

Stuart Bryan Weiss, Ph.D.

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EDUCATION

Stanford University 1992 - 1996

Ph.D. in Biological Sciences. September 1996

Area of Specialization: Ecology and Conservation Biology

Dissertation: Weather, landscape structure and the population ecology of a threatened butterfly, *Euphydryas editha bayensis*.

Doctoral Committee: Profs. Paul R. Ehrlich, Peter M. Vitousek, Harold A. Mooney

Stanford University 1978 - 1982

B.S. with Honors Biological Sciences 1984

Area of Specialization: Population Biology and Ecology

Expertise: Population biology, landscape ecology, restoration ecology, GIS analysis, statistical analysis and experimental design, nitrogen deposition, policy development.

Contractor to USFWS. Recovery Plan for Tidal Marsh Species, population analysis of California Clapper Rail, Salt Marsh Harvest Mouse, and development of recovery criteria and strategies. July 2004 – July 2005

Research Assistant Professor, Donald Bren School of Environmental Science and Management, University of California at Santa Barbara: October 2002-December 2004

- CEC PIER program funded nitrogen deposition biodiversity risk screening project (Principal Investigator: Frank Davis) assessing sensitive habitat types, GIS overlays of ecosystem and rare species across California, and first order assessment of the magnitude and location of N-deposition risks to biodiversity

Independent Consulting Ecologist (Creekside Center for Earth Observations), selected projects

- Oct 2004-present: Adaptive management of serpentine soil species in Santa Clara County, funded by USFWS Central Valley Project Conservation Project.
- 2004-present: Habitat assessment of microclimate in Monarch Butterfly Biosphere Reserve, Mexico, funded by World Wildlife Fund, Mexico
- 1999-present: Calpine Metcalf Energy Center Project: N-deposition impact assessment, mitigation planning, and long-term monitoring, negotiations with CEC and USFWS, subcontracted with CH2M Hill
- 2001-present: Edgewood Preserve Habitat restoration for Bay checkerspot butterfly: assessed N-deposition and habitat impacts from I-280, planned restoration of habitat and reintroduction of butterfly in 2007
- Continuing studies of Bay checkerspot butterfly ecology and conservation

- Vineyard microclimate studies with Robert Mondavi Winery, Woodbridge Winery, Etude Winery, and Gallo of Sonoma
- Habitat assessment of over-wintering monarch butterflies California
- Impact of Bt corn on monarch butterflies and non-target lepidopterans
- Regional biodiversity assessments in Oaxaca, Mexico and Podocarpus National Park, Ecuador
- Vegetation/environment mapping in White Mountains, CA
- Data analysis on effects of forest thinning on small whorled pogonia, New Hampshire
- CARE project. Development of solar radiation models for ecological and agricultural applications (Principal Investigators: Jeff Dozier and Paul Rich)

Postdoctoral Fellow, Center for Conservation Biology, Stanford University: 1996- 1999

Staff Biologist, Center for Conservation Biology, Stanford University: 1984-1992

SELECTED PUBLICATIONS (From 25 peer reviewed)

- Weiss, S.B.**, and A. Bytnerowicz. In review. Local population extinction of a threatened checkerspot butterfly driven by vehicular ammonia emissions. *Journal of Geophysical Research Biogeosciences*.
- Weiss, S.B.**, D.C. Luth, and B. Guerra. 2003. Potential solar radiation in a VSP trellis at 38°N latitude. *Practical Winery and Vineyard* 25:16-27.
- Ackerly, D. D. C.A. Knight, **S.B. Weiss**, K. Barton and K.P. Starmer. 2001. Leaf size, specific leaf area and microhabitat distribution of chaparral woody plants: contrasting patterns in species level and community level analyses. *Oecologia* 130: 449-457.
- Weiss, S.B.** 2000. Vertical and temporal patterns of insolation in an old-growth forest. *Canadian Journal of Forest Research* 30:1953-1964
- Galindo-Leal, C., J.P. Fay, **S.B. Weiss**, and B. Sandler. 2000. Conservation priorities in the greater Calakmul region, Mexico: Correcting the consequences of a congenital illness. *Natural Areas Journal* 20:376-380.
- Shaw, D.C., and **S.B. Weiss**. 2000. Canopy light and the distribution of hemlock dwarf mistletoe (*Arceuthobium tsugenses* [Rosendahl] G.N. Jones subsp. *tsugense*) aerial shoots in an old-growth Douglas-fir/western hemlock forest. *Northwest Science* 74:306-315
- Weiss, S.B.** 1999. Cars, cows, and checkerspot butterflies: nitrogen deposition and grassland management for a threatened species. *Conservation Biology* 13:1476-1486
- Guisan, A., **S.B. Weiss**, A.D. Weiss. 1999. GLM versus CCA spatial modeling of plant species distribution. *Plant Ecology* 143:107-122.
- Human, K., G., **S.B. Weiss**, A.D. Weiss, B. Sandler, and D.M. Gordon. 1998. Effects of abiotic conditions on the distribution and activity of the invasive Argentine ant *Environmental Entomology* 27:822-833.
- Clark, D.B., D.A. Clark, P.M. Rich, **S.B. Weiss**, and S.F. Oberbauer. 1996. Landscape-scale analyses of forest structure and understory light environments in a neotropical lowland rain forest. *Canadian Journal of Forest Research* 26:747-757.
- Fleischman, E., A.E. Launer, K.R. Switky, and **S.B. Weiss**, 1994. Multi-level monitoring of the endangered plant *Cordylanthus palmatus* at the Springtown Alkali Sink. *Western Wetlands*:

- Proceedings of the 1993 Conference of the Society of Wetland Scientists, Western Chapter. D.M. Kent, and J.J. Zenter, (eds.) pp. 20-32
- Weiss, S.B.** and D.D. Murphy. 1993. Climatic consideration in reserve design and ecological restoration. pp. 89-107 in Saunders, D.A., R.J. Hobbs, and P.R. Ehrlich (eds.) *Nature Conservation 3: Reconstruction of Fragmented Ecosystems*. Surrey Beatty & Sons, Chipping Norton NSW, Australia.
- Weiss, S.B.** 1993. The San Bruno Elfin. pp. 141-142 in: New, T.R. (ed.) Conservation Biology of Lycaenidae (Butterflies) Occasional paper of the IUCN Species Survival Commission No. 8.
- Hetrick, W.A., P.M. Rich, F.J. Barnes, and **S.B. Weiss**. 1993. GIS-based solar radiation flux models. American Society for Photogrammetry and Remote Sensing Technical Papers Vol. 3 GIS Photogrammetry and Modeling. pp. 132-143.
- Saving, S.C., P.M. Rich, J.T Smiley, and **S.B. Weiss**. 1993. GIS-based microclimate models for assessment of habitat quality in natural reserves. American Society for Photogrammetry and Remote Sensing Technical Papers Vol. 3 GIS Photogrammetry. pp.319-330.
- Murphy, D.D., and **S.B. Weiss**. 1992. The effects of climate change on biological diversity in western North America: species losses and mechanisms. In: Peters, R.L., and T.J. Lovejoy (eds.) *Global Warming and Biological Diversity*. Yale University Press New Haven, CT.
- Rich, P.M., and **S.B. Weiss**. 1992. Physiographic inventory of a tropical reserve. Twelfth Annual ESRI Users Conference. pp. 197-208.
- Weiss, S.B.**, P.M. Rich, D.D. Murphy, W.H. Calvert, and P.R. Ehrlich. 1991. Forest canopy structure at overwintering monarch butterfly sites: measurements with hemispherical photography. *Conservation Biology* 5:165-175.
- Weiss, S.B.**, and D.D. Murphy. 1990. Thermal microenvironments and the restoration of rare butterfly habitat. pp. 50-60 in: J. Berger (ed.) *Environmental Restoration: Science and Strategies for Restoring the Earth*. Island Press, Washington D.C.
- Murphy, D.D., K.E. Freas, and **S.B. Weiss**. 1990. An environment-metapopulation approach to population viability analysis for a threatened invertebrate. *Conservation Biology* 4:41-51.
- Weiss, S.B.**, D.D. Murphy, and R.R. White. 1988. Sun, slope, and butterflies: topographic determinants of habitat quality for *Euphydryas editha bayensis*. *Ecology* 69:1486-1496.
- Weiss, S.B.**, and D.D. Murphy. 1988. Fractal geometry and caterpillar dispersal, or how many inches do inchworms inch? *Functional Ecology* 2:116-118.
- Murphy, D.D., and **S.B. Weiss**. 1988. Ecological studies and the conservation of the Bay checkerspot butterfly, *Euphydryas editha bayensis*. *Biological Conservation* 46:183-200.
- Murphy, D.D., and **S.B. Weiss**. 1988. A long-term monitoring plan for a threatened butterfly. *Conservation Biology* 2:367-374.
- Weiss, S.B.**, R.R. White, D.D. Murphy, and P.R. Ehrlich. 1987. Growth and dispersal of larvae of the checkerspot butterfly *Euphydryas editha*. *Oikos* 50:161-166.
- Murphy, D.D., and **S.B. Weiss**. 1987. A bibliography of *Euphydryas*. *Journal of Research on the Lepidoptera* 26:256-264.