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A revision of the genus *Atelecrinus* PH Carpenter (Echinodermata: Crinoidea)

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Abstract

The unusual bathyal comatulid crinoid genus *Atelecrinus* is widespread in the Atlantic and tropical Pacific Oceans and currently includes three recognized species. A re-assessment based on examination of new and existing specimens requires establishment of two new genera and five new species, and returns three junior synonyms to species-level status. *Paratelecrinus* is erected to accommodate *Atelecrinus wyvilli* PH Carpenter, *A. conifer* AH Clark, *A. cubensis* PH Carpenter, *P. orthotriremis*, new species, *P. amenouzume* new species, *P. laticonulus* new species and *P. telo* new species. *Adelatelecrinus* is erected to accommodate *Atelecrinus sulcatus* AH Clark and *Adelatelecrinus vallatus* new species. *Atelecrinus* retains *A. balanoides* PH Carpenter and *A. helgae* AH Clark, which restricts the genus to the Atlantic. In both *Paratelecrinus* and *Adelatelecrinus*, the basals articulate with the centrodorsal via ligament bundles anchored in deep ring-like interrational pits that project into the centrodorsal cavity, whereas in *Atelecrinus* the centrodorsal rim has shallow interrational concavities and attaches to the basals via a tight junction with no obvious ligament bundles. The spoon-shaped aboral fossa in the basals of *Paratelecrinus* appears to be unique among articulate crinoids and differs from the smooth fossa found in both *Atelecrinus* and *Adelatelecrinus*. New material extends the range of the family to the Indian Ocean. A few species are now known from enough specimens to identify some ontogenetic and distributional variations. Proximal ray morphology varies substantially with size in *P. cubensis* and *P. orthotriremis*. *A. balanoides* generally occurs in deeper water in the Lesser Antilles than in the Bahamas and Strait of Florida, while *P. orthotriremis* occurs in shallower water in the Lesser Antilles and deeper in the Bahamas.

Key words: Atelecrinidae, *Atelecrinus*, *Paratelecrinus*, *Adelatelecrinus*, Crinoidea, Echinodermata, bathyal, new species