

appear to be a factor threatening the species (Bury 1985). The State of California prohibits taking or possession of black legless lizards without a special permit (see Factor D). Federal listing could raise the interest in this animal among reptilian trade markets and increase the threat of collection. Interest in the species among reptile collectors could pose a serious threat to populations that contain few individuals.

C. Disease or Predation

Disease and predation are not known to be factors affecting the five plant taxa being proposed as endangered. Several references discuss diseases that affect cypresses (Peterson 1967, Wagener 1948). However, diseases, such as the oak root fungus (*Armillariella mellea*) and the canker-producing strain of *Coryneum*, primarily seem to attack cypresses planted outside of their native range and in nursery settings (Wagener 1948). No signs of disease or predation have been noted by biologists familiar with the two *Cupressus goveniana* ssp. *goveniana* stands (Jim Griffin, Research Botanist, Hastings Natural History Reservation, Carmel Valley, CA, pers. comm., 1992, Yadon, pers. comm., 1992).

The black legless lizard has no known diseases, and, although it harbors some internal parasites (Hunt and vanLobenSels in press in Bury 1985), populations of this lizard do not seem to be negatively affected by either disease or parasites. Many lizards have broken or scarred tails, indicating possible attempted predation (Bury 1985). Miller (1944) indicated predation by feral house cats may affect some populations.

D. The Inadequacy of Existing Regulatory Mechanisms

Under the Native Plant Protection Act (California Fish and Game Code section 1900 *et seq.*) and the California Endangered Species Act (California Fish and Game Code section 2050 *et seq.*), the California Fish and Game Commission has listed *Astragalus tener* var. *titi*, *Potentilla hickmanii*, and *Trifolium trichocalyx* as endangered. *Piperia yadonii* and *Cupressus goveniana* ssp. *goveniana* are on List 1B of the California Native Plant Society's (CNPS) Inventory (CNPS 1992), indicating that, in accordance with section 1901, of the California Department of Fish and Game Code, it is eligible for State listing. Though both the Native Plant Protection Act and the California Endangered Species Act prohibit the "take" of State-listed plants (section 1908 and section 2080), 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 10 days in advance of changing the land use to allow salvage of such plant" (section 1913).

The Pebble Beach Company, the primary landowner on the Monterey Peninsula, has developed policy to protect sensitive species and habitats for current management activities, as well as planning of future development (Fryberger, *in litt.*, 1992). While portions of the *Astragalus tener* var. *titi* population and the *Potentilla hickmanii* population have been fenced off, the remaining portions remain vulnerable to disturbance. No specific protection currently exists for *Piperia yadonii*. *Cupressus goveniana* ssp. *goveniana* and habitat for *T. trichocalyx* are partially protected by the restriction on development within the Morse Reserve. However, development of a golf course in the early 1980s removed a significant number of *C. goveniana* ssp. *goveniana* trees and fragmented the remaining habitat. Development is currently being planned within historical habitat for both of these taxa adjacent to the Reserve.

A management plan for Point Lobos State Park (California Department of Parks and Recreation 1979) states that the major management effort within the preserve will be "management toward the pristine state, that is, the state the ecosystem(s) would have achieved if European man had not interfered," but also to provide limited public access to the *Cupressus goveniana* ssp. *goveniana* area. The stand is currently protected from human disturbance by virtue of its isolation and lack of public access, but the acquisition of key parcels now in private ownership may allow for development of limited public access. Any future development on adjacent private parcels may increase the vulnerability of *C. goveniana* ssp. *goveniana* to human disturbance.

The black legless lizard is listed as a protected reptile under Section 650 of the California Sport Fishing regulations. Except under special permit from the California Department of Fish and Game, collection of black legless lizards is prohibited by the State of California. The habitat of this species, however, is not specifically protected by any State or Federal regulation. Land use on black legless lizard habitat is controlled by local zoning, California State Park regulations on State parks such as

Marina and Monterey State Beaches, and land management practices on Federal lands, including the Salinas River National Wildlife Refuge, Fort Ord, and the Naval Post-graduate School. The black legless lizard is often given special consideration in land use planning and National Environmental Policy Act and California Environmental Quality Act compliance documents. The California Coastal Act regulates approval of developments within the coastal zone and has slowed the loss of coastal habitats such as the dunes and sand habitats used by black legless lizards. This species has also been afforded some protection indirectly through special management for Federal candidate plant species that occur in coastal areas. Where the black legless lizard is sympatric with the endangered Smith's blue butterfly, protection of habitat for the butterfly has also benefitted the legless lizard.

These regulatory mechanisms have slowed the loss, degradation, and fragmentation of black legless lizard habitat, but additional protection is needed to address regional habitat conservation and long-term survival and recovery of this species.

Sand City is in the process of developing a habitat conservation plan for a 13 acre area known as East Dunes. This area supports Smith's blue butterfly (*Euphilotes enoptes smithi*), *Gilia tenuiflora* var. *arenaria* (sand gilia), *Chorizanthe pungens* var. *pungens* (Monterey spineflower), species that are federally listed as endangered, and the black legless lizard. Sand City is including the black legless lizard in this planning process, and it is likely that the plan would adequately provide for the conservation needs of the lizard on this one site.

E. Other Natural or Manmade Factors Affecting Its Continued Existence

Two of the five plant taxa occur in small patches of meadow habitat containing a high percentage of non-native taxa. Along 17-Mile Drive, *Astragalus tener* var. *titi* occurs with the non-native *Plantago coronopus* (cut-leaf plantain) and *Carpobrotus edulis*. These non-native species spread rapidly and compete aggressively with native species for space. The Pebble Beach Company has an active *C. edulis* eradication program in and adjacent to the enclosure on the ocean side of 17-Mile Drive. However, *C. edulis* has been planted and is being maintained within a few feet of the unfenced portion of the milk-vetch habitat on the inland side of 17-Mile Drive, and *P. coronopus*, a prolific seeder, is physically crowding