



# Article

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## **Ampharetidae (Annelida: Polychaeta) from Japan. Part I: The genus *Ampharete* Malmgren, 1866, along with a discussion of several taxonomic characters of the family and the introduction of a new identification tool**

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### **Abstract**

Five species of *Ampharete* are reported from Japan. Two species, *Ampharete ampullata* **sp. nov.**, and *Ampharete cinnamomea* **sp. nov.**, are newly described, and *Ampharete falcata*, is newly recorded from the North Pacific. Several morphological characters are reviewed and their value for taxonomy and systematics is discussed. A schematic diagram of the anterior end of ampharetid polychaetes, which may serve as the species' "ID card", is introduced.

**Key words:** New species, new record, taxonomy, distribution

### **Introduction**

The ocean surrounding Japan is divided into a northern and a southern zoogeographical province. The approximate border is near the Boso Peninsula, north of Tokyo, where the eastern coastline of the main island Honshu bends sharply. In the winter the bend marks the location where the warm Kuroshio Current, which originates in the Philippine Sea, and the cold Oyashio Current, which originates in the Arctic Sea, collide. This oceanographic condition suggests that the southern province, including southern Honshu, Shikoku and Kyushu, has a warm-temperate fauna, whereas the northern province, including northern Honshu and Hokkaido, supports a cold-temperate fauna.

The ampharetid polychaetes from Japanese waters have been studied by Marenzeller (1884), Hessle (1917), Okuda (1936), and Imajima (2001, 2006, 2009). However, information on the number of species and their distribution in Japanese waters is still fragmentary. This is the first of a series of papers on Ampharetidae from Japan, dealing with the most speciose genus *Ampharete*. Specimens were collected between 1957 and 2008 from 37 stations, at depths between the intertidal and 480m, from Chichijima Island in the south to Sarufutsu on the northern coast of Hokkaido. A total of 5 species are reported, two of them new to science and one newly recorded from Japan.

The generic diagnosis of *Ampharete* Malmgren, 1866 has recently been emended to include species of the genera *Asabellides* Annenkova, 1929, *Parampharete* Hartman, 1978, *Pterampharete* Augener, 1918, and *Sabellides* Milne-Edwards in Lamarck, 1838 (Jirkov 1994, 2001, 2011; Parapar *et al.* (2012)). The only character by which *Asabellides* had been distinguished from *Ampharete* is the lack of notochaetae in segment II (traditionally described as paleae). However, the presence of chaetae in segment II is considered a character for specific, rather than generic diagnoses (Jirkov 1994, 2001, 2008, 2011; Reuscher *et al.* 2009; Parapar *et al.*, 2012). We agree with Jirkov (2001) that loss or gain of a single thoracic unciniger is also a character that is more appropriate for specific rather than for generic diagnoses. *Sabellides* had been distinguished from *Ampharete* by the presence of 11, rather than 12 thoracic unciniger. Just like in *Ampharete*, segments II and III are fused in *Sabellides* and chaetae