidae of the genus *Tefflus*, etc.), or as larvae (Drilidae and Lam-pyridae). The larva and the wingless adult female of one of the drilids were shown. Although the foregoing predators are strictly snail-eating, none are specific to *Achatina*; all will attack any type of snail or slug of suitable size. Their release has not been authorized thus far.

MAY 9

The 521st meeting was held at the H.S.P.A. Experiment Station on Monday, May 9, at 2:00 p.m., with President Balock in the chair.

Members present: Balock, Bess, Blalock, Bonnet, Clancy, Hardy, Hinman, Hu, Inada, Ito, Keck, Look, Mainland, Marucci, Nishida, Pelot, Pemberton, Ritchie, Rosa, Sakimura, Stout, Schwabe, Swezey, Tanada, Tuthill and Van Zwaluwenburg.

Visitors: A. C. Baker, C. E. Cooley and Walter Thomsen.

Philip E. Marucci and Wesley R. Nowell were elected to the Society.

PAPER

A paper by Pierre E. L. Viette was presented: "Contribution to the Study of the Hepialidae (9th Note): The Genus *Phassodes* Bethune-Baker (Lepidoptera)."

NOTES AND EXHIBITIONS

LASIODERMA SERRICORNE (F.)—Dr. Hardy exhibited a woolen cap infested and damaged by this anobiid, the cigarette beetle. The beetles were working in the vizio; within, this consisted of a sack-cloth material stiffened with a hard, glue-like substance. Both adults and larvae were tunnelling through the stiffening substance between the fibers of the cloth. There was no evidence of feeding on the wool itself.

SCHOLASTES PALMYRA Curran—Dr. Hardy exhibited specimens of this platystomatid fly collected April 6, 1949, on Palmyra Island by Dr. Hu. The species is closely allied to *S. lonchifera* Hendel, described from the Cook Islands and reported throughout the Society group.

PLATYPTILIA CARUIDACTYLA (Riley)—Dr. Swezey exhibited a caterpillar of this pterophorid moth, found by Mrs. Swezey in an artichoke from California. There was no external evidence of injury, and only two or three of the innermost bracts were injured, where the larva must have worked its way down from the small egg laid at the apex; the larva was active and in good condition.

CARPOPHILUS IN MACADAMIA NUT—Dr. Swezey exhibited a larva of *Carpophilus* sp. found in a macadamia nut. Several nuts were found with a hole at the stem end. In one of these the entire kernel had been eaten, and there were several dead nitidulid larvae amid the refuse; only one was alive. *C. maculatus* Murray was once recorded similarly from macadamia.

ANTONINA GRAMINIS (Maskell)—Dr. Clancy reported the following: This common grass-infesting scale has been known here since 1910 and appears to be effectively controlled by the encyrtid, *Anagyris antoninae* Timberlake. Occasional outbreaks on lawns are usually of brief duration. The scale has recently become a serious pest of various range grasses in southern Texas, and on March 4 and April 23, shipments of the *Anagyris* parasite were sent from Hawaii to P. T. Rihard of the Weslaco, Texas, substation, through the U. S. Bureau of Entomology's Division of Foreign Parasite Introduction. C. P. Clausen recently reported that production of Rhodes grass on the King ranch was substantially reduced; an area of about 50,000 acres would, at the present time, yield an aggregate of not more than one acre of good hay. All of this loss was attributed to the scale insect.

EUCELATORIA ARMIGERA (Coquillett)—Mr. Van Zwaluwenburg reported that Mr. Keck had brought in caterpillars of the coconut leafroller, *Omiodes blackburni* (Butler), parasitized by this tachinid. Adult flies found dead in the web were in poor condition, but examination of empty puparia established the fact that they were *Eucelatoria*. *O. blackburni* thus becomes the eighth lepidopterous host of this tachinid to be reported locally.

OECHALIA PACIFICA (Stål)—Mr. Van Zwaluwenburg also reported that Mr. Keck had found an adult of this pentatomid bug feeding on half-grown larvae of the geometrid moth, *Anacamptodes fragilaria* (Grossbeck).

JUNE 13

The 522nd meeting was held at the H.S.P.A. Experiment Station on Monday, June 13, at 2:00 p.m., with President Balock in the chair.

Members present: Balock, Bess, Carter, Clancy, Hardy, Hinman, Inada, Look, Maehler, Mainland, Marucci, Pelot, Rosa, Sakimura, Schmidt, Schwabe, Swezey, Tuthill and Van Zwaluwenburg.

Visitors: P. N. Annand, G. F. Ferris, F. D. Morrison, Newton Morton and Walter Thomsen.

Dr. R. L. Doult was nominated for corresponding membership.

NOTES AND EXHIBITIONS

CRYSPTHYRIS PHERETROPA Meyrick—Dr. Swezey exhibited specimens of this immigrant tineid moth collected commonly at light traps in Manoa

Valley, Kaneohe, Wahiawa and the Pearl Harbor region of Oahu, from 1944-1946. The species was not previously known in Hawaii, but due to oversight has not before been recorded in these "Proceedings." It was described (Exotic Microlepidoptera, 4:105, 1931) from Assam, and is distinguished from other species of the genus by the thinly-scaled, longitudinal 8-shaped impression in the end of the cell of the male forewing. Another species, *C. enixa* Meyrick (Zool. Med. Leiden, 6:197, 1921) from Java, has been known here for some time, having been reared by Dr. Swezey from trash in axils of old leaves of date palm, in 1921. No doubt *C. pheretropa* has similar scavenger habits.

EUMENES LATREILLEI PETIOLARIS (Schulz)—Dr. Swezey told of having seen as many as a half a dozen of these wasps feeding at one time on flowers of *Justicia betonica*.

PINEAPPLE MEALYBUGS—Dr. Carter described some results following field treatments for mealybugs on pineapple. Field control of *Pseudococcus brevipes* (Cockerell) aims to eliminate *Pheidole* ants in the early months of the crop. In areas treated with DDT, *P. adonidum* (L.) (*P. longispinus* Targ.-Tozz.) entirely replaced *brevipes*. Applications of parathion controlled both species of mealybugs, but in the DDT areas *adonidum* was abundant, and attracted many *Cryptolaemus montrouzieri* Mulsant, which were apparently little affected by the DDT.

TACHYPOMPILUS ANALIS (F.)—A specimen of this psammocharid wasp, collected by Mr. Weber at Hickam Field, April 13, 1949, was exhibited. It is a new immigrant to Hawaii, and occurs from India eastward to the Philippines. It was identified by Dr. J. C. Bequaert who compared the Oahu specimen with *T. ashmeadi* Brown, identified by Nathan Banks; Dr. Bequaert considers *ashmeadi* to be a synonym of *analis*. A series of this wasp was collected June 9 and 10 at Hickam Field by Messrs. Dyson, Maehler, Morrison and Stevens.

PRODENIA LITURA (F.)—This agrotid moth was taken at light on Palmyra Island by Dr. Bonnet on May 20, 1949; this is a new island record. Identification was by Dr. Swezey.

VANDUZZEA SEGMENTATA (Fowler)—Mr. Look exhibited adults and nymphs of this recently introduced membracid found breeding on *Verbesina encelioides* at Kaimuki. He had also found the nymphs on a rose plant. Both are new host records.

EUTRETA XANTHOCHAETA Aldrich—Dr. Hardy exhibited specimens of the lantana gall fly reared from galls on Jamaica vervain (*Stachytarpheta jamaicensis*); this appears to be a new host record. On May 13 vervain near Kaneohe was heavily infested by this fly.

AONIDIELLA INORNATA McKenzie—Dr. Hardy exhibited specimens of the "yellow scale" collected by Mr. Tanada on rose bushes, a new host record. Although according to Zimmerman (Insects of Hawaii, 5:366) no parasites have been recorded from this scale in Hawaii, a large series of an unidentified eulophid was reared at the University. [This was sub-

sequently determined by A. B. Gahan as *Aphytis chrysomphali* (Mercet).] This scale resembles a *Chrysomphalus*, and has been confused in the local literature under the names *Aspidiotus* and *Chrysomphalus aurantii*. The female can be recognized by its reniform shape and the "pushed in" appearance of the pygidium.

EUXESTA SEMIFASCIATA Malloch—Dr. Hardy reported an ortalid fly not specifically reported from Oahu, until now, and previously unknown from Palmyra. A specimen of this species is from Lanikai, taken in light trap, December 3, 1945 (W. W. Wirth), and another was collected by sweeping on Palmyra Island, May 18, 1949 (D. D. Bonnet). Described from the Ellice Islands (Ins. of Samoa, 6:216, 1930) this fly is most closely related to *Euxesta binotata* Loew, from Cuba. The genus is not well developed in the Pacific.

PROTAETIA FUSCA (Herbst)—Mr. Maehler exhibited a large scarabaeid new to the Territory. It was first found by F. D. Morrison at Hickam Field nursery, June 9, 1949. Two specimens were taken on trees, and one in flight. This beetle occurs in India and Mauritius, and eastward in southeast Asia, the Dutch East Indies, the Philippines, North Queensland and Fiji. Arrow (Fauna British India, Coleop., Lamellicornia, Pt. 1:154, 1910) states that the larvae damage roots of cannas and other plants. It has been reported as breeding in vegetable refuse (Java) and in refuse from a coffee mill (Malaya). In Queensland it is said to attack *Cassia brewsteri*, and in Malaya to attack the roots of tub plants. It is reported to feed on male flowers of the coconut in Malaya, where it is parasitized by *Scolia vollenhoveni* Saussure. In Queensland the adults have been found to attack nests of a stingless bee, *Trigona*, probably for the honey.

CORISCUS PILOSULUS (Herrich-Schaeffer)—Mr. Maehler exhibited specimens of this recent immigrant corizid bug, captured on indigo at the base of Mt. Kaala. This is the second time this insect has been taken in the field here, the first being at Poamoho in May 1948, some four miles from where Mr. Maehler collected it.

NEW INSECT RECORDS FROM THE WESTERN PACIFIC—Mr. Maehler presented the following new island records:

HETEROPTERA

Megymenum affine Boisduval; Dublon, Truk, Feb. 1948; on cucumber; det. Usinger.

Mezira membranacea F.; Guam, Feb. 1, 1948; under bark; det. Usinger.

Anisops nasuta Fieber; Saipan, Jan. 1, 1948; in pool; det. Usinger.

Coleotichus breddini Schouteden; Saipan; Jan. 1, 1948; at light; det. Usinger.

Melanacanthus margineguttatus Distant; Saipan; Jan. 1, 1949; det. Usinger.

COLEOPTERA

Olenecamptus bilobus lacteoguttatus Fairmaire; Guam; Dec. 17, 1948; at light; det. Zimmerman.

Cassida sp.; Guam; Dec. 17, 1947; det. Zimmerman.

Epilachna philippinensis Dieke; Guam; Nov. 23, 1948; on leaves *Cestrum diurnum*; det. E. A. Chapin.

Adoretus sinicus Burmeister; Guam; Feb. 1949; at light; det. Maehler.

HYMENOPTERA

Xylocopa varipuncta Patton; Saipan; Jan. 1949; flowers of *Leucaena glauca*; det. Maehler.

Pachodynerus nasidens^o (Latreille); Yap; Feb. 1949; Koror, Palau, March 1948; both on *Crotalaria*; det. Maehler.

Ropalidia marginata sundaica van der Vecht; Koror, Palau, March 1948; det. Maehler.

Chalybion bengalense (Dahlbom); Guam, March 1949, on *Ipomoea*; det. Maehler.

DIPTERA

Aedes oakleyi Stone; Saipan; Jan. 1948; reared from water in can; det. A. Rudnick.

Aedomyia venustipes (Skuse); Yap; March 6, 1949; at light; det. W. C. Reeves.

FRUIT FLIES ON MAUI—Dr. Bess said that a recent survey on the slopes of Haleakala, Maui, shows the Mediterranean fruit fly to be common in peaches to an altitude of 2500 ft. There is no evidence that this fly is being displaced by the oriental fruit fly there.

JULY 11

The 523rd meeting was held at the H.S.P.A. Experiment Station on Monday, July 11, at 2:00 p.m., with President Balock in the chair.

Members present: Balock, Blalock, Bonnet, Clancy, French, Flitters, Fullaway, Hinman, Look, Marucci, Keck, Pemberton, Rosa, Sakimura, Schwabe, Swezey, Wallace and Weber.

Visitor: Walter Thomsen.

Dr. R. L. Doult was elected a corresponding member.

PAPER

Mr. Fullaway presented his paper: "Description of a *Brachymeria* parasitic on *Agonoxena argaula* Meyr. in Samoa (Hymenoptera: Chalcididae)."

NOTES AND EXHIBITIONS

THRIPOCTENUS BRUI Vuillet—Dr. Swezey reported that this introduced thrips parasite was collected by Paul Baldwin from *Acacia koa* at 4400 ft. elevation in Hawaii National Park, Hawaii, April 2. It is known from all the islands of the group except Molokai, but Dr. Swezey said it was remarkable that it should have spread to so remote a region as the Park area. *Isoneurothrips fullawayi* (Moulton) was collected at the same time; both identifications were by Mr. Sakimura.

TRAMEA LACERATA Hagen—Dr. Swezey exhibited a large dragonfly which he had never caught or seen before, one rarely taken nowadays in the Territory. It was captured by Miss Dorothy Swezey at Barber's Point lighthouse on July 8, when several were seen in flight and alighting on plants near the shore.

CRYPTORHYNCHUS MANGIFERAE (F.)—Dr. Swezey reported on a heavy infestation of mango seeds by this mango weevil. In examining 259 seeds over a period from June 21 to July 9, 98.9 per cent were found to contain weevils in various stages: 97 larvae (mostly full grown), 104 pupae and 55 adults. Counts were from mangoes falling from day to day from a single large tree. This is a higher record than any made during the past years. Another tree with fewer fruits, ripening simultaneously, showed an infestation of only 84 per cent.

ECTEMNIUS POLYNESIALIS (Cameron)—Mr. Weber exhibited specimens of this crabronid wasp and remarked on its abundance about 14 miles south of Kilauea, Hawaii, where he collected a large series on June 21.

TACHYPOMPIIUS ANALIS (F.)—Mr. Rosa exhibited four specimens of this psammocharid wasp taken in the Makiki district of Honolulu, June 24. Mr. Thomsen said he had also collected this wasp recently on the north side of the base of Mt. Kaala.

DIOCALANDRA TAITENSIS Guerin—Mr. Fullaway exhibited a coconut badly damaged by this weevil, which normally attacks the petioles and leaf stalks. He also showed some guavas from Lanikai, Oahu, russet in color due to feeding by an unidentified mite.

AUGUST 8

The 524th meeting was held at the H.S.P.A. Experiment Station on Monday, August 8, at 2:00 p.m., with President Balock in the chair.

Members present: Balock, Bonnet, Clancy, Fullaway, Hinman, Inada, Keck, Lewis, Look, Marucci, Pemberton, Ritchie, Rosa, Schwabe, Swezey, Tuthill, Van Zwaluwenburg and Weber.

Visitors: F. H. Haramoto, F. D. Morrison, G. D. Peterson, Jr., Walter Thomsen and N. D. Waters.

Stephen Au and G. D. Peterson, Jr., were nominated for membership.

NOTES AND EXHIBITIONS

VANDUZZEA SEGMENTATA (Fowler)—Mr. Tanada reported finding all stages of this membracid on young macadamia seedlings (*Macadamia ternifolia*) at Poamoho, Oahu, on August 4. They were feeding at the bases of the petioles near the tip of the growing point; infestation was light and no injury to the plants was noted.

LEAFMINER IN HONEYSUCKLE—Dr. Swezey exhibited a new moth reared from leafmines in Japanese honeysuckle (*Lonicera japonica*). A heavy infestation was found in July of this year in a garden on Makiki Heights, Honolulu. The larva, after issuing from the mine, made its cocoon on the surface of the leaf; the adult moth issued about a month later, on August 7. More material is needed for determination. [This insect is

described as *Swezeyula lonicerae* in a paper in this issue of the "Proceedings" (p. 191 et seq.)]

BRACHYMERIA AGONOXENAE Fullaway—Dr. Swezey exhibited a specimen of this chalcid parasite, which issued July 26 from a cocoon of *Agonoxena argaula* Meyrick on coconut leaf from Lanihuli Drive, Honolulu. This is several miles from Kaala-wai where the parasite was released nearly a year ago after having been introduced from Tutuila, Samoa. This indicates that it is now established and spread. (For description of this parasite see p. 63 of this issue of the "Proceedings"; for breeding notes, see Proc. Haw. Ent. Soc., 13:447, 1949.) Dr. Swezey remarked that his seven-year-old tree showed excessive work of the larvae of the host moth. On a single leaf of 85 pairs of leaflets, every leaflet had feeding scars to indicate that there must have been at least 10 larvae feeding there over a period covering the life of the leaf, of a year or more. This would give a total of 1900 larvae for the whole leaf, and many thousand for the whole tree, though only a few larvae can be found at any one time.

LATRODECTUS MACTANS (F.)—Dr. Bonnet reported receiving a specimen of the black widow spider collected in mid-July, 1949, on Canton Island. This is a new island record.

ARGENTINE ANT—Mr. Peterson reported that recently a male *Iridomyrmex humilis* Mayr was captured at the Honolulu airport, a considerable extension of its range from the area near Ft. Shafter where it was previously known.

SEPTEMBER 12

The 525th meeting was held at the H.S.P.A. Experiment Station on Monday, September 12, at 2:00 p.m., with President Balock in the chair.

Members present: Balock, Bess, Bryan, Carter, Fullaway, Hardy, Inada, Keck, Pelot, Pemberton, Peterson, Rosa, Stout, Swezey, Tanada, Tuthill, Van Zwaluwenburg and Weber.

Visitors: F. H. Haramoto, L. F. Steiner, Walter Thomsen, N. D. Waters and A. B. Weir.

George D. Peterson, Jr., was elected a member, and Stephen Au, a corresponding member. The following were nominated: F. H. Haramoto, L. F. Steiner and N. D. Waters.

PAPER

A paper by Harold E. Box was presented: "The more Important Insect Pests of Sugar Cane in Northern Venezuela."

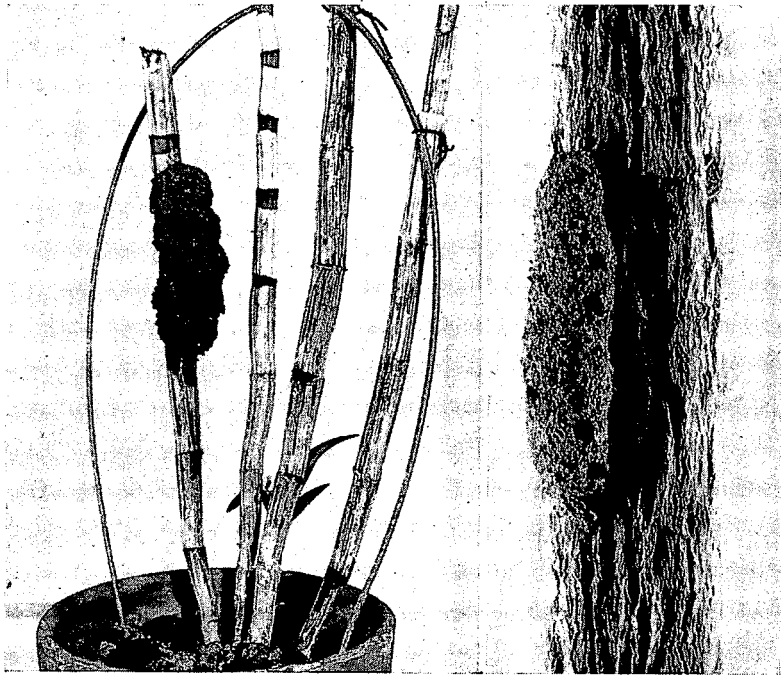
NOTES AND EXHIBITIONS

TUBIFERA AENEA (Scopoli)—Mr. Bryan reported recently seeing great numbers of this syrphid fly on *Sesuvium* foliage on Popoia Island (off Kailua, Oahu). This fly was formerly very abundant on Oahu, but has not been seen so frequently of late years.

SCATOPSE FUSCIPES Meigen—Dr. Hardy reported that this scatopsid fly is apparently well established in Hawaii. It is a scavenger, and Miss Inada has collected it in numbers about overripe papayas, mangoes and other fruits. Dr. Hardy has taken it at lights also. It is undoubtedly the species which Bryan (Proc. Haw. Ent. Soc., 8:406, 1934) reported as *Rhegmoclema atrata*, "captured on a parasite cage from California in 1915," but "not known to be established." *Rhegmoclema* has been placed in synonymy with *Scatopse*, and *atrata* Say is a synonym of *fuscipes* Meigen. Wirth reported this species in 1946 in light traps at Hickam Field and Honolulu. Dr. Alan Stone reports that specimens in the U. S. National Museum bear the following data: Volcano, Island of Hawaii, on *Calla* lily flowers, Jan. 12, 1944, and Honolulu, Oahu, quarantine in rotten potatoes from Canal Zone, 1920.

MANGO WEEVIL—Dr. Swezey reported that among 20 seeds of Haden mangoes recently examined, only one contained *Cryptorhynchus mangiferae* (F.).

EUMENES LATREILLEI PETIOLARIS (Schulz)—Dr. Swezey exhibited a nest of this wasp built on the trunk of a papaya tree. The material of which it is made closely matches the color of the trunk. (See figure.)



Left, nest of *Eumenes pyriformis philippinensis* Bequaert, on *Dendrobium*.
Right, 7-celled nest of *Eumenes latreillei petiolaris* (Schulz), on papaya stem.

VOLUCELLA HOYA Curran—Mr. Weber reported rearing a specimen of this syrphid from overripe avocado.

OPIUS LONGICAUDATUS (Ashmead)—Mr. Weber reported rearing one specimen of this braconid from a number of galls of the tephritid, *Proccidochares utilis* Stone on pamakani (*Eupatorium*) from Mt. Tantalus, August 10. This is a new host record.

DICRANORHINA LUZONENSIS Rohwer—Mr. Weber exhibited a specimen of this larrid wasp, new to the Territory. It was taken by him in Honolulu, September 10, 1949. In the Philippines, according to Dr. Williams (H.S.P.A. Expt. Sta., Ent ser., Bull. 19:100, 1928), it nests in the ground, preying on a wood cricket, probably *Cycloptilus dewitzi* (Saussure).

TRYBLOGRAPHA sp.—Mr. Weber exhibited a series of this cynipid parasite of *Dacus dorsalis* Hendel, found by Mr. Krauss in Malaya, and introduced into Hawaii this year. It attacks the larva and issues from the puparium; it has reproduced well on *dorsalis* in guava and rose apple, and appears to be a valuable parasite. It has been released from quarantine and will be liberated soon.

ARGENTINE ANT—Mr. Thomsen and Mr. Peterson reported the occurrence of this ant at Pearl Harbor, where there have been several swarms near the Fleet Post Office during the past three weeks. This is the farthest known extension of this ant's range from its original establishment at Ft. Shafter in 1940.

EUMERUS MARGINATUS Grimshaw—Mr. Pemberton reported rearing this syrphid from planted cane cuttings which had failed to germinate at Kailua, Oahu. The cuttings were completely covered with soil; when dug up they were sour and considerably decayed. The larvae were well developed when found on August 10. It is believed that failure to germinate was due to factors other than the syrphid infestation.

APION ULICIS (Forster)—Mr. Pemberton reported on the status of the gorse weevil in New Zealand, which he recently investigated there. Introduced from England, the weevil destroys from 90 to 99 per cent of the gorse seed in New Zealand, and has definitely checked the spread of the plant. By arrangement with Dr. David Miller of the Cawthron Institute, a shipment of the weevil arrived in Hawaii on September 8, of which some 2000 were alive. That same day 1500 were released at Olinda, Maui, and on September 10, 500 were liberated at Humuula, Hawaii. Mr. Look reported that the weevils began feeding on the gorse blossoms immediately after liberation. An unsuccessful attempt was made to establish this weevil in Hawaii in November 1926.

HONEYSUCKLE LEAFMINER—Mr. Rosa reported that this new moth, recently found attacking honeysuckle, and as yet unidentified,¹ has been found widespread in Honolulu: on Pacific Heights, Nuuanu Valley and Kalihi Valley. A eulophid parasite reared from the larva was identified

¹ *Swezeyula loniceræ* Zimmerman and Bradley; see page 191 of this issue of the "Proceedings."

by Mr. Fullaway as *Zagrammosoma flavolineata* Crawford (see Proc. U.S.N.M., 45:255, fig. 2, 1913). This is a new record for the Territory.

AGONOXENA ARGAULA Meyrick—Mr. Rosa said he had found this pest of coconut near Hauula, a considerable extension of its known range on Oahu. He also reported that a eulophid hyperparasite on *Brachymeria agonoxenae* Fullaway, in an *Agonoxena* cocoon, was identified by Mr. Fullaway as *Pleurotropis* sp.

OCTOBER 10

The 526th meeting was held at the H.S.P.A. Experiment Station on Monday, October 10, at 2:00 p.m., with President Balock in the chair.

Members present: Alicata, Balock, Bess, Bonnet, Carter, Chong, French, Fullaway, Haramoto, Hardy, Hinman, Inada, Keck, Look, Pelot, Pemberton, Rosa, Schwabe, Steiner, Swezey, Tanada, Tuthill, Van Zwaluwenburg, Waters and Weber.

Visitors: L. M. Chilson, G. L. Finney, C. T. Nihei, Martin Sherman, Gordon L. Smith, Harry S. Smith and Walter Thomsen.

Elected to membership in the Society were Frank H. Haramoto, Loren F. Steiner and Norman D. Waters. Nominated for membership were G. L. Finney, Dr. Martin Sherman and Gordon L. Smith.

NOTES AND EXHIBITIONS

EUMENES LATREILLEI PETIOLARIS (Schulz)—Dr. Swezey reported further on the wasp nest exhibited at the previous meeting. Wasps began emerging on September 13, and continued on September 15, 19, 21, 24 and 25, at intervals of from one to four days, for 12 days. This indicates the brief time it took the parent female to build and provision one cell after another.

EUMENES CAMPANIFORMIS (F.)—Dr. Swezey exhibited a male of this immigrant wasp, collected October 9 on low herbage near Barber's Point lighthouse. It was previously taken in the Pearl Harbor area, in Honolulu and Kahuku.

VANDUZEA SEGMENTATA (Fowler)—Dr. Swezey exhibited specimens of this recent immigrant membracid taken in numbers on *Verbesina* near Barber's Point; both nymphs and adults were found. This is a new locality record for this insect on Oahu.

DIRHINUS LUZONENSIS Rohwer—Mr. Weber exhibited specimens of this chalcid, not previously recorded from Hawaii. Specimens collected in 1920 are in the collection of the Board of Agriculture and Forestry, indicating that it has been here, unrecognized, for some time. It was described from the Philippines (Phil. Jl. Sci., 22:348, 1923) and probably parasitizes houseflies and other Diptera. A series was recently bred by Mr. Tanada from poultry manure.

MOTES ARGENTATUS (Beauvois)—This nearctic larrid wasp, new to the Territory, was taken by Mr. Weber at Hickam Field, Oahu, June 5, 1949. Mr. Krombein, who identified the specimen, says he has seen males collected by Richard Dow one mile northeast of Koko Head, Oahu, in 1945. It is said to prey on crickets.

OPIUS spp.—Mr. Weber reported that hundreds of two species of *Opius* collected from *Olea chrysophylla* in East Africa were recently received from Messrs. McGough and Skinner. Over 2400 have been released on the four larger islands. These wasps appear to be *Opius africanus* Szepilgeti and *O. dacicida* Silvestri, both bred from olives by Silvestri on his 1913 expedition in search of fruit fly parasites.

DACUS DORSALIS Hendel—Mr. Weber reported that a species of *Pyrus*, probably *serotina*, can be added to the hostplants of the oriental fruit fly. From 28 fruits of this sandpear collected in Honolulu, 118 puparia were obtained, which produced 55 *D. dorsalis* and 50 *Opius longicaudatus* (Ashmead).

Dr. Bess said that recently at Olinda, Maui, peaches were free of both the oriental fruit fly and the Mediterranean fruit fly. On Maui at about 4000 ft. elevation, *dorsalis* was not very abundant. Dr. Bess remarked that *Ceratitis* is now found on Oahu below 500 ft., but that it is scarce; on Hawaii at 4000 ft. it is more abundant than *dorsalis*.

ANANCA BICOLOR (Fairmaire)—Dr. Bonnet reported the swarming of this oedemerid beetle October 3, at Keolu Hills, Oahu, clustering on a house under the eaves. The beetles dirtied the side of the house with their excrement; photographs of the clusters were shown.

ARGENTINE ANT—Mr. Pemberton reported finding thriving colonies of *Iridomyrmex humilis* Mayr in Nuuanu Valley, opposite the west end of Laimi Road. Mr. Thomsen also reported finding it in Nuuanu, as well as in Moanalua Gardens, Moanalua golf course and north Halawa Valley. On *Calliandra* it was attending colonies of *Vanduzea segmentata* (Fowler) and *Aphis gossypii* Glover. On *Ixora* and *Schinus* (Christmas berry) it was attending *Coccus viridis* (Green). At Halawa it was on sugarcane, associated with the pink mealybug, *Trionymus sacchari* (Cockerell). Prof. Harry S. Smith pointed out the possibility of this ant upsetting an established biological control, and cited the increase of certain citrus pests in areas where the Argentine ant is present in California.

BREVIPALPUS PAPAYENSIS Baker—Attention was called to the original description (Amer. Midland Nat., 42:375, Pl. X, figs. 84-86, 1949) of this pseudoleptid mite, from material taken on papaya by Mr. Look in 1941 on Oahu. What may be the same species was reported from camphor leaves in Washington, D. C., and from lemon in Cuba.

NEW WASP RECORDS—Mr. Van Zwaluwenburg reported seeing adults of *Ampulex compressa* (F.) and *Eumenes latreillei petiolaris* (Schulz) on Molokai, on September 14; both are new island records.

NOVEMBER 14

The 527th meeting was held at the H.S.P.A. Experiment Station on Monday, November 14, at 2:00 p.m., with Vice-President Tuthill in the chair.

Members present: Bess, Bryan, Chong, Clancy, Fullaway, Haramoto, Hardy, Hinman, Hu, Inada, Keck, Look, Marlowe, Marucci, Newell, Pelot, Pemberton, Rosa, Sakimura, Sherman, Swezey, Tanada, Tuthill and Van Zwaluwenburg.

Visitors: L. M. Chilson, Randall Latta, R. L. Metcalf, C. T. Nihei, Walter Thomsen and Robert van den Bosch.

David T. Fullaway and Harry S. Smith were elected honorary members of the Society.

Elected to membership were G. L. Finney, Dr. Martin Sherman and Gordon L. Smith. Nominated for membership were L. M. Chilson, Walter Thomsen and Robert van den Bosch, and C. T. Nihei for associate membership.

PAPER

Mr. Bryan presented a biographical sketch of the late Dr. J. F. Illingworth.

NOTES AND EXHIBITIONS

PLOVER PREDACEOUS ON ANOMALA—Mr. Sakimura reported that the Pacific golden plover (*Pluvialis dominica fulva*) has been observed to be an efficient predator on adult *Anomala orientalis* (Waterhouse). Dr. Carter noted a concentration of this migratory bird in pineapple fields in the upper Kunia section of Oahu, and observed *Anomala* elytra in their droppings. A later survey showed as many as 124 to 183 droppings in 50 feet of 10-ft. road, and every dropping examined consisted entirely of macerated *Anomala* beetles. High incidence of plover droppings was associated with high *Anomala* grub populations. 124 to 183 droppings were found where the grub index was between 30 to 35; 47 to 73 where the index was 10 to 20; and 6 to 24 where the index was 0 to 6. The *Anomala* index is the total number of grubs in nine samples of soil columns, 6 inches in diameter and 12 inches deep.

SCALES ON CHRYSALIDOCARPUS—Miss Pelot reported that on three leaves of a small golden-fruited palm (*Chrysalidocarpus lutescens*) she found six species of scale insects. In each case this palm proves to be a new host record:

- Parlatoria proteus (Curtis)
- Diaspis boisduvalii Signoret
- Chrysomphalus dictyospermi (Morgan)
- Ischnaspis longirostris (Signoret)
- Phenacaspis sandwicensis (Fullaway)
- Hemiberlesia lataniae (Signoret)

EUMENES LATREILLEI PETIOLARIS (Schulz)—Dr. Swezey reported a new island record for this immigrant wasp. Mrs. Hilda F. Swezey found it at Lahaina, Maui, and recognized it from her previous acquaintance with it at Waianae. Later this wasp was seen at Haiku and at Makawao, Maui.

APHYCUS ALBERTI Howard—Dr. Swezey exhibited specimens of this encyrtid parasite of scales, collected on mamani (*Sophora chrysophylla*) foliage August 17, at 3000 ft. elevation in the National Park on Hawaii, by Paul Baldwin. It is an insect seldom recorded in these islands. Dr. Swezey reared it in 1914 from *Coccus elongatus* (Signoret) in Honolulu, which, according to Timberlake, was the first record from the Territory. Apparently it has not been recorded from the island of Hawaii until now.

NEW ORIENTAL FRUIT FLY HOST—Dr. Bess reported that Miss Inada recently reared 9 *Dacus dorsalis* Hendel and 132 *Ceratitis capitata* (Wiedemann) adults from 40 English walnuts from Waikii, Hawaii. Walnuts collected on Maui were infested by the Mediterranean fruit fly.

OPIUS LONGICAUDATUS (Ashmead)—At an earlier meeting Dr. Bess had reported this opiine in relatively large numbers early in October at various places on Maui up to about 3000 feet. He now reported that Mr. Murakami had revisited these same places early in November and failed to find a single parasite in the upper Kula region where they were conspicuously abundant a month before.

NEW CHRYSIDID WASP—Mr. Pemberton exhibited specimens of a chrysidid wasp new to these islands, tentatively determined as *Chrysis fuscipennis* Brullé. It was first taken at Foster Garden, Honolulu, October 14, 1949, by Colin Potter.

BETHYLID IN INFESTED BOOKS—Dr. Hardy exhibited specimens of Bethylinidae found in considerable numbers in termite galleries in books in the University library. These wasps were probably parasitizing Anobiidae, although no beetles were found in the books. The parasites are *Cephalonomia gallicola* Ashmead; Mr. Muesebeck, who identified them, states that it is possible that *C. peregrina* Westwood is the same species, but that definite determination of that point is impossible from the description, which is very inadequate. He says: "I prefer, therefore, to apply a name which I know does fit these specimens. *C. gallicola* has been received here from many different parts of the world. Apparently it has been widely distributed in commerce."

DECEMBER 12

The 528th meeting was held at the H.S.P.A. Experiment Station on Monday, December 12, at 2:00 p.m., with Vice-President Tuthill in the chair.

Members present: Carter, Chong, Fullaway, Haramoto, Hardy, Hu, Inada, Keck, Look, Newell, Nihei, Pelot, Pemberton, Rosa, Sakimura, Schwabe, Sherman, Swezey, Tanada, Tuthill, van den Bosch and Van Zwaluwenburg.

Visitor: Francis Rathburn.

La Mar Chilson, Walter Thomsen and Robert van den Bosch were elected active members, and Clarence T. Nihei an associate member. Francis Rathburn was nominated for associate membership.

A slate of officers for 1950 was presented, and elected to office as follows:

President.....	C. E. Pemberton
Vice-President.....	Yoshinori Tanada
Secretary-Treasurer.....	R. H. Van Zwaluwenburg
Members of Executive Committee.....	{ J. W. Balock D. E. Hardy

PAPERS

Papers by the following authors were presented: H. A. Bess, D. D. Bonnet, W. E. China and R. L. Usinger, L. J. Dumbleton, D. T. Fullaway, D. Elmo Hardy, D. D. Jensen, K. V. Krombein, P. E. Marucci and D. W. Clancy, S. Maulik, K. Sakimura, C. W. Schwabe, E. C. Zimmerman and O. H. Swezey.

NOTES AND EXHIBITIONS

PINNASPIS BUXI (Bouché)—Dr. Swezey exhibited an *Anthurium* leaf infested with this scale insect. It is an additional hostplant to those reported by Zimmerman in "Insects of Hawaii." The scale was identified by Mr. Fullaway.

DIARTHROMYIA CHRYSANTHEMI Ahlberg—Dr. Hardy reported that the chrysanthemum gall midge is apparently a new immigrant to Oahu. Samples of chrysanthemum plants were obtained recently in Palolo Valley; these were heavily infested, but it was impossible to determine the source of the infestation. The plants had come from Waipahu some two years ago, but were not infested then. It seems probable that the trouble originated rather recently in Palolo. The only other record of this fly in Hawaii is that of Mr. Look (Proc. Haw. Ent. Soc., 13:332, 1949) who reported a heavy infestation on chrysanthemums grown under glass at Hilo, Hawaii.

This insect is a serious pest of chrysanthemums. It is normally considered a greenhouse pest; this is the first time Dr. Hardy has seen it on plants grown out of doors. The Palolo specimens were heavily parasitized by *Charitopodinus swezeyi* (Crawford) (Eupelmidae; det. A. B. Gahan) and *Platygaster* sp. (Scelionidae; det. C. F. W. Muesebeck). No parasites of this midge have previously been reported from Hawaii.

TOXIC REACTION TO SPIDER BITE—Dr. Hardy reported that on November 21, a spider was submitted for identification which had bitten a woman on the eye lid at 1:30 a.m. the night before. She had experienced rather severe symptoms; the bite was very painful and the affected areas swelled up immediately. She was given emergency treatment at the hospital at about 2:00 a.m., but suffered intense pain all night and was nauseated. The following day (12:30 p.m.) the eye lid was red, swollen and very sore. The intense pain persisted and she was still nauseated to some extent, and had been unable to eat. The specimen was identified by Dr.

Willis J. Gertsch of the American Museum as *Chiracanthium* sp.? (Family Clubionidae); he was unable to place it to species from the single female specimen. Dr. Gertsch says that up to the present time no species of this genus has been recorded from Hawaii, and so it follows that this would be a new species, if it were an endemic one. Dr. Gertsch says that the European species, *Chiracanthium nutrix*, has been credited with causing distressing symptoms, but to his knowledge there are no other records of injurious bites from members of this genus.

IRIDOMYRMEX HUMILIS Mayr—Mr. Thomsen reported finding the Argentine ant in a sugar cane field at Ewa Plantation Co. in November. Mr. Pemberton added that, following information from Mr. Thomsen, the Ewa area was scouted and the ant found to occupy practically all of the plantation from Pump 10 to the western end, a distance of nearly two miles. It is suggested that the original focus of infestation was an Army camp, since abandoned, in the kiawe growth a short distance away, where the ant is still numerous.

PROTAETIA FUSCA (Herbst)—Mr. Chilson reported an extension of the known local range of this cetonine beetle on Oahu. In November he found adults on corn tassels, and larvae in compost at Moanalua Gardens. He has also taken the adults feeding on the blossoms of mango, yellow ginger and candle flower (*Cassia alata*).

LAEMOPHLOEUS MINUTUS (Olivier)—Mr. Fullaway reported finding this cucujid beetle recently in wheat at the plant quarantine office in Honolulu. It does not agree with specimens so named in local collections, but does agree with the figure of that species given in Back and Cotton's "Stored-Grain Pests" (Farmers' Bull. 1260, revised, p. 24, fig. 32, 1938).

OLIARUS VAFER Fennah—Attention was called to the description of this new cixiid described (Ann. Mag. Nat. Hist., ser. 12, 2:589, figs. 3 a-e, 1949) from Hiva-oa in the Marquesas. It is closest to *O. swezeyi* Giffard and *O. muiri* Giffard, but differs from both in the shape of the male genitalia.

DACUS DORSALIS Hendel—Dr. Carter summarized a study of various species of *Vanda* orchids with respect to oviposition by the oriental fruit fly. In some 20,000 culled blossoms of *Vanda Miss Joaquim*, 20 *dorsalis* eggs were found; among 12,500 culls of other species of *Vanda*, 8 eggs were found. He stressed the fact that eggs were found only in blossoms culled, for one reason or another, before packing.

MELON FLY—Mr. Tanada reported finding in a field at Mokuleia, an exposed Irish potato with 11 fly eggs, on November 2. The eggs were in a small cavity resulting from a breakdown of the tissues just under the epidermis. All eggs hatched in the tuber, but six maggots left in the potato died within a few days, after attempting to feed. The other five maggots were reared to adult *Dacus cucurbitae* Coquillett on papaya by Miss Inada.

JAMES FRANKLIN ILLINGWORTH, 1870-1949

(Presented at the meeting of November 14, 1949)

Dr. J. F. Illingworth, for 37 years (1912 to 1949) a member of the Hawaiian Entomological Society, died on August 31, 1949, at the home of his daughter in Santa Ana, California. The members of the Society wish to pay tribute to the valuable contributions he made to the economic entomology of the Hawaiian Islands and other lands in and around the Pacific.

He was born in Lanark, Illinois, May 11, 1870. After receiving degrees from Pomona College (B.S. 1900) and Stanford University (A.M. 1901), he taught biology for nine years in a high school in Seattle, Washington. He then went to Cornell University, where he was granted the degree of Doctor of Philosophy in 1910.

During his years in Seattle, he was much interested in the conservation of wild life. As president of the Washington State Audubon Society, he published feature articles in the Seattle Sunday Times: "Help the Birds build their Spring Homes" (May 2, 1909) and "Protecting Wild Animals" (July 18, 1909).

From 1912 to 1917, Dr. Illingworth was professor of entomology at the College of Hawaii. Besides studying various insect pests in Hawaii, he also went to Fiji, where he introduced parasites of sugar cane pests for the Colonial Sugar Refining Company. This led to his going to Queensland, Australia, where, from 1917 to 1921, he investigated sugar cane pests for the Queensland government. He spent the period from 1922 to 1924 in Japan and China, making entomological studies for the U. S. Department of Agriculture.

In 1922 Dr. Illingworth became a research associate in entomology with Bernice P. Bishop Museum, where he made his headquarters when in Honolulu. This association continued until 1943, during which time he contributed thousands of insect specimens to the Museum's collections. Many of his entomological papers were written there. An interest in the background and growth of economic entomology in Hawaii led to a paper, "Early references to Hawaiian entomology," published as Bulletin 2 of the Museum, in 1923. A large part of Dr. Illingworth's other papers on Hawaiian entomology were printed in the Proceedings of the Hawaiian Entomological Society, a total of about 50 from 1913 to 1942.

From 1926 to 1930, Dr. Illingworth was entomologist for the Association of Hawaiian Pineapple Cannerys. He moved to California soon after the start of the war in the Pacific, and settled on a ranch near Santa Ana. Always ready to help students and home owners with entomological problems, he will be remembered by a large circle of friends and acquaintances as well as by his colleagues in the various scientific institutions of Hawaii.

E. H. BRYAN, JR.