



<http://dx.doi.org/10.11646/zootaxa.3765.6.4>

<http://zoobank.org/urn:lsid:zoobank.org:pub:3E9B7388-CF58-46D2-8A37-E820E165772D>

Redescription of a poorly known epialtid crab *Pugettia pellucens* Rathbun, 1932 (Crustacea: Decapoda: Brachyura: Majoidea) and description of a new species from Sagami Bay, Japan

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Abstract

A poorly known epialtid crab species, *Pugettia pellucens* Rathbun, 1932, is redescribed and a closely allied new species *P. vulgaris* n. sp. is described and illustrated on the basis of material from Sagami Bay, Japan. *Pugettia pellucens* was originally described as a subspecies of *P. quadridens* (De Haan, 1839), but it is confirmed that the taxon is distinct from *P. quadridens*. The superficially similar *Pugettia vulgaris* n. sp. can be distinguished from *P. pellucens* by several morphological characters. The new species is also similar to *P. elongata* Yokoya, 1933, and *P. intermedia* Sakai, 1938, but can also be separated by various carapace and gonopodal characters.

Key words: Crustacea, Decapoda, Brachyura, Epialtidae, *Pugettia*, new species, Sagami Bay, Japan

Introduction

Species of the kelp crab genus *Pugettia* Dana, 1851, occur in the western and northern North Pacific Ocean, ranging from the Philippines northward along the East Asian coast, across the Aleutian Islands south to Baja California, Mexico (Shen 1937; Garth 1958; Takeda & Miyake 1972; Sakai 1976; Griffin & Tranter 1986; Williams *et al.* 1989; Dai & Yang 1991; Richer de Forges 1993; Komatsu 2011; Wicksten & Stachowicz 2013). Twenty-one species are currently recognized in the genus (Ng *et al.*, 2008; Wicksten & Stachowicz 2013), of which 11 species have been recorded from Japan: *P. elongata* Yokoya, 1933, *P. incisa* (De Haan, 1837), *P. intermedia* Sakai, 1938, *P. kagoshimensis* Rathbun, 1932, *P. marissinica* Takeda & Miyake, 1972, *P. minor* Ortmann, 1893, *P. nipponensis* Rathbun, 1932, *P. ogasawaraensis* Komatsu, 2011, *P. pellucens* Rathbun, 1932, *P. quadridens* (De Haan, 1839), and *P. similis* Rathbun, 1932. Of these, *P. intermedia* and *P. pellucens* were previously recognized as subspecies of *P. quadridens* (e.g., Sakai 1976). Griffin & Tranter (1986) clarified that *P. intermedia* was a distinct species. Sakai (1986) elevated *P. pellucens* to full specific status, although he did not comment on his reasons for doing so. These were also recognized as distinct species in the global brachyuran checklist by Ng *et al.* (2008).

During a survey of the shallow-water crustacean fauna at Nagai, Miura Peninsula, on the east coast of Sagami Bay, Japan, we found that a small-sized species of *Pugettia* predominantly inhabits among small red algal turfs. In Sakai (1976) and Griffin & Tranter (1986), this species keys to *P. pellucens*, which was originally described as a subspecies of *P. quadridens* based on a male specimen from Omae-Zaki Light, Suruga Bay, Japan (Rathbun 1932), although there appeared to have some differences. The identity of *P. pellucens* is not very clear because the original description and subsequent accounts (e.g., Rathbun 1932; Sakai 1938, 1976) are all very brief and without good figures. Certainly the diagnostic characters of the taxon are absent. We have therefore examined photographs and drawings of the holotype of *P. pellucens*, including its first gonopod structure, to clarify its identity. With this information as well as a good series of specimens, we can now confirm that the species found in Nagai is new to science, and is here described as *P. vulgaris* n. sp. A detailed redescription is also given for *P. pellucens*.

his help and guidance during the preparation of the manuscript. Thanks are also extended to colleagues and reviewers for critically reading earlier drafts of the manuscript.

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