

Order Tanaidacea

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Tanaids are small, mostly marine creatures that look like tiny lobsters, with elongate bodies a few millimeters in length and conspicuous claws that they hold in front of their heads. Some occur on hydroids, bryozoans, coralline algae, barnacles or other epibenthic organisms, others occur on mud. Most live either in tunnels or in tubes cemented together from particles of detritus, where they often appear with their head and claws poking out. Members of one genus, *Pagurapseudes*, live coiled inside tiny snail shells with their claws protruding, like minute hermit crabs.

The tanaid body is subcylindrical or flattened dorsoventrally, and is divided into three sections (Fig 1): a **cephalon**, which bears 2 pairs of antennae and a pair of clawed appendages (**gnathopods**); a thorax or **pereon**, consisting of 6 segments (**pereonites**), each of which bears a pair of legs (**pereopods**); and a short abdomen or **pleon**, with 2-5 free segments (**pleonites**) plus a terminal **pleotelson**. The pleon usually bears a series of up to 5 flattened, 2-branched **pleopods**, and a pair of caudal appendages called **uropods**. Tanaids differ from isopods in having 6 rather than 7 pereonites; at least one jointed uropod branch; and pincers or true chelae on the gnathopods, where these are simple or subchelate in isopods.

Tanaids have no planktonic stage; rather, the young are brooded by the females in **marsupiums** and emerge as epibenthic juveniles called **mancas**. The marsupium is a pouch beneath the pereon formed from thin plates (**oöstegites**) that project from the basal segments of one or more pairs of legs. The sexes are often dissimilar, and in some species different types of males may develop either from mancas or secondarily from females. Males of dimorphic species can generally be distinguished from females by their more strongly developed gnathopods, often bearing large and sometimes grotesque chelae; longer first antennae, which are often hairier and have more flagellar segments; larger eyes; and in some genera, fused mouth parts.

Lang (1956) divided the tanaids into two suborders, the **Monokonophora** with a single, small **genital cone** (the penial process at the end of the sperm duct) between the last pair of legs, and the **Dikonophora** with two. Sieg (1980) instead proposed an arrangement with three suborders, the **Apseudomorpha** (corresponding to the Monokonophora), the **Tanaidomorpha** and the **Neotanaidomorpha** (together corresponding to the Dikonophora), which is followed here. Only the Apseudomorpha and Tanaidomorpha are represented by species in this key.

KEY TO THE TANAIACEA

- 1 —1st antenna with 2-branched flagellum (Fig 2b); mandible with 3-articled palp (Fig 8a); marsupium in females formed by 4 pairs of oostegites Apseudomorpha 2
- 1st antenna with unbranched flagellum; mandible without palp (Fig 8b); marsupium in females formed by 1 or 4 pairs of oostegites Tanaidomorpha 3

- 2 —5 pleonites plus pleotelson; pleopods present; pereopods cylindrical; lives in tiny snail shells *Pagurapseudes laevis*
- 2 pleonites plus pleotelson; no pleopods; pereopods somewhat flattened and stout (Fig 2) *Synapseudes intumescens*
- 3 — 3-5 pleonites plus pleotelson; 3 pairs of pleopods (1 may be rudimentary); 1 pair of oostegites, which issue from the 5th pair of pereopods; uropods unbranched; usually found on hard substrates Tanaidae 4
- 5 pleonites plus pleotelson; 5 pairs of pleopods; 4 pairs of oostegites; uropods 2-branched, though the outer branch may be inconspicuous (Figs 1, 7b); usually found on mud 7
- 4 Note 3 choices:
- 3 pleonites plus pleotelson; 2 functional pairs and 1 rudimentary pair of pleopods (Fig 3) *Pancolus californiensis*
- 4 pleonites plus pleotelson; 3 pairs of functional pleopods; complete transverse dorsal rows of setae on first 2-3 pleonites; male cephalon strongly narrowed toward anterior (Fig 4) *Sinelobus* sp.
- 5 pleonites plus pleotelson; 3 pairs of functional pleopods 5
- 5 —1st article of the 1st antenna twice the length of the 2nd article (Figs 4, 9a) *Anatanais pseudonormani*
- 1st article of the 1st antenna 2.5-3 times the length of the 2nd article (Fig 9b) 6
- 6 — Adult uropods with 6 articles (Fig 10a); coxa of 1st pereopod with longer protuberance (Fig 11a); carpus of 2nd pereopod with 4 caudal and 2 rostral spines (Figs 5, 11b)..... *Zeuxo normani*
- Adult uropods with 5 articles (Fig 10b); coxa of 1st pereopod with shorter protuberance (Fig 11c); carpus of 2nd pereopod with 3 caudal and 2 rostral spines (Fig 11d) *Zeuxo paranormani*
- 7 —maxilliped basis not fused medially (Fig 12a); inner branch of pleopod with a seta on outer margin close to basis (Figs 1, 6, 13a) *Leptochelia dubia*
- maxilliped basis fused medially at bottom (Fig 12b); inner branch of pleopod without seta on outer margin close to basis (Fig 13b) *Leptognathia* spp.