

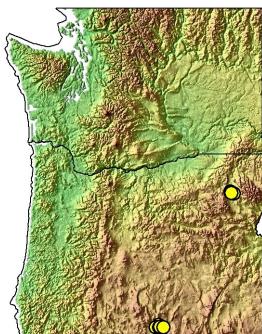
# the Oregon semaphore grasses

by Cindy Roché

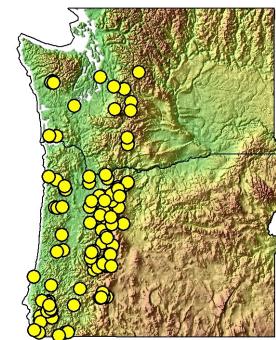
Two species of semaphoregrass grow in Oregon: nodding semaphoregrass (*Pleuropogon refractus*) and Oregon semaphoregrass (*P. oregonus*). The leaves of both species have a prominent central vein, with a prow shaped tip. The prow-shaped tip is a feature found in many *Poa* (bluegrass) species. Nodding semaphoregrass, while not common, is widely distributed along rivers, streams, and wetlands from British Columbia south into northern California, mostly west of the Cascade Range. It occasionally slips over into the east slope of the Cascades, for example, at Odell Lake and along the Metolius River. In contrast, Oregon semaphoregrass is rare, known from only two populations in eastern Oregon.



*Pleuropogon  
oregonus*



*Pleuropogon refractus*



Floret of *P. oregonus*,  
note palea awns

William C. Cusick collected the new species in 1886 in Hog Valley near Union, Oregon. Another Union County specimen collected in 1901 by A. B. Leckenby was originally labeled *Pleuropogon californicum*, one of the three species of *Pleuropogon* found in California. No one recognized the rare grass as a new species until Morton Peck collected it in Lake County in 1937 and sent a sample the following year to Agnes Chase at the National Herbarium in the Smithsonian, Washington, D.C. She noticed that it had long awns on the paleas. Yes, you read that correctly: awns on the palea! If you are familiar with grass anatomy, you know that awns are commonly found on lemmas and glumes, but not on a palea. The paleas in *P. californicum* and *P. refractus* have a tooth at the tip of each vein, but no awn. When Chase named the new species in 1938, she used the Leckenby collection as the type specimen.



Palea of *P. refractus*,  
note the tooth on the  
right

Due to vague location data on the labels, no one relocated the populations for many decades and the species was declared extinct in 1975. Fortunately, Jimmy Kagan and Ginny Crosby rediscovered the Lake County population in 1982. [The article in *Madroño* in 1985 incorrectly reported the year as 1979. Jimmy Kagan, a co-author of the paper, corrected this error for me.] The previous summer Kagan had started working in The Nature Conservancy's Oregon Critical Areas project, looking for the best potential preserves for the most endangered species in the state. Before heading to the field, he met with Crosby, then the Lakeview BLM botanist, who knew the area. It was a day Kagan remembers vividly: "Using a map, Ginny suggested places to look. It was June and we were having a wet, cold spring, but grasses were in flower, and it actually started snowing (lightly). But I went right where she suggested, and only about 30 feet north of the road, I found it! It is very distinctive, and there were enough plants for a few good collections, which I immediately took back to Ginny along with some pictures. Once we knew what it looked like in natural conditions and understood the habitat, finding additional populations was much easier. Interestingly, I'd looked for it the previous year near the type location near Union, and didn't get close to finding it, as the descriptions and the locations implied a low to mid-elevation species, rather than one occurring in mountain meadows. Andy Kratz, US Forest Service botanist, relocated Cusick's populations from Union County four years later, only 20 miles away from where I searched."



Oregon semaphoregrass is currently federally designated as a Species of Concern and state listed as Threatened. Even today there remain only fragmented populations in two disjunct locations, one each in Lake and Union counties. It is likely that this grass has been extirpated in most of its natural habitat, and it is unlikely that additional populations will be found. It is an obligate wetland species occurring in wet

meadows and marshlands with sluggish moving water. This species is especially vulnerable to live-stock grazing, as it is rhizomatous and shallowly rooted and easily pulled; in addition, roads and grazing of these habitats create other disturbances, such as lowered water tables. Most of the plants grow on private land, thus are not protected by any legislation. The goal is to secure survival of the species by establishing new colonies in Lake and Grant counties.