

NOTES ON THE NESTS OF *MONTEZUMIA* (Hymenoptera, Eumenidae)¹

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Montezumia is a neotropical genus of mason wasps, one species of which reaches southern Arizona. Although these are relatively large wasps, little has been reported regarding their nests, and the published reports are not entirely consistent with one another. Hence it seems worth describing a nest I recently encountered in Colombia and a very similar nest, also from Colombia, found in museum material.

These nests bear out Saussure's (1875) characterization of the nests as "agglutinated masses of earth, in which one finds the cells disposed in parallel order", as well as Maindron's (1882) statement that the walls are constructed "en terre gâchée". However, Bodkin (1918) later mentioned that C. B. Williams had found a species that "constructs burrows in the clay banks of the canals or trenches to be found on all sugar estates". (Bodkin also mentioned a species that makes fragile, pendant nests and forms large colonies, but Bequaert, 1921, properly regards this as a case of confusion with a similarly colored social vespid.) Finally, F. X. Williams (1928) reported a species that nests in the ground and surrounds its hole with a ring of pellets.

It is by no means unusual to discover nests of more than one basic type within one genus of Eumenidae. For example, some species of *Stenodynerus* make free mud nests while others nest in hollow twigs and still others nest in the ground. Presently available information suggests that some species of *Montezumia* are ground-nesters while others make free mud nests. The following is a summary of the species that have been studied:

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Species	Nest	Prey	Reference
M. spinolae Saussure (=infernalis Spinola)	In ground	"Green Caterpillars"	Bodkin, 1918
M. brunea Saussure	In ground	Skipper larvae	Williams, 1928
M. ferruginea Saussure	Mud nest	--	Saussure, 1875
M. sp.	Mud nest	Caterpillars	Maindron, 1882
M. cortesia Saussure	Mud nest	Larvae of Microlepidoptera	Present Paper
M. dimidiata Saussure	Mud nest	--	Present Paper

Montezumia dimidiata Saussure³

A nest of this species was found along a dirt road closely paralleling the Rio Anchicaya, in the province of Valle, Colombia, on 14 January 1972. This was an area of wet tropical forest at an altitude of about 400 meters, approximately 40 km from the Pacific coast near Buenaventura. The nest was built of brownish soil and was plastered beneath a large rock that sloped in such a way that the nest was well protected from rain although still clearly visible from the road. Much of the rock was covered with lichens and rootlets, but the area surrounding the nest was bare. The nest was angled near the middle and measured 13 cm long in a straight line, 17 cm when measured along the upper margin. It was 2.5 cm wide at one end, where the cells were in a single row, 5 cm wide at the other end, where they were in two rows. The outside of the nest was well plastered with soil, so that the individual cells were barely evident from the exterior. In all there were 17 cells, some of those near the center being to some extent one above the other (Fig. 1). Seven cells had earthen closures about 2 mm thick; these contained fully grown larvae or pupae. Seven cells were empty and were open. Two cells containing eggs and one containing a newly hatched larva were also open; the cell containing the larva and one containing an egg each had a small turret, 4-5 mm long, at the entrance. Cells measured 9 x 20 mm in inside dimensions.

This nest was observed from time to time over two days, and on each occasion 3 or 4 adults were found to be resting on the nest or in some of the empty cells, facing outward. When the nest was collected the adults were also taken. Three were found to be females and one a male. None were observed carrying mud or bringing prey, and it is not known whether one or more than one female was active in these capacities. The additional adults on the

nest may well have been recently emerged individuals that had not yet left the parental nest.

Provisioning was evidently progressive, as the two cells containing eggs were otherwise empty, and the cell containing a small larva had only two small microlepidopterous larvae (not identified). The eggs measured about 3 mm long; each was suspended from the roof of the cell by a thread about 1 mm long (Fig. 3). If these three cells were all the work of one female, it is obvious that she would have had to provision the three simultaneously.

Three weeks after this nest was collected, two Ichneumonidae were found to have emerged from capped cells. These were found to represent an undescribed species of the genus *Labena*.

Montezumia dimidiata Saussure

A nest of this species in the Museum of Comparative Zoology is similar to that of *cortesia* in all important features. The nest is labeled as having been collected at Restrepo, Colombia, on 6 August 1936, but there is no further information with the specimen. The nest measures about 5 x 5 cm and is approximately 2.5 cm deep; it is plastered to a thick branch or root where it is joined by a smaller branch (Fig. 4). There are 11 cells in a cluster, all subparallel and with their openings upward; on the under surface of the nest one additional cell is attached transversely, that is, with its long axis perpendicular to that of the other cells. Seven of the cells have short turrets, 1-6 mm in length, closely resembling those of *cortesia*. As in that species, the outside of the nest is irregularly plastered with earth, such that the outlines of individual cells are indistinct.

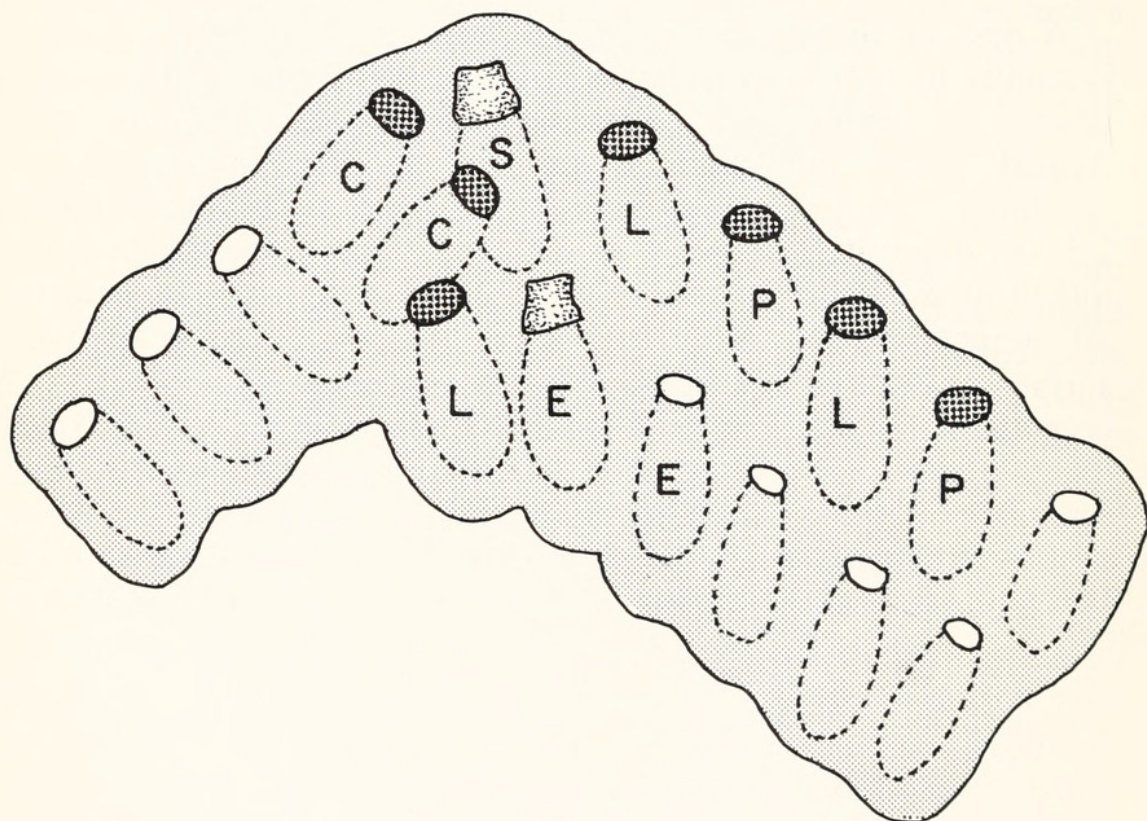
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- ³ This species has commonly been called *infundibuliformis* Fabricius, but the type of Fabricius' species has been shown to be a *Zethus* (Bohart and Stange, 1965). The name *dimidiata* Saussure, listed as a junior synonym of *infundibuliformis* by Saussure, 1875, must thus be used for this species.

REFERENCES

- Bequaert, J. 1921. Description d'une espece congolaise du genre "Montezumia" (Hyménoptères, Vespides) suivie de remarques taxnomiques sur ce groupe. Rev. Zool. Afric., 9:235-251.
- Bodkin, G. E. 1918. Notes on some British Guiana Hymenoptera (exclusive of the Formicidae). Trans. Ent. Soc. London, 1917, pp. 297-305.
- Bohart, R. M., and L. A. Stange. 1965. A revision of the genus *Zethus* Fabricius in the Western Hemisphere (Hymenoptera:Eumenidae). Univ. Calif. Publ. Ent., 40:1-208.
- Maindron, M. 1882. Histoire des guepes solitaires (Eumeniens) de l'Archipel Indien et de le Nouvelle-Guinee. Part 3. Ann. Soc. Ent. France, (6)2:267-286.
- Saussure, H. de 1875. Synopsis of American Wasps. Smithson, Misc. Coll., no. 254, 393 pp.
- Williams, F. X. 1928. Studies in tropical wasps—their hosts and associates. Bull. Exp. Sta. Hawaiian Sugar Pl. Assoc., Ent. Ser., Bull. 19, 179 pp.



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10 cm



ABSTRACT:—A description is provided of the nest of *Montezumia cortesiae* Saussure, found in the province of Valle, Colombia. The nest was of mud and was plastered to a sloping rock. There were 17 cells, 10 of which were open, three of the open ones containing eggs or newly hatched larvae. Three adult females and one male were present on the nest. A very similar nest of *M. dimidiata* Saussure, found in museum material, is also described.

Descriptors:—Hymenoptera, Eumenidae, *Montezumia*, nests.

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Required six-months' notice is given of the possible use of plenary powers by the International Commission on Zoological Nomenclature in connection with the following names listed by case number:

(see *Bull.zool.Nomencl.* 30, part 2, 10th October, 1973)

- 1877. Suppression of *Galaxias delfini* Philippi, 1895 (Pisces, Galaxiidae).
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- 2027. Designation of a neotype for *Pieris virginiensis* Edwards, 1870 (Insecta, Lepidoptera).
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- 2032. Designation of a type-species for *Cerithium* Bruguière, 1789 (Gastropoda).
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- 2038. Suppression of *Leucospis gallica*, Villers, 1789 and *Cynips lugdunaea* Gmelin, 1790 (Insecta, Hymenoptera).
- 2040. Designation of a type-species for *Madiza* Fallén, 1810 (Insecta, Diptera).

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