

Hastings Natural History Reservation



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

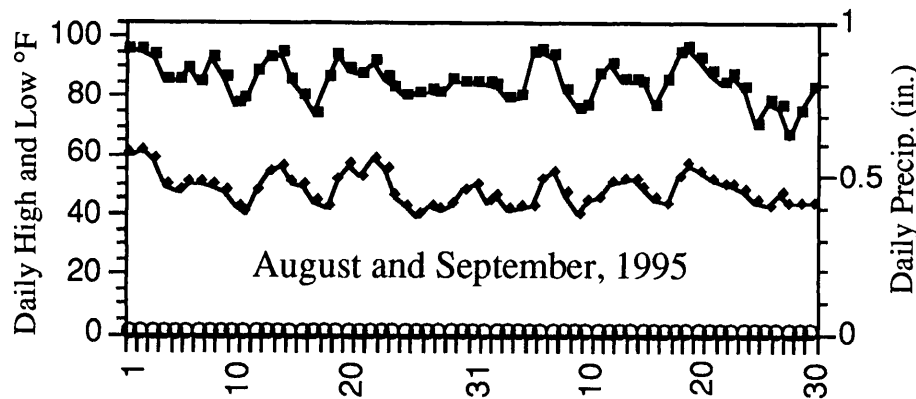
and a part of the University of California's
Natural Reserve System



Reserve Steward- Mark Johnson

Weather Report

August and September, 1995



August and September were dry. Flows in Big Creek over the lower crossing along the entry lane ended during the last week of September. Daily highs averaged 86 and 84 (°F) respectively, while daily lows were 48 and 47. These monthly averages were within a degree of long-term averages. Rainfall to date is still only 0.56"; well above the average of 0.36". Our hillsides

are fragrant with the turpentine weed, *Trichostema lanceolatum*, one of the few green plants in our grasslands. Acorn production this year at Hastings has been very limited, probably due to the wet, cold weather during this spring's pollination. Finch Creek is almost dry under the Martin Road bridge, especially during hot afternoons.

Research and Education: Condor Editorial Work Begins

Resident field assistants in the Robertson House included Jon Akre (Dickinson-Western Bluebirds), Ellen Cheng and Peter Freeman (Koenig-Acorn Woodpecker). Charley Land and Karen Ritchie joined the California deer mouse project (Gubernick, Teferi) in early September.

Dr. Joe Haydock's (Red House) work on DNA fingerprints of acorn woodpeckers continues. He has reached a sample size of nearly 120 individuals. Ginger Bolen (Fanny's Cabin) continued her observations of Yellow-billed Magpies and she joined Joe Haydock in the lab for fingerprinting magpies. David Villareal and Gordon Frankie (UCB) visited Hastings on 3 day trips to collect bees.

Walt Koenig hired Christina Slager as the assistant editor of the Condor, the journal of the Cooper Ornithological Society. Walter wrote a number of programs to handle papers as they are submitted and reviewed. Filing drawers and office space were set up in the Linsdale library. Welcome, Christina!

Janis Dickinson and Jon Akre are examining winter associations in western bluebirds (who is with who) and Janis continued to do fingerprinting of western bluebirds. Janis has several new papers in progress with one appearing in Behavioral Ecology (see below).

Our GPS community base station is now up and running Trimble's PFINDER software. I have done a series of differential corrections and written a summary instruction sheet for our installation.

GIS vector files (topographic maps with several layers- streams, major vegetation types, roads, buildings, etc.) have been delivered by Hammon-Jenson and Wallen on CD. We have now installed ArcView (2.1) for Macintosh but have reversed our decision to use ArcView rather than GeoNavigator as our major GIS software. Our present computer capacity is not sufficient to run ArcView for our GIS. Although we have ArcView 2, I will devote a significant part of my time supporting GeoNavigator for those who are interested. Our color digital orthophotos was sent back for color balancing across flight lines. In early October, Eric Rainbolt helped me compile a composite topographic map for Hastings, and scaled it correctly. I am working closely with Mike Markkula at Rana Creek Ranch and Hammond, Jensen and Wallen (Oakland) on this GIS project. ArcView2 will allow us to share files with MVZ.

Butch Washington (CDF-Monterey Regional Forester) and I continue to discuss a vegetation management plan for Hastings. This would entail burning most of School Hill. Before we can burn the hill, we

August and September, 1995 (continued)

need to move back the chaparral vegetation about 70 feet from the School House, aviary, and Red House. If CDF can provide the Gabilon crews, we might have the brush cleared this winter, burned in piles and then plan the control burn next winter.

Work on native perennial grasses continues. Dick Lundy at Rana Creek directed the installation of a sub-surface irrigation system. Paul Kephart and Dick Lundy will be planting native grasses in the pasture in October. Carmel Ranch Company is working with me to replace their barley fields with native perennials for forage production and control of the yellow star thistle. About 22 ac. will be planted this fall.

Visiting researchers once again included Sanj Muttulingam (UCSC) and his assistants who are working with the gopher populations here. Dr. Taye Teferi and his wife, Wanda Hirschfield (Stucco House) continued daily field work on the California deer mouse. David Gubernick moved from Madison to Hastings (Hastings Cabin) to continue his work on behavior and ecology of the California Deer Mouse. Brad Shaffer spent a couple of days in August with Walt Koenig. Graduate students Lara Hansen and Eric Mielbrecht from UC-Davis made day visits to Hastings. Lara is studying development in Hyla- tree frogs.

People, Places and Habitations

In late September, FEMA notified us that they will provide some payments for repairs completed after the March floods. Unfortunately, the state office of emergency services does not reimburse "state agencies" like UC. Thus, we only qualify for the 75% share provided by the federal government. Before we can start the repair of the creek crossing to the Hallisey House, we are now told by the Army Corps of Engineers that we need a standard 404 permit, a permit from Fish and Game and a permit from the Regional Water Quality Control Board. And of course, they all first need a negative declaration under the California Environmental Quality Act (CEQA). We probably can't repair the crossing this winter!

David Gubernick and I have been in touch with various campus and USDA representative regarding the establishment of a captive population of the California deer mouse at Hastings. After many meetings, phone calls and a USDA inspection of our proposed animal care facility, it is clear that it will be virtually impossible for Dr. Gubernick to house mice here.

With funds from the Office of the President, a new roof was installed on the workshop. The contractor covered the building with new plywood and blocked the gaps which formerly allowed the occasional persistent mouse, bats and wood rat to enter under the eaves.

As usual, Mark Johnson has been working to keep up with the myriad of maintenance needs in the building complex. We were able to purchase about 4 cords of wood locally. Thanks to Ginger, Mark, Jon, Joe and Walt; your help made moving and stacking the wood both quick and fun. We are now stocked up for this winter. As our use of the Robertson House has increased over the winters, we may consider installing a propane fired heater there for next year.

Recent Publications: A Sampling of work in progress at Hastings.....

Dickinson, J.L. 1995. Tradeoffs between mate guarding and mate location in the blue milkweed beetle. *Behavioral Ecology*. 6:280-286.

Gries, C., T. H. Nash III, and J. Kesselmeier. 1994. Exchange of reduced sulfur gases between lichens and the atmosphere. *Biogeochemistry* 26:25-93

Koenig, W. and J. Knops. 1995. Why do oaks produce boom-and-bust seed crops? *California Agriculture* 49:7-12.

Koenig, W.D., R. L. Mumme, M. T. Stanback and F. A. Pitelka. 1995. Patterns and consequences of egg destruction among joint-nesting acorn woodpeckers. *Animal Behavior* 50:607-621.

Knops, J., J. R. Griffin, and A. C. Royalty. 1994. Introduced and native plants of the Hastings Reservation, central coastal California: a comparison. *Biological Conservation* 71:115-123.

Song, W., N. Torrex-Martinez, W. Irwin, F.J. Harrison, R. Davis, M. Ascher, M. Jay and B. Hjelle. 1995. Isla Vista virus: a genetically novel hantavirus of the California vole, *Microtus californicus*. in press. *Journal of General Virology* [provided tissue in 1975 and 1995].