

Description and behaviour of *Goniotropis kuntzeni* larvae (Coleoptera: Carabidae: Paussinae: Ozaenini) and a key to genera of Paussinae larvae

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Abstract

Goniotropis species are large, parallel-sided paussine beetles common in the New World tropics and ranging from southern Arizona to northern Argentina. Specimens of *Goniotropis kuntzeni* Bänninger were collected in southern Arizona and larvae were reared under laboratory conditions. The egg, first instar larva and second instar larva are described and illustrated, providing the first larval description for this genus. *Goniotropis* larvae live in burrows that they construct and seal with their terminal disk (which is composed of modified urogomphi and dorsal plates). They feed by trapping live insect prey with the moveable components of their terminal disk, and then they bring the captured prey into their gallery to consume. Burrowing and feeding behaviours of *Goniotropis kuntzeni* larva closely resemble those previously described for *Pachyteles* species. A key to the genera of paussine larvae is provided.

Key words: Carabidae, Paussinae, Ozaenini, *Goniotropis kuntzeni*, larva, Arizona, bombardier beetle

Introduction

The carabid tribe Ozaenini contains approximately 181 described species classified in 24 genera (Lorenz 1998; Deuve 2001a, 2001b, 2002, 2004). Over 90 percent of Ozaenini species live only in tropical regions; however, there are a few exceptions. For example, the distribution ranges of five ozaenine species include areas north of the US/Mexico border. The distribution ranges of *Goniotropis kuntzeni* Bänninger, *G. parca* LeConte, *Ozaena lemoulti* Bänninger, and *Pachyteles gyllenhali* (Dejean) include southernmost Arizona and the distribution range of *Physeia hirta* LeConte includes southernmost Texas (Ball and McCleve 1990).