

New Species of Hawaiian Chalcid-Flies (Hymenoptera)—II

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(Presented by title by O. H. Swezey at the meeting of Dec. 2, 1926)

The types of the new species described in this paper have been deposited in the collection of the Hawaiian Entomological Society, and paratypes in the United States National Museum.

ENCYRTIDAE

Coccidencyrtus Ashmead.

Coccidencyrtus was poorly and in some respects incorrectly described by Ashmead, but has been quite correctly identified by Mercet. The pedicel is not short as stated by Ashmead, since in the type species *C. ensifer* (Howard) it is twice as long as wide and as long as the first two funicle joints combined. The mandibles in *ensifer* have an acute, rather large, outer tooth and a moderately broad inner truncation which is slightly retuse thus faintly indicating a middle and inner tooth, and are armed on outer edge near the middle with a rather long slender spine.

The species *C. flavus* Ashmead from South Africa (Can. Ent., 33, p. 139, 1901) belongs to the genus *Metaphycus* Mercet and probably to the subgeneric group *Euaphycus* Mercet. As it is congeneric with *Metaphycus flavus* (Howard) it requires a new name, hence it may be designated in the future as *Metaphycus subflavus* Timb.

Coccidencyrtus ochraceipes Gahan.* Figure 1.

Easily distinguished from all described species of the genus by having the legs and antennae almost uniformly pale yellow and by the large yellow spot at the base of the abdomen.

Female

Head somewhat broader than thorax, distinctly wider than long, broadest just above the middle, the cheeks converging arcuately to the broad

* While in press, the discovery was made by Mr. Timberlake that the species here described by him under another name had recently been described by Mr. Gahan in Proc. U. S. Nat. Mus., 71, Art. 4, p. 18, 1927. [Ed.]

oral margin, the dorsal margin as seen in frontal view gently rounded, and the thickness fronto-occipitally about two-thirds of the length. Face rather abruptly inflexed but the frons not prominent, eyes rather small, the cheeks moderately long. Frontovertex about as long as wide and covering about one-half of the dorsal surface of head. Ocelli minute, arranged in an approximately equilateral triangle, the posterior pair very close to the acute occipital margin and about twice their own diameter from the margin of eyes, and the anterior ocellus placed a little behind the center of frontovertex. Face rather plane, with the antennal scrobes moderately deep and broad, converging above and uniting just below angle between face and frons, and separated otherwise by the longitudinal facial prominence in the form of a convex ridge, hardly widened below and gradually tapering in height and width above. Antennal sockets placed moderately far apart on ocular line and not much more than their own length from oral margin. Scape slenderly fusiform, not very long; pedicel about twice as long as wide at apex, and slightly longer than first two funicle joints combined; funicle increasing very slightly in width distad and the joints successively increasing in size, except that the first three are nearly equal and as long as wide, the sixth joint a little longer than wide; club elongate-oval, rather pointed at apex, not quite twice as wide and about as long as funicle, and its three joints subequal in length. Mandibles narrower at apex than in *C. ensifer* (Howard), the outer tooth much shorter and separated by a comparatively shallow obtuse emargination from the inner teeth, the truncation indistinct or divided into two very short blunt teeth by a shallow emargination, and the spine on outer edge somewhat shorter and inserted a little nearer the base. Maxillary palpi three-jointed, rather stout, the first joint about twice as long as thick at apex, the second somewhat shorter and considerably broader than the first and about as wide as long, the apical joint about as long as the two preceding joints combined, cylindrical, not so thick as second joint and obliquely truncate at apex. Labial palpi slender, two-jointed, the second joint finer and somewhat shorter than the first.

Thorax depressed, or only very slightly convex above, and about one-half longer than wide. Pronotum very short, mainly concealed by the head, the hind margin broadly and gently arcuate. Mesoscutum transverse, not quite twice as wide as long, the hind margin straight except for a slight angular projection medially between tips of axillae. Axillae rather more than twice as broad as long and separated medially by a space about equal to their length at outer ends. Scutellum slightly shorter than mesoscutum, as long as wide at base and well rounded at apex, the margins perpendicularly declivous but only slightly elevated above surrounding parts, and the disk strongly depressed. Propodeum extremely short medially and moderately long at sides. Abdomen as wide as thorax and considerably shorter, widest about at the basal third and thence arcuately narrowing to the rather acute apex; tergum strongly depressed; ovipositor sheaths slightly protruded at apex, the spicula showing no tendency to become disengaged as in *C. ensifer*; cercal plates situated on lateral margins just posterior to the widest part of disk.

Legs ordinary in structure and length, the spur of middle tibiae about as long as the middle basitarsus. Wings of ordinary proportions; disk very finely and rather densely setose, the speculum obscure and less evident than a hairless streak bordering the inner margin of apical part of

venation; setae on basal area paler in color and considerably sparser than those on rest of disk but quite uniformly distributed. Marginal fringe short and rather dense. Venation terminating considerably before the middle of costal margin; submarginal vein slightly thickened in its apical third; marginal vein about as long as wide; postmarginal and stigmal veins about equal, hardly twice as long as marginal and meeting in a very acute angle; stigmal vein triangularly enlarged almost from the base to apex, its apical margin with a row of about five circular pores. Submarginal vein armed with about eight fine, rather short bristles, which become a little longer and coarser on the thickened part of the vein; marginal and postmarginal veins together with about ten setae, of which about one-half are placed on the costal margin and are slightly coarser than other setae of costal margin nearby.

Face with fine reticulations, the bottom of the scrobes smoother and more shining; frontovertex and mesoscutum shining and with very fine reticulations, which are uniformly hexagonal on mesoscutum and more irregular and somewhat transversely lengthened on frontovertex; axillae sculptured like the scutum, but the scutellum opaque and very densely and minutely granular; mesopleura very delicately lineolate and practically smooth; abdomen shining and very obscurely and delicately, transversely reticulated. Pubescence sparse, very fine, dark colored and inconspicuous; short and erect on frontovertex, extremely short on eyes, reclinate and rather distinctly arranged in four longitudinal rows on mesoscutum, and restricted to about three pairs of setae on scutellum, of which the apical pair is twice as long as the others and erect. Abdomen with a very few fine hairs on apical margin and a few shorter hairs on ovipositor sheaths.

Head and thorax nearly black, with a strong, tolerably brilliant reddish purple and brassy green luster on frontovertex, mesoscutum and axillae; face and pleura shining but hardly metallic, the scutellum matt. Abdomen with a large pale yellow basal macula, reaching rather more than half way to apex, and even larger on ventral surface; the margins broadly piceous with a slight greenish luster above toward base. Antennae pale yellow, with the club slightly dusky. Legs, including coxae, pale yellow or almost whitish toward base. Wings hyaline, the setae dusky, the venation at apex fuscous but most of submarginal vein somewhat yellowish.

Length of body (0.549 to) 0.636; length of head, 0.232; width of head, 0.280; width of frontovertex, 0.134; length of antenna, 0.428; width of mesoscutum, 0.259; length of fore wing, 0.697; width of fore wing, 0.307; length of protruded part of ovipositor, 0.047 mm.

Described from twelve females reared at Honolulu, Oahu, during March and on April 1, 1926, (Fullaway), and one female reared at Berkeley, California, March 11, 1912 (Roy Campbell), all from *Diaspis boisduvalii* Sign.

EULOPHIDAE.

Elachertus giffardi n. sp. Figures 3-4.

Similar to *E. advena* Timb. but distinguished by having the scutellum delicately tessellate and shining, with the grooved lines impunctate, and in the male by having the antennae much more ordinary in structure.

Female

Head a little wider than long, rather thick fronto-occipitally, well rounded above, the cheeks strongly converging toward the mouth. Occiput moderately concave, the dorsal margin strongly angled and slightly carinate. Frontovortex covering a little more than half the dorsal surface of head. Ocelli in an obtuse angle, the posterior pair situated rather less than their own diameter from occipital margin and twice as far from the eye margin. Eyes rather large, broadly ovate, about one-third longer than wide, the inner orbits parallel. Cheeks short, with a very fine but distinct genal suture. Face deeply grooved to form the scrobal impression, which broadly and shallowly emarginates the anterior margin of frons. Antennal sockets situated on the ocular line and about twice their own diameter apart, the distance between them not much less than distance from either to nearest point of oral margin. Scape slenderly fusiform, as long as the next four joints combined and a little wider than pedicel; pedicel twice as long as thick at apex and equal in length to first funicle joint; ring joint small but distinct; first funicle joint twice as long as wide and longer than any of the following joints, the second a little longer than wide, the third and fourth joints approximately as long as wide, or the fourth slightly wider than long; club two-jointed, slightly longer than last two funicle joints combined and a little wider than the funicle, the apical joint short and acute; setae on antennae fine, short and sparse.

Thorax about twice as long as wide and moderately convex. Middle lobe of mesoscutum about as long as wide at its anterior end, and not quite so wide at its posterior end as base of disk of scutellum between the grooves. Axillae well separated, reaching barely further inward than ends of parapsidal lines. Scutellum somewhat longer than mesoscutum, the disk between the grooved lines nearly twice as long as wide at base, the marginal grooves almost straight but diverging toward apex, where they curve inward but do not quite meet medially. Propodeum about as long as mesoscutum and produced into a short neck at apex. Abdomen depressed, narrowly ovate, and including the slightly exerted ovipositor sheaths slightly more than twice as long as wide and nearly as long as thorax. Spicula of ovipositor with a strong tendency to become disengaged from sheaths, almost as long as abdomen, and cylindrical in shape, with a narrow blade-like expansion on apical third but contracted to a very slender point at apex. Wings and legs approximately as in *E. advena*.

Head moderately dull, subrugulose reticulate and with fine shallow rather close punctures, bottom of scrobal impression smooth. Mesoscutum sculptured much like the head but with coarser reticulations and without distinct punctures. Axillae and disk of scutellum shining and delicately tessellate, the tessellation of axillae very indistinct; grooved lines of scutellum not punctured. Metanotum and disk of propodeum polished, the latter with a median carina that is provided with short oblique branches. Pleura mainly polished, the abdomen smooth. Pubescence much as in *E. advena*, but by far less conspicuous since it is not whitish as in that species, and it is apparently somewhat shorter and sparser on the thorax but with the same arrangement of longer bristles as in the other species.

Head and thorax dark aeneous green, the metallic luster rather dull, mostly brassy but with dark reddish and purple tints on scutellum. Mandibles brown. Antennae dull yellow, the scape and pedicel clearer yellow, the flagellum tinged with brown, which becomes more pronounced toward apex. Abdomen with a slight metallic luster, shining brown on disk but broadly piceous at margins and apex. Legs dull yellow with a slight brownish tint, the front coxae brown. Wings hyaline, very faintly tinted with fuscous, the veins yellowish.

Length of body, 1.57; length of head, 0.405; width of head, 0.465; width of vertex at anterior ocellus, 0.261; length of antennae, 0.657; width of mesoscutum, 0.409; length of fore wing, 1.101; width of fore wing, 0.486 mm.

Male

Very similar to the female, with the head a little thinner fronto-occipitally and the abdomen considerably smaller than thorax and with parallel sides. Antennae eight-jointed; the scape shorter and a little stouter than in female and as long as next three joints combined; pedicel about one-half longer than wide; flagellum six-jointed, without a ring joint, the first joint largest and longest, the others gradually decreasing slightly in size distad, the sixth joint conical and pointed at apex, the first four constricted at articulation with the following joint by an excavation on dorsal side.

Coloration much as in the female, but with the mesoscutum considerably more brilliantly metallic, brassy on parapsides and dark purple on the middle lobe of mesoscutum; flagellum uniformly pale dull yellowish brown; abdomen much as in the female with the apical half dark and the basal half brown and with a small central yellowish spot on disk between the two other colors.

Length of body, 1.27; length of head, 0.348; width of head, 0.408; width of vertex at anterior ocellus, 0.239; length of antennae, 0.726; width of mesoscutum, 0.354; length of fore wing, 1.019; width of fore wing, 0.456 mm.

Described from four females and one male (holotype female, allotype and paratypes) reared January 14, 1907, from an unknown host collected on December 9, 1906, in Moanalua Valley, Oahu, at 500 feet elevation, by W. M. Giffard (Giffard's No. 415 B).

In my list of introduced and immigrant chalcid-flies of the Hawaiian Islands, the date given for this species (No. 117) was cited incorrectly through a clerical error.

Notanisomorphyia Girault.

As used here *Notanisomorphyia* includes those *Sympiesis*-like species which have the abdomen moderately long at the most, the propodeum smooth and carinate, and the male with ramose antennae.

Notanisomorphomyia externa n. sp. Figure 2.

This species is similar to the North American species (*Sympiesis*) *N. felti* (Crawford), (*Sympiesis*) *N. agromyzae* (Gahan) and (*Eulophus*) *N. guttiventris* (Girault). From *N. felti* it differs by having the transverse carina of propodeum intersecting the median carina at or very near the middle of the propodeum, the outer lobes of mesoscutum sculptured throughout like the middle lobe, the head shining, slightly bluish black with a weak metallic luster, etc. From *N. agromyzae* it differs by having a strong reticulate sculpture on mesoscutum, the axillae delicately lineolate-reticulate, the abdomen distinctly shorter than thorax, etc. From *N. guttiventris* it differs by having a large yellowish brown mark on abdomen, the venter entirely of this color except the rather narrow lateral and apical margins, the first segment of the gaster much the longest, the first funicle joint not twice as long as the third, the scape longer than pedicel, ring joint and first funicle joint combined, etc.

Female

Head of the usual Eulophine shape, much broader than long, with the cheeks as seen from in front strongly converging to the moderately wide oral margin, the sides above strongly rounded, the dorsal margin gently rounded; as seen from the side the head appears lenticular, with the occipital surface a little less convex than anterior surface; as seen from above the head appears transverse, slightly emarginate medially in front and broadly emarginate behind. Eyes not very large, convexly protuberant, the inner orbits just perceptibly convergent below. Vertex transverse and somewhat more than one-half as wide as whole head. Ocelli rather large, arranged in a very obtuse-angled triangle, the posterior pair a little closer to the eye margins than their distance apart. Face with a rather shallow scrobal impression above antennae, the apex of the impression reaching nearly to anterior ocellus, the sloping sides not nearly reaching to margins of eyes, the bottom of impression with a triangular depressed area, very acute above. Antennal sockets small, nearly circular, placed hardly more than their own diameter apart and considerably above ocular line, and a little below middle of face in frontal view of head. Cheeks short, not quite one-half the width of eyes, the genal suture distinct.

Antennae nine-jointed; scape linear, compressed, hardly wider than pedicel and as long as pedicel, ring joint, first and about one-half of second funicle joint combined and reaching distinctly beyond level of vertex; pedicel about one-half longer than thick and somewhat more than one-third as long as first funicle joint; ring joint small and transverse; flagellum compressed, the first funicle joint about thrice as long as wide, the next three joints gradually shortening, the fourth funicle joint wider than preceding joints and not quite twice as long as wide; club distinctly longer than preceding joint and about equal to the third funicle joint, the terminal joint excluding nipple about two-thirds as long as the basal joint, the nipple moderately short and not articulated. Dorsal margin of scape with fine short setae; the flagellum with rather sparse whitish bristle-like setae, which are a little longer than width of ring joint. Mandibles with two distinct, rather acute and deeply divided

outer teeth and an inner truncation bearing three to four minute bluntly rounded teeth. Maxillary palpi two-jointed, the terminal joint rather long, slender, cylindrical and nearly twice as long as basal joint, which is considerably stouter. Labial palpi one-jointed, cylindrical, about three-fourths as long as terminal joint of maxillary palpus, not quite so thick, squarely truncate at apex and provided with two long apical setae.

Thorax about two and one-half times longer than wide, broadest at posterior margin of mesoscutum, moderately convex from side to side, and considerably arched longitudinally. Pronotum hardly shorter than mesoscutum, concial and with the collar not discrete. Lateral lobes of mesoscutum set off anteriorly by rather deep depressions and forming rather prominent, rounded shoulders; parapsidal lines on disk of mesoscutum practically obsolete. Scutellum somewhat longer than wide, well elevated and abruptly declivous at sides, its surface discontinuous with that of metanotum. Metanotum about one-sixth as long as scutellum, with an apical arcuate carina and a more or less distinct median carina. Propodeum about as long as scutellum, strongly hollowed out on each side at apex and produced medially to a short, distinct, well elevated neck, the hollow on each side of neck partially closed by a thin semi-transparent lamina; disk of propodeum provided with one transverse and three longitudinal carinae, the lateral pair diverging to transverse carina, then strongly converging arcuately and reaching to apex of the neck, of which they form the dorsal lateral boundaries; transverse carina meeting the lateral pair behind the middle, but meeting the median very near the middle of disk. Spiracles of propodeum small, circular and contiguous to anterior margin of the segment. Abdomen depressed, oval to ovate, about twice as long as wide to a more or less extent in different specimens, about as wide as thorax and hardly as long, the dorsal surface somewhat concave, the apex acute; first tergite of gaster fully as long as the next three combined; ovipositor not distinctly protruded. Legs long and slender; outer spur at apex of hind tibiae obscure and very much shorter than the inner spur. Submarginal vein of fore wings hardly shorter than marginal vein, the postmarginal about three-fourths as long as the marginal and twice as long as the stigmal vein.

Head mainly polished, the face medially below antennae with transverse lineolations, the frons on each side of scrobal impressions rather finely reticulate, and the occipital surface with transverse lineolations which anastomose in places to form reticulations. Mesoscutum and scutellum rather coarsely reticulated with raised lines. Pronotum subreticulate posteriorly and anteriorly with transverse raised lines which continue on to the pleura. Axillae with delicate lineolations. Apical margin of scutellum with a transverse sulcate line, that is provided with cross carinae at frequent and regular intervals, thus producing small puncture-like foveae. Metanotum and propodeum polished, but with a fine delicate reticulation apparent in favorable light, the sides of propodeum with fine setiferous punctures. Pleura, except propleura, for the most part, and abdomen polished. Pubescence whitish, fine and rather long, except on the head where the hairs are rather sparse, very short and mostly confined to upper part of occiput and face. Pubescence of thorax densest and most conspicuous on sides of propodeum, where the hairs are long; hairs on mesoscutum somewhat shorter, moderately numerous and mostly decumbent, but a pair on posterior margin submedially and two pairs on

scutellum longer and semierect, those on scutellum directed backward and inward, so that the tips of the posterior pair nearly meet; scutellum otherwise bare. Abdomen with a few fine short hairs mostly around the margins, but the basal tergite also provided across the disk with numerous, fine, moderately long and decumbent hairs.

Head slightly bluish black, shining but only weakly metallic, a purplish and brassy luster sometimes apparent on vertex. Thorax dark green with a moderately brilliant brassy luster, which becomes slightly reddish on scutellum. Abdomen shining piceous, with a large brownish yellow mark on basal half, both above and beneath, reaching almost to lateral margin and on venter reaching nearly to apex. On the first segment of gaster the pale mark extends quite to the base but not quite so far to the sides as on the other segments. Dark lateral margins on basal half of gaster distinctly brassy green. Petiole of abdomen also brownish yellow. Mandibles dark brown. Scape pale yellow but becoming dusky at apex, the pedicel and flagellum dull piceous. Legs, including coxae, entirely pale yellow. Wings hyaline, the veins slightly dusky yellowish, the submarginal vein clearer yellowish.

Length of body (0.97 to) 2.35; length of head, 0.465; width of head, 0.649; width of vertex at posterior ocelli, 0.374; length of antenna, 1.337; width of mesoscutum, 0.609; length of fore wing, 2.060; width of fore wing, 0.860 mm.

Small specimens (1.25 mm. or less long) show less of the characteristic sculpture and those less than 1.0 mm. long have the reticulations of mesonotum very faint.

Described from seven females (holotype and paratypes) reared May 9-11, 1924, from *Bedellia orchilella* Walsm., collected on April 29 at Waipio, Oahu (Swezey); six females (paratypes) reared April 22 to May 4, 1922 from *Gracilaria marginestrigata* Walsm., on *Xanthium*, Kaimuki, Oahu (Timberlake); fifteen females (paratypes) from the same host on *Sida*, Feb. 16 to March 3, 1924, Kaimuki, Oahu (Timberlake); five females (paratypes) from *Cremastobombycia lantanella* Busck, collected May 6, 1921, at Lihue, Kauai (Swezey); one female (paratype) collected at Malamalama, Oahu, July 28, 1918 (Timberlake); two females (paratypes) from *Gracilaria neraudicola* Sw., July 25, 1921, south of Hilo, Hawaii (Swezey); two females (paratypes) from *Philodoria pipturicola* Sw., Dec. 9, 1922, Wailuku, Maui (Swezey); 1 female (paratype) from *Cremastobombycia lantanella* Busck, May 17, 1921, Ulupalakua, Maui (Swezey); two females (paratypes) from *Gracilaria hibiscella* Sw., May 28, 1923, Honolulu, Oahu (Swezey); one female (paratype) from *Gracilaria epibathra* Walsm., Nov. 12, 1922, Lanihuli, Oahu (Swezey); one female (paratype) from *Cremastobombycia lan-*

tanella Busck, March 27, 1921, Makaha, Oahu (Swezey); one female (paratype) from the same host, June 8, 1921, Waiawa, Oahu (Swezey); and one female (paratype) from *Euhyposmocomma trivitella* Sw., May 13, 1923, Kilohana, Kauai (Swezey).

This parasite has been reared by Mr. Swezey also from the *Cremastobombycia* collected at Waiahole, Oahu, Spreckelsville, Maui and Huehue, Hawaii; from *Aristotelia* sp. in *Kadua*, April 5, 1919, Tantalus, Oahu; from *Gracilaria hauicola* Sw., Sept. 8, 1921, Wailua, Kauai; and from *Agromyza* sp. in *Cocculus*, April 10, 1921, Opaeha, Oahu.

TRICHOGRAMMATIDAE

Ittys perditrix (Gahan).

Specimens reared by the writer July 19-20, 1916, from eggs of *Nesophrosyne maritima* Kirkaldy, in *Dodonaea* leaves collected at Makua, Oahu, July 16 (Swezey), agree closely with the description of *Ittys perditrix* (Gahan). The only discrepancy is the presence of two transverse lines on abdomen, more or less broken up into dots, and not very conspicuous. *I. perditrix* was originally reared from eggs of *Stictocephala festina* (Say) at Tempe, Arizona.

Ufens elimaeae n. sp. Figures 5-6.

This species is closely allied to the North American species, *U. niger* (Ashmead), which is the type of the genus, but it differs by having the discal setae of fore wings much sparser and arranged in about twenty-three more or less even lines, the antennae considerably stouter and somewhat contorted, the abdomen shorter, stouter and with a shorter ovipositor, the legs nearly uniformly dusky yellow, etc. Among the Australian species described by Girault it is perhaps most similar to *U. flavipes* and *U. hercules*, but is distinguished by the long marginal vein, uniformly pale legs, by the longest marginal cilia of hind wing being distinctly longer than width of disk, etc.

There are two ring joints in the genus *Ufens* instead of only one, as stated by Girault, but the second joint is often very obscure on account of its close application to the base of the funicle.

Female

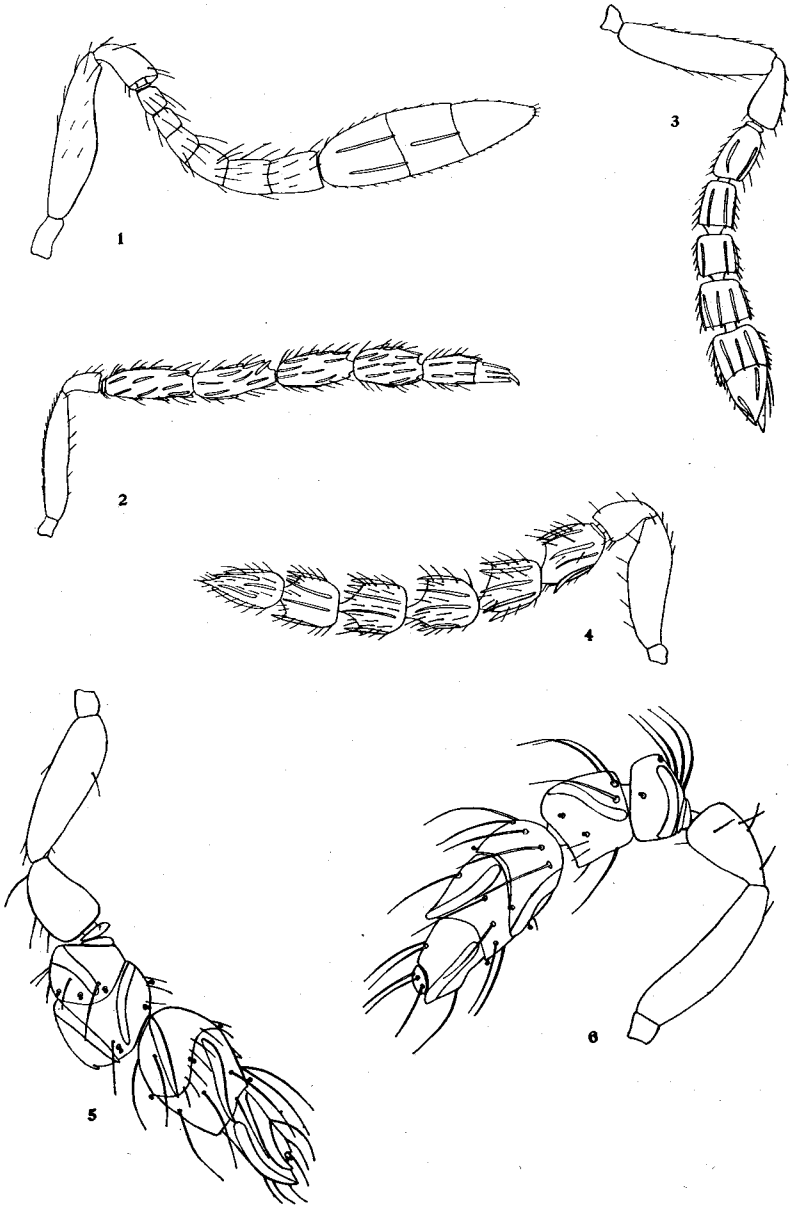
Antennae nine-jointed. Scape fusiform, somewhat shorter than pedicel and funicle combined. Pedicel broader at apex than scape and considerably less than twice as long as wide (sometimes appearing even broader than shown in figure). Ring joints very small, equal, the second one more or less imbedded in base of first funicle joint. Funicle somewhat

longer than wide, wider than the club, distinctly longer than pedicel, divided by strongly curved suture into two closely joined segments and provided with large corneous sensoria. Club inserted obliquely on ventral edge of apex of funicle, three-jointed, the two basal joints closely joined and separated by an extremely fine suture (much more curved on reverse side of that shown in figure), the apical joint much narrower and nearly as long as the other two combined, (on reverse side of that shown in figure the separating suture deeply indents the apical margin of second joint); corneous sensoria of club, especially those on apical joint, very large and conspicuous. Antenna provided with bristle-like setae, which are very sparse on scape and comparatively long and coarse on club, the basal joint of club with a transverse arcuate row of small setae close to the apical margin.

Fore wings very broad, triangular in shape with apex rounded. Marginal fringe short and moderately dense. Discal setae arranged in about twenty-three lines, two of which are more prominent than others, viz., the one starting from apex of stigmal vein and about the fifth one from posterior margin; the latter line reaching much farther basad than all the others and opposite to the apical part of submarginal vein; an oblique curved line from apex of stigmal vein toward posterior margin also prominent. Submarginal vein strongly broken, the thickened apical part beyond the break about as wide and almost as long as the marginal vein. Marginal vein approximately four times as long as wide and truncate at apex. Stigmal vein about three-fourths as long as marginal, constricted at base where it is inserted at an angle of about 45 degrees with marginal, then abruptly bent downward so that it becomes almost at a right angle with marginal; the part beyond constriction oblong, provided with a large uncus on distal margin a little beyond the middle, the posterior margin of uncus forming a right angle with the oblong part of vein and the anterior margin continuous with that of the constricted part of vein; uncus provided with four pustules which are arranged in a line and decrease in size toward apex. Costal cell at apex provided with three marginal bristle-like setae and three much smaller setae on the disk. Disk of wing below submarginal vein with a row of six setae, one or two of which are inserted on the oblique extension of the vein. Submarginal vein provided with one bristle-like seta on each surface of disk of proximal part and one on distal part near apex. Marginal vein with three coarse bristle-like setae on the margin, which are about three-fourths as long as vein itself, and with five much smaller setae on the disk and four on the reverse surface. Stigmal vein with about three

EXPLANATION OF FIGURES, PLATE XVIII.

- Fig. 1. *Coccidencyrthus ochraceipes*. Antenna of female.
 Fig. 2. *Notanisomorphomyia externa*. Antenna of female.
 Fig. 3. *Elachertus giffardi*. Antenna of female.
 Fig. 4. *Elachertus giffardi*. Antenna of male.
 Fig. 5. *Ufens elimaeae*. Antenna of female.
 Fig. 6. *Ufens elimaeae*. Antenna of male.



Hawaiian Chalcid-flies.

setae at apex, which form a part of the oblique curved discal line of setae, and provided with one seta on reverse surface near base of uncus. Hind wings linear, rather acute at apex, the basal part constricted and extremely narrow opposite middle of venation, the marginal fringe barely longer than greatest width of disk; the discal setae arranged in three lines.

General form of body robust, the thorax not much longer than wide. Head about as wide as thorax, the vertex very broad. Mesonotum gently convex, the scutellum about as long as wide and broadly rounded at apex. Abdomen about as long and as wide as thorax.

Body piceous or brownish piceous, appearing decidedly brownish by transmitted light in slide mounts. Head, except the more chitinized gular region, and antennae yellowish brown. Legs dusky yellow, the hind femora, and hind tibiae in less degree, more dusky but not definitely piceous. Eyes and ocelli dark red. Wings clear hyaline, the veins brown.

Length of body, 0.472 to 0.894; length of scape, 0.096; length of pedicel, 0.049; length of funicle, 0.068; length of club, 0.121; length of fore wing, 0.489; width of fore wing, 0.311; greatest length of marginal fringe of fore wing, 0.021 mm.

Male

Very similar to the female except in antennae and color of head. Antennae nine-jointed, not quite so stout as in the female, the club inserted normally at center of apex of funicle, the bristles on flagellum a little longer and much more numerous than in the female. Funicle joints more quadrate, the suture transverse. Club elongate-ovate, four-jointed, with the apical joint a minute button, which is distinctly articulated. Second ring joint very obscure in ordinary position of antennae but sometimes distinctly visible. The large sensorium on first funicle joint transverse and more or less arcuate. Head almost entirely brownish yellow, the antennae also yellower than in the female.

Length of body, 0.562 to 0.838; length of scape, 0.106; length of pedicel, 0.051; length of funicle, 0.069; length of club, 0.111; length of fore wing, 0.519; width of fore wing, 0.354; greatest length of marginal fringe of fore wing, 0.023 mm.

Described from thirty females and five males (holotype female, allotype and paratypes), reared January 31, 1916, from egg of *Elimaea punctifera* (Walker) in koa leaf, collected on Tantalus, Oahu, January 16 (Swezey); one female and one male (paratypes) from same host, Waikiki, Oahu, November 16, 1919 (Pemberton); three females (paratypes) from same host, Barber's Point, Oahu, December 23, 1923 (Swezey); and eight females and four males (paratypes) mounted on a card and reared from the same host at Honolulu, March 10, 1925 (Swezey).

This parasite has been reared also from the eggs of *Holochlora japonica* Brunner.