

DESCRIPTIONS OF SOME NEW SPECIES OF
CHALCIDOIDEA FROM CUBA AND
PUERTO RICO

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Descriptions of six apparently new species of Chalcidoidea from the West Indies are included in this paper. Five of these species were received from the Estacion Experimental, Santiago de las Vegas, Cuba, and are said to have parasitized various economic pests. One species was taken by G. N. Wolcott in Puerto Rico.

Family EUPELMIDAE

Arachnophaga albolínea, new species

This species will be easily recognized by the unusual wing markings.

Female.—Length, exclusive of ovipositor, 4 mm.; exerted portion of ovipositor 0.8 mm. Head as wide as thorax, thin antero-posteriorly at the vertex, finely rugulose sculptured, except the frons, which is granularly opaque; occiput broadly but not deeply concave; vertex not broad, posteriorly abruptly truncate; ocell-ocular line equal to about one half the diameter of an ocellus; eyes large, sparsely pubescent, converging dorsally, very nearly touching the occiput above; ledge between lower extremity of eye and antennal fossa distinct but rounded, not carinate; malar space about one third as long as the eye; frons clothed with pale hairs, those along the inner orbits much longer than elsewhere; face with a very weak median carina above clypeus; apical joint of maxillary palpus not distinctly expanded. Antennae 13-jointed; scape slender, not quite reaching level of front ocellus; pedicel about two and one half times as long as broad; fourth, fifth, and sixth joints subequal and each about equal to the pedicel; following joints successively decreasing in length, the tenth subquadrate; club scarcely thicker

than last funicle joint and about as long as two preceding joints, 3-jointed, the apical joint weakly obliquely truncate. Mesoscutum trilobed, pubescent, the anterior lobe sharply defined, closely and finely punctate and a little longer than depressed area behind it; median depression shallow, more weakly sculptured than anterior lobe; lateral lobes not carinate, weakly sculptured on inner faces, the outer faces sculptured like the anterior lobe; scutellum convex, rounded posteriorly, with extremely fine and dense sculpture, and with a few moderately coarse black bristles; axillae sculptured like posterior middle of mesoscutum, strongly pubescent, separated by a distance less than the basal width of an axilla; mesopleura finely reticulate punctate, pubescent on approximately the anterior half, the posterior half bare; propodeum deeply emarginate behind, very short medially, the lateral disks finely reticulated. Wings fully developed, attaining apex of abdomen; fore wing densely ciliated beyond the point on submarginal vein where it begins to curve toward the front margin of wing, bare basad of that point except for a narrow streak of cilia running from base of submarginal vein obliquely distad to join ciliated portion of wing near posterior margin; costal cell densely ciliated at apex; submarginal vein distinctly longer than marginal; marginal more than twice as long as postmarginal; the postmarginal not twice as long as stigmal. Middle tibial spur about two thirds as long as basitarsus, the basal three joints of middle tarsus spined beneath; posterior femur somewhat thickened, broadest at about one third its length from the apex, with a very narrow flange on the apical third of its ventral margin; posterior tibia slightly compressed, tapering from base to apex, the inner spur twice as long as the outer, the tarsi slender. Abdomen about as long as thorax, slightly broader near apex than at base, a little narrower than the thorax; the tergites nearly uniformly finely reticulated, the posterior margins of 1-4 straight, of 5 emarginate, of 6 rounded; ovipositor exerted a little more than one third the length of abdomen.

Color dull blackish brown; antennae reddish yellow, the pedicel and apex of club blackish; mouthparts and region below antennae reddish yellow; scutellum at base yellowish; legs dark brown, with their tarsi, apices of tibiae, and the trochanters yellowish; fore wings hyaline at base for two thirds the length of submarginal vein, fuscous beyond except for a broad longitudinal stripe of hyaline a little behind the middle and a transverse band distad of but touching the stigmal knob, the transverse band angled at middle of wing where the longitudinal stripe unites with it and terminates; the infuscated portion of wing much darker behind the marginal vein than be-

yond the transverse hyaline band; abdomen black, with a yellowish spot embracing the apical two thirds of first and more or less of the second tergites; ovipositor yellow except at extreme base.

Type-locality.—El Cano, Habana, Cuba.

Type.—Cat. N° 50437, U. S. N. M.

Described from two female specimens received from S. C. Bruner and said to have been reared by him December 17, 1931, from pupae of the dipteron, *Argyrophylla albincisa* Wiedemann, which had parasitized the pyralid *Lamprosema indicata* Fabricius infesting lima beans.

***Anastatus scutellatus*, new species**

Readily distinguished from all species known to the writer by the unusually coarse punctation of the scutellum.

Female.—Length 3.75 mm. Head a little more than twice as broad as thick antero-posteriorly, with strong rugulose-punctate sculpture; vertex unusually narrow, comprising a little less than one fourth total width of head; ocelli in a nearly equilateral triangle, the ocell-ocular line very short, less than half the length of the longest diameter of a lateral ocellus; anterior ocellus a little larger than the lateral ones, about one and one half times its own diameter above dorsal limit of scrobes; scrobes consisting of two grooves which are sharply impressed and broadly separated at bases of antennae but which become shallower and converge above, becoming very narrowly separated or slightly confluent at extreme dorsal angle. Antennal scape extending to level of vertex; flagellum moderately clavate; pedicel twice as broad as long; third antennal joint weakly transverse; fourth and fifth subequal, each about equal in length to pedicel; sixth very nearly as long as fifth; seventh to tenth shorter, the tenth subquadrate; club 3-jointed, nearly as long as three preceding joints together, distinctly broader than funicle, obliquely truncate apically. Mesoscutum trilobed; anterior lobe closely punctate, its sculpture much finer than that of scutellum; lateral lobes weakly carinate for a short distance at posterior end, more finely sculptured than anterior lobe; lateral margins of the lateral lobes and the entire surface of the depressed median posterior portion of mesoscutum covered with setiferous papillae in addition to the fine punctation; scutellum nearly flat and mostly covered with coarse thimble-like punctures, the apex more finely punctate; axillae much more finely

punctate than base of scutellum; lateral disks of propodeum smooth; pleura very finely sculptured, opaque, the anterior one third covered with setiferous papillae, posterior two thirds bare. Fore wing more than three times as long as broad, ciliated from base to apex; marginal vein over twice as long as postmarginal, postmarginal nearly three times stigmal; hind wing with the marginal vein very long. Abdomen as long as thorax, the first and second tergites nearly smooth, the third to sixth with very fine granular sculpture; ovipositor not exerted. Head aeneous, with strong coppery reflections; antennae bright testaceous, except the club, which is black; thorax mostly brownish black, the anterior lobe of mesoscutum more or less aeneous, the lateral lobes tinged with metallic green; scutellum and axillae black, very slightly tinged with greenish; propodeal disks blue-green; sutures between mesonotum and pleura testaceous; tegulae dark brown; abdomen black with a yellow spot beneath near base, and the apical tergite more or less testaceous; fore wing hyaline basally, fuscous from base of marginal vein distad, with a large triangular hyaline spot embracing the apical half of marginal vein and a similar spot opposite this at posterior margin, the infuscation less distinct toward apex of wing; hind wing entirely hyaline; legs blackish brown, with the sutures more or less testaceous and the tarsi all pale testaceous.

Type-locality.—Santiago de las Vegas, Cuba.

Type.—Cat. N° 50438, U. S. N. M.

Described from five females reared by S. C. Bruner from eggs of Tettigoniidae, January 4, 1932. The tettigoniid eggs were identified by A. N. Caudell as being those of some species of the subfamily Phaneropterinae.

Anastatus diversus, new species

Very similar to *reduvii* Howard but differs by having the antenna bright testaceous, except the club which is black; the head not metallic green but dark copper colored; mesoscutum blackish with only a very slight coppery tint, without the bright metallic green and brassy reflections of *reduvii*; scutellum and axillae dull copper colored, not green; base of fore wing nearly uniformly sparsely ciliated; hyaline crossband behind marginal vein interrupted at middle of wing, or, if complete, it is narrower than in *reduvii*; marginal vein a little less than twice as long as postmarginal. In color of antenna and markings of fore wing, as well as in many other ways, similar to *scutellatus* but

may be distinguished at once from that species by the uniformly finely punctate scutellum.

Female.—Length 2.4 mm. Head finely and nearly uniformly punctate; frons at vertex comprising more than one third of total width of head; antennae weakly clavate; scape flattened on outer side, attaining the level of vertex; pedicel not twice as long as thick; third joint transverse, fourth a little longer than pedicel, fifth a little shorter than fourth, sixth equal to the fourth, seventh to tenth subequal and subquadrate; club not much thicker than funicle, nearly as long as three preceding joints, and obliquely truncate at apex; mesoscutum nearly uniformly weakly punctate, with short pubescence but without distinct papillae; scutellum and axillae with uniform very fine punctation; abdomen as long as thorax. Fore wings hyaline at base, fuscous from a little before the base of marginal vein to apex of wing, except for the hyaline crossband which may be complete or interrupted at the middle; the infuscation weaker toward wing apex. Legs brownish piceous, their tarsi testaceous with the apical joint dark; abdomen with a whitish band above and below at second tergite and with the apical tergite more or less testaceous.

Type-locality.—Santiago de las Vegas, Cuba.

Type.—Cat. N° 50439, U. S. N. M.

Described from three females reared by A. E. Otero, June 23, 1931, from eggs of a pentatomid.

Anastatus viridicaptus, new species

The extremely narrow vertex, metallic green head, and nearly uniformly pale testaceous thorax and abdomen distinguish this species from all other forms known to the writer.

Female.—Length 3.6 mm. Head not over twice as broad as thick, less transverse than usual; eyes large, almost attaining the occiput dorsally, the temples very narrow; frons at vertex very narrow, comprising not over one seventh of the total width of head; posterior ocelli touching the eye margins and separated from each other by less than the diameter of an ocellus; front ocellus larger than the lateral ones, fully twice as far from the lateral ocelli as the latter are from each other, about half its own diameter from the eye margins, the ocellar triangle very acute; antennal grooves well separated and distinct anteriorly, confluent above; cheeks and face convexly and evenly rounded; whole head with very fine granular sculpture and short pubescence, the clypeal area slightly depressed and nearly smooth.

Antennal scape a little more slender basally than apically, sub-cylindrical, distinctly curved and not quite reaching the level of anterior ocellus; flagellum moderately clavate, unusually slender basally; pedicel about twice as long as thick; third antennal joint a little broader than long; fourth joint distinctly longer than pedicel, nearly four times as long as thick, and more slender than usual; fifth and sixth joints subequal in length to fourth, the sixth becoming perceptibly thicker toward apex; seventh approximately one and one half times as long as thick; eighth a little shorter; ninth subquadrate; tenth very slightly broader than long; club 3-jointed, rather slender, about as long as three preceding joints and obliquely truncate. Mesoscutum dull, with nearly uniform, very fine and shallow sculpture, the posterior middle not deeply concave, the lateral lobes weakly carinated posteriorly; scutellum and axillae alike finely punctate and opaque; lateral disks of propodeum polished, small; mesopleura finely sculptured, subopaque. Fore wing about as densely ciliated behind the submarginal vein as elsewhere; marginal vein nearly as long as submarginal; postmarginal much less than half as long as marginal and about twice the length of stigmal. Legs normal. Abdomen a little longer than thorax, slightly more slender than usual, smooth and polished basally and very weakly sculptured apically; ovipositor slightly exerted. Whole head metallic green; eyes light brown; mandibles dark brown; palpi and antennal scape testaceous, pedicel and flagellum piceus; thorax, abdomen, and legs testaceous; the tegulae, a small spot on pleurum below tegula, a spot on middle femur at apex above, a stripe on middle tibia at apex, a stripe on inner side of hind femur, a large part of hind tibia apically, and a spot surrounding the spiracle on seventh tergite dark brown. Fore wing fuscous, with the base and a large triangular area embracing the apical half of marginal vein and a similar large area on the posterior margin hyaline, the two hyaline areas usually not broadly separated, the infuscation basad of the hyaline spots yellowish, distad of the spots blackish becoming weaker toward apex of wing; posterior wing hyaline.

Male.—Length 2.9 mm. Head shaped as in the female; temples broad, at vertex equal to about half the greatest eye width; frons broad, narrowest at the posterior ocelli where it constitutes one third of the total width of head; ocelli in a very obtuse triangle; the anterior ocellus larger than the lateral ones, located at margin of scrobes, distant from the eye margin by nearly twice its own diameter; lateral ocelli separated from eye margins by about half their own diameters, the postocellar line four times as long as ocell-ocular line; scrobes deep, confluent and broadly rounded above. Antennae inserted very slightly

below the eyes; scape approximately four times as long as broad; pedicel no longer than broad; third joint very small, fourth nearly three times as long as thick, following joints to the tenth successively decreasing in length, the tenth subquadrate; club solid, not thicker than the funicle and about as long as two preceding joints. Pronotum very prominent; mesoscutum, scutellum, and axillae nearly uniformly sculptured, the sculpture similar to that of head; parapsidal grooves delicately impressed, complete; propodeum faintly reticulated, very nearly smooth, with a distinct median carina, the lateral folds absent; prepectus sculptured like mesoscutum, pleurum weakly sculptured and shining. Fore wing without a bare area basally, marginal vein a little more than twice the postmarginal, stigmal slightly more than half the postmarginal. Anterior femur large, much longer than the anterior tibia, the latter with a distinct swelling on ventral side at apex; hind femur slightly enlarged. Abdomen as long as thorax exclusive of prothorax, nearly smooth. Head, mesoscutum, scutellum, and axillae dull coppery, somewhat mixed with greenish on face, temples, and anterior part of mesoscutum; propodeum shining metallic green; mesopleura more or less shining coppery and green; prothorax and legs, including all coxae, testaceous; fore wing distinctly but not strongly infuscated, with the base and a large spot embracing most of the marginal vein hyaline but without a corresponding hyaline spot on the posterior margin; hind wing hyaline.

Type-locality.—Puerto Rico, W. I.

Type.—Cat. N° 50440, U. S. N. M.

Described from twenty females and one male reared from eggs of a mantid January 4, 1923, by G. N. Wolcott.

Family CHALCIDIDAE

SPILOCHALCIS LANIERI (Guérin) (new combination)

Chalcis lanieri Guérin, Iconogr. Regne Anim., III, Insectes, 1845,*
p. 412; pl. 67, fig. 4.

One specimen which agrees exactly with Cresson's redescription of this handsome scarlet species (Trans. Amer. Ent. Soc.,

* Dalla Torre (Catalogus Hymenopterorum, V, 378) gives the date as 1845, although Hagen and other authorities give 1829-1844 as the publication dates for Cuvier's Iconographie du Regne Animal, Insectes, correcting the undoubtedly erroneous date 1838 which appears on the title page in place of 1844. The specific name was originally published as *lanierii* but corrected to *lanieri* by Guérin in volume VII of Ramon de la Sagra's Historia Fisica Politica y Natural de la Isla de Cuba, page 315, 1856.

IV, 1872, p. 48) has been received from S. C. Bruner; reared at Santiago de las Vegas, Cuba, April 5, 1933, by A. R. Otero, from a cocoon of *Leucophobetron argentiflua* Hübner.

Spilochalcis rufa, new species

This species is very similar to *lanieri* (Guérin) but differs by having twelve or thirteen small teeth instead of five large irregular ones on lower margin of hind femur, by having all of the tibiae entirely black, and the wings a little less strongly infuscated. Differs from the description of (*Smicra*) *Spilochalcis coccinea* (Cresson) (new combination) by having the hind tibiae entirely black instead of red and the mesonotum coarsely punctate. Apparently differs from (*Smicra*) *Spilochalcis coccinata* (Cresson) (new combination) by having the mesoscutum and scutellum coarsely punctate instead of transversely wrinkled, the apex of scutellum carinately margined but without prominent processes, the head not yellowish, and the legs differently colored.

Female.—Length 6.5 mm. Face transversely rugose, a median ridge nearly smooth; occiput nearly smooth but with some transverse wrinkles; temples nearly smooth; genae smooth except for a few short rugae at base of mandibles; frons punctate laterally, the antennal scrobe deep and smooth. Antennal scape compressed and very slightly expanded below; flagellum thick, tapering slightly from base to apex; first funicle joint about twice as long as broad or somewhat shorter; club small, not nearly as long as two preceding joints; prothorax rugoso-punctate, with a strongly carinate anterior margin laterally, the carina weaker medially; mesonotum and scutellum coarsely punctate, the latter with a low marginal carina completely across the apex; propodeum rugose, hairy, with a prominent process above each hind coxa; propleura and mesopleura largely smooth, the femoral groove more or less foveolated; mesosternum punctate. Postmarginal vein longer and more slender than marginal, nearly three times as long as stigmal. Hind femur polished, with sparse setigerous punctures, the lower margin with 12 to 13 rather small teeth, and with a single tooth on inner side near base. Abdomen short, obtuse, and perfectly smooth, the petiole about three times as long as broad. Scarlet; the head above antennal fossae except a narrow orbital line, antennae entirely, a

broad median stripe on middle lobe and an obscure spot on each lateral lobe of mesoscutum, an apical stripe on hind coxa above, the hind trochanters, all tibiae, and all tarsi black; wings uniformly dark fuliginous, tegulae blackish.

Male.—Similar in every way to the female except that behind the eyes the black extends downward to the lower extremity of the eyes, the mesoscutum is entirely red with only a suggestion of fuscous medially, and the anterior and middle femora are black.

Type-locality.—Santiago de las Vegas, Cuba.

Type.—Cat. N° 50441, U. S. N. M.

Described from two females and one male reared September 9, 1930, from *Alarodia* sp. by A. R. Otero under Estacion Experimental Agronomica N° 9412-a, and one male said to have been reared by the same collector, April 16, 1931, from *Leucophobetron argentiflua* Hübner under N° 9553-a.

Family EULOPHIDAE

Secodella pallidiscapus, new species

Resembles *subopaca* Gahan, but the female differs from that species by having the first funicle joint nearly twice as long as the pedicel, by having the propodeum smooth and shining, by the punctures on prescutum being slightly larger, and by the scape being pale yellowish. The male differs by having the funicle joints distinctly pedicellate.

Female.—Length 1.9 mm. Head, viewed from in front, broader than high, viewed from above strongly transverse, as wide as the thorax; occiput concave; frons collapsed; ocelli nearly in a line, lateral ocellus almost touching the eye margin; antennae not clavate; scape slender; pedicel not much longer than broad; ring joints minute; flagellum hairy; funicle 4-jointed, the joints subequal, each one and one half to two times as long as thick, the first a little less than twice as long as pedicel, distinctly thicker than pedicel; club not thicker than funicle, 3-jointed, a little longer than the two preceding funicle joints together, terminating in a weak spicule; whole head finely reticulate-punctate. Mesoscutum, scutellum, and axillae finely reticulate-punctate, the punctures elongate and a little coarser on

prescutum than on scutellum; propodeum very short, smooth or very nearly so, with a delicate median carina, without lateral folds; prepectus large, strongly punctate; mesopleurum nearly smooth above, strongly punctate below the femoral groove; metapleurum smooth. Submarginal and marginal veins nearly equal, postmarginal not longer than the short stigmal; discal ciliation weak and sparse, the row of hairs behind marginal vein on ventral surface of wing consisting of only three long hairs. Hind coxae outwardly strongly sculptured, without a carinate dorsal margin. Abdomen as long as head and thorax or a little longer, conical, nearly smooth, shining, the first tergite comprising about one sixth of its length; ovipositor with only its apex exposed.

Color bluish green; vertex, mesoscutum, and scutellum dark green with bluish tints; propodeum, metapleura, and base of abdomen bright metallic green; head (except vertex), prothorax, pleura, and abdomen (except above at base), violaceous mixed with green; antennal scape pale yellow, flagellum violaceous, covered with pale hairs; all coxae, femora, and tibiae concolorous with the thorax, the extreme apices of tibiae very narrowly and first four joints of all tarsi pale testaceous, apical joint of all tarsi dark; wings hyaline, the venation pale.

Male.—Length 1.6 mm. Antennal scape brownish black, slightly tinted with metallic, a little compressed, about four times as long as broad; pedicel about as long as broad; flagellum consisting of 5 subequal funicle joints and a 2-jointed club; each funicle joint narrowed apically into a slender pedicel which is about as long as the thickened basal portion; the club not thicker than the funicle, the joints not pedicellated but distinctly separated, the apical joint terminating in a rather long slender spicule; all funicle and club joints clothed with coarse long hairs which are distinctly longer than the segments; abdomen about as long as the thorax. Otherwise like the female.

Type locality.—Santiago de las Vegas, Cuba.

Type.—Cat. N° 50442, U. S. N. M.

Described from 4 females and 2 males received from S. C. Bruner, and said to have been reared January 9, 1931, from *Lonchaea bruneri* Malloch.