

## Observations on the biology of the antlion genus *Glenurus* Hagen (Neuroptera: Myrmeleontidae)

This New World genus contains nine described species classified in the Nemoleontini. Larvae have been found for five species (Miller and Stange, unpublished data). The larvae have only two mandibular teeth and the labial palpus has only 2 segments. These characters are unknown in other genera of the Nemoleontini. Larvae live in dry tree holes (Miller, R. and L. A. Stange, 1983, Description and biology of *Acrolophus pholeter*, (Lepidoptera: Tineidae), a new moth commensal from Gopher Tortoise burrows in Florida. Proceedings of the Entomological Society of Washington 90:164-178.), in litter under rocks or under tree roots, or (*G. gratus*) live in Gopher Tortoise burrows (Davis, D. R. and E. G. Milstrey, 1988, The ant-lions of Florida. *Glenurus gratus* (Say) (Neuroptera: Myrmeleontidae). Florida Department of Agriculture Consumer and Services, Division of Plant Industry, Entomology Circular 251:1-4.). They are very slow moving except for *G. proi* which moves faster than the other species.

*Glenurus gratus* (Say) 1839. Larvae have been found in both dry tree holes (Miller and Stange 1983) and in gopher tortoise burrows (Davis and Milstrey 1988) in Florida. In both cases animal feces were present. In the tree hole there was abundant squirrel excrement whereas in the gopher tortoise burrows the larvae were found in the area of tortoise excrement where the tineid moth, *Acrolophus pholeter* Davis, and other insects were present feeding on the excrement. The *G. gratus* larvae were active predators on the tineid moth larvae and lived near the entrance of the burrows where drier, looser sand was present mixed with dry leaves.

*Glenurus luniger* Gerstaecker 1893. Larvae of this species were found in leaf litter under rock overhangs and also in dry wood debris in tree stumps discovered in Mexico.

*Glenurus penningtoni* (Navás) 1917. Larvae were found living in dry wood debris in tree stumps in Argentina.

*Glenurus proi* Navás 1929. Third instar larvae were found under a large, ground level tree root overhang at Rio Salado, 7 miles south of Colima, Mexico. An associated rodent burrow was located in the back of this root overhang. All of the larvae were on the surface and nearly completely covered with debris including rodent pellets except part of the highly modified (shortened) head. These are the only known larvae in the New World which purposely place debris over nearly their whole bodies using their mandibles. They are the most rapid predators of the known *Glenurus* larvae.

*Glenurus snowii* Banks 1907. A few larvae were found in the Santa Rita mountains of southern Arizona living in dry wood debris in a tree stump.

This is Entomology Contribution No. 917, Bureau of Entomology, Nematology & Plant Pathology.

### Literature cited

- Davis, D. R. and E. G. Milstrey.** 1988. The ant-lions of Florida. *Glenurus gratus* (Say) (Neuroptera: Myrmeleontidae). Florida Department of Agriculture Consumer and Services, Division of Plant Industry, Entomology Circular 251:1-4.
- Miller, R. and L. A. Stange.** 1983. Description and biology of *Acrolophus pholeter*, (Lepidoptera: Tineidae), a new moth commensal from Gopher Tortoise burrows in Florida. Proceedings of the Entomological Society of Washington 90:164-178.
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