

Lockeford Plant Materials Center

Quarterly Newsletter – Winter 2011

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Featured Plant Materials Center Releases: 'Sierra' sulphur-flower buckwheat and 'Duro' Eastern Mojave (California) buckwheat

The genus *Eriogonum*, or California buckwheat, is native to California and has diversified into the largest dicot genus in the state, with numerous species and varieties. Members of the genus share a woody, shrub-like growth form and produce flower stems topped with tight clusters of flowers; the seeds are small and angled. Species vary in height from a few inches in the high Sierras to over six feet tall on the coastal islands. They are an important component of the California flora as leaves and seed provide food for birds, mammals and insects, and the flowers are an important nectar and pollen source for native pollinators.

Sulphur-flower buckwheat, *Eriogonum umbellatum*, is a woody perennial and grows to form low, broad mats with individual clumps reaching two feet in both height and width. Leaves are one inch long, and are usually shiny green on top and woolly underneath, although different varieties are highly variable. Flower stems are topped by clusters of tiny, sulfur-yellow flower heads. The species has about thirty varieties distributed across the western United States.



'Sierra' sulphur-flower buckwheat in bloom.



The pinkish white flowers of Eastern Mojave buckwheat. ©J.S. Peterson. USDA NRCS NPDC.

'Sierra' sulphur-flower buckwheat was released in 1987 by the NRCS Plant Materials Center, Lockeford and the California Agricultural Experiment Station, Davis. The original collection was made in 1972 in South Lake Tahoe, El Dorado County, California, at an elevation of 6,200 ft. This low-growing shrub was developed for critical area stabilization on dry, rocky slopes and droughty sites. It can be used for landscaping, and is an excellent dry flower for arrangements as it holds its color and structure for many months. This cultivar is adapted to the dry Sierra Nevada foothills and mountains where soils and slopes limit competition.

Eastern Mojave or California buckwheat, *E. fasciculatum*, is similar in form although larger, with a greater proportion of woody stems, and reaching 1 to 3 feet high and 2 to 4 feet wide. Branches are numerous, slender and flexible.

Leaves are green; 1.5 to 3.8 inches long and less than half an inch wide; smooth or fuzzy above and fuzzy beneath. Flowers are white or pink. Seeds are light brown, angled and very small.

'Duro' California buckwheat was released in 1987 and is a blend of six accessions collected from native stands in Kern, Modoc, and San Luis Obispo counties in 1964. Duro has performed well compared to other native California shrubs in both container plantings and direct seedings on critically eroded areas.

Both Sierra and Duro are excellent pollinator and insectary plants as the flowers bloom from May through October. The plants can be established from seeds or from transplants, and they flower beginning from the second year. They require well-drained sandy or gravelly soils and will not tolerate saturated soils. Although growth is typically enhanced when irrigated during their first year, they do not require irrigation thereafter. If you are interested in this plant for demonstration or field testing, please let us know.

Training on Plant Growth Data Collection at the CAPMC

Training for staff from the Arizona, Colorado, Idaho, Montana, Nevada, New Mexico and Washington Plant Materials Centers was held at the Lockeford PMC on January 25, 2011. The training covered data collection techniques for the ALMANAC model (Agricultural Land Management Alternative with Numerical Assessment Criteria), which was developed by the USDA Agricultural Research Service for NRCS use as part of the Conservation Effects Assessment Project (CEAP). The model integrates climatic and plant growth data on important western rangeland species to predict plant cover, competition, erosion control and forage production of plant functional groups under different climatic conditions. Plant growth data including biomass production, nutrient content, leaf area and light interception measurements are collected at the different PMCs. Thanks to the training there will now be greater standardization in data collection among the participating Centers.



Bird Species at the CAPMC - Point Reyes Bird Observatory Surveys

Situated along the banks of the Mokelumne River, the 106 acres of the CAPMC is a haven for birds. Between April and July of 2001, 2004, and 2006 through 2010, biologists from the Point Reyes Bird Observatory conducted bird surveys at the PMC as part of a cooperative effort between the San Joaquin Research Conservation District and private landowners. The presence of 69 native species and one non-native bird species was documented at the PMC. Among resident species were the American Kestrel, Barn Owl, and Belted Kingfisher, and summer migrants included the Black-chinned Hummingbird and the Northern Rough-winged Swallow. The riparian focal species observed were Black-headed Grosbeak and Blue Grosbeak, common yellowthroat, Swainson's Hawk, Tree Swallow, Warbling Vireo, Wilson's Warbler, and Yellow Warbler.

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