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Two new species of *Salmoneus* Holthuis, 1955 with a deep dorsal depression on the carapace (Crustacea, Decapoda, Alpheidae)

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Abstract

Two closely related species of the alpheid shrimp genus *Salmoneus* Holthuis, 1955 are described as new, viz. *S. excavatus* **sp. nov.** from the tropical eastern Pacific (Panama, Colombia), and *S. depressus* **sp. nov.** from the western Atlantic (Panama, Venezuela, Barbados). The two species share the presence of a dent-like, deep, longitudinal depression on the dorsal surface of the carapace, a feature unique within *Salmoneus*, the Alpheidae, and possibly the infra-order Caridea, as well as several other characters, thus forming a transisthmian sister species pair.

Key words: Caridea, Alpheidae, shrimp, *Salmoneus*, East Pacific, West Atlantic

Introduction

The genus *Salmoneus* Holthuis, 1955 is being continuously enriched with new species, many of them presenting features that were previously unknown in the family Alpheidae. For instance, *S. armatus* Anker, 2010 is characterised by the anteriorly directed tooth on the mid-dorsal line of the carapace, posterior to the rostrum (Anker 2010). Another recently described species, *S. paulayi* Anker, 2011, presents a very unusual armature on the fingers of the major chela, consisting of strong teeth intercalated with finely striated, thin, lamellar structures (Anker 2011).

During the author's field studies in Panama (2005–2008), numerous specimens of *Salmoneus* were collected from both the Pacific and the Caribbean coasts of this country. Among them were several unusual specimens with a dent-like, deep, longitudinal depression on the carapace, a feature previously unknown not only in the genus *Salmoneus* and the family Alpheidae, but possibly also in the entire infra-order Caridea. In the present study, these specimens serve as type material in the description of two new species of *Salmoneus*, one from the eastern Pacific, and another from the western Atlantic. Specimens from the Pacific coast of Colombia, Venezuela and Barbados are included as additional material.

Type material is deposited in the collections of the Muséum national d'Histoire naturelle, Paris, France (MNHN), Nationaal Natuurhistorisch Museum, Naturalis, Leiden, the Netherlands (RMNH), and Oxford University Museum of Natural History, Oxford, the United Kingdom (OUMNH). Non-type material is or will be deposited in the collections of the National Museum of Natural History, Smithsonian Institution, Washington DC, USA (USNM), Museo de Historia Natural Marina de Colombia, INVEMAR, Santa Marta, Colombia (MHNMC), Colección de Referencia, Departamento de Biología Marina, Universidad de Panamá, Ciudad de Panamá, Panama (UP), and Colección de Invertebrados Marinos, Universidad de Oriente, Boca del Río, Isla Margarita, Venezuela (UO).

Carapace length (cl, in mm) was measured from the tip of the rostrum to the posterior margin of the carapace. As pointed out in a previous study (Anker 2011), all individuals of *Salmoneus* have a well-developed appendix masculina and appear to be simultaneous hermaphrodites rather than conventional males and females; therefore, it seems sufficient to distinguish only between ovigerous and non-ovigerous specimens. The abbreviation "fcn" stands for field collection number (also corresponding to a photographic voucher).

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