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SOUTH AMERICAN BEES

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The holotypes of the new forms will be found in The American Museum of Natural History.

Centris (Hemisia) nitens callospila, new variety

MALE.—Length about 13 mm., anterior wing about 10 mm.; pubescence entirely pale, on head and thorax white, with a faint creamy tint on vertex and dorsum of thorax; eyes very large, light yellowish brown; face narrow; clypeus (except a broad black band on each side of upper part), a triangular supraclypeal mark (the lateral extensions almost linear), lateral marks filling space between clypeus and eye. mandibles (except the apical part, which is strongly bidentate), labrum entirely, and scape in front, all bright lemon yellow; flagellum obscurely reddish beneath, with no distinct red spot on third joint; scutellum red, but the rest of thorax black; tegulae testaceous; wings brownish hyaline, not dark, stained along the veins; legs very dark reddish basally, but tibiae and tarsi, and apical half of femora, clear red; a small yellow spot on each knee; no stripe on front tibia; spurs red; abdomen smooth and shining, bluish green shading to brassy green, the margins of the tergites broadly pallid, not covered by hair, except that the apical segments have much white hair; five tergites are green; what can be seen of the sixth, and the apex, are light red; sides of tergites 2 to 5 with large lemon-yellow spots; venter light red, with a blackish stain in middle.

British Guiana: Waranama, Nov. 14, 1936 (J. Ogilvie). Closely resembles C. bakeri Cockerell, from Brazil, but differs by the pale dorsal pubescence, lack of fuscous hair on vertex, paler wings, more red on legs, no yellow stripe on front tibiae, no black hair on hind tibiae, fifth tergite green, four yellow spots on each side of abdomen. It is very like the male C. nitens Lepeletier, as I have recognized it from Waranama (whence come females of C. nitens also), but that has red hair on head and thorax above, dilute fuliginous wings, a conspicuous red spot at end of third antennal joint, and abundant long fulvescent hair on hind margins of posterior tibiae and tarsi. Yet the resemblance is so close that I provisionally regard the present insect as a variety, supposing that the hind legs may have been largely denuded of hair.

Centris rufulina, new species

MALE.—Length about 10.5 mm., anterior wing 9.2 mm.; head and thorax black, abdomen and legs red, the legs more or less black basally, the anterior femora black in front, the middle femora mainly black or very dark in front, but apex and

upper margin red, the hind femora with more than the basal half black or nearly so in front and behind; pubescence entirely pale, except a fuscous band on occiput; the short dense hair of thorax above is reddish fulvous, on sides of thorax it is paler, and on lower part of cheeks white; eyes red-brown; clypeus (except a broad band at each side above), a short transverse crescentic supraclypeal mark, lateral marks filling space between clypeus and eye, malar space, labrum entirely, mandibles except apex, and scape in front, all bright lemon yellow; third antennal joint red beneath, flagellum obscure reddish; tegulae clear red; wings very dilute fuliginous; hind tibiae and tarsi with long pale hair; hind trochanters unarmed; abdomen entirely clear red, except a yellow spot at each side of second tergite.

British Guiana: Waranama, Nov. 10, 1936 (L. Ogilvie). In Friese's table of *Rhodocentris*, this runs nearest to *C. labrosa* Friese, having the labrum not greatly broader than long, but it is not black or notched at end. Superficially, it looks just like *C. vulpecula* Burmeister, but the legs and face are quite different. Actually, it is a red derivative of the group of *C. nitens* Lepeletier, which falls in *Cyanocentris* in Friese's arrangement. It is not a color-variety of *C. nitens*, being considerably smaller. The clypeus is flattened and polished in middle, much more shining than in male *C. nitens*.

Ceratina paraguayensis Schrottky

British Guiana: Waranama, Nov. 15, 1936 (J. Ogilvie). It differs from the type (9) by having the antennae black, but agrees so closely with Schrottky's description of this Paraguay species that I cannot refer it elsewhere. It is closely allied to *C. chrysocephala* Cockerell, from Brazil, but differs by the yellow spot on tubercles, the blue-black mesothorax, black scape, and brassy green abdomen.

When we consider the topography of South America, it appears probable that the fauna of Paraguay may more closely resemble that of the lowlands of British Guiana than does that of the eastern coast of Brazil, as at Rio de Janeiro. The coastal lowlands form a narrow strip, cut off from the interior by the vast plateau of Brazil. But from the valley of the Paraná and Paraguay the lowland humid forest extends northward through western Brazil and the broad valley of the Amazon, and is connected with British Guiana by way of the Rio Branco.

Eulaema polyzona Mocsary

British Guiana: Waranama, Nov. 16 and 20, 1936 (J. Ogilvie).