

SPECIES SPOTLIGHT: **Clustered Field Sedge (*Carex praegracilis*)**

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First described in 1753, the *Carex* genus is the largest genus in the *Cyperaceae* (sedge) family with 11 recognized groups (Baldwin et al. 2012). *Carex* species are important components of wetlands, riparian zones, meadows, prairies, roadsides, and bioswales. All *Carex* species are perennial monocots and, like many wetland species, most spread by rhizomes or stolons although some form tufts (Wilson et al. 2014).

The genus is incredibly diverse, and keying out individual species can be very challenging. One of the unique characteristics of *Carex*, and the related genus *Kobresia*, is the presence of perigynia (often shortened to *peri*). A *peri* is a specialized bract that encloses the ovary and achene, wherein the seed is located (Wilson et al. 2014). These structures are usually crucial for distinguishing *Carex* species, and the fact that they are not present year round adds to the difficulty of keying out *Carex* specimens.

The *Carex* Working Group (CWG), based in Washington State, is an excellent resource for identifying sedges in the Pacific Northwest. In 2014 CWG released the second edition of their reference book, *Sedges of the Pacific Northwest* (Wilson et al. 2014), which is a valuable resource for learning to identify sedges.

Carex praegracilis is a common sedge with a wide range across North America (Reznicek and Catling 1987). In California it can be found along the coast, in the Central Valley, and in both the coastal and inner mountain ranges. It is usually found at low and moderate elevations, but it can be found above 10,000 feet elevation, according to the Calflora website: www.calflora.com. It is found in a range of communities, including grasslands, coastal scrub, pine and fir forests, wetlands, and riparian areas.

A distinguishing feature of *C. praegracilis* is black rhizomes (Wilson et al. 2014), and it grows in dense clumps or forms a mat depending on management. It has soft, narrow leaves and can be from 1 to 3 feet tall; if left to grow tall, the foliage may fall over. *Carex praegracilis* is dioecious, with each individual having either male or female flowers but almost never both. It blooms from May through June (Calflora 2014) with very noticeable, soft brown inflorescences (Fig. 1).

Tolerance to fire, partial shade, moderate foot traffic, low temperatures, grazing (Wilson et al. 2014), flooding, and drought make *C. praegracilis* very adaptable, and this tolerance has contributed to the species being useful in a wide range of restoration, revegetation, and landscaping projects in California. It is also tolerant of a variety of soils, including alkaline (Baldwin et al. 2012), serpentine (Wilson et al. 2014), saline, sand, and clay. A long list of common names for this

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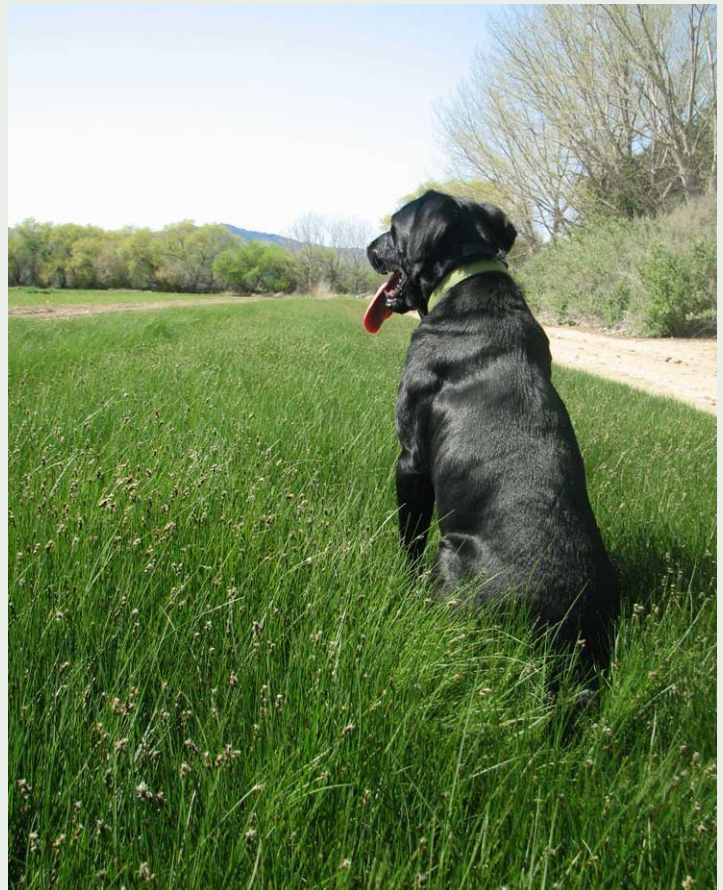


Figure 1: *Carex praegracilis* has attractive soft brown inflorescences.
Photo: Emily Allen



Figure 2: A short production field of *C. praegracilis* in spring. Photo: Emily Allen

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plant reference different key features, including black creeper, freeway sedge (Baldwin et al. 2012), field sedge, clustered field sedge (Calflora 2014), deer-bed sedge, and slender sedge. A few of the planting areas in which *C. praegracilis* has recognized value are in managed landscapes as a turf alternative, for filtering and stabilizing areas with water runoff, and as forage for livestock (Catling et al. 1994).

Some sedge species, including *C. praegracilis*, stay green almost year round with infrequent deep irrigation, and this trait makes them good candidates for low-water-use turf alternatives. *Carex praegracilis* left unirrigated may go dormant in the summer or

winter but will quickly regrow from rhizomes after water is applied. Mowing a few times a year will keep *C. praegracilis* at a reasonable height, and it can take light-to-moderate foot traffic (Fig. 2). Currently, the quickest and most effective method of establishing a lawn of *C. praegracilis* is by planting small transplants.

Transplants of *C. praegracilis* are usually planted from 6 to 12 inches on center in a diamond pattern, rather than a grid, to give a softer look. The denser the planting, the faster the plants will fill in, but there will also be higher labor and plant costs.

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Bioswales, roadsides, and field edges are also excellent areas to utilize *C. praegracilis*. Its ability to grow in harsh and saline-alkaline soils has permitted its spread along roadsides and expansion into eastern areas in the United States where salt is used on icy roads (Reznicek and Catling 1987). *C. praegracilis* also has potential in bioswale applications because of its ability to tolerate flooding and drought.

Some promising research shows that *C. praegracilis*, along with other native grass species, can assist in nitrate removal from runoff (Riesenfeld 2014). It establishes well on canal banks and levee edges, and because it can be kept short with limited mowing, it has potential for use in bioswales and roadsides where driver visibility is a safety concern.

Carex praegracilis can be utilized as forage, and it can play an important function in a grazing regime because it is able to grow well on harsh sites and is green when other desirable species are not present or palatable (Wilson et al. 2014). Tests of populations of *C. praegracilis* from Ontario show “higher values of crude protein and acid-pepsin digestibility and lower acid detergent fiber values . . . equivalent to good quality grass hay in their potential forage value” (Catling et al. 1994). The crude protein measured in the study ranged from 8.1% to 16.8% (Catling et al. 1994). Grazing can benefit the plant by stimulating its growth and preventing thatch buildup, although heavy grazing can lead to *C. praegracilis* becoming dominant and native plant diversity becoming reduced (Wilson et al. 2014).

One of the restrictions to *C. praegracilis* being used more widely is the difficulty of establishment from seed. Some of the complications with seed germination are the light, heat, and moisture requirements for germination of sedge seed (Tilley 2010). Establishment techniques that have shown promise

include pre-germination of seed before hydroseeding and using a landscape fabric covering to retain moisture and keep temperatures high (Tilley 2010). Using transplants is currently the most reliable method of establishment, but this is usually more costly than seeding.



References

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