



Cumacea from the continental shelf of Angola and Namibia with descriptions of new species

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Abstract

During two sampling campaigns carried out in 2004 and 2008 on the shelf off Angola and northern Namibia (South West Africa), sixteen cumacean species belonging to the families Bodotriidae, Diastylidae and Pseudocumatidae were collected. Two of them are new to science, namely *Bodotria fionae* and *Heterocuma ambrizetensis*. Figures are drawn for the new species and additional for seven species, which are partially described up to date. Additionally, an adapted key to the species of *Heterocuma* is provided. Taxonomic and morphological features were analysed and the findings were compared and discussed with earlier investigations from West Africa.

Key words: Bodotriidae, Diastylidae, Pseudocumatidae, Benguela current, West Africa

Introduction

The Atlantic Ocean on the south-west coast of Africa is a highly dynamic environment due to the Benguela upwelling system. The west coast is bathed by the northward-flowing Benguela Current (south of ~ 20°S) and by the southward-flowing Angola Current (north of ~ 20°S) (Shillington, 2003). Freshwater plumes extend into the shelf, for instance where the rivers Congo and Kunene enter the ocean. The Benguela Current brings cold, oxygen-poor waters to the surface, whereas the Angola Current has a subtropical origin with warm and oxygen-rich waters. Conditions in these environments change continuously and irregular anomalies in temperature, oxygen concentration and salinity may occur even in the border region of both currents around the river Kunene (Zettler *et al.*, 2009). These fluctuations at the shelf off Namibia tend to favour the persistence of few generalists with large abundances and high production (Sakko, 1998). There is a clear trend of decreasing species diversity from southern to northern Namibia.

Despite a very long length of the West African coast-line only few taxonomic studies on Cumacea are available. The comprehensive works on cumaceans of southern Africa (Day, 1975, 1978a, b, 1980) focus on species south of 20°S. This is about the same northern limit for the study of Jones (1955), where only five different species were found near Walvis Bay (Namibia). Further studies were locally concentrated in north western African waters off Senegal (Fage, 1928 b), Ivory Coast (LeLoeuff & Intess, 1972), Sierra Leone and Cameroon (Jones, 1956).

The very shallow, 0–1 m water depth, littoral areas of Angola and Namibia were focus of a study by Mühlenthal-Siegel (1996). She reported fourteen species collected along the coast-line from Angola to South Africa and Tanzania. Jones (1956) published the results of the “Galathea” expedition from 1950, where only three sampling stations were located north of Walvis Bay.

Therefore, the present study of a cumacean collection mainly from the shelf off Angola but also from northern Namibia provides basic data on this crustacean group and contributes to the knowledge about species richness and species distribution in these shelf areas. Moreover, it results in the description of two species new to science.