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## New species of hippolytid shrimps (Crustacea: Decapoda: Caridea: Hippolytidae) from a southwest Indian Ocean seamount

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### Abstract

Two specimens representing two hippolytid genera were sampled recently from the Coral Seamount, southwest Indian Ocean, at 732 m water depth. *Lebbeus ketophilos* sp. nov. and *Eualus oreios* sp. nov. are described and illustrated and their morphologies are compared with those of previously described species. The new species are closest in morphology to *L. indicus* Holthuis, 1947 and *E. kinzeri* Tiefenbacher, 1990 respectively. They are distinguished clearly from these and other species by a suite of morphological features. This record enhances our present knowledge of seamount biodiversity and species richness of decapod crustaceans in the Indian Ocean.

**Key words:** *Lebbeus*, *Eualus*, seamounts, chemosynthetic, whale bone, biodiversity

### Introduction

*Lebbeus* White, 1847 is presently composed of sixty one species, making it the most diverse genus within the family Hippolytidae Spence Bate, 1888 (De Grave & Fransen 2011; Komai *et al.* 2012; Nye *et al.* 2012). The genus displays a wide bathymetric range from shallow to deep waters and cosmopolitan distribution from the tropics to high latitudes, although most species exhibit narrow geographic ranges (Komai *et al.* 2004, 2012; Chang *et al.* 2010). The majority of species are described from the western North Pacific (e.g. Hayashi, 1993; Komai *et al.* 2004; De Grave & Fransen 2011). *Lebbeus* is the only hippolytid known to inhabit chemosynthetic environments; eight species are documented from hydrothermal vents in the Pacific and Caribbean (see Komai *et al.* 2012; Nye *et al.* 2012 and references therein).

The genus *Eualus* Thallwitz, 1892 is represented by 38 species (one of which has two subspecies), distributed primarily in cold and temperate waters of the world oceans at shallow to bathyal depths (De Grave & Fransen 2011; Nye *et al.* 2013). The majority of *Eualus* species have been described from the northern hemisphere (Jensen 2004; Kim *et al.* 2006).

Seamounts (underwater mountains) are ecologically and biologically significant global deep-sea ecosystems but only a few hundred seamounts have been surveyed to date (CBD 2007; Yesson *et al.* 2011). Despite an increasing research effort describing the biological assemblages and assessing the biodiversity and biogeography of seamounts (see Clark *et al.* 2010 for recent review), there have been few studies on the diversity of biological assemblages and the southern Indian Ocean has been highlighted as a significant gap in our present knowledge of global seamount biodiversity (Clark *et al.* 2010).

During a recent research cruise investigating seamounts in the southwest Indian Ocean, two novel species of the hippolytid genera *Lebbeus* and *Eualus* were discovered. This study describes and illustrates the new species and compares their morphology with previously described species. This record enhances existing knowledge of seamount biodiversity and species richness of decapod crustaceans in the Indian Ocean.