

Researchers have found that *C. ferrisae* is relatively easy to propagate from seed, and both Waste Management and the Santa Clara Valley Water District have been experimenting with the use of *C. ferrisae* for revegetation projects. The third population, consisting of approximately 500 plants (Corelli 1989) occurs on private land scheduled for development.

*Dudleya setchellii* always has been restricted to the Coyote Valley area of Santa Clara County. Eleven of the 14 populations are on private land and are subject to various levels of threat due to development. The three northernmost populations, which occur in southeastern San Jose, and the three southernmost populations, which occur in the area around Morgan Hill, approximately 27 km (17 miles) southeast of San Jose, are at greatest risk. One of the northern populations is threatened with the proposed Cerro Plata Project, consisting of 550 dwelling units and a 67 ha (164 ac) golf course on a 236 ha (575 ac) site. This population contains approximately 20,000 plants, 61 percent of all known plants, of which approximately 2,380 would be directly eliminated by planned construction activities (City of San Jose 1993). All remaining plants would be exposed to human activities during and after construction that would result in significant impacts to the population. These impacts include potentially harmful runoff from an upslope golf course, introduction of weedy species during construction, and uncontrolled foot traffic. Another of the northern sites is threatened by the proposed construction of the Valley Christian School and South Valley Christian Church. This construction would eliminate 74 percent of the approximately 1,900 *D. setchellii* plants found on the site (City of San Jose 1992). The other four sites also are developing rapidly and have been proposed for development at one time or another. Two of the central populations also are threatened with imminent development including residential development and road construction. One central population, due to its proximity to an off-road motorcycle park, may be threatened by off-road motorcycle traffic and unauthorized dumping. The remaining two populations that occur on private land are on the grounds of the IBM Bailey Avenue laboratory. The company apparently plans to preserve the habitat (McCarten 1992a). Three populations occur on land owned by Santa Clara County. Of these, two populations occur in county parks.

The known historical distribution of *Streptanthus albidus* ssp. *albidus* is as

restricted as its current distribution. It is found only in the Coyote Valley area of Santa Clara Valley, primarily on the east side of the valley. Of the 13 documented sites, 9 are known to still harbor plants. Two populations are known to have been extirpated, one by the construction of Anderson Dam, and the other as a result of being covered by fill from a housing development. Two occurrences are known from herbarium records only. One of these historical sites was revisited in 1990, but no plants were found. *Streptanthus albidus* ssp. *albidus* was last observed at the other historical site in 1895. One population consisting of approximately 9,000 plants, approximately 45 percent of all known plants, occurs on the proposed site of the Cerro Plata residential and golf course project (City of San Jose 1993). Although no direct destruction of any plants is planned, construction activities, human disturbance, and habitat fragmentation would result in significant impacts to the population. The proposed construction of the Valley Christian School and South Valley Christian Church would destroy 61 percent of the 2,700 plants occurring on the site (City of San Jose 1992). The remaining seven populations also are threatened by impending or potential development.

B. *Overutilization for commercial, recreational, scientific, or educational purposes.* Overutilization is not currently known to be a factor for any of the 12 plants, but unrestricted collecting for scientific or horticultural purposes or excessive visits by individuals interested in seeing rare plants could result from increased publicity as a result of this final rule. *Calochortus tiburonensis* is a strikingly unusual member of a much-collected genus. *Eriophyllum latilobum*, with its showy golden flowers and proximity to roads and the proposed San Mateo Creek trail, might prove to be especially tempting to collectors. *Dudleya setchellii* also is vulnerable because of the horticultural appeal of succulents and the slow growth of the plants. The remaining plants are usually not spectacular in flower, but may nonetheless appeal to collectors because of their rarity.

C. *Disease or predation.* Both horses and deer have been reported to browse on *Cordylanthus tenuis* ssp. *capillaris* but the number of plants damaged generally appears to be minimal (Lynn Lozier, pers. comm., 1992). Cattle grazing has been reported to threaten the western Marin population of *Castilleja affinis* ssp. *neglecta* (Martin 1991) and a portion of the American Canyon occurrence (Hunter 1989a).

Another source suggests, however, that cattle provide little threat to the American Canyon population because the plants occur on a very steep slope (Jake Ruygt, Napa Valley Chapter, California Native Plant Society, pers. comm., 1992). Grazing threatens one population of *Streptanthus albidus* ssp. *albidus* in southeast San Jose and three populations in the Metcalf Canyon/south Coyote area (McCarten 1992b).

Seed predation by beetle larvae has been reported for *Cirsium fontinale* var. *fontinale* (Dean Kelch, University of California, Davis, pers. comm., 1992), however, the impact of this seed predation on *C. fontinale* var. *fontinale* is unknown. Beetle larvae also have been observed in seed heads of *Eriophyllum latilobum*, however, the extent of predation is unknown (McGuire and Morey 1992).

D. *The inadequacy of existing regulatory mechanisms.* Under the Native Plant Protection Act (Division 2, Chapter 10, section 1900 *et seq.* of the Fish and Game Code) and California Endangered Species Act (Division 3, Chapter 1.5, section 2050 *et seq.*), the California Fish and Game Commission has listed three of these species (*Cirsium fontinale* var. *fontinale*, *Clarkia franciscana*, and *Streptanthus niger*) as endangered, two species (*Calochortus tiburonensis* and *Castilleja affinis* ssp. *neglecta*) as threatened, and one species (*Cordylanthus tenuis* ssp. *capillaris*) as rare. The California Fish and Game Commission recently voted to list two other species (*Eriophyllum latilobum* and *Pentachaeta bellidiflora*) as endangered, and one species (*Hesperolinon congestum*) as threatened. Although both statutes prohibit the "take" of State-listed plants (Chapter 1.5 section 2080 and Chapter 10 section 1908), State law appears to exempt the taking of such plants via habitat modification or land use change by the landowner. After the California Department of Fish and Game notifies a landowner that a State-listed plant grows on his or her property, State law requires only that the landowner notify the agency "at least ten days in advance of changing the land use to allow salvage of such plant." (Chapter 10 section 1913).

The California Environmental Quality Act (CEQA) requires a full public disclosure of the potential environmental impacts of proposed projects. The public agency with primary authority or jurisdiction over the project is designated as the lead agency and is responsible for conducting a review of the project and consulting with other agencies concerned with resources affected by