



***Chaetozone* and *Caulleriella* (Polychaeta: Cirratulidae) from the Pacific Coast of Costa Rica, with description of eight new species**

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Abstract

Polychaetes of the family Cirratulidae have often been poorly understood yet are very common and important components of intertidal and subtidal benthic communities. Five species of *Chaetozone* are here described from the Pacific coast of Costa Rica. Three of these species, *C. acuminata* **sp. nov.**, *C. cimar* **sp. nov.**, and *C. nicoyana* **sp. nov.**, are new to science while *C. corona* Berkeley & Berkeley, 1941 and *C. hedgpethi* Blake, 1996 were previously described from California. *C. acuminata* **sp. nov.** has an elongate peristomium, a narrow anterior body region and elongate unidentate spines; the upper notosetal and lower neurosetal spines may be bidentate. *C. cimar* **sp. nov.** has notopodial and neuropodial spines in the mid-body region and partially complete posterior cinctures. *C. nicoyana* **sp. nov.** has a double row of posterior notopodial spines with fine recurved tips. Five new species in the genus *Caulleriella* are also described: *C. cucula* **sp. nov.**, *C. dulcei* **sp. nov.**, *C. minuta* **sp. nov.**, *C. moralesensis* **sp. nov.**, and *C. murilloi* **sp. nov.** *C. cucula* **sp. nov.** has dark, prominent nuchal organs, notopodial spines from the midbody to the posterior body region, capillary setae accompanying the spines in posterior setigers, bidentate neuropodial spines throughout. *C. dulcei* **sp. nov.** has accompanying capillary setae in all parapodial lobes except the posterior neuropodia, and notopodial spines from the anterior to mid-body region. *C. minuta* **sp. nov.** is a very small species with neuropodial spines beginning at setiger 4, capillaries accompanying the spines in posterior notopodia and segment 1 fused with setiger 1. *C. moralesensis* **sp. nov.** has notopodial spines from the anterior region and capillaries accompanying spines in both the notopodia and neuropodia. *C. murilloi* **sp. nov.** has dorsal tentacles emerging from setiger 3 and highly modified bidentate spines with low, rounded teeth or an encircling hood. Morphological characters which best aid in the differentiation of species in each genus are discussed including the use of peristomial annulations as a morphological character.

Key words: Polychaeta, Cirratulidae, *Chaetozone*, *Caulleriella*, Costa Rica, Eastern Pacific

Introduction

The polychaete fauna of Costa Rica has been poorly characterized and this is especially true for the family Cirratulidae. Globally, the taxonomy of Cirratulidae has been very confused due to a relative lack of discrete morphological characters and the somewhat cursory or misleading descriptions of species (see Blake 1991). Many of the Costa Rican records of Cirratulidae identify specimens only to the family or genus level (Nichols-Driscoll 1976; Dean 1996a b) or misidentify species based on the previous literature. Dean (1996a), for example, listed nine species of cirratulids belonging to five genera in the Golfo de Nicoya but five of these were simply identified to a genus and given a provisional designation (e.g. *Chaetozone* sp A) and several of the named species are now considered unlikely to occur in the eastern Pacific (Blake 1996). Dean (2004) attempted to update the list of recorded species using Blake's (1991, 1996) reviews of the family but was only partially successful.