

# UC Office of the President Transect

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# The NRS Transect

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University of California Natural Reserve System

Fall 1988

## In this issue:

- Beach overlook built at Younger Lagoon (page 2)
- Fire strikes Stebbins Reserve (page 3)
- NRS welcomes new personnel (page 5)
- South Pacific field facilities available (page 7)

## A Perspective from The Director

This is a time of transition for the NRS — a time to consolidate and build upon our accomplishments to date. As my tenure as director draws to a close, I would like to share with you several emerging trends and developments that, from my perspective, augur well for the future of the system.

### *Successful collaboration with:*

(1) *the state university system.* Our three-year cooperative agreement with Chico State University on the use and management of the Eagle Lake Field Station in Lassen County has been so successful that now, in concert with the Davis campus, we are negotiating a more permanent arrangement.

(2) *federal agencies.* Drawing upon precedent established in negotiating cooperative agreements with the U.S. Bureau of Land Management (BLM) with respect to lands adjacent to the Boyd Deep Canyon and Granite Mountains reserves, we are pursuing agreements with BLM for use and management of at least five other high-priority sites.

(3) *The Nature Conservancy (TNC).* Again, drawing upon precedent (and other successful cooperative ventures), we anticipate acquiring two additional reserves from TNC in the near future.

*Increased federal funding.* Five NRS reserves have received facility and equipment development grants from the National Science Foundation in recent years. We anticipate that at least two proposals being sub-

*continued on page 8*



A gull's-eye view of Bodega Bay, location of Bodega Marine Laboratory/Reserve's soon-to-be-expanded facilities. (Photo by Robert Craig)

## Bodega Laboratory/Reserve Plans Major Expansion

The Bodega Marine Laboratory and Reserve recently received the go-ahead from The Regents of the University of California and the state to proceed on a 20-year facilities expansion plan.

This 362-acre NRS reserve, which surrounds the lab, is located in Sonoma County some 50 miles north of San Francisco. It encompasses a wide variety of coastal habitats and has supported numerous studies on marine, intertidal, near-shore, and terrestrial systems. The lab has long sought funds to build additional housing for visiting scien-

tists. Although the town of Bodega Bay is only two miles away, available housing in the immediate area is both limited and expensive. Consequently, reserve users end up commuting long distances from Santa Rosa and other neighboring towns.

The first good news for Bodega came last April when the project's Environmental Impact Report (EIR) was certified by the state.

Then, in July, with two-for-one matching provided by the University, the laboratory and reserve received a two-year \$194,000 grant from the National Science Foundation (NSF) for the first phase of the project, which focuses on researcher housing. With \$582,000 in hand toward the \$1.5 million in first-phase housing and with the encouragement of NSF, the lab and reserve will seek a second grant for the balance, again with two-for-one matching.

On August 11, the California Coastal Commission conditionally certified the lab's long-range development plan. The conditions concerned visual screening, site drainage, detailed site review by the California Department of Fish and Game for buildings within a specified distance from on-site wetlands, and overall review of the plan by the state Department of Parks and Recreation, the reserve's neighbor to the north and south. Commission certification capped a three-year process of plan development, technical studies, and environmental review.

The lack of adequate on-site housing has long been a limiting factor for the lab's research and instructional programs. This is particularly true for long-term researchers. The current NSF award will enable Bodega to build a two-apartment duplex that will accommodate eight long-term researchers. At full build-out, a total of nine duplexes will ultimately be constructed. A new undergraduate dormitory will also provide accommodations with greater privacy for students in residence for a full quarter.

—Jeff Kennedy  
Senior Environmental Planner  
Natural Reserve System

# Reserve Highlights

## Conservation Corps Labors At Younger Lagoon

This summer Younger Lagoon Reserve in Santa Cruz became the focus of a successful collaboration that produced its first beach overlook and enhanced the potential academic futures of more than a dozen young adults. Collaborators in the effort included crew members from the Monterey Satellite of the California Conservation Corps, reserve and Long Marine Laboratory personnel, and the instructors who designed and taught a special creative writing program at UC Santa Cruz.

Younger Lagoon, a 20-acre NRS reserve located next to UC Santa Cruz's Long Marine Laboratory, is an important teaching and research resource. The reserve is one of the central coast region's few remaining undisturbed wetlands and offers protected feeding and nesting habitat for many species of coastal birds. The site's management plan called for the construction of two beach overlooks that would permit public viewing and research data-collection without disruptive entry into the lagoon.

One CCC crew member described his experience of working at Younger Lagoon:

*I went and grabbed the big blue wheelbarrow. I called it Tonka. By now the sun had cleared the sky; it burned off all the fog left over from the night before, and the clouds moved inland. There I was: stuck with a wheelbarrow and a pile of dirt and that blasted sun, beating over me. I started working. Soon I was moving sand up this embankment that seemed not too far. I thought it was fun and easy. [But] as the pile of dirt became smaller, so did my desire to push these [loads]... My arms felt like they could take more punishment, but my shoulders and neck were on their hands and knees, begging their master to stop... I pushed on... By now my own odor had enveloped me. When I saw the sweat in my eyes, I decided to stop and do something else. I put Tonka down, and soon someone else took my place. I walked up the walkway. ... I was in for a special treat. I stood at the top of the project, and I felt the ocean breeze engulf me. I was in heaven. I lifted my hardhat and noticed the mix of sweat and dust on the rim of my hardhat straps. The wind blew on, and I saw the waves crash against the cliffs below.*

—Marvin Zamora  
Crew Member  
California Conservation Corps



Hard-working Conservation Corps members needed just two weeks to construct a new beach overlook and 160-foot, handicap access trail at the Younger Lagoon Reserve. (Photo by Jim Keller)

A 10- by 20-foot observation platform, along with a 160-foot, handicap access trail leading up to it, was constructed in late June by 17 young men and women from the California Conservation Corps (CCC).

Those who join the CCC expect to work on such manual labor projects. However, nowadays they are also asked to spend a minimum of three hours each week in an academic class. During their two-week project at Younger Lagoon, corps members fulfilled this requirement at the UC Santa Cruz Oakes Learning Center by attending an innovative workshop designed to make the writing process enjoyable and to help many of them overcome their anxieties about school.

On July 8, their labors in both settings were celebrated. The picnic held to mark the opening of the beach overlook included a series of poetry and prose readings by the CCC members.

Long Marine Laboratory's docent coordinator, Mary Lou Breese, praised the crew's work. Public education tours of this university marine station are given throughout the year by over 60 docents. These docents regularly use the overlook to interpret both the lab's marine mammal facility and the beach portion of the reserve. From the platform, visitors may see otters off the beach, shorebirds feeding, and cliff-nesting birds on the bluffs. A full view of the beach area is now possible without disturbing wildlife or trampling plants.

A second overlook and observation blind has been planned to allow similar low-impact access to the upper reaches of the lagoon. The blind will permit shaded viewing of the birds and house a workroom for bird banding and other lagoon projects.

## Fish Slough Taps State License Plate Fund

Summer brought good news for Fish Slough, a 64-square mile Area of Critical Environmental Concern (ACEC), jointly managed by the U.S. Bureau of Land Management, U.S. Fish and Wildlife Service, California Department of Fish and Game (DFG), Los Angeles Department of Water and Power, and University of California's Natural Reserve System (NRS). The NRS and DFG together received a \$94,000 grant from the 1988-89 Environmental License Plate Fund for a comprehensive resource inventory and soil/vegetation mapping of the central 10-square-mile valley of the Fish Slough ACEC.

This new work will build on a three-year survey of the birds, reptiles, amphibians, and plants of the area conducted under the leadership of Wayne Ferren, manager of the Carpinteria Salt Marsh Reserve and curator of the UC Santa Barbara herbarium. The survey was funded through the systemwide NRS office by the Giles W. and Elise G. Mead Foundation.

Fish Slough, which is located in the Owens Valley east of the Sierras and eight miles north of Bishop, is a desert spring ecosystem that harbors a number of rare, threatened, and endangered species, including the last native population of the Owens Valley pupfish (*Cyprinodon radiosus*), a federally listed endangered species. The resource inventory will provide data needed by the five managing agencies to properly protect the habitats and biota of the ACEC. It will also provide the University with the baseline data needed by its faculty and students to implement teaching and research programs at Fish Slough.

## Some Good News about The Fire at Stebbins

In late September, the Miller Canyon fire near Vacaville burned over 30,000 acres in the vicinity of our Stebbins Cold Canyon Reserve. More than 2,000 fire fighters were involved in efforts to stop the blaze. Highway 128 near Monticello Dam represented the only line of defense on the fire's northern flank, and the California Department of Forestry (CDF) planned on lighting a backfire to burn into the advancing wildfire. Between the two lay the Stebbins Reserve. At risk were a half-dozen faculty and student research projects with a value in grant funding and time invested in six figures.

It was a pleasant surprise, therefore, when a recent assessment of the reserve produced good news. The backfire did touch all the reserve; however, only about one-third was intensely burned and only two research projects were adversely affected by the fire.

Controlled burning had long been needed at Stebbins to eliminate the accumulated fuel load. The Miller Canyon fire, and the backfire set by the CDF, produced roughly the same effects as a controlled burn, removing nearly impenetrable brush and making possible more detailed surveys of the reserve's geology, soils, and archaeological resources. Though the chaparral-clad, south- and west-facing slopes of the reserve burned completely, only the understory was affected on the moister, oak-studded, north- and east-facing slopes. The low-intensity fire that spread through the canyon bottom traveled quickly, and the patchy burn pattern left throughout the reserve now offers excellent opportunities for controlled research on fire recovery.

One of the most gratifying aspects of the situation was the excellent interagency com-

munication NRS personnel experienced during and after the crisis. By fortunate coincidence, a previously scheduled multiple-agency meeting between representatives from the University, the state departments of Forestry and Fish and Game, and the U.S. Bureau of Land Management took place immediately after the fire to discuss a comprehensive, basinwide management plan being developed by UC Davis Professor Steve McNiel. The California Department of Forestry, in particular, took special care to focus its backfiring efforts to limit damage at Stebbins and has been sympathetic to requests from University representatives that the reserve not be reseeded with fast-growing, but non-native rye grass.

UC Davis Chancellor Theodore L. Hular has already approved \$5,000 in funds for trail repair and other rehabilitation work that must be started at once before the rains begin.

—Jeff Kennedy  
Senior Environmental Planner  
Natural Reserve System

## Drought Takes Its Toll At Hastings Reserve

The drought this year has dominated life at the Hastings Natural History Reservation in the Upper Carmel Valley of Monterey County. Summer daytime temperatures were in the middle 90s, and though a trace of rain graced the 25th of August, a record high of 103°F was recorded that same day.

Hastings has long been a popular site for bird research. With at least one ornithologist always in residence, the reserve's database contains 50 years of records, with field notes that include sightings of over 165 bird species. However, bird research at Hastings is temporarily at a standstill, according to resident Reserve Manager Mark Stromberg. The weather has been so hot and dry that no breeding is taking place.

Botanical research, on the other hand, is turning up some interesting facts. Dr. Jim Griffin, a research ecologist who has studied the reserve's oaks for many years, finds that



Stebbins' Faculty Reserve Manager Wesley Weathers (wearing cap) met on site with state and federal agency representatives the week following the Miller Canyon fire. (Photo by Jeff Kennedy)

## Reserve Highlights *continued*

these trees respond to the stress of the drought by putting out no flowers. Consequently, acorn production this fall will be almost nil, a bleak prospect for deer, pigs, woodpeckers, and other wildlife that relies on acorns for food.

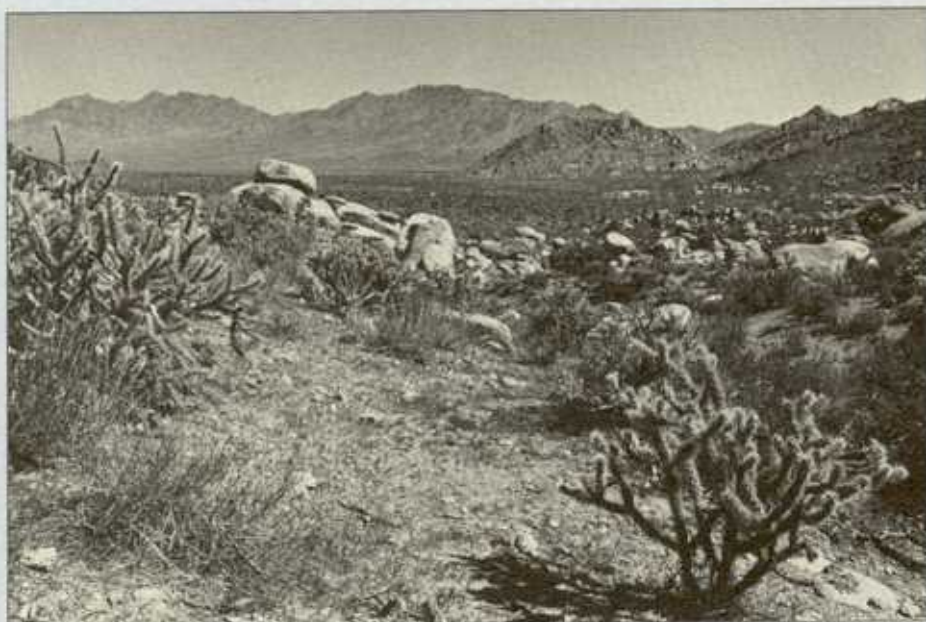
Griffin has discovered that one oak species, *Quercus agrifolia*, is refusing even to produce new leaves. Throughout the drought, this species continues to function on its old leaves alone — in essence, delaying its own growth until more favorable times.

As the drought persisted, it made good sense to test on-site water resources. Arnold Spring, which has always flowed steadily, was found to be down to approximately 20 gallons a day. Fortunately, when the reserve's wells were tested, the Hastings and Robinson wells were found to be producing steadily.

Facilities expansion at Hastings continues despite the intense heat. The construction site for the new laboratory addition, funded last year by the National Science Foundation (NSF), has been checked and approved by a soils engineer. Moreover, the Omnidata digital recording weather station, also funded by the NSF, began operating August 31. This weather-monitoring unit measures 20 weather parameters — including air temperature, precipitation amount and intensity, wind speed and direction, solar radiation, and relative humidity — every 15 minutes. As more data are accumulated, this weather station will make possible comparative studies with other field stations.



Hastings' oaks. (Photo by N. H. (Dan) Cheatham)



View from Granite Mountains Reserve, with Providence Mountains against the horizon. (Photo by N. H. (Dan) Cheatham)

### Granite Mountains Delight Doctoral Candidate

While pursuing a doctorate at UC Berkeley, I worked at Pisgah Lava Flow, approximately 60 miles west of the Granite Mountains Reserve. For the last eight months, I lived at the research/teaching cabin on the reserve while I finished gathering data for my dissertation. Dorner's cabin not only provided such amenities as running water, kerosene heaters, gas stove and refrigerator, tables and walls, but also the company and friendship of other researchers and the on-site personnel, Reserve Manager Philip Cohen and Research Associate Cindy Stead. Without these benefits, I doubt such a long stay in the desert would have been possible or one-tenth as enjoyable.

My research concerns the ability of side-blotched lizards to change color. At Pisgah Lava Flow, lizards living on black lava rock are darker in body color than those dwelling in sandy areas off the flow. The dark lava lizards do not lighten with increasing temperature, an ability common among desert lizards that causes changes in heating rates. My dissertation addresses the cellular mechanisms which prevent color change, differences in the ability of lizards to change color with temperature and background, and the ecological consequences of body color differences on thermoregulation and predator avoidance.

I conducted several studies on the reserve itself. At Dorner's I prepared small skin samples for later microscopic analysis.

In the "garage" in back of Dorner's, I housed adult and juvenile lizards on lava and sand in shoe boxes to find out if dark and light lizards have different abilities to match their backgrounds. I measured their color at frequent intervals with a portable spectral scanner and oscilloscope. At Granite Cove, I built a 10- by 10-foot pen in the abandoned corral to determine whether lizard body color affects prey detection by coachwhip snakes. In addition, I worked at Dorner's in conjunction with my field work at Pisgah by rebuilding and calibrating thermal lizard models which I used to measure the effect of color on heating rate, identifying and counting insects collected in pitfall traps at Pisgah, and entering and analyzing data collected on a portable personal computer.

Living at the Granites gave me the time and ability to design and conduct experiments otherwise impossible at my study site. I am indebted to Philippe and Cindy, for the logistic help and interest they showed in my research, and to the desert, for its beauty and the opportunities it affords for solitude and clarity of thought.

— Claudia Luke

Ph.D. Candidate

Museum of Vertebrate Zoology

University of California, Berkeley

(For more information on the Granite Mountains Reserve, see the Spring 1987 *Transect* 5(2):3.)

## People

### UC San Diego Welcomes New Academic Coordinator

It was hard to say good-bye to former UC San Diego Academic Coordinator Melinda Pruett-Jones. She left her post in June to move to Chicago, where her husband, Steve Jones, accepted a faculty position with the University of Chicago's Department of Ecology and Evolution.

Happily, San Diego's new academic coordinator, Julie Vanderwier, brings with her a first-class mix of scientific and management skills. Vanderwier earned her M.S. degree in biology, with an emphasis on plant ecology, from California Polytechnic State University in San Luis Obispo. For several years, she was a botanist for the U.S. Navy and acted as scientific liaison for researchers at Point Mugu and San Nicholas Island. She also conducted basic ecological research needed for the preservation and management of saltmarsh bird's beak (*Cordylanthus maritimus*), a plant listed as federally endangered.

In 1985, Vanderwier moved to San Diego to work for the environmental consulting firm of Michael Brandman Associates. She subsequently became an environmental management specialist for the County of San Diego and conducted reviews that focused on biological compliance with the California Environmental Quality Act.

As academic coordinator for UC San Diego, Vanderwier will be involved in the management of four NRS reserves: Dawson Los Monos Canyon Reserve, Elliott Chaparral Reserve, Kendall-Frost Mission Bay Marsh Reserve, and the Scripps Coastal Reserve.

Julie Vanderwier may be reached at: Scripps Institution of Oceanography, A-001, University of California, San Diego, La Jolla, CA 92093; (619) 534-2077.

Melinda Pruett-Jones and Steve Jones can be reached by mail: c/o Department of Ecology and Evolution, University of Chicago, 5630 South Ingleside, Chicago, IL 60637.

### New Roving Steward Comes to UC Riverside

Scott Carlson likes his life better now that he doesn't have to wear a suit everyday. Before September, when he became a roving NRS reserve steward, he serviced heating-ventilation-air conditioning (HVAC) systems in

large commercial properties and ran an independent residential property maintenance company on the side. These days he is responsible for maintenance and repairs on four UC Riverside reserves: James San Jacinto, Granite Mountains, Boyd Deep Canyon, and Motte Rimrock, where he is based.

Although these four reserves have a geographical spread of more than 300 miles and the drive to Granite Mountains alone is a three-and-a-half-hour proposition, Carlson loves his new job — its self-directed character, the scientists he meets, the natural environments in which he works. Bridges and labs, roofs and decks, gates and water lines keep him busy, but at six-foot-six, Carlson looks more than equal to any job he might confront as reserve steward.

He has a degree in geography from San Diego State University and lives in San Diego with his wife and three-year-old son. The Carlsons plan to move to Riverside after the birth of their second child in December.

### Big Creek's Care Placed In Capable Hands

It's not your average man who can come straight from the jungle and fix his mother-in-law's Mr. Coffee machine. "We're lucky to have him," said John Smiley, resident reserve manager at the Landels-Hill Big Creek Re-

serve in Big Sur. The man whose abilities he was praising — a man who did, in fact, once come home from the jungle and fix Mr. Coffee — is Feynner Arias-Godenez, Big Creek's capable new reserve steward.

Arias-Godenez has been working on the Big Creek Reserve since July. His wide range of field experiences make him especially well suited not only to perform the day-to-day work of maintaining a reserve, but also to handle effectively any sort of difficulties that might arise in a remote area.

Though Arias-Godenez was born in Parrita, Costa Rica, he has lived and worked in virtually every region of that country. He has done everything from cutting sugar cane to assisting researchers at a plant pathology lab to directing the Monte Verde Cloud Forest Biological Reserve. He has collected snakes and amphibians for the University of Costa Rica. He has been a guide for tropical biology graduate courses sponsored by the Organization for Tropical Studies (OTS) in such areas as the Corcovado National Park. He is a first-rate woodsman and animal tracker as well.

No wonder he periodically returns to his homeland at the request of field biologists there who appreciate his diverse scientific and field skills at sites more remote than any the NRS has to offer.

So far at Big Creek, Arias-Godenez has been organizing for the winter months to come, repairing and maintaining equipment and facilities. One of his first major projects has been to revamp the reserve's interpretive trail. He looks forward to becoming better acquainted with the area's flora and fauna.

Arias-Godenez resides at Big Creek during his working week, but goes home on his days off to be with his wife, Deborah Letourneau, an assistant professor of environmental studies at UC Santa Cruz since 1984.

### Systemwide Planner Accepts Campus Post

Dr. Margaret Race, who joined the NRS earlier this year as acting director of planning and program review, has become assistant dean for planning in UC Berkeley's College of Natural Resources.

During her time with the NRS systemwide office in Oakland, Race provided background and documentation for the NRS in a consultant's study of the University's operation and maintenance needs of field facilities. The study is necessary to clarify NRS eligibility for state Operation and Maintenance.



J. Vanderwier (left), S. Carlson (center), F. Arias-Godenez (right) at the 1988 Reserve Management Workshop. (Photo by Sarah S. Gustafson)



(Photo by John Gustafson)

## The NRS's Newest Friend

is Elena Jean Gustafson, born to NRS Senior Editor Sarah Steinberg Gustafson and John Gustafson on July 29, 1988. She was delivered at Presbyterian Hospital in San Francisco, weighing in at 8 pounds, 2 ounces. She appears here at 10 weeks of age.

nance of Plant (OMP) funds and is therefore an important step in securing this support for the reserve system. Race also worked with NRS staff on an analysis of National Science Foundation facilities matching grants.

Race continues to play a role in support of the NRS. Since the dean of the College of Natural Resources, Dr. Wilford Gardner, is the campus NRS administrative officer for UC Berkeley, Race maintains close contact with the campus NRS committee and brings to that setting the advantage of her working knowledge of systemwide operations.

## NRS Analyst Answers a Higher Call

After twelve years' service as administrative analyst, Robert (Bob) Dering announced he would leave the NRS systemwide office in September. He had resigned in order to spend more time with his family, especially his two young children.

NRS Director J. Roger Samuelsen expressed the sentiments of the entire systemwide staff when he said: "It has been a great privilege having Bob as a colleague and friend over the years. His contributions have often been behind the scenes and thus out of public view, but those of us who have worked with him day in and day out are well aware of how much he has meant to both the administration and development of the NRS and of how very much he will be missed."

An opportunity for Bob's wife, Gay, to resume a full-time staff nurse position at Alta Bates Hospital, Berkeley, prompted the timing of his decision.

# News and Notes

## Many Thanks!

Recent contributions from several private sources have greatly enhanced the Natural Reserve System. Among our contributors:

*Charles and Ottie Mae Motte* — whose donation of a three-bedroom, cement-block house as an addition to the Motte Rimrock Reserve has provided an office for the reserve manager and living quarters for students and faculty engaged in reserve-based research projects.

*Fanny H. Arnold and Oliver P. Pearson* — whose timely and generous gifts made possible the purchase of a single-family dwelling for the resident reserve manager of the Hastings Natural History Reservation.

*Charles Pruett* — who donated 16 pressurized-water fire extinguishers for use on NRS reserves.

*The Edwin W. Pauley Foundation* — which donated \$5,000 in unrestricted funds.

Contributions have also been received from *C. Clarke Keely, Jeffery A. Kennedy, Mildred E. Mathias, John C. Mendel, J. Roger Samuelsen, and H. Emmons Sebenius.*

The Natural Reserve System depends upon such funds for many of its resources and programs. We are grateful to all our contributors for their generous support.

## NSF Award Brings Mentor to Bodega Marine Reserve

The National Science Foundation has awarded one of its prestigious Visiting Professorships for Women grants this year to Dr. Barbara L. Bentley, who began a one-year residency at the Bodega Marine Reserve in August. During her stay at Bodega, Bentley will study bush lupine (*Lupinus arboreus*), a member of the pea family, and the relationship between two of its chemical mechanisms — one that protects it against grazing insects and another that enables it to convert nitrogen into a nutrient.

Bentley, an associate professor of ecology from the State University of New York at Stony Brook, was one of 25 women researchers nationwide who received one of the NSF grants designed to support talented women in the sciences and engineering. In addition to performing her research at the Bodega

Marine Reserve, Bentley will conduct lectures and participate in other activities that offer guidance and encouragement to women scientists and women considering research as a profession.

## NRS Reserve Managers Meet at Eagle Lake

The fifth annual NRS Reserve Management Workshop was held September 22-25 at Eagle Lake Field Station, located about 26 miles northeast of Susanville in Lassen County, California. Attending this year's workshop were 30 reserve managers, stewards, UC campus representatives, and systemwide office personnel.

Participants spent two days discussing such topics as systemwide strategic planning, facilities funding and development, electronic-mail networks, environmental monitoring and data management, volunteer labor, and health and safety issues. The sessions were welcomed as an opportunity for NRS reserve staff from remote sites to share information, experiences, and camaraderie. Afternoon tours of the Eagle Lake Field Station and its environs were conducted by field station director Dr. Roger Lederer and director designate Jay Boggiatto.

The Eagle Lake Field Station is located next to Eagle Lake, the state's fourth largest lake, and surrounded by Great Basin sage and juniper woodlands. The 80-acre site is owned by California State University, Chico, and cooperatively managed by the University of California. (For more information on the Eagle Lake Field Station, see the Fall 1986 *Transect* 5(1):1.)

## Federal Legislation Hotline Is Now In Service

The National Wildlife Federation, in Washington, D.C., offers current information on federal environmental legislation through its "Legislative Hotline." To reach the hotline, call: (202) 797-6655.

The specially taped message, updated every Tuesday and Friday, reviews recent congressional proceedings, hearings, and votes. The hotline can be reached at any time, and calls are billed to the caller's telephone.



Faces in a crowd: the elephant seal colony at Año Nuevo State Reserve. (Photo by Steve Davenport)

## Time to Tour Año Nuevo

Access to Año Nuevo Island is restricted to those who have direct research need. However, the public may visit the mainland portion of Año Nuevo State Reserve, owned and operated by the state park system. Many of the island's biological features can be observed on the mainland, and the mainland offers excellent opportunities for birding and for observing plant succession on coastal dunes and abandoned fields.

The most dramatic feature of the state reserve is a breeding colony of elephant seals, most active from December to March. Last year, UC Santa Cruz Professor Burney Le Boeuf and colleagues constructed a scale that made it possible for them to weigh adult elephant seal bulls for the first time anywhere.

Winter season public tours of Año Nuevo State Reserve run from mid-December to May 1. These tours are so popular that tickets can be purchased through Ticketron. Arrangements can also be made for school tours through grade 12.

For more information, including directions on how to reach the reserve, call the Año Nuevo Interpretive Association (ANIA): (415) 879-0454.

## Restorationists Will Meet In California

"Restoration: The New Management Challenge" will be the theme of the first annual meeting of the Society for Ecological Restora-

tion and Management, to be held January 16 through 20, 1989, in Oakland, California.

Symposia on the restoration of natural areas and on setting standards for evaluating restored ecological communities will highlight this major event for the recently formed, international society. The program will include papers, poster sessions, lectures, and workshops.

For information and registration forms, contact: Society for Ecological Restoration and Management, 1207 Seminole Highway, Madison, WI 53711; (608) 263-7889.

## Stay Safe in the Field

The Office of Environmental Health and Safety (EH&S) at UC Berkeley has produced a booklet designed to help researchers, teachers, students, and even recreational hikers and campers prepare for the health and safety hazards they are most likely to encounter in the field.

"Safety Guidelines for Field Research" offers general advice on advance planning, medical care and first aid, environmental hazards (such as pests, poisonous plants, impure water, exposure to the elements, and diseases), and organizational resources available on and off the Berkeley campus.

The EH&S office also distributes an "Index of Health & Safety," which lists books, pamphlets, films, slideshows, and videos available to campus departments for employee training or safety references. Approximately 30 different topics are covered, including chemicals, laboratory safety, biohazards, and waste disposal.

To order either of these publications, call UC Berkeley's EH&S Training and Technical Information Unit: (415) 642-4400. Additionally, each UC campus has its own EH&S office whose responsibility it is to ensure a safe and healthful environment for all staff, faculty, and students using University facilities.

## South Pacific Tropical Island Offers Field Facilities

The Richard B. Gump South Pacific Biological Research Station welcomes inquiries from scientists seeking a site where they can pursue studies of tropical terrestrial and marine biology.

Located on Moorea, the sister island of Tahiti, French Polynesia, the station was donated to the University in 1981 by Mr. Richard B. Gump of San Francisco. His gift of a 35-acre estate was made on the condition that it be dedicated to research, to preservation of the environment, and to the benefit of the Polynesian people.

Facilities include an open-air field laboratory and a dormitory. The laboratory, completed last year, offers tables and benches, storage lockers (for scuba diving gear and field equipment), a wash room, and an air compressor room. The dormitory, built in 1985, can accommodate up to 15 scientists. The manager, Dr. Rick Steger, and his wife, Bonnie, live on site.

The station attracts scientists not only from within the UC system (with seven of nine campuses represented thus far), but from other universities throughout the nation and the world as well. Last year, 22 scientists used the site, initiating or completing 11 projects and surveys. The station, which maintains excellent relations with the Polynesian territorial government and the French government, locates researchers to address such specific local problems as vanilla root disease and detrimental effects on the coral reef. The station can also accommodate classes for instruction in tropical island biology and marine biology.

To obtain more information or make arrangements to use the facility, contact: Werner J. Loher, Director, South Pacific Biological Research Station, Department of Entomology, 201 Wellman Hall, University of California, Berkeley, CA 94720; (415) 642-0975 (office), 642-3327 (department).

**Director** continued from page 1

mitted in the next round (with matching fund support from the systemwide NRS office) will be highly competitive.

**New student grants.** We have set aside \$80,000 to endow a grant program for students who wish to conduct research on NRS reserves.

**Expanded NRS endowment.** In keeping with the terms of the original gift, a 176-acre parcel near Rancho Cucamonga in Southern California will be sold by competitive bid within a year. The proceeds will be added to the NRS endowment fund and the interest used to support and enhance teaching and research activities on NRS reserves.

**Greater public visibility.** Through the NRS publications program and with attention from various University publications and such professional journals as *BioScience* (which profiled the NRS in its July / August 1988 special issue on conservation biology), we are overcoming our reputation as "UC's Best-Kept Secret." A 10-minute movie being produced by the Films and Television Division of *Sunset* magazine and a first systemwide annual report will further enhance our communications efforts.

**Extended use of reserves.** To the degree that our facilities permit and extended activities do not infringe upon our basic teaching and research mission, we are providing more opportunities for University Extension, Cooperative Extension, Friends of the NRS, secondary level students and teachers, and others to use NRS reserves.

**Outstanding reserve-level management.** The gathering for the fifth annual NRS Reserve Management Workshop at Eagle Lake in September demonstrated once again that we have assembled an exceedingly talented and committed cadre of reserve managers and stewards.

**Enhanced interaction with the Division of Agriculture and Natural Resources**

(DANR). In keeping with a basic objective of divisional reorganization, we are working to communicate more effectively and collaborate more actively with other DANR units and programs.

These trends and developments — together with our assemblage of 26 reserves — have laid the foundation for the transition of the NRS to new leadership, new levels of achievement, and even greater contributions to the understanding of natural processes and the resolution of critical environmental issues. We have reason for optimism, particularly if the missing link — state funding to augment sources otherwise available for operation and maintenance of NRS reserves — can be realized in the near future.

In closing, I wish to express my deep appreciation for the support and encouragement I have received while pursuing the dream of the NRS. It has been my privilege to work closely with colleagues and supporters of extraordinary commitment: former Vice Presidents Earl C. Bolton and James B. Kendrick, Jr.; Vice President Kenneth R. Farrell; Mildred E. Mathias, Kenneth S. Norris, and other members of the Universitywide NRS Advisory Committee; former UC Regent William A. Wilson and the Citizens NRS Advisory Committee; the entire systemwide NRS staff; and donors, friends, and University associates too numerous to name.

We have come a long way over the years, and that is very satisfying. But what is particularly exciting is that the full academic potential of the NRS has yet to be realized. Like a proud father, I will watch with more than passing interest — and help where I can — as the NRS fully matures.

— J. Roger Samuelsen  
Director  
Natural Reserve System



## New Reserve Brochures Now Off the Press

The NRS has recently produced three new reserve brochures: Landels-Hill Big Creek Reserve, Jepson Prairie Reserve, and Granite Mountains Reserve.

Designed for prospective reserve users, each brochure describes the natural resources of the site and contains information on access, facilities, and use.

The Big Creek brochure includes a two-page supplement insert on the history and ecological effects of the Rat Creek Fire of 1985.

For free copies of these brochures — or a subscription to the *Transect* (two issues per year) — write or phone the systemwide NRS office.

♻️ 100% Recycled paper  
Edited by Susan Gee Rumsey  
Designed by Pam Fabry

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