

Synthetonychiidae Forster, 1954

Adriano B. Kury

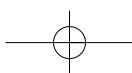
Etymology: *Synthetonychia*, from Greek *synthetos* (compounded, composite) and *onychion*, diminutive of *onyx* (claw).

Characterization:

- Size: Dorsal scutum between 1.0 and 1.7 mm long. Legs I–IV 2.2–3.6/3.1–5.2/2.6–4.3/3.2–5.4 mm long.
- Dorsum: Dorsal scutum pyriform in dorsal view (Figure 4.41a), hemispherical in lateral view (Figure 4.41b), with eyes far away from the frontal border. Grooves separating the areas absent. Ocularium lacking, but the eyes are placed close together.
- Chelicerae: Not swollen; basichelicerite very short, without noticeable bulla. Hand with a few minute tubercles.
- Pedipalps (Figures 4.41c,d): Without keels, processes, or spines, only a few scattered minute setae. In some species trochanter of male has stout ventral and dorsal processes. Pedipalpal tibia of male slender and tarsus still more slender and elongate. Pedipalp of male with a dorsoapical process in tibia and a ventral subapical stout spine in tarsus.
- Legs: Smooth and unarmed. Tarsal claws III–IV bear a complex structure (Figures 4.41e–g), called “synthetonychium” and comparable with the peltonychium of the Travuniidae. Median prong is large and flattened. There are numerous strongly developed lateral prongs and usually a small accessory tooth. Tarsal formula: 3:5:4:4.
- Genitalia: Penis (Figures 4.41h–j): with muscle extending entire length of truncus. Dorsolateral plates reduced to two lobes pointing dorsally. Ventral plate typically tongue shaped, strongly concave ventrally, with two pairs of setae. Stylus very long, with two parastyli (when present) fused along three-fourths of its length.
- Color: Body background yellowish brown to reddish brown, sometimes shaded in black. Chelicerae and pedipalps with dense black reticle. Legs may have darker and lighter rings.
- Sexual dimorphism: Shown in pedipalps and shape of the genital operculum.

Distribution: Endemic to New Zealand.

Relationships: Forster (1954), when describing the family, stated, “I consider this family to be most closely related to the Triaenonychidae.” Martens (1986) also defended this point of view and went a bit further, stating (my translation): “Regarding their male genital morphology, they are very close to Triaenonychidae. Perhaps this family is a side branch of the New Zealand Triaenonychidae, with which they share the degree of reduction of armature of glans. The familial status, granted mainly by the aberrant habitus, is probably not sustained.” Briggs (1971b, Figure 1) included Synthetonychiidae in his phylogenetic tree of Travunioidea, making it arise straight



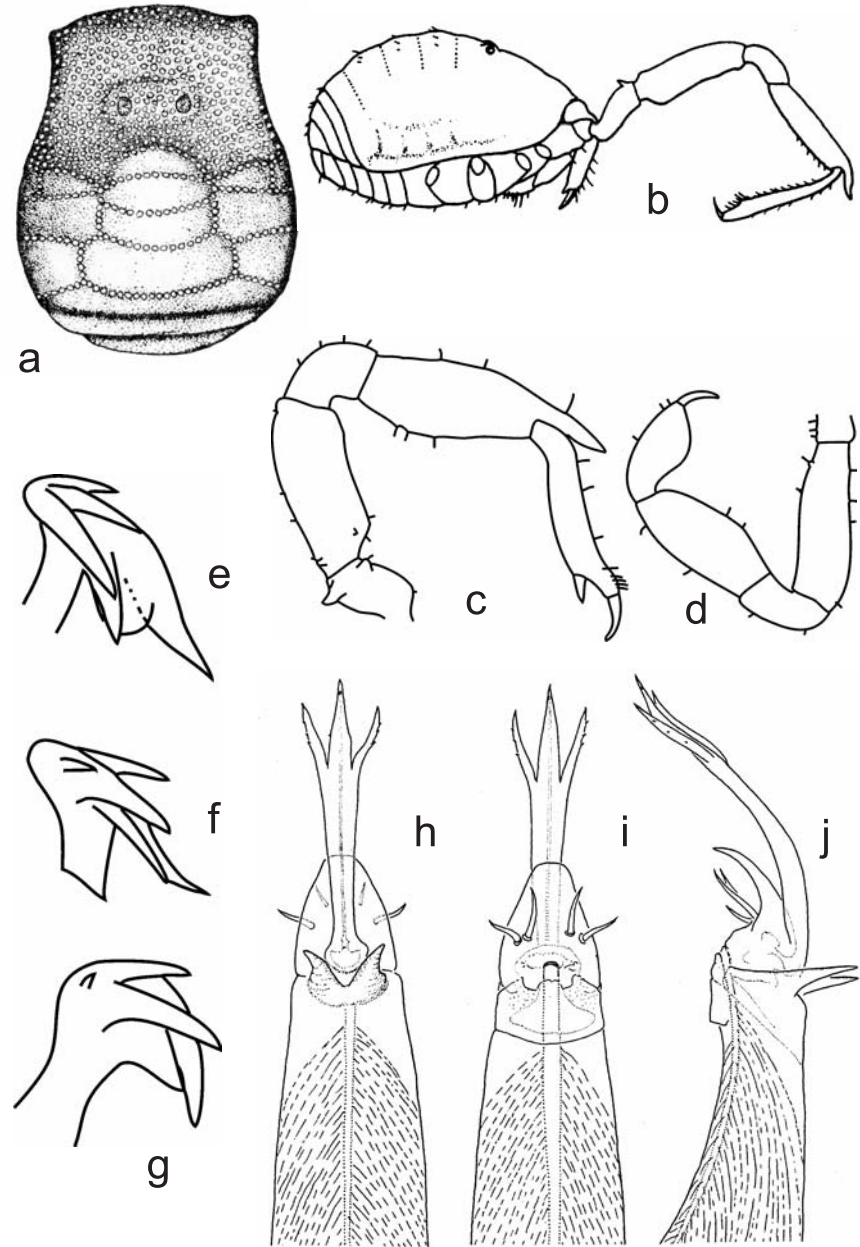
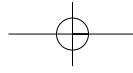
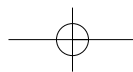
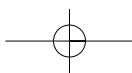


Figure 4.41. Synthetonychiidae. (a) *Synthetonychia minuta* (New Zealand), habitus without appendages, dorsal. (b) Undetermined (New Zealand), habitus, lateral view. (c–d) *S. cornua* (New Zealand): (c) male pedipalp, ectal view; (d) female pedipalp, ectal view; (e–g) *Synthetonychia* spp. (New Zealand), examples of of tarsi IV different synthetonychia: (e) *S. glacialis*; (f) *S. oparara*; (g) *S. acuta*. (h–j) Undetermined from New Zealand, penis: (h) Dorsal, (i) ventral, (j) lateral views. 1, 3–7 modified from Forster (1954); 2, 8–10 from Martens (1986).



S-
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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

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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).

