

*Grasses of the South Yuba River State Park at Bridgeport*  
Dan Lubin, Environmental Scientist, Sierra Gold Sector, Sierra District,  
CA State Parks, Grass Valley, CA

Grasses often are overlooked on the landscape level by park visitors, and even by naturalists, amateur or professional. Oftentimes we only see grasses in California by the annoying poking seeds in our socks and shoes or by the green emerald carpet that springs to life in November from the winter rains. Most people are unaware that the seeds in our socks or that green carpet on the hillsides are not in fact natural historical occurrences in California. These grasses are native to Europe, mostly the Mediterranean region, and came to California with early European settlers and their livestock within the last few hundred years. These grasses are all *annuals*, which mean they live for one year only, usually sprouting in November in the rainy season and are finished seeding themselves by May, thereby dying and turning brown in the summer and creating our golden-brown hillsides during the dry summer months. Foxtails, Rip-gut, Dog-tail grass, Cheatgrass, Medusahead, and Goatgrass are some of the common names for these invasive annual grasses.

These annual, *non-native* grasses have been competing with our *native* perennial “bunch”-grasses and generally have “won” the competition, especially when coupled with grazing livestock animals and/or with the absence of fire. Historically, perennial grasses (mostly called “bunchgrasses”) would dominate the open hillsides of most of California and would have actually kept some green color throughout the summer months (more like grey-green), being very drought tolerant. Most of our native grasses are tolerant of some grazing as historically herds of elk and antelope used them as a major food source. When European livestock arrived, more intensive grazing (especially sheep) coupled with the introduction of non-native annual grasses doomed most of our perennial native grasses to exist only in the fringes of our grasslands and Oak woodlands. Luckily, many of these “fringes” are found at Bridgeport at the South Yuba River State Park.

### **Purple Needlegrass**

Purple needlegrass (*Stipa pulchra*) is a native perennial bunchgrass commonly found throughout interior California. It is tolerant of summer drought and heat, and stays green longer than the non-native annual Mediterranean grasses; making it probably the most important native bunchgrass for the lower elevations (grows under 2000 feet). It provides an important source of forage for animals in the summer and the prolific seeds were once used by Native Americans as a food source. Needlegrass is now commonly used for habitat restoration and erosion control. Because of its



historical importance, its myriad uses, and its relative abundance Purple needlegrass has become the official California State grass.

Though Purple needlegrass was once found throughout the Central Valley, Coast Range and Sierra Nevada Foothills its current range is now significantly diminished. There are several populations left at the South Yuba River State Park in Bridgeport, and park biologists are making an effort to preserve and expand these remnants. The largest population exists on top of Point Defiance in an open meadow adjacent to the trail. This meadow area also contains other native grasses such as Blue Wild Rye (*Elymus glaucus*) and some nice spring wildflowers, and will be an area of focus for invasive plant removal in 2013 and beyond. The largest extent of remaining Needlegrass is off of Sanctuary Road (a private road which runs adjacent to park land). This population is not accessible to the general public, but Parks staff have been collecting seeds from this population for several years and broadcasting it into other areas of the park. Keep an eye out for small Needlegrass plants around the new parking lot in the future! Populations that are accessible to the public can be found on the Buttermilk Trail right behind the recently fallen oak tree and in the shade near the picnic benches (at trail's start) and at the top of the Point Defiance Trail.

<http://www.cnga.org/library/StipaPulchraBartolome1981.pdf>

### **Blue Wildrye**

Blue Wildrye (*Elymus glaucus*) is the most commonly found native bunchgrass in the foothills. It is usually found in oak woodlands, pine forests, and on the shadier edges of grasslands. Look for clumps of bluish green leaves and very tall flowering stalks. Like Purple needlegrass, Blue Wildrye provides an important source of forage for wildlife, particularly in the summer months, and has been used heavily for habitat restoration.



Blue Wildrye was an important component of the central valley grasslands, which have been heavily invaded by invasive annual grasses. Individual plants can be seen scattered throughout Bridgeport, but only top of the Point Defiance Trail contains large remnant populations usually in some shade from Blue Oaks.

<http://www.hastingsreserve.org/nativegrass/natives.html#ElymusGlaucus>

### Deergrass

Deergrass (*Muhlenbergia rigens*) is the largest perennial grass found in California, with basal foliage that can reach up to 3 feet in size and flowering spikes extending up to 5 feet. It is commonly found in moister areas of grasslands and oak woodlands (and growing in roadside ditches and adjacent to irrigation canals). Native Americans historically used the seed stalks to make baskets, and used fire to cultivate large stands of this plant. The seed stalks also provide an overwintering home for butterflies and ladybugs, and food for birds. The large clumps are used as cover for deer populations during fawning periods, giving rise to the common name 'Deergrass'. It is very drought tolerant and commonly used as a landscape plant for deer resistance and erosion control.



The only known population of this grass at Bridgeport consists of 5 individuals, located downslope from the extensive rock work near the beginning of the Buttermilk Trail. It is currently blocked from view by oak branches from a tree that fell across the trail. Parks staff is working to remove the vegetation and make the population visible from the trail once again. There is also a nice population on Pleasant Valley Road about ½ mile from Bridgeport towards Lake Wildwood on the upslope road-cut. This species is more common at elevations exceeding 2000 feet.

[http://ucanr.org/sites/scmg/Plant\\_of\\_the\\_Month/Muhlenbergia\\_Rigens/](http://ucanr.org/sites/scmg/Plant_of_the_Month/Muhlenbergia_Rigens/)

### California Melic

*Melica californica* occurs infrequently throughout the foothills and seem to prefer some afternoon shade. These are handsome grasses and usually have bright green foliage in the spring, and like to cling on cliffs and slopes in a characteristic “bunch”-grass way. These plants can be found scattered along the sides of the lower Point Defiance trail, and the trail from the visitor center to Kneebone Cemetery. More info soon on this species!

[http://www.calflora.org/cgi-bin/species\\_query.cgi?where-calrecnum=5392](http://www.calflora.org/cgi-bin/species_query.cgi?where-calrecnum=5392)

### Torrey's Melica

*Melica torreyana* is a smaller perennial bunchgrass with a characteristic black and white “melica” inflorescence. It is commonly found in shady areas in oak woodlands, and this particular species is endemic to California. Plants can be found scattered along the shadier and east-facing sides of the Buttermilk Trail and the trail from the visitor center to Kneebone Cemetery. More info soon on this species!

[http://calphotos.berkeley.edu/cgi/img\\_query?where-genre=Plant&where-taxon=Melica+torreyana](http://calphotos.berkeley.edu/cgi/img_query?where-genre=Plant&where-taxon=Melica+torreyana)

### **Non-native Grasses**

Non-native and invasive, weedy grasses are very common in the park, and much more prevalent than our native grasses.

Common non-native grasses that you will see include: **Foxtails**, **Italian Ryegrass** (perennial), **Orchard grass** (perennial), **Rip-gut Brome**, **Wild Oats**, **Soft Chess**, **Annual False Brome**, **Medusahead grass**, **Barb Goatgrass**, and **Bermuda-grass** (perennial).

More info on these non-native annual and perennial grasses coming soon!