

Redescription of *Chone infundibuliformis* Krøyer, 1856 (Polychaeta: Sabellidae) and histology of the branchial crown appendages, collar and glandular ridge

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Abstract

Fifty-three species have been formally described in *Chone* Krøyer, 1856, showing wide variation in the shapes of dorsal lips, peristomium, and posterior abdominal uncini. Previous studies indicate that such variation could result in splitting of the genus; however, the original description of the type species, *C. infundibuliformis* did not include critical details and illustrations, and for other species, incomplete or misleading information has been provided. In order to redescribe the species *C. infundibuliformis* and delineate the genus, type and topotype materials were reviewed, and histological sections of the appendages of the branchial crown, collar and glandular ridge are described. The redescription points out that in *C. infundibuliformis*: 1) insertion of the branchial lobes is not exposed beyond the collar; 2) radioles have a paired series of pinnules of different sizes; 3) radiolar flanges are broad; 4) dorsal lips are broadly rounded, as long as wide, without mid-rib; they have hyaline cartilage, but there is no extension of the branchial skeleton; 5) dorsal lips are vascularized by a plexus of small blood vessels derived from the basal branchial blood vessels, which further back communicate with the dorsal vessel; 6) thoracic uncini have teeth above the main fang of unequal size, median tooth of basal row larger than teeth in subsequent rows; 7) uncinus shape shows variation within each torus, but no intersegmental gradation is appreciable; 8) females with oocytes distributed in all thoracic and abdominal segments; males with sperm in abdomen, with barrel-shaped nucleus and mushroom-shaped acrosome. The collar is supported by a dense mass of hyaline cartilage and covered by glandular epithelium composed of basophile glands. Acidophil glands, tubular-shaped with granulose secretions, constitute the glandular ridge. Size of teeth in thoracic uncini, presence or absence of abdominal uncini variation, latero-ventral posterior abdominal depression, dorsal lips internal construction and glandular ridge are compared among some species of *Chone* and close genera.

Key words: Sabellidae, *Chone infundibuliformis*, histology, glandular ridge