

Lisa A. Needles

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Education

- Ph.D. University of California Santa Barbara: Department of Ecology, Evolution, and Marine Biology (in progress). Advisor: Dr. Steven D. Gaines
- M.S. California Polytechnic State University San Luis Obispo: Department of Biological Sciences (2007). Advisor: Dr. Dean E. Wendt
- M.A.T Oregon State University: Department of Science and Math Education (1997). Advisor: Dr. Norman Lederman
- B.S. University of California at Davis: Department of Zoology (1990).

Description of Current Research Interests

Population and community ecology, marine ecology, conservation biology, invasive species. My current research involves studying community dynamics in the context of invasive species. Specifically, I'm interested in looking at factors and processes that affect community resistance to invasion and shape community assemblages. Additionally, I'm interested in the impacts invaders have on the recipient community.

Research Experience

Research Assistant: *Cal Poly San Luis Obispo, San Luis Obispo, CA (2002-present)*

Designed and implemented a study to assess the status of non-indigenous marine invertebrates in Morro Bay. Supervised six undergraduate assistants.

Wildlife Biologist: *Oregon State University, Corvallis, OR, United States Forest Service, Pacific Southwest Research Station Arcata, CA, and the United States Forest Service, Foresthill, CA (1991- 1998)*

Used mark and recapture techniques to examine demographics of Northern Spotted Owls and associated prey species. Compiled and analyzed data on home ranges of owls using software programs such as dBase III and CalHome.

Information Technician: *Colorado Natural Heritage Program, Fort Collins, CO (1994- 1995)*

Catalogued information on rare and threatened species in the state of Colorado. Created scientific illustrations for the Colorado Rare Plant Guide.

Biological Technician: *Wildlife International Ltd. Visalia, CA (1992)*

Conducted surveys to assess the effects of pesticide applications on wildlife populations. Utilized circular plot surveys, mark and recapture techniques, mist netting, and radio telemetry.

Research Assistant: *Bodega Marine Laboratory, University of California Davis, Bodega Bay, CA (1990- 1991)*

Analyzed the effects of toxicants from offshore oil drilling and pulp mill effluent on marine invertebrate development. Procedures included gas chromatography, dissections, extractions, collection of specimens and other general laboratory procedures.

Research Intern: *Marine World Africa USA, Vallejo, CA (1989-1990)*

Assisted in a linguistics study of dolphin vocalizations and communication.

Teaching Experience

Teaching Assistant: *University of California Santa Barbara, Santa Barbara, CA* (2006 to present)
Taught an upper division laboratory course in Vertebrate Biology and assisted with a mandatory Teaching Techniques course for graduate student teaching assistants.

Teaching Assistant: *Cal Poly San Luis Obispo, San Luis Obispo, CA.* (2002 to 2006)
Assisted with the design, implementation and evaluation of lectures and lab activities for an upper division Marine Biology course.

Teaching Assistant: *Cal Poly San Luis Obispo, San Luis Obispo, CA.* (2002 to 2006)
Taught introductory General Biology lab courses for non-major undergraduate students.

Teacher: *Paso Robles Public Schools, Paso Robles, CA* (2000- 2003)
Taught 9-12th grade students in all subject areas using an independent study format. Designed individual lesson plans for different ability levels and learning styles.

Naturalist: *Kern County Superintendent of Schools, Bakersfield, CA.* (1999- 2000)
Responsible for the instruction and well being of 5th to 8th grade students in an outdoor science camp setting. Designed and led outdoor explorations to the forest, beach and estuary ecosystems.

Science Teacher: *Central Linn School District, Halsey, OR.* (1998- 1999)
Taught biology, marine biology, anatomy/physiology and physical science to 8th through 12th grade students. Utilized a variety of instructional techniques including labs, demonstrations, field trips, and presentations. Emphasized hands-on and inquiry based learning.

Student Teacher: *Lebanon Union High School, Lebanon, OR* (1996- 1997)
Taught 9th through 12th grade students in biology and zoology. Planned field trips, labs, activities and discussions. Emphasized hands-on instruction and student involvement. Worked with gifted and learning disabled students.

Scholarships and Awards

California State University Research Competition: 2nd place, Agricultural and Biological Sciences (2007)

California State University Chancellor's Doctoral Incentive Program: Recipient (2006)

Contributor: Research Grant from the Morro Bay National Estuary Program: Has Morro Bay (California) been invaded? Initial characterization of the non-indigenous invertebrate macro-fouling community. (Awarded to Dean E. Wendt 2004)

National Science Foundation: Graduate Fellowship Award, Honorable Mention (2004)

Student Fee Committee: California Polytechnic State University, research grant (2004)

Oregon Laurels Scholarship: Oregon State University (1996-1997)

United States Forest Service: Special Recognition (1995)

Dean's List: University of California Davis (1989)

Reviewer

Marine Ecology Progress Series

Licensures

Oregon Basic Teaching License: Biology (October 1997)

California Clear Single Subject Teaching Credential: Biology (June 1998)

Professional Affiliations

Western Society of Naturalists

Ecological Society of America

National Science Teachers Association

Abstracts for Work Presented

Needles, L.A. and D.E. Wendt (2006). Big changes to a small bay: Exotic species in the invertebrate community of Morro Bay over thirty years. Western Society of Naturalists Program Abstracts 2006: pg

Needles, L.A. and D.E. Wendt (2006). Big changes to a small bay: Exotic species in the invertebrate community of Morro Bay over thirty years. Morro Bay National Estuary Program State of the Bay Conference.

Needles, L.A. and D.E. Wendt (2005). Has Morro Bay been invaded? Analysis of the native and exotic species in the Morro Bay macrofouling community. Central Coast Biological Society Annual Meeting. April 2005.

Needles, L.A. and D.E. Wendt (2004) Has Morro Bay (California) been invaded? Initial characterization of the non-indigenous invertebrate macro-fouling community. Poster. Western Society of Naturalists. Western Society of Naturalists Program Abstracts 2004: pg 106.