above the pistillate flowers, especially on the terminal inflorescence, lateral spikelets, and leaves that are shorter than the stems and 3 to 5 mm (0.1 to 0.2 in.) wide.

Carex albida, which was thought to be extinct, is currently known from only one population, discovered in 1987. The population contains approximately 800 to 1,000 plants on privately owned property in Sonoma County (CDFG 1993a, CNDDB 1993). Carex albida was known historically from four other locations: the type locality on Santa Rosa Creek, one site in Perry Marsh, and two sites in Pitkin Marsh, all in Sonoma County. The marsh habitat containing C. albida at the Santa Rosa Creek site was destroyed in the 1960s by channelization and other alterations to Santa Rosa Creek (B. Guggolz, in litt. 1993). The Perry Marsh site has been used for cannery waste disposal beginning in 1971, causing the probable loss of the population (CNDDB 1993). One of the Pitkin Marsh populations has not been seen since 1951. Permission for access to the second Pitkin Marsh site has been denied since 1976. The occurrence has not been confirmed since that time. Pitkin Marsh, which has become drier in recent years because of the addition of wells and other construction that have altered marsh hydrology, likely no longer supports the species (B. Guggolz, in litt. 1993). The known remaining population of C. *albida* is found in a sphagnum bog near Pitkin Marsh, between 45 and 60 m (150 and 200 ft) in elevation. The original habitat of all populations occurred within an area of approximately 10 sq km (4 sq mi). The species occurs in conjunction with Lilium pardalinum ssp. pitkinense, spikerush (Eleocharis spp.), rush (Juncus spp.), and Himalayan blackberry (Rubus discolor). *Carex albida* is threatened by potential alteration of hydrology from changes in land use or potential disturbance from a proposed wastewater treatment project, inadequate regulatory mechanisms, competition from nonnative species, stochastic events, small population size, and potential disturbance from repair or alteration of a nearby State highway.

Frank H. Lewis and Margaret Lewis (1953) described *Clarkia imbricata* from specimens they collected on July 10, 1951, along the roadside of Vine Hill Road, near Pitkin Ranch. Searches for this plant at the type locality have been made since 1974, but no plants have been observed (CNDDB 1994). Currently, *C. imbricata* is known from two populations in southern Sonoma County.

Clarkia imbricata is an erect, annual herb in the evening-primrose family (Onagraceae). The stems grow to 6 dm (2.5 ft) tall, unbranched or with numerous short branches in the upper parts. This plant is densely leafy, with entire, lanceolate leaves 2.0 to 2.5 cm (0.8 to 1.0 in.) long and 4 to 7 mm (0.2 to 0.3 in.) broad that are ascending and overlapping. The showy inflorescences appear from June through July. The flowers are grouped closely together and each flower has a conspicuous funnelshaped tube at its base. Each flower has four fan-shaped, lavender petals 2.0 to 2.5 cm (0.8 to 1.0 in.) long with a V shaped purple spot extending from the middle to the upper margin of the petal. Clarkia purpurea ssp. viminea is the only other Clarkia taxon with which C. imbricata can be confused. Clarkia purpurea ssp. viminea has a much shorter, funnel-shaped tube and does not have the relatively broad, ascending, overlapping leaves of C. imbricata.

Historically, Clarkia imbricata has never been common. This taxon is only known from two populations found in grasslands on acidic sand in Sonoma County. The type locality is presumed to have been extirpated by changing land uses (CNDDB 1994, B. Guggolz, in litt. 1993). The remaining natural population was the source population for cuttings that were transplanted into a preserve in 1974. The elevational range for the two extant populations is 60 to 75 m (200 to 250 ft). The two populations are 1.2 km (0.75 mi) apart and occur on privately owned land. The natural population contains 2,000 to 5,000 plants and occurs on an open, flat grassland surrounded by a variety of introduced trees and shrubs. The planted population, located in a 0.6 ha (1.5 ac) preserve, has fluctuated between 200 and 300 plants. The preserve is owned and managed by the California Native Plant Society. The planted population recently has expanded its range onto the adjacent private parcel east of the preserve, where 70 to 100 plants were found in 1993. Both populations are threatened variously by agricultural land use conversion, inadequate regulatory mechanisms, stochastic events, and damage associated with trespassers collecting other rare plants found in the preserve (B. Guggolz, in litt. 1993).

Lawrence Beane and Albert M. Vollmer first collected *Lilium pardalinum* ssp. *pitkinense* on July 20, 1954, in Pitkin Marsh, Sonoma County, California. Beane (1955) described the plant as *Lilium pitkinense*. The plant subsequently was treated as a subspecies of *L. pardalinum* (Skinner 1993).

Lilium pardalinum ssp. pitkinense is an herbaceous, rhizomatous perennial in the lily family (Liliaceae). The slender, erect stems reach 1 to 2 m (3 to 6 ft) in height. Leaves are yellowgreen, up to 14 cm (5.5 in.) long, and 1 to 2 cm (0.4 to 0.8 in.) wide. The leaves are generally scattered along the stem, but in some plants occur in 2 or 3 whorls of 3 to 6 leaves near the middle of the stem. The inflorescence is a terminal raceme. The flowers are large, showy, and nodding. The petals, which are reflexed from the middle, are red at the outer edge changing to yellow at the center with small, deep maroon dots mostly within the yellow zone. Anthers are purple-brown. The fruit is an elliptical capsule containing many rounded seeds (CDFG 1993b). The species flowers from June to July. Lilium pardalinum ssp. pitkinense is distinguished from *L. pardalinum* ssp. pardalinum by generally shorter petals and anthers.

Lilium pardalinum ssp. pitkinense grows only in permanently saturated, sandy soils in freshwater marshes and wet meadows that are 35 to 60 m (115 to 200 ft) in elevation. Only three populations of L. pardalinum ssp. pitkinense were recorded historically. All the sites are found in Sonoma County on privately owned land. The three populations, located over a distance of 13 km (8 mi), are presumed extant. Since 1975, access to one of the sites has been denied by the landowner (CNPS 1988a). As a result, the status of this population has not been confirmed. Currently, 200 individual plants remain on the two known sites (CDFG 1993b; B. Guggolz, pers. comm. 1993). The extent of the two populations has declined from loss of habitat from urbanization and competition with blackberries (Rubus spp.) (CDFG 1993b). Collection of plants, seeds, and bulbs for horticultural use, competition from invasive plant species, potential disturbance from a proposed subdivision, grazing, stochastic events, inadequate regulatory mechanisms, and low plant numbers threaten this species (Lynn Lozier, The Nature Conservancy (TNC), in litt. 1990).

Edward L. Greene (1897) first described *Sidalcea oregana* ssp. *valida* in June, 1894, based on material he collected from Knight's Valley, Sonoma County, California. Since then, this taxon has been known as *S. maxima* (Baker), *S. oregana* var. *spicata* (Jepson), *S. eximia* (Baker), and *S. spicata* ssp. *valida* (Wiggins) (CNPS 1988c). Charles Hitchcock (1957) treated the genus *Sidalcea* and recognized four subspecies, including *S. oregana* ssp. *valida*.