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Rohnert Park, Cotati, & Penngrove

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Ode to California's native grasslands

By Wade Belew
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In California we are blessed with a wide array of remarkable landscapes: Towering redwoods reaching skyward in the coastal fog; majestic oak woodlands filled with bird song; wetlands so rich that historic migrations of waterfowl would darken the sky as a living eclipse of the sun in pursuit of a watery oasis; coastal bluffs and tidepools with amazing views at your feet or on the horizon. The one landscape that ties these all together, and is itself so ubiquitous as to be almost invisible amongst the grandeur of these other ecosystems, is grasslands.

California grasslands are among the richest and most productive ecosystems. Ask a birdwatcher where to go if you want to see many of North America's most spectacular birds of prey including Redtail, Ferruginous, Rough-legged and Swainson's Hawks and Northern Harriers. Common songbirds in grasslands are Western Bluebirds and Meadowlarks, and it's not surprising to find a foraging Canada Goose, Egret, or Heron when they are not in their usual aquatic habitats.

Vivid wildflower displays in California have lost their luster with the decline of the "canvas" on which this natural art was painted - native perennial grasslands. According to the California Native Grasslands Association, less than 2 percent of our native grassland heritage remains.

How can this be when we seem to have grasslands everywhere? The answer is the grasslands you see have largely been usurped with non-native invasive annual weeds. Grasslands have also been replaced by agriculture, industry and residential development.

Non-native grasses were introduced deliberately as forage for livestock, used as erosion control or unintentionally transported by livestock or dirt deposited on our shores after serving as ballast for Spanish cargo ships plying California coastal ports.

Annual grasses grow, set seed and die in one year or less. They tend to grow quick and tall, with a root system that effectively monopolizes topsoil resources. The tall thatch is a fire hazard, and can smother the slower-growing native wildflowers and perennial grasses beneath.

Native California grasslands would have been comprised primarily of perennial bunch grasses. Perennial plants grow for more than a year, and some native grasses can persist for decades. Deep, penetrating roots tap soil resources in and below the topsoil layer, allowing some to remain green year-round.

Yet these plants may abandon 15 to 50 percent of their root system every year, effectively "injecting" organic matter 5-10 feet or more into the subsoil, sequestering significant carbon and continuing the soil building process.

Decaying roots also have the benefit of opening up channels through the soil for rainwater to penetrate deeply, slowing stormwater's rush into urban flood control channels. The increased level of organic matter and improved soil structure also help store more water longer into the dry season.

If we could wave a magic wand and restore native grasslands to the upper watersheds of the creeks that flow through Rohnert Park and Cotati, it would likely result in the measurable benefits of reduced flooding and increased groundwater infiltration.

The clumping growth habit of native bunchgrasses does not dominate a landscape as a continuous field of annual grasses.

These grasses can also be found under tree cover, and locally you can look for the gray-green clumps of California fescue growing under the oaks at Annadel State Park in Santa Rosa. Or join the Cotati Creek Critters in planting native grasses and other understory plants along the Laguna in Cotati this winter.

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