

IL-CREES 国際サンゴ礁環境学ラボラトリー

日本学術振興会 頭脳循環を加速する若手研究者戦略的海外派遣プログラム 採択事業

「複合的なアプローチによる生物源炭酸塩骨格を用いた地球環境変動の解明」

International Joint workshop on Coral reef environmental earth sciences

Faculty of Science Hokkaido University
Sapporo, JAPAN

25, 26 March 2014 10:00-17:30

Guest scientists:

Malcolm McCulloch

(Special lecture; The University of Western Australia)

pH up-regulation in scleractinian corals and vulnerability to ocean acidification

Miriam Pfeiffer (RWTH Aachen University, Germany)

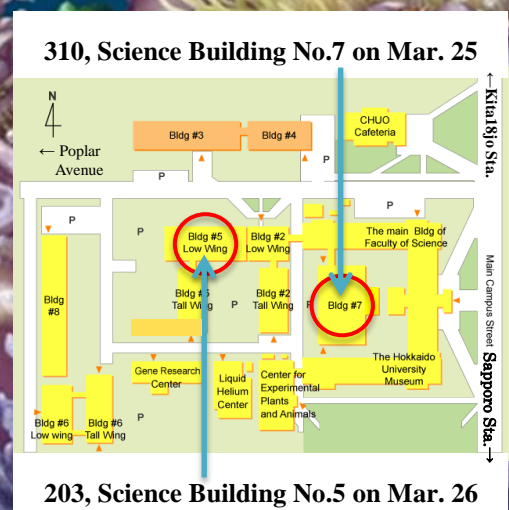
Steffen Hetzinger (GEOMAR, Germany)

Michael Holcomb (The University of Western Australia)

Jonas von Reumont (GEOMAR, Germany)

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25 Mar 2014

- 10:00-10:20 **Tsuyoshi Watanabe** (Hokkaido university)
High-resolution reconstruction of palaeoclimates using stable isotopes and trace elements in biogenetic carbonates
- 10:20-11:00 **Miriam Pfeiffer** (RWTH Aachen University, Germany)
Coral records from the western Indian Ocean: implications for the African and Asian Monsoon
- 11:00-11:30 **Hideko Takayanagi** (Tohoku University)
Reconstruction of sea-surface temperature and the Indian Ocean Dipole in the eastern Indian Ocean during the last 200 years
- 11:30-12:00 **Tsuzumi Miyaji** (Hokkaido university, Tomakomai City Museum)
Coral Ba/Ca records of anthropogenic land-use history in Ishigaki Island, Okinawa, southwest Japan
- 12:00-13:30 **Lunch time**
- 13:30-14:00 **Jonas von Reumont** (GEOMAR, Germany)
Deciphering decadal-scale climate signals in corals from the Cayman Islands, Western Atlantic Warm Pool
- 14:00-14:30 **Atsuko Yamazaki** (Atmosphere and Ocean Research Institute The University of Tokyo)
 $\delta^{15}\text{N}$ of Caribbean coral skeletons: Multi-decadal variation of North Atlantic nitrogen fixation
- 14:30-15:00 **Aya Sakaguchi** (Hiroshima University)
Anthropogenic U-236 recorded in annually banded coral skeleton at Iki-island, Japan
- 15:00-15:15 **Coffee break**
- 15:15-15:45 **Keiichi Sasaki** (Kanazawa Gakuin University)
Interstadial coral reef developments between 62 and 52 ka in Kikai Island, central Ryukyus of Japan
- 15:45-16:15 **Kazuto Ohmori** (Hokkaido university)
Observation of micro-skeletal structures and trace elemental analysis in Pacific sclerosponges collected from Southwestern Japan.
- 16:15-16:45 **Steffen Hetzinger** (GEOMAR, Germany)
Crustose coralline algae as recorders of past climate and ocean variability

26 Mar 2014

- 10:00-11:00 Special lecture Malcolm McCulloch** (The University of Western Australia)
pH up-regulation in scleractinian corals and vulnerability to ocean acidification
- 11:00-11:30 **Kentaro Tanaka** (Hokkaido University)
 $\delta^{11}\text{B}$, Sr, Mg and Ba in *Acropora digitifera* cultured under high-pCO₂ seawater: Effects of seawater pH on trace element incorporation into coral aragonite
- 11:30-12:00 **Kohki Sowa** (Hokkaido University)
Effects of coral calcification on annually resolved boron, oxygen, carbon isotopic compositions and trace element abundance in *Porites* from the northern habitable limits of Japan.
- 12:00-13:30 **Lunch time**

26 Mar 2014

13:30-14:00 **Osamu Abe** (Nagoya University)

Reconstruction of 9c-12c marine environment using long-lived fossil coral proxies

14:00-14:30 **Kotaro Shirai** (Atmosphere and Ocean Research Institute The University of Tokyo)

Organic controls on elemental incorporation into biogenic calcium carbonate

14:30-16:00

Coffee break and poster session

16:00-16:30 **Tomihiko Higuchi** (Graduate School of Science and Technology, Shizuoka University)

Biotic Control of Skeletal Growth by Scleractinian Corals in Aragonite–Calcite Seas

16:30-17:00 **Satoko Motai** (Hokkaido university)

Compositional information on the calcification medium in reef-building corals derived from identification of mineral phases

17:00-17:30 **Michael Holcomb** (The University of Western Australia)

Ocean acidification and calcifying fluid pH in corals

18:30

Workshop dinner

Poster session

Steffen Hetzinger (GEOMAR, Germany)

A reduction in coral extension rate and a baseline shift in stable isotopic composition: reaction to El Niño-induced coral bleaching?

Jonas von Reumont (GEOMAR, Germany)

Assessing the influence of sea surface temperature on coral growth and Sr/Ca: A replication study from the Cayman Islands

Atsuko Yamazaki (Atmosphere and Ocean Research Institute The University of Tokyo)

Variation of Kuroshio transport over the 20th century recorded by nitrogen isotopes in coral skeletons

Kazuto Ohmori (Hokkaido university)

Seasonal to decadal climate signals in skeletal growth and trace elements of the Pacific sclerosponges

Taro Komagoe (Hokkaido university)

Strong typhoon in 2005 recorded in the shell growth lines and geochemical signals of *Tridacna maxima* from Okinotori island, Japan

Saori Ito (Hokkaido university)

Reconstruction of Sumatra earthquakes using stable isotopes in *Porites* corals from Simeulue Island.

Takaaki Watanabe (Hokkaido university)

High-resolution isotopic records in Oman corals: Indian Monsoon climate reconstruction

Mayumi Suzuki (Hokkaido university)

Multidecadal climate reconstruction using sclerochronological and geochemical approaches on freshwater peal mussels in Hokkaido, Japan