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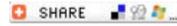
E-Edition

Thursday June 16, 2011

Volume 19 Issue 19

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The forest at your feet



By Wade Belew June 3, 2011 12:00 am

As Stewardship Coordinator for the Cotati Creek Critters, I became interested in native grasses several years ago when we wanted to add understory plants to complement our creek restoration plantings of trees and shrubs.

I turned to the California Native Grasslands Association to learn more and attended a conference and several workshops. I found that native grasses were important, but surprisingly uncommon, despite the fact we're surrounded by grasslands.

Why should we care about native grasses or grasslands? Despite their small stature, grasses are ecological powerhouses in plant communities throughout the State.

Grasses are the biological threads that weave the canvas on which is painted the biodiversity of California. Grasses are very productive, providing forage and seed for a wide array of wildlife. This precious energy is passed through the food web, such as, when a rabbit is eaten by a golden eagle or coyote.

Only two percent of native grasslands remain after about two centuries of impacts from invasive weeds, agricultural conversion, development, mismanaged grazing and fire suppression. Let's examine these impacts and effects on native grasses, and how that, in turn, affects us.

Invasive weeds have been introduced since Spanish cargo ships dropped off livestock and ballast, which consisted of soil that inadvertently carried seeds from far away places. Grasses and other plants were intentionally planted for forage or other uses.

Most grasses native to California adapted to our Mediterranean climate as deep-rooted perennials, meaning, they live year after year.

Some can live for five to 10 years, or even for 100 years or more. Most of the invasive grasses are annual, completing their entire life cycle in one year or less.

The fibrous roots of native perennial grasses can grow as deep as 10 or 15 feet and provide many benefits over the shallow-rooted annual weeds. Probing roots break into subsoil and routinely die off, leaving organic matter deep in the soil profile. This process sequesters atmospheric carbon and helps convert subsoil into topsoil. It also opens up channels for rainwater to infiltrate instead of run off the surface.

Annual grasses grow fast and tall, outcompeting the slower-growing native perennials for sun and soil resources. At the end of the rainy season, the annual non-native grasses die and further smother native plants with a thick thatch layer.

It is analogous to the tortoise and the hare. The native perennials are the tortoise, slowly chugging along, but in it for the long haul. Annuals are like the hare, a quick burst of energy, but nothing sustained over the long term.

Converting grasslands to agricultural crops is common because grasslands typically have highly developed, fertile soil. All of the grains such as corn, wheat, rye and barley are grasses, so it makes sense they would thrive in grassland soils.

Development, whether residential, commercial, industrial or public works projects permanently extirpate grasslands and other native plant communities.

California was historically grazed by large herds of elk, pronghorn and deer foraging vast grasslands. Besides naturally-occurring fires started by lightning, there's evidence to suggest Native Americans regularly burned grasslands, which also improved forage for their game animals.

Grazing and fire are now recognized as an important disturbance regime benefitting grasslands by discouraging brush, eliminating thatch and cycling nutrients. Livestock grazing occurs on 40 percent of the state and is an important economic resource.

In an effort to be economically competitive, commercial pasture can be overgrazed, resulting in soil erosion, compaction and loss of fertility. Eliminating grazing is problematic too, as invasive annual weeds often dominate in these situations.

If you would like to learn more about this subject, please join me for a workshop entitled "Introduction to California Grasslands and Grass Identification" on June 11 at 9 a.m. at Pepperwood Preserve northeast of Santa

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Rosa. You can learn more about this event and other workshops offered by the California Native Grasslands Association at www.cnga.org.

Wade Belew is president of the California Native Grasslands Association and stewardship coordinator of Cotati Creek Critters.



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