

## ***Myzostoma seymourcollegiorum* n.sp. (Myzostomida) from southern Australia, with a description of its larval development**

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### **Abstract**

Few Myzostomida have been recorded from southern Australian waters. Most myzostome taxa to date have been described from the warmer waters of the Indo-Pacific, where their crinoid echinoderm hosts are most diverse. In this paper a new myzostome, *Myzostoma seymourcollegiorum* n. sp., is described from the crinoid *Cenolia trichoptera* (Comasteridae) taken from Encounter Bay near Adelaide, South Australia; further records suggest its range extends also to Tasmania and around eastern Australia to central New South Wales. *Myzostoma seymourcollegiorum* n. sp. is an ectocommensal on *C. trichoptera* and *C. glebosus* and there has previously been no myzostome recorded from any species of *Cenolia*. The new species resembles a number of other *Myzostoma* species that are quite flat and have a nearly circular shape with 20 short marginal cirri. The early stages of its larval development are also outlined and compared with those of other Myzostomida.

**Key words:** Crinoidea, Myzostomida, larval development, symbiont

### **Introduction**

Myzostomida comprises a small taxon of around 150 nominal species. There is an ongoing debate on the overall position of the group, with some authors favoring a position among polychaetes (e.g. Rouse & Pleijel 2001), while others favour a placement outside annelids and closer to platyhelminths (Eeckhaut *et al.* 2000) or rotifers (Zrzavy *et al.* 2001). Myzostomida are all obligate symbionts, mainly with crinoids but some with other echinoderms. Many are mobile and roam over the host, stealing food from it, but others remain sessile near a convenient 'feeding' site. Some induce the host to form galls or cysts around them, while others are endoparasitic, living in the gut lumen, coelom, or gonads of their host