



# Finch Creek Gazette

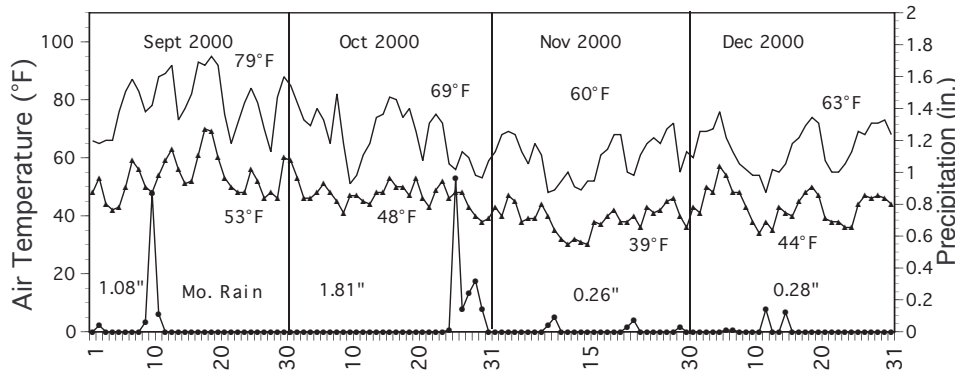
The Quarterly Newsletter for Friends and Members of the Hastings Natural History Reservation

A Biological Research Station of the **Museum of Vertebrate Zoology**, University of California, Berkeley, and the University of California's Natural Reserve System

Website: <http://www.hastingsreserve.org> (for more detailed newsletter, with color pictures - and lots more)

Vol 13:4 Sept-Dec 2000

## Weather



Although September brought on near-normal temperatures, it had five times the average rain. October was a few degrees cooler than average, but it too was wet, with about 2.3 times normal rain. Annual grasses and filaree (*Erodium*) sprouted and the hills took on a green tinge. Then the early rain stopped and November and December, which usually bring 2.3" and 3.6" of rainfall respectively, were basically dry. December's rainfall was only about 7% of the average rainfall for the month. Temperatures were about normal, with many warm, sunny, windy days and freezing (briefly) nights. The annual grasses rapidly dried out and *Erodium* turned rusty red as its newly minted sugars turned to anthocyanin and its chlorophyll was broken down by the cold dawn temperatures (our equivalent of "fall colors").

With this very dry first third of our rain year, we might look at the long-term

predictions. The same folks who were generally right about the El Niño in 1998 (NOAA) have been looking at several variables in the Pacific Ocean. It seems things have settled down to a very "average" condition for La Niña. Eastern Pacific sea temperatures are cool again. So they predict (see maps below) a near-average January to March for our temperature and precipitation. (on map; A- above, B- below, CL- climatic average)

With abundant acorns, the acorn woodpeckers had several successful fall nests. Several new social groups of acorn woodpeckers were seen- one on Haystack Hill and one near the Hastings Cabin. Such tentative territories reflect abundant food resources. Other wildlife observations- bobcats are abundant; most seen hunting gophers. No mountain lion sightings this time. Feral pigs continue to auger the hill-sides in upper Carmel Valley.

## New Research Funding

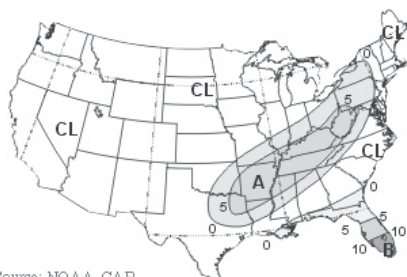
Resident research staff at Hastings have been successful in seeking outside funds for supporting both basic and applied research.

Janis Dickinson was informed that her grant proposal, "Long-term Research in Environmental Biology: The role of winter sociality in the evolution of facultative social behavior" was recommended for funding (\$270,000) by the National Science Foundation. This program by NSF provides the baseline support to continue long-term studies. This grant will provide five years of support for this ongoing, long-term study of western bluebird social behavior and demography. For the past 17 years, most of the breeding bluebirds and their young on Hastings and adjacent Oak Ridge Ranch have been banded. A population of individuals with known ancestry is an invaluable resource for field studies of animal behavior. Janis and her field assistants will be studying how mistletoe abundance, a food important for wintering birds, affects winter territorial behavior and subsequent population levels.

Similarly, Walt Koenig's LTREB proposal, "Evolution and Ecology of Social Behavior in Acorn Woodpeckers" was approved for funding (\$240,00) by NSF to support Walt and his field assistants for the next five years. For the past 29 years, most of the acorn woodpeckers at Hastings and nearby Oak Ridge Ranch have been banded as well as their young. This long-term data set is critical to a better understanding of evolution of behavior in these group-living birds. The focus of Walt's new work is documenting which birds contribute to the parentage of young in each social group's shared nest. For background, see: **Koenig, W.D. and J. Haydock. 2001. *Dividing up the Kids*. Science (January).**

Other, more applied research has initial funding from the Packard Foundation. The University of California Natural Reserve (continued on page 2)

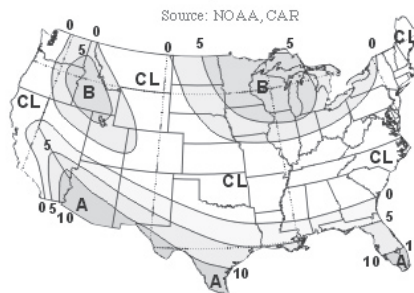
### Climate Outlook January 2001-March 2001 Precipitation



Source: NOAA, CAR

Release Date: December 14, 2000

### Climate Outlook January 2001-March 2001 Temperature



Source: NOAA, CAR

## New Research Funding (continued)

System (NRS) has received a \$263,600 grant from the David and Lucile Packard Foundation to develop the framework for a long-term research, monitoring, and training program to restore and manage California's threatened coastal-oak ecosystems. More than 3 million acres of California's oak woodlands and grassland ecosystems have now been identified as being at risk. These ecosystems are in decline biologically and are also being lost to residential and agricultural development.

Oaks and their associated grasslands in California's central coast ranges are slowly disappearing. Studies have shown that even on undeveloped lands, many oak species are failing to reproduce. In fact, in many areas of coastal California, it is becoming increasingly difficult to find blue oaks and valley oaks that are less than 75 years old. The funding comes from the Packard Foundation's Conserving California Landscapes Initiative. "The award demonstrates the foundation's understanding that preserving open space is only the beginning of saving the biological diversity of oak woodlands, and that informed stewardship and scientifically sound management and monitoring are also needed," said UC Santa Barbara environmental scientist Frank Davis.

This planning grant from the Packard Foundation will support an extensive

nine-month planning effort by leading UC environmental field scientists and staffs at the UC Berkeley, Davis, Santa Barbara and Santa Cruz campuses. An interdisciplinary team of experts will assess the current state of scientific knowledge of California foothill woodland and grassland ecosystems. They will also identify suitable sites—both NRS reserves and non-UC sites—where research, monitoring and training programs can be conducted over the next 10 years. Strong relationships will be developed with partner organizations and individuals to create and analyze mechanisms for applying the results of the research, disseminating data and eliciting user feedback. In addition, parallel social science research will be performed to inform policy designs and management strategies for these ecosystems.

Core participants include, from UC Santa Barbara, Frank Davis, Claudia Tyler, and Jim Reichman, director, National Institute of Ecological Analysis and Synthesis; from UC Berkeley, Carla D'Antonio and Mark Stromberg; from UC Santa Cruz, Daniel Press and John Thompson; from UC Davis, Susan Harrison and Kevin Rice. The grant will be administered by the Marine Science Institute at UC Santa Barbara.



Typical Valley Oak and Blue Oak woodland and grassland of central California's coastal mountain ranges. Grasses are being replaced by noxious weeds (e.g. yellow star thistle) and deciduous oaks have no seedlings, even on fenced parklands. Evergreen live oaks have recently been threatened by sudden death, perhaps caused by a new disease. Scenes like this could be replaced by a vast expanse of weedy, annual grasses in the next 40 years unless we can find a way to preserve this ecosystem. Such oak woodland/savannahs provide life support for thousands of other life forms, most of which are not found anywhere else in the world.

## Ongoing Research News

Several biological studies kept people out in the field this fall and early winter. In September, **Teresa McKenzie** moved out of the Robertson House. **Lauryn Benedict** (see photo) is our new winter intern, busy



collecting data on acorn woodpeckers, checking the Blomquist Pond for newts and salamanders each day, and

occasionally checking hundreds of acorns. **Walt Koenig** and Lauryn are comparing the insect abundance, species, and size of acorns stored by woodpeckers to randomly selected acorns. As of October, the international journal of ornithology, the *Condor*, has moved its editorial offices out of Hastings. **David Gubernick**, first here to study behavior in California deer mice, and for years the associate editor of the *Condor*, moved out of the Hastings Cabin to pursue a career as a photographer, but still based here in Monterey County. Mark and **Andrew Stromberg** planted hundreds of blue and valley oak acorns—half in native bunchgrass clumps and half in adjacent open soil. As we have observed that pigs and gophers do not dig up the native bunch grasses, this might be a good way to get oaks started. **Janis Dickinson** wrote a paper on facultative sex ratio adjustment in western bluebirds.

We had several visiting researchers. In September, **Matt Cerney** and 4 others from the USFS Pacific Northwest Experiment Station spent a week at Hastings, taking photographs and measurements of ungrazed blue oak woodlands on Hastings as a part of their research effort to develop more realistic wildland fire behavior models. Other visitors included **Bonnie Bowen** and **Rolf Koford** (MVZ alumni), looking at the Condor Recovery program nearby. **Euan Young**, from the Univ. of Auckland (New Zealand) visited in October. Euan studies cooperative breeding in skuas and compared notes with Janis and Walter. In October, **Eric VanDyke**, a researcher from USSC, visited Hastings to return Jim Griffin's data set on manzanita. Eric is working with Karen Holl in producing a paper showing that lack of fire and inva-

## Research (continued)

sion by coast live oak are slowly eliminating many endemic species of manzanita in the central coast. **Gordon Frankie** (UC Berkeley) visited several times to continue taking data on the bees of Hastings. **Maria Soares** (UCB) found her voles are still here. **Marjorie Matocq** (UCB) worked from Hastings to collect woodrats from Rancho San Carlos, Arroyo Seco and Ft. Hunter Liggett. **Bill Carmen** and his family spent a weekend in September with Walter, checking on his scrub jays. **Jan Shellman** (Cornell) arrived in late October and stayed in the Ranch House almost till Christmas. Jan has been studying termites in the Monterey pine forests of Pebble Beach for 10 years, and she continued her experiments.



Known to many residents of the Forest as the "Termite Lady", Jan spent a day with **Steve Staub** (see photo) of the Del Monte Forest Foundation, explaining the importance of termites as decomposers in the forest

ecosystem and the importance of leaving dead and down wood in the forest. Wet-wood termites do not bother houses and they keep dry-wood termites out of an area. However, Jan points out that if people remove all of the down and decaying wood, the wet-wood termites cannot survive, and dry-wood termites can then become abundant. Thus, a homeowner in a forest who "cleans up" dead and down wood in the land around their house is just making thing more inviting to dry wood termites. Of course, dry-wood termites readily eat wooden houses. Another Monterey Pine researcher,



**Janet Beals** (UCD) has set up common gardens of seedling

pinus to examine genetic patterns of susceptibility to pine pitch canker. Janet plans to stay at Hastings when she needs to tend her gardens.

Wet-wood termites live in family groups, a male and female with their young (see photo). Family groups will spend up to year or so in one small patch of a decaying log. Jan is thus able to do experiments with the termites. For a very simple instance, she could remove the adult males from some experimental fami-

lies and see if the number and size of the young subsequently brought up by widowed females is reduced over that seen in undisturbed families. Termites have very



complex social behavior and the termites in the Monterey Pine forest are perfect for such behavioral studies.

This fall, **Kerri Steenwerth**, and **Eli Carlisle** (UC Davis- see photo) moved into the Stucco house to pursue studies of soil nitrogen and microorganisms (bacteria, fungi) under native perennial grasses, non-native annual grasses and in tilled soil. Working with Professor **Louise Jackson**, Kerri and Eli set up a series of sampling plots on Corral Field. They set up a gas chromatograph in the Hastings Lab and take soil gas and chemistry samples immediately after rainfall and compare them to samples taken from dry soils.

## Classes - Groups



We had several really interesting groups visit Hastings. In September, Gordon Frankie (UCB) brought a group of about 20 students from UC Berkeley's Conservation Biology Class. The theme of the class was environmental problem solving. Staff from several groups were kind enough to talk to the class over the three days they stayed at Hastings, including Rana Creek Habitat Restoration, Nikki

Nedeff (Big Sur Land Trust), Elkhorn Slough, and Big Sur Ornithology Lab/Ventana Wilderness. In October, the Elkhorn Docents (see photo) visited and we talked about the natural history of Hastings. We hope they will make it an annual event. On October 15, Hastings hosted about 30 new

visitors; the board and Tom Leuders of the Community Foundation for Monterey County. After lunch, we heard from Laura Lee Leink (Return of the Natives), Gary Patton (LandWatch, Monterey County) and Craig Hohenberger (Carmel Middle School/Hastings K-12 outreach). Several researchers presented some of the natural history of upper Carmel Valley.



Prof. Louise Jackson examines bees from Hastings at lunch for Community Foundation for Monterey County.

Louise presented her research on soils of agricultural and native grasslands. Dr. Frankie



CFMC hear about oak woodlands.

## Facilities and Stewardship

Mark Johnson was busy as usual, keeping up with the houses, but got to some special projects as well. Mark insulated the exposed pipes and replaced a pressure release valve on the well. As it had been failing occasionally, it made quite a pig wallow! Mark tackled several projects at the School House- faucets, flooring, and helping Walt replace a bathroom sink. Mark installed a new layer of plastic over the screen porch on the Robertson House; one that can be rolled up in the summer and reused for the next few winters. Brake shoes and pads in the white truck were replaced. While replacing a wall heater at the Hallisey House, Mark found a serious wiring problem we had fixed.

On other fronts, a contractor tented and fumigated the Hallisey House in September (termites and wood ants), a contract was written to grade a new entrance to the Red House, add drainage around the School House garage, and chip-seal the roads from the Office and Red House to the entry gate. To make sure we don't have weather complications, we will defer this work until early summer. Engineers provided a plan to use geothermal sources

to heat and cool the administrative offices; apparently we will first insulate. The slump block wall, although impressive, provides virtually no insulation. This spring, we will install 3" hard foam on the outside of the offices and finish with stucco.

## Outreach

Again this year, the Natural Reserve System was able to provide matching funds to allow us to offer a spring course for K-12 teachers. Kim Smiley of the Big Creek Reserve will once again offer her course, "From Oaks to Insects", March 4-8. Kim has already been in touch with teachers and we hope this will be a successful effort. If you know of any K-12 teachers who might be interested, please give us a call.

Hastings provided some teaching materials and many copies of a flier describing our website to the Pacific Grove Museum of Natural History for the "Kid Fest" held at the Monterey County Fairgrounds Oct 7 and 8. Helen Johnson and others presented information on the bats of Monterey County. Later that week, Mark Stromberg

made a presentation at the PGMNH to the Audubon Society, explaining the incredible natural diversity and rarity of undisturbed coastal terrace grasslands in central California.

## Milestone for Frank Pitelka

In mid-October, Walt, Janis and Mark drove up to Berkeley to visit with Dr. Frank Pitelka on his last day at the Museum of Vertebrate Zoology. Frank Pitelka was a faculty zoologist at MVZ for over 50 years. During that time, Frank encouraged his students to work at Hastings and make use of the natural lands on the reservation. Frank was very helpful in facilitating campus support for Hastings for decades, including the last ten years when we have seen so many improvements. Frank is moving to southern California to live in a casita on land owned by his daughter Kazi, who is a classical musician of some fame in the Los Angeles area. We at Hastings will keep Frank in our thoughts and we wish him all the best of the operas, classical music and time to read and relax in sunny southern California. We hope he can visit Hastings on occasion.

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With the expansion of our newsletter to a new quarterly format and an ever wider distribution, we are asking our readers for contributions to cover the costs of publication. An annual gift of \$25 would be very helpful. Please make checks payable to "Friends of Hastings" and mail to: Betty Holland, Museum of Vertebrate Zoology, 3101 Valley Life Science Building, University of California, Berkeley, CA 94720

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