Manaosbiidae – version 1.0

A. B. Kury

Introduction

The Manaosbiidae constitute a medium-sized family of medium-sized Gonyleptoidea distributed in Northern South America, reaching Panama. They can be easily recognized by the oval-shaped body and the conspicuous basitarsal spindle in the leg I of males. During half a century the name Manaosbiinae was used as a monotypic subfamily of Gonyleptidae, until Kury (1997) transferred many genera from Cranaidae and Gonyleptidae and elevated it to familial rank.

Systematic historical background

In the beginning, all the non-Cosmetidae members of the Neotropical taxon Gonyleptoidea were either placed in Gonyleptidae or Phalangodidae (subfamily Tricommatinae). Slowly, the groups as we recognize today started to be sorted out and stand as families in their own right – the Stygnopsidae (Sørensen, 1932), Stygnidae (Mello-Leitão, 1935), Agoristenidae (Šilhavý, 1973), Cranaidae (Kury, 1994) and finally the Manaosbiidae (Kury, 1997). Until 1943 all genera and species today in Manaosbiidae were allocated in different subfamilies of “Gonyleptidae”. Roewer (1912) started to describe a series of new species attached to monotypic genera such as Camelianus fuhrmanni from Colombia in Prostygninae and later (1913) Meridia palpalis from Venezuela, Rhopalocranaus atroluteus and Rhopalocranaus ypsilon from Colombia, Rhopalocranaus gracilis from Venezuela, Rhopalocranaus marginatus from French Guyana all in Cranaeinae, Saramacia aurilimbata from Suriname in Hernandariinae, Syncranaus cribrum from Brazil in Heterocranaeinae and continued (1915) describing Bugabitia triacantha from Panama in Mitobatinae and Clavicranaus tarsalis from Suriname in Cranaeinae. In the following years, various authors started to describe many species from Amazonian and Andean realms, totaling a little less than 50 species, although there are dozens of undescribed species in Brazil, Colombia and Venezuela (Kury, unpubl. data). Most manaosbiids have been described by Roewer (1913; 1915; 1943). A review of the characters defining the family and the confusion with the Hernandariinae/Stygnoleptinae was given by Kury (1997).

Subtaxa included

No subfamilies; 27 genera and 47 species (Kury, 2003). These genera have never been gathered together before the work of Kury (1997), therefore their diagnoses are not comparable.

Characterization

- Body dorsal and ventral: Abdominal scutum with sides convex, only a little wider than prosomatic carapace, posterior border substraight. Eye mound narrow, low, without depression, with a pair of weak small spines. Scutal area I armed with a pair of weak small spines; scutal area III armed with a pair of stouter spines. Free tergites II-III often with a pair of small spines.
• Pedipalp: smooth, without strong armature in any of the segments; femur cylindrical, neither flattened nor keeled;
• Chelicera: Weakly developed in both sexes, with bulla variably armed.
• Legs: coxa IV barely visible under scutum, dorsally covered with pointed tubercles and armed with spiniform apical apophysis; trochanters I-III may bear ectal spines; femur IV unarmed, straight or a little crooked; only proximal segments of basitarsus I spindle-like swollen in male; tarsi III-IV with a pair of smooth claws (pectinate in only one known species from Brazil) and occasionally sparse scopulae.
• Genitalia: Ventral plate of penis rectangular elongate, with distal border concave or entire, basal setae stout, slightly bent, median two pairs of setae of ventral plate dorsally located, distal setae strongly curved but not helcoidal; stylus straight, usually bent in apex; glans long columnar, without dorsal or ventral processes.
• Color pattern: Most species are dark brown with black mottling. Appendages in general are much lighter, attaining yellow hues and often bear dark rings. A few species possess large white tubercles on laterals of mesotergum.
• Sexual dimorphism: Basitarsus I of male with basal two joints spindle-like swollen, sometimes fused in a single piece.

Distribution
Manaosbiidae were recorded from Panama, the Lesser Antilles, Venezuela (plus Trinidad), the Guyanas, Colombia, Ecuador, northern and central Brazil, Peru. Southern limit seems to be Brazilian state Mato Grosso do Sul. Habitats include lowland Amazonian rainforest up to submontane Andean forest, dry forests in Central America and riparian forests in the open formations in Brazil.

Natural history
Many species of Manaosbiidae are long-legged and walk at night on posts/logs and on the foliage of bushes in the forest. Defensive mechanisms include: camouflage, secretive behavior and death feigning (thanatosis) but not appendotomy. In captivity, the secretions of exocrine glands are not commonly emitted (Cokendolpher, 1987). Šilhavý (1979) described two species from caves in Venezuela, but none of them shows any troglomorph traits.

Rodriguez & Guerrero (1976) related the paternal behavior of the construction of a mud arena by the male of a species from Panama. Cokendolpher (1987) described the devices for fluid emission of presumably the same species (although there is some doubt on the taxonomic details). Mancini & Machado, (2003) presented preliminary results on the histological structure of the glandular spindle of a Brazilian Amazonian species, surely related to some reproductive behavior.

Relationships
On evidence of genital structure, Manaosbiidae is surely a member of the superfamily Gonyleptoidea (Kury, 1993), but its relationship with the other families is still unclear.
References


