

## Poster

## A LATE MIOCENE METHANE-SEEP FAUNA FROM KALIMANTAN, INDONESIA

Steffen KIEL<sup>1</sup>, Sonja REICH<sup>2</sup>, Willem RENEMA<sup>2</sup>, John D. TAYLOR<sup>3</sup>,  
Frank P. WESSELING<sup>2</sup>, and Jonathan A. TODD<sup>4</sup>

<sup>1</sup>Swedish Museum of Natural History, Dept. of Palaeobiology, Box 50007, 10405 Stockholm, Sweden; <sup>2</sup>Naturalis Biodiversity Center, Department of Geology, P.O. Box 9517, 2300 RA Leiden, The Netherlands; <sup>3</sup>British Natural History Museum, Department of Life Sciences, London SW7 5BD, United Kingdom; <sup>4</sup>British Natural History Museum, Department of Earth Sciences, London SW7 5BD, United Kingdom

Corresponding author: [steffen.kiel@nrm.se](mailto:steffen.kiel@nrm.se)

A late Miocene methane-seep deposit and associated invertebrate fauna was found in the Kutai Basin in eastern Kalimantan, Indonesia. The fauna is dominated by the large, globular lucinid bivalve, *Meganodontia* sp. nov., reaching 124 mm in width, and by an elongate bathymodiolin mussel, *Gigantidas* sp. nov., reaching 87 mm in length. Further taxa include the small but abundant lucinid *Cardiolucina* aff. *quadrata* (Prasad, 1932) and the small vesicomylid bivalve *Isorropodon* sp.; rare are the lucinid *Lucinoma* sp., a possible thyasirid bivalve, and the gastropods *Bathybembix* (Calliostomatidae), *Naticarius* (Naticidae), *Profundinassa* (Nassariidae) and a possible turrid. Geologic setting and the bathymetric ranges of extant representatives of these taxa indicate that the fauna lived at an upper bathyal depth of around 400–500 m. Biogeographically, the fauna shows close affinities to Recent tropical Westpacific seep faunas. In contrast to the predominantly flat to moderately inflated lucinid bivalves at Jurassic to Paleogene seeps, we note that strongly inflated, globular lucinids such as *Meganodontia* and *Cardiolucina* started to appear at seeps only from the Miocene onward.

