

Shira Yoshimi Maezumi, Ph.D

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EDUCATION

- 2010-2015 University of Utah
Doctorate of Philosophy Geography, Concentration Paleoecology
Dissertation Title: *Neotropical Climate, Vegetation, and Fire Linkages on Local to Regional Scales*
- 2007 –2010 California State University Long Beach
Masters of Arts, Anthropology: Concentration Analytical Archaeology
Thesis title: *A Paleoenvironmental Reconstruction of the Huntington Beach Wetlands*
- 2003-2006 University of California San Diego
Double Bachelor of Arts, Anthropological Archaeology & Religious Studies

ACADEMIC POSITIONS

- 2015-Present Post-doctoral research Associate (Supervisor: Prof. J. Iriarte)
Department of Archaeology, University of Exeter, UK.

TEACHING AND RESEARCH INTERESTS

- ❖ Paleoecology, paleoclimatology, Amazonia, neotropics, biogeography, disturbance regimes, systems theory, neotropical pollen, phytolith analysis, Global Charcoal Database, stable isotopes, neotropical archaeology, anthropogenic climate change.
- ❖ My teaching focuses on inspiring students to engage in their learning process by opening dialogues that encourage them to explore the natural and anthropogenic linkages between humans and the environment on different spatial and temporal scales.
- ❖ My research uses paleoecological sediment proxy records including pollen, phytolith, stable isotope, charcoal, LOI, magnetic susceptibility, and lithological analysis to advance the understanding of long-term natural and anthropogenic paleoecological variability in the Neotropics.

TECHNICAL SKILLS

- ❖ Microsoft Office Suite, Excel, Access, PowerPoint, R-software, Mat Lab, Adobe Illustrator, Adobe Photoshop, Aperture, ArchGIS, Arch Map, EndNote, Total Commander, Web Design, Grapher, Char Analysis, and Tilia.

ANALYTICAL TRAINING

- ❖ Laser-Ablation ICP-MS, Biogenic Silica via Spectrophotometry, Stable Isotope Analysis,

AMS Radio Carbon Dating, X-Ray Diffraction, Scanning Electron Microscopy, Refractometry, Pollen Analysis, Phytolith Analysis, Charcoal Analysis, Archaeological Artifact Restoration, Replication and Drawing, Analysis and Categorization, Archaeological Field Survey, Site Mapping, and Artifact Collection, Familiarity with CRM and NAGPRA Laws and Regulations.

ACADEMIC WORK EXPERIENCE

- ❖ Post-Doctoral Research Associate in Paleoecology (2015-Present), University of Exeter
Research includes the collection, analysis and publication of data from lake sediment cores from lake and swamp core sites in the Brazilian and Bolivian Amazon.
- ❖ Associate Instructor/Teaching Assistant (2010-2015), University of Utah
Teaching responsibilities include three hours of weekly lectures and discussions with students, designing and proctoring exams, and counseling students.
- ❖ Lab Manager/ Researcher Power Paleoecology Lab (2010-2014), University of Utah
Assist PI with field and laboratory research in the Power Paleoecology Lab at the University of Utah. Responsible for training graduate and undergraduate students in laboratory procedures including sediment processing, charcoal, LOI, phytolith and pollen analysis.
- ❖ Lab Manager Wetlands Ecology Lab (2008-2010), CSU Long Beach
Assisted PI with field and laboratory work in the Wetland Ecology Lab at CSU Long Beach. Fieldwork included sample collection, data recording, and general field preparation. Laboratory work included training undergraduate and graduate student in sediment processing, stable isotope analysis procedures, live sorting of invertebrate samples, and data analysis.
- ❖ Archaeological Crew Chief: (GS 7) (2008), U.S. Forest Service Department of Agriculture
Crew Chief of the archaeological field crew on the Eagle Lake Ranger District, Lassen National Forest. Provided technical support to the heritage resources staff with ARR reports. Coordinated and conducted archaeological field surveys on over 3,500 acres on US Forest Service land and identified, documented, and mapped new archaeological sites.
- ❖ Laboratory Assistant (2003-2007), Scripps Institution of Oceanography
Processed, sorted and analyzed Macro and Meio invertebrate samples, sediment analysis of ground biomass, chlorophyll levels, and organic matter content.

TEACHING EXPERIENCE

<u>Course #</u>	<u>Title</u>	<u>Semesters</u>
GEOG 5460/6460	Popular Literature on Global Change	Fall 2014
GEOG 3270/5270 & ENVST 3270/5270	Biogeography: Global Patterns of Life Lab	Spring 2014
GEOG 3230/5230 & ENVST 3230/5230	Pyrogeography: Fire, Humans and the Environment	Fall 2013
GEOG 1000 & ENVST 1000	Earth Environments	Fall 2010-Fall 2012, Spring 2011-2013, Summer 2012-2013

ANTH 140

Pyramids, Tombs and Treasures

Fall 2007, Spring 2008

UNDERGRADUATE STUDENT RESEARCH MENTORING (*PAID POSITION)

- ❖ Daniel Harris*- Undergraduate Research Opportunities Program (UROP), October 2013-Present
- ❖ Mary McIntyre*- Undergraduate Research Opportunities Program (UROP), August 2012-May 2013

PUBLICATIONS

- Maezumi, S.Y.**, Power, M.J., Mayle, F.E., McLauchlan, K.K., Iriarte, J. (2015) *Climates of the Past*. Effects of past climate variability on fire and vegetation in the cerrādo savanna of the Huanchaca Mesetta, NE Bolivia.
- Marlon, J.R., Bartlein, P.J., Daniiau, A-L., Harrison, S., **Maezumi, S.Y.**, Power, M.J., Tinner, W., Vanniere, B. (2013) *Quaternary Science Review*. Global Biomass Burning: A Synthesis and Review of Holocene Paleofire Records and Their Controls.
- Maezumi, S.Y.** (2010). A Paleoenvironmental Reconstruction of the Huntington Beach Wetlands. Master's Thesis, California State University Long Beach.

JOURNAL ARTICLES IN REVISION or IN PREPARATION

- Maezumi, S.Y.**, Power, M.J., Mayle, F.E., McLauchlan, K.K. (In Review) *Quaternary Research*. Glacial and Holocene Fire Activity and Nitrogen Cycling in the Bolivian Amazon
- Marlon, J.R., Kelly, R., Daniiau, A-L., Vannièrre, B., Power, M.J., Bartlein, P., Higuera, P., Blarquez, O., Brewer, S., Brücher, T., Feurdean A., Gil Romera G., Iglesias V., **Maezumi S.Y.**, Magi, B. Mustaphi, C.J.C., Zhihai T. (In Review) *Biogeosciences Discussions*. Reconstructions of biomass burning from sediment charcoal records to improve data-model comparisons.
- Maezumi, S.Y.**, Brewer, S., Mayle, F.E., Whitney, B.S., Behling, H., Bush, M.B. (In Prep) *Quaternary Science Reviews*. Systems Theory in Paleocological Analysis: Identifying Tipping Points through the analysis of fossil pollen data.
- Maezumi, S.Y.**, Whitcraft, C.R., Power, M.J., MacDonald, G.M., Stevens, L.R. (In Prep) *Bulletin of Southern California Academy of Sciences*. An Assessment of Paleocological Proxy Methods on Wetland Sediments Cores from the Huntington Beach Wetland Complex.
- Power, M.J., Punyasena, S.W., Mayle, F.E., Kenig, F., Paul, T., **Maezumi, S.Y.** (In Prep) Fire, Flood and drought: landscape evolution during the past 5000 years in Central Bolivia.

PRESENTATIONS AND ABSTRACTS

- Maezumi, S.Y.**, Iriarte, J., Schaan, D., (2015) Atividade tarde Pre-Columbian Fogo no Baixo Amazonas. Sociedade de Arqueologia Brasileira 35th Congress.
- Maezumi, S.Y.**, Power, M.J., Iriarte, J. (2015) Late Pre-Columbian Fire Activity in Amazonia: Detection and Challenges. International Union for Quaternary Science (INQUA) 19th Congress.
- Maezumi, S.Y.**, Power, M.J., Mayle, F., Iriarte, J. (2014) Holocene climate controls on fire and vegetation in neotropical *cerrādo* savanna ecosystems. Long-Term Climate Reconstruction and Dynamics of South America (LOTRED-SA) 3rd Symposium.
- Maezumi, S.Y.**, Power, M.J. (2014) Late Quaternary Climate Controls on Fire and Vegetation in Neotropical Savanna Ecosystems. Geological Society of America (GSA) Annual Meeting.
- Maezumi, S. Y.**, Power, M. J., Iriarte, J. (2013) Holocene Climatic Controls on Fire in Neotropical Savanna Ecosystems. University of Exeter Fire Workshop.

- Maezumi, S. Y.**, Power, M. J. (2012). Late Quaternary Climate Controls on Fire in Neotropical Savanna Ecosystems. AFE's 5th International Fire Ecology Congress.
- Maezumi, S. Y.**, Power, M., Anderson, R.S., and the GPWG Community (2011). Paleofire Regimens in Mediterranean Climate Regions Worldwide. International Union for Quaternary Science (INQUA)
- Maezumi, S. Y.**, Power, M., Anderson, R.S., and the GPWG Community (2011). Paleofire Regimens in Mediterranean Climate Regions. Pacific Climate Workshop Poster (PACLIM).
- Maezumi, S. Y.**, Whitcraft, C., Stevens, L., Power, M. (2009). Paleoenvironmental Reconstruction of Huntington Beach Wetlands. *Poster Competition Winner*, Western Society of Naturalists (WSN)

GRANTS AND FELLOWSHIPS

- 2014-15- U of U Graduate Research Fellowship (\$16,500)
- 2010-14- GCSC Graduate Research Fellowship (\$12,300)
- 2010-14- Department of Geography Teaching Assistant: 4 years of funding (\$64,000)
- 2013- PAGES Student Travel Funding (\$750)
- 2013- Travel, Research, and Educational Experience (TREE) Grant for AFE (\$500)
- 2013- U of U Department of Geography Travel Support for Charcoal workshop in Exeter, \$400
- 2011- U of U Graduate School Travel Assistant Award for INQUA \$400
- 2011- Associated Students of University of Utah, Travel Support for INQUA \$700
- 2011- U of U Department of Geography Travel Support for INQUA \$400
- 2011- PACLIM Travel Grant to Monterey, CA (\$500)
- 2010-2011- Don Currey Graduate Research Scholarship \$1,500
- 2009- Graduate Research Fellowship CSU Long Beach (\$10,000)

AWARDS AND HONORS

- 2014-Thomas G. Stockham Medal for Conspicuously Effective Teaching Nomination
- 2012- Department of Geography Graduate Student of the Year Award, University of Utah
- 2010- Award Winner in WSN Student Poster Competition
- 2003-2006- Phi Kappa Phi Honors Society
- 2003-2006- Phi Sigma Theta Honors Society and chapter historian
- 2006-2009- Phi Theta Kappa Honors Society
- 2001-2006- National Dean's List Honors Society
- 2003-2006- Golden Key Honors Society
- 2006- Senior Honors Thesis Highest Distinction and Provost Honors UC San Diego

SERVICE

- 2014- Volunteer, Power Paleoecology Lab Science Day for high school students
- 2013-2014- International Scientific Steering Committee for the Palaeofire Working Group (Global Charcoal Database) Committee member.
- 2013-2014- Dean Search Committee, Graduate Student Representative, College of Social and Behavioral Science, University of Utah.
- 2013- 'Scientist in the Spotlight' Utah Natural History Museum
- 2012-2013 Graduate Student Representative to the Faculty, Department of Geography, University of Utah

MEMBERSHIPS AND PROFESSIONAL AFFILIATIONS

American Geophysical Union (AGU), Association of Fire Ecology (AFE), the Society for American Archaeology (SAA), the Western Society of Naturalists, (WSN) Student Association for Fire Ecology, Geological Society of America (GSA)

ADDITIONAL RESEARCH AND FIELD EXPERIENCE

- 2014 Paleocology Field Assistant - University of Utah, coring research, Tortola, British Virgin Islands.
- 2013 Stable Light Isotope in the Environment Short Course - Kansas State Research Facility Konza Prairie Research Facility, Kansas.
- 2013 Neotropical Pollen Training - University of Edinburgh, Scotland, training in neotropical pollen analysis.
- 2013 Phytolith Analysis Training - University of Exeter, England, training in phytolith analysis in sediment cores.
- 2011 Paleocology Field Assistant - University of Utah, coring research, Fish Lake and Unita Mountains, Utah.
- 2008 Archaeological Excavation - CSU Long Beach, Archaeological excavation and Geophysical surveys, El Baul, Guatemala.
- 2007 Laboratory Assistant for the IIRMS Research Facility - CSU Long Beach, California assistant to lab manager of the IIRMES facility, Archaeometric analysis of artifacts and general lab maintenance and upkeep.
- 2006 Assistant Archaeological Site Supervisor - American Institute for Rome Culture, assistant site supervisor for excavation of a Hadrian Roman Villa, Rome, Italy.
- 2005 Archaeological Excavation - University of Oxford - archaeological excavation of Iron Age Trade center in Deia, Mallorca.
- 2004 Archaeological Field School - University of San Diego, archaeological excavation of Iron Age Cemetery in Quigra, Jordan.

LANGUAGES

Studied four years of French, two years of Italian, one year of Spanish, and currently studying Portuguese.