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New Weevils of the Genus *Metamasius* from Central and South America (Coleoptera, Curculionidae, Rhynchophorinae)

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Since the publication of my revision of *Metamasius* (Vaurie, 1966, 1967), three new species of species group I have been recognized; they are described here. The species of this group are characterized chiefly by having a lateral line on the aedeagus which divides the dorsal and ventral surfaces. Species of group II have only a partial line, and species of group III have no line.

I wish to thank the Graphic Arts Department of the American Museum of Natural History for the inking of the drawings, and Mr. Robert E. Logan of the Museum for the photographs.

***Metamasius illusionis* Vaurie, new species**

Figure 1

Type, male, Buenaventura, Colombia, May 18, 1926, O. F. Cook, collector, in "flower 'cabecite' Palm," and one male and one female paratype, same data, in the United States National Museum, Smithsonian Institution.

DIAGNOSIS: Similar in aedeagus to other members of *hebetatus* subgroup, but almost identical to *cerasinus* and *crustosus* Vaurie of *canalipes* subgroup in some characters, i.e.: elongate, subparallel shape; flat dor-

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sum; buffy, coated, opaque surface; and strongly ribbed elytra. Differing externally from *canalipes* subgroup by having hind femur scarcely bulbous, front coxae more widely separated, and beak of female more arcuate, not so straight. Differing internally by having apodemes of male genitalia contiguous, not forked, behind aedeagus, and attached to aedeagus dorsally instead of laterally.

DESCRIPTION OF TYPE: Length (without beak), 8 mm. Ground color black with some red, but covered with buffy, waxy coating; pronotum and elytra showing red pattern when specimen wet with brush, pattern consisting of lateral stripe on each side of pronotum, and broad red C on left elytron, reversed on right elytron, each half circle connected at base to red at base of second and third intervals (sutural interval is considered first interval). Peduncle of postmentum narrow, its sulcus not visible (but see variations below); in profile horizontal. Beak as long as pronotum; in profile same width throughout except for wider base with its slight sinuation under scrobe; beak arcuate, somewhat compressed; sides of base and most of upper surface encrusted with yellowish tomentose covering; punctures denser above where visible near apex, but on sides sparse and minute near apex, larger and coarser near base; basal dilation longer than wide, and rather feeble; under side of beak narrowly sulcate in basal half, with tomentose punctures making crenulated effect; scrobe with posterior edge distant from eye by about one and one-half times width of scape. Antennal club with spongy part shorter than base. Pronotum elongate; sides parallel in basal half, thence gently arcuate to well-defined apical constriction; densely punctate; tomentose covering denuded in spots; basal depression faintly indicated; basal margin subtruncate, impressed. Elytra scarcely wider than pronotum; sides subparallel to near apex; striae punctures well separated; intervals, except where denuded of coating, subcrispate with uniseriate, whitish, tomentose punctures. Scutellum elongate-triangular, flat, tomentose. Pygidium convex, vertical, tomentose, narrowing to rounded apex, apical hairs appearing worn.

Under side entirely punctate with same kind of punctures as those on pronotum; legs and sides tomentose; distance between front coxae about equal to width of antennal club, or more than one-third of diameter of coxa, distance between middle coxae equal to diameter of coxa; venter flat; last segment of abdomen subtruncate at apex. Mesepimeron about three times wider than long, its outer border acuminate. Hind tibia slightly sinuate near base, with fringe of hairs as long as one-half of width of tibia along inner edge; tibia appearing carinate because of lines of tomentose hairs. Front and middle femora bulbous,

but hind femur only slightly widened before apex and with sparse hairs on inner edge; middle femur scarcely reaching to base of metasternum, hind femur to apex of elytra. Tarsi dorsally tomentose; third segment of front tarsus not larger than club of antennae, third segment of hind tarsus narrower than that of front, not quite twice width of second segment, below entirely hairy; second segment of hind tarsus about as wide as long. Aedeagus strongly curved, its deflexed apex, viewed dorsally, slightly wider than base, and rounded at apex but with slight sinuate

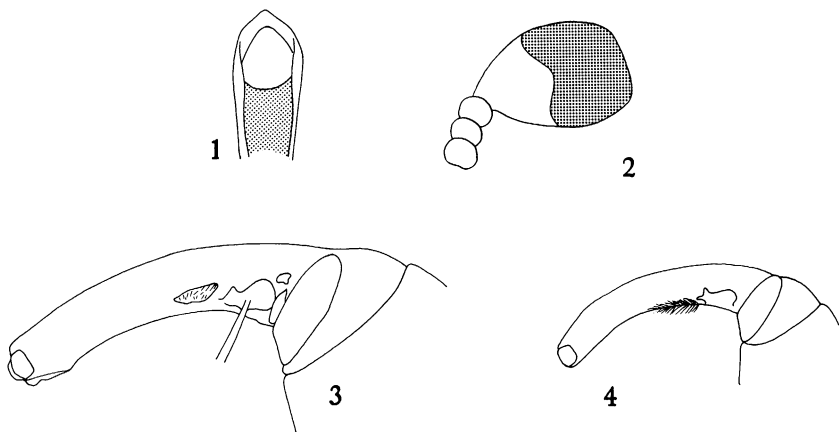


FIG. 1. *Metamasius illusionis* Vaurie, new species, apex of aedeagus, dorsal view.

FIGS. 2, 3. *Metamasius alveolus* Vaurie, new species. 2. Antennal club. 3. Beak.

FIG. 4. *Metamasius barbatulus* Vaurie, new species, beak of male.

projection at middle; border narrow (fig. 1). Eighth tergum with apex rounded and fringed with hairs.

VARIATIONS FROM TYPE: The paratypes are larger, the female measuring 11 mm. and the male 13 mm. They are entirely coated dorsally, but show red, when wet, as does the type, although the female shows no red on the pronotum. The female specimen differs from the males by having the beak more strongly arcuate, somewhat longer, with fewer punctures laterally and virtually no punctures inferiorly; it has slight subrostral teeth at the base, and has a distinct sulcus at the apex of the peduncle of the postmentum (this sulcus is evidently worn smooth on the males). The large male paratype has the sinuation of the hind tibia more pronounced than that of the type, the hairs of the hind tibia and femur longer, and a subapical median line of hairs on the pygidium.

Both paratypes have the front intercoxal space slightly wider than that of the type.

REMARKS: Of the characters given above, those that are the same in the 15 other species of the *hebetatus* subgroup are the peduncle, base of the pronotum, scutellum, widely spaced coxae, mesepimeron, and apodemes of the aedeagus. The arrangement of the apodemes distinguishes this subgroup from other subgroups of species group I.

Most of the species of the subgroup have some distinct characters differentiating them at once from *illusionis*, and all but four differ from *illusionis* by lacking the glazed or tomentose coating on the beak, dorsum, and legs. Of the species in which some individuals may have the coating and thus may readily be confused with *illusionis*, *hebetatus* Gyllenhal and *tectus* Vaurie have shorter, very bulbous hind femora, a longer spongy apex of the club, and slightly different elytral pattern when wet; specimens of *dasyurus* Champion also have a longer spongy apex, seldom have coating dorsally, and differ further by having a narrower pygidium furnished with two apical tufts of hairs and a median subapical tuft, the male differing by having long hairs on the front, not the hind, tibia. The fourth similar species is *octonotatus* Champion, which has the elytral intervals impunctate, and lacks the subcristate, ribbed effect, the pygidium has two apical tufts of hair extending beyond the apex, and the elytra are mostly red, with from two to eight black spots.

In my key (Vaurie, 1966, pp. 238-245), *illusionis* goes to couplet 57 with the species of the *canalipes* subgroup. With the addition of the locality "Colombia" to Bolivia, Brazil, and Peru in the second part of the couplet, *illusionis* would then proceed to 58, containing *canalipes* and *crustosus*. To separate it from these two species, we should insert between couplets 57 and 58 the following:

Pronotum, when wet, black, or black with two long lateral red marks; aedeagus with slight median sinuation at apex (fig. 1). . . . *illusionis* Vaurie, new species
 Pronotum, when wet, red with a long median and two short lateral black marks; aedeagus at apex truncate or acuminate.
 *canalipes* Gyllenhal and *crustosus* Vaurie

Metamasius alveolus Vaurie, new species

Figures 2, 3, 5

Type, male, Estrella, Costa Rica, 2000 meters, May, on *Bromelia*, and paratype, female, Candelaria Tal [=Candelaria Mountains], Pacific side of Costa Rica, December 28, 1923, F. Nevermann, collector, in the United States National Museum, Smithsonian Institution.

DIAGNOSIS: Identifiable by combination of: contiguous, tumid orange

spots on elytra (fig. 5), very elongate pronotum, dark red color, and nearly straight, rather short, stout beak (fig. 3), with small, elongate, hairy depression on sides near base; male with long, hairy fringe within hind tibia.

DESCRIPTION OF TYPE: Length (without beak), 18 mm. Dark red above; elytra with elevated orange spots (arranged as in fig. 5); head, beak, under side black. Peduncle of postmentum with slight prominence in front which is obtusely angulate in profile. Beak distinctly shorter than

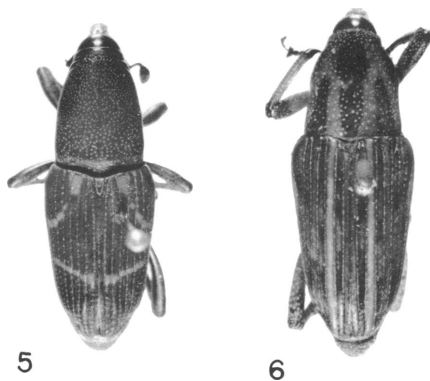


FIG. 5. *Metamasius alveolus* Vaurie, new species.

FIG. 6. *Metamasius barbatulus* Vaurie, new species.

Figures not to scale.

pronotum; of about the same width throughout; nearly straight, cylindrical; sides in front of scrobe with elongate depression about one-half of length of scrobe and hairy within; densely, rather finely punctate except for extreme apex; basal dilation, viewed from above, longer than wide and very feeble; under side impunctate, with two feebly impressed lines; scrobe opening onto eye; narrow slit between eye and scrobe and small fovea above scrobe. Antennal club very large, its spongy apex quadrate and longer than base (fig. 2). Pronotum one and one-half times longer than wide; very feebly narrowing from base to ill-defined apical constriction; finely punctate, more densely on sides; no basal depression; basal margin slightly sinuate at middle, median third strongly margined and furrowed. Elytra scarcely wider than pronotum; sides gently convergent to apex; striae punctures distinct, well separated; intervals impunctate. Scutellum elongate-triangular, flat. Pygidium rather flat, with faint, median, hairy ridge; apex rounded-truncate, hairy.

Under side with larger, coarser punctures on abdomen and metastern-

num than those on prosternum; legs finely punctate; prosternum feebly tumid in front of each coxa; distance between front coxae no wider than segment of antennal funicle, or about one-eighth of diameter of coxa; distance between middle coxae slightly less than diameter of coxa; venter slightly depressed; last segment of abdomen with median oval patch of long but sparse hairs, longer than hairs of pygidium; apex shallowly depressed. Mesepimeron with front and hind borders subparallel, outer edge not acuminate. Hind tibia very slightly bent inward at middle; inner edge furnished with double row of abundant hairs as long as tibia is wide, hairs shorter toward base of tibia; other tibiae and all femora with somewhat shorter hairs on inner edges. Front and middle femora slightly bulbous; hind femur gradually widened and extending to apex of elytra, middle femur to base of metasternum. Tarsi dorsally shining; third segment of all tarsi not larger than antennal club; widely dilated to three times width of second segment; spongy-hairy below on sides and at apex, leaving glabrous space at base; second segment twice longer than wide. Aedeagus truncate apically; border narrow. Eighth tergum rounded-truncate and hairy at apex.

VARIATIONS FROM TYPE: The female paratype is slightly larger, 20 mm., and agrees with the male except for the following differences: The hairy depression on the beak in front of the scrobe is deeper; the punctuation of the beak is scarcely visible; the pronotum is so dark red as to appear black; the intercoxal space of the front legs is nearly twice as wide; the venter is not depressed; there are no hairs on the apex of the abdomen and only short hairs within the tibiae and femora. The hairs of the pygidium are evidently worn off, and no median ridge is visible; the antennae are lacking except for the first few segments; the apices of the eighth tergum are conjointly rounded.

REMARKS: The type specimen is labeled "*Rhodobaenus*, n. sp.?" but it differs from all species of that genus by having a lateral line on the aedeagus and from the majority of species by having the inner apex of the claw segment smooth, not at all excavated. This species has somewhat the appearance of an individual of *Sphenophorus*, but the tarsal soles are more hairy than those of that genus, the front coxae are not contiguous, the elytra have tumid colored markings, and the peduncle of the postmentum, viewed frontally, is small, not large in comparison with the apex of the beak.

Of the various subgroups of *Metamasius*, *alveolus* agrees best with the characters of the *fasciatus* subgroup. In my key (Vaurie, 1966, p. 239) to the species of group I, *alveolus* comes to couplet 15, for which may be substituted the following:

15. Sides of beak either with long line of embedded, tomentose hairs, or with hairy basal depression..... 15A
 Sides of beak not as stated..... 16
- 15A. Beak laterally from base to near apex with median line of dense, tomentose hairs; base of pronotum sinuate medially; male with long hairs on front tibia..... *peruanus* Hustache
 Beak laterally in front of scrobe with sparsely hairy depression no longer than scrobe (fig. 3); base of pronotum subtruncate; male with long hairs on hind tibia..... *alveolus* Vaurie, new species

A similar hairy depression or alveolus on the sides of the beak is found in *M. viduus* Hustache of species group III, and, although less marked and from some specimens absent, in *M. elegantulus* Hustache and *M. miniatopunctatus* Chevrolat of that group.

***Metamasius barbatulus* Vaurie, new species**

Figures 4, 6

Type, male, Balzapamba, Bolivar Province, Ecuador, March-April, 1894, M. de Mathan, collector, in Muséum National d'Histoire Naturelle, Paris, and a female paratype, same data, in the American Museum of Natural History.

DIAGNOSIS: Differing from other species in combination of black and orange striped elytra (second and eighth intervals entirely orange), with short hairs under beak near base or in basal half (fig. 4). Differing from majority of species of group I by having apex of beak, in dorsal view, wider than front intercoxal space.

DESCRIPTION OF TYPE: Length (without beak), 12 mm. Surface opaque; head, beak (except for red base on top), scutellum, and most of under side black; pronotum black, with two red-orange lateral stripes forked at base; elytra striped with reddish orange and black, second and eighth intervals orange from base to apex; femora and tibiae orange, with apices black; sides of second abdominal segment and sides of metasternum and pronotum with colored markings. Peduncle of postmentum slightly, narrowly sulcate; in profile horizontal, not angulate. Beak about same length as pronotum; of same width throughout; slightly arcuate, cylindrical; large punctures on under side near base from which emerge fine, sparse hairs (fig. 4); sides and top of beak more finely punctate, especially toward apex; basal dilation sharp, longer than wide; scrobe with posterior edge distant from eye by width of base of scape. Antennal club rather elongate, its spongy apex about one-half of whole. Pronotum distinctly longer than wide; sides in basal half bent slightly inward, thence arcuate to apex; finely, sparsely punctate; no basal depression; basal margin seemingly slightly sinuate at middle, but sides

covered by base of elytra. Elytra and scutellum (except for color) as described above for *alveolus*. Pygidium flat; apex rounded, hairy.

Under side and legs well punctate; prosternum faintly tumid in front of each coxa; distance between front coxae slightly wider than segment of antennal funicle; distance between middle coxae slightly more than one-half of diameter of coxa; venter slightly depressed; last segment of abdomen with tufts of longer hairs on each side of apex, short hairs at middle; apex not depressed. Mesepimeron with front border arcuate, outer border truncate. Hind tibia straight, with appressed, sparse hairs; femora sparsely hairy, gradually widened; middle femur extending to trochanter of hind femur; hind femur extending to apex of elytra. Tarsi dorsally shining; third segment of all tarsi smaller than antennal club, gradually dilated to only twice width of second segment; second segment two to three times longer than wide and nearly as long as third. Aedeagus shallowly emarginate at apex; border narrow. Eighth tergum at apex rounded-truncate and hairy.

VARIATIONS FROM TYPE: The female paratype is larger (16 mm.) and has a shiny surface. The punctures of the beak are finer throughout except for those on the under side which are even larger than those of the male. The infrarostral hairs are more noticeable and extend farther front and back. The peduncle of the postmentum is shallowly bilamellate at its apex and is angulate in profile. The last segment of the abdomen lacks the hairy tufts of the male.

REMARKS: This species may be considered in the *fasciatus* subgroup, in which it is perhaps most similar to *bromeliadicola* and *quadrilineatus* of Champion. It differs from them, as well as from two other orange (or red) and black striped species (*scutellatus* Hustache and *vicarius* Vaurie) by having hairs under the beak, more narrowly spaced front coxae, longer second tarsal segment, and different elytral pattern. Infrarostral hairs occur elsewhere in the genus in males of *cinnamominus* Perty and *peruanus* Hustache and faintly in some specimens of *anceps* Gyllenhal, all of species group I, and in *miniatopunctatus* Chevrolat and *personatus* Vaurie of group III. They occur abundantly in several species of the related genus *Rhodobaenus*.

In the key to species groups I and II (Vaurie, 1966, p. 241), this species stops at couplet 33 and does not agree with either alternative. Therefore, we may insert before this couplet the following:

Under side of beak near base hairy on each side of median glabrous line; no infrarostral tooth.....*barbatulus* Vaurie, new species
Under side of beak either not hairy, or (male of *cinnamominus*) both hairy and with large, triangular, basal tooth..... 33

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