



## The Cumacean (Crustacea: Peracarida) Genus *Petalosarsia* (Pseudocumatidae) from the Pacific Ocean

TADASHI AKIYAMA<sup>1</sup> & SARAH GERKEN<sup>2</sup>

<sup>1</sup>*Ushimado Marine Laboratory, Okayama University, Ushimado, Okayama 701-4303, Japan*

*E-mail: akiyama@uml.okayama-u.ac.jp*

<sup>2</sup>*University of Alaska, Anchorage 3211 Providence Dr., Biological Sciences, Anchorage, Alaska 99508, USA*

*E-mail: gerken.uaa@gmail.com*

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### Abstract

The distribution of the cumacean family Pseudocumatidae is restricted to the North Atlantic, Mediterranean and brackish waters of the Pont-Caspian region, except for three known species of the genus *Petalosarsia*. The present study describes nine species of *Petalosarsia* from Japanese waters, the Sulu Sea, the North-west Pacific, the Indo-West Pacific, and the Tasman Sea, Australia. The occurrence of *P. declivis* (Sars, 1865) in northern Hokkaido agrees with the reported circumpolar distribution of this species. Four species from the Pacific coast of southern Japan and the East China Sea, *P. brevirostris* Gamô 1986, *P. ovalis* **sp. nov.**, *P. ryukyuensis* **sp. nov.** and *P. gamoi* **sp. nov.**, are characterized by prominent dorsolateral carinae with teeth anteriorly and the basis of the 2nd maxilliped with a semicircular plate on the ventral surface. Nine specimens collected from the Sulu Sea included five species, *P. brevirostris*, *P. gamoi*, *P. jonesi* **sp. nov.**, *P. suluensis* **sp. nov.** and *P. longicauda* **sp. nov.** The latter three species were characterized by no or faint dorsolateral carinae on the carapace. Among them, *P. jonesi* was similar to *P. longirostris* from the eastern tropical deep Atlantic. *Petalosarsia australis* **sp. nov.** from the Tasman Sea is characterized by one faint pair of dorsolateral carinae running for the entire length of the carapace. The species richness of *Petalosarsia* in the Sulu Sea and the Indo-West Pacific suggests a wide distribution of ancestors of Pseudocumatidae around the ancient Tethys Sea, with the Ponto-Caspian region located near the center. The habitat of *Petalosarsia* was mostly deeper than 200 m.

**Key words:** Cumacea, *Petalosarsia*, Pseudocumatidae, Northwest Pacific, Indo-West Pacific