



New records of callianassid ghost shrimp (Crustacea: Decapoda: Axiidea) from reducing environments in Kyushu, southwestern Japan

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Abstract

This paper reports on two species of callianassid ghost shrimps collected from reducing environments in Japan. *Cheramus cavifrons* n. sp. is described on the basis of five specimens from an invertebrate community associated with mass sinking of whale carcasses implanted off Cape Nomamisaki, Kagoshima Prefecture, Japan, at depths of 219–254 m. This new species is compared with *Cheramus spinophthalmus* (Sakai, 1970), *Callianassa aqabaensis* Dworschak, 2003 and *Callianassa acutirostella* Sakai, 1988. The generic assignment of the new species is provisional, reflecting the flux state of the taxonomy of the family. *Nihonotrypaea thermophila* Lin, Komai & Chan, 2007, originally described from hydrothermally influenced field off northeastern Taiwan, is first recorded from outside the type locality, based on a single specimen from hydrothermally influenced field in Kagoshima Bay, where the siboglinid tube worm *Lamellibrachia satsuma* Miura, Tsukahara and Hashimoto, 1997, is abundant.

Key words: Callianassidae, new species, new record, whale-fall community, hydrothermal vents, Japan

Introduction

The burrowing decapod crustacean fauna (Axiidea and Gebiidea) from reducing environments, such as hydrothermal vents or cold seeps, have been documented in recent years. The following species have been recorded from various sites in the world: two axiids, *Calocarides lev* (Zarenkov, 1989) from deep-water hydrothermal vent sites in the Gulf of California (2000–2036 m) (Zarenkov 1989) and *Heterocalaxius carneyi* (Felder & Kensley, 2004), described from deep-water seeps off Louisiana, Gulf of Mexico (Felder & Kensley 2004; as *Calaxius* Sakai & de Saint Laurent, 1989); and five callianassids, *Bathycalliax geomar* Sakai & Türkay, 1999, from Aleutian subduction zone, off Oregon (627 m) (Sakai & Türkay 1999), *Callianassa truncata* Giard and Bonnier, 1890, from shallow water vents (about 12 m deep) around the islands of Milos and Santorini in the Hellenic Volcanic Arc of the Aegean Sea (Dando *et al.* 1995), *Nihonotrypaea thermophila* Lin, Komai and Chan, 2007, from hydrothermally influenced field off northeastern Taiwan (128–310 m); *Paraglypturus calderus* Türkay & Sakai, 1995, from hot springs of Esmeralda Bank, an active submarine volcano in the Mariana Arc (63–114 m) (Türkay & Sakai 1995); and *Vulcanocalliax arutyunovi* Dworschak & Cunha, 2007, from a mud volcano in the Gulf of Cádiz (1339 m), Atlantic (Dworschak & Cunha 2007). Very little information on the infaunal Decapoda from whale-fall chemosynthetic assemblages is available at present. Fujiwara *et al.* (2007) listed an unidentified species of Callianassidae (as *Callianassa* s. l. sp.) from whale-fall fauna off Kyushu, Japan.

This study reports on two species of callianassid species collected from reducing environments in Japan. *Cheramus cavifrons* n. sp. is described on the basis of specimens collected from the area around sperm whale carcasses artificially implanted off Cape Nomamisaki, Kagoshima Prefecture, Kyushu, Japan (see Fujiwara *et al.* 2007). The second, collected from hydrothermally influenced field in Kagoshima Bay, is identified with *Nihonotrypaea thermophila*, previously known only from hydrothermally influenced field off northeastern Taiwan. It is confirmed that *N. thermophila* is associated with hydrothermalism.

The material examined in this study is deposited in the National Museum of Nature and Science, Tokyo