

Hastings Natural History Reservation



38601 E. Carmel Valley Road
Carmel Valley, CA 93924
Office: (408) 659-2664
Fax: (408) 659-3649

Editor, Resident Manager- Mark R. Stromberg
stromber@violet.berkeley.edu

Research Zoologist-Walter Koenig
wicker@uclink.berkeley.edu

A Biological Research Station of the
Museum of Vertebrate Zoology
University of California, Berkeley

Reserve Steward - Mark Johnson

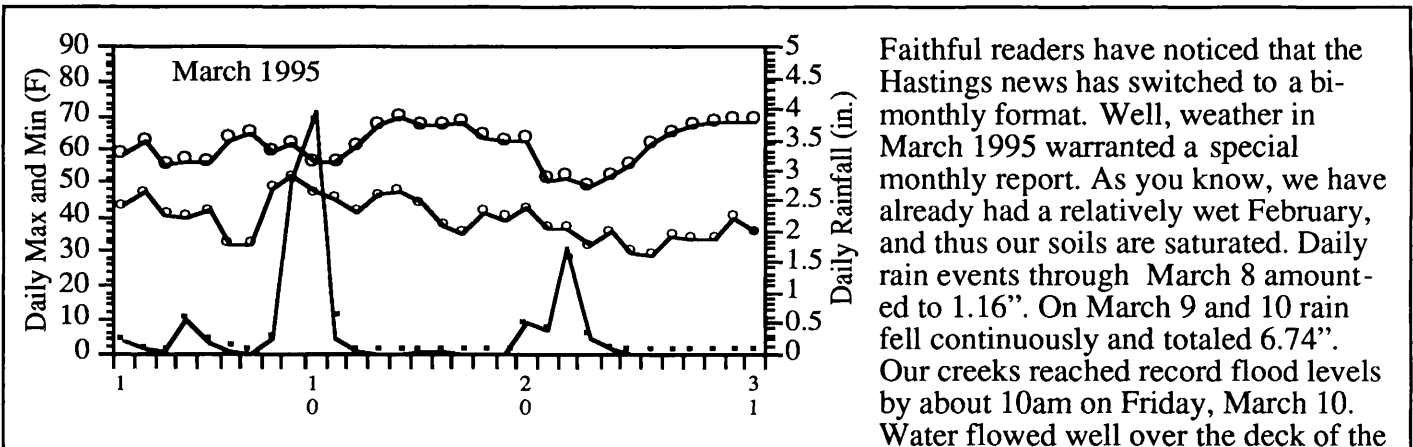
Research Associate- Janis Dickinson
sialia@uclink2.berkeley.edu

and a part of the University of California's
Natural Reserve System



Weather Report

March, 1995



Faithful readers have noticed that the Hastings news has switched to a bi-monthly format. Well, weather in March 1995 warranted a special monthly report. As you know, we have already had a relatively wet February, and thus our soils are saturated. Daily rain events through March 8 amounted to 1.16". On March 9 and 10 rain fell continuously and totaled 6.74". Our creeks reached record flood levels by about 10am on Friday, March 10. Water flowed well over the deck of the

Martin Road bridge on Finch Creek, around the bridge site, crossing the the south side of the Carmel Valley Road. Big Creek ran from 3-5 feet deep over the crossings. Any exact creek depths were almost impossible to obtain.

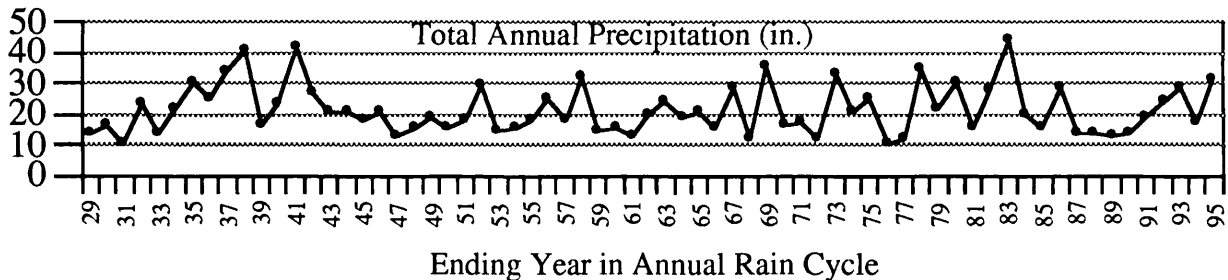
Mud and soil flows were common. The largest flow was on the north side of Poison Oak Ridge, coming down into Robertson Creek about 300 yards west of the road to the Robertson House. This slide may be very long- it started well up on Poison Oak Ridge in the forest (?) and ended as a broad alluvial fan (75 yards wide?). It clearly crossed Robertson Creek, formed a dam which in turn filled and failed. Many large (1-2 ft. DBH) oak trees were ripped from the ground and lay tumbled in the new mud terrace spread across the canyon. Just above this slide, where Martin Road crosses a steep south-facing chaparral hillside, Martin Road fell away in places for a stretch of about 350 feet. A smaller flow came down the northwest slope of School Hill, crossing the lane just upstream of the upper crossing. This flow resembles an avalanche chute, about 20 feet wide at the base. The soil is stripped bare in these slides, leaving only a few muddy poison oak stringers, parallel and pointing downhill. Many slides covered the Arnold Road. A mature live oak which had been growing from the hill above the Arnold road slipped in one large (25' wide) chunk such that it now appears to have been growing from the center of the road, along with its undisturbed understory, for 100 years.

Finch Creek below the confluence of Big and Robertson Creeks was most impressive. A new channel about 60 feet wide was gouged out and when it settled down to a small river again, the channel had dropped about 6 feet. Hundreds of feet of dense riparian vegetation, including mature live oaks, bay trees, willows and entire patches of poison oak were gone. The embankments where this vegetation was rooted were washed away. Gentle slopes to the creek were replaced by vertical drops of 15 feet in places, revealing deep layers of rounded river rock between layers of silt and sand.

Further downstream where Finch Creek meets Cachagua Creek, the road to the Los Padres Dam was gone in many places. People were evacuated in helicopters. A massive road building campaign started immediately and continued for two weeks. Damage was almost restricted to roads and homes which were near the creeks. Steep roads had slides, often trapping residents for several days. Culverts washed out on just about every road in the area. The Carmel River flooded again, this time taking out the bridge on Highway One and inundating Mission Fields with 4-5 feet of muddy water. For a weekend, all roads in and out of Monterey and Carmel were closed by flooding, blown bridges or landslides. The road between Carmel Valley village and Arroyo Seco was closed by many massive slides and places where the road slipped away from the face of steep hillsides. It remains closed to the public through April 8 but local residents are getting through.

Although the rainfall for March produced these record floods, the rainfall to date (31.09") is by no means a record year (see chart 1929- present), although rainfall to date is well over the mean rainfall through March (18.43"). Daily highs in March were only 0.5 degree cooler than the mean of 61.5 (F), while the average of daily lows (39.3 was about 3 degrees above the long term average. On average, we have only 3.54" of rain in March; this year we recorded 11.08".

Wind is usually unremarkable here as light and variable in the canyons. On March 8th, we had gusts peaking at 37.6 m/s (84 mph) about 9am, and we had gusts on March 16th peaking at 61 mph at 10am.



Research and Education

March brought in changes in field assistants and researchers.

Walter's work with Acorn Woodpeckers continues. Field assistants Jennifer Hill and Bill Merkle departed, and at the end of March, new assistants Jim Kellam and Peter Freedman arrived and moved into the Robertson House. Walt and Jean Knops (post-doc in Hastings Cabin) worked on data analysis for several papers. Joe Haydock (post-doc in Red House) continued to work with Walt and Janis Dickinson on DNA fingerprinting. Ginger Bolen (Fanny's Cabin) and her assistant Leif Richardson (Robertson House) carry on with observations of the breeding behavior of the magnificent Yellow-billed Magpies here and on Oak Ridge Ranch.

Janis Dickinson's work on the western bluebirds included new field assistants. Jon Akre arrived in early March and moved into the Robertson House. Later, Dan Ruthrauff and Lori Scinto arrived to begin work with Janis. Bluebirds are late in breeding this year, with only a few nests in the first week of April. Jon made 60 new boxes and repaired old nest boxes.

Mark Stromberg attended a meeting in Santa Fe, New Mexico (March 8-11) hosted by Susan Lohr of the Rocky Mountain Biological Lab, on behalf of the Organization of Biological Field Stations. This group of OBFS directors, with an NSF grant, contribute ideas to create new mechanisms to enhance the recognition and funding of biological field stations both inland and marine as a network of research and education facilities in relatively pristine locations.

Taye Teferi spent some time with his family in Ethiopia, and returned to find nearly one third of his traps washed away along Robertson Creek. Siri Iburguen and Charley Land carried on through the floods, documenting the movements and survival of that population of California deermice in a large flood. Siri and Charley moved to the Bunk House at the end of March.

David Richardson (Oriole study, Leicester Univ.) and his field assistant Karl Evans (Leicester Univ.) moved into the Bunk House in late March. They are watching oriole nests here and on Oak Ridge ranch.

Peter Trenham (UC-Davis, Ecology Group) continued his study of the amphibians on Hastings and he installed a fence around Laguna Conejo, the second pond to allow comparisons of amphibian populations. Peter left the Bunk House for Davis in late March to attend to his teaching duties.

Sanjan Muttulingam (UCSC) and his assistants spent many days in March working on gopher corrals in Pearson Field and the field on Haystack above Long Field. Caroline Dingle spent a week in the Bunk House.

Paul Neal (UCSB-Botany) and his assistant Fernando Corregio, spent the last part of March returning to re-sample oak flowers on the upper Arnold. Our thanks to our neighbors, the Bradleys, for letting Paul through their land to the Arnold Flats.

Visitors included Robert Montgomerie (Queens University, Ontario) with post doc Jim Briskie and graduate student Tarmo Poldmaa. All three gave seminars on sperm competition in song birds. Dr. David Wake (Director, MVZ) visited on the 27th.

31.09
1.25
1.47

People, Places and Habitations

First, we want to say thank you to our neighbors who helped us out during the floods.

On the morning of the 10th, Mark Johnson's was crossing Big Creek on his way into work. Although the water was not too deep to cross, he hit some object under the water, it jammed his wheels, and by the time he was able to return to pull out his truck, the water had risen enough to pack his engine in silt and flood the cab. The truck was a total loss, but was replaced by insurance.

The strong winds blew the roofing off Fanny's Cabin adjacent to the Robertson House. All other roofs held up, although we had some leaks. Many neighbors lost shingles to the high winds.

Most other damage was done to roads or creek crossings. Our abandoned main water lines below the Ranch House are hanging in the air, as Big Creek eroded out a much larger path. These pipes had been undisturbed for at least 70 years. Three fords along Big Creek on the Hastings entry lane had to be cleaned out and reinforced with road rock on either end. A mud slide covered the entry lane just above the two creek fords, but Mark Johnson was able to clear it with the our tractor. A culvert on the Robertson House road and large culvert on Martin Road washed out. Our neighbors at Oak Ridge (Roger Allan, Tim Curran) were most helpful in bringing over their backhoe, clearing Martin road and helping Mark Johnson replace the washed out culvert on Martin Road. This work was necessary to allow the Ingrahams and Brownes at Palo Escrito Ranch to get out. Later, we hired an excavating company to clear the logjam on the Martin Road bridge over Finch Creek and clear the larger slides on Martin Road.

The Hallisey House was surrounded by water, the foot bridge there (along with the embankments for the footbridge) were washed out. Finch Creek cut a new steep south bank, and a deep cut up to the concrete liner on the Hallisey House ford, where the ford now forms the lip of a waterfall. The yard and areas around the house were covered in debris and mud. The Stromberg family (Barb, Brian and Andrew) was evacuated on the afternoon of the 11th and we lived for a week in an apartment made available to us by Nick and Becky Craft (Thanks!). By the 19th, Rich Evan's crew finished a new footbridge and were able to move back into the house. Clean up continues, with many days spent with the tractor moving mud, followed with a shovel and hose for more detailed cleaning.

Meetings with representatives from UC-Berkeley, FEMA and the state OES are underway, and we are working out the details of what will probably be years of processing claims. I want to thank Debbie Elliott-Fisk, the director of the Natural Reserve System for loaning us the funds to make the emergency repairs. This assistance was critical in providing the materials and several contract which got us up and running again.

Mark Johnson has been terrific through all the flood and clean up, working many overtime hours. Even Mark was stranded at Hastings on March 10, but after a long day with the tractor, was able to open the road. Our thanks also go out to Rich Evans (Evans Construction) and Jim Sommerville (Pacific Coast Excavation) who were willing to work with the University bureaucracy yet help with construction equipment and help immediately.

Hastings is back in the full swing of spring research. Almost every bed is occupied and we are at capacity. Now if it will just dry out, we can get on with the repairs.....