MANZANITA

Volume 17, Number 3 • *Published by the* Friends *of the Regional Parks Botanic Garden* • *Autumn 2013*

Aridity and the California Flora:
Remarkable Adaptations to a Unique Climate

by Dylan O. Burge

Glenn Keator

Desiccation-tolerant bushy spike-moss (*Selaginella bigelovii*, a vascular plant, not a true moss) looks dead in summer without water.

Ken Hickman

In the rainy season, bushy spike-moss revives and produces new green shoots.

California's native plants are famous for their perseverance under conditions of extreme aridity. In California's Mediterranean-type climate region, summer drought may last for as long as six months, while in the state's deserts, rainfall only amounts to a few inches per year. Survival in these conditions requires extreme water conservation, and California's native plants have adapted to the challenge. The remarkable drought adaptations of many of California's native species allow them to survive—and to thrive—under conditions that would kill many non-native garden plants. Some of the most remarkable adaptations to aridity in the California flora include summer dormancy in the state's celebrated bulb flora, desiccation tolerance in some ferns, and extremely efficient water use in the diverse group of shrubs that make up California's most iconic plant community, chaparral.

Drought adaptation in California's flora has attracted attention from both horticulturists and researchers. Horticulturists look to California's native plants for cultivars that will conserve water, while researchers examine these plants to gain understanding of how California's flora evolved and how it will be able to persevere in the face of human-caused climate change.

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