

## New Record of Alvinocaridid Shrimps (Crustacea: Decapoda: Caridea) from Hydrothermal Vent Fields on the Southern Mid-Atlantic Ridge, including a New Species of the Genus *Opaepele*

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Three species of alvinocaridid shrimps are recorded from the recently discovered hydrothermal vent fields on the southern Mid-Atlantic Ridge: *Opaepele susannae* sp. nov., *Rimicaris exoculata* Williams and Rona, 1986, and *Mirocaris fortunata* (Martin and Christiansen, 1995). All three species are considered to be vent-endemic. The new species is provisionally assigned to the heretofore monotypic genus *Opaepele* Williams and Dobbs, 1995, based on overall similarity. *Opaepele susannae* sp. nov. is primarily distinguished from *O. loihi* Williams and Dobbs, 1995, the type species of the genus, by the dorsally smooth rostrum with a truncate or rounded apex. It is the first representative of *Opaepele* known outside the Pacific Ocean.

**Key Words:** Crustacea, Decapoda, Caridea, Alvinocarididae, *Opaepele*, new species, new record, southern Mid-Atlantic Ridge, hydrothermal vent.

### Introduction

Hydrothermal vents and other reducing habitats in deep water (e.g., brine, cold-water sulfide, and hydrocarbon seeps) are frequently inhabited by shrimps of the caridean family Alvinocarididae. Most species appear to be restricted to a particular ridge, seamount, or seep system, although a few species have broad, disjunct distributions (Webber 2004; Komai and Segonzac 2005). Recent studies have reported new species from various localities in the world oceans (Kikuchi and Hashimoto 2000; Watabe and Hashimoto 2002; Shank and Martin 2003; Komai and Segonzac 2004, 2005; Martin and Shank 2005; Komai *et al.* 2005, 2006; see also the review by Martin and Haney 2005), and the family is, so far, represented by 19 species in seven genera. Phylogenetic relationships among some species were investigated by Shank *et al.* (1999) on the basis of an analysis of the mitochondrial Cytochrome C Oxidase subunit I (COI) gene.

During recent surveys conducted from RV *Meteor* (M 64/1, April 2005, chief scientist Dr K. Haase; and M 68/1, May 2006, chief scientist Prof. Dr A. Koschinsky),