

TWO NEW METALLIC SPECIES OF *HELINA* FROM CHILE(DIPTERA: MUSCIDAE)¹

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In limited Chilean material from various sources two apparently new metallic Phaoniines have been found which seem best referred to *Helina*, though neither agrees fully with Malloch (1934) or other diagnoses of that genus.

***Helina violescens*, New Species**

Length 7 mm. A blackish fly with thorax blue-black and abdomen blue-green. Legs black; eyes bare; squamae dark; parafacials and lunule silvery pollinose; 4 posterior dorsocentral bristles.

Male.—Front 0.13 of head width; frontal rows of about 10 pairs, the upper 3 or 4 hair-like; frontal vitta velvety black, broadened to lunule; parafrontals linear, dark pollinose; ocellar bristles very strong, proclinate; verticals undifferentiated; parafacials narrow, silvery pollinose; eyes bare; antennae black, segment 3 is 1.4 as long as 2; arista long, minutely pubescent; clypeus with antennal depressions; vibrissae slightly above oral margin; cheeks black, 0.2 of head height; occiput black-haired. Palpi black, slender.

Thorax shining blue-black, with 2 faint pollinose vittae on anterior half of notum. Chaetotaxy: Acrostichals 3:1; dorsocentrals 3:4; intraalars 1:2; supraalars 1:2-3 (prealar strong); humerals 3; notopleurals 2, posterior callus 2; scutellars 3 marginal, 1 small discal, some setules laterally outside the marginal bristles; propleuron bare; prosternum bare; metasternum bare; pteropleuron and hypopleuron bare; beret hairs 1-2; sternopleurals 1:2 to 2:3; postalar declivity bare; infrasquamals none. Spiracles black. Wing hyaline, veins bare, dark brown; vein 3 ends in wing apex; vein 4 straight, posterior cross vein sinuous; costal spine vestigial; basicosta and epaulet black; squamae blackish, the margins darker; lower lobe extends 0.75 beyond upper. Halteres black. Legs black. Middle tibia with 2 small posterior bristles and none on anterior side; hind tibia lacks calcar, but with a very long, erect PD at apical fourth and 2 AD, 2 AV bristles.

Abdomen shining, blue-green, with scattered erect bristles on the sides of third and disc of fourth segments; venter black-haired; 1st sternum bare. Fifth sternum with a small notch; genital segments small, retracted.

Female.—Similar to male in most respects. Front slightly narrowed to vertex, which is 0.33 of head width; ocellars more divergent; ocellar triangle large, reaching half way to lunule; inner and outer verticals well developed; orbital bristles absent; frontal rows of about 8 pair of bristles; parafrontals setulose; parafacials glabrous on upper half; costal spine longer, double in allotype, vestigial in most paratypes; tibial bristles identical to the male.

Type Series.—Holotype male, Las Condes, Santiago Prov., Chile, Oct. 6-12, 1958 (Luis Peñas); Allotype and two male, one female para-

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types, "Concep(cion), 1.Oct.(19)55, J. A. Coll."; 1 female, Quintero, Oct. 15, 1951 (Maria Etchevery); 2 females, Angol, Chile, Nov. 9 and Sept. 19, 1950 (D. Cataldo); 1 female, Quillota, Valparaiso Prov., Chile, Dec. 30, 1954 (Luis Peñas); 5 males, Barrancas, Santiago, Chile, Mar. 14, 1955 (Luis Peñas); 2 males, 21 females, Dalcáhué, Chiloé Prov., Chile, lat. 42°23', Feb. 10–20, 1957 (Luis Peñas); one male, Maullín, Chile. Holotype, allotype and paratypes at Washington State University; paratypes to be sent to Prof. Jorge Artigas, Univ. of Concepción; Prof. Maria Etchevery and the U. S. National Museum.

This species keys to *Helina* (part) in Couplet 5b of Snyder (1940) because the hypopleuron is bare; however the presence of setules about the posterior notopleural bristle and on the outer margin of the scutellum would exclude it from that group in couplet 4. In Malloch's key (1934) it runs to *viola* Malloch, but differs by the bare eyes, hyaline wings and smaller size. If the PD bristle of the hind tibia is interpreted to be the calcar, this species runs to *Euphaonia fulvohumeralis* Malloch, which is obviously different. It seems better to refer it to *Helina*, at least for the present.

Three of the five Barrancas males have the wings deeply yellowed but do not appear to differ otherwise. Some specimens may have three pairs of postsutural acrostichals, but only the prescutellar pair is strong.

Helina veniseta, New Species

Length 7 mm. Superficially very similar to the preceeding species but lunule and parafacials with blackish pollen, cruciate interfrontals present, acrostichals 2:3, all very strong, notopleuron with scattered setules about both bristles and vein 3 setulose.

Female.—Head black; eyes extremely sparsely and minutely spiculose. Front parallel-sided, 0.33 of head width; frontal rows of 9–10 pair, the upper 2 pair reclinate; frontal vitta broad, velvety black, with a pair of cruciate interfrontals and the ocellar triangle reaching about 0.33 to lunule from the anterior ocellus; ocellar and vertical bristles very strong; no orbitals; parafrontals narrow, with a row of black setules; parafacials wider, polished on upper half, blackish pollinose below; antennae black, segment 3 is 1.4 as long as segment 2; arista very minutely pubescent to tip; vibrissa as in preceeding species; cheek 0.25 of head height; cheek, metacephalon and occiput entirely black-haired; palpi black, slightly swollen; haustellum short. The antennal axis is 0.64 and vibrissal axis 0.63 of the head height.

Thorax bluish-black, faintly dusted along front margin; acrostichals 2:3; dorso-centrals 2:4; intraalars 1:2; supraalars 1:3, the prealar subequal to the posterior notopleural; humerals 3; notopleurals 2 plus many setules; posterior callus 2; scutellars 3 strong marginals and a weaker basal, 2–3 discals; propleuron and prosternum bare; sternopleurals 2:2; pteropleuron setuled on posterior half; hypopleuron setuled before the spiracle, bare below; beret hairs present; infrasquamals absent. Posterior spiracle large, oval, without bristles in lower margin; supra-spiracular convexity equal in size and shape to the spiracle, pilose. Legs black;

hind tibia with erect PD at apical fifth and 2 AD and 2-3 AV at about middle; hind femur with complete AD and AV rows; middle tibia with 3 P, no PV bristles; middle femur with a complete PV row, the basal 2-3 stout and erect; anterior tibia with only one outstanding bristle, dorsal and subapical. Wing hyaline, veins dark; vein 3 with dorsal setules at base, extending half way to the cross vein, ventrally bare on node, followed by 3 small setules, visible on one wing only; vein 3 apically rather strongly bowed; vein 4 straight on apical section; remigium bare; costal spine vestigial; basicosta and epaulet black; squama blackish with black margins, the lower lobe subtriangularly rounded, projecting about halfway beyond the upper lobe; halteres black.

Abdomen shining blue, the 4th segment concolorous, with scattered, erect hairs. Venter black-haired, the first sternum bare.

Male.—Unknown.

Holotype.—Female, Las Condes, Santiago Prov., Chile, Oct. 6-12, 1958 (Luis Peñas), at Washington State University.

The setulose vein 3 would exclude this species from *Helina*. However, in Malloch's key it does not fully agree with *Myiospila* because vein 4 is straight nor with *Hydrotaea* because of the absence of a proclinate orbital bristle, so it would key falteringly to *Helina*. Its resemblance to *violescens* may be more than superficial. In Curran's (1934, 1965) Manual it runs to *Mydaea*, but it is excluded from that genus by the presence of anterior acrostichal and female interfrontal bristles. If keyed past *Helina* in Malloch it differs from the metallic *Darwinomyia* by the eye not conspicuously pilose, the presence of hypopleural hairs and absence of PV bristles on the middle tibia; from *Euphaonia fulvohumeralis* Malloch by the clavate palpi, from *Psilochaeta* by the presence of cruciate interfrontals in the female and from *Brachygasterina* by the hypopleural hairs. Furthermore, all of these genera are stated in Malloch's key to have vein 3 bare.

Helina violescens and *veniseta* do not agree with any of the metallic Muscidae described from Argentina by Shannon and del Ponte (1926). In Albuquerque's (1952) key to metallic Neotropical Phaoninae they run best to *Brachygasterina* and differ from *Xenomorellia* Malloch and *Dasymorellia* Malloch by the remigium bare.

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