March 27, 1916.

NUMBER 24.

OCCASIONAL PAPERS OF THE MUSEUM OF ZOOLOGY

UNIVERSITY OF MICHIGAN

ANN ARBOR, MICHIGAN.

PUBLISHED BY THE UNIVERSITY.

SOME BEES FROM BRITISH GUIANA.

By T. D. A. Cockerell.

The bees listed below were collected at Dunoon, British Guiana, in 1914, by the Bryant Walker Expedition from the Museum of Zoology. Mr. F. M. Gaige, who collected the specimens, has supplied some notes on the habits of the species. Although there are no new species, the range of several is considerably etxended, and the specimens of *Eulama bruesi* include the hitherto unknown male.

Aglaë cærulea Lepeletier.—One specimen, August 29. It is a very fine shining dark blue; a specimen from Brazil is much greener.

Exærete dentata (L.).—Four specimens, August I and I4. This is very like E. *smaragdina* (Guerin), but is a little

SCIENTIFIC PAPERS OF THE UNIVERSITY OF MICHIGAN NO. 25.

smaller, with the ocelli not so close together, and the mesothorax more closely punctured.

Euglossa cordata (L.).—One specimen, August 2. A widely distributed species.

Eulæma bruesi Cockerell.—Four females and two males, August 2. The female exactly agrees with the type of E. bruesi from Guayaquil, Ecuador. The male, not before known, has the front and sides of face brilliant green; the mesothorax (nearly hidden by black hair) and the tegulæ green; the first abdominal segment purplish, not pure black, with black hair; concealed part of second segment dark; clypeus with a large oval depressed space, having raised margins, and through the middle of this a strong keel. In structure and general characters this agrees closely with E. mexicana Mocsary, but the pronotum is entirely black haired, as is the whole of the thorax, and the swollen hind tibiae have a brilliant shining green area behind. The size is also greater, about 20 mm.

Ducke remarks that the *E. smaragdina* group is insufficiently known, and suggests that perhaps various species have been confused. This seems to be the case. The neotropical *Xylocopa* and Oriental *Crocisa* have similarly been supposed to consist of relatively few very variable species, but when good series of the several forms are obtained, it is seen that they are constant, the supposed variability being due to the mixing of different things from various localities.

Eulæma auripes (Gribodo), based on a male, 21 mm. long, from Cayenne, differs from the male of *bruesi* in the subobsolete median carina of the clypeus, the golden hair on the middle tibia and basitarsi; (in *E. bruesi* black on middle tibiae, dense and shining cream-color on outer side of basitarsi), and the golden hair on outer side of hind tibiae (this part in *E. bruesi* bare, with only very minute inconspicuous scattered hairs). Apparently related to E. auripes is E. concava (Friese), described as a variety of E. mexicana from four males collected in Nicaragua. This is 19 mm. long, with the clypeal keel almost obsolete. Ducke reports that it is also found in Brazil (Para).

E. bruesi was tolerably common locally. A number of individuals lived beneath the hut that served as headquarters for the expedition. They constructed nests of wood shavings in chinks between the floor and the posts that kept the hut out of water at high tide, and were frequently seen bearing shavings across the little clearing. Where they retired to make the shavings is a mystery, but they were not made at the nest site.

Epicharis scutellata Smith.—One specimen, August 20. The specimen of this rare species, described from Brazil, is a female. It is 22 mm. long and has the band on first abdominal segment entire, though narrowest in middle, while segments 4 to 6 (except base of 4) are feruginous. There is a minute cream-colored spot at apex of anterior and middle femora. According to Ducke, this is the female of *E. zonata* Smith, which has priority. The species was common on the sand hills where the forest thinned to dry, open areas of bare sand and stunted trees known locally as "mouries." Here in the bare sand were scores of burrows made by this bee. They were about $\frac{1}{2}$ inch in diameter, of undeterminable depth, with a small pile of sand at the entrance, and in general appearance were much like a very small rodent burrow.

Megalopta idalia Smith.—One female, September 2. Previously known from Brazil.

Trigona amalthea Oliv. (fuscipennis Friese).—Five workers, July 17. A common and widely distributed species. Abundant on the tall, sweet lilies about camp.

