

Relationships: Stygnommatidae belongs to the informal group “Samooidea” closest to Samoidae, Biantidae, Podoctidae, Minuidae, and Escadabiidae, characterized by the penial internal capsule completely eversible with two separate or fused conductors. The position inside this group is little understood. The laminar and tubular conductor relates it to Biantidae; the exposed follis internally upholstered with digitiform projections relates it to Podoctidae; the absence of ocularium and the enlarged pedipalps relate it to Biantidae and basal Podoctidae; sexual dimorphism in the enlargement of calcaneus III relates it to Samoidae and Stenostyginae.

Main references:

- **Systematics:** Roewer (1923), Goodnight & Goodnight (1951), González-Sponga (1987), Kury & Cokendolpher (2000), Kury (2003).
- **Natural history:** Goodnight & Goodnight (1951), González-Sponga (1987).

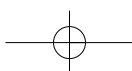
Stygnopsidae Sørensen, 1932

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Etymology: *Stygnopsis*, from preexisting genus *Stygnus* and Greek *opsis* (aspect, appearance).

Characterization:

- **Size:** From medium to large sized; body length 2.5 (*Karos*) to 7 mm (*Hoplobunus*).
- **Dorsum** (Figures 4.40a,c–f): Outline of dorsal scutum subrectangular, constricted at scutal groove; in *Karos* carapace much narrower, giving the body a pyriform shape. Lateral margin of scutum projected to the sides, forming a pair of lobes in *Karos*, *Paramitraceras*, and *Sbordonia*. Mesotergum clearly divided into four areas; sometimes third and fourth fused entirely or partially; none of them divided by a longitudinal groove. All scutal areas unarmed except area III, armed with a pair of paramedian spines in *Stygnopsis*, and area IV with an unpaired backward-directed spine in *Karos*. Free tergites all unarmed. Granulation varied; dense cover in *Karos*, *Paramitraceras*, and *Sbordonia*. Common ocularium always present as a high cone, situated more or less near the anterior margin of the carapace, armed with an unpaired spine, sometimes reduced or missing (blind species). In *Karos* the ocularium is low, more removed from the anterior margin of the carapace, armed with two pointed tubercles.
- **Venter** (Figure 4.40b): Maxillary lobe of coxa II lacking. Spiracles clearly visible. Spiracular area well detached from coxa IV. Spiracular area T shaped except in *Paramitraceras*, where it is very short, almost like a sternum of Bothriuridae. Coxae I–IV densely granulous, granules growing stouter from IV to I, especially in *Hoplobunus* and *Stygnopsis*, where granulation of coxa I is heavy.
- **Chelicerae:** Basichelicerite very long (almost as long as the carapace, Figure 4.40a), granulous, and without developed bulla in *Hoplobunus* and *Stygnopsis*;



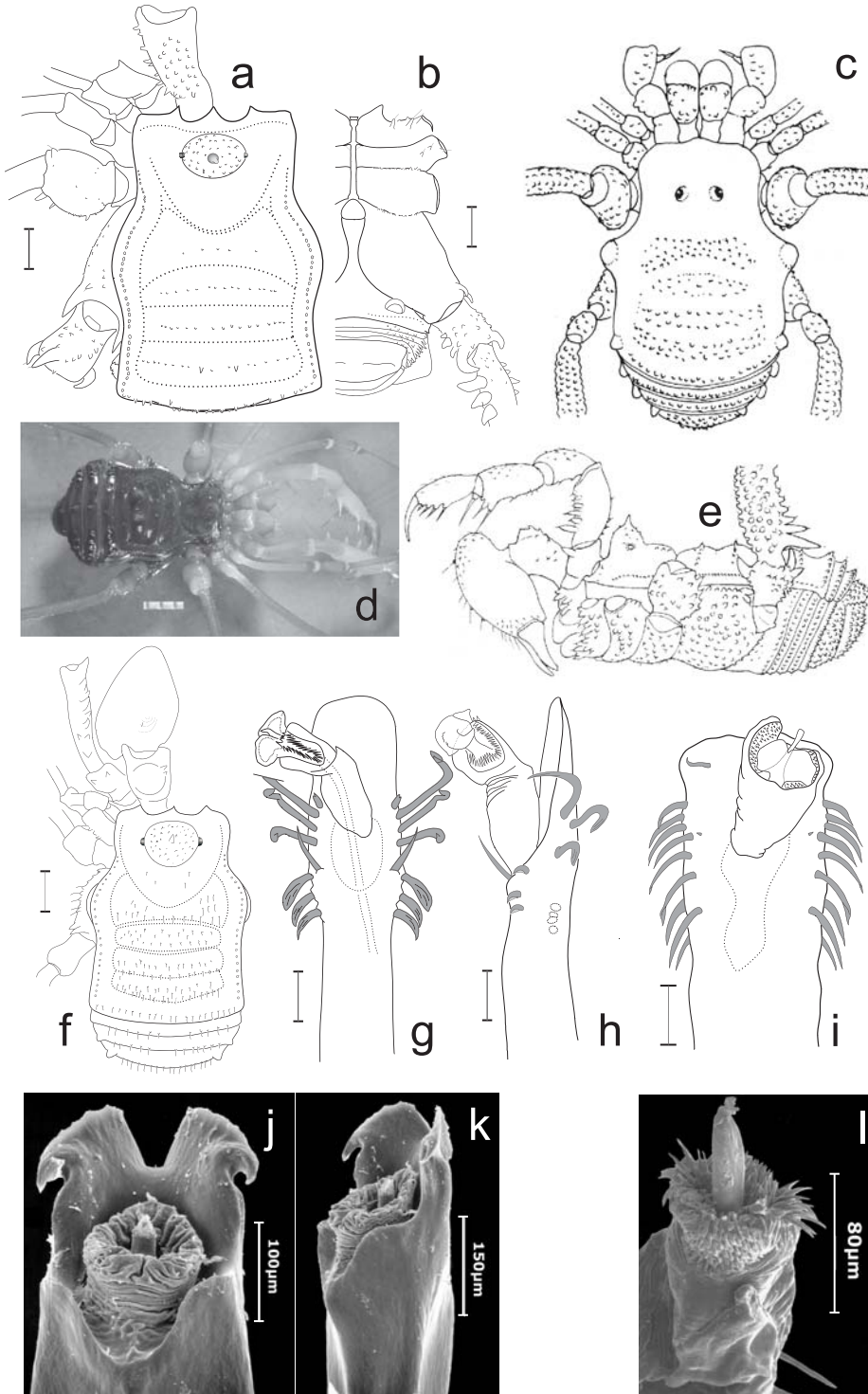
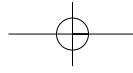
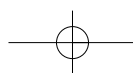
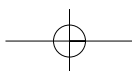


Figure 4.40. Stygnopsidae. (a–b) *Hoplobunus boneti*, male habitus (Mexico): (a) dorsal; (b) ventral. (c) *Karos rugosus*: male habitus, dorsal (from original description). (d) *Stygnopsis valida*, female dorsal (Mexico) (photo: A. B. Kury). (e) *Hoplobunus queretarius*, lateral of male (Mexico, from original description). (f) *Sbordonia* sp.n., male dorsum (Honduras). (g–h) *Hoplobunus boneti*, distal part of penis, dorsal and lateral (Mexico). (i) *Paramitraceras granulatus* (Mexico): male, distal part of penis, dorsal. (j–k) *Stygnopsis valida* (Mexico), male, distal part of penis: (j) dorsal; (k) laterodorsal (photos: D. Ubick). (l) *Karos* sp., male, glans, lateral (photo: A. L. Tourinho).





short in *Karos* (Figure 4.40c). In *Paramitraceras* and *Sbordonia* the bulla is very stout and spiny. Cheliceral hand not swollen in *Karos*, moderately swollen in *Paramitraceras*, *Stygnopsis*, and *Hoplobunus*, and immensely swollen in *Sbordonia*.

- **Pedipalps:** Segments short, elongate (especially patella and tibia) in *Stygnopsis* and *Hoplobunus* (Figures 4.40d,e). Tibia and tarsus always armed with mesoventral and lateroventral spines. Femur with dorsal and ventral row of tubercles, much larger in *Sbordonia*. In *Karos* granules are densely clustered, not forming rows. Tarsus and tibia laterally projected as a keel in *Paramitraceras* and *Sbordonia*.
- **Legs:** Very long or short. Tarsal formula: 4–7:10–17:6–8:7–10. Tarsus with smooth double claws, without scopulae or pseudonychium. Trochanter III moderately to strongly inflated.
- **Genitalia** (Figures 4.40g–l): Ventral plate of penis not well defined: setiferous region not greatly flattened; it starts cylindrical as the rest of the truncus and grows thinner apically, where it may be divided into two revolving lobes. Setae are typically long, but may be very short, as in *Stygnopsis*. Ventral and ventrolateral setae are numerous and not arranged in rows. There is a pair of setae flanking the follis. Dorsal part of setiferous region of truncus is excavated, bearing the follis, which is well developed, multifolded, and covered with numerous small spines in the apical region. The follis appears to be partially everisible to expose the stylus, which is inserted in it.
- **Color:** Dark brown to black, appendages much lighter. Many troglomorphic species are pale light brown.
- **Sexual dimorphism:** The armature of the fourth leg in females is reduced in comparison with that of males, and their chelicerae, although enlarged, are smaller than those of the males.

Distribution: Stygnopsidae is mostly Mexican, with records from the southern USA (*Hoplobunus*), Guatemala, El Salvador, and Belize (*Paramitraceras*). This places them in the region intermediate between the Nearctic and Neotropical realms, although their affinities are clearly Neotropical (Kury, 1997c). The record of *Paramitraceras* from Colombia (Flórez & Sanchez, 1995) is mistaken (see Kury, 2003). As in other Laniatores, most species have narrow distributions.

Relationships: Kury (1993a) proposed a sister-group relationship to Epedanidae, although later (1997c; Kury & Cokendolpher, 2000) he considered that Epedanidae could be the sister group to a broader Gonyleptoidea including also Assamiidae and that Stygnopsidae would be the sister group to the rest of Gonyleptoidea.

Main references:

- **Systematics:** Roewer (1923), Sørensen (1932), Goodnight & Goodnight (1942b, 1944, 1953b), Šilhavý (1974, 1977), Kury (2003).
- **Natural history:** Šilhavý (1974, 1977).

