**Title** Assistant Professor

**First Name** Sarah

**Middle Name** M.

**Last Name** Eppley

**Institution** PSU

**Department** Biology

**Email** eppley@pdx.edu

**Phone** 503-725-8986

9/19/2007

**Permission date**

**Photo**

**Website**

www.biology.pdx.edu/people/eppley/index.php

## Research Fields

- ☐ Atmospheric chemistry
- ☐ Biogeochemistry
- ☐ Carbon Footprint Analysis
- ☐ Climatology
- ☐ Community & Disaster Planning
- ☐ Data Analysis & Statistical Modeling
- ☐ Ecology & Ecosystem Management
- ☐ Economics
- ☐ Energy policy & technology
- ☐ Ethics
- ☐ Fire
- ☐ Forestry & Forest Management
- ☐ Geographic Information Systems
- ☐ Horticulture
- ☐ Human Impacts - economics
- ☐ Human Impacts - health
- ☐ Human Impacts - policy
- ☐ Hydrology
- ☐ Impacts - agriculture & horticulture
- ☒ Impacts - ecosystems, populations
- ☐ Impacts - physical
- ☐ Instrumentation
- ☐ Mitigation Policy
- ☐ Modeling Climate
- ☐ Modeling Ecosystems
- ☐ Modeling Socioeconomic Processes
- ☐ Natural Resource Policy & Planning
- ☐ Outreach & Engagement
- ☐ Paleoclimatology
- ☐ Paleoecology
- ☐ Physical Ecology
- ☐ Physiological Ecology
- ☐ Urban Ecology
- ☐ Water Policy & Planning
- ☐ Other…

## Specific Research Interests

My work involves the interactions between environmental stress, breeding systems, and ecophysiology in the survival and maintenance of plant populations. Understanding the role of stress, particularly extreme environmental stress, in the ecology and evolution of plant species is critical to our ability to protect rare and endangered plant species and to predict the impacts of climate change on plant communities.

## Projects

1. Spatial segregation of the sexes in the saltmarsh grass *Distichlis spicata*. Currently unfunded. Proposal submitted to NSF. Was previously funded by EPA and NSF, due to its relations to climate change and sea level changes.
2. Stress, the evolution of sex, and the evolution of stress tolerance, using bryophytes around geothermal vents as model systems. New system that I have been developing. I am now collaborating with Dr. Todd Rosensteil (PSU) on this system. Currently unfunded. Plan to submit a proposal to NSF this year.

## Selected Recent Publications

Eppley, S. M. and J. R. Pannell. 2007. Density-dependent self-fertilization and male versus hermaphrodite siring success in an androdioecious plant. Evolution (in press).

Eppley, S. M. and J. R. Pannell. 2007. Patterns of occupancy and abundance in an annual plant: testing a metapopulation model for the distribution of sexual systems. American Naturalist 169:20-28.

Eppley, S. M., Taylor, P. J. and L. K. Jesson 2007. Self-fertilization in mosses: a comparison of heterozygote deficiency between species with combined versus separate sexes. Heredity 98: 38-44.

Eppley, S. M. 2006. Females make tough neighbors: sex-specific competitive effects in seedlings of a dioecious grass. Oecologia 146: 549-554.

## Professional Activities