

Native grasses: The misunderstood and undervalued understory

By Jeanne Wirka Resident Biologist, Bouverie Preserve of Audubon Canyon Ranch  
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Why is it that a field of grass looks so empty compared to an oak woodland? Why do we yearn for bushes and trees when so much is going on below our knees?

It's not surprising that most people lack an appreciation for what we are used to walking on or through. Grasslands can seem ho-hum compared to the showy fields of wildflowers, wetlands, and woodlands we are so lucky to have here in Sonoma County.

Yet grasslands are one of the most biologically diverse habitats in California. Appreciating native grasses (those that evolved here and are adapted to our local climate) and the important role they play in our ecosystems can open up a whole new world of botanical wonder and highlight an area of major conservation concern.

There are over 300 species of native grasses in California, including sod-forming types as well as bunched forms, annuals and perennials, and both short and long-lived species. Some have beautiful foliage and flowers, others are barely noticeable. Some are extremely drought-tolerant, others live in wet meadows and vernal pools.

While grasses are adapted to most habitats in California, from coastal dunes to high Sierra meadows, the term "grassland" is reserved for those communities where grasses and forbs (non-woody plants) make up the majority of the plant cover.

Unfortunately, the vast majority of California's grasslands have been wiped out mainly because they historically occurred on the real estate most sought after by humans for agriculture and urban uses.

The California Native Grasslands Association ([www.cnga.org](http://www.cnga.org)) estimates that less than 2 percent of our once existent grasslands remain. Most areas where natives once flourished have been overtaken by introduced invasive plants such as annual ryegrass, wild oats, and yellow star-thistle.

### **Why care about native grasses?**

Long-lived and deep-rooted native bunchgrasses benefit ecosystems in a number of ways. Their extensive root systems provide organic matter deep into the soil. When roots die, they leave channels that enhance rainwater infiltration and groundwater recharge. Native perennial grasses maintain a firm grip on the soil year-round, reducing erosion on hillsides and stabilizing banks along streams.

But it's the other plants and animals that need the grasses the most. From a birds-eye view or that of a small foraging animal, the structure of native grasslands are very different than those dominated by introduced annuals. Because they are more structurally diverse, native grasslands offer a wider array of niches in which animals and other plants can thrive.

The open spaces between bunches in native prairies are dotted with flowers and other delicious forbs in spring. They also allow enough room for grassland-dependent animal species (such as the grasshopper sparrow, a species of special concern) to move around, forage, and avoid predators.

### **Restoration efforts underway**

While intact native pastures and meadows are few and far between, Sonoma County is one of the places where remnant stands of coastal prairie are hanging on, rich with native bunchgrasses such as tufted hairgrass, California oatgrass, blue wildrye, and purple needlegrass. Recent research has also suggested that coastal grasslands may be more easily restored than other grassland types because the milder climate gives native perennial grasses a competitive chance against invading annuals.

Fortunately, a growing appreciation for the role of grasses in our ecosystems, and the importance of grasslands as part of our habitat matrices in California have added momentum to efforts to restore native grasses. If planting a single acorn can give a person a lifelong appreciation for oaks, then planting 20 or 50 or even hundreds of native grasses might be just the thing to nurture our growing appreciation of native grasslands.

*Jeanne Wirka will be speaking native grasses as part of a lecture series hosted by the Cotati Creek Critters Monday, October 1 at 7 p.m. at the Cotati Community Center, 216 E. School St. For further information visit <http://www.CotatiCreekCritters.info>.*

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