Final Report: QRC small grant

Climate Change and the Historical Record:
Engaging Area Studies in the Large Research University

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Project leader: Peter Lape

This report details the results of a $2,000 awarded to Lape in 2015 to support travel costs for UW Archaeology PhD student Lauryl Zenobi to join a field expedition to Indonesia. The expedition surveyed archaeological sites and also collected mangrove peat cores for palaeorainfall proxy measurements. The cores were collected on Seram and Ujir Islands, Eastern Indonesia in October 2015 (Fig.1) This project was done in collaboration with the National Archaeology Research Center in Jakarta, Indonesia and its branch office in Ambon (Balai Arkeologi Maluku). Field work was also supported by grants to Lape from National Geographic and the Mellon Foundation. A separate small grant from the QRC in 2016 helped support later laboratory analyses of the cores.

This field research was part of a larger initiative to explore climate change in the historical record and the ethics of international research by bringing together five sets of University of Washington actors: faculty and graduate students in Southeast Asian and Latin American area studies, the UW Science Studies Network (SSNet), the Ida B. Wells School for Social Justice (IBW), the Burke Museum, and other scholars from climate sciences and policy studies outside the College of Arts and Sciences. The aims were to broaden the audience for traditional area studies; open up a conversation on ethics in international scientific collaboration; and explore new possibilities for intellectual engagement between the natural sciences and area studies. In the process we hope to build enduring institutional alliances and to advance the conversation on research ethics while fostering pedagogic initiatives from the high school to the graduate level. Project activities included a series of lunchtime workshops; public lectures at the Burke Museum; the creation of new course materials; and the field work in Indonesia described here. Other supporters of this larger project included the UW Program on Climate Change and the SSnet.

The Indonesia fieldwork was part of an investigation of Neolithic period (4000-2000 BP) social changes in this region, which includes efforts to reconstruct climate history for the time period, with a focus on rainfall patterns. This data is needed for both archaeological and paleoclimate research. It can allow archaeologists to better understand agricultural conditions for people living in Eastern Indonesia. It will allow paleoclimate researchers to better understand how local rainfall in Eastern Indonesia, a crucial region in the western Pacific that is influenced by monsoon systems, is linked to regional and global scale climate fluctuations.

Two series of mangrove cores were collected for analysis from Seram and Ujir Islands, including 7 locations from a large mangrove system in SE Seram, and 4 locations from a mangrove tidal inlet on NW Ujir (Figs 2-3). The cores were delivered to the Sachs lab in December 2015 and are currently in cold storage, with analyses about mid-way complete.
Lauryl Zenobi was trained in core sampling methods by graduate students from Julian Sachs’ lab, and she took responsibility for the core sampling aspects of the field work, including training our Indonesian partners. We hope to complete the analysis phase of this project in the near future, depending on student availability and funding.

Figure 1: Eastern Indonesia showing Seram and Ujir mangrove core sampling locations
Figure 2: Lauryl Zenobi explaining the core sampling methods to our Indonesian partners
Figure 3: Mangrove coring at Seram locale; l-r: Lauryl Zenobi (UW), Emily Peterson (UW), Michael Lahallo (Balai Arkeologi Maluku), Joss Whittaker (UW), Simon Latupapua (Balai Arkeologi Maluku)