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A NEW SPECIES OF OPILIOACARIDAE (PARASITIFORMES: OPILIOACARIDA) FROM BELIZE WITH SOME OBSERVATIONS ON LIFE HISTORY AND BEHAVIOR

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Mites in the order or suborder Opilioacarida form a relatively small lineage, currently containing nine genera and about 24 species. A few studies have addressed feeding modes, or defensive behaviors, but only a few anecdotal reports exist on egg deposition, and none on mating behavior. Most specimens were hand collected from under moss and lichens on large standing live pine trees. The objective was to observe the life history and behavior of a new species of opilioacaridae from Belize. Three pairs of one male and one female were each placed in small jars with a moistened layer of activated carbon and plaster of Paris. Specimens were offered a range of food options, from pollen grains to crushed insects. Occasionally, the mites subsequently started feeding on the hard pollen cuticle. Co-feeding on single anthers was repeatedly observed, with no signs of aggression. In the development, specimens were kept alive for periods of 5-8 months. During this period reproduction took place for two pairs, resulting in eggs, larvae, protonymphs, and deutonymphs. Larvae were not observed to feed, consistent with previous hypotheses. In the reproduction, females nearly always deposit only one egg at a time, and that eggs are coated before deposition. The female remained near the egg, barely moving until the egg hatched. The larvae are non-feeding and molt quickly to protonymphs. Adults appear to facilitate feeding by protonymphs. A major question regarding Opilioacarida concerns their mating behavior and specifically their method for sperm transfer. We have not been able to observe the latter, but can provide some observations on some aspects of pre-mating behavior. There are some indications of basic parental care.

Keywords: *Neocarus*, development, feeding behavior, Central America.