

## Redescriptions and taxonomic notes on species of the *Synalpheus townsendi* Coutière, 1909 complex (Decapoda: Caridea: Alpheidae)

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### Abstract

We compared morphological features in 122 specimens of the *Synalpheus townsendi* species complex from the Caribbean, Gulf of Mexico and eastern Pacific. Our objectives were to examine the taxonomy of *S. townsendi townsendi*, *S. t. mexicanus*, *S. t. brevispinis* and *S. t. peruvianus*, which we felt have not been appropriately described and to reconsider their status. Based on examination of type material and different characters, we conclude that these taxa should be treated as distinct species, *S. townsendi* Coutière, 1909; *S. mexicanus* Coutière, 1909, *S. brevispinis* Coutière, 1909 and *S. peruvianus* Rathbun, 1910. We agree with Dardeau, 1986, that *S. scaphoceris* Coutière, 1910, is a distinct species. Specimens identified as *S. townsendi productus* Coutière, 1909, overlap in morphology with typical *S. townsendi*, and therefore are not considered to warrant designation as a separate taxon. *Synalpheus mexicanus* is not endemic to the Gulf of California.

**Key words:** Crustacea, Decapoda, Caridea, *Synalpheus*, shrimp

### Introduction

The genus *Synalpheus* Bate, 1888 contains over 115 described species (Chace, 1988), 19 of which have been cited for the eastern Pacific Ocean (Ríos, 1992; Wicksten & Hendrickx, 2003). There has been taxonomic confusion regarding the status of species in this genus. Most of the species of *Synalpheus* are small. Their characters are difficult to interpret. Existing diagnoses of species often are unclear and may be accompanied by inadequate illustrations. In addition, thoracic appendages bearing relevant characters are very