



Sweeney Granite Mountains Desert Research Center

University of California

Site Specs



Administering
Campus
UC Riverside

Established
1978

Location

East Mojave Desert, San Bernardino County; 128 km (80 mi) east of Barstow.

Size

3,600 ha (9,000 acres)

Elevations

Granite Mountains: 1,128 to 2,071 m (3,700 to 6,796 ft)

Sacramento Mountains: 700 to 915 m (2,300 to 3,000 ft)

Average Precipitation

22 cm (8.9 in) per year

Average Temperatures

July maximum: 33°C (92°F)

December minimum: -1°C (30°F)

Facilities

Housing and laboratory w/ AC electricity, full conveniences for up to 12 researchers; small trailers for long-term researcher housing; cabin w/ DC electricity for classes of up to 40 persons; campground and conference/lecture room for up to 40.

Databases

Vascular plant and cryptogamic herbarium; synoptic collections of animals and rock types; 7-parameter climatological data; aerial photos; maps; library; artifact collection; bibliography of on-site research.

Personnel

Reserve director, museum scientist, and steward on site.

NRS Publications

Reserve brochure published 1999.

Contact Information

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NRS Website

<<http://nrs.ucop.edu>>

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The Sweeney Granite Mountains Desert Research Center is located in the rugged Granite Mountains of the East Mojave Desert. High plateaus and ridges dominated by piñon-juniper woodland and sagebrush descend precipitously to the east in highly fractured granitic canyons. Massive pinnacles and broken, rocky terrain eventually give way to densely vegetated bajadas and washes, supporting creosote bush scrub, a unique community of enriched mixed woody and succulent scrub, and other habitat types. Springs and seeps are common. Variation in habitat, hydrology, and elevation supports widely diverse plant and animal life, including more than 460 species of vascular plants, two amphibians, thirty-four reptiles, 138 birds, and 42 mammals. The reserve also protects a dense concentration of archeological sites left by Chemehuevi and other Native American tribes. This NRS reserve lies within the recently established Mojave National Preserve. Operating as a satellite site is the Sacramento Mountains Reserve, which lies on the steep slopes and flat bajadas of the Sacramento Mountains in the East Mojave Desert. This satellite site supports several Sonoran Desert plant species, including Bigelow teddy bear cholla, along with a small, disjunct colony of ocotillo, one of this species's northernmost occurrences.

Selected Research

Linkages between biotic and physical components of piedmont landscapes. Characterization of microbial communities and desert soil crusts.

Ecomorphology of desert lizards. Systematics of scorpions. Ecology of ants. Systematics of wasps and bees.

Bighorn sheep demographics and dietary requirements. Rattlesnake life history/distributional ecology. Kangaroo rat physiology and foraging behavior.

Ecology and evolutionary factors that maintain genetic diversity in annual plants. Long-term demographics of desert shrubs.

Special Programs

Field courses: Many university courses use the reserve, including geology, archaeology, physiology, ecology, evolution, and photography.

Public outreach: Field trips for high-school students from nearby communities; site visits by outdoor groups; integration of research with National Park Service; displays and guided tours; volunteer programs.

Regional plant inventory: Reserve personnel are conducting a floristic study of the East Mojave that includes the collection and deposit of more than 5,000 specimens in the reserve herbarium.