

# California native-plant classic gets a 21st-century makeover

January 31 2012, By Cathy Cockrell



Species no longer classified as lilies in The Jepson Manual's second edition.

Thanks to new molecular-genetic tools and intensive field research, scientists' understanding of the native flora of the Golden State -- one of the world's hotspots of botanical diversity -- has grown exponentially in the 18 years since publication of *The Jepson Manual*, the authoritative reference on California botany. New native plants have been discovered, evolutionary relationships redefined, additional species threatened or endangered by development and climate change — the list goes on.

With so much new knowledge to be incorporated and so much at stake on the conservation front, early copies of the supersized tome *The Jepson Manual: Vascular Plants of California*, 2nd edition (UC Press)

were eagerly snapped up — its six-pound weight, 1,600 pages and \$125 sticker price notwithstanding — at a meeting of native-plant enthusiasts in San Diego earlier this month.

Bringing Jepson’s legacy into the 21st century, the new manual aims to describe “all California taxa that occur in wildlands, regardless of how difficult to identify,” says convening editor Bruce Baldwin, curator of UC Berkeley’s Jepson Herbarium, named for the eminent early California botanist and Berkeley professor Willis Linn Jepson. In all, the second edition features 7,601 California plant species, subspecies and varieties.

Plant keys, which help readers definitively identify plants, were edited for accuracy, clarity and ease of use. New botanical illustrations were added; earlier illustration plates were revised to reflect new understandings of plant relationships. Five staff and five editors, in addition to Baldwin, fine-tuned entries authored by some 300 experts from around the world. A first-ever electronic version was also created; the e-book is in final production, with an expected release in mid-February.

No wonder that Baldwin — himself a California native, and a professor of integrative biology — calls the second edition’s years-long gestation “the most time-consuming undertaking of my career.”

The guiding philosophy for the revision, he says, was to classify California plants according to the newest findings on their evolutionary relationships, rather than preserving “groups of convenience” dictated by traditional classification schemas.

California goldfields, for example, a native daisy that carpets the state’s oak woodlands and grasslands in spring, was long thought to constitute a single species. But research in the late 1990s by Raymond Chan, a grad

student of Baldwin's, determined that there are, in fact, two distinct species of California goldfields. In the second edition, the plants' descriptive treatment, co-authored by Chan and the late Robert Ornduff, former director of the Jepson Herbarium, reflects this new understanding of a signature California wildflower.

Many Californians, even if they don't share serious botanists' passion about such distinctions, are passionate about preserving the state's natural heritage. The new Jepson Manual aids the conservation cause, Baldwin says, by helping to ensure that rare or endangered native [plants](#) — some of them now identified for the first time — don't "slip through the cracks" and disappear forever.

*The Jepson Manual* is part of the larger [Jepson Flora Project](#), which is also producing online companion materials found on the Jepson Online Interchange for California Floristics.

Provided by University of California - Berkeley

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