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SAGE 2013

2nd Southeast Asian Gateway Evolution Meeting March 11-15, Berlin, Germany

SAGE 2013 Conference Program and Abstracts



Conference Program and Abstracts

1



Palaeobiogeography in SE Asia from the Late Palaeozoic to the Cenozoic

Organizers: Dr. Gilles Cuny & Dr. Eric Buffetaut

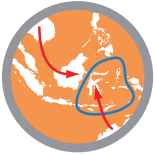
2



SE Asian peat swamp forests: biodiversity vs. biofuel

Organizer: Dr. Lukas Rüber

3



Layers in the landscape: biome assembly and biogeography in SE Asia

Organizers: Dr. Niels Raes & Dr. Craig Costion

4



Geohazards as primary factors for bio-geodiversity and conservation in SE Asia

Organizer: Dr. Dicky Muslim

5



SE Asian biodiversity: challenges of inventoring megadiverse biota

Organizers: Dr. Thomas von Rintelen & Prof. Peter Ng

6



The origin and diversification of the endemic fauna of Sulawesi

Organizers: Dr. Peter Galbusera, Dr. Greger Larson & Dr. Alastair McDonald

7



Processes and mechanisms of Cenozoic climate and environment change in SE Asia

Organizer: Dr. Matthias Prange

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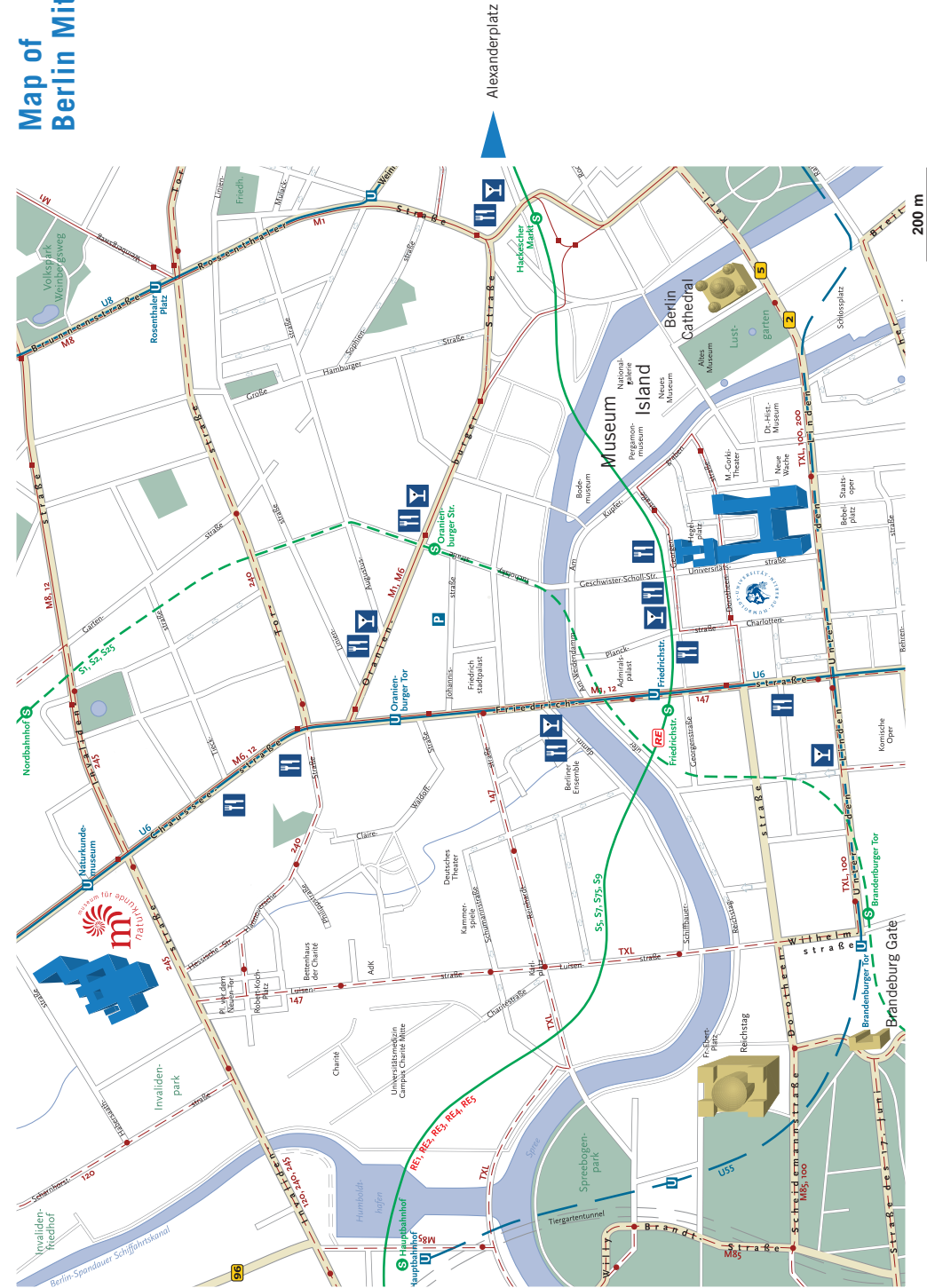
General session



Evolution of Southeast Asia mapping and merging geology and biology

Organizers: Dr. Mark de Bruyn & Prof. Robert Hall

Map of Berlin Mitte



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**Museum für Naturkunde –
Leibniz Institute for Research on Evolution and Biodiversity**

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Monday, March 11

Lecture Hall 1.101

- 09.00 **Opening of conference and welcome addresses**
President, Humboldt-Universität zu Berlin, Prof. Dr. Jan-Hendrik Olbertz
Director General, Museum für Naturkunde, Prof. Dr. Johannes Vogel
Vice Ambassador of Indonesia, Dr. Siswo Pramono

Plenary Session

- 09.30 **Wallacean paleogeography** **Robert Hall**

Palaeobiogeography Symposium

- 10.20 **Fossil avifaunas from insular Southeast Asia and their implications for avian biogeography** **Hanneke Meijer**

11.00 **TEA & COFFEE BREAK**

- 11.20 **Island rule and habitat selection: exploring factors behind the body size reduction of the Javanese fossil bovid *Duboisia santeng*** **Roberto Rozzi**
- 11.40 **Trends of body size evolution in the fossil record of insular Southeast Asia** **Alexandra van der Geer**
- 12.00 **Plio-Pleistocene reef-coral diversity in the Sulu Sea Sabah: Implications for the development of the Indo-Pacific centre of diversity** **Jasmin Ng Saw**
- 12.20 **The Plio-Pleistocene mammal fauna and paleoenvironment in central Myanmar** **Yuichiro Nishioka**
- 12.40 **The origin of Neogene Indonesian *Babylonia* fossils and their tertiary paleogeographic significance** **Aswan**

13.00 **LUNCH**

- 14.00 **Bryozoan diversity in the Miocene of East Kalimantan, Indonesia** **Emanuela Di Martino**
- 14.20 **Mollusks as seagrass indicators in the Miocene of Indonesia** **Sonja Reich**
- 14.40 **Understanding the murky origins of coral diversity in the Coral Triangle** **Nadiezhdia Santodomingo**
- 15.00 **Origin and evolution of tapirids in Southeast Asia** **Hao-wen Tong**
- 15.20 **First discovery of a hippopotamus fossil from Thailand and its significance on palaeobiogeography in SE Asia** **Rattanaphorn Hanta**

15.40 **TEA & COFFEE BREAK**

- 16.10 **Carnivora from the Middle Miocene of Southeast Asia and palaeobiogeography of Miocene Asian Carnivora** **Camille Grohé**
- 16.30 **Faunal turnover in ancient (Paleogene/Neogene) coral reefs in Sarawak, Malaysia** **Morana Mihaljevic**
- 16.50 **Migration and extinction of conifers during the Cenozoic: Evidence from the fossil record in Thailand** **Paul Grote**
- 17.10 **Was Southeast Asia a distinct zoogeographical province during the Mesozoic?** **Eric Buffetaut**
- 17.30 **Palaeobiogeography of the freshwater sharks from the Mesozoic of Thailand** **Gilles Cuny**
- 17.50 **New report of the large crocodylian '*Sunosuchus thallicus* from the Phu Kradung Formation of northeastern Thailand** **Jeremy Martin**

18.10

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Abstracts

Trends of body size evolution in the fossil record of insular Southeast Asia

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Today, insular Southeast Asia includes biodiversity hotspots like the Philippines and Sulawesi. Although their fossil record is extremely fragmented and often poor in content, the study of these fossil faunas reveals a very high degree of endemism also in the deep past. We present an overview of fossil mammalian taxa from Pleistocene Southeast Asian islands in the light of the 'island rule'. This rule describes a graded trend in insular populations of vertebrates from gigantism in small species to dwarfism in large species. When applied to extant species of mammals, there remains some debate regarding both generality and in particular, the causality of the trend, mainly due to the presence of much scatter about the general trend. When applied to extinct species of mammals, the trend appears to be more pronounced, which is consistent with the hypothesis that time in isolation is an important factor. For example, the body masses of *Stegodon florensis* (Late Pleistocene, Flores) and *S. sompoensis* (Early Pleistocene, Sulawesi) were respectively about 50% and 20% of that of their mainland ancestor. In some cases, diversification in body size occurred in response to ecological displacement (radiation). Insular mammalian body size results from selective forces whose influence varies with characteristics of the islands and focal species, and with interactions among species (ecological displacement and release). This research is part of the Thalys Program "Island biodiversity and cultural evolution", co-financed by the EU (ESF) and Greek national funds.