

THE RELATIVE POSITION OF THE LEFT
AND RIGHT LAMELLAE OF THE FURCA
IN THE ORDER MYODOCOPIDA
(CRUSTACEA: OSTRACODA)

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Abstract.—The anterior claw of the right lamella of the furca is always anterior to the anterior claw of the left lamella in the ostracode order Myodocopida. The constancy of this relationship, independent of ontogeny or sex, has not been noted previously. In the sister group of the Myodocopida, the order Halocyprida, a similar relationship of the left and right lamellae does not appear to be present in the suborder Cladocopina, and in the suborder Halocypridina, the relationship holds for the superfamily Thaumatocypridoidea, but not for the superfamily Halocypridoidea.

All members of the superfamily Cypridinoidea Baird, 1850, the only superfamily in the ostracode order Myodocopida Sars, 1865 (sensu Kornicker and Sohn, 1976:3), have a well developed caudal furca posterior to the anus. Because of its position relative to the anus, the caudal furca has been considered a telson (Bowman, 1971:169). The furca (or telson) consists of 2 lamellae, each bearing claws and bristles or only claws, along the ventral margin (Fig. 1a, b).

The Cypridinoidea comprises 5 families. The shapes of the lamellae of the furca as well as the distribution of the claws and bristles are sufficiently characteristic to identify some of the families, but are especially useful for identification at the generic and specific levels.

A previously unnoted feature of the furca of the Myodocopida is documented here: the anterior claw of the right lamella always lies slightly anterior to that of the left lamella. Examination of more than 100 males and females of several species in all 5 families in the Cypridinoidea indicates that the relative positions of the right and left lamellae are constant throughout the superfamily. Although the relationship has been illustrated many times (Table 1), its constancy has not been noted previously. An additional asymmetry was observed on the furca of the large ostracode "*Gigantocypris* sp." (Cypridinidae: Cypridinoidea). The anterior edge of the right lamella bears a broad sclerotized internal structure not present on the left lamella (Fig. 1c).

In growth stages of Cypridinoidea reared from parents collected at Belize, the anterior position of the right furcal lamella is already present in the 1st

Table 1.—Cypridinoidea having right furcal lamella anterior to left (n.d. = no data).

| Species* | Sex | Develop- mental stage | Reference |
|----------------------------------|------|-----------------------------|---------------------------------------|
| Philomedidae | | | |
| <i>Euphilomedes nodosa</i> | ♀ | adult | Poulsen (1962: fig. 159b') |
| <i>Euphilomedes bradyi</i> | ♂ | adult | Poulsen (1962: fig. 169j) |
| <i>Euphilomedes schornikovi</i> | ♂ | A-1 instar | Kornicker and Caraion (177: Fig. 21i) |
| <i>Euphilomedes sinister</i> | ♀ | adult | Kornicker (1974: fig. 7d) |
| <i>Igene walleni</i> | ♀ | adult | Kornicker (1975: fig. 238m) |
| <i>Paraphilomedes tricornuta</i> | ♂ | adult | Poulsen (1962: fig. 180k') |
| <i>Philomedes interpuncta</i> | ♀ | n.d. | Müller (1894: pl. 3:16) |
| <i>Philomedes aspera</i> | n.d. | n.d. | Müller (1894: pl. 3:17) |
| <i>Philomedes levis</i> | ♀ | n.d. | Müller (1894: pl. 3:18) |
| <i>Philomedes rotunda</i> | n.d. | juvenile | Kornicker (1975: fig. 146a) |
| <i>Philomedes heptathrix</i> | ♂ | adult | Kornicker (1975: fig. 149j) |
| <i>Philomedes tetrathrix</i> | ♀ | adult | Kornicker (1975: fig. 153c) |
| <i>Philomedes ramus</i> | ♀ | adult | Kornicker (1975: fig. 169m) |
| <i>Philomedes lofthousae</i> | ♀ | adult | Kornicker (1975: figs. 175e, d, 176a) |
| <i>Philomedes levis</i> | ♀ | adult | Kornicker (1974: fig. 4n) |
| <i>Philomedes charcoti</i> | ♀ | adult | Kornicker (1971: fig. 5o) |
| <i>Philomedes triathrix</i> | ♀ | adult | Kornicker (1971: fig. 7h) |
| <i>Scleroconcha gallardoii</i> | ♀ | adult | Kornicker (1971: fig. 18f) |
| <i>Tetragonodon rhamphodes</i> | ♀ | juvenile | Kornicker (1968: fig. 5e) |
| Cypridinidae | | | |
| <i>Azygocypridina rudjakovi</i> | ♂ | adult | Kornicker (1970a: fig. 8e) |
| <i>Codonocera cruenta</i> | n.d. | adult? | Müller (1906b: pl. 8:6) |
| <i>Cypridina norvegica</i> | ♀ | adult | Sars (1922: pl. 2c) |
| <i>Cypridina mediterranea</i> | ♀ | adult? | Müller (1894: pl. 2:25, 26) |
| <i>Cypridina squamosa</i> | ♀ | adult | Müller (1894: pl. 2:31) |
| <i>Cypridina squamosa</i> | ♂ | adult | Müller (1894: pl. 2:35) |
| <i>Cypridina asymmetrica</i> | ♂ | adult | Müller (1906b: pl. 6:4) |
| <i>Cypridina castanea</i> | ♀ | adult | Müller (1906a: pl. 33:16) |
| <i>Cypridinodes species</i> | n.d. | juvenile | Kornicker (1970b: fig. 12e) |
| <i>Doloria pectinata</i> | ♀ | A-1 instar | Kornicker (1975: fig. 48b) |
| <i>Isocypridina quatuorsetae</i> | ♂ | adult | Kornicker (1975: fig. 124a, b) |
| <i>Paradoloria dorsoserrata</i> | ♂ | adult | Kornicker (1976a: fig. 21b, g) |
| <i>Pyrocypris lepidophora</i> | ♀ | adult | Müller (1906b: p. 3:19) |
| <i>Skogsbergia costai</i> | ♀ | adult | Kornicker (1974: fig. 3j) |
| <i>Skogsbergia squamosa</i> | ♀ | A-1 instar | Kornicker (1974: fig. 2d) |
| Rutidermatidae | | | |
| <i>Rutiderma rostrata</i> | ♂ | adult | Poulsen (1965: fig. 3o) |
| <i>Rutiderma normani</i> | ♀ | adult | Poulsen (1965: fig. 4l) |
| <i>Rutiderma hartmanni</i> | ♀ | adult | Poulsen (1965: fig. 8g') |
| <i>Rutiderma mortenseni</i> | ♂ | adult | Poulsen (1965: fig. 11k) |
| <i>Rutiderma ovata</i> | ♂ | adult | Kornicker (1975: fig. 423a) |

Table 1.—Continued.

| Species* | Sex | Developmental stage | Reference |
|---------------------------------|-----|---------------------|--|
| Sarsiellidae | | | |
| <i>Cymbicopia brevicosta</i> | ♂ | adult | Kornicker (1975: fig. 399f) |
| <i>Eusarsiella verae</i> | ♂ | adult | Poulsen (1965: fig. 36h) |
| <i>Sarsiella capsula</i> | ♀ | juvenile | Müller (1894: pl. 1:8) |
| <i>Sarsiella levis</i> | ♂ | juvenile | Müller (1894: pl. 1:28) |
| <i>Sarsiella levis</i> | ♂ | adult | Müller (1894: pl. 4:36) |
| <i>Sarsiella capsula</i> | ♀ | adult | Müller (1894: pl. 4:37) |
| <i>Sarsiella janiceae</i> | ♀ | adult | Kornicker (1976b: fig. 4k) |
| <i>Sarsiella neapolis</i> | ♀ | adult | Kornicker (1974: fig. 15i) |
| <i>Spinacopia variabilis</i> | ♀ | adult | Kornicker (1969: fig. 6g) |
| <i>Spinacopia sandersi</i> | ♂ | adult | Kornicker (1969: fig. 13r) |
| <i>Spinacopia antarctica</i> | ♂ | juvenile | Kornicker (1970a: fig. 14g) |
| Cylindroleberididae | | | |
| <i>Asterope mariae</i> | ♂ | adult | Sars (1922: pl. 10:1) |
| <i>Asteropteron nodulosum</i> | ♂ | adult | Poulsen (1965: fig. 68g') |
| <i>Asteropteron skogsbergi</i> | ♀ | juvenile | Poulsen (1965: fig. 71h) |
| <i>Cycloleberis americana</i> | ♀ | juvenile | Poulsen (1965: fig. 85k) |
| <i>Cycloleberis galathea</i> | ♀ | adult | Poulsen (1965: fig. 88f) |
| <i>Cycloleberis bradyi</i> | ♂ | adult | Poulsen (1965: fig. 92d', d'') |
| <i>Cycloleberis christiei</i> | ♀ | adult | Kornicker and Maddocks (1977: fig. 3a) |
| <i>Cylindroleberis oblonga</i> | ♂ | juvenile | Müller (1894: pl. 1:10) |
| <i>Cylindroleberis teres</i> | ♀ | adult | Müller (1894: pl. 5:24) |
| <i>Cylindroleberis lobianci</i> | ♀ | unknown | Müller (1894: pl. 5:32) |

* Species names are as they appear in reference source.

ostracodid stage. Observations were made on 1st instars of 13 *Skogsbergia* sp. (Cypridinidae), 4 *Parasterope* sp. (Cylindroleberididae), 5 *Harbansus* sp. (Philomedidae), and 10 *Sarsiella* sp. (Sarsiellidae).

The sister group of the Myodocopida, the superorder Halocyprida, includes the suborders Cladocopina and Halocypridina (sensu Kornicker and Sohn, 1976:3). The Halocypridina includes the superfamilies Thaumatoocypridoidea and Halocypridoidea (Kornicker and Sohn, 1976:3). An examination of a few specimens and a brief review of the literature suggest that members of the Thaumatoocypridoidea (Fig. 1d), like the Myodocopida, have the anterior claw of the right lamella anterior to the anterior claw of the left lamella. On the other hand, no fixed relationship between the lamella appears to be present in the Halocypridoidea (Fig. 1e; Müller, 1894, pl. 5:49) and Cladocopina.

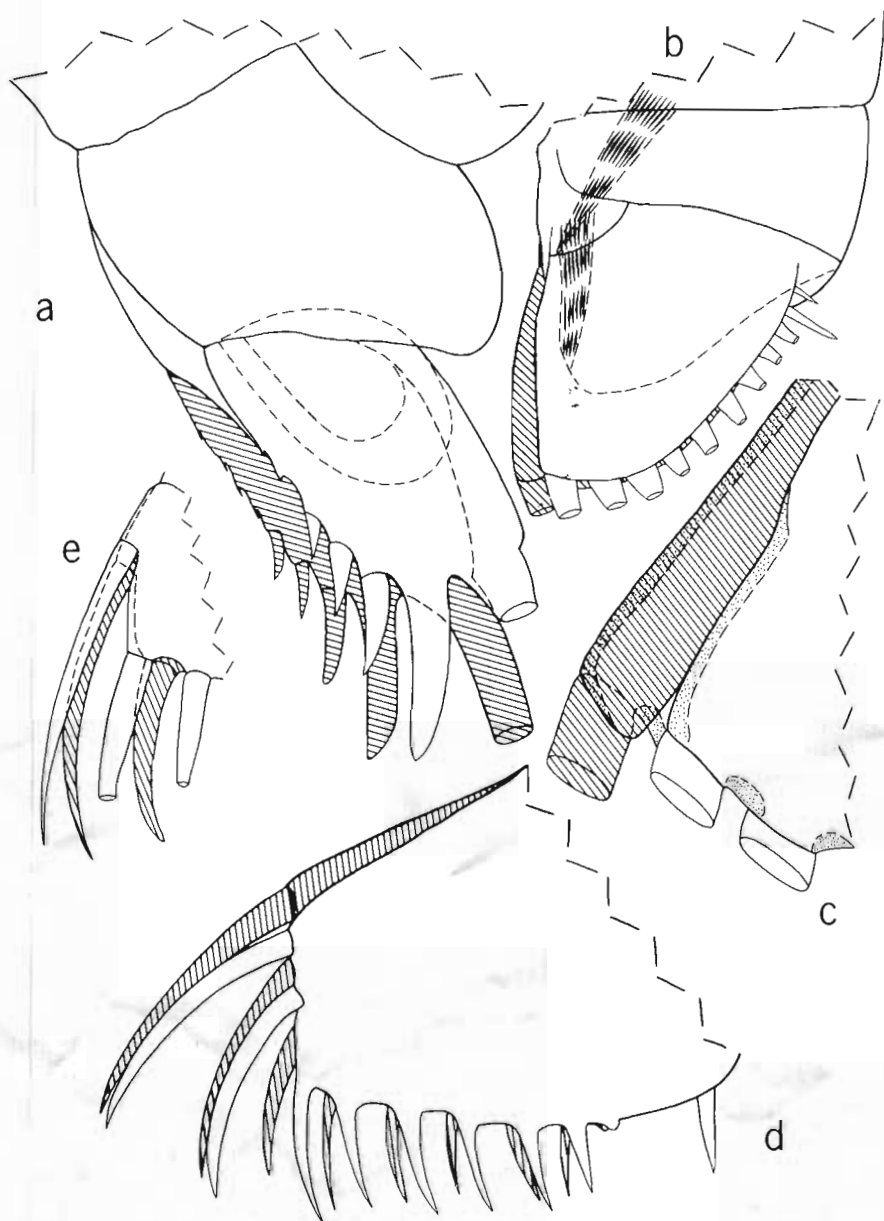


Fig. 1. Ostracode furcae: a-c, Cypridinoidea (Myodocopida): a, *Cymbicopia* sp., USNM 158208; b, *Gigantocypris* sp., USNM 157883, only proximal parts of claws illustrated; c, Detail showing sclerotized structures in anterior part of furca shown in b; d, Thaumatoocypridoidea (Halocyprida: Halocypridina), *Thaumatoconcha radiata* Kornicker and Sohn 1976, USNM 143858C. e, Halocypridoidea (Halocyprida: Halocypridina), Halocyprididae, gen. and sp. unknown, anterior claws only. Hachures identify far lamella.

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