

Hastings Natural History Reservation

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Weather Report

Hastings shared in the record March rainfall in northern California. Precipitation was recorded in the electronic sensor on 22 days for a total of 11.79 inches. Our brass bucket/stick sum was 14.23 in. Odd; these two techniques usually agree within a few hundredths of an inch. We will continue to use the former as our official total for now, continue our observations and experiment with the electronic gauge after the rain season ends. Normal total precipitation through March is 18.7 in. Our total this year is 17.49 in., with March almost entirely responsible for the annual total. Soils quickly saturated and even the smallest rainfall caused runoff. Big Creek flowed for the last 10 days of March. The Arnold Spring was flowing at 2.5 gallons/min. by the end of the month, ending its dry spell. Average daily high temperatures were low; often daily highs were in the 50's. We had frost 6 nights and snow on 4 days. Finch Creek flowed all the way through the reservation, starting March 4. Virtually all of the watercourses on Hastings flowed. Water is still seeping from the large field above the lower barn site and had to be diverted in new ditches from that construction site. Curiously, there was no runoff from the very closely grazed watersheds leading down from the Palo Escrito Ranch. Vernal pools at Corral Viejo, the summits of Ardilla and Conejo Grades and at Laguna Conejo (just north of Haystack Hill) all had filled. By the end of the month, clear, warm weather returned and grass was rapidly greening the hills. Shooting stars, violets and filaree were in full bloom, while grasses were generally just leafing out. Our deciduous oak trees were in flower only during the last week and most riparian species had barely begun to break buds.

Research

Walt Koenig finished his teaching duties for the U.C. Berkeley course, "IB104- Natural History of Vertebrates". Janis Dickinson completed some very clear DNA fingerprints from Western Bluebirds at MVZ's DNA lab. Apparently Western Bluebird young in the nest hole are not necessarily offspring of the adults living in that nest hole. Walt spent a day with Rex Stallabanks (Dept. Biology Univ. Oregon) on the 19th, discussing woodpeckers. Walt and Janis cleared out of their temporary quarters in Berkeley on the 28th and carried on with field work full time at Hastings. Elizabeth Ross moved into "Betty's Lab" and set up an office, focusing her field work on the ecology of Scrub Jays. By the end of the month, Elizabeth had located five jay nests. Philip Hooe presented a seminar on his doctoral dissertation research to students and staff of MVZ on March 13th. Philip discussed his work on dispersal behavior in Acorn Woodpeckers. He completed the radio antenna for the Toyota Land Cruiser. Philip Hooe was one of 10 graduate students selected for research grants given by a University-wide review panel established by the Natural Reserve System. Congratulations, Philip! Philip continued to monitor a group of woodpeckers with radio transmitters, some of which have been given hormonal implants. Testosterone apparently has a strong influence on the inclination of a given bird to wander. Dr. Morné Du Plessis moved into the Hastings Cabin on February 25th. Morné has recently conducted research in both Africa and New Mexico, and will be working with the Acorn Woodpeckers here. Morné is providing additional food at feeders for selected groups of Acorn Woodpeckers and he will be looking for any changes in reproductive output by breeding groups with supplementary provisions of high quality food. Morné is also investigating potential energy savings woodpeckers realize by sleeping in groups in nest holes. Mark Stanback is writing his dissertation.

Field assistants for both the Acorn Woodpecker and Western Bluebird projects have arrived. Jill Goldstein, Phillipa Shepherd and Roger Emond moved into the Bunkhouse. Jill and Roger moved in at the beginning of March and Phillipa, known as "Pippa", arrived at mid-month. Geoff Morse moved into a Schoolhouse garage bedroom on the 31st. We expect the last assistant, Dan Albano, to join Geoff at the schoolhouse in early April.

Jean Knops worked from the stucco house from March 6 to 23. Jean worked with Dr. Virginia Boucher from March 14 to 21. The abundant rain kept this lichen research crew busy emptying bottles of rain, both clean and with water rinsed through blue oaks with lichen. Water and soil samples indicate the lichens intercept a small fraction of the rain before it reaches the soil level, but that rain rinsing the lichen increases a variety of soil nutrients.

Dr. Jenella Loye (Univ. of Utah) and Scott Carroll, (UC-Davis) visited Hastings March 7-10 and on the 17th to set up bluebird nest boxes on the Arnold Flats and on Rana Creek Ranch. Dr. Loye met with Jeff Froke of Rancho San Carlos regarding potential bluebird research at RSC. A big thanks to Rana Creek, particularly manager Kent Heneks for allowing Dr. Loye to put out some bluebird boxes along Carmel Valley Road.

John Barthell worked at Hastings every Sunday during March. John brought assistants and other staff from UCB Entomology, including Aleta Barthell and Rebekah Stone. John noted the first solitary bee males were flying during the last week of March.

Pam Muick visited Hastings on the 12-13th and again on the 31st to monitor the status of the oak seedlings planted a

couple of years ago. The rains have brought on a flood of exotic grass plants, but a few oak seedlings are showing leaves again.

Spring break at UC-Berkeley allowed a group of four students in the Natural History course to spend March 23-26 at Hastings trapping woodrats and deermice along Big Creek. DeeAnn Reeder, Jeff Stobaugh, Heidi Robert and Charles Bouch stayed at various locations at Hastings. In addition to trapping many of the woodrats originally marked by Dr. Pat Kelly, they documented the return of a few feral pigs to Big Creek; no new pig diggings have been seen on Hastings- yet.

An Oakland High School biology class visited Hastings on the 26th, and Mark Stromberg made a presentation for the local Quail Unlimited group on the 12th.

Mark Stromberg and Dr. Frank Pitelka continued to prepare a proposal for the National Science Foundation for septic and water supply facilities. Dr. Jim Griffin continued updating and revising his "Natural History of Hastings".

Dr. Keith Clarkson, and his wife Claire (Peak National Park Study Center, Sheffield) and Dr. Tim Birkhead (Sheffield University), his wife Merriam and three offspring arrived March 24. Keith and Tim immediately began study of the Yellow-billed Magpies along Carmel Valley Road and the Haystack Hill- Corral Viejo area. Walt Koenig refurbished the cannon net and had banded a group of magpies for this study. Keith and Claire are at the Robertson house and Merriam and Tim are using the refurbished stucco house. Our thanks again to Oak Ridge Ranch for access to this important Magpie study site.

Carmel Ranch Company Research Project

Dr. Jim Griffin prepared field sheet for the inventory of plant species on his 40, tenth hectare plots on Hastings. Paperwork at UC Berkeley was processed to hire Nancy Popkin and Ruth Griffin as field assistants to help inventory the plants on the various plots in April and May. Nancy and Ruth will work with Stromberg and Griffin to conduct the field studies. Stromberg, Amme, Griffin, Dr. Frank Pitelka and Dr. John Menke continued to refine priorities for later research, exchanging copies of work schedules, research plans, techniques, etc. Hastings joined the California Native Grass Association as an associate member, and Mark Stromberg submitted a brief summary of our research for their newsletter. Virtually continuous rains of March made access to field sites impossible, so field work was delayed.

Facilities

Mark Johnson finished up a myriad of small tasks getting the "stucco house" or "Lois Bell House" ready for occupancy. Once Jean Knops moved in, Mark helped with a number of small repairs and additions. Similar help was given to Elizabeth with Betty's Lab. Mark also made a series of repairs to fixtures, heating elements, gutters, washing machines, dishwashers, doors, roofs, windows, window shades, woodstoves, etc. in several reserve houses. With the continual rain, a lot of road, culvert and gutter maintenance was needed. Doors and windows at Schoolhouse garage bedrooms were repaired and one room which required it was painted. We moved the beds back into these bedrooms and cleaned them out. Most brush piles were burned. Mark helped diagnose and repair the well works at the Hallisey House. Phones were hooked up in the Betty's Lab (Elizabeth Ross, 659-4423), Lois Bell House (Jean Knops, 659-4124), and Hastings Cabin (Morné Du Plessis, 659-0674). During some rainy days, Mark labeled the last of the unmarked drawers and boxes in the workshop.

With the onset of rains, the Arnold Spring began to flow again. Mark fixed up the spring boxes and after several repairs of geysers in leaking pipes, he had the spring filling the community redwood storage tank. By the end of the month, the spring was providing nearly all the water for the reserve. Unfortunately, the spring is showing signs of fading rapidly after a promising return to flow. Perhaps the ground water renewal was not all that deep? A small slide of gravel and sand covered part of the road to the Arnold Cabin, so access is limited to our four-wheeled motorcycles.

Daniels and House broke ground for the lower barn on March 6. The ground was leveled for the building site and the basic layout for the building was prepared. Then it rained for three weeks. Clearing weather in the last 3 days of March allowed the crews to return and put in the forms for the concrete floor. We had to dig two long trenches around the barn site to divert the water which oozed and at times gushed from squirrel holes on the hillside above the barn site.

Reminder! April 20, Saturday, 11 am to 3 pm, is our Open House here at Hastings. Bring your picnic lunch and we'll show you around. Hope you can make it!