

Copepods of the family Dirivultidae (Siphonostomatoida) from deep-sea hydrothermal vent fields on the Mid-Atlantic Ridge at 14°N and 5°S

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Abstract

Five species of three genera of Dirivultidae Humes and Dojiri, 1980 were found at deep-sea hydrothermal vent fields on the Mid-Atlantic Ridge, at the Logachev-1 field at 14°N and at two new sites (Turtle Pits and Red Lion) explored at 5°S. The copepods were collected with a Remotely Operated Vehicle (ROV Quest 4000) and Video Controlled Grab, operated from the *R/V Meteor* during two cruises (M60/3 and M64/1) conducted in 2004 and 2005 at depths 2992–3048 m. The male of *Stygiopontius lomonosovi* n. sp. from the Logachev field shares a medioventrally prolonged syncoxa of the maxilliped with *S. mirus* Humes, 1996 and *S. latulus* Humes, 1996 from the Snake Pit at 23°N of the Mid-Atlantic Ridge, but differs from them in having two, instead of three, outer spines on the distal exopodal segment of leg 4. *Aphotopontius atlanteus* Humes, 1996 previously known from the Lucky Strike and the Menez Gwen sites at 37°N and *Rimipontius mediospinifer* Humes, 1996 known from three sites (Logachev, Snake Pit, and Broken Spur at 29°N) are recorded from the Logachev field. *Stygiopontius pectinatus* Humes, 1987 previously recorded from the Mid-Atlantic Ridge hydrothermal vent fields TAG (26°N), Snake Pit, Broken Spur (29°N), and from the Mariana Back-Arc Basin of the Pacific Ocean and *Stygiopontius cladarus* Humes, 1996 previously known only from Snake Pit and Broken Spur, were found associated with alvinocaridid shrimps (*Rimicaris* sp.) from the hydrothermal vent field at 5°S. The discovery of dirivultids at 5°S represents the first record of copepods from a deep-sea hydrothermal vent southward of the Logachev field in the Atlantic Ocean.

Key words: Copepoda, Siphonostomatoida, Dirivultidae, deep-sea hydrothermal vents, Mid-Atlantic Ridge, symbiosis