

PROCEEDINGS
of the
HAWAIIAN
ENTOMOLOGICAL
SOCIETY



PROCEEDINGS of the Hawaiian Entomological Society

VOLUME 27

FOR THE YEAR 1985

DECEMBER 15, 1986

The following minutes, notes and exhibitions were recorded by the Secretary on the months indicated during the calendar year 1985. The minutes as they appear here contain only the highlights in abbreviated form. Only the total attendance is given. Complete minutes can be obtained from the files of the Secretary. The Editor.

JANUARY

The 949th meeting of the Hawaiian Entomological Society was called to order at 2:10 p.m. on Jan. 14 by Pres. S. Saul in the meeting room of the Manoa Library. Twenty two members and 2 guests were in attendance.

Program: Dr. Jennifer Sharp from USDA-ARS in Miami, Florida presented an informative lecture on her studies with the tephritid fruit flies, *Toxotrypana curvicauda* and *Anastrepha suspensa* occurring in Florida. She reported on research concerned with the effects of hot water bath treatments on various stone fruits. The second half of the program was a review of the Entomological Society of America Annual Meeting held on Dec. 9-13, 1984 in San Antonio, Texas with reports by J. Beardsley, W. Mitchell, and T. Wong.

Report of Officers and Committees:

Editorial: Dr. Joyce proposed that the suggestions of the Ad Hoc Publication Committee to increase the page charges to \$24. per page for up to 10 pages and \$35./page for beyond 10 pages, with non-members paying \$35./page for all pages, be adopted. The motion was seconded and approved and will affect future volumes.

Membership: Lynn M. Lebeck who will receive her PhD in Entomology from the Univ. of CA, Riverside in Spring, 1985, was nominated and elected to membership.

New Business: Dr. Jack Beardsley submitted a resolution from the Dept. of Entomology, Univ. of Hawaii, in support of the Hawaiian Entomological Society. This resolution is on file with the Secretary's minutes of the meeting.

Announcements: Ray Joyce read a letter from Marcus Matthews of the British Museum of Natural History requesting specimens of Heliethinae and Stirriinae (Lepidoptera: Noctuidae), particularly early stages.

Stan Higa announced that a number of distinguished service awards will be presented to deserving individuals at the ESA, Pacific Branch Meetings in June 1985. If you know of anyone who should be considered, please contact Dr. Higa.

NOTES AND EXHIBITIONS

Brachycyttarus sp.: Dr. Don Davis of the National Museum believes the bagworm recently reported as a new state record by Dr. John Beardsley is a species of *Brachycyttarus*, perhaps *griseus* de Joannis.

Surveys by Hawaii Department of Agriculture personnel (L. Nakahara, R. Dinker, C. Kaku, and R. Heu) were conducted during October through December 1984 on the bagworm. Infestations were limited to about 0.8 sq. mi. in the Haiku Gardens area of Kaneohe. The surveys also indicated that the bagworm may have been present in the Haiku area since the summer of 1984.

Infestations were found on Bermuda grass (*Cynodon dactylon*), foxtail (*Setaria* sp.), Hilo grass (*Paspalum conjugatum*), Natal redtop (*Rhynchelytrum repens*), green kyllinga (*Cyperus brevifolius*), and *Desmodium* sp. R. Heu.

Aphanisticus sp.: A specimen of a buprestid beetle new to Hawaii was collected by K. Murai on November 13, 1984 on a sugar cane leaf at Ewa, Oahu. Adult specimens collected during subsequent surveys were identified as *Aphanisticus* sp. by the USDA Systematic Entomology Laboratory. Surveys by Dr. Vincent Chang of HSPA indicate that the buprestid is widespread in Oahu sugarcane fields. The larvae damage sugarcane by creating mines in the older leaves. R. Heu.

Contarinia: Specimens of a gall midge (Cecidomyiidae) were sent to the USDA Sys. Ent. Lab. and identified by R.J. Gagné as an undescribed species of *Contarinia*. The dipteran specimens were found on terminals of Arizona cypress, *Cupressus arizonica* Green, in a nursery at Olinda, Maui by N. Miyahira in June 1984. R. Heu.

Pseudococcus elisae Borchsenius: The established presence of *P. elisae* was reported for the first time in Hawaii by Jack Beardsley at the January 1985 meeting of H.E.S. *P. elisae* was intercepted in quarantine in California in December of 1984 on red ginger. Beardsley examined specimens collected at the source of the infested ginger and confirmed its identification. More details on the species is included in the paper by Beardsley "Taxonomic Notes on *Pseudococcus elisae* Borchsenius, a Mealybug New to the Hawaii Fauna (1985)," Proc. Hawaii Entomol. Soc. 26:31-34. J.W. Beardsley.

FEBRUARY

The 950th meeting of the Hawaiian Entomological Society was called to order by Pres. Saul at 2:02 p.m. on Feb. 11 in the meeting room of the Manoa Library. The minutes of the January meeting were approved as read. 34 members & 5 guests attended.

Program: Dr. Marshall Johnson acted as moderator for a panel discussion of the final draft Environmental Impact Statement for the proposed USDA Tri-fly eradication project. Participating on the panel were Dr. J.E. Gilmore and E.J. Harris from the USDA, Dr. J. Beardsley, Dr. K. Kaneshiro and Dr. S. Saul from the University of Hawaii, and Dr. F. Howarth from the Bishop Museum.

Reports of Officers and Committees:

Treasurer: Total assets of \$12,676.27 were reported. The cost of printing of Volume 25 of the Proceedings is estimated to be approximately \$7,000.00

Membership: Two new members were voted into the Society, Chiba Hidayuki, and Aubrey Moore, both graduate students in the Dept. of Entomology, Univ. of Hawaii.

Common Names: A motion was approved to accept the list of corrections of common names and to incorporate it into the 1985 Common Names Edition.

Executive: It was proposed that the recipients of the annual HES science fair award be invited to attend an HES meeting where they would receive the monetary awards of \$30 for first prize and \$20 for second prize. The motion was approved.

Announcements: An insect photographer who will be attending the ESA Pacific Branch Meetings has contacted Dr. Frank Howarth and expressed an interest in hiking or field trips planned at this time. Interested persons contact Dr. Howarth at the Bishop Museum.

Positions are available as a Pesticide Branch Chief and as an Exploratory Entomologist with the Dept. of Agriculture, State of Hawaii. Interested persons contact Dr. Po-Yung Lai.

A position is currently available as an Urban Extension Specialist with the Dept. of Entomology, Univ. of Hawaii. Interested persons contact Dr. Ron Mau.

NOTES AND EXHIBITIONS

Swarming *Haptoncus ocularis* (Fairmaire): A swarm of these small nitidulid beetles was observed at my residence in Kahaluu Valley, 120 m elevation, Oahu on 2 Feb. 1984, 0715–0745 hrs. Swarming took place next to the house at around 2 to 3 m above the ground, with 5–15 beetles usually flying within a visualized 1 m² "square" with sky as a background. During the first minutes of observation, a White-rumped Shama Thrush, *Copsychus malabaricus*, periodically caught insects from the swarm and returned to the roof of the house. It was actually the Shama's activity that drew my attention to the swarm. Swarming diminished after appearance of sunlight, following sunrise over an adjacent ridge at 0736 hrs. At 0745 hrs, less than 5 beetles were observed through my visualized square at any instant. Another insect, unidentified, in the 5–10 mm size range was present in small numbers flying at around 5 m above the ground, with only 3 or 4 insects in view at any instant. At a higher level, about 10 m above ground, a single dragonfly, probably *Pantala flavescens* (Fab.), was patrolling the immediate area. Obviously, conditions were ideal for insect swarming. Roof and ground surfaces were quite moist following moderately heavy rains during the night. At around 0730 hrs, the temperature was 19.5° C and the relative humidity was 100%; the air was still. The glistening, silvery, aluminated surface of the roof may have helped to attract some of the higher flying insects, including the dragonfly. The beetles appeared to fly mostly at and below roof-level. *Haptoncus ocularis* is the senior synonym of *H. tetragonus* Murray (among others); the latter name is sometimes associated with Hawaiian specimens. The species ranges from East Africa, through the Indian Ocean, parts of S. Asia, Indonesia, Japan, and into the Pacific. It has been taken on rotting papaya and breadfruit in Micronesia. In Hawaii, its host records include *Delissea*, guava, hydranga, and under rotting bark of *Lobelia*; many specimens were taken at light or in light traps. G.A. Samuelson.

***Ceropsila coquillettii* Cresson (Diptera: Ephydriidae):** This ephydrid was recorded by Hardy (Insects of Hawaii, Vol. 13, 1983) from all the major islands in the Hawaiian chain. Seven specimens collected at Smuggler's Cove, 8–9.xi.1979 and Beck's Cove, 11–14.ii.1980 by Dr. W.A. Steffan mark the first record for this species from Kahoolawe. Determination was made by Dr. Wayne Mathis, Smithsonian Institution.

***Hydrellia tritici* Coquillett (Diptera: Ephydriidae):** Three specimens of this species identified by Dr. Wayne Mathis, Smithsonian Institution mark a new island record. They were collected by W.A. Steffan, G.M. Nishida & M.L. Goff at Hakiowa Pt. on Kahoolawe Island, 7–8.xi.1979. It's occurrence is Hawaii plus it's status as a potential pest in grasses is discussed in Mathis & Wirth (1981, Proc. Hi. Ent. Soc. 23:371–73), also Hardy (1983, Proc. Hi. Ent. Soc. 24:162, 165, 168 & 196).

Brachydeutera ibari *Ninomyia* (Diptera: Ephydriidae): A single specimen collected at Becks Cove, Kahoolawe Island, 11-14.ii.1980 by G.M. Nishida at U.V. light marks the first state record for this species. It was determined by Dr. Wayne Mathis, Smithsonian Institution. N.L. Evenhuis.

Acari infesting bananas in Hawaii: Banana fruits are relatively free from the depredations of insects and mites. However, reports by farmers of thrips damage on banana resulted in closer observations being made during all stages of the developing fruit. In addition to thrips, various Acari were found infesting the fruit. Among the Acari being reported for the first time on banana are:

1. *Brevipalpus phoenicis* (Geijskes) — Tenuipalpidae
2. *Stenotarsonemus pallidus* (Banks) — Tarsonemidae
3. *Lasioseius* sp. — Ascidae
4. *Cheletomimus* sp. — Chelytidae
5. Unidentified sp. — Bdellidae

Among the Acari recorded *Brevipalpus phoenicis* was the most numerous and common mite. Eggs and other immature forms were always seen. Batches of 2-9 bright orange eggs were often observed in shallow pockets on the banana skin or among cracks of split skin. They were present all over the fruit, especially at the junction of the banana fingers and the bunch. The other mites though less frequently observed, were recorded on the fruit and were found to be present more often at the tip of the fruit, where dried flower remnants were present. Among the mites recorded the first two species are phytophagous mites and the other three are general mite predators. D. Muruvanda and M. Lee Goff.

Endocima fullonia (Clerck): Specimens of a noctuid caterpillar new to Hawaii were collected by Ed Shiroma on Jan. 26, 1985 from a coral tree, *Erythrina variegata* var. *orientalis* at Moanalua Gardens, Oahu. It has been identified as *E. fullonia* (Clerck), the fruit piercing moth, by R. Poole of the Systematic Entomology Laboratory, USDA, ARS. This moth is widespread, being found in Africa, India, Southeast Asia, Australia, and the South Pacific Islands.

The caterpillar stage is reported to feed on the leguminous tree *Erythrina* (Madison, P.A. 1982, South Pacific Commission leaflet No. 14) while the adult is known to attack a wide range of fruit such as banana, citrus, guava, mango, papaya, and tomato. The adult moth, active at night, lands on ripening fruit, pierces the skin with the tip of its proboscis and sucks out the juices.

Surveys by Hawaii Dept. of Agriculture personnel indicate 2 infested *Erythrina* trees within 0.4 miles of each other, both in Moanalua Gardens. Over 3 dozen other *Erythrina* sites throughout Oahu have been inspected and thus far no caterpillars have been detected. Surveys by DOA personnel are being continued. R.A. Heu.

Helorus sp.: A single female specimen of a small wasp of the family Heloridae (Proctotrupoidea) was collected by Mr. William Perreira from a light fixture at his home on Tantalus Drive, Honolulu, on Feb. 1, 1985. I have identified the specimen as *Helorus* sp. It may be *H. paradoxus* Provancher, which is widely distributed in North America, but no determined specimens are available for comparison. Mr. Perreira also provided a second, badly damaged but recognizable specimen which he had removed, dead, from a neuropteran cocoon collected in the same area (Mt. Tantalus) last Oct. or Nov.

Helorus species develop as internal parasites of larval Chrysopidae and possibly Hemerobiidae. The biology of *H. paradoxus* was studied in detail by Clancy (1946, Univ. Calif. Pubs., Entomol. 7:408-418). Only *H. paradoxus* has been recorded

from North America, but several other species occur in the Palearctic Region. This is the first record of the occurrence of Heloridae in Hawaii. J.W. Beardsley, Jr.

MARCH

The 951st meeting of the Hawaiian Entomology Society was called to order by Pres. Saul at 2:05 p.m. on Mar. 11 in the conference room at the Manoa Library. Thirty one members and 2 guests were in attendance.

Program: Lynn LeBeck from the University of California, Riverside presented an informative talk on her studies with *Comperia merceti* Compere (Hymenoptera: Encyrtidae), a parasite of the brownbanded cockroach, *Supella longipalpa* (F.), and of a yeast symbiont found in the reproductive tract of the parasite.

Report of Officers and Committees:

Executive Committee: Pres. Saul announced that Dick Tsuda has accepted the position as Business Manager and Arnold Hara has accepted the position of Chairman of the Nominations Committee for 1985.

Request was made for Volunteers for various committees in 1985, among them, the Science Fair, Finance, Membership, and the Annual Dinner committees.

Treasurer: Total assets of \$5,508.05 were reported following payment for printing of Vol. 25, which cost \$7,805.00.

Membership: Five new members were voted into the Society: Dr. Todd Shelly from UCLA Biology Dept., and currently a member of the Hawaiian Evolutionary Biology Program, Dr. J.W. Armstrong from the USDA-ARS in Hilo, Hawaii, John Stark and Stella Su, PhD candidates in Entomology at Univ. of Hawaii, and Pociano Baltazar Epino, a Master's degree candidate in Entomology at the Univ. of Hawaii.

New Business: The proposal that the HES obtain and print T-shirts with the HES logo for sale at the ESA Pacific Branch Meeting in June was discussed by Society members. No decision was made at this time.

NOTES AND EXHIBITIONS

Placopsidella marquesana Malloch: This is the correct name for *P. cyanocephala* Kertész in the Hawaiian literature. This has previously been misidentified and has been corrected by Dr. Wayne Mathis of the U.S. National Museum, Smithsonian Institution (1980, Hardy, D.E. & M.D. Delfinado, *Insects of Hawaii*, Vol. 13:270). D. Elmo Hardy.

Coleoptera new to Hawaii: Among identifications for specimens of minute Coleoptera, around 1 mm long or less, which were received recently from Dr. J.F. Lawrence, CSIRO, Canberra, Australia, there were five which appear to constitute new state records, as follows:

Anchicera sp. (Cryptophagidae): Four specimens were collected in Honolulu by C.R. Joyce between IX-21-1955 and V-6-1957.

Myrmecixenus vaporarium Gueren, family Colydiidae (according to Crowson, 1967, Families of Coleoptera), but Lawrence placed it in Tenebrionidae. Two specimens were collected in a light trap in Waipio Peninsula, Oahu, X-1960 and XI-1963, by J.W. Beardsley.

Melanophthalma sp., family Lathridiidae. Eighteen specimens are in the Univ. of Hawaii Entomology Dept. collection, mostly from light trap collections at Ewa, Oahu during the 1960s, but including one specimen labeled: Kaimuki, Oahu,

VIII-22-1919 (no collector but label appears to be O.H. Swezey's handwriting), in basket of plums.

Holoparamesus sp., family Merophysiidae (formerly part of Lathridiidae). Three specimens, collected at Ewa, Oahu IX-1974, A.K. Ota, ex pitfall trap in sugarcane field, are in the U.H. Entomology Dept. collection.

Cephennum sp., family Scydmaenidae There are seven specimens in the U.H. Entomology Dept. collection; six are from Ewa, Oahu X-1960 and XI-1961, J.W. Beardsley, ex light trap; one is from Aina Haina, Oahu, XI-11-1967, C.R. Joyce. J.W. Beardsley.

Dacus latifrons (Hendel) in Hawaii (from a note in the Yokohama Plant Protection News, No. 563, Sept. 1, 1984 — through T. Matsuzawa, Narita Branch): On July 21, 1984, cut flowers and leis were carried in aircraft baggage from Hawaii. A single lei made from fresh fruits of *Solanum aculeatissimum* was held for investigation. In August three individuals of *D. latifrons*, the solanaceous fruit fly, eclosed. This is the first record of an infestation of this solanaceous fruit by this fruit fly. Leis, called "kiiania-lei" are made from the fresh fruit in Hawaii. Hardy (1973, Pacific Insects Monograph) indicates that this fly has been recorded from four other species of *Solanum*. Submitted by W. Mitchell.

APRIL

The 952nd meeting of the Hawaiian Entomological Society was called to order by Pres. Saul at 2:05 p.m. on Apr. 8 in the conference room of the Manoa Library. Twenty-two members and 3 guests were in attendance. The minutes were approved as read.

Program: Dr. Dan Papaj of the Department of Entomology, Univ. of Massachusetts, Amherst, gave an informative presentation titled "Conditioning of Host-selection in the Pipevine Swallowtail Butterfly, *Battus philenor*."

Reports of Officers and Committees:

President Stephen Saul stated that the 1971 draft of Guidelines for HES involvement in matters pertaining to legislation and governmental actions seemed the most appropriate draft. Approval by the Society was left for a later meeting.

Membership: Two new members were voted into the Society: Jiraporn Petchart and Edhimartono, both graduate students in the Dept. of Entomology, University of Hawaii.

No Notes and Exhibitions were submitted.

MAY

The 953rd meeting of the Hawaiian Entomological Society was called to order by Pres. Saul at 2:02 p.m. on May 13 at the conference room of the Manoa Library. One guest and 21 members were in attendance. Minutes were approved as read.

Program: David A. Ironside, a research entomologist with the Maroochy Horticulture Research Station, Department of Primary Industries (DOA) Nambour, Queensland, Australia, discussed his work on the development of an Integrated Pest Management program for macadamia in Australia.

Reports of Officers and Committees:

President: Stephen Saul suggested that persons wishing to nominate an individual for honorary membership in the Society should prepare a brief advocate's statement and present it to the Executive Committee for review.

Membership: Art Buchman, an entomologist with the U.S. Army at Ft. Shafter was nominated and unanimously elected into the Society.

Old Business: F.A. Bianchi volunteered to act as HES Historian until such time as one is officially elected.

Presentation of papers: A paper was submitted for publication by M.L. Goff, M. Early, K. Tullis, and C. Odom, entitled "A Preliminary Checklist of Arthropods Associated with Exposed Carrion in the Hawaiian Islands."

NOTES AND EXHIBITIONS

***Brachydeutera ibari* Ninomiya:** This is to put on record another collection of *Brachydeutera ibari* Ninomiya, 1929: Oyo Dobutsugaku Zat. 1:190 from the Hawaiian Islands. It was collected from Hakioawa stream, Kahoolawe Island on April 26, 1980 by S.L. Montgomery. The new record for the Hawaiian Islands appears in W.N. Mathis and K.D. Ghorpade, 1985, *Smiths. Contr. Zoology* 406:14 (see note by Evenhuis, Feb. 1985 in *Proc. Hawaii. Entomol. Soc.* 27 (in press)). D.E. Hardy.

***Comptosia moretonii* (Macquart):** In February 1984 I presented a note to the HES on a specimen of *Comptosia* (Diptera: Bombyliidae) collected by Dr. Gressitt from Franz Josef Glacier in New Zealand. I tentatively identified it as *C. fasciata* (Fab.). The specimen was subsequently sent to Mr. David K. Yeates, Dept. of Entomology, University of Queensland, Australia, who is revising the genus *Comptosia* for his doctoral dissertation. He has determined the specimen as *Comptosia moretonii* (Macquart), a species that commonly occurs on the east coast of Australia from December to April. This New Zealand specimen was collected in February and is presumed to have been blown to New Zealand from Australia over the Tasman Sea via the strong air currents that exist during the summer and fall seasons there. N.L. Evenhuis.

***Aphanisticus cochinchinae seminulum* Obenberger:** The correct name for the sugarcane leafmining buprestid, *Aphanisticus* sp., previously reported as a new state record (Jan. 1985 Note) should be *Aphanisticus cochinchinae seminulum* Obenberger. The identification of this beetle was made by S. Bily of the National Museum in Czechoslovakia. Populations of this buprestid beetle are currently found only in the sugarcane fields on Oahu and do not appear to be as numerous as first reported in January 1985. R. Heu.

***Bemisia tabaci* (Gennadius):** Specimens of the sweetpotato whitefly, *Bemisia tabaci* were collected from sweetpotato from the Homestead and Houselot areas of Waialua on Kauai by C. Ragasa and D. Melendez on April 4, 1985. This constitutes a new island record for this species. The identification was made by B. Kumashiro, HDOA taxonomist. *B. tabaci* was first collected on Oahu in October 1982 as recorded in a note by P.Y. Lai, P.H.E.S. 25:18. R. Heu.

***Endocima fullonia* (Clerck):** One specimen of this moth was collected from a coral tree at Kilauea, Kauai on April 22, 1985 by C. Ragasa. This constitutes a new island record for this species. The identification was made by B. Kumashiro, HDOA taxonomist. No other specimens were found in subsequent surveys. *E. fullonia* was previously collected only from Moanalua Gardens, Oahu. R. Heu.

***Scirtes* sp.:** Specimens of the helodid beetle, *Scirtes* sp. were collected from a corn field in Kapaa, Kauai on March 28, 1985 by L. Nakahara and D. Sugawa. They were identified as *Scirtes* sp. by A. Samuelson of the Bishop Museum. This constitutes a new island record for this species. *Scirtes* sp. adults were first found in

light trap catches on Oahu in 1975 (Beardsley, Proc. Hawaii Entomol. Soc., 23:6). Adults occur on vegetation in swampy places while the larvae are aquatic. R. Heu.

Thrips damaging banana: Banana fruits with skin exhibiting intense scarification, cracking and corky growth were collected and examined at Hilo, Hawaii. From these green fruits, in various stages of development, numerous thrips were collected. The thrips were identified by me as *Elixothrips brevisetis* (Bagnall) The identification and damage on fruits has been confirmed by K. Sakimura.

The first collection of this thrips in the Hawaiian Islands was a single female made in 1981 (Sakimura, 1985, Proc. Hawaii. Entomol. Soc. 25:2). All the thrips collected were females. On two occasions adult thrips were enclosed on small banana fingers in separate containers. In both cases, immature thrips were observed approximately 15 days after confinement. The adults have since died but the immature thrips are currently developing on banana fingers.

Though this species is a polyphagous insect (Sakimura, loc. cit.), this is the first record of it feeding on banana. It also constitutes a new record for the island of Hawaii. No males of this species have been found. According to Mr. Sakimura, *E. brevisetis* probably is a parthenogenetic species of thrips (personal communication). D.A. Muruvanda.

JUNE

The 954th meeting of the Hawaiian Entomological Society was called to order by Pres. Saul at 2:05 p.m. on June 13 in the conference room of the Manoa Library. Minutes were approved as corrected. Fourteen members and two guests were in attendance.

Program: Dr. Tod Shelly of the Hawaiian Evolutionary Biology Program, University of Hawaii, presented a seminar on his doctoral research concerning ecological comparisons of light and shade seeking species of robber flies.

Reports of Officers and Committees:

Historian: F. Bianchi suggested that new members in the Society submit a brief note containing autobiographical information of interest, to be kept on file.

Papers submitted: By J.W. Beardsley — "The Ectoild Parasites of Agromyzid Leafminers in Hawaii (Hymenoptera: Cynipoidea)" and "Taxonomic notes on *Pseudococcus elisae* Borchsenius, a Mealybug New to the Hawaiian Fauna (Homoptera: Pseudococcidae)."

NOTES AND EXHIBITIONS

Tenomerga mucida (Chevrolat): This is an E Palaearctic species and a member of the Cupedidae in the primitive suborder Archostemata. This beetle is also reported for the Philippines and Bonin Islands, and is a fairly recent introduction to Oahu. This species was previously known as *Cupes clathratus* Solsky over part of its range, including Japan and the Pacific island records. Arturs Neboiss of the Victoria Museum in Melbourne published a reclassification of *Cupes* in which *clathratus* was synonymized with *mucida* and transferred to the new genus *Tenomerga* Neboiss (1984, Syst. Entomol. 9:443-447).

Of the apparently known 6 specimens taken from Oahu, the last 3 were collected in my house in Kahaluu Valley on 10 April 1981, 27 April 1982, and 9 June 1985. The 1st Oahu specimen was collected by J.K. Fujii at the University of Hawaii quarry on 16 March 1969 (1970, PHES 20:490). The 2nd and 3rd specimens, from UH student collections and determined by J.W. Beardsley, were col-

lected in Pearl City on 7 May 1970 by Santos (1971, PHES 21:15) and from Manoa on 13 March 1971 by M. Ono. The Kahaluu specimens indicate that this species is indeed established on Oahu, and from fairly distant localities, with a range extension to the windward side of the island marking its 12th recorded year of 16. The 1st Kahaluu specimen was alive but lying motionless on the floor inside the house and remained inactive when I picked it up — it had the legs drawn in neatly to the body but the antennae were extended fully anteriorad, as were the antennae of the subsequent specimens. The 2nd specimen was freshly dead on the basement floor, open to the outside. The 3rd specimen was freshly dead on the strainer in the kitchen sink.

From Arnett (1960, The Beetles of the U.S., p. 46) "*Cupes* spp. larvae are wood-borers, living under bark, or about logs . . . Both adults and larvae live together. The wood is usually moist. Sometimes they are found in basement timbers of old houses." Although these beetles tend to be rare in collections, they are sometimes found in numbers in old logs or swarming in the sunlight. G.A. Samuelson.

***Andaspis luecophloae* Rao:** In August of 1984, Mr. Dick Tsuda gave me a twig of *Ficus benjamina*, bearing specimens of a diaspidid scale insect, which had been submitted to the Plant Disease Clinic at U.H. Manoa by a resident of Moiliili, Honolulu. The scale proved to be a species of *Andaspis* which ran to *A. leucophloae* Rao in the 1952 revision of the genus *Andaspis* by Rao and Ferris (Microentomology 17:17-32). However, because of some minor differences between the specimens and the description and figure of *A. leucophloae* published by Rao, I sent specimens to Dr. D.J. Williams at the Commonwealth Institute of Entomology in London. His opinion was sought because he had access to Rao's type material in the British Museum (Natural History). Dr. Williams recently wrote me that he believes our species is *A. leucophloae*, and the minor difference between Hawaiian specimens and Rao's description of the species are within the range of variability exhibited by specimens from India, which is the type locality for this species.

Andaspis leucophloae is a new state record for Hawaii. It is a bark-inhabiting species. The scale covering is moderately long and slender in form and light brown in color. Like other bark-inhabiting species of this group, it is quite inconspicuous. Outside Hawaii, it is known only from India. Three other *Andaspis* species have been reported previously from Hawaii, *A. hawaiiensis* (Maskell), *A. mackienana* (McKenzie), and *A. punicae* (Laing). J.W. Beardsley.

***Pseudococcus dendrobiorum* Williams:** In October 1977 I reported on a new immigrant mealybug which had been collected in October 1976 on *Dendrobium* orchids at Kohala Hawaii (Proc. H.E.S. 23:183). At that time this mealybug was reported as *Pseudococcus* n. sp., with a further notation that it would be described by Dr. D.J. Williams of the Commonwealth Institute of Entomology in London. Williams was at that time working on a revisionary study of the mealybugs of Australia, and this mealybug was known outside Hawaii from specimens from Northern Australia.

A description and figure of this mealybug, named *Pseudococcus dendrobiorum* by Williams, has recently been published. It is contained in Williams' monographic revision, titled Australian Mealybugs which was published in January, 1985 in book form by the British Museum (Natural History), London. The book contains 431 pages and includes 177 full-page figures. Of the 196 species in 61 genera which are treated, 132 species and 27 genera are described as new. J.W. Beardsley.

Ceraphron sp. (Hymenoptera: Ceraphronidae): Specimens of a ceraphronid new to Hawaii were first collected by K. Murai on the Hawaii Dept. of Agriculture grounds in April 1985. It was identified as *Ceraphron* sp. by P.M. Marsh, USDA Systematic Entomology Laboratory. The genus needs revision — the species are not identifiable. Some species of *Ceraphron* are primary parasites while others are hyperparasites. B. Kumashiro.

Leptodictya tabida (Herrich-Schaeffer) (Heteroptera: Tingidae): Specimens of a tingid new to Hawaii were first collected from sugarcane leaves from Waikapu, Maui by J. Kusakabe on May 15, 1985. It has been identified by R.C. Froeschner, Smithsonian Institute, as a sugarcane lace bug, *Leptodictya tabida*. This tingid is recorded from Texas, Cuba, Mexico, Guatemala, El Salvador, Panama, and Venezuela. Its reported host range includes sugarcane, corn, bamboo, and teosinte.

The tingid attacks sugarcane plants 2 to 20 months old. All stages of the tingids are found on the undersides of leaves, mostly on the lower half of the stalk. The initial feeding of the tingids cause yellow-white spots which, with continued feeding, later coalesce and form reddish-brown blotches.

Surveys conducted by HSPA indicate that about 80-90% of the sugarcane fields on Maui are infested. It has not been found on any of the other Hawaiian Islands. Surveys by HSPA and HDOA are being continued. R.A. Heu.

JULY

The 955th meeting of the Hawaiian Entomology Society was called to order at 2:02 p.m. on July 8, 1985. Nineteen members and 4 guests attended.

Program: Dr. James Carey from the University of Calif., Davis, presented an informative seminar titled "Medfly Demography: Population Boom or Political Bust."

Report of Officers and Committees:

Membership: Dr. Nick Liquido of USDA ARS, Hilo, Hawaii was unanimously elected to membership in the Society.

NOTES AND EXHIBITIONS

New island records:

Cosmopolites sordidus (Germar): Adults of the banana root borer were collected from banana stem traps at Hoolehua, Molokai, on June 14, 1985 by G. Tevis, P. Conant, and R. Heu. Identification was made by B. Kumashiro.

This is a new island record. This beetle also occurs on Oahu (1981) and Maui (1983) (PHES 25:18-19).

Chaetocnema confinis Crotch: Light adult populations of the sweet potato flea beetle were found on sweet potato at Hoolehua, Molokai, on June 14, 1985 by P. Conant and R. Heu. Identification was made by B. Kumashiro. This is a new island record. This beetle also occurs on Oahu (1982), Kauai (1983), and Hawaii (1984) (PHES 25:17).

Telostylinus lineolatus (Wiedemann): One specimen of this neriid fly was collected in May, 1985 at Hilo, Hawaii, by the Dept. of Health. Identification was made by B. Kumashiro. This fly was first found in Honolulu (1978) and also occurs on Kauai (1980) (PHES 24:6 & 167).

Thrips palmi Karny: Specimens of this thrips were collected from watermelon at Hoolehua, Molokai, on March 12, 1985 by M. Johnson. A light infestation was observed on cantaloupe in April 1985 by R. Heu, G. Tevis, and P. Conant. Identifi-

cations were made by R. Mau and B. Kumashiro. This is a new island record. This thrips also occurs on Oahu (1982), Kauai (1984), Hawaii (1984), and Maui (1985). Reported by R. Heu.

AUGUST

The 956th meeting of the Hawaiian Entomological Society was held on August 12, 1985, at 2:04 p.m. at the conference room of the Manoa Library. Nineteen members and 4 guests were in attendance.

Program: Dr. Hua Zhilong spoke on the current status of Systematic Entomology and remarked on Biological Control of Cerambycidae in the Peoples Republic of China.

Reports of Officers and Committees:

President: Dr. Saul read a letter of thanks from Kenneth Choi, the second place winner of the student science fair entomological award.

New business: Dr. Beardsley requested the support of the society to keep the "insects of Hawaii" series in print, as the University of Hawaii Press is considering discontinuing the series. A motion to draft a letter in support of additional volumes was unanimously approved.

NOTES AND EXHIBITIONS

Aphis nasturtii Kaltenbach: During March I received a letter from Dr. Manya Stoetzel, USDA Systematic Entomology Laboratory, Beltsville, Maryland in which she clarified the identification of aphid specimens from watercress which had been collected at Pearl City, Oahu during 1983. Earlier difficulties in the identification of these aphids had required collaboration between Dr. Stoetzel and Dr. Victor Eastop at the British Museum, London, in order to clarify the identity of specimens from watercress from two different sources on Oahu. The first collection was made from watercress purchased at a Safeway store in the Salt Lake area of Honolulu on 21 January 1983 by M. Sumida. This watercress had originated from California. The aphids from this collection were determined by Eastop as *Aphis ribiensis* Gillette and Palmer, a North American species which apparently is not established in Hawaii. Aphids from the second source were collected on watercress growing at Sumida Farm, Pearl City, Oahu on 25 January and 6 July 1983 by Mr. Larry Nakahara. These were determined as *Aphis nasturtii* Kaltenbach, a species widely distributed throughout Eurasia and North America which is frequently found on watercress. Additional collections made at Sumida Farm by Mr. Nakahara during March and August 1983 also are this species. These collections indicate that *Aphis nasturtii* is established on Oahu. This is a new state record. J.W. Beardsley.

Hydrellia tritici Coquillett: On June 20, 1985, in company with Dr. and Mrs. Oatman, University of Calif., Riverside, I visited Kipuka Puauulu (Bird Park), Hawaii Volcanos National Park. There we observed heavy leafminer damage to leaves of an abundant wild grass (*Poa* sp.?). Also observed on and around the damaged grass were numerous individuals of a small black fly which was unfamiliar to me. A quantity of infested grass was collected and held in the laboratory in Honolulu. Several dozen specimens of the small black fly emerged from this material. These were identified by me as *Hydrellia tritici* Coquillett, through comparison with specimens in the University of Hawaii collection.

H. tritici has been reported previously from Hawaii (Mathis and Wirth 1981, PHES 23:371-373 and Hardy PHES 24:24, 162, 165, 168, and 196). Also reared

from the infested grass collected at Bird Park were several dozen specimens of a pteromalid parasitoid wasp which I have determined as *Cyrtogaster* sp. This parasite, which is known to have been present in Hawaii since 1917, has been collected on all of the main Hawaiian Islands (Beardsley 1956, PHES 16:8). Species of *Cyrtogaster* are known to parasitize leafmining Diptera larvae in other areas, but this is the first evidence of such a host relationship in Hawaii. J.W. Beardsley.

Patchiella reaumuri (Kaltenbach): In 1971 I reported a root-infesting aphid of the subfamily Pemphiginae, which was found attacking dasheen and taro (*Colocasia esculenta*) on the island of Hawaii, as *Pemphigus* sp., determined by Louise M. Russell (PHES 21:147). A further identification of this species, which has become an important pest of dryland taro on Hawaii, was not available until now.

The recently published book "Aphids on the World's Crops" by R.L. Blackman and V.F. Eastop (1984, John Wiley and Sons) lists the pemphigine aphid *Patchiella reaumuri* as species which occurs, apparently as an anholocyclic form in the tropics, on the roots of Araceae, including taro. These authors specifically state (p. 323), "Specimens assigned to this species have also been collected on the roots of *Calocasia esculentum* (taro) in Hawaii and the Solomon Islands, suggesting that an anholocyclic form of *P. reaumuri* may be widespread, but often overlooked on the roots of Araceae." It is assumed that specimens sent by Ms. Russell to Dr. Eastop at the British Museum may have been the source of this Hawaiian record for *P. reaumuri*. J.W. Beardsley.

New Island Records:

Trox suberosus Fab.: Specimens of this scarabaeid beetle were recently collected at Puhi, Kauai on July 8, 1985 by D. Sugawa. Identification was made by B. Kumashiro. One other specimen of this beetle was collected from Kauai in December 1974 but not reported. This is a new island record. This beetle was first collected on Oahu in 1970 (PHES 21:7, 16, & 315).

Bruchophagus mellipes Gahan: Adults of this eurytomid wasp were collected from indigo at Kona, Hawaii on April 30, 1985 by S. Matayoshi, L. Doi, and C. Hirayama. Identification was made by J.W. Beardsley. This is a new island record. This wasp was first found on Oahu in 1979 (PHES 24:173).

Tetrastichus (Eutetrastichus) chrysopae (Crawford): Specimens of this eulophid wasp were collected from Opiuma at Kona, Hawaii on May 23, 1985 by S. Matayoshi. Identification was made by J.W. Beardsley. This is a new island record. This wasp was first found on Oahu in 1969 (PHES 21:18).

Pseudococcus elisae Borchsenius: One specimen of this mealybug was collected on *Aglaonema* at Hoolehua, Molokai on June 14, 1985 by P. Conant. Identification was made by B. Kumashiro and confirmed by J.W. Beardsley. This is a new island record. This mealybug was found to be present on Oahu after specimens were intercepted in California on red ginger from Kaneohe in December, 1984 (PHES 26:31-34). Reported by R. Heu.

SEPTEMBER

The 957th meeting of the Hawaiian Entomological Society was called to order by Pres. Saul at 2:10 p.m., September 9th at the conference room of the Manoa Library. Twenty-five members and 5 guests were in attendance.

Program: Dr. Donald Duckworth, Director of the Bishop Museum, spoke on the involvement of the Museum in, and the current status of entomological research in the Pacific Area. His presentation was titled "Tropical Entomology — the Future is Now."

Reports of Officers and Committees:

Membership: Dr. James Carey of the University of California, Davis was nominated and unanimously elected to membership in the Society.

President: The nominating committee for the next years officers has been activated and is chaired by Arnold Hara. The committee will be contacting specific members concerning nominations.

Dr. Lynn LeBeck has volunteered to act as committee chairperson for the annual dinner this year. Any questions or suggestions should be addressed to her.

Editor: The Index to Vol. 25 has been published and will be distributed to the Society members in the near future. The suggestion was raised of dedicating Vol. 26 of the HES Proceedings to the memory of Edward H. Bryan, a member of the Society for 66 years. A motion was made and unanimously passed to so honor Ed Bryan.

Old Business: Dr. J. Beardsley will tentatively meet with Mr. Sparks of the Univ. of Hawaii Press to discuss the future of the "Insects of Hawaii" series. A tentative committee of J.W. Beardsley and D.E. Hardy will be formed.

NOTES AND EXHIBITIONS

Agallia lingula Van Duzee: Recently I examined several lots of unsorted insect specimens taken in light traps at Hickam Air Force Base, Oahu, during May, June and July, 1985. This material contained specimens of several which were new to me. Among these were several dozen individuals of a cicadellid leafhopper which Bernarr Kumashiro of the Plant Pest Control Division, State Dept. of Agriculture submitted to the USDA Insect Identification and Beneficial Insect Introduction Institute at Beltsville, Maryland. Dr. J.P. Kramer of Systematic Entomology Lab. there identified the species as *Agallia lingula* Van Duzee, a new state record for Hawaii. Dr. Kramer wrote that, "This is a common species in Mexico, Central America, Jamaica, and is known from Texas and Louisiana in continental U.S." Hosts from which this leafhopper was collected in Costa Rica were listed by C.H. Ballou (1936) in USDA Bureau of Entomol. and Plant Quar., Insect Pest Survey Bul. 16, p. 456, as *Capriola dactylon*, *Coreopsis lanceolata* (Calliopsis), *Dahlia rosea*, *Dianthus caryophyllus* (carnation), *Ipomoea batatas* (sweet potato) and *Tetragonia expansa* (New Zealand spinach). There is no indication on which, if any, of these plants the leafhopper can reproduce. J.W. Beardsley.

Sogata eupompe (Kirkaldy): The same light trap material referred to above, from Hickam Air Force Base, May, June, July 1985, also yielded about two dozen specimens, mostly females, of a delphacid planthopper which appeared to be new here. These were determined, also by Dr. Kramer, as *Sogata eupompe* (Kirkaldy), a species which appears to be widespread in the Pacific. Dr. Kramer lists it as occurring in Australia (New South Wales, Queensland), Philippines, Fiji, Samoa and Tahiti. Fennah (1956 Ins. Micronesia 6(3):119) lists it as *Chloriona eupompe* from the Mariana Is., Palau, and Woleai (Caroline Islands). The species was described in 1907 in Bulletin 3, Div. of Entomology, HSPA Experiment Sta. Apparently, there are no published host records. J.W. Beardsley.

Steatococcus samaraius Morrison on Guam: A monophlebine margarodid scale insect, *Steatococcus samaraius* Morrison, was collected for the first time on Guam at Merizo on March 15, 1985, by F. Cruz on monkeypod. This scale insect was described from specimens collected on Guadalcanal in the Solomon Islands, and has subsequently been reported from the Palau Islands and Yap in Micronesia. J.W. Beardsley.

***Maconellicoccus hirsutus* (Green)** on Maui: Recently I identified specimens of the Egyptian Hibiscus mealybug, *Maconellicoccus hirsutus* (Green), from Maui which were submitted for identification through the Diagnostic Clinic of the College of Tropical Agriculture and Human Resources. The specimens were collected at Kaanapali during April 1985 by W. Morioka on *Hibiscus rosa-sinensis* leaves. This is a new island record for *M. hirsutus* which was first discovered in Hawaii on Oahu during September 1983 (Beardsley 1985, Proc. Hawaii. Entomol. Soc. 25:27). J.W. Beardsley.

***Aleurotuberculatus minutus* (Singh)**: Specimens of a whitefly were collected from *Ixora* sp. at Foster Village, Oahu on July 16, 1985 by C. Kaku and C. Otsuka. It was identified as the aleurodid, *Aleurotuberculatus minutus* (Singh), by B. Kumashiro, Hawaii Dept. of Agriculture (HDOA), and confirmed by S. Nakahara, USDA Systematic Entomological Laboratory. This is a new record for Hawaii and the rest of the United States. *A. minutus* is the 19th species of whitefly known to occur in Hawaii and is the smallest in size. Additional specimens were collected from *Ixora* sp. on the grounds of HDOA on July 18, indicating widespread establishment of this species. The recorded worldwide distribution of this whitefly includes India, Thailand, Malasia, Singapore, Burma, and Philippines. B. Kumashiro.

***Veronicella floridana* (Leidy)**: Specimens of a veronicellid slug were collected on the roadway in Kalihi Valley, Oahu on July 25, 1985 by N. Pang and submitted to the HDOA. It was tentatively identified as *Veronicella floridana* (Leidy) by E.A. Kay, Dept. of Zoology, University of Hawaii. This species is brownish yellow, mottled with black and has a median whitish line flanked by a longitudinal dark band on each side. Surveys by HDOA personnel indicate that the slug is well established in Kalihi Valley. *V. floridana* occurs in Florida and Cuba. In Florida, it is usually associated with St. Augustine grass but has been found damaging crops, such as beans and tomatoes. B. Kumashiro.

***Sericothrips gracilipes* Hood**: Specimens of a thrips were collected from *Sida fallax* (Ilima) at Moanalua Valley, Oahu on Jan. 28, 1985 by R. Heu. It was identified as *Sericothrips gracilipes* Hood by thysanopterist, K. Sakimura. This is a new island record. This thrips was previously known only from Maui (Sakimura 1985 PHES 25:30 & 32). K. Sakimura.

***Echinothrips americanus* Morgan**: Specimens of a thrips were collected from *Impatiens* at Wailupe, Oahu on Feb. 23, 1985 by Ms. Peterson. It was identified as *Echinothrips americanus* Morgan by K. Sakimura. This is a new island record. This thrips was previously known only from Hawaii (Mitchell 1983, PHES 24:192) K. Sakimura.

OCTOBER

The 958th meeting of the Hawaiian Entomological Society was called to order at 2:02 p.m. on October 7, 1985 at the conference room of the Manoa Library. Seventeen members and 3 guests were in attendance. Minutes approved as corrected.

Program: Dr. Bruce Tabshnik from the University of Hawaii presented an informative review of his recent visit to the People's Republic of China which was sponsored by the Ministry of Agriculture.

Reports of Officers and Committees:

President: A presentation of the slate of nominations for the year 1986 was

given. Approval of the slate was delayed pending a vote by a full quorum. The election will be by a mail ballot.

Annual Dinner Committee: The annual dinner meeting has been scheduled for Monday, December 2nd at the Ranch House in Aiea Haina. Notices and registration forms will be sent with the ballot in the next mailing.

NOTES AND EXHIBITIONS

Elasmus polistis Burks: During September, Mr. Moshen Ramadan, U.H. Graduate Student in Entomology, brought me a long series of an *Elasmus* sp. which had been reared from the larvae of a *Polistes* sp. collected at the USDA Tropical Insect Research Laboratory in Manoa Valley,, Honolulu. On checking the literature I found reference to a paper by B.D. Burks titled "A North American *Elasmus* parasitic on *Polistes* (Hymenoptera: Eulophidae) (Jour. Wash. Acad. Sci. 61: 194-196, 1971), in which a new species, *E. polistes* was described. Comparison of specimens to this description convinced me that the species reared by Mr. Ramadan was identical to this North American species. Burks, in the most recent Catalog of Hymenoptera in America North of Mexico (1979, Vol. 1:1021) records this species from Georgia, Maryland, Pennsylvania, and Texas, and lists as hosts four *Polistes* spp., including *P. exclamans* Viereck and *P. fuscatus* (Fab.), which occur here.

On checking the Univ. of Hawaii, Dept. of Entomology collection of Hymenoptera, I found several female specimens of this same species which I had collected as early as June, 1976. These had been identified by a chalcid specialist on the mainland, to whom I had sent specimens in 1979, as *Elasmus albizziae* Burks, and I reported on these specimens under that name (Beardsley 1983, PHES Vol. 24:177 & 197). Reference was made to the original description of *E. albizziae*, and it was apparent that the earlier determination of Hawaiian specimens as this species was incorrect. Therefore, the record of *E. albizziae* in Hawaii should be deleted. *E. polistis* is a new state record. J.W. Beardsley.

Chinese Cerambycidae: Out of about 90 species of Chinese Cerambycidae determined by Hua Lizhong from the collection at the Bishop Museum Entomology Dept., one new species was found, and 33 species new to China were discovered. S. Swift.

NOVEMBER

The 959th meeting of the Hawaiian Entomological Society was called to order by Pres. Saul at 2:05 p.m., November 4, 1985 in the conference room of the Manoa Library. Minutes were approved as read. Twenty two members and one guest were in attendance.

Program: Dr. Graham Petty, Senior Researcher with the South African Dept. of Agriculture discussed his studies of entomological pests of pineapple grown in South Africa.

Reports of Officers and Committees:

Treasurer: Bill Snell reported total assets of the Society as \$11,132.00.

Membership: Rachel Freeman and David Foote, graduate students at UC, Davis, and Willie Baringbing, a graduate student at UH, were unanimously elected to membership in the Society.

Old Business: It was announced that the Ad Hoc Publication Committee would be reactivated, with Dr. Beardsley in charge, in order to discuss the possibility of selection of a new Editor for the Journal.

NOTES AND EXHIBITIONS

***Brontispa chalybeipennis* (Zacher):** Last week Dick Tsuda received specimens of insect damaged coconut leaves which had been sent to the Plant Disease Clinic of the U.H. College of Tropical Agriculture and Human Resources. The specimens were collected at the Honolulu, City Hall. The leaves were examined by Dr. Al Martinez, a plant pathologist, and referred to Mr. Tsuda, who identifies insect and mite pests for the PDC. Mr. Tsuda recognized the damage, consisting of extensive brown necrotic areas on young, newly expanded leaves, as typical of that caused by leaf-feeding hispine beetles of the genus *Brontispa* and related genera. He was able to find one adult specimen, several larval and pupal exuviae, and some hatched eggs. When he showed this material to me, I recognized it as being very similar to that of *Brontispa chalybeipennis* (Zacher), a coconut pest known heretofore only from the Eastern Caroline and Marshall Islands of Micronesia. I have compared Mr. Tsuda's specimens with adult specimens in the U.H. Entomology Dept. collection, from Likiep Atoll in the Marshall Islands, and with keys and descriptions of larvae and adults by J.L. Gressitt (1955, *Insects of Micronesia*, Vol. 17, No. 1, Coleoptera: Chrysomelidae), and I believe that the specimens from Honolulu are *B. chalybeipennis*. However, confirmation is being sought. The genus *Brontispa* contains about 15 species or more, distributed throughout the South and Western Pacific, and islands of the Indian Ocean. Apparently, several species have transferred to coconut from palm species endemic to the islands where they originated. Several species have been reported to damage coconuts, most often young trees, on islands where they have been accidentally introduced. One species, *B. mariana* Spaeth, caused particularly serious damage when accidentally introduced into the Northern Mariana Islands during World War II, until it was brought under successful biological control. See Doutt, 1950, *Proc. Hawaii. Entomol. Soc.* 14:55-58 for an account of the biological control work, and Lange, 1950, *PHES* 14:143-162 for an account of the biology of *B. mariana*. *B. chalybeipennis* is believed to have originated on one of the high islands of the Eastern Carolines, such as Ponape, where it is associated with endemic palms as well as coconut (Gressitt 1955). J.W. Beardsley.

Survey for *Brontispa chalybeipennis* on Oahu: On Oct. 28, 1985, several Dept. of Agriculture staff members met with the City and County's Dept. of Parks and Recreation personnel to observe the injured coconut trees around City Hall, Kawaiahao Church, and the Board of Water Supply in Honolulu. Moderate damage by the new coconut beetle was observed on some of the trees. Many adults and larvae of the beetle were obtained from cut terminals and young leaves of damaged trees at City Hall. Light damage is indicated when there are small areas of brown spots on the terminal and young fronds. The browning of the young fronds spreads out to the older leaves as feeding progresses. The entire canopy will dry and turn brown in trees in which feeding by the beetle has been severe and sustained for a long time.

Surveys for coconut trees damaged by the beetle were conducted on Oahu from Oct. 18 to 30. Damage was observed in approximately 2.1 square miles in the Makiki-punchbowl-Pauoa-Kakaako area in Honolulu. The heaviest coconut tree damage appeared to be located at Roosevelt High School in lower Makiki Heights. Approximately one dozen trees at the school were observed to be entirely dry and brown. Surveys have not revealed any other damaged coconut trees outside of the Honolulu infestation area. The coconut beetle is not known to occur on the neighbor islands. R. Heu.

New Island Record: *Liris opulenta* (Lepeletier): An adult specimen of this sphecid wasp was collected on the ground at upper Makaweli on Kauai at 1000' elevation on Oct. 4, 1985 by T. Kojiri. Identification was made by B. Kumashiro. This is a new island record. It was first found on Oahu in Sept. 1946, reported as *L. aurata* Fab. (PHES 13:22), and is known to prey on *Gryllus* and *Gryllodes* crickets. It also occurs on Hawaii (Gagné 1971, PHES 21:309).

Another specimen is here recorded from Maui. It was collected by HDOA personnel from Maui but not previously reported so is thus noted here as a new island record. Collection data: Kahalui, Maui, June 24, 1968; N. Miyahira. R. Heu.

Rhopalosiphum nymphaeae (L.) (Homoptera: Aphididae): Dr. T.A. Lumpkin (Univ. of Hawaii; present address, Washington State Univ.) collected colonized aphids on *Azolla filiculoides* and *A. microphylla*, aquatic ferns fixing nitrogen from the air in symbiotic association of the cyanobacterium, *Anabaena azollae* Strasburger, at the Univ. of Hawaii, Honolulu, in June 1983 and kindly sent to me. I sent the specimens to Dr. M. Miyazaki of the National Institute of Agro-Environmental Sciences, Yatabe-tyo, 305 Japan who kindly identified the species as *Rhopalosiphum nymphaeae*, the waterlily aphid. The two species of *Azolla* are new host records for Hawaii. Osamu Mochida, IRRI, P.O. Box 933, Manila, Philippines (communicated to Editor).

New island Diptera records:

Diptera

Muscidae: *Muscina stabulans* (Fallen) — Molokai, Kauai, & Hawaii. In checking through some old records I find that I collected this false stable fly in small numbers in port areas on these three islands in baited fly traps: Kaunakakai, Molokai, Dec. 17, 1963, Lihue, Kauai on Dec. 7, 1965, and Hilo, Hawaii Dec. 16–20, 1964. Dr. Hardy in "Insects of Hawaii" Vol. 14, 1981 reports this fly only from Oahu.

Sarcophagidae: *Parasarcophaga albiceps* (Meigen) — Kauai, Hawaii, & Molokai. Dr. Hardy records this fly from the islands of Oahu and Maui only. I collected and identified a moderate number of specimens of this sarcophagid fly in each of several baited fly traps as follows: Nawiliwili and Port Allen Kauai on Dec. 16–21, 1963 and again on Dec. 6–10, 1965; at Hilo, Hawaii, Dec. 16–21, 1963 and Nov. 16–20, 1964; and at Kaunakakai, Molokai on Dec. 6–10, 1965. C.R. Joyce.

New island ectoparasite records:

Siphonaptera: Pulicidae: *Xenopsylla cheopis* (Rothschild) — Molokai. One specimen from *Rattus norvegicus* in the Kaunakakai pier area, Molokai, Dec. 17, 1963, C.R. Joyce, and one on Dec. 17, 1965.

Anoplura: Hoplopleuridae: *Polyplax spinulosa* (Burmeister) — Molokai and Kauai. Five specimens were taken from *Rattus norvegicus* at Kaunakakai, Molokai on Dec. 9, 1965, and 6 specimens were taken from a *Rattus rattus* at Port Allen, Kauai, on Dec. 17, 1965.

Acari: Laelaptidae: *Laelaps nuttalli* Hirst — Kauai, and Molokai. 43 specimens were taken from *Rattus norvegicus* at Port Allen, Kauai and 3 specimens were taken from *Rattus exulans* at Port Allen, Kauai, on Dec. 7, 1965, by C.R. Joyce.

Myobiidae: *Radfordia affinis* (Poppe) — Kauai. Three specimens of this fur mite were taken from the house mouse, *Mus musculus* in a warehouse at Port Allen, Kauai, on Dec. 7, 1965. C.R. Joyce.

Radfordia ensifera (Poppe) — Kauai. Four specimens of this rat fur mite were taken from *Rattus rattus* at Port Allen, Kauai on Dec. 21, 1963 and 5 specimens were taken from *R. rattus* at Mawiliwili, Kauai, on Dec. 7, 1965 by C.R. Joyce.

Myobia musculi (Schränk) — Kauai. Five specimens of this house mouse fur mite were taken from *Mus musculus* from a pier shed at Nawiliwili and 4 specimens from Port Allen, Kauai by C.R. Joyce. C.R. Joyce.

DECEMBER

The Annual Dinner meeting (960th) of the Hawaiian Entomological Society was held at the Ranch House, Aina Haina, at 6:30 p.m. on Dec. 2, 1985, with 30 members and 12 guests in attendance. Dr. Stephen H. Saul presided and gave as his presidential address a discussion on "A Personal View of Applied Biological Research." The new slate of Officers for the year 1986 were then introduced as follows:

President	Po-Yung Lai
President-elect	Dick Tsuda
Secretary	William Snell
Treasurer	Stanley Higa
Advisor (Past-president)	Stephen Saul
Advisor	Barry Brennan

NEW IMMIGRANT RECORDS FOR THE YEAR 1985

The following species were reported for the first time in the Hawaiian Islands during 1985, or earlier, on the dates indicated in the text. Species marked with an asterisk may be considered as doubtfully established as these records are based on a single collection.

Chance Immigrants

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<i>Aphanisticus cochinchinae</i> seminulum Obenberger (Coleoptera: Buprestidae)	2, 7
<i>Helorus</i> sp. (Hymenoptera: Heloridae)	4
<i>Brachydeutera ibari</i> Ninomiya (Diptera: Ephydriidae)	4
<i>Endocima fullonia</i> (Clerck) (Lepidoptera: Noctuidae)	4
<i>Anchicera</i> sp. (Coleoptera: Cryptophagidae)	5
<i>Myrmecixenus vaporarium</i> Gueren (Coleoptera: Colydiidae)	5
<i>Melanophthalma</i> sp. (Coleoptera: Lathridiidae)	5
<i>Holoparamesus</i> sp. (Coleoptera: Merophysiidae)	6
<i>Cephennium</i> sp. (Coleoptera: Scydmaenidae)	6
<i>Andaspis leucophloeae</i> Rao (Homoptera: Diaspididae)	9
<i>Ceraphron</i> sp. (Hymenoptera: Ceraphronidae)	10
<i>Leptodictya tabida</i> (Herrick-Schaeffer) (Heteroptera: Tingidae)	10
<i>Aphis nasturtii</i> Kaltenback (Homoptera: Aphididae)	11
<i>Agallia lingula</i> VanDuzee (Homoptera: Cicadellidae)	13
<i>Sogata eupompe</i> (Kirkaldy) (Homoptera: Delphacidae)	13
<i>Aleurotuberculatus minutus</i> (Singh) (Homoptera: Aleurodidae)	14
<i>Veronicella floridana</i> (Leidy) a slug, (Pulmonata: Veronicellidae)	14
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NAME CHANGES & CORRECTIONS NOTED IN 1985

Previous name	Changed to	Reason*	Page
Psychidae	<i>Brachycyrtarus</i> perhaps griseus de Joannis	Det	1
<i>Placopsidella cynocephala</i> Kertesz	<i>Placopsidella marquesana</i> Malloch	CD	5
<i>Aphanisticus</i>	<i>Aphanisticus cochinchinae</i> seminulum Obenberger	Det	7
<i>Pseudococcus</i> n. sp.	<i>Pseudococcus dendrobtorum</i> Williams	ND	9
<i>Pemphigus</i> sp.	<i>Patchiella reaumuri</i> Kaltenbach	CD	12
<i>Elasmus albizziae</i> Burks	<i>Elasmus polistis</i> Burks	CD	15
<i>Cupes clathratus</i> Solsky	<i>Tenomerga mucida</i> (Chevrolat)	Syn	8

OFFICERS AND COMMITTEES FOR 1985

Elected Officers

President	Stephen H. Saul
President-Elect	Po-Yung Lai
Secretary	Gail Mason
Treasurer	Bill Snell
Advisor (Past-President)	Barry Brennan
Advisor	Ronald F.L. Mau

Standing Committees

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IN MEMORIAM

Dr. James M. Brennan (1905–1985)

James M. Brennan died in Queen's Medical Center on 31 October 1985 at the age of 80. He is survived by his wife Isabel.

Dr. Brennan was a native of Pennsylvania. His BA was from Dickinson College with a major in English in 1926. He received his MA in 1931 and PhD in 1933 from University of Kansas, majoring in entomology. Following his graduation, Dr. Brennan worked with the USDA Plant Quarantine from 1935 to 1941 and then as a civilian entomologist for the U.S. Army from 1942 to 1944. In 1944, Dr. Brennan joined the U.S. Public Health Service and spent most of his career at the Rocky Mountain Laboratory in Hamilton, Montana. Following his retirement from the USPHS in 1975, Dr. Brennan moved to Hawaii and was appointed an Honorary Associate in Entomology at the Bishop Museum. In addition to his association with the HES, Dr. Brennan was a Fellow of the American Association for the Advancement of Science and a member of the Entomological Society of America, American Society of Parasitologists, American Mosquito Control Association and Society of Systematic Zoology.

While the majority of Dr. Brennan's over 100 published works dealt with the systematics of Trombiculidae, he was involved in work during the 1940s on repellents for ticks and other arthropods and in the 1952 USDA Yearbook, is credited for development of the repellent issued to the military which is still in use. Also during the 1940s, Dr. Brennan was involved in testing of antimalarial drugs in Central and South America. While his entomological activities were diverse in nature, Dr. Brennan's major area of interest was in the taxonomy of the family Trombiculidae, or chiggers. During his research career, he was considered the major world authority on the taxonomy of this difficult group of acarines. At the Rocky Mountain Laboratory, he assembled a reference collection which would ultimately become the National Chigger Collection of the National Museum of Natural History/Smithsonian Institution. This collection, currently housed at the Acarology Laboratory, University of Hawaii at Manoa, has become the largest single reference collection for this group of mites in the world.

Jim will always be fondly remembered by his colleagues and friends not only for his ability as an acarologist and teacher, but also for his interest in fishing and his delightful sense of humor. Acarology is the poorer for his passing. **M. Lee Goff.**

Sam S. Fluker

Dr. Sam S. Fluker, a former member of this Society, died suddenly in Washington D.C. on March 12, 1986. Dr. Fluker received his MS and PhD degrees from the University of Hawaii and was a resident of Hawaii during the years 1966–1969.

Dr. Fluker was born in Texas in 1931 and served in the U.S. Air Force as a medical technician for 12 years before entering Texas Technological College at Lubbock in 1962. He received a BS in entomology from Texas Tech in 1965. The following year Sam moved to Hawaii where he entered the graduate program in entomology at U.H. Manoa. During his graduate studies Sam held a half-time research assistantship and worked on research projects dealing with the biology of ants and the biological control of insect pests. His PhD dissertation research dealt with sympatric associations of several species of ants which infest Hawaiian sugarcane fields. He was awarded the PhD degree in June 1969. After leaving Hawaii Sam was employed by the University of Florida at its field station at Homestead for several years. He then joined EPA where he was involved in pesticide regulation work and was based in Atlanta, Georgia. About five years ago Sam returned to the University of Florida at Gainesville, where he held a staff appointment in the Department of Entomology and served as a statewide extension specialist in pesticide chemicals. His responsibilities included coordinating pesticide applicator training, publishing a monthly newsletter, serving as state pesticide impact assessment coordinator and Florida's liaison to USDA's pesticide registration program. He served on several pesticide advisory groups including Chairmanship of the EPA's Task Force in Farm Worker Protection. He was attending a task force meeting at the time of his death.

Dr. Sam Fluker was a competent and hardworking entomologist. He made many friends during his time in Hawaii who will be saddened to learn of his death. He is survived by his wife, Laura, and two children. **J.W. Beardsley.**

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Page	Line	Correction
4	16	change <i>flavescens</i> to <i>flavescens</i>
18	19 from bottom	change Canacidae to Canacidae
20	12 from bottom	change McGinnis to McInnis
21	17 from bottom	change Mirahira to Miyahira
39	3 from bottom	change Cyipoidea to Cynipoidea
51	5 from bottom	change Etnombryinae to Entomobryinae
65	11 from bottom	change Beardsley (1985) to Beardsley (1986)
70	middle of page	change the Beardsley reference to: Beardsley, J.W., 1986. Taxonomic Notes on the Genus <i>Ganaspidium</i> Weld (Hymenoptera: Cynipoidea: Eucolidae). Proc. Hawaii. Entomol. Soc. 26:35-39.