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Functional morphology of the exocrine glands of *Aneuretus simoni* Emery

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Abstract

Aneuretus simoni Emery is the only living representative of the ant subfamily Aneuretinae, and is endemic to Sri Lanka. Information on its exocrine gland system is restricted to a rather superficial study that documents its abdominal glands by Traniello and Jayasuriya (1981). During a visit to Gilimale forest in December 1986, we collected a colony fragment that consisted of 16 minor and 4 major workers (literature data mention maximum 3 majors per nest). Cut body parts were fixed and embedded in araldite, and were used to examine the functional morphology of their exocrine system using light microscopy, as well as scanning and transmission electron microscopy. Our survey study dealt with 10 exocrine glands: intramandibular, mandibular, pro- and postpharyngeal glands in the head, labial (= salivary) and metapleural glands in the thorax, and Dufour's, Pavan's (= sternal), pygidial and venom glands in the abdomen. Major workers are not involved in brood care and defense, but play a role in food storage. This is reflected in their more developed pharyngeal and labial glands when compared to minor workers. The metapleural gland and Dufour's gland are also larger in majors, although the significance of this is rather unclear. Majors also have more developed Pavan's glands, which corresponds with their higher activity in trail laying. In contrast, minor workers have more developed venom glands, which is in line with their role in foraging.

Key words: *Aneuretus simoni*, exocrine glands, morphology, ultrastructure

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