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## Three new species and one new record of *Campylaimus* (Diplopeltidae, Nematoda) from Argentine coasts (Buenos Aires and Santa Cruz, Argentina)

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### Abstract

Two new *Campylaimus* species from Arroyo Pareja, Buenos Aires province and one new species and one new record of *Campylaimus* from Puerto San Julián, Chubut province are described. The three species are characterized by the shape of the copulatory apparatus of the male and the presence of precloacal papillae. *Campylaimus bonariensis* **sp. nov.** has slender and arcuate spicules, with well-developed cephalization at the proximal end, tubular gubernaculum and three precloacal papillae; *Campylaimus arcuatus* **sp. nov.** has curved spicules, with well-developed cephalization at the proximal end, gubernaculum with dorso-caudally directed apophysis and five precloacal papillae; *Campylaimus patagonicus* **sp. nov.** has slender and arcuate spicules without proximal cephalization, gubernaculum with dorso-caudally directed apophysis and two precloacal papillae. An emended diagnosis of the genus *Campylaimus* and an identification key to species based on male characters are given

**Key words:** marine nematode, emended generic diagnosis, description, systematics, key

### Introduction

New free-living marine nematodes were found during an ecological and taxonomical study of the meiobenthos of Argentine coasts. The family Diplopeltidae Filipjev, 1918 has been reviewed by Muthumbi & Vanreusel, (chapter 19, 2006) as having (Cylindrolaiminae) or not having precloacal supplements (Diplopeltinae). The family Diplopeltinae was reviewed by Vincx & Gourbault, 1992 and the genus *Campylaimus* Cobb, 1920 was reviewed by Gerlach & Riemann, 1973; 1974, Warwick *et al.*, 1998, Huang & Zhang, 2006 and Tchesunov & Miljutina, 2008 without suggestion of the presence or absence of precloacal supplements. Analyzing descriptions of different *Campylaimus* species, we found that none of them mention the presence of precloacal supplements, either papilliform or setiform.

Huang & Zhang (2006) redescribed the species *C. gerlachi* Timm, 1961 collected in the Yellow Sea of China and did not observe precloacal supplements. The three species described as new in this paper: *Campylaimus bonariensis* **sp. nov.**, *Campylaimus arcuatus* **sp. nov.** and *Campylaimus patagonicus* **sp. nov.**, plus a population of *C. gerlachi* found in San Julián area all have tiny precloacal papillae present. So due to inconsistencies with the literature, we provide here an emended diagnosis of the genus *Campylaimus*.

Huang & Zhang, 2006 published a key to the genus that included nine species. They give good arguments to differentiate *C. inaequalis* Cobb, 1920 from *C. gerlachi* Timm, 1961. Their key did not include *C. inaequalis* Cobb, 1920 and did not take into account *C. tkatchevi* described by Tchesunov in 1978. *C. abnormis* was described by Thanh & Gagarin, 2011. We consider here *C. cylindricus* Gerlach, 1956, *C. minor* Timm, 1961, *C. siwaschensis* Sergeeva, 1981 and *C. gracilis* Thanh *et al.*, 2012 only described from females, as species inquirendae.

Within the genus *Campylaimus* we consider nine species as valid: *C. abnormis* Thanh & Gagarin, 2011; *C. inaequalis* Cobb, 1920; *C. gerlachi* Timm, 1961; *C. lefeveri* Gerlach, 1956; *C. mirus* Gerlach, 1950; *C. ponticus* Sergeeva, 1981; *C. rimatus* Vitiello, 1974; *C. striatus* Boucher & Helléouët, 1977 and *C. tkatchevi* Tchesunov, 1978.