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Abstracts

PRESENTER: Warne, Mark

Fossil ostracod proxies of paleoceanographic events in the Bass Strait seaway, southeast Australia

Mark Warne
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ABSTRACT: Bass Strait is a narrow seaway between mainland Australia and Tasmania. This marine passage has its origins in the late Cretaceous, but became a fully open marine link between the Pacific and Southern oceans during the late Oligocene. Since the early Miocene, this has been a region of confluence between major Pacific and Southern Ocean currents. Key paleoceanographic events since this time, which have defined broad phases in the ecological history of Bass Strait, are as follows:

• Strong warm plumes of East Australian Current waters entering eastern Bass Strait (16.4, 5.8 and 2.6 million years ago) via the East Australian Current, as evidenced by fossil occurrences of warm water, western Pacific *Neohornibrookella* species.

• Sporadic incursions of cool waters, probably derived from the South Indian Ocean Current (or Antarctic Circumpolar Current), entering the western Bass Strait between 10 and 5 million years ago, as evidenced by the influx of normally high latitude paracyprid species.

• Periods of particularly intense coastal upwelling, which allowed deep sea taxa to briefly invade the shallow shelf seas of Bass Strait (approximately 8 and 6 million years ago), as evidenced by fossil occurrences of *Clinocythereis* species.

• The inception of warm Leeuwin Current waters entering western Bass Strait (4.6 million years ago), which created a confluence with East Australian Current waters. This is evidenced by an east-west biogeographic differentiation of shallow marine ostracod faunas across this seaway.

• The widespread extinction of warm water marine ostracod taxa in Bass Strait (e.g. *Neohornibrookella* species) due to the inception of the cold winter Bass Cascade current (1.8 to 2.2 million years ago). The inception of the Bass Cascade was associated with an early Quaternary northward shift in the southern hemisphere mid latitude westerly winds.

PRESENTER: Spadi

Taxonomic Harmonisation of Neogene and Quaternary Candoninaceae genera (Crustacea, Ostracoda) of the Paratethys

Spadi

Affiliation

Ostracod biostratigraphy suggests no non-marine J/K boundary in the Dabeigou Formation or Dadianzi Formation, Luanping Basin, China

H. Wang

Affiliation

ABSTRACT:

PRESENTER: Tuncer, Alaettin

Preliminary results on the Holocene ostracod fauna of the Lake Mogan (Ankara, Central Anatolia)

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ABSTRACT: Lake Mogan is located in the Gölbaşı district, 20 km south of the Ankara City, Central Anatolia. The length of lake along the N-S direction is 5 km while the width is 1 km. The periphery of the lake is 14 km. The catchment of the lake is 925 km2 while the average surface area is 6-6.5 km2. The volume of the lake water varies between 14.612.700 m3 (973 m a.s.l.) and 9.470.600 m3 (972 m a.s.l.). The maximum depth was measured 5.0 m by the bathymetry studies carried out in 2015. The shores of the lake (north and south ends with western gulf) are densely covered with reeds. The continental climatic conditions, peculiar to Central Anatolian Region, prevails in the area. 30 m-thick Mogan borehole was drilled at the northern border of the lake approximately 30 m beyond the today's shoreline and a 18.18 m long core was retrieved. The Mogan core is composed of anthropogenic fill at the uppermost 150 cm while it passes sandy lithologies with soil interleaves indicating shallow-to-subaerial lake conditions between 150-450 cm. The middle and lower parts of the core mainly consist of the mollusc and ostracod bearing fine clastics (mud, clay and silt) representing relatively deep lake conditions. Radiocarbon dating of a charcoal sample from the base of the lake infill yields a corrected age of 7950 BP. 18 ostracod taxa have been determined by the investigation of the 241 samples collected from the Mogan core. *Candonina neglecta*, *Ilyocypris bradyi*, *Pseudocandona compressa*, *Cypris pubera*, *Prionocypris zenkeri*, *Ilyocypris gibba*, *Plesiocypridopsis newtoni*, *Cypridopsis vidua*, *Trajanocypris clavata*, *Psy-
**Abstracts**

*Chromodoris olivaceus*, *Heterocypris salina* and *Cyclocypris ovum* are most common species respectively while *Potamocypris* cf. *unicaudata*, *Eucypris* cf. *dulcifons*, *Fabaformiscandona* sp., *Herpetocypris chevreuxi*, *Heterocypris incongruens* and *Trajaneocypris* cf. *serrata* are rare. Determined fauna mainly indicates freshwater-oligohaline lacustrine conditions.

**Poster Session**

**PRESENTER:** Salvi, Gianguido  
**Recent and Late Pleistocene ostracod assemblages from the western Magellan Strait**  
Gianguido Salvi

*Department of Biological Geological and Environmental Sciences, University of Catania, Italy*

**ABSTRACT:**

**PRESENTER:** Fujihara, Yuki  
**Paleoenvironmental changes in Suwa Bay, Oki Islands, Japan, during the Holocene recorded by ostracod assemblages.**  
Toshiaki Irizuki, Tetsuya Sakai, Emi Yasui and Shigenori Kawano

*Affiliation:

ABSTRACT: The Oki Islands are located in the Sea of Japan, 40.80 km north of mainland Honshu in southwestern Japan. They consist of the Dogo Island to the east and the Dozen group of islands to the west, and were connected to the mainland during the last glacial period. Subsequently they became isolated during the Holocene transgression, allowing for ostracod repopulation in several inlets. The aim of this study is to infer environmental and ostracode changes in a small enclosed bay in the islands during the Holocene. Three borehole cores and one short core were obtained from the reclaimed land and from the inner part of Suwa Bay in the Nakanoshima Island of the Dozen group, respectively. Depositional ages were estimated by 14C or 210Pb dating. At approximately 8,000 cal yr BP, seawater inundated the study sites as suggested by the occurrences of mud dwellers in enclosed bays such as *Bicornucythere bisanensis*, *Spinileberis quadriaculeata*, and *Pistocythereis bradyi*. During this early stage these species increased and dominated others. The ostracode composition changed abruptly at least twice at ca. 600 cal yr BP and during the early to middle 19th century. Muddy sand dwellers such as *Cytheromorpha acupunctata* and/or phytal taxa, *Aurila* spp. and *Xestoleberis* spp. increased rapidly, whereas *P. bradyi* decreased upward and became rare. This suggests that the environment of the study sites changed suddenly from an enclosed bay to an open bay. The cause of this change is uncertain but there is a possibility that natural environmental modification for example due to tsunamis occurred at these times because the Oki islands have been affected by several tsunamis during the past few hundred years.

**PRESENTER:** Salvi, Gianguido  
**Ostracods as a possible lecture key to explicate late Quaternary climatic events in the NW Ross Sea area**  
Gianguido Salvi¹, Francesco Sciuto² and Ester Colizza²

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**ABSTRACT:** Carbonate sediments on polar shelves hold great potential to refine our understanding of climate and oceanography in regions of the globe that are particularly sensitive to global change. Such deposits have not received much attention from micropaleontologists, however, and thus remain poorly understood. Nevertheless, the fossil assemblages of these marine sediments contain invaluable proxies useful for reconstructing the paleo evolution of marine ecosystems. Within fossil assemblages, Ostracods have an excellent fossil record and are among the few groups that can be palaeo-environmentally informative in the marine realm and are therefore widely employed as a palaeoclimatic indicator. The NW Ross Sea area close to Cape Adare shows carbonate-rich lithofacies, consisting of poorly sorted sandy and gravelly skeletal remains with a good presence of ostracod remains. We analyzed six gravity cores recovered during two PNRA cruises to exploit qualitative and quantitative variations of the ostracod species together with compositional data in order to reconstruct the ice shelf-front oscillation phases, to define different accumulation patterns in the western Ross Sea area where carbonate rich sequences associated with glacial marine sediments are found, and to locate the more or less favorable periods when carbonate factories operated. Micropaleontological results within the cores showed strong qualitative/quantitative variations on ostracod populations (species appearance and disappearance, test fragmentation evidence of displacement phenomena) probably linked specifically to glacial fluctuations. Ostracod analyses, supported by radiocarbon dating from the ANTA 98-C25 core, drafted a likely glacial phase connected to a Holocene reactivation of carbonate factories recorded by an evident association transition indicative of the contribution of nutrients by cold upwelling currents. The isotopic analyses provided could support such a hypothesis.