Proceedings of the HAWAIIAN ENTOMOLOGICAL SOCIETY *for* 1971

THIS ISSUE DEDICATED TO DR. CYRIL E. PEMBERTON

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Suggestions for Manuscripts

Manuscripts should be typewritten on one side of 8-1/2 × 11 white bond paper. Double space all text including tables. Margin should be a minimum of 1 inch. One original and 1 copy should be sent to the editor.

Pages should be numbered consecutively as well as footnotes, figures and tables. Place footnotes at the bottom of the manuscript page on which they appear with a dividing line. Place tables appearing in the manuscript separately at the back of the manuscript with a circled notation in the margin of the manuscript as to approximately where you wish them to appear.

Illustrations should be planned to fit the type page of 4-1/2 × 7 inches. The originals should be drawn to allow at least 1/2 reduction. It is preferred that original art work be reduced for reshooting by a line drawing velox process as supplied by a graphic arts plant to a size approximating 9 inches × 14 inches for submission to the editor. Photographs and graphs should be at teast 8 × 10 inches. Original art work, however, is acceptable. Graphs and figures should be drawn in India ink on white paper, tracing cloth or light blue cross-hatched paper. Submit a 2nd copy of all art work.

Proofs should be corrected as soon as received and returned to the editor with the abstract on the forms provided. Additional costs to the Society for correction of authors' changes in proofs may be charged to the authors. An order for reprints should be placed when proofs are returned.

Fifty gratis copies of reprints will be supplied by the Society to authors under certain circumstances.

Examination of articles in this issue will help in conforming to the style of presentation desired. Many helpful hints are found in *Style Manual for Biological Journals* prepared by the Committee on Forms and Style of the Conference of Biological Editors available from the American Institute of Biological Sciences, 3900 Wisconsin Avenue N. W., Wahington, D. C., 20016.

PROCEEDINGS

of the

Hawaiian Entomological Society

VOL. XXI, NO. 2 FOR THE YEAR 1971 DECEMBER, 1972

JANUARY

The 781st meeting of the Hawaiian Entomological Society was called to order by President Dr. Derrell L. Chambers on 12 January 1971, at 2:00 PM at Agee Hall, HSPA Experiment Station.

Members Present: Beardsley, Bess, Chambers, Chang, Davis, Drake, Funasaki, Gressitt, Haramoto, Hardy, Howarth, Ikeda, Joyce, Kawamura, Leeper, Look, Madinger, Middleton, Montgomery, Morrill, Nakahara, Nakao, Nakata, Namba, Nishida, Olson, Ota, Pemberton, Radovsky, Raros, Sakimura, Samuelson, Shiroma, Steffan, Sugerman, Tamashiro, Tsuda, and Woolford.

Visitors Present: Ruth Gay, Mrs. Agnes T. Hardy, Derrai Herbst, Susan Holbrook, Kuswata Kartawinata, Russell K. LeBarron (Div. of Forestry), Dieter Mueller-Dombois (Assoc. Prof. of Botany, U.H.), Dr. Harold St. John (retired Prof. of Botany, U.H.), Nengah Wirawan, and Mrs. Ercell Woolford.

Reports of Officers and Committees:

Membership Committee: Dr. Frank Haramoto proposed that Dr. Edward P. Mumford be made an Honorary Member of the Society. The motion was seconded and passed.

Unfinished and New Business: Dick Tsuda announced that the Science Fair Committee has had several meetings preparing for the fair and that the committee members, Steve Montgomery and Ken Kaneshiro, were busy making arrangements.

President Chambers announced the following committees and appointees for the year:

Business Manager.....	Dr. Asher Ota
Finance Committee.....	Dr. Asher Ota (Chairman)
	Dr. Frank H. Haramoto
	Dr. Minoru Tamashiro
	Mr. Kiichi Ohinata
Membership Committee...	Dr. Frank H. Haramoto (Chairman)
	Mr. Kenneth F. Kawamura
	Dr. G. Allan Samuelson
	Mr. William Schroeder

	Mr. Frank L. Madinger
Program Director.....	Dr. Toshiyuki Nishida
Program Committee.....	Dr. Toshiyuki Nishida (Chairman)
	Mr. Elbert W. Jackson
	Mr. Jonathan Kajiwara
Science Fair Committee.....	Mr. Dick Tsuda (Chairman)
	Mr. Steve Montgomery
	Mr. Kenneth Kaneshiro
Liaison Committee.....	Mr. Austin W. Morrill, Jr. (Chairman)
	Mr. Wayne Gagné
	Dr. Ryoji Namba
Common Names Committee...	Mr. Clifton J. Davis (Chairman)
	Mr. George Y. Funasaki
	Dr. Albert A. LaPlante, Jr.
	Mr. Ed Shiroma
	Dr. Frank H. Haramoto
	Dr. Wally A. Steffan
	Miss Mabel Chong

President Chambers announce that Dr. Tamashiro had agreed to accept another 3-year term as Editor of the "Proceedings." The new Editorial Committee will be appointed in July.

President Chambers asked for discussion on the extent the Society should become involved and what role the Society should play in influencing environmental and ecological decisions in the state. Mr. Steve Montgomery commented that the activities of the Society and others had influenced recent environmental legislation. Drs. Hardy and Nishida felt the Society should become involved in environmental problems in the community. It was pointed out that too much legislature influencing activities could result in the revoking of the Society's tax exempt status as a non-profit organization.

Dr. Nishida moved that President Chambers appoint an Ad Hoc Committee to study the question and make recommendations to the Society. This was seconded and passed.

Notes and Exhibitions

Dr. J. W. Beardsley submitted a note received from Dr. E. C. Zimmerman stating that he had completed the manuscript for Vol. IX—*Insects of Hawaii*, on the Microlepidoptera. The manuscript had been sent to the University of Hawaii Press in October, 1970. This will be a very large volume. Dr. Zimmerman estimates 2000+ pages including more than 4,830 illustrations and 15 years in preparation. Dr. Zimmerman asks the Society to join him in the hope that the manuscript will receive prompt editing and publication. **J. W. Beardsley.**

Haematoloecha rubescens Distant: The first specimen of this

reduviid was collected on 14 November 1970 in a rotten branch on Mt. Tantalus, Oahu by Miss L. Mochizuki. This specimen was identified by R. C. Froeschner of the USNM as *Haematoloecha* sp. Froeschner stated that this species was not in the USNM collection and that it did not agree well with any of the original descriptions, which unfortunately are based primarily on the amount of red and/or black color on ones specimen.

An additional specimen was collected by Mr. Irving Keiser on 2 January 1971, in a house on Alewa Hts., Oahu.

This constitutes a new record for the Hawaiian islands. **Dick Tsuda.**

Perigrinator biannulipes (Montrouzier & Signoret): A total of 6 specimens, one female and 5 nymphs, of this reduviid were collected on 19 March 1969 from infested grain in Kalihi, Oahu. The young nymphs were reared in the lab for 2 months on various tenebrionid larvae found in the infested grain. The resulting adults were then killed and placed in the collection. Additional nymphs of this reduviid were collected by Jack Fujii from infested feed under a pigeon cage in Waianae, Oahu. Previous records consisted of a single specimen collected by Perkins before 1901 from Waianae, Oahu and two specimens collected in the Barbers Point area by Edward Sawa in 1954. (Proc. Haw'n. Entomol. Soc. XV (3): 376).

This constitutes a more recent record for the Hawaiian islands. **Dick Tsuda.**

Semiothisa probably **santaremaria** (Walker): A geometrid new to Hawaii was determined as *Semiothisa* probably *santaremaria* (Walker) by D. C. Ferguson of the U.S. National Museum.

Adult specimens first were noticed by W. Au in catches from a light trap at Halawa, Oahu, during October 1970. Subsequently, many adults have been taken from the same light trap and in light traps from Makakilo, Waianae, and Hickam Air Force Base. On 13 November 1970, adult specimens were collected in dense haole koa growth at Poipu, Kauai by Mr. Donald Sugawa.

According to Dr. Ferguson, "The Hawaiian specimens appear to be an exact match for the species identified as *Semiothisa santaremaria* (Walker) in the U.S. National Museum, and have the same male genitalia. I think that there is no doubt that it is a species introduced from the American tropics, and is either *santaremaria* or another very closely related to it.

"*Semiothisa* is a large and notoriously difficult genus, full of unsolved sibling species problems. The species of the continental U.S. have not as yet been adequately worked out, and much less is known about the Neotropical ones". **George Funasaki**

Symploce hospes (Perkins): Numerous specimens of this cockroach were collected from litter and under objects at the Retarded Children's Center, Ft. Ruger. **George Komatsu.**

Dacus dorsalis Hendel and **D. cucurbitae** (Coquillet): Fruit

fly introductions into southern California have been eliminated through the use of spot applications of a thick mixture of male attractant and naled. In the fall of 1969, 18 male oriental fruit flies were captured over a period of several weeks in the El Monte area. In the early winter of 1970, 7 male oriental fruit flies were captured near Santa Ana and Westminster. In both instances the means of introduction is unknown. No immature stages were found, although fruit sampling was extensive, and it is presumed the flies did not become established.

Eradication campaigns in the Marianas Islands have freed the area of tephritids of economic importance, with the exception of Guam where the melon fly is well established. Rota, 37 miles distant from Guam, has been reinfested 7 times since 1963, when it was freed of melon flies. Each time the release of 1–5 million sterile flies each week for periods of about 2 months has prevented or eliminated establishment. We are now sending about 2 million flies each week from Honolulu, where they are produced and sterilized. This is in response to the recovery of 2 fertile wild male melon flies on Rota within the last 2 weeks. **D. L. Chambers.**

Program: Dr. Bess introduced Dr. Harold St. John, who spoke on the history of plant life in the Hawaiian Islands. The talk was thoroughly enjoyed by all.

February

The 782nd meeting of the Hawaiian Entomological Society was called to order by President Dr. Derrell L. Chambers on 16 February 1971, at 2:00 PM at Agee Hall, HSPA Experiment Station.

Members Present: Beardsley, Bess, Chambers, Davis, Drake, Goff, Haramoto, Hardy, Holway, Ikeda, Joyce, Look, Madinger, Montgomery, Morrill, Nakata, Napompeth, Nishida, Olson, Ota, Pemberton, Samuelson, Schroeder, and Shiroma.

Visitors Present: George L. Hutton and Carol Barendregt.

Reports of Officers and Committee:

Membership Committee: Dr. Haramoto submitted the names of George H. Komatsu and Walter H. Watanabe to the Society for membership ratification—both were ratified.

Dr. Haramoto announced that the Membership Committee initiated a contest amongst themselves to see who could enlist the greater number of new Society members during the year—the winner to receive a free ticket to the annual dinner meeting. Dr. Haramoto suggested all prospective membership candidates contact him for a membership form.

Dr. Haramoto reported that the Membership Committee had discussed granting Honorary Membership to Mrs. Swezey because she was one of the founding members. The Committee suggested instead that she be honored by dedicating the next "Proceedings" to the founding members

and naming her as one of the group. This action was suggested because Honorary Membership is approaching the 12% maximum allowed by the Constitution and because Mrs. Swezey had been a member for only seven years.

The Science Fair Committee: Steve Montgomery reported that judging at all participating schools would start later in the week.

Unfinished and New Business: Dr. Asher Ota was appointed chairman of the Ad Hoc Committee for considering the role of the Society in determining ecological/political direction in the community. Dr. Ota announced the selection of the following members to serve on the committee:

George Y. Funasaki, Hawaii Dept. of Agr., Entomology Br., Ed Shiroma USDA Plant Quarantine Div., Dick Tsuda University of Hawaii, Entomology Dept., and J. W. Beardsley University of Hawaii, Entomology Dept.

Dr. Ota indicated the committee was incomplete and that he will continue to seek additional members.

Presentation of Papers: F. J. Olson submitted a paper entitled "Mode of Entry by the 'Parasitoid' Maggot of the Cane Weevil Tachinid, *Lixophaga sphenophori* (Villeneuve) (Diptera: Tachinidae), into the New Guinea Sugarcane Weevil Larva, *Rhabdoscelus obscurus* (Boidsduval) (Coleoptera: Curculionidae)."

Notes and Exhibitions

Scotorythra epixantha (Perkins): Dr. Beardsley exhibited an adult male of this geometrid which had been reared from a larva collected from *Meterosideros polymorpha* foliage on Aiea Ridge Trail, Oahu, during October 1971. *S. epixantha* is an endemic species known only from Oahu. This species is among the more colorful of our endemic moths. Up until now, the host plant of the species was unknown. The larva from which the moth was reared had two pairs of conspicuous dorsal wart-like protuberances on the abdomen, one on the second segment and one on the eighth. **J. W. Beardsley.**

Melormenis antillarum (Kirkaldy): Numerous adults and nymphs of this immigrant flatid bug were found on young growth of a small guava tree near the Hilo Airport on 16 November 1970. This is the first host record for *M. antillarum* in Hawaii. **J. W. Beardsley.**

For Dr. Darrel Hale, Dr. Beardsley called attention to a recent publication entitled, "Taxonomy and distribution of the European corn borer and allied species: Genus *Ostrinia* (Lepidoptera: Pyralidae)" by Akira Mutuura and Eugene Munroe; Memoirs of the Entomol. Soc. Canada, No. 71, 112 pp., 1970. In this work the Asiatic corn borers, *O. furnacalis* Guenee, is shown to be distinct from the European species, *O. nubilalis* (Hübner). *O. furnacalis* occurs in Guam and other parts of Micronesia and has been previously misidentified in literature as *O. nubilalis.*

Dialeurodes citrifolii (Morgan): Light to moderately heavy in-

festations of the cloudy-winged whitefly, *D. citrifolii*, was noted on several acres of experimental citrus at University of Hawaii Waimanalo Experimental Farm, Oahu, during January. This whitefly has been recorded in our literature only from the island of Hawaii. One specimen was taken at Kailua, Oahu, by E. Shiroma in 1968, but not recorded. **J. W. Beardsley.**

Lepidosaphes pini (Maskell): Specimens of this armored scale were identified by Dr. Beardsley from needles of a *Pinus* sp. submitted by a resident of Honolulu, Helen Koyama, on 3 February 1971. This is a new state record. The species was described from Japan where it infests needles of several conifers, including *Pinus* spp. The pine needles also were infested with an adelgid, apparently *Pineus pini* Koch. Extent to whch spread in Hawaii is not known. The infested tree from Honolulu was a small potted "bonsai" tree of unknown origin. **J. W. Beardsley.**

Pseudaulacaspis major (Cockerell): This armored scale insect was found infesting bark on twigs of *Alphitonia excelsa* (Kauwila), a rare native tree, at Naulu Forest, Hawaii Volcanoes National Park, Hawaii, on 14 January 1971, by J.W. Beardsley. This is a new host and new island record for *P. major* which had been reported previously only from Oahu. **J. W. Beardsley.**

Callopistria sp.: Two larvae of the fern caterpillar, *Callopistria* sp. near *floridensis* were brought to the State insectary on 28 January 1971 by William Komoda of Vet's Termite Control Co. The caterpillars were damaging fishtail fern at a Diamond Head residence. A survey showed the same caterpillar in a fern patch about a mile mauka in Kaimuki. Laboratory tests showed that the larvae fed on 8 different species of ferns but not on staghorn, treefern, and maidenhair. This insect, which was identified by Mr. George Funasaki, is new to this state. **C. J. Davis.**

Austin W. Morrill, Jr., exhibited metal insects made of bronze, silver, and iron obtained from Japan.

Program: Dr. Nishida introduced Steve Montgomery who gave a stimulating talk on "Politics, Ecology, and Conservation." The talk was followed by considerable discussion.

March

The 783rd meeting of the Hawaiian Entomological Society was called to order by President Dr. Derrell L. Chambers on 16 March 1971, at 2: 00 PM at Agee Hall, HSPA Experiment Station.

Members present: Balock, Chambers, Davis, Drake, J. Fujii, Funasaki, Haramoto, Hardy, Jackson, Joyce, Kitaguchi, Look, Madinger, Maehler, Mitchell, Montgomery, Morrill, Napompeth, Nishida, Ota, Pemberton, Raros, Schroeder, Shiroma, Sugerman, Tenorio, and Tsuda.

Visitors present: Dr. G. Mallory Boush, Dr. Harry C. Coppel, and HSPA Trainees Lawrence Ferreira, Charles Inouye, John Jardine, Sugum

Takahashi, Masao Tanaka, and Victor Tanimoto.

Reports of Officers and Committees: Ad Hoc Committee: Chairman Dr. Ota reported that this Committee had met on 5 March to discuss the various aspects of involvement which the Society should consider as far as ecology and legislation pertaining thereto is concerned. Dr. Ota also suggested that since many topics listed for consideration may require much discussion, perhaps each topic should be discussed with a 20 minutes time limit at each subsequent meetings. Of primary concern will be legislation concerning ecology (native fauna and flora), pollution, pesticides, quarantines, exotic animals, etc. Dr. Nishida suggested that it may be worthwhile to include the above discussions as part of our monthly programs.

Dr. Ota also reported that Dr. Wally Steffan of the Bishop Museum has agreed to serve on the Ad Hoc Committee.

Membership Committee: Dr. Haramoto proposed Miss Carol Barendregt of the Bishop Museum for membership into the Society. The proposal was unanimously ratified.

Science Fair Committee: Chairman Dick Tsuda reported that the Hawaii Science Fair will be held at the HIC beginning on 1, April 1971. Mr. Tsuda recommended that the Society award two prizes, one for intermediate and one for high school. Mr. Tsuda made a motion which was seconded by Dr. Sherman to allot the sum fo $40.00 for awards to be expended at the descretion of the Committee. The motion carried unanimously.

Unfinished Business: President Chambers discussed a letter in Bioscience which outlines the structure of the Wildlife Society listing the various committees and attitudes from which the Ad Hoc Committee could possibly gain some ideas as to areas of involvement by our Society. The letter to A. S. Mossman entitled "The Wildlife Society and the Environmental Crisis—A Clarification," was written by Raymond F. Dasman, Senior Ecologist, International Union for Conservation and Nature of Natural Resources, Morges, Switzerland.

New Business: President Chambers received a copy of a letter from Governor John A. Burns to Dr. Robert H. Nelson, President of the Entomological Society of America in which Governor Burns thanks Dr. Nelson for sending him the Press Release concerning establishment of the American Registry of Certified Entomologists. A general discussion followed with Austin Morrill presenting a brief resume of why this Registry was necessary.

Presentation of Papers: Eugene F. Drake of the Bishop Museum submitted for publication a paper entitled "Life Cycle and Laboratory Diet for *Atrichopogon jacobsoni* (de Meijere) (Diptera: Ceratopogonidae)."

Notes and Exhibitions

Tromatobia rufopectus Cresson: Mr. C. J. Davis exhibited the

ichneumonid parasite, *T. rufopectus*, which emerged from an egg sac of the spider, *Argiope appensa* (Wal.). The egg sac was collected by William Rose, DOA entomologist at Kahe Point, Oahu on 28 February 1971. **C. J. Davis.**

Aphycus mexicanus Howard, (Encyrtidae): This species was emerging in large numbers from the barnacle scale, *Ceroplastes cirripediformis* Comstock, which is heavily infesting fiddlewood (*Citharexylum spinosum*) trees along Lunalilo Home Road, Oahu. Collections of *Ceroplastes cirripediformis* by Kenneth Kawamura from this area since October 1970, to the present time have yielded hundreds of adult *Aphycus mexicanus*. Numerous specimens have also emerged from the barnacle scale taken from fiddlewood trees near the Honolulu International Airport. *Aphycus mexicanus* is a new insect in Hawaii. It is recorded from Mexico, Louisiana, and Virginia. Determination was made by Dr. B. D. Burks, U. S. National Museum. **G. Funasaki.**

Pericyma cruegeri (Butler), (Noctuidae): On 7 January 1971, Donald Sugawa collected several larvae feeding on royal poinciana leaves at Koloa, Kauai. He reared three larvae to adults, of which two were sent to the U. S. National Museum. Dr. E. L. Todd has identified the species as *Pericyma cruegeri*. This is a new state record. There is little information on the distribution of this species other than that it occurs in Borneo and Australia. In Australia it is known as the "poinciana looper." **G. Funasaki.**

Coccus capparidis (Green): This immigrant soft scale, previously unrecorded in our literature, apparently has been established in Hawaii for around 20 years or more. Specimens of this scale, collected and determined by J. W. Beardsley, were found on leaves of an endemic Lobelioid, probably *Clermontia* sp., near Puu Kaneohoa, Waianae Mts., Oahu, during February. However, this species, determined by the late Dr. Harold Morrison, was taken twice in quarantine interceptions on plant material from Hawaii—first in June 1952 on *Alyxia olivaeformis* (Maile), intercepted in San Francisco; and again on mock orange, intercepted in January 1955, in Honolulu. *C. capparidis* was described in 1904 in Green's "Coccids of Ceylon," Part 3, p. 187. Apparently it is uncommon in Hawaii. The scales are pale green in color, and might be mistaken for the common green scale, *Coccus viridis* (Green), except that they lack the black Malpighian tubules characteristic of the latter. Distinctive characters are exhibited by slide mounted specimens which permit *C. capparidis* to be distinguished readily from other species of the genus *Coccus* present in Hawaii. **J. W. Beardsley.**

Neuropria sp.: This diapriid of the subfamily Belytinae was reared from the indtoduced sciarid *Bradysia spatitergum* during February and March 1970. The parasitized sciarids were taken from the rotting bark of the native *Hibiscus arnottianus*. Two laboratory generations were reared on

the host, *B. spatitergum*, cultured as per Steffan (1966, U. C. Pub. in Ent., page 4). This species is unique in that the female curls her abdomen between her legs to oviposit in mature host larvae. While ovipositing, she also palpitates the host with her antennae. Other diapriids palpitate the host, walk over it, then back up to it and oviposit, but they do not curl the abdomen under the body. One laboratory generation requires approximately 3 weeks, with the adults emerging from the sciarid puparium. **E. Drake.**

Trichopria drosophilae (Perkins): This diapriid originally described from Hawaii by Perkins in 1910 appears to be restricted to elevations below 600 m, and may be found around rotting guava and pineapple fruits. No specific host has ever been recorded although Perkins indicated that introduced *Drosophila* were hosts. I have reared it from the introduced *Drosophila immigrans* Sturtevant. The female parasite lays her eggs in the puparium of the host species. The adult parasites emerge from the puparium about 15 days after ovipositing. This species was carried through several laboratory generations. **E. Drake.**

Habrocytus sp.: This pteromalid has been reared from the puparia of *Ensinia sonchi* (L.), a tephritid fly attacking the flowers of the sow thistle *Sonchus oleraceus* L.. Parasitized material was found in the University Quarry area in April 1969, and a month later, parasites were reared from material collected at Halawa quarry. Specimens were determined by J. W. Beardsley. **E. Drake.**

Program: Dr. G. Mallory Boush of the University of Wisconsin presented a very interesting discussion on "Microbes of Tephritids" with preliminary discussion of microorganisms (bacteria and fungi) of other insects. Of interest was the fact that these organisms may be potentially useful for the control of various insects.

April

The 784th meeting of the Hawaiian Entomological Society was called to order by President Dr. D. L. Chambers on 12 April 1971 at 2:04 PM at Agee Hall, HSPA Experiment Station.

Members Present: Balock, Beardsley, Bryan, Chambers, Chong, Delfinado, Fujii, Gressitt, Haramoto, Hardy, Ikeda, Komatsu, Krauss, Lai, Look Manoto, Mau, Mitchell, Morrill, Nakahara, Namba, Napompeth, Nishida, Ohinata, Okada, Olson, Pemberton, Rungvatana, Samuelson, Schroeder, Sherman, Shiroma, Takei, Tamashiro, Tanimoto, Tenorio, Tsuda, Watanabe, and Woolford.

Visitors Present: Linden Teramoto, Louella Uyenishi, and Ercell Woolford.

Reports of Officers and Commttees:

Membership Committee: Dr. Frank Haramoto submitted the name

of William Sieker, Attorney-at-Law, from Madison, Wisconsin—membership was ratified.

New Business:

Dr. Gressitt announced that a memorial fund was being established by the Bishop Museum in honor of Miss Setsuko Nakata who passed away during the month. President Chambers added that a letter of condolence was going out from the Society to Miss Nakata's parents and that the Society had sent a floral wreath for Miss Nakata's funeral.

President Chambers announced that the Executive Committee met and selected Jack Balock to complete Miss Nakata's term as Advisor to the Society.

Notes and Exhibitions

Bucculatrix thurberiella Busck: Dr. Beardsley exhibited specimens (larvae, pupae, and adults) of the cotton leaf perforator, *Bucculatrix thurberiella* Busck, which he collected at Nanakuli, Oahu, on 30 March. This is a new insect record for Hawaii. This moth, which is placed in the family Lyonetiidae, was first discovered at Nanakuli in mid-January when larvae were found feeding on native Hawaiian cotton (*Gossypium sandvicense*).

Specimens recently were sent to Dr. E. C. Zimmerman at the British Museum in London, who made the determination. *B. thurberiella* is a North American species, described from Arizona and also found in southern California and Northern Mexico. Essig (Insects of Western North America, p. 750) states that the moth is common on Arizona wild cotton, and is often a serious pest to cultivated cotton as well. A braconid parasite, *Apanteles bedelliae* Viereck, emerged from one pupa of *B. thurberiella* collected at Nanakuli, Oahu. **J. W. Beardsley.**

Aphis nerii Boyer de Fonscolombe: The oleander aphid, *A. nerii* was found near Pahala, Hawaii, on *Gomphocarpus physocarpus* by Beardsley and Gagné on 2 April 1971. This is a new island record and new host record for this aphid. **J. W. Beardsley.**

Psylla uncatoides (Ferris and Klyver): During a recent visit to the island of Hawaii, April 2–3, Acacia psyllid populations on young terminal growth of *Acacia koa* in the Hawaii Volcanoes National Park were found to have increased noticably since last sampled during January 1971. Populations in this area are still below the high levels which occurred during July of last year when noticable injury and die-back of twig terminal growth resulted. At the Koaia Reserve near Waimea, Hawaii, which was visited on 3 April in company with Mr. Fred Bianchi, psyllid populations were extremely heavy on terminal growth of small koaia trees (*Acacia koaia*). At least seven species of predators (adults and larvae of five species of Coccinellidae, larvae of a syrphid fly, and adults and larvae of an endemic green lacewing) were found associated with the psyllids on koaia. **J. W. Beardsley.**

Aspidiotus destructor Signoret: Mr. Shinya Namiki, Assistant Inspector in Charge, Agricultural Quarantine Inspection Division, U.S.D.A., submitted for identification several leaves of *Ligustrum sinense* (Chinese privet) heavily infested with *Aspidiotus destructor* Signoret on 31 March 1971. The leaves were removed from plants on the corner of Queen and Mililani Streeets in downtown Honolulu. This constitutes a new host record for this pest in Hawaii. **E. S. Shiroma.**

E. H. Bryan, Jr. submitted a review of a recent publication, *Butterflies of the genus Vanessa and of the resurrected genera Bassaris and Cynthia (Lepidoptera: Nymphalidae)*, by William D. Field, published as Smithsonian Contribution to Zoology No. 84, with 105 pages and 160 illustrations, 1971 (price, with paper covers, $1.50.)

He suggested that this paper should be of interest to Pacific biogeographers because of the several species which had found their way to islands, and also because the larvae of many species feed on plants of the families Urticaceae, Malvaceae and Compositae, well known in the Pacific. In Hawaii, besides the endemic Kamehameha butterfly, *Vanessa tameamea* Eschscholtz, three other species, *Vanessa atalanta rubria* (Fruhstorfer, *Cynthia cardui* (Linnaeus), and *Cynthia virginiensis* (Drury), have become established.

Program: Dr. Nishida introduced Dr. Wally Mitchell who showed exhibits and slides of insect pests of the Australian macadamia nut industry and talked about his recent travels in Australia. Dr. Mitchell also showed slides of Australian entomological facilities and personnel, scenic splendor, and other assets.

May

The 785th meeting of the Hawaiian Entomological Society was called to order by past-president A. W. Morrill, Jr. on 10 May 1971 at 2:05 PM at Agee Hall, HSPA Experiment Station.

Members Present: Balock, Beardsley, Chang, Davis, Fujii, Funasaki, Gagné, Gressitt, Haramoto, Howarth, Joyce, Kawamura, Madinger, Morrill, Napompeth, Nishida, Ohinata, Okada, Olson, Pemberton, Schneider, Schroeder, Shiroma, Steffan, Tamashiro, and Tsuda.

Visitors Present: Dr. Harry C. Coppel from Madison, Wisconsin, and Dr. Wen-Yung Lee from Taiwan.

Reports of Officers and Committees:

Science Fair Committee: Mr. Dick Tsuda reported that the 14th Hawaiian Science and Engineering Fair was held at the HIC Exhibition Hall on 1–4 April 1971. Out of the total of 198 exhibits, 12 were entomological in nature. Miss Coreen Sato of Washington Intermediate School was awarded a letter of commendation and two books, "*The Amazing World of Insects*" and "*101 Simple Experiments with Insects*," for her winning project on "Photoperiodism in Drosophila."

Liaison Committee: A. W. Morrill announced that the Hawaiian Conservation Council was initiating a series of awards for extraordinary activities in conservation by classes: (1) child, (2) teacher, (3) private individual, (4) business concern, and (5) non-commercial organizations.

The Hawaiian Conservation Council had asked the Liaison Committee for comments. The Committee suggested changing the category "child" to mean student as well and adding the category (6) Government (non-professional). The Committee submitted the names of the following Haw'n. Ent. Soc. members for receipt of conservation awards: Mr. Steve Montgomery (student); Dr. D. Elmo Hardy (teacher); and Dr. J. Linsley Gressitt (non-commercial organizations).

Ad Hoc Committees:—The Amy Suehiro Memorial Committee: Dr. J. W. Beardsley reported that most of the work had been completed on insects that could be checked by local specialists but little could be done with groups of insects requiring a specialist's attention at this time.

Membership Committee: Dr. Haramoto submitted the name of Miss Leslie Jensen for membership ratification—she was ratified.

Unfinished and New Business: Past-President A. W. Morrill, Jr. read a card of appreciation received from the parents of the late Miss Setsuko Nakata.

Notes and Exhibitions

Hedylepta blackburni (Butler): On 31 March, T. Nishida, D. Sugawa and myself examined coconut trees at Wailua Golf Course, Lydgate Park, and along the highway to Kapaa, Kauai. The trip was to investigate reports of trees dying due to the feeding of palm leaf roller larvae. Counts were made on the numbers of host and parasite on four trees per locality by examining 4–6 fronds per tree. Counts of moth larvae and parasite cocoons on pupae at Wailua Golf Course were as follows:

	Host			*Parasites*		
Location	*Pupae*	*Larvae*	*Total*	*Hymen-opterous*	*Dipterous*	*Total*
Leeward (along highway)	160	17	177	103	67	170
Windward (oceanside)	39	123	162	9	6	15

The records show that the number of parasites were high in relation to the host on the leeward side. However, the host parasite ratio was not as favorable on the windward side. The strong winds that prevailed prior to our visit may have caused this unfavorable balance on the windward side.

On the leeward side of the golf course, the trees had two to three central shoots appearing that were not damaged, but on the windward side the

central shoots were damaged and had numerous living larvae. No eggs were observed in either area. Parasites had apparently caught up with the infestation on the leeward side and no further damage is anticipated. It is anticipated that the parasites in time will catch up with the infestation on the windward side. Examination of one 40-foot tree that was dying showed that the growing tip was broken and infected with *Fusarium*. The Plant Disease Clinic, College of Tropical Agriculture, believes the soft tissues were damaged by the whiplashing action of the tree top in the wind. Rain carried the disease organisms into the cracks and further breakdown had occurred. The actual symptom of damage is noticeable long after it occurs. A dead tree was examined, but the death was not directly due to leaf roller attack. Wind and salt spray damage was evident on the palms, especially on the windward areas. Throughout the golf course the old fronds were 75–80% damaged by the leaf roller. Since new undamaged fronds were appearing the trees were expected to recover without difficulty. **W. C. Mitchell.**

Palmicultor palmarum (Ehrhorn): Mealybugs, *Palmicultor palmarum* (Ehrhorn) were present at the bases of the fronds and ladybird beetles, mostly *Coleophora* adults and larvae, were actively preying upon the mealybugs. Several syrphid fly pupae were also observed on the foliage indicating that the larvae of this predator had been actively feeding on the mealybugs. **W. C. Mitchell.**

Thrips hawaiiensis (Morison): On 14 April moderate to heavy populations of these thrips were observed on macadamia flowers. Mr. Fred Bianchi observed thrips eggs on the style, sepals and petals of the blossoms. It is believed that the oviposition in the style may cause premature blossom drop and prevent fertilization and production of nuts. A total of seventy racemes sampled at 140 (10), 180 (10), 240 (10), 300 (20) and 365 (20) meters elevation had an average of 301 thrips per raceme. The range in numbers of thrips per raceme was 150 to 420. **W. C. Mitchell**

Anacamptodes fragilaria (Grossbeck): On 30, April larvae of this insect were reported by Dr. Richard A. Hamilton as feeding on foliage of *Macadamia leptophylla*, a species from New Caledonia. He also reported the insect feeding on mango leaves. These are new host records for *A. fragilaria*. *Macadamia ternifolia* (probably *M. integrifolia*) had previously been recorded as a host. **W. C. Mitchell.**

Pemphigus sp.: Specimens of a species of root-infesting aphid of this genus were submitted to Dr. Beardsley for identification by Mr. Yoshio Watanabe, County Agent for Hilo, during April. The aphids were found infesting roots of dasheen (*Colocasia esculenta* var. *lobulifera*) at Hilo, Hawaii on 10 April. Specimens were were later submitted to Miss Louise M. Russell, Systematic Entomology Laboratory, USDA, Washington, D. C, who identified them as *Pemphigus* sp. Miss Russell remarked that *Pemphigus* is a very difficult group taxonomically and that for the present

she is unable to give a specific identification for our species. The genus *Pemphigus* belongs to the Eriosomatinae, which also includes the wooly apple aphid, *Eriosoma lanigera* (Hansman), the only other representative of this group known to be present in Hawaii. This is a new insect record for the state. **J. W. Beardsley.**

Pulvinaria urbicola Cockerell: This soft scale was found abundantly infesting leaves and twigs of a small fiddlewood tree (*Citharexylum spinosum*) in Honolulu recently. About a year ago the same species was collected on stems of *Momordica balsamina* at Ewa, Oahu. These are new host records for *P. urbicola.* **J. W. Beardsley.**

Undetermined Torymid Wasp. Specimens were exhibited of an unidentified chalcid wasp of the family Torymidae which appears to be new to Hawaii. Females of this wasp were first found in light trap material from the University of Hawaii, early in April. Subsequently, both sexes were found within fruit of *Ficus retusa* collected on the U. H. Campus, in company with the agaonid wasp, *Euprestina verticillata* (Waterstoy). Males are flightless, with greatly enlarged mandibles. **J. W. Beardsley.**

Papilio xuthus Linnaeus: A caterpillar (on a fence) and an adult (at large) of this species were taken at Salt Lake, Oahu, by Alan Ahn during April, 1971. According to literature, the caterpillars feed on leaves of all kinds of citrus trees, *Triphasia trifoliata*, prickly ash (*Zanthoxylum americanum*) and *Fagara* spp., all members of the family Rutaceae. It has a wide range in the Orient, from India through China to Korea, Japan, Formosa, Ryukyu Islands, Bonin Islands to the Philippines and also occurs in Siberia, upper Burma and Guam.

Two adults and eight eggs on citrus were collected at Foster Village, approximately 1.5 miles from the Salt Lake area, during a delimiting survey conducted by staff members of the State Department of Agriculture Entomology Branch, the first week of May. This swallowtail butterfly is a new record for the state. It was identified by G. Funasaki, Hawaii Department of Agriculture. **K. Kawamura.**

Protalebrella brasiliensis Baker: Trace infestations were observed on foliage of *Wedelia* sp. used in landscaping at Wailuku and Kaanapali, Maui; previously reported only from the island of Oahu. This is a new island record. **K. Kawamura.**

Semiothisa santaremaria (Walker): One adult specimen was taken at Olowalu; this species was previously recorded only from the islands of Oahu and Kauai. This is a new island record. **K. Kawamura.**

Bombotelia jocosatrix (Guenee): Two adult specimens (one each at Kahului and at Hana) were taken at large; previously reported only from the islands of Oahu and Kauai. This is a new record for Maui. **K. Kawamura.**

Euconocephalus nasutus (Thunberg): To adult males were finally taken at Kula, following many months of reported "singing" on

this island. This species has now been recorded from every major island except Hawaii and Lanai. This is a new island record. **K. Kawamura.**

Achaea janata (L.): Larvae of this noctuid were found feeding on the foliage of an ornamental, (*Euphorbia leucocephala*) by C. J. Davis at Sandy Beach, Oahu, for a new host record in Hawaii. As an added interest, of 147 croton caterpillar eggs collected off this host, all but one were parasitized by *Trichogramma* sp. **K. Kawamura.**

Strictoptera subobliqua (Walker): Numerous larvae were found feeding on foliage of *Ocharocarpus excelsus* and *Garcinia* sp. at Foster Botanical Gardens at Honolulu and Wahiawa, Oahu, by Y. Miyashiro for new host records in Hawaii. This species has previously been reported from several other members of the family Guttiferae including kamani (*Calophyllum inophyllum*), *Clusea rosea* and mammee apple (*Mammea americana*). **K. Kawamura.**

Dryudella immigrans Williams and **Eumenes campaniformis** (Fabr.): To keep the recently completed Hymenoptera portion of the card file on Hawaiian insects at the Bishop Museum up to date, new distribution records of the following 2 species are noted: they are the sphecid, *D. immigrans*, new to Hawaii Island (Pohakuloa, May 1966, Beardsley) and the vespid, *E. campaniformis*, new to Maui (Manawainui, May 1967, Quate & Krauss). **W. Gagné.**

Graptostethus manillensis (Stål): The woodrose bug, *G. manillensis*, has been found feeding on the seeds of the rare Hawaiian moon flower, *Ipomoea tuboides* (W. Maui, Malalowaiaole Gulch, nr. McGregor Pt., April 1971, Gagné), for a new host record. **W. Gagné.**

Lamenia caliginea (Stål): A derbid new to the state, *L. caliginea*, also the first member of this family for the state, was swept from noni, *Morinda citrifolia*, on Kauai (Nonou Mts., 210 m, Aug. 1970, Gagné). The 4 adults taken at that time were subsequently identified (det. Gagné) by comparison with abundant material of this species in the Bishop Museum. It has a wide distribution in Micronesia where Fennah has segregated 8 subspecies (Ins. Mcronesia 6 (3): 158). Among its many recorded hosts, the following are also common to Hawaii: *Hernandia*, *Calophyllum*, *Barringtonia racemosa*, mango, taro, banana, and *Messerschmidia* where it might be looked for. (See also Ins. Gvam 2: 114, 154). **W. Gagné.**

Spissistilus festinus (Say) and **Vanduzea segmentata** (Fowler): Two membracids, the 3-cornered alfalfa hopper, *S. festinus*, and the Van-Duzee treehopper, *V. segmentata*, were collected on ohai, *Sesbania tomentosa* (Oahu, Kaena Pt., Nov. 1970, Gagné), for new host records. It should be noted that Zimmerman (Ins. Hawaii 6: 194) apparently overlooked Pemberton's (*P.H.E.S.* 14: 16) record of *V. segmentata* on *Calliandra*, there attended by the Argentine ant. **W. Gagné.**

Neacoryphus bicrucis (Say): Numerous adults and nymphs of this plant-feeding lygaeid were collected under ground litter at the Wai-

manalo Experimental Farm on 5 May 1971. This insect is new to the state. Host preference was not determined due to the mixed vegetation in the area. This lygaeid has been recorded from Georgia, Texas, Florida, California, Nevada, and New Mexico. It also occurs in Mexico, Guatemala, Brazil, and Venezuela. The identification was confirmed by J. L. Herring. **D. Tsuda.**

Program: Dr. T. Nishida introduced Dr. Harry C. Coppel of Madison, Wisconsin, who spoke on research in systhesizing a sex lure for the introduced pine sawfly.

June

The 786th meeting of the Hawaiian Entomological Society was called to order by President-elect William C. Look on 14 June 1971, at 2: 05 PM at Agee Hall, HSPA Experiment Station.

Members Present: Balock, Chang, Delfinado, Gagné, Hardy, Howarth, Joyce, Look, Namba, Napompeth, Nishida, Olson, Ota, Rungvatana, Shiroma, and Woolford.

Visitors Present: Rashid A. Khalid, Jim Pearson, Irving B. Rurs, Miss Cynthia Schultz, and W. L. Yauger, Jr.

Unfinished and New Business:

Dr. A. K. Ota announced that the Ad Hoc Committee on political action would have a report ready by the next meeting.

President-elect Look announced that a member of the Liaison Committee would be asked to attend the "Zero Population Growth" meeting.

Notes and Exhibitions

Conoderus exsuls (Sharp): Larvae of the elaterid, *Conoderus exsuls* (Sharp) were implicated in causing damage to thin-walled polyethylene tubes being tested in subsurface irrigation studies at Kaumakani, Kauai, by Olokele Sugar Company, Ltd. Larvae chew through the polyethylene tubes and cause an excessive number of holes which interfere with proper distribution of water. In one 320-ft. tubing, which was in the soil for 5 months, we counted an average of 1 hole per foot. We collected six larvae from 40 linear feet of soil samples taken immediately around the tubing. Apparently a single larva causes many holes.

C. exsuls is primarily a predaceous wireworm which has been reported to cause damage to sugarcane seedpieces along the Hamakua Coast of the Island of Hawaii. The larva has a pair of sharp mandibles which is used to grasp its prey or bore into sugarcane seedpieces. The reasons for the behavior of the larvae toward polyethylene tubing is unclear. **A. K. Ota.**

Cydnidae: The Cydnidae reported in the Hawaii Cooperative Economic Insect Report, week ending 21 May 1971, as *Rhytidoporus indentatus* Uhler, is not that species according to Dr. R. C. Froeschner of the U. S.

National Museum. Although no determination was made, Dr. Froeschner states that the 18 specimens sent him about a month ago represent a new species, probably introduced, but possible source not yet known. This then represents the third species for the family Cydnidae in Hawaii. **E. Shiroma.**

Leucopis nigricornis Egger: The aphid feeding species which has been consistently referred to in the Hawaiian literature as *Leucopis "nigricornia* Egger" has been identified by Dr. J. F. Mc Alpine as *Leucopis albipuncta* Zetterstedt complex (species #45). He says this is a worldwide complex which needs a great deal of work in order to sort it out. **D. E. Hardy.**

Leucopis ocellaris Malloch, 1940, Ann. Mag. Nat. Hist. (11) 6: 272. New record for the state. A predator on scale insects and mealybugs collected preying on *Dysmicoccus neobrevipes* Beardsley, on fruit of *Pritchardia pacifica*, Honolulu, April 1960 (J. W. Beardsley), and on *Nipaecoccus vastator* (Maskell), on *Gossypium tomentosum*, Koko Head, Oahu, Sept. 1960 (J. W. Beardsley). Identified by J. F. Mc Alpine, Canada Dept. Agric. **D. E. Hardy.**

Hippelates hermsi Sabrosky, 1941, Canad. Entomol. 73: 27. Numerous specimens on hand from Oahu, Molokai, and Hawaii, dating back to 1953. Species widespread over southwestern U. S. This is a new record for the state. **D. E. Hardy.**

Monochaetoscinella anonyma (Will.), 1896, Trans. Entomol. Soc. Lond., 1896: 423. Common over Oahu, Kauai, and Molokai, dating back to 1962. Species widespread over southern U. S. and Neotropical Region. This is a new record for the state. **D. E. Hardy.**

Thaumatomyia glabra (Meigen), 1830, Syst. Beschr. Europ. Zweifl. Ins. 6: 149. Known from one specimen, Puu Waawaa, N. Kona, Hawaii, 1125 m, 24 Aug. 1917 (W. M. Giffard). Widespread over Europe, U. S., Canada and northern Mexico. This is a new record for the state. **D. E. Hardy.**

Liriomyza pullata Frick, 1952, Proc. Haw. Entomol. Soc. 14 (3): 509 is the correct name for our species which causes serpentine mines in tomatoes, eggplants, cauliflower, squash, etc.. It has previously been treated in most of our literature as *minutiseta* Frick. The latter is a synonym according to K. A. Spencer. **D. E. Hardy.**

Protopiophila australis Harrison, 1959, New Zealand Dept. Agric. and Indust. Res. Bul. 128: 173. New State Record. Two specimens collected on bones on beach, Kahana Bay, Oahu, April 1971 (Joaquin Tenorio). Identification confirmed by George Steyskal, U.S.D.A., Washington.

Previously known only from Australia and Fiji. **D. E. Hardy.**

Scenopinus adventicia Hardy, new island record for Molokai. Collected in reeds (*Phargmites*) Kamalo, Molokai, 7 June 1971 (D. E.

Hardy). Previously recorded only from Oahu. **D. E. Hardy.**

Supella longipalpa (Fabr.): The name of the brown-banded cockroach should be changed from *Supella supellectilium* (Serville) to *S. longipalpa* (Fabr.), according to Ashley B. Gurney, 1971, Bull. Ent. Soc. Amer. 17 (1): 31. **D. E. Hardy.**

Anthrax distigma Wiedemann: One adult was collected and several other *A. distigma* were seen in the Kanepuu native dry forest, Lanai, in June (col. Gagné) constituting a new island record. Other than Niihau, this is the last of the main islands from which this bombyliid had not yet been reported. **W. Gagné.**

Graptostethus manillensis (Stål) and **Neacoryphus bicrucis** (Say): The woodrose bug, *G. manillensis* was also found at Kanepuu, and also at Manele Bay and Lanaihale, but was far less numerous than *N. bicrucis*, which it superficially resembles. Both bugs constitute new island records. Only adults were seen; the latter, a recently reported species in the state (Hawaii Coop. Econ. Insect Rpt., 28 May 1971), presently is one of the most frequently encountered insects on Lanai (June 1971). Adults of this species were swept in numbers from vegetation at the summit of the Castle Trail, Koolau Mts., Oahu, on 30 May 1971 (Gagné). Since no nymphs of either lygaeid species were seen, these records are considered as perching individuals. **W. Gagné.**

Tempyra biguttula Stål: Yet another lygaeid, *T. biguttula*, collected at light at Manele Bay, June 1971, (Gagné) constitutes another new island record for Lanai. It is presently recorded from Oahu, Kauai, and Niihau. **W. Gagné.**

Program: Dr. T. Nishida introduced Miss Cynthia Schultz, graduate student in oceanography, who spoke on pesticide pollution in the Ala Wai Canal.

July

The 787th meeting of the Hawaiian Entomological Society was called to order by President-elect William C. Look on 12 July 1971 at 2: 04 PM at Agee Hall, HSPA Experiment Station.

Members Present: Balock, Beardsley, Bess, Davis, Funasaki, Gagné, Gressitt, Haramoto, Hardy, Holway, Howarth, Joyce, Komatsu, Look, Mitchell, Morrill, Napompeth, Olson, Ota, Rungvatana, Steffan, and Sugerman.

Visitors Present: Dr. D. J. Gubler.

Reports of Officers and Committees:

Membership Committee: Dr. Haramoto submitted the name of Michael Conant for membership ratification—membership was ratified.

Dr. Haramoto announced that Ed McC.Callan, a Society member since 10 March 1947, was retiring and asked the Society to decide if hono-

rary membership should be extended to him. Action was postponed until the August meeting.

Dr. Mitchell reported that his committee of one responsible for setting up an entomology exhibit at the Pacific Palisades' Children Festival would be able to do so. He also suggested that the Society may have second thoughts on developing a permanent exhibit since it would cost from $500 to $5,000.

Common Names Committee: C. J. Davis announced that the common names list had been updated and was being circulated to committee members.

Dr. Mitchell announced that Glen Finney passed away in June. He was not now a Society member but he had been at one time. It was moved and seconded that a letter of condolence be sent to Mrs. Finney—the motion was passed.

Presentation of Papers: Mr. Banpot Napompeth submitted a paper authored by himself and Dr. Toshiyuki Nishida entitled, "The Number of *Draeculacephala* Species in Hawaii (Homoptera: Cicadellidae)."

Notes and Exhibitions

Antianthe expansa (Germar): Three specimens of a membracid, *Antianthe expansa* (Germar), new to Hawaii, were caught floating alive in a swimming pool at Salt Lake, Oahu, one each on 14, 18, and 22 June 1971 by George Komatsu. Two more were subsequently caught in a light trap at the Honolulu International Airport. This membracid is common in Mexico and Central America. In Costa Rica, it is reported to be a pest of sweet peppers and its wild food hosts include plants in the genera *Cestrum*, *Solanum* and *Acnistus*. Determination was made by R. C. Froeschner, U.S. National Museum. **G. Funasaki.**

Ananca kanack (Fairmaire): Dr. Beardsley exhibited specimens of this oedemerid beetle, which appears to be a newly discovered immigrant. Seven specimens were taken at light on 11 April 1971 on the beach near Kapoho, Hawaii by Mr. L. Santo, a student in the General Entomology course at the University of Hawaii. Mr. Santo reported that the beetles were plentiful. This oedemerid is known from Samoa, Tahiti, Fiji, and the Solomon Islands. (see Blair 1928. Insects of Samoa Pt IV, fase. 2, pp. 91–92). In June 1964 Mr. Davis exhibited a specimen of this species which was taken alive aboard a schooner which had recently returned from the Line Islands, but that capture was considered a quarantine interception. The present record seems to indicate the beetle is established on Hawaii. **J. W. Beardsley.**

Curtomerus flavus (Fabr.): The cerambycid *Curtomerus flavus* (Fabr.) (*Cylindera flava*) was reared from *Osteomeles* near Auwahi Dry Forest, SW side of E. Maui; it was collected in May 1971; 2 adults emerged in June 1971. This is a new native host record for an introduced

species. **J. L. Gressitt.**

Program: Dr. Henry Bess introduced Drs. Haramoto, Mitchell, and Beardsley who reported on the E. S. A. Pacific Slope Branch meeting held in Sacramento, California.

August

The 788th meeting of the Hawaiian Entomological Society was called to order by President Dr. D. L. Chambers on 9 August, 1971, at 2 PM at Agee Hall, HSPA Experiment Station.

President Chambers announced that Wednesday, 11 August/1971, Dr. Pemberton will celebrate his 85th birthday. On behalf of the Society, Dr. Chambers congratulated Dr. Pemberton and commended him for sustained productivity and intellectual activity.

Members Present: Bàlock, Barendregt, Beardsley, Bess, Davis, Gagné, Haramoto, Howarth, Kim, Look, Mitchell, Miyashita, Napompeth, Nishida, Olson, Ota, Pemberton, Schneider, Schroeder, Shiroma, Sugerman, and Woolford.

Visitors Present: Mrs. Perlita S. Raros, Drs. Wen-yung Lee (from Taiwan) and José R. Quezada (University of El Salvador).

Reports of Officers and Committees:

Membership Committee: Dr. Haramoto submitted the name of Mrs. Suzanne K. Kim for membership ratification—membership was ratified.

Ad Hoc Committees: Dr. Ota circulated copies of a rough draft of political action proposals.

Dr. Beardsley announced that he would be leaving on a 9-month sabatical in Australia and that it would be necessary to resign from the Amy Suehiro Memorial Committee. Dr. Beardsley suggested that either Frank Howarth or Wayne Gagné of the Bishop Museum would make a good chairman.

Unfinished Business: Honorary membership proposed by Dr. Haramoto for Dr. Ed McC. Callan postponed from the July meeting was voted on and honorary membership ratified.

Notes and Exhibitions

Callopistria sp.: Male and female adults of a fern feeding noctuid reported at the February 1971 meeting as *Callopistria* near *floridensis* (Guenee) were sent to Dr. E. L. Todd, U.S.N.M. for confirmation. In a letter dated 9 May/1971, he replied..."The (*Callopistria*) specimens are not dimorphic as in *floridensis* in which the males are distinctly paler than the females, being yellowish brown while the females are purple brown...The male genitalia are very similar to those of *floridensis*, but there is a distinct difference in the female genitalia..." Since Dr. Todd was unable to place a specific name on this species, he suggested we send specimens to the British Museum in London, England. In a letter dated 21 July 1971, Dr. A. H.

Haynes of the British Museum replied, "I regret I cannot give further information other than confirming the very thorough findings of Dr. Todd. Certainly these insects cannot be matched here, the two closest species being *floridensis* and *meridionalis*." **G. Funasaki.**

Cryptochaetum iceryae (Williston): Several specimens of a cryptochaetid fly, *Cryptochaetum iceryae* (Williston) emerged from the cottony-cushion scale, *Icerya purchasi* Maskell collected from *Erythrina* sp. at Eleele, Kauai on 19 July/1971. This parasite of the cottony-cushion scale was previously reported only from Oahu and Hawaii. **G. Funasaki.**

Gyranusa phenacocci Beardsley: Specimens of this immigrant encyrtid parasite were reared from *Phenacoccus gossypii* (the Mexican mealybug) collected by D. E. Hardy at Puuwaawaa Ranch, on the island of Hawaii, 665 m elevation, 9 July 1971, on *Hibiscus brackenridgei*. This is a new island record. **J. W. Beardsley.**

Acerophagus coccois E. Smith: Numerous specimens of *G. phenacocci* and a second encyrtid, tentatively identified as *Acerophagus coccois* E. Smith, were reared by J. W. Beardsley from *P. gossypii* collected on the University of Hawaii Campus, Honolulu. This *Acerophagus* has not been recorded previously in Hawaii. It is known as a parasite of *P. gossypii* and related species in Western North America. Presumably it is an accidental introduction. **J. W. Beardsley.**

Antianthe expansa (Germar): Numerous nymphs and adults of *Antianthe expansa* were found infesting two bushes of night cestrum (*Cestrum nocturnum*) at Waipahu, Oahu. This is the first host relationship record for this new immigrant pest in Hawaii. *C. nocturnum* is an ornamental shrub in the family Solanaceae. **K. Kawamura.**

Pineus pini (Koch): Moderate numbers of nymphs and adults of the Eurasian pine aphid, *Pineus pini*, were found infesting *Pinus* sp. at various areas on Maui, for a new island record. Previously recorded only from the islands of Hawaii and Oahu. **K. Kawamura.**

Neacoryphus bicrucis (Say): A single adult specimen of the new immigrant lygaeid bug, *Neacoryphus bicrucis* was collected off a *Pinus* plant at Kahului, Maui for a new island record. First recorded on Oahu in May 1971, it has subsequently been reported from the islands of Molokai and Lanai. **K. Kawamura.**

Euconocephalus nasutus (Thunberg): A single adult specimen of the aggravating grasshopper, *Euconocephalus nasutus*, was captured at large at Hilo, Hawaii, and constitutes a new island record. It has now been reported from every major island except Lanai. **K. Kawamura.**

Semiothisa santaremaria (Walker): Moderate numbers of adults of the koa haole moth, *Semiothisa santaremaria* were noted at large on Molokai and Lanai, for new island records, and now occurs on every major island in the State. **K. Kawamura.**

Endemic insects from lava tubes: During July 1971, I collected

some insects from lava tubes on the island of Hawaii. The most remarkable one is a new endemic cixiid. This is the first eyeless, nearly colorless, and brachypterous cixiid known in Hawaii. About 20 specimens of Mesoveliidae were collected in a cave near Mountain View by F. G. Howarth and W. C. Gagné. The wingless, nearly eyeless bug is the first record of the family in the native fauna, and is possibly related to *Speovelia maritima* Esaki from Japan. Other insects collected which show varying degrees of specialization for life in caves include the following: *Thaumatogryllus* new species, a genus of crickets previously known only from Kauai; Trigonidiinae, genus unknown, probably related to the endemic genus *Paratrigonidium;* and a ground beetle, *Tachys*, possibly a new species related to *T. arcanicola* endemic to Oahu. The carabid beetle was identified by G. A. Samuelson. A study of lava tubes as a biotope for native fauna has been started under the soil arthropod studies in the I.B.P. **F. G. Howarth.**

Program: Dr. Nishida introduced Dr. Wen-yung Lee (from Taiwan), who spoke on metamorphal changes in the thoracic muscles of *Tenebrio.*

September

The 789th meeting of the Hawaiian Entomological Society was called to order by President-elect William C. Look on 13 September 1971, at 2: 00 PM at Agee Hall, HSPA Experiment Station.

Members Present: Balock, Barendregt, Bess, Conant, Davis, Gagné, Haramoto, Howarth, Ikeda, Kim, Komatsu, Lauret, Look, Morrill, Napompeth, Nishida, Olson, Ota, Pemberton, Shiroma, and Sugerman.

Visitors Present: Marshall R. Topham and Janet G. McLane.

Reports of Officers and Committees: President-elect W. C. Look named the following members to committees: Nominating Committee: Kenneth F. Kawamura—Chairman (Haw. Dept. of Agr.), Wayne Gagné (Bishop Museum), Francis Madinger (Federal AQI), Dr. Asher K. Ota (HSPA), and Dr. Henry Bess (University of Hawaii).

Annual Dinner Meeting Committee: Bernard Sugerman—Chairman (US Army), Dr. Wallace C. Mitchell (University of Hawaii), and Kiichi Ohinata (USDA Fruit Fly Lab).

Notes and Exhibitions

Antianthe expansa (Germar): At Ewa, Oahu approximately 100 nymphs and adults were noted on a red pepper (*Capsicum annuum*) plant and three adults were collected from a small backyard planting of tomato. Although heavy infestation of tomato has been recorded in California by this membracid, this is the first record of its occurrence on tomato in Hawaii. These constitute two additional host records in Hawaii for this new immigrant pest since it was first reported in July. **K. Kawamura.**

Coriscus pilosulus (H.-S.): The alydid bug, *C. pilosulus*, was collect-

ed in Hawaii Volcanoes National Park at Kipuka Keana Bihopa, August 1971 (Gagné col.), and others were seen the previous May near Kalapana; in both cases, these were adults which were rapidly walking on the ground through grass. This constitutes a new island record as the insect is presently reported only from Oahu. **W. Gagné.**

Doius meridianus Matsushita: The cerambycid, *D. meridianus*, was collected at Kahana Iki Stream near the Pali Lookout, 330 m, June 1971 (Gagné col., Gressitt det.). This is only the fourth known specimen of the rare immigrant beetle still presently known only from Oahu and of unknown host plant affinities here (Proc. Haw. Entomol. Soc. 19: 145).

Neacoryphus bicrucis (Say): The rapidly spreading immigrant lygaeid bug, *N. bicrucis*, was collected in several localities on Molokai in July 1971 (Gagné col.). All specimens were adults, probably dispersing. The insect was reported from this island at the August 1971 meeting by C. J. Davis. **W. Gagné.**

Plautia stali Scott: Another bug, a pentatomid, *P. stali*, was collected from olopua, *Osmanthus sandwicensis*, in Kawela Gulch, Molokai, 935 m, July 1971 (Gagné col.), for a new island record; presently known only from Oahu. **W. Gagné.**

Parandra puncticeps Sharp, **Plagithmysus ignotus** Perkins, **Plagithmysus** sp.: C. J. Davis exhibited three cerambycid larvae. *Parandra puncticeps* Sharp and *Plagithmysus ignotus* Perkins were developing normally on Harley's meridic diet. The third, *Plagithmysus* sp. avoided the artificial diet and tunneled in the wall of the plastic vial. **C. J. Davis.**

Ectomocoris biguttulus Stål: This determination was received for two adult reduviids picked up in a black light trap at Hickam Air Force Base on 20 August/1971. Dr. R. C. Froeschner, who made the determination, states that this insect occurs in Southeast Asia and is of no economic importance. This constitutes a new insect record for the State. **E. Shiroma.**

Neacoryphus bicrucis (Say): Several adult specimens of this lygaeid were intercepted in quarantine by inspectors Michael Jodoi and Gordon Tanaka on *Plumeria* and *Bougainvillea* flowers respectively. This constitutes new host records for this recently discovered lygaeid. **E. Shiroma.**

Aspidiotus destructor (Signoret): A guava leaf heavily infested with this scale insect from the Pearl City area was submitted for identification by Shinya Namiki, Assistant Inspector in Charge. This constitutes a new host record for this scale insect in Hawaii. **E. Shiroma.**

Morganella longispina (Morgan): Inspector Aileen Kitagawa intercepted 15 cuttings of hibiscus heavily infested with this scale insect for a new host record. The cuttings were destined to California from Oahu. Other recorded hosts include Avocado, kukui, fig, mango, orange, and Bauhinia (Proc. Haw. Entomol. Soc. 14: 185–186). **E. Shiroma.**

Pinnaspis uniloba (Kuwana): Several specimens of this scale were intercepted on *Alyxia* leaves from Kauai by inspector Eloise Muramoto. This constitutes a new distribution record for this scale, which was previously recorded only from Oahu. **E. Shiroma.**

Program: Dr. Nishida introduced Dr. Henry Bess, who gave an interesting talk on his sabatical travel in Fiji, New Zealand, and Australia.

October

The 790th meeting of the Hawaiian Entomological Society was called to order by President D. L. Chambers on 12 October/1971, at 2: 00 PM in the conference room of the State Plant Quarantine Station at 1701 Ilalo Street, Honolulu.

Members Present: Bess, Chambers, Gagné, Haramoto, Hardy, Ikeda, Jackson, Kajiwara, Kawamura, Kitaguchi, Komatsu, Look, Montgomery, Nakahara, Nishida, Ohinata, Olney, Olson, Ota, Sherman, Tenorio, Tsuda, Watanabe, and Woolford.

Visitor Present: Howard A. Woolford.

Reports of Officers and Committees:

Membership Committee: Dr. Haramoto submitted the following names for membership ratification: Stanley T. Kashiwai, William T. Takabayashi, and Marshall R. Topham—membership was ratified.

Nominating Committee: Mr. Kawamura announced the following slate of candidates:

President-elect..... Mr. Ed Shiroma and Dr. Asher Ota
Secretary ..... Mr. Frank Olson and Mr. Jonathan Kajiwara
Treasurer ..... Dr. Frank Haramoto and Mr. James Ikeda
Advisor ..... Mr. Jack Balock and Mr. Harry Nakao

Annual Dinner Meeting Committee: Dr. Haramoto announced that the annual dinner would be held 14 December, 1971 at Tripler Officers' Club.

Notes and Exhibitions

Papilio xuthus L.: Several caterpillars of the citrus swallowtail were found feeding on leaves of *Triphasia trifoliata* at Kuliouou, Oahu. This is the first Hawaiian record of its occurrence on this host, although according to literature, it is the predominant host for this pest species on Guam.

Field collected swallowtail eggs from various areas on Oahu revealed parasitism by a trichogrammatid wasp ranging from 68 to 100% with an average of 74%. **K. Kawamura.**

Apotoforma sp.: The tortricid moth, *Apotoforma* sp., was introduced for the biological control of blackberry, *Rubus penetrans*. It is considered to be successfully established on this host on Kauai, Maui, and Hawaii. In May 1971, I reared 3 adults and a braconid from larvae feeding on the

terminals of akala, *Rubus hawaiiensis*, collected at Keahou Ranch, 1200 m adjacent to Hawaii Volcanoes National Park. The akala, a native, non-noxious raspberry is a new host record. The plants did not appear to be adversely affected and parasitism by the braconid may be the preventive factor. **W. Gagné.**

Ceratocombus (**Xylonannus**) sp.: A second species of minute, predaceous dipsocorid bug has been found in Hawaii. This determination was made by Dr. Wygodzinsky of the American Museum of Natural History for material which I collected in rotting papala, *Charpentiera ovata* in Niu Gulch, Oahu, June 1970. I again found it in Sept. 1971 (adults and nymphs in both instances) beneath the bark of rotting olapa, *Cheirodendron trigynum*, on the summit trail of the Koolau Mts., Oahu, between Mt. Olympus and Puu Konahuanui. Dr. Wygodzinsky states that it cannot be determined with certainty whether or not the insect is endemic until the fauna of Micronesia is more fully known. In any event it is not conspecific with *C.* (*X.*) *hawaiiensis* Usinger. Adachi reported a *Ceratocombus* sp. from Oahu in 1953 (Proc. Haw. Entomol. Soc. 15: 3) but the material could not be found to check its identity. **W. Gagné.**

Haematoloecha rubescens Distant: A recent immigrant reduviid bug was found (1 adult) by S. Montgomery under bark of rotting lapalapa, *Cheirodendron platyphyllum*, on the summit trail of the Koolau Mts., Oahu, Sept. 1971 between Mt. Olympus and Puu Konahuanui. The habitat had abundant larvae of Diptera and Coleoptera on which the bug was presumably feeding. This is the first instance of this bug having been found well away from human habitation in a "native" ecological niche. **W. Gagné.**

Neacoryphus bicrucis (Say): The recent immigrant bug, *N. bicrucis*, has quite quickly invaded Molokai, Lanai, and Maui since its original interception on Oahu in May 1971. One factor for its apparent ease of invasion may be that the dispersing adults take nectar. This was observed on kanawau, *Broussaisia arguta*, at the same time and place as the reduviid (see above). This may also account for their aposematic coloration as is so frequent among continental flower visiting insects. This species is from North America. **W. Gagné**

Achaetoneura archippivora (Williston): According to C. W. Sabrosky and P. H. Arnaud in the "Catalog of the Diptera of America North of Mexico" (1965), the correct name for this parasite is *Lespesia archippivora* (Riley). The name should be credited to Riley, 1871, rather than Williston, 1889. **D. E. Hardy.**

Limnophora arcuata Stein: *Gymnodia arcuata* (Stein) is the correct combination for the species which has been in our literature under *Limnophora* since it was first recorded in 1922. **D. E. Hardy.**

Lispe metatarsalis Thomson: *Lispe pygmaea* Fallén (1825, Mon. Musc. Suec. 9: 94) is the correct name for the species known in the

Hawaiian literature as *L. metatarsalis* Thomson. This was synonymized by Stein, 1910, Wien. Ent. Ztg. 29: 78. **D. E. Hardy.**

Desmometopa inaurata Lamb, 1914, Trans. Linn. Soc. Lond., Zool. 16: 363. Described from Seychelles and now widespread. New record for Hawaii; it is common on all Islands and collection records go back to 1947. **D. E. Hardy.**

D. palpalis de Meijere: *D. singaporensis* Kertesz (1899, Termés Fuzetek, 22: 194) is the correct name for the species which has been in the Hawaiian literature as *D. palpalis* de Meijere. Correction made by Dr. C. W. Sabrosky, Systematic Ento. Lab., c/o U. S. Nat. Museum.

Program: Dr. Nishida introduced Dr. John W. Hylin, Professor of Biochemistry at the University of Hawaii, who gave a talk entitled, "Random Thoughts About Pesticide Residues."

November

The 791st meeting of the Hawaiian Entomological Society was called to order by President D. L. Chambers on 8 November/1971, at 2: 00 PM at Agee Hall, HSPA Experiment Station.

Members Present: Bess, Chambers, Davis, Funasaki, Gagné, Gressitt, Haramoto, Hardy, Howarth, Ikeda, Jackson, Komatsu, Lauret, Look, Mitchell, Morrill, Namba, Nishida, Olson, Samuelson, Shiroma, Steffan, Sugawa, and Sugerman.

Visitor Present: Dr. T. Sankaran, C.L.R.C., India.

Reports of Officers and Committees:

Membership Committee: Dr. Haramoto submitted the name of Mr. Wilfred Loui of DBA Consolidated Pest Control, Honolulu, for Society membership. Dr. Nishida proposed that Professor Keizo Yasumatsu of Kyushu University, Japan, be granted Honorary membership. This was seconded by C. J. Davis. Membership for both categories was ratified.

Annual Dinner Meeting Committee: Bernard Sugerman reported that the dinner banquet would be held in the same room as last year's meeting. Dr. Mitchell volunteered to be toastmaster for the evening of the dinner meeting.

New Business: Dr. Mitchell moved that the Hawaiian Entomological Society send through him, to the ESA meeting in Los Angeles, an official bid for the 1976 National ESA Meeting to be held in conjunction with the meeting of the Entomological Society of Japan in Honolulu. The motion was seconded and carried.

Notes and Exhibitions

Protalebrella brasiliensis Baker: Four adult specimens of the Brasilian leafhopper, *Protalebrella brasiliensis*, were taken in a small landscape planting of *Wedelia* at Kona, Hawaii during October, and twenty-

three specimens were taken from the same host at Lihue, Kauai in April 1971 for two new island records. Previously recorded only from the islands of Oahu and Maui. **K. Kawamura.**

Elimaea punctifera (Walker): Field-collected eggs of the narrow-winged katydid, *Elimaea punctifera*, which has been raising havoc with anthurium and citrus growers at Pahoa, Hawaii during the past few months, have been found to be parasitized by two Hymenoptera. Approximately 30 percent were parasitized by a trichogrammatid wasp, *Ufens elimaeae* Timberlake, and 10 percent by an eupelmid wasp, *Anastatus koebelei* Ashmead.

Cryptoblabes aliena Swezey and **Rhopalosiphum maidis** (Fitch): Larvae of *Crytoblabes aliena* and nymphs and adults of the corn leaf aphid, *Rhopalosiphum maidis*, were found heavily infesting most fields in 2,000 plus acres of sorghum at Kilauea, Kauai. Population of the sorghum midge, *Contarinia sorghicola*, was generally light in most fields except in a 60-acre field, where seed yield was practically nil due to heavy infestation. **K. Kawamura.**

Symploce hospes (Perkins): The roach, *Symploce hospes* was sifted from dead grass clumps in an insect survey of a newly erected goat exclosure at Puu Kaone, Hawaii Volcanoes National Park, 235 m, Oct. 1971, Gagné col. The habitat was occupied by several other species of roaches. A review of older material in the Bishop Museum revealed that the species has also been collected from Kahoolawe, E. end, under stones, 275 m, Feb. 1931, E. H. Bryan col., and from Lanai, Lanaihale, March 1961, Arnessmann & Kondo cols. These are all new island records. This immigrant species is presently known from Kauai and Oahu. **W. Gagné.**

Xylosandrus compactus Eichh.: The black coffee twig borer, *X. compactus*, was found killing the endemic kawau tree, *Ilex anomala*, in the Pupukea Paumalu Forest Reserve, Oahu, 235 m, Oct. 1971, Gagné col. This is a new host record. **W. Gagné.**

Cheumatopsyche analis Banks: Over 36 adults of this caddisfly were trapped in a black light trap operated by Agricultural Quarantine at Hilo, Hawaii. This constitutes a new distribution record for this insect which was previously reported from Oahu and Molokai. **E. Shiroma.**

Tetranychus desertorum Banks: Several specimens of this tetranychid mite were intercepted on crown flower, *Calotropis gigantea*, by inspector M. T. Yoshinaga on 17 March 1971. This constitutes a new host record for this mite in Hawaii. Previously reported only on Poha, *Physalis peruviana* (PHES XIX, page 392). Determination was made by Dr. E. W. Baker of the U S. National Museum.. **E. Shiroma.**

Stictoptera subobliqua (Walker) Noctuidae, has been placed as a synonym of *S. cuculioides* Guenee according to A. H. Hayes of the British

Museum. Larvae of this species were abundant on foliage of *Ochrocarpus excelsus* at Foster Garden and on *Garcinia* sp. at Wahiawa Botanical Garden during April of this year. **G. Funasaki.**

Program: In lieu of a program, Dr. Namba led a discussion on recommendations submitted by the Ad Hoc Committee for political action.

Austin Morrill moved that the recommendations be amended to permit the Society to take stands on entomologically related community issues deemed important by the Society membership. Dr. Gressitt seconded the amendment. The amendment passed by a 12 to 5 vote.

December

The 792nd meeting of the Hawaiian Entomological Society—the Annual Dinner Meeting—was called to order by President D. L. Chambers on 14 December 1971, at 8:30 PM at the Tripler Officers' Club.

President Chambers announced that the meeting would be abbreviated and that members who had papers to be published in the 1971 "Proceedings" should give them to Dr. Tamashiro by the end of January 1972.

Members Present: Balock, Bess, Bianchi, Chambers, F. Chang, V. Chang, Davis, Fujii, Fujimoto, Haramoto, Hardy, Ikeda, Jackson, Kajiwara, Kawamura, Kobayashi, Lauret, Look, Loui, Madinger, Mau, Mitchell, Morrill, Namba, Nishida, Ohinata, Olson, Ota, Raros, Sakimura, Schroeder, Sharp, Sherman, Shiroma, Sugerman, Takei, Tamashiro, Tanimoto, and Tsuda.

Visitors Present: Betty Balock, Ozeal Bess, Carolyn Chambers, Cheryl Chang, Mally Davis, Gail M. Fujii, May Haramoto, Agnes Hardy, Bette Jackson, Edna Kajiwara, Florence Kawamura, Jackie Kobayashi, Leta Lauret, Helen Look, Penny Mau, Sue Mitchell, Miss Jeanne Moriyasu, Jo S. Morrill, Winnie Namba, Ellen Nishida, Jane Ohinata, Zenaides Olson, Perlita S. Raros, Bertha Sakimura, Jannie Schroeder, Charlotte Sharp, Ruth Sherman, Jane Shiroma, Joslyn Sugerman, Polly Tamashiro, Miss Linden Teramoto, Mr. and Mrs. John Kunisaki, and Mr. A. L. Madinger.

Reports of Officers and Committees: Nominating Committee: Kenneth Kawamura gave the results of the election of officers for 1972 held in November 1971.

President-elect..... Dr. Asher K. Ota
Secretary ..... Franklin J. Olson
Treasurer ..... Dr. Frank H. Haramoto
Advisor ..... Harry K. Nakao

President Chambers introduced President-elect, William C. Look, who will be President of the Society for 1972.

President-elect Look introduced President Chambers, who gave a presidential address entitled, "Gut Reaction to Science's Issues; the

Danger in Today's Challenge to Scientists."

Following the presidential address, door prizes were given to female guests of Society members.

Correction

Due to a delay, the Proceedings of the Hawaiian Entomological Society, Vol. XXI, No. 1, for 1970 was not issued until February, 1972.

Editor.

SETSUKO NAKATA
(1930–1971)

Miss Setsuko Nakata, Administrative Assistant to the Chairman, Entomology Department, Bishop Museum, passed away from cancer, on April 3, 1971. Miss Nakata had been employed at Bishop Museum continuously since early 1952. She commenced as Assistant in Entomology on the Pacific Science Board (National Research Council)'s INSECTS OF MICRONESIA project, working part-time while still attending the University of Hawaii. In January 1953 she obtained her B.S. degree in Zoology (specializing in entomology) from the University and commenced working full-time at the Museum. The Insects of Micronesia project was transferred from the Pacific Science Board to Bishop Museum, also in January 1953, from which time she was employed by the Museum. She became successively Assistant in Entomology, Associate in Entomology, and from June 1962 until her death served as Administrative Assistant to the Chairman of the Entomology Department.

Setsuko, or 'Sets' as many of her friends knew her, was born August 22, 1930 and her early years were spent in Ookala on the "Big Island" of Hawaii. Her parents are Mr. & Mrs. Shinichi Nakata of Ookala, Hawaii. She graduated from Laupahoehoe High School and attended the University of Hawaii branch at Hilo on the Big Island for two years and finished on the main Honolulu campus.

Sets took unusual interest and responsibility in the activities of the Entomology Department at Bishop Museum, and contributed a great deal to its rapid growth over nearly two decades. She did not only secretarial and administrative work, but played an active part in curating the

collections, sending out collections to specialists for study, handling loans, exchanges and accessions, and doing some editing.

She also participated in research. She did preparatory work for studies of the stick insects (phasmids) and wrote a sizeable paper on their distribution in the Pacific ("Some notes on the occurrence of Phasmatodea in Oceania", Pacif. Ins. Monogr. 2, 1961). She collaborated with J. L. Gressitt on the publication, "Trapping of air-borne insects on ships in the Pacific", Proc. Haw. Ent. Soc. 16(1): 363–65, 1958. She also did work on a joint paper with J. L. Gressitt on the long-horned beetles of Samoa, and, at the time of her death, was in the process of doing a joint study with T. C. Maa on the parasitic Dermaptera. During the fall of 1960 and the summer of 1965, the Museum financed her trips to the US Mainland to visit with other entomologists and to study the phasmid collections in major institutions. On the latter trip she proceeded on to Europe to continue her study of type collections and to accumulate references and literature not available in the U.S.

In 1961, Sets did a great deal of the organizing for the Zoology Section of the 10th Pacific Science Congress in Honolulu. She was an active member of the Hawaiian Entomological Society from January 1955 and served as Treasurer (1961), as a member of the Program Committee (1963), as Secretary (1964, 1970), as a member of the Nominating Committee for 1970 officers, as a member of the Membership Committee for 1970, and was elected in December 1970 as an Advisor for the Executive Committee. For a number of years, she was a member of the Hawaiian Academy of Sciences and actively participated in the Academy's annual Hawaiian Science fairs as committee member in selection of entomological exhibits (1960), Secretary (1959–1963) and as Exhibit Chairman of the 7th Science Fair (1964). In 1963, she accompanied the girl winner to the National Science Fair in New Mexico. In 1970 she served as Chairman for the Ladies' Day Program during the Pacific Branch, Entomological Society of America meeting held in Honolulu. She was also a member of the American Association for the Advancement of Science. In 1966 she attended the 11th Pacific Science Congress in Tokyo and traveled with colleagues to Kyoto, Fukuoka, Taipei and Hong Kong.

Through these many activities, particularly at the Museum and through the Hawaiian Entomological Society and the Hawaiian Academy of Science, Sets made great contributions to entomology, and to science in Hawaii.

"We may be proud of her as friends and family for many reasons, but surely foremost among these are that Sets understood the value of work and the maintenance of high standards of performance. Her contributions were most outstanding—and we are grateful both for her gifts of service to science and to the Museum, and for the kind of person she was; for all of us who counted her a friend and colleague have benefited in con-

sequence" (R. W. Force, Eulogy, April 10, 1971).

A fund has been established by Bishop Museum for a memorial to Miss Nakata. The establishment of a student fellowship in her honor is under consideration.

J. L. GRESSITT and CAROL N. HIGA

Name changes or corrections recorded in this issue

Previous name	Correct name
Achaetoneura archippivora (Williston)	*Lespesia archippivora* (Riley)
Leucopis nigricornis Egger	*Leucopis albipuncta* Zetterstedt
Liriomyza minutiseta Frick	*Liriomyza pullata* Frick
Supella supellectilium (Serville)	*Supella longipalpa* (Fabr.)
Limnophora arcuata Stein	*Gymnodia arcuata* (Stein)
Lispe metatarsalis Thomson	*Lispe pygmaea* Fallen
Desmometopa palpalis de Meijere	*Desmometopa singaporensis* Kertesz
Stictoptera subobliqua (Walker)	*Stictoptera cuculioides* Guenée

CHANCE IMMIGRANTS

OFFICERS FOR 1971

President.....D. L. Chambers
President-elect.....W. C. Look
Secretary.....F. J. Olson
Treasurer.....F. H. Haramoto
Advisor.....J. W. Balock

HONORARY MEMBERS

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F. A. Bianchi
E. H. Bryan, Jr.
E. McC. Callan
W. Carter
Q. C. Chock
M. Chong
C. F. Clagg
C. P. Clausen
C. B. Keck
N. L. H. Krauss
E. P. Mumford
C. E. Pemberton
K. Sakimura
P. H. Timberlake
H. A. Woolford
K. Yasumatsu

MEMBERSHIP 1971

Andersen, D. M.
Andrews, W. B., Jr.
Ashlock, P. D.
Au, S. H.
Au, W. T. S.
Barendregt, C. E.
Bartlett, B. R.
Beardsley, J. W., Jr.
Bellinger, P. F.
Bess, H. A.
Brennan, B. M.
Chambers, D. L.
Chang, F.
Chang, V.
Charanasre, V.
Chilson, L. M.
Conant, M.
Cunningham, R. T.
Davis, C. J.
Delfinado, M. D.
Drake, E. F.
Esguerra, N. M.
Farias, G. J.
Fluker, S.
Fujii, J. K.
Fujii, W. K.
Fujimoto, M. S.
Funasaki, G.
Furumizo, R. T.
Gagné, W. C.
Gillogly, A. N.
Girard, D. H.
Gressitt, J. L.
Haas, G.
Hagen, K. S.
Hale, D.
Haramoto, F. H.
Hardy, D. E.
Harris, E. J.
Hart, W. G.
Higa, S. Y.
Hinckley, A. D.
Hiramoto, J. T.
Hirashima, Y.
Holway, R. T.
Howarth, F. G.
Hoyt, C. P.
Ikeda, J. K.
Jackson, E. W.
Jensen, L.
Joyce, C. R.
Kajiwara, J. T.
Kamasaki, H.
Kaneshige, W. K.
Kaneshiro, K.
Kawamura, K. F.
Kaya, H.
Khoo, B. K.
Kim, S. K.
Kitaguchi, G.
Kobayashi, R. M.
Koga, R. E.
Kohn, M. A.
Komatsu, G. H.
Kumabe, H. T.
Lai, P.
LaPlante, A. A., Jr.
Lauret, T. H.
Leach, S. S.

Leech, R.
Leeper, J. R.
Look, W. C.
Loui, W.
Maa, T. C.
Madinger, F. L.
Maehler, K. L.
Manoto, E.
Matsumoto, B.
Mau, R. F. L.
McMahan, E.
Messenger, P. S.
Middleton, C. R.
Mitchell, W. C.
Miyahira, N.
Miyashita, D. H.
Montgomery, S. L.
Morrill, A. W., Jr.
Murai, K.
Murphy, J.
Nakagawa, P. Y.
Nakagawa, S.
Nakahara, L. M.
Nakahara, S.
Nakamura, G.
Nakao, H.
Nakata, S.
Namba, R.
Napompeth, B.
Navvab-Gojrati, A.
Newell, I. M.
Nishida, T.
Nowell, W. R.
Oda, C. S.
Ohinata, K.
Okada, E.
Olney, V. W.
Olson, F. J.
Ota, A. K.
Ozaki, E. T.
Park, R.
Perkins, B. D., Jr.
Peterson, G. D., Jr.
Radovsky, F. J.
Rainwater, H. I.
Raros, E. S.
Respicio, N.
Richardson, T. E.
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Ross, M. M.
Rutschky, C. W.
Samuelson, G. A.
Schaefer, P.
Schneider, E. L.
Schroeder, W. J.
Sharp, J. L.
Sherman, M.
Shiroma, E.
Sieker, W. E.
Spadoni, R. D.
Steffan, W. A.
Steiner, L. F.
Suda, D. Y.
Sugawa, D. T.
Sugerman, B. S.
Takabayashi, W. T.
Takei, G. H.
Tamashiro, M.
Tanabe, A.
Tanada, Y.
Tanaka, N.
Tanimoto, V. M.
Tenorio, J. A.
Tsuda, D. M.
Urago, T.
Wasti, S. S.
Watanabe, W. H.
Wirth, W. W.
Wolfenbarger, D. O.
Yano, K.
Yates, J. R. III
Yoshimoto, C. M.
Yoshinaga, M. T.
Yoshioka, D. S.
Yoshioka, E. R.
Yu, H.
Zimmerman, E. C.