



A new vent shrimp (Crustacea: Decapoda: Alvinocarididae) from the Mid-Atlantic Ridge*

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Abstract

Opaepele vavilovi sp. nov., family Alvinocarididae, is described from the Broken Spur vent site (26° 09'N, 44°50'W) on the Mid-Atlantic Ridge. An emended diagnosis for *Opaepele* is provided, along with characters distinguishing new species from other species of the genus. All known vent species of Alvinocarididae from the Mid-Atlantic Ridge are listed, and key to the genus *Opaepele* is provided. Despite intensive sampling of this vent field for several decades, the new species was only discovered in 2005, highlighting our still fragmentary knowledge of hydrothermal vent biodiversity.

Key words: Crustacea, Decapoda, Caridea, Alvinocarididae, vent shrimps, Mid-Atlantic Ridge, new species

Introduction

Collections from hydrothermal vents along the Mid-Atlantic Ridge have been yielding numerous new taxa of hydrothermal shrimps since 1986 when *Rimicaris exoculata* and *Chorocaris chacei* were described (Williams & Rona 1986). Two new species of the genus *Alvinocaris* were found on the North-Atlantic Ridge (Williams 1988; Shank & Martin 2003) later and a new species of the genus *Opaepele*, previously only known from off Hawaii, was described from the recently detected vent fields along the southern Mid-Atlantic Ridge, between 4° and 9°S (Komai *et al.* 2007). Until now, seven species of vent shrimps have been recorded from the North Atlantic part of the Mid-Atlantic Ridge: *Alvinocaris markensis* Williams, 1988, *A. williamsi* Shank & Martin, 2003, *Chorocaris chacei* (Williams & Rona, 1986), *Mirocaris fortunata* (Martin & Christiansen, 1995), *Rimicaris exoculata* Williams & Rona, 1986, *Opaepele susannae* Komai, Giere & Segonzac, 2007. Most intriguing was the discovery of a new shrimp species on the well-studied Broken Spur vent field in 2005 during the 50th Cruise of the R/V "Akademik Mstislav Keldysh" with deep-sea submersibles "Mir-1" and "Mir-2" onboard. This vent field has been previously explored by numerous expeditions, including some of the R/V "Akademik Mstislav Keldysh". This discovery highlights our still fragmentary knowledge of hydrothermal vent biodiversity, as well as the utility of manned deep-sea submersibles in exploring these habitats.

Materials and methods

The present material was obtained during the 50th Cruise of the R/V "Akademik Mstislav Keldysh", in August–September 2005, with the use of two deep-sea manned submersibles "Mir-1" and "Mir-2". Shrimps