

# Overview of the HCPA Science Advisory Panel

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**The purpose of independent science review.** There are a number of reasons for including independent science review in the development of a Habitat Conservation Plan (HCP) / Natural Communities Conservation Plan (NCCP) for eastern Contra Costa County. These include the following:

- a) Science review is now a requirement of the NCCP Act, as amended by the state of California in 2002.
- b) Independent review will help to assure that the HCP/NCCP is based on appropriate and valid scientific techniques and principles.
- c) Including science review in early phases of the development of the HCP/NCCP, such as we propose, may uncover and resolve scientific issues before they threaten our schedule and budget.

**Facilitator for the science review process.** The success of the science review process will depend heavily on the work of the panel facilitator. The facilitator will assist with designing the review process, selecting and recruiting panelists, and framing questions for the panel. The facilitator will also run panel meetings and assist the panel chair in documenting findings. Agency staff, with the assistance of the Jones and Stokes team, considered a list of potential facilitators and selected two facilitators for interview. Based on this research, staff recommended hiring Erica Fleishman, a scientist who works for the Center for Conservation Biology at Stanford University. Dr. Fleishman has an excellent and directly relevant academic background, has experience in coordinating the efforts of multiple scientists and in convening large scientific conferences, and is very enthusiastic about the potential for assisting with our HCP/NCCP. The Executive Governing Committee approved the hiring of Dr. Fleishman.

**Assembling the Panel.** The panel facilitator was asked to identify the areas of scientific expertise that should be represented on the panel. Dr. Fleishman recommended the following areas of expertise:

1. Taxonomic expertise. Most of the species covered by the HCP can be grouped into several major taxonomic categories, including aquatic invertebrates, herptiles (amphibians and reptiles), raptors, and plants. One terrestrial invertebrate (Valley elderberry longhorn beetle), one small mammal (San Joaquin kit fox), one bat, and several other species of birds (a shorebird, an owl, and a blackbird) are also on the list.
2. Moderate to large-scale ecological patterns and processes (e.g., community or landscape ecology, hydrology, quantitative ecology)
3. Conservation biology (e.g., principles of reserve design, surveys and monitoring, adaptive management, role of human and natural disturbance at multiple spatial and taxonomic scales)
4. Conservation and land-use planning in practice

Dr. Fleishman further recommended that the following pragmatic criteria be considered in selecting potential panel members:

1. Scientific credibility
2. Interpersonal skills, including the ability to function as a responsible and productive member of a team
3. Oral and written communication skills

Dr. Fleishman and agency staff also felt it would be helpful to include some members who participated in the biological technical review for the East County Pilot Study Task force because of their familiarity with the geographic area and with the basic methods used to gather ecological information for the HCP.

To assemble the panel, we (the facilitator, agency staff, and project consultants) first brainstormed a list of individuals in the greater San Francisco Bay Area with appropriate scientific expertise. Next, Dr. Fleishman used the pragmatic criteria described above to help cull the initial list. Dr. Fleishman then proposed a final list of panel members based on the interest and availability of the scientists contacted and on the aim of building a well-balanced panel in terms of ecological background and practical experience<sup>1</sup> (as described above). With prior authorization from the Executive Governing Committee of the HCPA, agency staff approved Dr. Fleishman's recommended list of panelists and offered honoraria of \$2500 for panel members and \$4000 for the panel chair.

The following individuals comprise the Science Advisory Panel for the HCPA:

Lynn Huntsinger (Chair)  
Barbara Ertter  
Alan Launer  
Sue Orloff  
Bruce Pavlik  
Brian Walton

Biographical information on panel members and the facilitator is provided below.

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<sup>1</sup> We sought members with both breadth and depth of expertise; the informal network of professional courtesy and information exchange among scientists bolsters our confidence that any gaps in knowledge regarding individual species covered under the plan can be filled if the need arises.

### **Lynn Huntsinger, Chair**

Lynn Huntsinger (Ph.D., Wildland Resource Science, University of California, Berkeley) is Associate Professor in the Department of Environmental Science, Policy, and Management, University of California, Berkeley. Huntsinger's research focuses on range ecology and management, including effective collaboration between government and private landowners. For example, she is examining the developing role of ranching and the dairy industry in land conservation in Marin County and elsewhere in California. Other ongoing studies include diversity patterns of native grasses in urbanized landscapes, land fragmentation and oak woodlands, and fire hazard management in California and Nevada. Huntsinger has considerable practical experience working for and interacting with federal and state resource management agencies, including the U.S. Bureau of Land Management and the California Department of Forestry and Fire Protection. She also is a member of the editorial boards of several peer-reviewed journals. Huntsinger previously served on the Biological Technical Review Committee of the Alameda–Contra Costa Biodiversity Working Group, East County Pilot Study Task Force.

### **Barbara Ertter**

Barbara Ertter (Ph.D., Biology, City University of New York and The New York Botanical Garden) is Research Botanist in the University Herbarium and Jepson Herbarium at the University of California at Berkeley, where she holds the joint position of Administrative Curator and Curator of Western North American Botany. Her professional training and research orientation primarily involve plant systematics, floristics, and biogeography, with special interest and expertise in the flora of the east San Francisco Bay area. In 1997, she published the first comprehensive synopsis of native and naturalized plants in the East Bay. Ertter also has recently updated the Mount Diablo flora, increasing the number of recorded species by 25%. She has served as President of the California Botanical Society and Chair of the Rare Plant Scientific Advisory Committee of the California Native Plant Society, which provided the scientific underpinning for the latest (6th) edition of the *Inventory of Rare and Endangered Plants of California*. Ertter previously served on the Biological Technical Review Committee of the Alameda–Contra Costa Biodiversity Working Group, East County Pilot Study Task Force.

### **Alan Launer**

Alan Launer (Ph.D., Organismic and Evolutionary Biology, Harvard University) is Campus Biologist for Stanford University and a Senior Research Associate in the Department of Biological Sciences. His current work focuses primarily on the conservation biology of organisms inhabiting human-modified landscapes. Specific topics of research include the ecology and conservation of species restricted to the serpentine soil-based grasslands of the San Francisco Bay area, land-use and conservation planning for grasslands and scrub in central coastal California, and land-use planning and endangered species preservation in the north Livermore Valley (Alameda County, California). As Campus Biologist, Launer works on numerous issues involving protected species and university land use. His projects include development of both a Habitat Conservation Plan for Stanford lands and a conservation plan for California tiger salamanders on Stanford lands, investigating the biotic impacts of non-native fishes, and informing university land-use policy concerning red-legged frogs and other species of conservation concern.

## *Susan Orloff*

Susan Orloff is a certified wildlife biology with more than twenty years of professional experience. She specializes in biological assessments for rare and endangered wildlife, inventories of wildlife populations, habitat evaluation and management, and impact analysis and mitigation design. She has conducted habitat assessments, evaluated potential impacts, and developed detailed mitigation plans for more than 100 projects throughout California and the western United States. Orloff specializes in the sensitive species of the San Joaquin Valley and has managed and supervised numerous field-intensive investigations of the endangered San Joaquin kit fox. She is considered an authority on the kit fox and has published several professional papers on this species.

## **Bruce Pavlik**

Bruce Pavlik (Ph.D., Botany, University of California, Davis) is Professor of Biology at Mills College in Oakland, California. His research has focused on the ecology and physiology of plants native to western North America, including the conservation of endangered species. Ecological restoration has become central to his research program. Recent projects have emphasized the design and active management of populations and communities using field-based, experimental approaches. Most of his projects have been associated with grasslands and deserts, but unusual ecosystems (dunes, geothermal springs, serpentinite outcrops, vernal pools) have received special attention. Pavlik is author or coauthor of more than forty scientific and popular publications, including *Oaks of California*, *California's Changing Landscapes*, and the fifth edition of *Inventory of Rare and Endangered Vascular Plants of California* (1994, California Native Plant Society).

## **Scott Terrill**

Scott Terrill (Ph.D., Biology / Ecology, State University of New York, Albany) is Senior Ornithologist and Vice President of H.T. Harvey & Associates. He has extensive experience in avian ecology and behavior and a strong background in community ecology and population biology of vertebrates. He directs projects and research activities ranging from evaluation of the status of individual species of concern, to oil spill recovery efforts in Prince William Sound, Alaska, to investigation of the population dynamics of penguins in the Ross Sea, Antarctica. Terrill has published more than thirty scientific papers and was the primary contributing author to the *Audubon Society Master Guide to Birding*. He served as Research Director for Coyote Creek Riparian Station and is a member of the Board of Directors of the San Francisco Bay Bird Observatory.

## **Erica Fleishman, Facilitator**

Erica Fleishman (Ph.D., University of Nevada, Reno) is Research Associate at the Center for Conservation Biology, Stanford University. Fleishman has expertise in analytic and predictive modeling of species occurrence, identification and application of 'indicator' and 'umbrella' species, and the integration of science and land-use planning. In the early 1990s, she worked with the Scientific Review Panel for the southern California coastal sage scrub NCCP to compile and review relevant biological information. Much of Fleishman's research is conducted in partnership with government agencies, nongovernmental organizations, and private landowners.

As a result, she understands the practical realities of land-use planning, and communicates effectively with diverse professionals and stakeholders as well as researchers. Fleishman also has considerable experience coordinating teams of scientists and editing scientific documents.

**Anticipated Science Advisory Panel meeting schedule and agendas:**

Meeting 1 (May 29)

1. Review land cover methodology, maps, criteria for selecting covered species and priority listings, profiles of priority 1 species
2. Review questions posed by the HCPA Team

Meeting 2 (early July 2002, possibly by email)

1. Review ecological and conservation principles on which conservation strategies / alternatives will be based
2. Review questions posed by the HCPA Team

Meeting 3 (Fall 2002)

1. Review draft conservation strategy and substantive alternatives
2. Review questions posed by the HCPA Team

Meeting 4 (Spring 2003)

1. Review the draft HCP/NCCP
2. Review questions posed by the HCPA Team