



Information

- [Fees & Registration](#)
- [Important Dates](#)
- [AOGS Funding Support](#)
- [Presenter Guides](#)
- [Best Student Poster Competition](#)

Society

- [Awards](#)
- [Committees](#)
- [General Election](#)

Sessions & Abstracts

- [Session/Workshop Proposal](#)
- [Abstract Submission](#)
- [Sessions & Conveners](#)

Program

- [Final Program](#)
- [Scientific Program](#)
- [Featured Speakers](#)
- [Special Sessions](#)
- [Abstracts](#)

- [Member Exclusives](#)
- [Social Highlights](#)

Exhibition

- [Exhibition Information](#)
- [Exhibiting Companies](#)
- [Innovation Theatre](#)
- [Exhibitor Guide](#)

Venue

- [Convention Centre](#)
- [Visa Application](#)
- [About Singapore](#)
- [Beyond Singapore](#)
- [Hotels](#)

Contact & Enquiries

- [Contact Us](#)
- [AOGS Membership](#)

[Print this page](#)

Poster Presentations	
7/29/2019 EXHIBITION HALL EVE (IG)	
	<p><b>IG18-D1-EVE-P-166(IG18-A002)</b></p> <p style="text-align: center;"><b>Biển Hồ Maar Sediment as a Time Capsule of Past Environmental and Climate Conditions in Vietnam's Central Highlands Back to the Last Glacial Maximum</b></p> <p>Huong NGUYEN-VAN<sup>1#*</sup>, Arndt SCHIMMELMANN<sup>2</sup>, Duong NGUYEN-THUY<sup>1</sup>, Ingmar UNKEL<sup>3</sup>, Jan SCHIMMELMANN<sup>4</sup>, Thai NGUYEN-DINH<sup>1</sup>, Kelsey DOIRON<sup>2</sup>, Antti OJALA<sup>5</sup>, Peter SAUER<sup>2</sup>, Agnieszka DROBNIAK<sup>2</sup>, Duong NGUYEN-THUY<sup>1</sup>, Nguyet NGUYEN-THI-ANH<sup>1</sup>, Quoc DO-TRONG<sup>1</sup>, Hong NGUYEN-THI<sup>1</sup>, Hoan NGUYEN-TRONG<sup>1</sup>, Nhat NGUYEN-HONG<sup>1</sup>, Anh VU-NGOC<sup>1</sup>, Simon BRASSELL<sup>2</sup>, Minh SCHIMMELMANN<sup>2</sup></p> <p><sup>1</sup>Vietnam National University, Viet Nam, <sup>2</sup>Indiana University, United States, <sup>3</sup>Christian-Albrechts-Universität zu Kiel, Germany, <sup>4</sup>University of Bremen, Germany, <sup>5</sup>Geological Survey of Finland, Finland</p> <p>Global warming enhances atmospheric moisture loading and will likely affect the East-Asian monsoon system across Vietnam. The absence of a long written history in Vietnam creates a reliance on geological archives of past monsoon history and regional paleoenvironmental changes to provide a framework for evaluating current climatic trends. Biển Hồ (14°03'03.5" N, 108°00'00.2" E) is a volcanic crater (i.e. maar) lake in Vietnam's Central Highlands that has been accumulating anoxic, laminated sediments for tens of thousands of years. In field campaigns between 2016-2018, collection of numerous gravity, piston and freeze cores have yielded sediment records extending to a depth of ~15 m in the 21 m deep maar lake. Radiocarbon ages for fossilized terrestrial plant fragments document continuous sedimentation, with sediment at a depth of 6 m corresponding to 12 kyr. Sediments from longer piston cores are currently being dated and will likely yield ages of perhaps 30 kyr, extending beyond the last glacial maximum. Preliminary data from the upper 6 m of sediment document significant changes in chemical composition during the Holocene. For example, the Mn/Fe ratio is lower in the early Holocene, possibly indicating a predominance of dysoxic or acidic conditions, whereas higher values in the late Holocene suggesting less oxygen depletion or alkaline conditions in bottom waters. Low sulfur concentrations coincide with low Mn/Fe ratios. The Rb/Zr ratio is mainly associated with grainsize and follows a coarsening trend downcore. Interpretation of these geochemical data for Biển Hồ sediments will be aided by evidence from biomarker, pollen, and thin-section data, expected for late 2019, and by analyses of deeper sediments from parallel cores. Thus, paleoclimate proxy records from Biển Hồ are expected to provide paleoclimate data at decadal resolution extending back to the last glacial maximum and possibly beyond.</p>

