



A new sea star of the genus *Hippasteria* (Asteroidea: Goniasteridae) from the Aleutian Islands

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Abstract

A new species of goniasterid sea star, *Hippasteria aleutica* sp. nov. is described from the Aleutian Islands, and compared to *H. phrygiana* (Parelius, 1768) from the North Atlantic-Arctic, as well as its congeners from the North Pacific. Distribution is discussed and a key to the described species of *Hippasteria* in Alaskan waters is presented.

Key words: sea star, AKMAP, Alaska, *Hippasteria*, echinoderm, Valvatida

Introduction

Fisher (1911) recorded two species of *Hippasteria* Gray, 1840 from Alaskan waters, but none from the Aleutian Islands. *Hippasteria spinosa* Verrill, 1909, was recorded in the Gulf of Alaska, north and west to the Shelikof Strait, NW of Kodiak Island (although he mentions a specimen from off Saint Paul Island, in the Bering Sea, he does not include it in his range data) and *H. heathi* Fisher, 1904, was recorded from Clarence Strait in southeastern Alaska.

From 1994–2004 specimens of several *Hippasteria* spp. were taken in National Oceanic and Atmospheric Administration (NOAA)/ National Marine Fisheries Service (NMFS) survey trawl catches in the Aleutian Islands. Most were referable to known species, but one form differed markedly from the well known *Hippasteria spinosa* of the North American Pacific coast, and was very similar in appearance to the North Atlantic-Arctic *Hippasteria phrygiana* (Parelius, 1768). A comparison of the two forms demonstrated that the Aleutian form was distinct from the Atlantic species, and new to science.

In 2006–2007 during the Alaska Monitoring and Assessment Program (AKMAP) survey in the Aleutian Islands, Divers collected and photographed specimens of the new species at several Islands. The Holotype was collected the subsequent year (2008) on another dive expedition to the region. The species is herein described, and its morphology compared to other *Hippasteria* from the region. The distribution of the genus in Aleutian waters is discussed and a key to the identification is presented.

Methods

Specimens were collected during AKMAP in 2006–2007, and subsequent dives in the region in June of 2008. They were gathered using scuba and photographed *in situ* using a variety of digital cameras with underwater housings. Additional material was collected from trawl samples from 1994–2005, during NOAA/NMFS Aleutian Islands and Gulf of Alaska trawl surveys.