

from the “hypothetical ancestral travunoid” in the same way as Travuniidae and a clade composed of all other taxa. Suzuki (1975b) kept this arrangement, changing only internal relations in Triaenonychidae. Hunt and Hickman (1993) called the synthetonychiid claw a peltonychium, implying that it is homologous with the travuniid claw. According to a preliminary analysis (Kury, 2002), Synthetonychiidae form a clade with the Southern Temperate Triaenonychidae. This implies an independent acquisition of such a complex structure as the peltonychium or, in other words, that the synthetonychium is not homologous with the peltonychium.

**Main references:**

- **Systematics:** Forster (1954), Martens (1986).
- **Natural history:** Forster (1954).

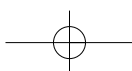
**Travuniidae Absolon and Kratochvíl, 1932**

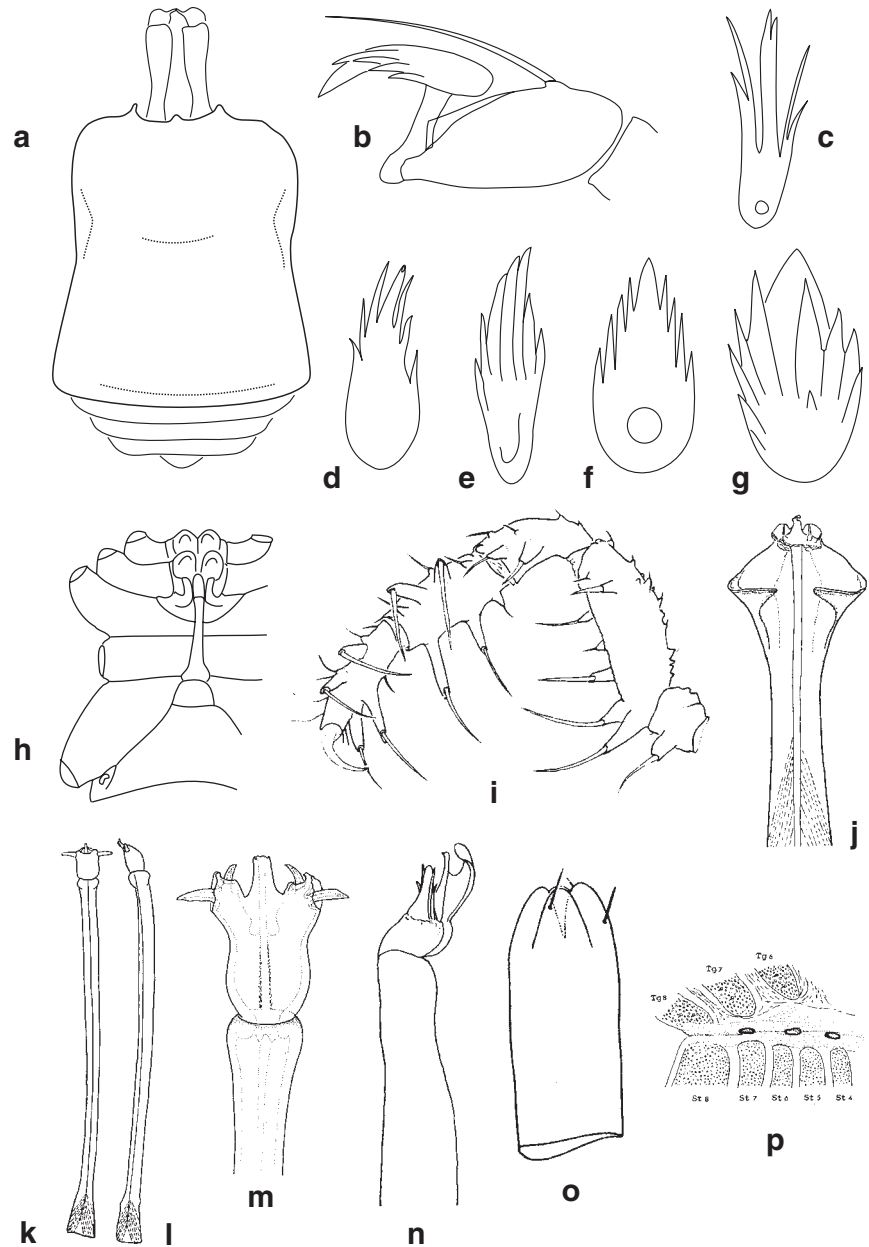
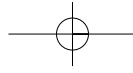
Adriano B. Kury

**Etymology:** *Travunia* is the Latin name of the city of Trebinje, Bosnia and Herzegovina.

**Characterization:**

- Size: Small Laniatores, 1–3 mm.
- Dorsum (Figure 4.42a): Body convex, mostly rounded posteriorly, only slightly constricted in anterior third. Frontal border of carapace unarmed. Segments of body ill marked by incomplete grooves, mostly lacking. All areas, tergites, and sternites unarmed. Ocularium, when present, low, granular, far from the frontal border of the carapace. Eyes may be reduced and depigmented. Ninth tergite and lateral free sclerites (Figure 4.42p) present in non-European genera.
- Venter: Sternum wedge shaped (Figure 4.42h).
- Chelicerae: Basichelicerite slender, with only scarce dorsal ornamentation of tubercles. Cheliceral hands never swollen.
- Pedipalps: Pedipalps robust and strongly spined, femur dorsally convex, with ventral row of setiferous tubercles and mesal subapical setiferous tubercle (Figure 4.42i).
- Legs: Tibia and tarsus with powerful mesal and ectal setiferous tubercles. Setae inserted subdistally in sockets. Legs I–IV slender and unarmed. Claws III–IV with peltonychium (complex claw formed by central shield and many pairs of lateral branches, sometimes asymmetrical) attached to a stem at distal part of tarsus (Figures 4.42b–g). Tarsal formula: 3–6(2–3):5–6(3–4):4:4; only *Travunia* has such high counts as 6(3) in leg I; other genera have 3–5(2).
- Genitalia: Penis (Figures 4.42j–n) with musculature often reduced to basal portion of truncus (Figures 4.42j–l). Glans with sclerites fused including the stylus. Ovipositor unsegmented, four-lobed, with only scattered setae (Figure 4.42o).

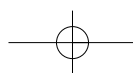


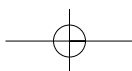


**Figure 4.42.** Truvuniidae. (a) *Travunia anophthalma*, dorsal scutum (redrawn from Absolon & Kratochvíl, 1932c). (b) Peltonychial claw of leg IV in lateral view from *Travunia anophthalma* distitarsus and claw (redrawn from Absolon & Kratochvíl, 1932c). (c–g) Examples of adult peltonychial claw in dorsal view: (c) leg III, *Abasola borisi*; (d) leg IV, *Abasola borisi*; (e) *Dinaria vjetrenicae*; (f) *Travunia anophthalma*; (g) *Yuria pulchra*. Redrawn from several sources (Absolon & Kratochvíl, 1932; Roewer, 1935a; Hadži, 1973; Suzuki, 1975a). (h) *Abasola troglodytes*, sternum, coxae and stigmatic area, ventral view (redrawn from Roewer, 1935a). (i) *Peltonychia leprieuri*, right pedipalp, mesal (from Martens, 1978b). (j–m) Penis: (j) *Dinaria vjetrenicae*, distal part, ventral; (k–n) *Peltonychia postumicola*, dorsal, lateral, distal dorsal and distal lateral (from Martens, 1976, 1978b, 1986, and Suzuki, 1975a, respectively). (o) *Peltonychia clavigera*, ovipositor (from Martens, 1978b). (p) *Yuria pulchra*, view of free abdominal sclerites (from Suzuki, 1975a).

- Color: Color in general uniform dark yellow to pale yellow; troglobites are depigmented.
- Sexual dimorphism: No secondary sexual dimorphism.

**Distribution:** Europe, Japan, and USA. The records for Slovenia are erroneous (Novak & Gruber, 2000).





**Relationships:** Branched claws are present in most Triaenonychidae, but the peltonychium as a unique complex claw would be a potential synapomorphy for the genera of Travuniidae. However, similar structures develop in many apparently unrelated Travunioidea such as Synthetonychiidae (Forster, 1954), some Australian Triaenonychidae of the genus *Lomanella* (Hunt & Hickman, 1993), and the Argentinean troglobite triaenonychid *Picunchenops* (Maury, 1988). The monophyly of Travuniidae is not corroborated by any unique structure, but even so the presence of the peltonychium could be a synapomorphy (convergent in other Travunioidea). Travuniidae is most closely related to Cladonychiidae because the musculature of the penis is restricted to the base and the complex of the glans is short, with all median and dorsal components fused in a single structure. It is possible that Travuniidae is paraphyletic with respect to Cladonychiidae, because some of its genera (at least *Peltonychia*) appear closer to this family in genital morphology. The replacement of the peltonychium for a cladonychium could be a synapomorphy for Cladonychiidae in a scenario of a paraphyletic Travuniidae. The presence of additional opisthosomal sclerites in the genera *Yuria* and *Speleonychia* is a retention of a plesiomorphic state, shared with Pentanychidae. This would add support to a paraphyletic Travunioidea, but would need an extra ad hoc hypothesis of independent loss of those sclerites in other Travuniidae plus Cladonychiidae and in all other Laniatores.

**Main references:**

- **Systematics:** Absolon & Kratochvíl (1932a,b), Hadži (1935), Roewer (1935a), Suzuki (1975a), Martens (1980).
- **Natural history:** Suzuki (1975a), Marcellino (1982).

**Triaenonychidae Sørensen, 1886**

Adriano B. Kury

**Etymology:** *Triaenonyx*, from Greek *triaina* (trident, three-pronged fish spear) and *onyx* (claw).

**Characterization:**

- **Size:** Medium-sized Laniatores; body length typically 3 to 5 mm, although some South African Triaenonychinae can be much smaller (down to 1 mm), and on the other side some Adaeinae are much larger (up to 10 mm). Legs I–IV almost always short, 4–7/6–12/4–8/6–10 mm long.
- **Dorsum** (Figures 4.43a–c): Dorsal scutum width increasing backward without major constriction. Mesotergum seldom clearly divided into areas by grooves; usually areas are marked by arrangement of tubercle rows. No areas fused. Armature of areas and tergites usually weak, formed by small paired acuminate spiniform tubercles. Ocularium usually present, mostly very narrow and high with unpaired armature (Figure 4.430). Ocularium lacking sometimes, and eyes are sessile, placed close together. Eyes elevated, much higher than the level of the carapace (Figure 4.44h). Anterior margin of cara-

