One hundred eighty-four years ago, a young naturalist of 26 years, who suffered regularly from seasickness, left the HMS Beagle whenever he could to go ashore. Fortunately, for us, he spent five weeks on a group of islands isolated 1,200 miles in the Pacific Ocean west of South America. His short stay proved enormously significant for science and for the study of evolution. He would write about disembarking in a cove at San Cristobal, “The day was glowing hot, and the scrambling over the rough surface...was very fatiguing, but I was well repaid by the strange...scene. As I walked along I met two large tortoises, each of which must have weighed at least two hundred pounds; one was eating a piece of cactus, and as I approached, it stared at me and slowly walked away; the other gave a deep hiss, and drew in its head.” These huge reptiles, surrounded by black lava, leafless shrubs, large cacti, both dull and showy colored birds not two feet away, are just a few of the items that Hal Mackey will share with us from his Eco-Tour of the Galapagos Islands that retraced much of the journeys of Charles Darwin during that fateful stop in this Archipelago.

Hal Mackey moved to Chico after a career as an environmental educator for 7 years at the Johnstown Campus of the University of Pittsburg and as a senior scientist for 25 years at the Savannah River Site in SC. He has conducted research on revegetation of American chestnut forests, prepared ER and EIS documents, published extensively on mapping wetlands with remote sensing data, and engaged in planning foraging ponds for the formerly endangered American Wood Stork. After moving to Chico, he has researched the development and growth patterns of Steers head, *Dicentra uniflora*, as a possible indicator species for global warming. He also has enjoyed conducting angler creel surveys for the past two summers in the Canyon of the North Fork of the Feather River. His main hobby is development of his Mediterranean style vegetable and fruit garden in his backyard, which he refers to as Mystery Run Urban Garden. And yes, he is known to most of you as Samantha’s Dad.
MENDOCINO NATIONAL FOREST
GENETIC RESEARCH CENTER
CHICO SEED ORCHARD
February 10
Sunday

Meet at 10 am at the entrance gate to the US Forest Service, at 2741 Cramer Lane, Chico. Take either Notre Dame Avenue or Dominic Drive south from Skyway, turn left on Morrow Lane, then right on Cramer Lane to the end. Join us for a level walk along a lovely riparian trail. Learn about the history of the plant introduction facility started in 1904 as a center to test trees and plants from around the world for use in agriculture, industry and medicine. In 1957 the Genetic Research Center was established, and now it is managed by Mendocino National Forest as the Chico Seed Orchard. Ends at noon. Rain Cancels. Leader: Marjorie McNairn 530 343-2397

Remembering
Jean Whittlesey

We lost another one of our long-term and previously active members on November 9, 2018 at the age of 99 years. Jean Whittlesey became a member of Mount Lassen Chapter upon her retirement from a career as a children’s librarian. She was quite active in the chapter, holding the office of Secretary for two years in 1990 and 1991. She became Vice President the next year, and was Program Chair in 1993. She recruited and provided popular speakers and topics. A particularly interesting one was by the late Dr. David Wood of CSU, Chico on “Plants and Rocks: Geobotany as a Factor in species Distribution.” And to satisfy her interest and love of mushrooms, she persuaded Taylor Lockwood, a well-known mushroom photographer to give a program to the chapter. She herself was very bright and inquisitive in many things, such as plants, people and activities. Her enthusiasm was contagious. Jean was elected Member-at-Large for a year, and then took on the responsibility of Hospitality, arranging for cookies and beverages at the monthly program meetings. She also chaired the tea table at many wildflower shows - serving up a variety of teas from native plants. During her years with CNPS she attended many field trips, led a few, and took wildflower and mushroom forays with Vern Oswald, Lowel Ahart and Emily White. It was a pleasure to work with such a personable, diligent and reliable member of the Executive Board. In the words of John about his mother, “She was curious about nature to the very end. She loved nothing better than sitting in my front garden watching clouds, flowers, butterflies and sorting through her rock collection that covered the surface of window sills, outdoor tables and even a large ring of rocks in the middle of the kitchen table.”
Conservation Notes
by WOODY ELLIOTT Conservation Chair

Support CAMP FIRE
Recovery Funding Appeal

Thanks to all 20 of you who donated a total of $1,625 to support a revision of the CNPS Fire Recovery Guide developed last year in response to the extensive 2017 wildfires in Mendocino, Napa and Sonoma Counties. This revision should be of service to areas throughout California including the four counties encompassing Mount Lassen Chapter. Continued financial support of Mount Lassen Chapter from annual contributions and your CNPS membership is vital to advancing CNPS’s Mission: To conserve California native plants and their natural habitats; and increase understanding, appreciation, and horticultural use of native plants.

DO YOU GROW NATIVE PLANTS?
The Mount Lassen Chapter is busy planning for the upcoming Wildflower Show & Plant Sale on April 14, 2019. If your native plants are producing seedlings or off shoots, please consider potting some up for the plant sale. They would be greatly appreciated. Questions to paulashapiro49@gmail.com.
About 30 years ago Magalia CNPS member David Anderson was instrumental in developing with the Bureau of Land Management a nature trail through the Magalia woods near Pine Ridge Middle School. He would lead fifth graders through the mile-long walk and introduce them to the wonders of nature. He died earlier this year at the age of 92, but his trail still exists and is still frequently used, if not by the fifth graders, at least by nearby residents with their kids and/or dogs. Today many of the sign posts are gone, and indeed much of the undergrowth has been removed due to fire hazard reduction, but it is still a pleasant walk with interesting finds along the way.

The habitat is mixed conifer forest at slightly over 2000 foot elevation, which is at the lower level for mixed conifer forests in this area. A conifer is a gymnosperm. It is more primitive than flowering plants, known as angiosperms, and more advanced than early vascular plants such as ferns and fern allies. There are 52 native conifers in California. No other area of comparative size on Earth contains more conifers or harbors a greater diversity of cone-bearing plants than California, as 14 of those 52 species are endemic, growing only in California, and 14 of the 16 Pinus genera grow in California. California is indeed Conifer Country.

Conifers are plants whose sex cells are housed in cones rather than flowers. Conifers have male cones on the lower branches as we observed on an incense-cedar, and female or seed cones growing on the upper branches in the sunlit crown. The male cones release pollen grains containing sperm into the air and soon the cone shrivels and falls to the forest floor. Seed cones may take one year for firs and incense-cedars to mature, or two years for pines to grow a mature cone.

Ponderosa pine or western yellow pine, is the most common conifer along the David Anderson Trail. It is also the most widespread pine species in the U.S. and Canada, stretching from British Columbia to San Diego County, and from the Pacific Coast states east to beyond the Rocky Mountains and south into Mexico, although those are different varieties from the Western Coast Pinus ponderosa var. ponderosa. It is dependent on low-level fire for regeneration by clearing litter to mineral soil and removal of competing trees and shrubs. Thick bark can protect even young pines from fire, and indeed, signs of previous fires are commonly seen. We saw two “cat faces” where previous fires had scarred the trunk from the ground level despite the thick bark, killing the cambium level there, but not killing the tree. After repeated fires bare wood is exposed in the shape of a Gothic Arch. These scars have been used by scientists to determine fire histories in an area, and show that fires have cleared accumulated fuels several times a century.

Along the trail, there is a preponderance of incense-cedar seedlings, which can outcompete the pine seedlings when the accumulated litter and shady forest areas are not cleared but remain even with fire hazard reduction efforts. Mature incense-cedars are almost as common as ponderosa pines, and one reason is due to previous forest management which had left incense-cedars after logging the pines, which were considered more desirable. Also fire suppression has favored the survival of the fire-tender young cedars.

A less-common conifer on this trail is the Douglas fir (Pseudotsuga menziesii) literally meaning “false hemlock.” It is nearly as widespread as ponderosa pine with one variety found along the West Coast and another along the Rocky Mountains and even into central Mexico. It grows in a wide variety of habitats, and in ideal conditions Douglas fir can grow to great size. Next to the coast redwood it is the tallest tree known, and one of the most massive.

One common tree growing in this mixed conifer forest is not a conifer, but a black oak (Quercus kelloggii). Like the conifers it prefers to grow with, it ranges in elevation from about 300 feet to nearly 6000 feet, and is found along the Coast Range, the Klamath, Cascades, down the Sierra Madre Mountains and dribbles down into Mexico. It has a reputation among Native Americans throughout the state for being the most desirable acorn not only because of its flavor, but its storage and thickening qualities. The black oak hybridizes with the interior live oak to produce an Oracle oak. The oversized leaf we found 19 cm by 26 cm appears to be from a black oak.

We took two interesting little side trails, one was to a spot to look out over Middle Butte Creek Canyon and observe the transition zone from blue oak (Quercus douglasii) and foothill chaparral to the mixed conifer forest on the top of the hill opposite our viewpoint. The other side trail was to a spring still with water in spite of months and months without rain. Many chain ferns (Woodwardia limbricata) grew as high as four feet. After some searching we found a frond with the sori placed in the characteristic “chain.”

After the Camp fire a quick drive-by of the area showed the forest floor, which had been cleared of undergrowth for fire safety, was burned and the Ponderosa trunks blackened to a height of about a 15 feet. The tops of the trees were still green. Time will tell if the cambium under the thick bark was injured enough to compromise the health of the trees.
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Calendar 2019

January
16 - Ex Board Meeting
17 - CCNC Workday

February
6 - General Meeting
10 - Chico Seed Orchard
20 - Ex Board Meeting
21 - CCNC Garden Workday

March
3 - General Meeting
17 - Ex Board Meeting