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TECHNICAL SESSIONS

1100 (time italicized and underlined) indicates a student presentation

* indicates the speaker from among several authors listed

63 (bolded number) indicates the abstract number

I. SYMPOSIA

Monday, 16 June 2008

Conservation Status of Hawaiian Native Land Snails

Library

Monday

8:00 AM – 12:00 PM

Program Organizer: *Michael G. Hadfield* (Professor of Zoology, Kewalo Marine Laboratory, University of Hawaii at Manoa)

Sponsored by the Pacific Division Section on Ecology, Organismal Biology, and Environmental Sciences.

The Hawaiian Islands were once home to one of the greatest radiations of land snails in the world: nearly 800 endemic species in a land area less than that of New Jersey. Due to loss of habitat, introduced predators and massive shell collecting, at least 75% of these unique species are extinct. In this symposium, we will explore the relationships, evolution and conservation status of remaining endemic Hawaiian land snails, and consider impacts upon them of the great numbers of alien gastropod species that have become established in the islands.

Session Chair: Michael G. Hadfield

0800 *Introductory Remarks*

0805 **7** *Conservation Status of Hawaii's Severely Endangered Achatinelline Tree Snails*, ***MICHAEL G. HADFIELD** and **JENNIFER SAUFLER** (Pacific Biosciences Research Center and Department of Zoology, University of Hawaii at Manoa, Honolulu, HI)

0830 **8** *The Application of Microsatellite Data in the Study of Population Differentiation and Inbreeding in Achatinella Species*, ***BJORN ERICKSON**¹ and **MICHAEL HADFIELD**² (¹Department of Animal Science, UC Davis, Davis, CA; ²Kewalo Marine Laboratory, 41 Ahui St., Honolulu, HI)

0855 **9** *Simulating Historical Connectivity among Endangered Tree Snail Populations: A Novel Approach to Translocation*, ***KEVIN T. HALL** and **MICHAEL G. HADFIELD** (Department of Zoology, University of Hawai'i at Manoa, Honolulu, HI)

0920 **10** *What Can Phylogeography Tell Us about Conservation of Hawaiian Land Snails?* ***BRENDEN S. HOLLAND** and **ROBERT H. COWIE** (Pacific Biosciences Research Center, University of Hawaii, Honolulu, HI)

0945 **BREAK**

1010 **11** *Achatinellid Land Snails of the Pacific Islands: Phylogenetics, Phylogeography and Evolution*, **MEAGHAN E. PARKER** (Department of Zoology, University of Hawaii at Manoa, Honolulu, HI)

1035 **12** *Cryptic Succineid Diversity on the Island of Hawaii: Conservation Implications*, **WALLACE M. MEYER III** (University of Hawaii at Manoa, Department of Zoology, Honolulu, HI)

1100 **13** *Hawaiian Land Snail Diversity, Its Decline, and Replacement by Aliens*, **ROBERT H. COWIE** and ***BRENDEN S. HOLLAND** (Pacific Biosciences Research Center, University of Hawaii, Honolulu, HI)

1125 **14** *Introduction Pathways, Spread and Impacts of Alien Snails and Slugs in Hawaii*, ***KENNETH A. HAYES**^{1,2}, **ROBERT H. COWIE**¹, **WALLACE M. MEYER**^{1,2}, **CHUONG T. TRAN**¹ and **JAYNEE R. KIM**³ (¹Center for Conservation Research and Training, University of Hawaii at Manoa, Honolulu, HI; ²Department of Zoology, University of Hawaii at Manoa, Honolulu, HI; ³Department of Biology, University of Hawaii at Manoa, Honolulu, HI)

1150 *Concluding Remarks*, Michael G. Hadfield

Missionaries and Museums, Imperialists and Nationalists, State Needs and Cold-War Politics: Anthropology in East and Southeast Asia

Room 42

Monday

8:20 AM – 5:00 PM

Program Organizer: *Alan L. Bain* (Smithsonian Institution Archives)

Sponsored by the Pacific Division section on Anthropology and Archaeology.

Session Chair: Alan L. Bain

0820 *Introductory Comments*

HAWAII

0830 **15** *Culture Change in Hawai'i Viewed from the Hilo Boarding School Carpentry Shop*, **LYNNE MACKIN**

WOLFORTH (Department of Anthropology, University of Hawai'i-Hilo, Hilo, HI)

The PHILIPPINES

0855 16 *Colonial Exemplaries: Parsing the Birth of Evil in Philippine Colonial Ethnography*, **OONA THOMMES PAREDES** (Department of Anthropology, University of Missouri-Columbia, Columbia, MO)

0915 17 *Towards the Decolonization of Philippine Anthropology: The Role of Ritual in the Formation of Post Colonial Research Agenda*, **MELANIE TAN UY** (Macquarie University, Australia)

1000 BREAK

CHINA

1020 18 *Nation-Building and Anthropology during the Republican Period: David Crockett Graham and the Missionary Anthropological Enterprise in Western Sichuan (1922-1945)*, **ANDREA RODRIGUEZ** (University of Oxford)

KOREA

1055 19 *Korean War anthropology in Japanese, American and Korean Politics*, **ROBERT OPPENHEIM** (Department of Asian Studies, University of Texas at Austin, Austin, TX)

1120 *Commentator's Comments*, Robert Oppenheim

1140 *General Discussion*

1200 LUNCH

JAPAN

1315 20 *Mixed-Blood and Adaptability: Japanese Racial Science, 1930s-1970s*, **TORU SAKANO** (College of Economics, Nihon University, Tokyo, JAPAN)

1345 21 *Reap and Sow: Scientific Investigations of the Ryukyu Islands Under the United States Military Control*, **HIDEKAZU SENSUI** (Department of Business Administration, Kanagawa University, Kanagawa, JAPAN)

VIETNAM

1430 22 *Colonial Surveillance, Postcolonial Controls and the Problematic Place of Anthropologists: Studying Vietnamese Caodaism in a Global Context*, **JANET HOSKINS** (Department of Anthropology, University of Southern California, Los Angeles, CA)

1450 BREAK

1510 23 *Nationalism in Vietnam's Post-Colonial Anthropology*, **CHINH VAN NGUYEN** (Department of Anthropology, Hanoi National University, Hanoi, VIETNAM)

1540 24 *Museums: Anthropology and the Work of Representing Culture in Contemporary Vietnam*, **MARGARET BARNHILL BODEMER** (Department of Anthropology, University of Hawai'i, Manoa, Honolulu, HI)

1620 *Commentator's Comments*, Janet Hoskins

1640 *General Discussion*

**New Humanities and Science Convergences:
Paradise Lost and.....Recoverable?**

Room 21

Monday

8:30 AM – 11:45 AM

Program organizers: *Robert L. Chianese* (Department of English, California State University, Northridge, CA) and *Carl A. Maida* (Schools of Dentistry and Medicine, University of California, Los Angeles, CA)

Sponsored by the Pacific Division General and Interdisciplinary Section.

Tropical Pacific Islands, since their earliest discovery by the West, have been subjects of utopian dreams. Unspoiled natural abundance, balmy weather, Edenic beauty and welcoming, uninhibited natives fulfilled European fantasies of an Earthly Paradise. This paradise was soon lost: imported disease, imposed religious and social structures, exploitation of resources and habitats, and introduced flora and fauna spoiled it.

This symposium will explore the efforts of scientists, social scientists, and humanists to help restore these islands to a more natural, sustainable place that serves native as well as foreign interests. It addresses the topic as a series of questions:

- Have the actual tropical "paradises" been lost beyond recovery?
- Are the efforts of scientists, social scientists, humanists, artists, and writers to recover the place compatible with native peoples' wishes?
- In what ways are these efforts coordinated, interdisciplinary, and evidence of convergence among the disciplines?

The symposium will also consider how the issues confronting contemporary Pacific Island societies can shed light on broader questions of concern to both the sciences and the humanities:

- Has a spoiled Eden become a model for the Earth itself? Is such a model appropriate, helpful? What does it reveal or obscure?
- Do we need a utopian model of an earthly paradise to inspire us any more?
- What does the literature and art of the Islands and of utopia as an idea foretell about their future?
- Do current models of sustainability as applied to the islands hold the best promise for managing their future?

Session Chair: Robert L. Chianese

0830 *Introductory Comments*: Robert L. Chianese

0845 25 *Science and Art: A Happy Symbiosis*, **SHOSHANAH DUBINER** (Studio Viva, LLC, 1330 Evan Lane, Ashland, Oregon, 97520; cybermusing@earthlink.net)

0915 26 *Past and Future Malarial Landscapes in California's Great Central Valley*, **BARBARA YABLON MAIDA** (Department of Geography, 1255 Bunche Hall, University of California, Los Angeles, CA 90095; bymaida@ucla.edu)

0945 27 *City-Building and Regionalism: Contrasting Images of Development in Early Modern Los Angeles and the Ow-*

ens Valley, **CARL A. MAIDA** (University of California, 63-037 Center for the Health Sciences, Los Angeles, CA 90095; cmaida@ucla.edu)

1015 BREAK

1045 28 *The Rural Idyll: Counter-Urbanization and the North American Attempt to Recover Rural Paradise* **SUSAN J. MULLEY** (Department of Landscape Architecture, College of Environmental Design, CSU-Pomona, 3801 West Temple Ave, Pomona CA 91768 sjmulley@csupomona.edu)

1115 29 *Ecological Awareness in American Landscape Art: Depicting and Repairing the American Wasteland*, **ROBERT LOUIS CHIANESE** (Department of English, 18111 Nordhoff Street, California State University, Northridge, CA 91330-8428; robert.chianese@csun.edu)

**Current Research Perspectives on Palmyra Atoll,
A Remote Central Pacific Outpost for Biodiversity**

Gates Performing Arts Center

Monday

8:30 AM – 4:45 PM

Program Organizer: Healy Hamilton (California Academy of Sciences, San Francisco, CA)

Sponsored by the Pacific Division section on Ecology, Organismal Biology and Environmental Sciences

Lying a few degrees north of the equator and east of the dateline, Palmyra atoll consists of almost 700 acres of emergent tropical islets surrounded by the most intact tropical marine wilderness in U.S. jurisdiction. Its location in the deep Central Pacific and singular history of low human occupancy provide conditions that support healthy colonies of nesting seabirds, rare sea turtles, coconut crabs, mangrove and tropical wet forests, and a diverse, healthy coral reef ecosystem with an intact trophic structure. The surrounding oceanic region steers the machinery of global climate and has high predictive value regarding the character of ENSO cycles. For marine biologists, Palmyra provides a window into historic coral reef ecosystems now everywhere altered by human influences. For biogeochemists, the atoll provides a living archive of Holocene climate from a key region with little existing data. For conservation scientists, Palmyra is a laboratory in which to study the process of restoration in a natural system free from confounding human influence. In this symposium, we will explore this fascinating and unique central Pacific atoll. The emphasis will be on the biodiversity of Palmyra, its composition and biogeographic relationships. Results from recent ecological research will demonstrate the value of Palmyra as a laboratory that can advance the conservation of island and coastal systems worldwide.

Session Chair: Healy Hamilton

0830 *Introductory Comments and Movie: “Biodiversity and Conservation Science from the Remote Central Pacific”*

0850 30 *Integrated Ecosystem Observations of Coral Reef Ecosystems of the U.S. Pacific Islands with a Focus on Palmyra and Kingman Atolls*, ***RUSSELL E. BRAINARD¹, JEAN KENYON², RONALD HOEKE², MARC LAMMERS², BENJAMIN RICHARDS², CRISTI RICHARDS², ROB-**

ERT SCHROEDER², BERNARDO VARGAS-ANGEL², SUSAN VOGT² and PETE VROOM² (¹NOAA, Pacific Islands Fisheries Science Center (PIFSC), Coral Reef Ecosystem Division, Honolulu, HI; ²University of Hawaii, Joint Institute for Marine and Atmospheric Research and NOAA PIFSC Coral Reef Ecosystem Division, Honolulu, HI)

0920 31 *Biogeography of Corals at Palmyra and other Central Pacific Atolls and Reef Islets*, **JAMES E. MARAGOS** (Pacific Remote Islands National Wildlife Refuge Complex, U.S. Fish and Wildlife Service, Honolulu, HI)

0950 32 *Biodiversity and Biogeography of the Fishes of Palmyra Atoll*, ***BRUCE C. MUNDTY, EDWARD E. DEMARTINI, FRANK A. PARRISH, BRIAN J. ZGLICZYNSKI, and ROBERT E. SCHROEDER** (NOAA Pacific Islands Fisheries Science Center, Honolulu, HI)

1020 BREAK

1045 33 *Examination of Algal Diversity and Benthic Community Structure at Palmyra Atoll, U.S. Line Islands*, ***CRISTI L. BRAUN¹, JENNIFER E. SMITH² and PETER S. VROOM¹** (¹Joint Institute for Marine and Atmospheric Research, University of Hawaii'i and Pacific Islands Fisheries Science Center (PIFSC), Coral Reef Ecosystem Division (CRED), Honolulu, HI; ²NCEAS, University of California, Santa Barbara, Santa Barbara, CA)

1105 34 *Ecology And Predator-Prey Dynamics Of Fishes At Palmyra Atoll NWR*, ***ALAN FRIEDLANDER¹, JENNIFER CASELLE², CHRISTOPHER G. LOWE³ and YANNIS PAPANASTATIIOU⁴** (¹NOAA/NOS Biogeography Branch and the Oceanic Institute, Waimanalo, HI; ²Marine Science Institute, University of California Santa Barbara, Santa Barbara CA; ³Dept. Biological Sciences, California State University Long Beach, Long Beach CA; ⁴Department of Zoology, Hawaii Institute of Marine Biology, University of Hawaii at Manoa, Kaneohe, HI)

1125 35 *Palmyra and the Line Islands as a Laboratory for Marine Conservation Research*, **STUART A. SANDIN** (Scripps Institution of Oceanography)

1145 LUNCH

1315 36 *Behavioral Effects of Fishing on Coral Reefs*, ***ELIZABETH M.P. MADIN¹, STEVEN D. GAINES^{1,2}, and ROBERT R. WARNER¹** (¹Department of Ecology, Evolution and Marine Biology, University of California, Santa Barbara, CA; ²Marine Science Institute, University of California, Santa Barbara, CA)

1335 37 *Simulating Overfishing in the Near-pristine Coral Reefs of Palmyra Atoll*, ***DOUGLAS MCCAULEY¹, DAN BRUMBAUGH², KATE HOLMES², HEIKE LOTZE³, ELIZABETH MADIN⁴, LISA MAX⁴, FIORENZA MICHELI¹, JENNIFER SMITH⁵, DEREK TITTENSOR³, BORIS WORM³, and HILLARY YOUNG¹** (¹Department of Biology, Stanford University, Stanford, CA; ²Center

for Biodiversity and Conservation, American Museum of Natural History, New York, NY; ³Department of Biology, Dalhousie University, Halifax, NS, Canada; ⁴Department of Ecology, Evolution and Marine Biology, University of California Santa Barbara, Santa Barbara, CA; ⁵NCEAS, University of California, Santa Barbara, Santa Barbara, CA)

- 1355 38** *Rats and the Reproductive Ecology of Terminalia catappa at Palmyra Atoll: An Example of How Invasive Rodents Influence Forest Structure on Low Tropical Islands*, **ALEXANDER S. WEGMANN** (Botany Department, University of Hawaii, Honolulu, HI)
- 1415 39** *Cocos nucifera Drives Nutrient Depletion via Changes in Seabird Density at Palmyra Atoll*, ***HILLARY YOUNG, DOUGLAS MCCAULEY, and RODOLFO DIRZO** (Department of Biology, Stanford University, Stanford CA)
- 1435 40** *Assessment of the Terrestrial Herpetofauna of Palmyra Atoll, Line Islands*, ***ROBERT N. FISHER and STACIE A. HATHAWAY** (San Diego Field Station, Western Ecological Research Center, United States Geological Survey, San Diego, CA)
- 1455 BREAK**
- 1515 41** *Vox Palmyra*, **BARRY W. STIEGLITZ** (U.S. Fish and Wildlife Service, Hawaiian and Pacific Islands National Wildlife Refuge Complex, Honolulu, HI)
- 1545 42** *Scale Population Dynamics and Control Measures and the Status of Pisonia grandis at Palmyra Atoll NWR in 2007*, **EDITH NONNER** (Formerly: University of Hawaii, Department of Molecular Biosciences and Bioengineering and The U.S. Fish and Wildlife Service, Pacific Remote Islands NWR, Honokaa, HI)
- 1605 43** *Coral Disease at Palmyra Atoll: Patterns of Spatial Distribution*, **GARETH J. WILLIAMS**
- 1625 44** *Conservation Status of Globally Endangered Sea Turtles at the Palmyra Atoll National Wildlife Refuge (2005-2007)*, ***ELEANOR J. STERLING¹, EUGENIA NAROMACIEL¹, KATHERINE MCFADDEN², KATHERINE HOLMES¹, and PETER J. ERSTS¹** (¹Center for Biodiversity and Conservation, AMNH, New York, NY; ²Columbia University, New York, NY)

Hawaiian Anchialine Pool Ecosystem Conservation and Management: The Present Status and Future of Anchialine Pools

Castle Lecture Hall

Monday

10:00 AM – 3:35 PM

Program Organizers: *Sallie Beavers* (Ecologist, National Park Service, Koloko-Honokohau National Historic Park, Kailua Kona, HI) and *David Foote* (USGS Biological Resources Division, Pacific Island Ecosystems Research Center, Hawaii National Park, HI)

Sponsored by the Pacific Division section on Ecology, Organismal Biology, and Environmental Sciences.

Anchialine pools are brackish-water pools that lack surface connection to the ocean, but are hydrologically connected to ground water and the ocean through the permeable aquifer. Anchialine habitats are unique ecosystems worldwide and support rare endemic species, including undescribed species. The Department of Land and Natural Resources estimates that there are between 600 and 700 anchialine pools in the state of Hawaii. Of these, the majority are found on the Kona Coast of Hawaii Island. Anchialine pools are culturally important to Hawaiians, and provided the fresh-water resource necessary to settle the arid Kona coast more than 800 years ago. Today, Hawaii's anchialine pools are increasingly threatened by introductions of alien species, unregulated collection of rare species, infilling by land-use development, alterations to water quality and water quantity from land development and ground-water withdrawals. Effective management tools and regulations need to be developed and implemented. This symposium will summarize the current knowledge of, and threats to, the anchialine pool ecosystem, as well as explore new avenues for research, management, and conservation.

Session Chair: Sallie Beavers

1000 *Introductory comments*

- 1005 45** *Submarine Groundwater Discharge and Its Role in Anchialine Pond Dynamics of Kaloko-Honokohau National Historical Park on the Arid Kona Coast of Hawaii, USA*, ***ERIC GROSSMAN¹, DELWYN OKI², KAREN KNEE³, ADINA PAYTAN⁴, DAVID FOOTE⁵, and SALLIE BEAVERS⁶** (¹US Geological Survey, Pacific Science Center, Santa Cruz, CA; ²US Geological Survey, Pacific Islands Water Science Center, Honolulu, HI; ³Department of Geological and Environmental Sciences, Stanford University, Stanford, CA; ⁴Institute of Marine Sciences, University of California, Santa Cruz, CA; ⁵US Pacific Island Ecosystems Research Center, Hawaii National Park, HI; ⁶Kaloko-Honokohau National Historical Park, Kailua-Kona, HI)
- 1035 46** *Status of the Hawaiian Anchialine Resource – 36 Years of Observations*, ***RICHARD E. BROCK¹, JULIE H. BAILEY-BROCK² and ALAN K. H. KAM¹** (¹Water Resources Research Center, University of Hawaii, Honolulu, Hawaii; ²Department of Zoology, University of Hawaii, Honolulu, HI)

- 1055 47** *Understanding the Species Richness and Distribution of Anchialine Pools in Hawai'i*, **STEPHANIE LU** (The Nature Conservancy, Honolulu, HI)
- 1115 48** *Reviving a Native Anchialine Community; A Case Study of Rotenone Use in Two Anchialine Pools at Hualalai Resort, Kaupulehu-Kona, Hawaii*, ***DAVID CHAI** and **AM-BYR MOKIAO-LEE** (Hualalai Resort, Kailua-Kona, HI)
- 1135 49** *Anchialine Pools and Candidate Conservation*, **LORENA WADA** (U.S. Fish and Wildlife Service, Honolulu, HI)
- 1155 LUNCH**
- 1315 50** *Population Genetics of an Anchialine Shrimp, *Metabetaeus lohena*, in the Hawaiian Islands*, ***ATLANTIS D. RUSS** and **CEDRIC C. MUIR** (Department of Tropical Conservation Biology and Environmental Science, University of Hawaii at Hilo, Hilo, HI)
- 1335 51** *Wildlife Forensics: What DNA Reveals about the Biology and Conservation of Organisms from Hawaiian Anchialine Environments*, **SCOTT R. SANTOS** (Department of Biological Sciences, Auburn University, Auburn, AL)
- 1355 52** *Biological Surveys of Anchialine Pools in Hawaii's National Parks*. ***DAVID FOOTE**¹, **LORI TANGO**², **CYNTHIA KING**², **MEREDITH ACLY**² and **KARL MAGNACCA**² (¹US Pacific Island Ecosystems Research Center, Hawaii National Park, HI; ²Pacific Cooperative Studies Unit, University of Hawaii, Honolulu, HI)
- 1415 53** *Regional Protection and Management Strategies for Anchialine Pools*, ***SALLIE BEAVERS**¹, **MARISKA WEJERMAN**², **ELIZABETH MARRACK**², and **KELLY KOZAR**³ (¹National Park Service, Kaloko-Honokohau National Historical Park, Kailua Kona, HI; ²University of Hawaii, Cooperative Ecosystems Studies Unit, Kaloko-Honokohau National Historical Park, Kailua Kona, HI; ³National Park Service, Inventory & Monitoring Program, Hawaii National Park, HI)
- 1435 Discussion**

Physics, Materials Science and Nanotechnology

Room 41

Monday

10:00 AM – 2:55 PM

Organized by: *Philippe Binder* (Department of Physics and Astronomy, University of Hawaii – Hilo, Hilo, HI), *Shalilni Prasad* (Department of Electrical and Computer Engineering, Portland State University, Portland, OR) *Klaus Sattler* (Department of Physics and Astronomy, University of Hawaii – Manoa, Honolulu, HI) and *Panos Photinos* (Department of Physics and Engineering, Southern Oregon University, Ashland, OR).

Sponsored by the Pacific Division section on Physics and Materials Science

This fourth annual symposium on Materials Science and Technology will cover the synthesis, preparation, characterization and applications of novel smart materials, including:

- Biomaterials
- Ferroelectrics
- Liquid Crystals and Complex Fluids
- Nanomaterials
- Polymers
- Thin Films and Coatings

Session Chair: Panos Photinos

- 1000** Introductory Comments
- 1005 54** *The Evolution of Cluster Early-Type Galaxies Over the Past 8 Gyr*, ***ALEXANDER FRITZ** and **INGER JØRGENSEN** (Gemini Observatory, Hilo, HI)
- 1035 55** *Undergraduate Special Studies Projects in Support of the Development of the Galbreath Wildlands Preserve Observatory*, **SCOTT A. SEVERSON** (Department of Physics and Astronomy, Sonoma State University, Rohnert Park, CA)
- 1055 56** *Electrical Conductance Anisotropy in a Shear Banding Micellar Solution*, **PANOS PHOTINOS** (Department of Physics and Engineering, Southern Oregon University, Ashland, OR)
- 1125 57** *Towards A General Theory of Complex Systems*, **PHILIPPE BINDER** (Department of Physics and Astronomy, University of Hawaii – Hilo)
- 1155 LUNCH**
- 1315 58** *Structural and Mechanical Characterization of Spider Silk*, **VILUPANUR A. RAVI**¹ and ***DAVID E. CHAVEZ-TICAS**² (¹Department of Chemical and Materials Engineering, California State Polytechnic University, Pomona, CA; ²Department of Mechanical Engineering, California State Polytechnic University, Pomona, CA)
- 1335 59** *Biosensors Based on Functional Nanoparticle Labels*, ***YUEHE LIN**, **HONG WU** and **JUN WANG** (Pacific Northwest National Laboratory, Richland, WA)
- 1405 60** *Spin Acoustic Effect*, **PRASHANT SHARMA** (Department of Physics, Suffolk University, Boston, MA)
- 1425 61** *Undergraduates using a 17 Tesla Superconducting Magnet System*, **JEREMY S. QUALLS** (Department of Physics and Astronomy, Sonoma State University, Rohnert Park, CA)