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A new sea star of the genus *Leptasterias* (Asteroidea: Asteriidae) from the Aleutian Islands

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Abstract

A new species of asteriid sea star of the genus *Leptasterias* (Order Forcipulatida) is described from the nearshore waters of the Aleutian Islands. *Leptaterias tatei* **sp. nov**. is distinguished from *Leptasterias stolacantha* Fisher, 1930, by the characteristics of the spines and pedicellariae. Geographic distribution is discussed and a key to the five-rayed *Leptasterias* of the Aleutian Islands is provided.

Key words: sea star, *Leptasterias,* new species, Alaska, Aleutian

Introduction

The Aleutian Islands have a highly diverse asteroid fauna. An inventory of shallow water (< 20 m) sea star species yielded six families, 18 genera, and 53 species (Jewett *et al*. 2012), including 17 recently discovered species (Clark & Jewett 2010, 2011a, b). The family Asteriidae is well represented with more than 20 species (Fisher 1930; Jewett *et al*. 2012). At least 14 species of the genus *Leptasterias* Verrill, 1866 occur in the Aleutians, primarily in two subgenera, the five-rayed *Leptasterias*, and the six-rayed *Hexasterias* (Verrill 1914; Fisher 1930). The taxonomic and morphological complexity of the genus have long been recognized (e.g. Verrill 1914; Fisher 1930; Lambert 2000; Foltz *et al.* 2008).

A new species, *Leptasterias tatei* **sp. nov**., of the subgenus *Leptasterias* is described herein. It resembles the much smaller, but similarly fleshy *Leptasterias stolacantha* Fisher, 1930. *Leptaserias tatei* **sp. nov.** is also similar to several large, relatively fleshy five-rayed species from the Okhotsk Sea, but is distinguished by the characteristics of the ossicles, spines and pedicellariae.

Methods

Specimens of sea stars were collected by hand, using scuba, and digital photographs were taken *in situ* during three expeditions to the Aleutians, the Alaska Monitoring and Assessment Program (AKMAP) nearshore Aleutian Islands survey (2006–2007), the Halfar/Hetzinger Bering Sea coralline algae expedition (2008) and the USDOE Amchitka radioactivity assessment expedition (2011), in which Adak Island was used as a reference (DOE 2013). Tissue samples for genetic analysis were taken, and are deposited at the Los Angeles County Museum of Natural History (LACM). Vouchered museum specimens were fixed in 10% buffered formalin and air-dried. One ray from the holotype was cleaned by soaking in sodium hypoclorite (NaCIO), rinsed in distilled water and dried.

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