



## A new hermit crab (Decapoda: Anomura: Paguroidea: Paguridae) from the eastern North Pacific

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### Abstract

A new intertidal species of the hermit crab genus *Pagurus*, recently discovered on the Olympic Peninsula of Washington, is described and illustrated. This species, *Pagurus holmi* n. sp., is compared and contrasted to other regional shallow-water species.

**Key words:** Decapoda, Anomura, Paguroidea, Paguridae, *Pagurus*, new species, North Pacific

### Introduction

The hermit crab fauna of the eastern North Pacific region was summarized in detail by McLaughlin (1974) and only one species has been added since that review (McLaughlin & Asakura 2002). Thus, it was with considerable surprise and interest that our attentions recently were directed to a potentially new addition to the intertidal assemblage. During a field trip to Marrowstone Point at the northern end of Marrowstone Island, Washington, in May of 2008, members of the Pacific Northwest Shell Club encountered some very tiny gastropods inhabited by equally tiny hermit crabs. Noting that two of the crabs were ovigerous females, these crabs were passed to the authors for identification. Following microscopic examination and comparison with descriptions and color notes of other local intertidal species, it appeared that these specimens represented an undescribed taxon. However, because of their small sizes, we could not exclude the possibility that the ovigerous females represented precocious juveniles of a common intertidal species.

Five specimens of the presumed new species were collected by hand on a sandy shore in eel-grass to the south (48°05.55'N, 122°41.50'W) and in kelp on a rocky substrate to the west (48°06.21'N, 122°41.61'W) of the Marrowstone lighthouse and the U.S. Geodetic Survey Marine Field Station. These specimens were compared with juvenile specimens of *Pagurus hirsutiusculus* (Dana, 1851), similarly collected by hand during a low tide at nearby Whiskey Creek. The unidentified specimens were photographed before being preserved in 70% ethyl alcohol. Two of the specimens were stained in a solution of 1% Chlorazole Black E in preparation for dissection and drawing. Illustrations were prepared with the aid of a camera lucida mounted on a Wild M5 dissecting microscope. Shield length (sl), measured from the tip of the rostrum to the midpoint of the cervical groove provides an indication of animal size. Terminology for the description follows that of McLaughlin (2007). The holotype and all paratypes have been deposited in the National Museum of Natural History, Smithsonian Institution (USNM).