



Preliminary data on the depth distribution of modern larger benthic foraminifera offshore Brunei Darussalam

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In this study we have analysed data on diversity, abundance and depth distribution of larger benthic foraminifera (LBF) from a number of sites offshore Brunei Darussalam. The investigated sites are called Pelong rocks, Abana Reef, Oil Rig Wreck, American Wreck, Australian Wreck and Bluewater Wreck and they cover a water depth range from 8 to 36 meters and are located few kilometres offshore Muara town. Altogether 16 taxa have been identified and the most common species belong to the families of Amphisteginidae, Calcarinidae and Nummulitidae. The purpose of this study is to calculate the depth distribution of each recovered LBF species and to compare it with that known from other localities in the Indo-Pacific realm to check for similarities and differences, to link them with specific environmental and ecological conditions. Such comparisons are very important as LBF depth distributions are strongly influenced by light penetration in the water column and sea bottom substrate. Brunei waters are generally rich in suspended material due to the large rivers discharging in the Brunei Bay and the sea bottom is mostly covered by fine mud and LBF have never been reported. According to the results obtained, both calcarinids and amphisteginids depict a clearly delimited species specific depth trend, which largely differs from the well-known depth trends in oligotrophic settings in the Indo-Pacific Realm. The LBF depth distribution in Brunei is characterized by much shallower depths and generally narrower depth distribution for all investigated species, thus indicating a reaction for all investigated taxa to meso- to eutrophic environmental conditions. Nonetheless, the number of species recovered from the study sites is only slightly lower than all other sites in the Pacific and several taxa are much more abundant than expected. These results indicate how benthic fauna living in meso- to eutrophic habitats can still be harbouring oligotrophic taxa in large diversity and abundance.