

4.11 VEGETATION, WILDLIFE, AND WETLAND RESOURCES

This section incorporates by reference information from the Flora and Fauna Baseline Study of Fort Ord, California, which is available at the public information repository established at the Seaside Branch Library (U.S. Army Corps of Engineers, Sacramento District 1992a). Detailed descriptions of survey methods, the biological resources, and management programs associated with these resources (i.e., grazing, woodcutting, hunting, and fishing) are contained in the baseline study. The woodcutting, hunting, and fishing programs are discussed in 4.2.5 "Recreation".

This section contains a summary of biological resources at Fort Ord. Information was derived from published and unpublished reports, personal communications with local experts, Jones & Stokes Associates file data, and field surveys conducted in spring and summer 1992. The data were digitally entered into a computerized geographic information system.

Botanical field surveys were conducted in April, May, June, and August 1992. The objectives of the surveys were to map vegetation types, identify the locations of special-status plants and communities, and expand the existing list of plant species at Fort Ord. Wildlife surveys were conducted in January, March, April, and May 1992. Small mammals were captured in live traps, direct observation was used to identify reptiles and birds, and amphibians and invertebrates were captured with dip nets in wetlands.

Figures 4.11-1 through 4.11-14 show locations of sensitive biological resources and are located at the end of this section.

4.11.1 Overview of the Biological Resources at Fort Ord

Fort Ord is located on California's central coast, a biologically diverse and unique region. The wide range and unusual combinations of climatic, topographic, and soil conditions at Fort Ord support unique biological communities and locally endemic species (Stebbins and Major 1965).

Botanical surveys have identified over 450 plant taxa at Fort Ord. Ten species of plants known from Fort Ord are endemic to north coastal Monterey County and adjacent coastal Santa Cruz County. A total of 146 plant species reach their most southern and a total of 156 plant species reach their most northern distributional limits in Monterey County (Howitt and Howell 1964, 1973).

The diverse habitat conditions at Fort Ord support a broad array of wildlife species. Ongoing wildlife surveys have identified over 260 vertebrate species at Fort Ord, including 24 species of reptiles and amphibians, 209 species of resident and migratory birds, and 28 species of terrestrial mammals (U.S. Department of the Army, Directorate of Facilities and Engineering 1975; Natural Diversity Data Base 1992; Fort Ord Parklands Group 1992). Several of these species are adapted to specific habitat conditions on the central coast. Three terrestrial mammals and one reptile found at Fort Ord occur primarily on California's central coast and one federally listed endangered butterfly found at Fort Ord occurs almost exclusively in Monterey County.

4.11.2 Biological Communities

Plant and wildlife species associated with the biological communities at Fort Ord are described below. The distribution of general biological communities are identified in Figure 4.11-1, and acreages for specific habitat types are presented in Table 4.11-1.

4.11.2.1 Coastal Strand and Dune Communities

Coastal strand and dune communities occur adjacent to Monterey Bay and west of SR 1. Five communities are recognized on Fort Ord: beaches, bluffs and blowouts; disturbed dunes; coastal strand; dune scrub; and ice plant mats. The beaches, bluffs and blowouts adjacent to Monterey Bay and

disturbed dunes are communities generally devoid of vegetation. The coastal strand and dune scrub communities support native vegetation and wildlife but occur only as small, isolated patches. Extensive mats of African ice plant, the most widespread community, have been planted to stabilize the shifting dunes.

Table 4.11-1 Habitat Acreage at Fort Ord

Habitat	Acreage
Beaches, Bluffs, and Blowouts	199
Disturbed Dune	105
Ice Plant Mats	638
Dune Scrub	8
Native Coastal Strand	89
Coastal Scrub	572
Maritime Chaparral	12,592
Coastal Oak Woodland	2,972
Inland Oak Woodland	1,423
Oak Savanna	308
Annual Grassland	4,309
Valley Needlegrass Grassland	391
Blue Wildrye Grassland	86
Mixed Riparian Forest	201
Oak Riparian	43
Vernal Pool	34
Ponds and Freshwater Marsh	<u>28</u>
Total Area of Natural Habitats	23,998
Area of Developed Nonhabitat	<u>3,726</u>
Total	27,724

Common wading birds, such as sanderlings, plovers, and godwits, occur along the beaches; California ground squirrels, deer mice, and red foxes occur in the disturbed dune, coastal strand, and dune scrub communities. The extensive mats of African ice plant provide marginal wildlife habitat because they provide little forage for native wildlife.

4.11.2.2 Chaparral and Coastal Scrub Communities

Chaparral and coastal scrub communities cover approximately 50% of Fort Ord and are characterized by moderate to low-growing evergreen and drought-deciduous shrubs adapted to shallow soils and periodic fires. Three types of chaparral and scrub communities occur at Fort Ord: sand hill maritime chaparral, Aromas formation maritime chaparral, and coastal scrub.

The two types of maritime chaparral occur on different soils and have different characteristic plants. Toro manzanita and Hooker's manzanita are rare on sand hill maritime chaparral, but are common on Aromas formation chaparral; sandmat manzanita is common on sand hill chaparral but uncommon on

Aromas chaparral. Shaggy-barked manzanita and chamise are dominant shrubs in both maritime chaparral types. Coastal scrub occurs near the coast on sandy soils and on inland hills on shallow soils. Common plant species include coyote brush, California sagebrush, and black sage.

Common species of wildlife in the chaparral and coastal scrub communities include western fence lizard, orange-crowned warbler, California thrasher, California quail, brush rabbit, Heerman's kangaroo rat, black-tailed deer, gray fox, and coyote.

4.11.2.3 Coast Live Oak Woodland and Savanna Communities

The coast live oak is the dominant tree of woodlands and savannas at Fort Ord. The live oak woodland is an open-canopied to nearly closed canopied community with a grass or sparsely scattered shrub understory. Coastal forms of this community are characterized by short, wind-pruned trees exposed to persistent salt spray, which grow on sandy soils. Inland coast live oaks grow tall because they are protected by topographic position from the coastal weather influences.

Common wildlife species in coast live oak woodlands include black-tailed deer, California mouse, raccoon, California quail, scrub jay, and Nuttall's woodpecker. Red-tailed hawks and great-horned owls nest and roost in the inland coast live oaks, but probably make little use of the coastal oaks because the tightly spaced branches discourage them from entering the tree canopies.

Coast live oak savanna occurs in drier areas than woodlands and supports widely spaced trees and an understory of annual grasses. Common species of wildlife include western bluebird, mourning dove, and olive-sided flycatcher.

Declines in oak woodland and savanna in California have resulted from firewood harvesting, land clearing for agriculture and range, and urban development. The conservation of these resources has been identified as an important issue by state agencies and conservation groups (California Senate Resolution Chapter 100).

4.11.2.4 Grassland Communities

Grasslands occur in the southeastern portion of Fort Ord and around Fritzsche Army Airfield. Annual grasslands dominated by introduced species, such as slender wild oats, soft chess, and riggut brome, are the most common grassland community at Fort Ord. Perennial grasslands are of two types at Fort Ord: valley needlegrass grassland and blue wildrye. Valley needlegrass grassland, dominated by native purple needlegrass, is scattered throughout the southeastern portion of the installation. Small patches of blue wildrye grassland occur sporadically in the southeastern portion of the installation. Common wildlife species include California ground squirrel, Heerman's kangaroo rat, narrow-faced kangaroo rat, western meadowlark, and kestrel.

4.11.2.5 Riparian Communities

Riparian communities occur on the banks of seasonal or permanent creeks and drainages. There are approximately 130,820 linear feet of creeks and drainages total and 25,130 linear feet of creeks and drainages with riparian habitat. Riparian habitats at Fort Ord are limited to the Salinas River, Toro Creek, Pilarcitos Canyon, and Merrill Ranch Canyon. The riparian communities along the Salinas River and Toro Creek are mixed riparian forests supporting a variety of tree species. The communities in Pilarcitos and Merrill Ranch Canyons are oak riparian forests dominated by coast live oaks with a dense understory of annual grasses.

Riparian corridors are important wildlife habitat because they usually support the highest diversity of wildlife and provide movement corridors between different communities. Common wildlife species that

occur in riparian communities include Pacific tree frog, California slender salamander, Wilson's warbler, dark-eyed junco, striped skunk, coyote, and black-tailed deer.

4.11.2.6 Wetland and Open Water Communities

Four major types of wetland and open water communities are scattered throughout Fort Ord: vernal pools, freshwater marshes, stream channels, and ponds. The locations of wetlands and open water communities are identified in Figure 4.11-2 and brief descriptions of these communities are provided below.

Vernal Pools. Vernal pools are small, seasonally flooded basins in grasslands. Plant and wildlife species in these pools are specially adapted to live through winter and spring flooding and summer and fall drought. Common plant species include common spike-rush, hyssop loosestrife, and Vasey's coyote thistle. Common wildlife species include western toad, garter snake, and northern rough-winged swallow.

Freshwater Marshes. Freshwater marshes are characterized by perennial, emergent plants that thrive in areas permanently flooded or saturated by fresh water. This community is usually found around freshwater ponds and perennial stream channels. Common plants include water smartweed and broad-leaved cattail. Common wildlife species include mallard, red-winged blackbird, and marsh wren.

Stream Channels. Fort Ord supports several intermittent and perennial streams. The amount of channel vegetation varies depending on the size of the channel and the amount of time that water is present in the stream. Wildlife species found in stream channels are similar to those occurring in vernal pools and freshwater marshes.

Ponds. Most of the ponds at Fort Ord occur in the southeastern portion of the installation and are associated with the livestock grazing lease. Wildlife species found in ponds are similar to those found in vernal pools and freshwater marshes.

4.11.3 Special-Status Biological Resources

Special-status biological resources are those resources that receive various levels of protection under local, state, or federal laws, regulations, or policies. Special-status biological resources include special-status plant and wildlife species, special native biological communities, native plant and butterfly reserves, significant natural areas, and habitats of the Monterey Bay National Marine Sanctuary. Definitions and occurrences of these resources are discussed below.

4.11.3.1 Special-Status Plant Species

Special-status plants are species in the following categories:

- plants listed or proposed for listing as threatened or endangered under the federal Endangered Species Act (50 CFR 17.12 [listed plants] and various notices in the *Federal Register* [proposed species]);
- plants that are Category 1 or 2 candidates for possible future listing as threatened or endangered under the federal Endangered Species Act (55 *Federal Register* 6184, February 21, 1990);
- plants listed or proposed for listing by the State of California as threatened or endangered under the California Endangered Species Act (14 CCR 670.5);
- plants listed under the California Native Plant Protection Act (California Fish and Game Code, Section 1900 et seq.);

- plants that meet the definitions of rare or endangered under the California Environmental Quality Act (CEQA) (State CEQA Guidelines, Section 15380);
- plants considered by the California Native Plant Society (CNPS) to be "rare, threatened, or endangered in California" (Lists 1b and 2 in Smith and Berg 1988 as updated by California Native Plant Society pers. comm.); and
- plants listed by CNPS as plants about which more information is needed to determine their status and plants of limited distribution (Lists 3 and 4 in Smith and Berg 1988, as updated by California Native Plant Society pers. comm.), which may be included as special-status species on the basis of local significance or recent biological information.

Botanical surveys during spring 1992 identified populations of 22 special-status plant species at Fort Ord (Tables 4.11-2 and 4.11-3). Four of the species are listed or proposed for listing as threatened or endangered under the federal or state endangered species acts: sand gilia, Monterey spineflower, robust spineflower, and Seaside bird's-beak.

Sand Gilia. Sand gilia occurs in scattered populations over much of Fort Ord in maritime chaparral and coastal scrub (Figures 4.11-3 and 4.11-4). The largest populations are at Fritzsche Army Airfield. Sand gilia is federally listed as endangered and state listed as threatened. Many of the sand gilia populations at Fort Ord support a mix of sand gilia; its more common relative, slender-flowered gilia; and plants of intermediate form (California Academy of Sciences, California Academy of Sciences and San Jose State University pers. comms.).

Monterey Spineflower. Populations of Monterey spineflower occur over most of the western half of Fort Ord in maritime chaparral, coastal scrub, coastal oak woodland, annual grassland, and coastal strand and dune communities (Figures 4.11-5 and 4.11-6). Monterey spineflower is proposed for federal listing as endangered (56 *Federal Register* 206, October 24, 1991). Monterey spineflower is similar in appearance to cuspidate spineflower (Zoger and Pavlik 1987). Populations of Monterey spineflower at Fort Ord may support a mix of these two species.

Robust Spineflower. One individual of robust spineflower was identified on the coastal dunes south of Stilwell Hall. A population of robust spineflower was reported from near this site previously, but only one plant of this annual species appeared in 1992 (Figure 4.11-7 and 4.11.8). Robust spineflower is proposed for federal listing as endangered (56 *Federal Register* 206, October 24, 1991).

Seaside Bird's-Beak. Scattered, localized populations of Seaside bird's-beak occur in maritime chaparral and coastal oak woodland in central portions of Fort Ord (Figure 4.11-9 and 4.11-10.) Seaside bird's-beak is state listed as endangered and is a candidate (Category 1) for federal listing as threatened or endangered.

4.11.3.2 Special-Status and Special-Interest Wildlife Species

Special-status animals are species in the following categories:

- animals listed or proposed for listing as threatened or endangered under the federal Endangered Species Act (50 CFR 17.11 [listed animals] and various notices in the *Federal Register* [proposed species]);
- animals that are Category 1 or 2 candidates for possible future listing as threatened or endangered under the federal Endangered Species Act (54 *Federal Register* 554, January 6, 1989);
- animals that meet the definitions of rare or endangered under CEQA (State CEQA Guidelines, Section 15380);

- animals listed or proposed for listing by the State of California as threatened or endangered under the California Endangered Species Act (14 CCR 670.5);
- animal species of special concern to the California Department of Fish and Game (DFG) (Remsen 1978 [birds] and Williams 1986 [mammals]); and
- animals fully protected in California (California Fish and Game Code, Section 3511 [birds], 4700 [mammals], and 5050 [reptiles and amphibians]).

Special-interest species are species that have been identified as rare or declining in the region but have no formal legal status. Twenty-three special-status wildlife species are known to occur or have potential to occur in terrestrial and freshwater environments at Fort Ord. Four special-interest wildlife species have been identified at Fort Ord. The names, legal status, habitat requirements, and distribution of these species are given in Table 4.11-4. Two species, Smith's blue butterfly and American peregrine falcon, are federally listed as endangered (Natural Diversity Data Base 1992, Fort Ord Parklands Group 1992), the California linderiella has been proposed for endangered status by the U.S. Fish and Wildlife Service (57 *Federal Register* 19856, May 8, 1992), and coastal populations of the western snowy plover have been listed as threatened (57 *Federal Register* 144, January 14, 1992). Known locations of special-status wildlife species are shown in Figure 4.11-11.

Table 4.11-2. Federally Listed, Proposed, and Candidate Plant Species Identified at Fort Ord during 1992 Surveys and the Relationship of Fort Ord to Known Distributions

Plant Species	Listing Status ^a		Approximate Percent of Range at Fort Ord	Habitat	Distribution	Importance of Fort Ord Population
	Federal/State/CNPS	RED Code ^b				
Federally Listed or Proposed Species						
Sand gilia <i>Gilia tenuiflora</i> ssp. <i>arenaria</i>	E/T/1b	3-3-3	50-70	Sandy openings in coastal dunes and scrub and maritime chaparral	Occurs around Monterey Bay, Salinas River Beach, Asilomar State Beach, from Point Pinos to Point Joe, and Fort Ord (1, 2, 6)	Fort Ord provides suitable habitat for sand gilia and constitutes a substantial portion of its range (at least half)
Monterey spineflower <i>Chorizanthe pungens</i> var. <i>pungens</i>	PE/-/1b	3-3-3	75-95	Colonizes recently disturbed sandy sites in coastal dune, coastal scrub, grassland, and maritime chaparral habitats	Along the coast of southern Santa Cruz and northern Monterey Counties and inland to the coastal plain of the Salinas Valley (1, 4, 8)	Fort Ord supports the largest populations of Monterey spineflower known (7, 8)
Robust spineflower <i>Chorizanthe robusta</i> var. <i>robusta</i>	PE/-/4	1-1-3	<1	Found on sandy soils in coastal dune and coastal scrub habitats	Historically from Alameda and San Mateo Counties south to Santa Cruz County and near the coast from southern Santa Cruz County to northern Monterey County, much of which is now developed (4, 5, 8)	Only several plants of robust spineflower were found at one site on Fort Ord; Fort Ord does not provide important habitat for this species (7)

Table 4.11-2. Continued

Plant Species	Listing Status ^a		Approximate Percent of Range at Fort Ord	Habitat	Distribution	Importance of Fort Ord Population
	Federal/ State/CNPS	RED Code ^b				
State-Listed Species						
Seaside Bird's-Beak <i>Cordylanthus rigidus</i> var. <i>litoralis</i>	C1/E/1b	2-3-3	30-50 ^d	Inhabits sandy soils of stabilized dunes, maritime chaparral, coastal scrub, and closed-cone coniferous forests	Monterey and Santa Barbara Counties, including Fort Ord, Monterey Airport, and between Carmel and Elkhorn Slough in Monterey County, and on Burton Mesa in Santa Barbara County (1, 2)	A substantial portion of the range of Seaside bird's-beak is found at Fort Ord
Federal Candidate Species						
Toro manzanita <i>Arctostaphylos</i> <i>monteirensis</i>	C2/-/1b	3-2-3	70-90	Occurs on stabilized sandy soils and badlands in maritime chaparral	Restricted to several sites in Monterey County, including Fort Ord, Toro Regional Park, and Monterey Airport (1, 3)	Fort Ord supports the largest expanse of Toro manzanita in existence
Sandmat manzanita <i>Arctostaphylos pumila</i>	C2/-/1b	3-2-3	70-90	Sandhills of maritime chaparral and coast live oak woodland	Scattered locations around Monterey Peninsula and an extensive area on Fort Ord (1, 3)	A large and important part of the range of sandmat manzanita is found on Fort Ord
Hickman's onion <i>Allium hickmanii</i>	C1/-/1b	2-2-3	<5	Grassy openings in closed-cone pine forests, maritime chaparral, and valley and foothill grasslands	Monterey Peninsula, Fort Ord, Monterey Airport, and San Luis Obispo County (1)	Some suitable habitat for Hickman's onion is found on Fort Ord (e.g., Machine Gun Flats), but this species has many occurrences outside Fort Ord
Monterey ceanothus <i>Ceanothus rigidus</i>	C2/-/4	1-2-3	50-70	Sandy hills and flats of maritime chaparral, closed-cone coniferous forests, and coastal scrub	Monterey County along the coast and Fort Ord, Toro Regional Park, Monterey Airport, and near Prunedale (1, 6)	The most abundant and probably most vigorous population of Monterey ceanothus is found on Fort Ord (3)
Eastwood's ericameria <i>Ericameria fasciculata</i>	C2/-/1b	3-3-3	70-90	Inhabits coastal dune and scrub, maritime chaparral, and closed-cone coniferous forest communities	Found in Monterey County, including Del Monte Forest, Monterey Airport, Toro Regional Park, near Prunedale, and Fort Ord (1)	Fort Ord supports most of the remaining individuals of Eastwood's ericameria (3)
Coast wallflower <i>Erysimum ammophilum</i>	C2/-/1b	2-2-3	10-30	Occurs scattered on stabilized coastal dunes	Coastal dunes of Monterey Bay and Santa Rosa Island, and coastal scrub on Fort Ord (10, 11)	Fort Ord provides a moderate amount of suitable habitat for coast wallflower and may constitute an important portion of its range because of the limited extent and high degree of disturbance to its habitat in California

Table 4.11-2. Continued

Plant Species	Listing Status ^a		Approximate Percent of Range at Fort Ord	Habitat	Distribution	Importance of Fort Ord Population
	Federal/State/CNPS	RED Code ^b				
Wedge-leaved hortensia <i>Hortensia cuneata</i> ssp. <i>sericea</i>	C2/-/1b	3-3-3	<10	Sandy and gravelly places in coastal scrub, maritime chaparral, and closed-cone coniferous forest communities	Along coast from Sonoma County to Santa Barbara County (10)	Wedge-leaved hortensia is widely distributed; Fort Ord likely comprises only a small part of its range
Yadon's piperia <i>Piperia yadoni</i>	- ^c /-/1b	N/A	<1	Occurs on sandy soils in maritime chaparral, coastal scrub, and closed-cone coniferous forest	Occurs in Monterey County from the Pajaro Hills to the Monterey Peninsula	Less than 1% of the individuals of Yadon's piperia are found on Fort Ord; it is noteworthy that its habitat on Fort Ord is intermediate between that of its occurrence in chaparral and pine forest habitats (7)
Hooker's Manzanita <i>Arctostaphylos hookeri</i> ssp. <i>hookeri</i>	-/-/1b	3-2-3	15-35	Inhabits sandy soils, sandy shales, and sandstone outcrops	Del Monte Forest, Monterey Peninsula, near Prunedale, Fort Ord, and the Larkin Valley (3, 6)	Fort Ord supports large populations of Hooker's manzanita; although it is more common on the Monterey Peninsula and near Prunedale than on Fort Ord, Fort Ord provides important habitat for Hooker's manzanita
Pajaro Manzanita <i>Arctostaphylos pajaroensis</i>	-/-/4	1-2-3	<1	Occurs on sandy hills in chaparral	Monterey County south of the Pajaro River; especially important in the Prunedale Hills (6)	One Pajaro manzanita plant was found on Fort Ord (probably planted); Fort Ord does not support important habitat for Pajaro manzanita
Monterey Indian Paintbrush <i>Castilleja latifolia</i>	-/-/4	1-1-3	?	Coastal dunes and scrub	Monterey and Santa Cruz Counties (10)	Fort Ord may constitute an important part of the range of Monterey Indian paintbrush because of the limited extent and high degree of disturbance to coastal dunes in central California
Douglas' Spineflower <i>Chorizanthe douglasii</i>	-/-/4	1-1-3	<1	Gravelly or sandy slopes	Southern coast ranges from San Benito and Monterey Counties to San Luis Obispo County (10, 11)	Has a large range on California's central coast; the small number of individuals at Fort Ord indicates that the installation does not constitute a large portion of Douglas' spineflower habitat

Table 4.11-2. Continued

Plant Species	Listing Status ^a		Approximate Percent of Range at Fort Ord	Habitat	Distribution	Importance of Fort Ord Population
	Federal/State/CNPS	RED Code ^b				
Lewy's Clarkia <i>Clarkia lewisii</i>	-/-/A	1-1-3	<5	Coastal scrub, oak woodland, and chaparral communities	Monterey and San Benito Counties (12)	Few individuals were found at Fort Ord; Fort Ord probably does not constitute an important part of the species' habitat, although more investigation is needed to determine the actual range and number of individuals
Virgate Eriogonum <i>Eriogonum virgatum</i>	-/-/A	1-1-3	?	Found on sand hills and meads	Monterey, San Benito, Ventura, and Los Angeles Counties (10, 11)	Fort Ord provides a large area of suitable habitat, but this species has a relatively wide distribution
Small-leaved Lomatium <i>Lomatium parvifolium</i>	-/-/A	1-2-3	?	Occurs in chaparral and open pine forests	Monterey, Santa Cruz, and San Luis Obispo Counties (10, 11)	Fort Ord provides a large amount of suitable habitat for small-leaved lomatium, but this species appears to have a wide distribution on the central California coast
Santa Cruz Monkeyflower <i>Mimulus ruttanii</i> var. <i>decurtatus</i>	-/-/A	1-1-3	<1	Sandy, open places, especially around sandstone outcrops or on burns, and other disturbed areas in chaparral and conifer forest	Santa Cruz and Monterey Counties (10, 11)	Only one small population of Santa Cruz monkeyflower was found at Fort Ord; Fort Ord probably does not provide important habitat for this species
Curly-leaved Monardella <i>Monardella undulata</i> var. <i>undulata</i>	-/-/A	1-1-3	<5	Chaparral and coastal dunes and scrub near the coast	From Marin to northern Santa Barbara County (10, 11)	Curly-leaved monardella has a wide, scattered distribution along the central California coast; the Fort Ord occurrence is probably a small portion of its total numbers
Purple-flowered Piperia <i>Piperia elongata</i> ssp. <i>michealii</i>	-/-/A	1-2-3	<1	Coastal scrub and chaparral	Humboldt and Alameda Counties and from Marin to San Luis Obispo County (10, 11)	Purple-flowered piperia is characterized by a wide, scattered distribution; Fort Ord comprises a small part of its range but supports large areas of suitable habitat

^a Status explanations (see the "Definitions of Special-Status Species" section above for citations):

Federal

- E - listed as endangered under the federal Endangered Species Act.
- PE - proposed for federal listing as endangered under the federal Endangered Species Act.
- C1 - Category 1 candidate for federal listing. Category 1 includes species for which USFWS has on file enough substantial information on biological vulnerability and threats to support proposals to list them.

Table 4.11-2. Continued

Plant Species	Listing Status ^a		Approximate Percent of Range at Fort Ord	Habitat	Distribution	Importance of Fort Ord Population
	Federal/ State/CNPS	RED Code ^b				

C2 = Category 2 candidate for federal listing. Category 2 includes species for which USFWS has some biological information indicating that listing may be appropriate but for which further biological research and field study are usually needed to clarify the most appropriate status. Category 2 species are not necessarily less rare, threatened, or endangered than Category 1 species or listed species; the distinction relates to the amount of data available and is therefore administrative, not biological.

-- = no designation.

State

E = listed as endangered under the California Endangered Species Act.

T = listed as threatened under the California Endangered Species Act.

California Native Plant Society

1b = List 1b species: rare, threatened, or endangered in California and elsewhere.

4 = List 4 species: plants of limited distribution.

^b RED Code:

Rarity (R)

- 1 = Rare, but found in sufficient numbers and distributed widely enough that the potential for extinction is low at this time.
- 2 = Occurrence confined to several populations or to one extended population.
- 3 = Occurrence limited to one or a few highly restricted populations, or present in such small numbers that it is seldom reported.

Endangerment (E)

- 1 = Not endangered.
- 2 = Endangered in a portion of its range.
- 3 = Endangered throughout its range.

Table 4.11-2. Continued

Distribution (D)

- 1 = More or less widespread outside California.
- 2 = Rare outside California.
- 3 = Endemic to California.

c Data sources:

- 1 = Natural Diversity Data Base 1992.
- 2 = Hillyard 1992.
- 3 = Griffin 1978.
- 4 = Reveal and Hardham 1989.
- 5 = Thomas 1981.
- 6 = Griffin 1978.
- 7 = Morgan 1992.
- 8 = U.S. Fish and Wildlife Service 1991.
- 9 = U.S. Fish and Wildlife Service 1992.
- 10 = Munz and Keck 1988.
- 11 = Abrams 1940.

^d This estimate incorporates locations of Seaside bird's-beak in Santa Barbara County, which may have formed as a result of hybridization; the estimate based on Monterey County above would increase the percent of range at Fort Ord to 80-80%.

^e Listing package is in preparation by USFWS (Rutherford pers. comm.).

Table 4.11-3 Acres of Habitat Occupied by Special-Status Plant Species at Fort Ord

Species	Listing Status	Density ^b			Total Acreage
	Federal/State/CNPS ^a	Low	Medium	High	
Sand Gilia	E/T/1B	3,285	309	162	3,756
Monterey Spineflower	PE/--/1B	5,948	3,546	980	10,474
Seaside Bird's-beak	C1/E/1B	1,112	16	0	1,128
Toro Manzanita	C2/--/1B	2,320	2,157	1,948	6,425
Sandmat Manzanita	C2/--/1B	2,133	3,207	3,448	8,788
Hickman's Onion	C1/--/1B	273	121	0	394
Monterey Ceanothus	C2/--/4	2,466	6,836	2,484	11,786
Eastwood's Ericameria	C2/--/1B	3,566	2,279	23	5,868
Coast Wallflower	C2/--/1B	494	226	51	771
Wedge-leaved Horkelia	C2/--/1B	2,438	1,202	0	3,640
Yadon's Piperia	--/--/1B	14	0	0	14
Hooker's Manzanita	--/--/1B	1,418	2,506	1,293	5,217

Table 4.11-3. Continued

Species	Listing Status		Density ^b			Total Acreage
	Federal/State/CNPS ^a	Low	Medium	High		
California Native Plant Society List 3 and 4 Species with No Federal or State Status	-/-/3 or 4	-	-	-	14,897	

^a See Table 4.11-2 for status definitions.

^b Occupied habitat refers to survey polygons in which plants of the given species occur. Low density is estimated at one to hundreds of plants per acre for herbaceous species and one to tens of plants per acre for shrub species. Medium density is estimated at hundreds to thousands of plants per acre for herbaceous species and tens to hundreds of plants per acre for shrub species. High density is estimated at thousands to over ten-thousands of plants per acre for herbaceous species and hundreds to over thousands of plants per acre for shrub species.

Low density could indicate that a species is either sparsely and evenly distributed throughout the survey polygon or occurs as one to a few small, dense patches in the survey polygon. High density could indicate that a species is densely populated throughout the survey polygon or densely populated over a large portion of the survey polygon.

Table 4.11-4. Federally Listed, Proposed, and Candidate Terrestrial and Freshwater Wildlife Species Known to Occur or Potentially Occurring at Fort Ord

Plant Species Population	Listing Status ^a		Approximate Percent of Range at Fort Ord	Habitat	Importance of Distribution Occurrence at Fort Ord	
	Federal/State					
Smith's blue butterfly <i>Euphilotes enoptes smithi</i>	E/-	5-10	Uses coastal dunes and hillsides that support seacliff buckwheat (<i>Eriogonum parvifolium</i>) or coast buckwheat (<i>Eriogonum latifolium</i>); these plants are used as a nectar source for adults and host plant for larvae	Restricted to localized populations along the coast of Monterey County; single populations reported in Santa Cruz and San Mateo Counties	Known to occur near the northern boundary of Fort Ord and from Giggling Sliding to the southern base boundary ^b	Fort Ord has been identified as important to the recovery of Smith's blue butterfly

Table 4.11-4. Continued

Plant Species Population	Listing Status ^a		Approximate Percent of Range at Fort Ord	Habitat	Importance of Distribution Occurrence at Fort Ord	
	Federal/State					
Peregrine falcon <i>Falco peregrinus</i> <i>anatum</i>	FE/E	<1	Nests and roosts on protected ledges on high cliffs, usually adjacent to water sources that support large bird populations	Permanent resident on the north and south Coast Ranges; winters in the Central Valley south through the Transverse and Peninsular Ranges and the plains east of the Cascade Range; occurs along both coasts of the United States and parts of Alaska, Arizona, Colorado, and the borders of Idaho	May forage on Fort Ord beaches and passes through Fort Ord during seasonal migration ³	Peregrine falcons occasionally occur at Fort Ord to forage or during migration; Fort Ord is not important to the species
California tinkerella <i>Lindertella occidentalis</i>	PE/-	<1	Ephemeral freshwater habitats such as vernal pools, rock outcrop pools, swales, and ponds	Found in the Central Valley from Tehama to Madera Counties, and the central and south Coast Ranges from Lake to Riverside County	Known from five vernal pools at Fort Ord ²	Fort Ord composes little of the total range of California tinkerella; however, vernal pool habitat is relatively rare in the Monterey Bay region
Western snowy plover <i>Charadrius alexandrinus</i> <i>nivosus</i>	PT/SSC	5-10	Found along beach above the high tide limit; also uses shores of salt ponds and alkali or brackish inland lakes	Intermittent nesting sites along the Pacific Coast from Washington to Baja California	Nests along the beaches at Fort Ord north of Stillwell Hall ⁴	Fort Ord supports one of 20 coastal breeding populations of western snowy plovers in California; Monterey Bay as a whole is considered one of eight primary coastal nesting areas
California black legless lizard <i>Anniella pulchra nigra</i>	C2 (LP)/SS C	10-20	Requires moist, warm habitats with loose soil for burrowing and prostrate plant cover; may be found on beaches, in chaparral, pine oak woodland, or riparian areas	Restricted to small populations along the coast in Monterey and northern San Luis Obispo Counties; one population in Contra Costa County	Found in stabilized dunes and maritime chaparral with sandy soils at Fort Ord ^{2, 7}	Fort Ord supports one of less than 20 confirmed black legless lizard populations
Monterey dusky-footed woodrat <i>Neotoma fuscipes</i> <i>luciens</i>	C2/-	1-5	Uses habitats with moderate to dense cover and abundant dead wood for nest construction; maritime chaparral and coastal live oak woodland at Fort Ord	Restricted to Monterey County and northern San Luis Obispo County	Found in maritime chaparral and coastal coast live oak woodland habitats throughout Fort Ord ²	Fort Ord provides high-quality habitat for Monterey dusky-footed woodrat in the extreme northern portion of the species range

Table 4.11-4. Continued

Plant Species Population	Listing Status ^a		Approximate Percent of Range at Fort Ord	Habitat	Importance of Distribution Occurrence at Fort Ord	
	Federal/State					
Monteary ornate shrew <i>Sorex ornatus salarius</i>	C2/-	15-25	Found in a variety of riparian, woodland, and upland communities where there is thick duff or downed logs	Restricted to the Monterey Bay region; historical occurrences at the mouth of the Salinas River and Moss Landing in Monterey County	May occur at Fort Ord ^b	Fort Ord provides abundant potential habitat for Monteary ornate shrew within the species' limited range
California tiger salamander <i>Ambystoma tigrinum californiense</i>	C2 (LP)/SS C	<1	Favors open woodlands and grasslands; requires water for breeding and burrows or cracks in the soil for summer dormancy	Occurs only in California from the coastline to the Sierra Nevada crest and from Sonoma to Santa Barbara Counties	Occurs in ponds and vernal pools throughout Fort Ord ^{2, 5}	Fort Ord comprises little of the total range of California tiger salamander; however, vernal pool habitat is relatively rare in the Monterey Bay region
California red-legged frog <i>Rana aurora draytoni</i>	C1 (LP)/SS C	<1	Requires cold water ponds with emergent and submergent vegetation and riparian vegetation at the edges	Found along the coast and coastal mountain ranges from Humboldt to San Diego Counties, and in the Sierra Nevada from Butte to Fresno Counties	May occur at Fort Ord ¹	Fort Ord composes little of the species total range; however, Fort Ord provides potential habitat for California red-legged frog, which is relatively rare within the Monterey Bay region
Southwestern pond turtle <i>Clemmys marmorata pallida</i>	C1 (LP)/SS C	<1	Requires aquatic habitats such as ponds, marshes, or streams, with rocky or muddy bottoms and vegetation for cover and food	In California, occurs along the central coast east to the Sierra Nevada, and along the south coast, inland to the Mojave and Colorado Deserts; occurs in southwestern California and northwestern Baja California	Occurs at Merrill Ranch just off base, known previously at Mudhen Lake; two turtles were transplanted to East Garrison Lake ⁶ ; may occur at the Salinas River	Fort Ord composes little of the species total range; however, Fort Ord provides potential habitat for western pond turtles, which is relatively rare in the Monterey Bay region

Table 4.11-4. Continued

Plant Species Population	Listing Status ^a		Federal/State	Approximate Percent of Range at Fort Ord	Habitat	Importance of Distribution Occurrence at Fort Ord
	C2/SSC	<1				
Tricolored blackbird <i>Agelaius tricolor</i>	C2/SSC	<1	Nests in freshwater marshes with heavy growths of cattails and tules; other forms of dense vegetation may also be used for nesting; nesting areas must be large enough to support a colony of at least 50 pairs; birds forage in grasslands and fields surrounding the colony	Occurs only in California; resides permanently in the Central Valley from Butte through Kern Counties, on the south Coast and Peninsular Ranges, and in parts of San Diego, Los Angeles, Alameda, Sonoma, and Lake Counties; breeding colonies are in Siskiyou and Lassen Counties, around the San Francisco Bay from Marin to Santa Cruz Counties, and east through the Delta to Solano County;	One nesting colony is known approximately 2 miles northeast of Laguna Seca at Fort Ord ²	Fort Ord composes little of the species total range; however, one of few breeding colonies in the region occurs at Fort Ord
California horned lark <i>Eremophila alpestris actis</i>	C2/-	<1	Grasslands, rangelands, and other open habitats with low, sparse cover	Resident along the California coast range from Humboldt to San Diego County and the San Joaquin Valley	Observed at Fritzsche Army Airfield at Fort Ord ²	Fort Ord composes little of the species' total range; Fort Ord does not provide important habitat for this species
Loggerhead shrike <i>Lanius ludovicianus</i>	C2/-	<1	Prefers open woodland habitats with scattered trees, shrubs, posts, fences, or other perches	Permanent populations throughout California except in the Sierra Nevada, Cascade, and Klamath Ranges, and the north Coast Range north of Mendocino County; some individuals winter along the coast from Sonoma to Del Norte Counties; uncommon in Monterey County; occurs from southern Canada into Mexico	Uncommon at Fort Ord; occurs at Fritzsche Army Airfield and in maritime chaparral, coastal, and scrub habitat ²	Fort Ord composes a very small amount of the total range of loggerhead shrike; Fort Ord does not provide important habitat for this species

^a Status definitions:

Federal

- E = listed as endangered under the federal Endangered Species Act.
T = listed as threatened under the federal Endangered Species Act.

- PE - federally proposed for listing as endangered.
- LP - listing package being reviewed by U.S. Fish and Wildlife Service.
- C1 - Category 1 candidate for federal listing. Category 1 includes species for which USFWS has on file enough substantial information on biological vulnerability and threat to support proposals to list them.
- C2 - Category 2 candidate for federal listing. Category 2 includes species for which USFWS has some biological information indicating that listing may be appropriate but for which further biological research and field study are usually needed to clarify the most appropriate status. Category 2 species are not necessarily less rare, threatened, or endangered than Category 1 species or listed species; the distinction relates to the amount of data available and is therefore administrative, not biological.

State

- E - listed as endangered under the California Endangered Species Act.
- SSC - considered a State Species of Special Concern by California Department of Fish and Game.
- - no status.

- ¹ Not found during field surveys.
- ² Encountered during field surveys.
- ³ Source: Jurek, Walton pers. comm.
- ⁴ Source: George pers. comm.
- ⁵ Source: Stanley pers. comm.
- ⁶ Source: Littlefield pers. comm.
- ⁷ Source: Bury 1985.
- ⁸ Source: Arnold 1983.

4.11.3.3 Special Native Biological Communities

Special native biological communities are habitats considered important because of their high species diversity, high productivity, unusual nature, limited distribution, declining status, or some combination of these qualities. These habitats are recognized by state and federal agencies as of high value to wildlife. The DFG's Natural Diversity Data Base (NDDDB) (1992) maintains a list of rare natural communities and this list was used to develop the list of special native biological communities at Fort Ord. Seven special native biological communities occur at Fort Ord. These communities and the reasons for their recognition by agencies are identified below:

- native coastal strand - native coastal strand communities have been reduced by dune disturbance and coastal development to remnants of what were once more extensive communities,
- dune scrub - dune scrub has been reduced by coastal development to remnants of what were once more extensive communities,
- maritime chaparral - the type on Fort Ord is known to occur only in the Monterey Peninsula area,
- valley needlegrass grassland - less than 1% of the historic range remains in California, blue wildrye grassland - this community has been greatly reduced in extent from its historic range in California,

- riparian forest - over 90% of California's riparian forests have been eliminated,
- vernal pool - vernal pools are considered wetlands and over 90% of California's wetlands have been lost, and
- freshwater marsh - freshwater marshes are considered wetlands and over 90% of California's wetlands have been lost.

4.11.3.4 Preserves and Significant Natural Areas

Specific sites at Fort Ord have been designated as biologically important by federal and state agencies and private organizations. These sites are the CNPS native plant reserves, Smith's blue butterfly reserve, and DFG significant natural areas.

Native Plant and Butterfly Reserves. Fort Ord's mosaic of biological communities creates a unique set of conditions for several special-status plants and wildlife. Recognizing that large portions of these unique and declining biological resources occur at Fort Ord, the Army, with assistance from CNPS, has identified and agreed to protect 11 native plant reserves and one butterfly reserve (Figure 4.11-12). Under the agreement with CNPS, the Army affords protection to them as long as there is no overriding military need for the sites (Griffin 1976). Plant reserves 6, 7, 11, and 12, were included as mitigation sites in a November 1990 draft mitigation and monitoring plan for construction of the ammunition supply point on Barloy Canyon Road.

Significant Natural Areas. The California Significant Natural Areas Program is administered by DFG and designed to encourage recognition of the state's most significant natural areas and seek perpetuation of these areas (California Fish and Game Code 1930-1932). Significant natural areas have no legal status, but they have been identified in response to a legislative mandate (California Assembly Bill 1039) to raise the level of awareness about California's natural diversity and to identify opportunities where cooperative efforts can conserve important biological resources. The DFG has recognized the unique biological resources at Fort Ord and identified three significant natural areas.

The DFG has used only the NDDB to identify significant natural areas, and the exact boundaries of significant natural areas have not been established because thorough field surveys have not been completed.

The DFG has identified three significant natural areas on Fort Ord (Figure 4.11-13):

- **Marina Dunes (MNT-026).** This significant natural area includes the Marina Dunes along the northern boundary of Fort Ord. In addition to a part of Fort Ord, this area includes private lands and lands belonging to the City of Marina and the California Department of Parks and Recreation's Marina State Beach. This significant natural area is reported by NDDB to contain eight rare elements, including the federally listed endangered Smith's blue butterfly, sand gilla, and Menzie's wallflower, coastal populations of western snowy plover which are federally listed as threatened, and Monterey spineflower and western snowy plover, which are federally proposed for listing as endangered and threatened. The other elements are Salinas harvest mouse, black legless lizard, and central dune scrub habitat.
- **West Eucalyptus Road (MNT-040).** This significant natural area encompasses a general area along Eucalyptus Road directly east of the developed area of Fort Ord. It is reported by NDDB to contain one rare element: sandmat manzanita.

- **Central Eucalyptus Road (MNT-050).** This significant natural area encompasses a general area centered about 1.5 miles east of the West Eucalyptus Road significant natural area. The site is reported by NDDB to include the rare central maritime chaparral habitat and two rare plant species, Eastwood's ericameria and sandmat manzanita.

4.11.3.5 Marine Environment

The marine environment of Monterey Bay is widely recognized as important habitat for an array of marine wildlife and has been approved for federal protection as part of the Monterey Bay National Marine Sanctuary (U.S. National Oceanic and Atmospheric Administration 1992).

Approximately 27 species of marine mammals and 94 species of seabirds are known to occur in the Monterey Bay region, including nine special-status mammals, 17 special-status birds, and three endangered sea turtles (Table 4.11-5). Most species occur as nonbreeding residents or spring and fall migrants. All the special-status birds may fly over the marine range area at Fort Ord or float in the open water, and southern sea otters may occasionally feed in the marine range area; however, no important marine mammal haul-out (resting) or breeding areas or seabird nesting colonies occur at Fort Ord (Figure 4.11-14).

Table 4.11-5 Special-Status Wildlife Species Known to Occur in the Marine Environment in Monterey Bay

Common and Scientific Name	Legal Status ^a	Occurrence
Northern Sea Lion <i>Eumentopsis jubatus</i>	FT	Nonbreeding resident/visitor
Guadalupe Fur Seal <i>Arctocephalus townsendi</i>	FT, ST	Rare seasonal transient
Southern Sea Otter <i>Enhydra lutris nereis</i>	FT	Breeding year-round resident
Gray Whale <i>Eschrichtius robustus</i>	FE	Seasonal migrant
Blue Whale <i>Balaenoptera musculus</i>	FE	Seasonal migrant
Fin Whale <i>Balaenoptera physalus</i>	FE	Seasonal migrant
Hump-Backed Whale <i>Megaptera novaeangliae</i>	FE	Seasonal migrant
Pacific Right Whale <i>Balaena glacialis japonica</i>	FE	Rare seasonal migrant
Sperm Whale <i>Physeter macrocephalus</i>	FE	Rare seasonal migrant
Double-Crested Cormorant <i>Phalacrocorax auritus</i>	SSC	Breeding

Table 4.11-5 Continued

Common and Scientific Name	Legal Status ^a	Occurrence
Caspian Tern <i>Sterna caspia</i>	*	Breeding
Forster's Tern <i>Sterna forsteri</i>	*	Breeding
Marbled Murrelet <i>Brachyramphus marmoratus</i>	FPT, SE	Breeding
Rhinoceros Auklet <i>Cerohinea monocerata</i>	SSC	Breeding
Tufted Puffin <i>Fratercula cirrhata</i>	SSC	Breeding
Common Loon <i>Gavia immer</i>	SSC	Nonbreeding resident/visitor
Western Grebe <i>Aechmophorus occidentalis</i>	*	Nonbreeding resident/visitor
California Brown Pelican <i>Pelecanus occidentalis californicus</i>	FE, SE	Nonbreeding resident/visitor
California Gull <i>Larus californicus</i>	SSC	Nonbreeding resident/visitor
Elegant Tern <i>Sterna elegans</i>	C2, SSC	Nonbreeding resident/visitor
Xantus' Murrelet <i>Synthliboramphus hypoleucus</i>	*	Nonbreeding resident/visitor
Ashy Storm-Petrel <i>Oceanodroma homochroa</i>	SSC	Nonbreeding resident/visitor
Laughing Gull <i>Larus atricilla</i>	SSC	Seasonal migrant
California Least Tern <i>Sterna antillarum browni</i>	SE, FE	Seasonal migrant
Short-Tailed Albatross <i>Diomedea albatrus</i>	FE	Rare visitor
Black Skimmer <i>Rynchops niger</i>	SSC	Rare visitor
Green Turtle <i>Chelonia mydas</i>	FE	Rare visitor
Leatherback Turtle <i>Dermochelys coriacea</i>	FE	Rare visitor

Table 4.11-5 Continued

Common and Scientific Name	Legal Status ^a	Occurrence
Pacific Ridley Turtle <i>Lepidochelys olivacea</i>	FE	Rare visitor

^a Status explanations (see the "Definitions of Special-Status Species" section above for citations):

FE = listed as endangered under the federal Endangered Species Act.

FT = listed as threatened under the federal Endangered Species Act.

C2 = Category 2 candidate for federal listing. Category 2 includes species for which USFWS has some biological information indicating that listing may be appropriate but for which further biological research and field study are usually needed to clarify the most appropriate status. Species that are possibly extinct are indicated with an asterisk (*). Category 2 species are not necessarily less rare, threatened, or endangered than Category 1 species or listed species; the distinction relates to the amount of data available and is therefore administrative, not biological.

SE = listed as endangered under the California Endangered Species Act.

ST = listed as threatened under the California Endangered Species Act.

FPT = proposed as threatened by the federal government.

SSC = California state species of special concern.

* = Taxa that fall into one or more of the following categories: taxa that are biologically rare, very restricted in distribution, or declining throughout their range; populations in California that may be peripheral to the major portion of a taxon's range, but which are threatened with extirpation within California; taxa closely associated with a habitat that is declining in California at an alarming rate (e.g., wetlands, riparian, old-growth forests).

4.11.4 Vegetation Management Programs

Fire management and livestock grazing are used to manage vegetation at Fort Ord. These activities can change habitat conditions for vegetation and wildlife on the installation.

4.11.4.1 Fire Management

Fire management includes maintenance of fuel breaks and fire roads, controlled burning, and fire suppression. Fuel and fire breaks are maintained over the entire installation. Maintaining fuel breaks results in conditions that provide favorable habitat for species that require early successional stages, such as sand gilia and Monterey spineflower. Prescribed burning is primarily used in the inland range area to reduce fuel levels before training exercises. These activities result in favorable habitat conditions for most chaparral

species that are adapted to periodic disturbance from fires. The mosaic of sites of different successional stages (i.e., different ages from the last burn) favors special-status plants that thrive in young and intermediate-aged stands, such as sandmat manzanita, Hooker's manzanita, Eastwood's ericameria, and Monterey ceanothus. The mosaic of successional stages resulting from fire management practices also improves habitat value for many wildlife species.

4.11.4.2 Livestock Grazing

Approximately 7,500 acres are leased for sheep grazing in the grasslands in the southeastern portion of Fort Ord. Approximately 2,700 head of sheep graze this area between February and June. Grazing leases are selected through a sealed bid process, with the lease awarded to the highest bidder. The annual lease fee is based on grazing capacity of the range.

Figure 4.11-3
 Known Distribution of Sand Gilia (*Gilia tenuiflora* ssp. *arenaria*) at Fort Ord

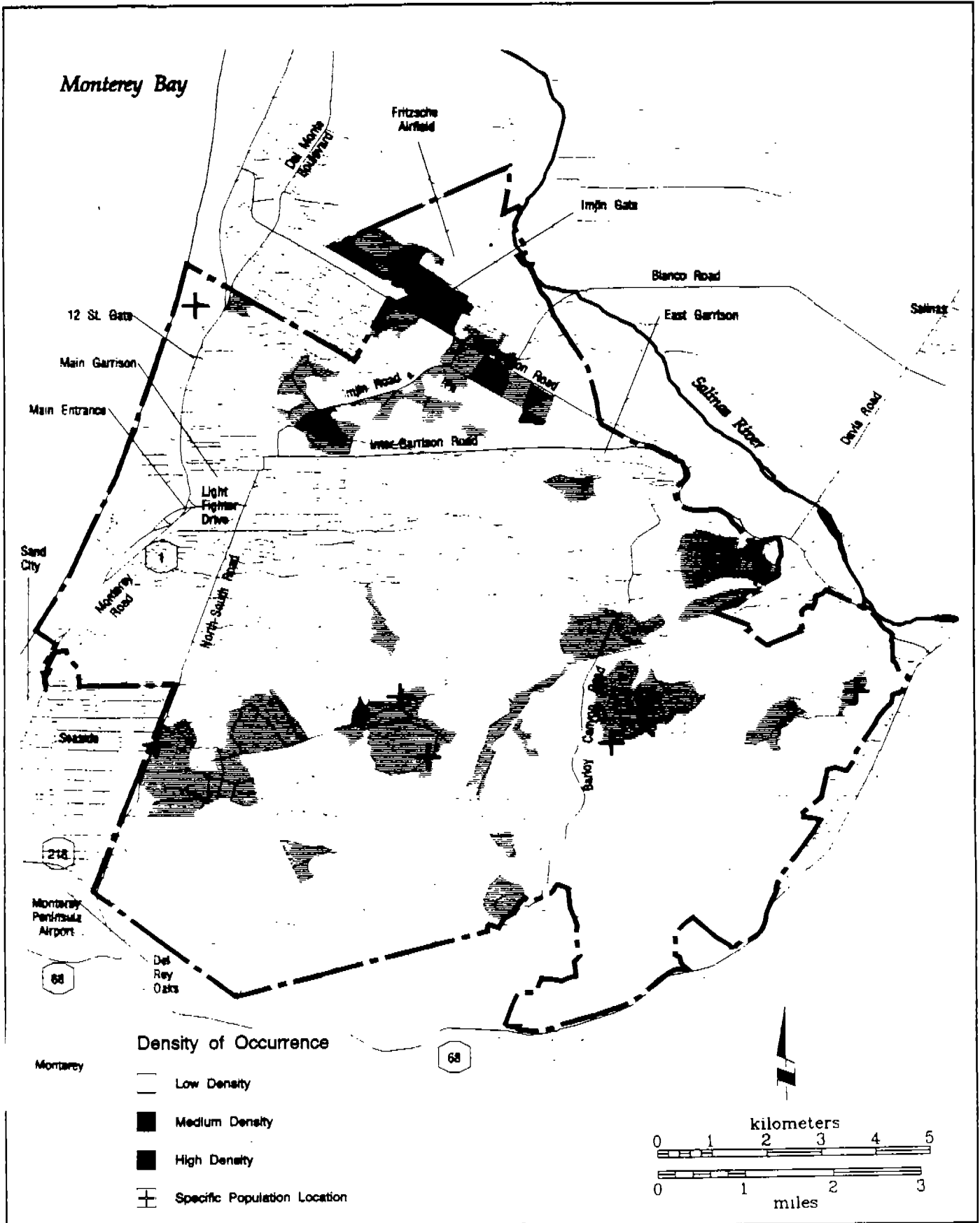


Figure 4.11-4
 Known Distribution of Sand Gilia (*Gilia tenuiflora* ssp. *arenaria*) near Fort Ord

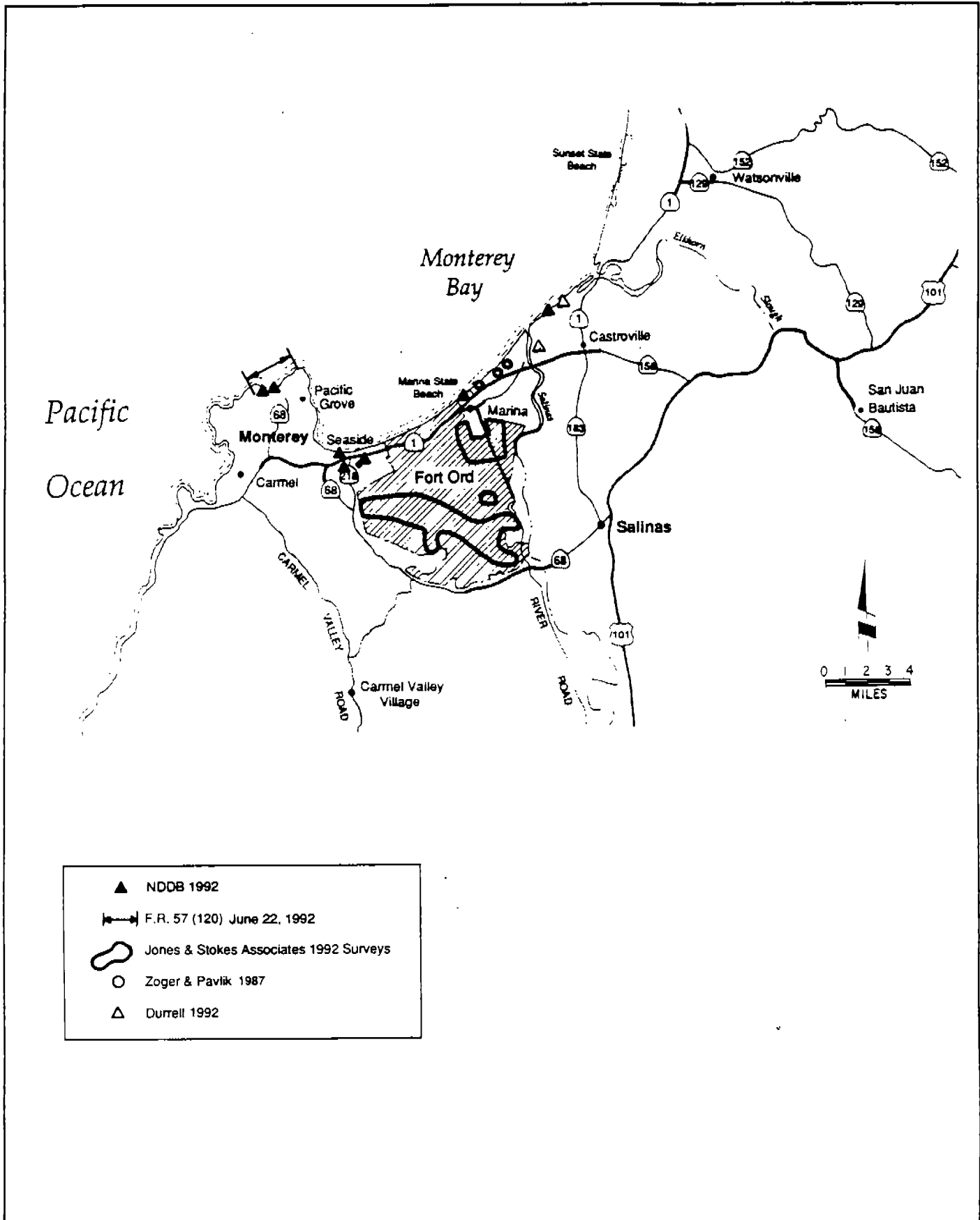


Figure 4.11-5
 Known Distribution of Monterey Spineflower (*Chorizanthe pungens* var. *pungens*)
 at Fort Ord

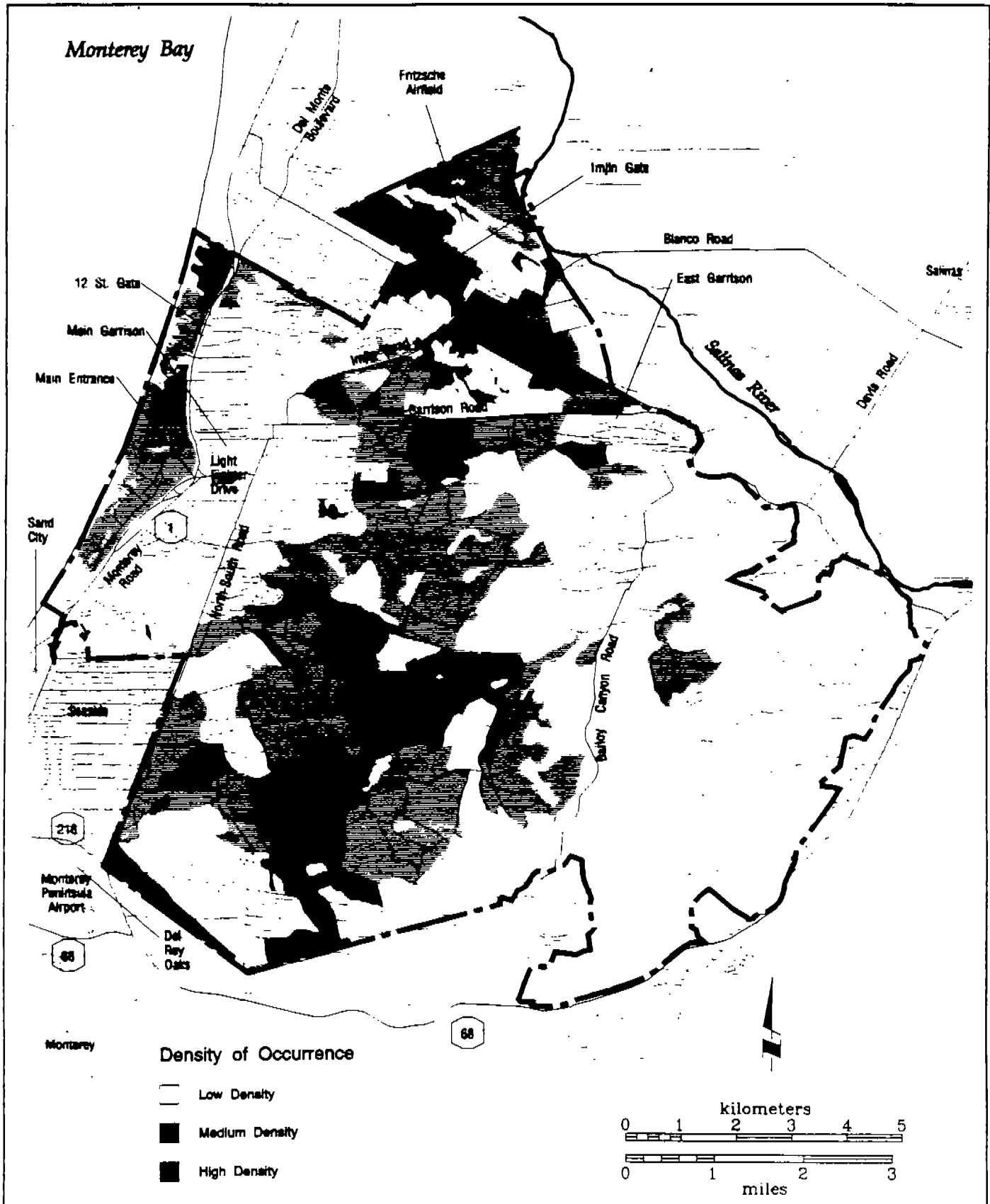


Figure 4.11-6
 Known Distribution of Monterey Spineflower
 (*Chorizanthe pungens* var. *pungens*) near Fort Ord

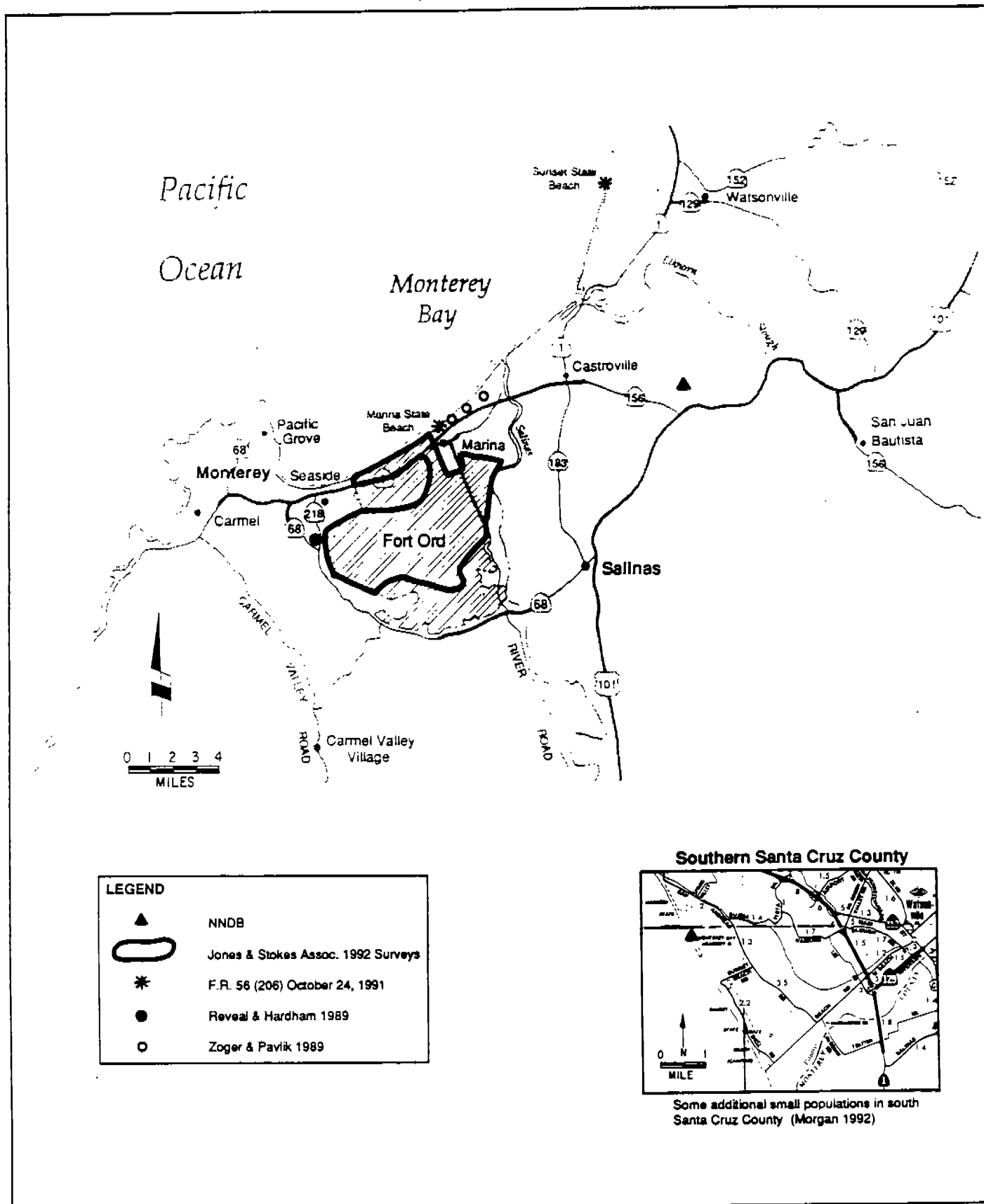


Figure 4.11-7
 Known Distribution of Robust Spineflower (*Chorizanthe robusta* var. *robusta*)
 at Fort Ord

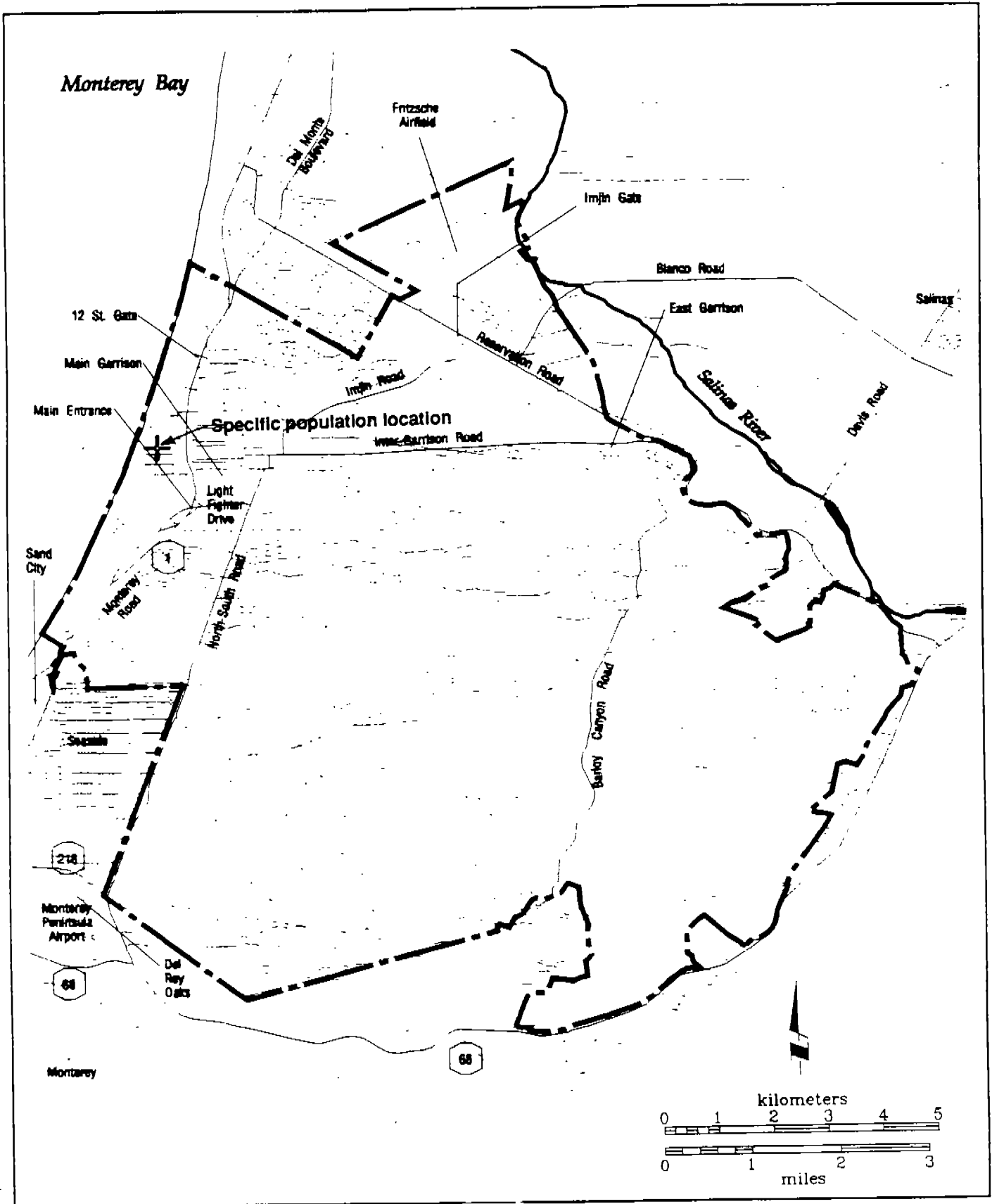


Figure 4.11-8
 Known Distribution of Robust Spineflower (*Chorizanthe robusta* var. *robusta*)
 near Fort Ord

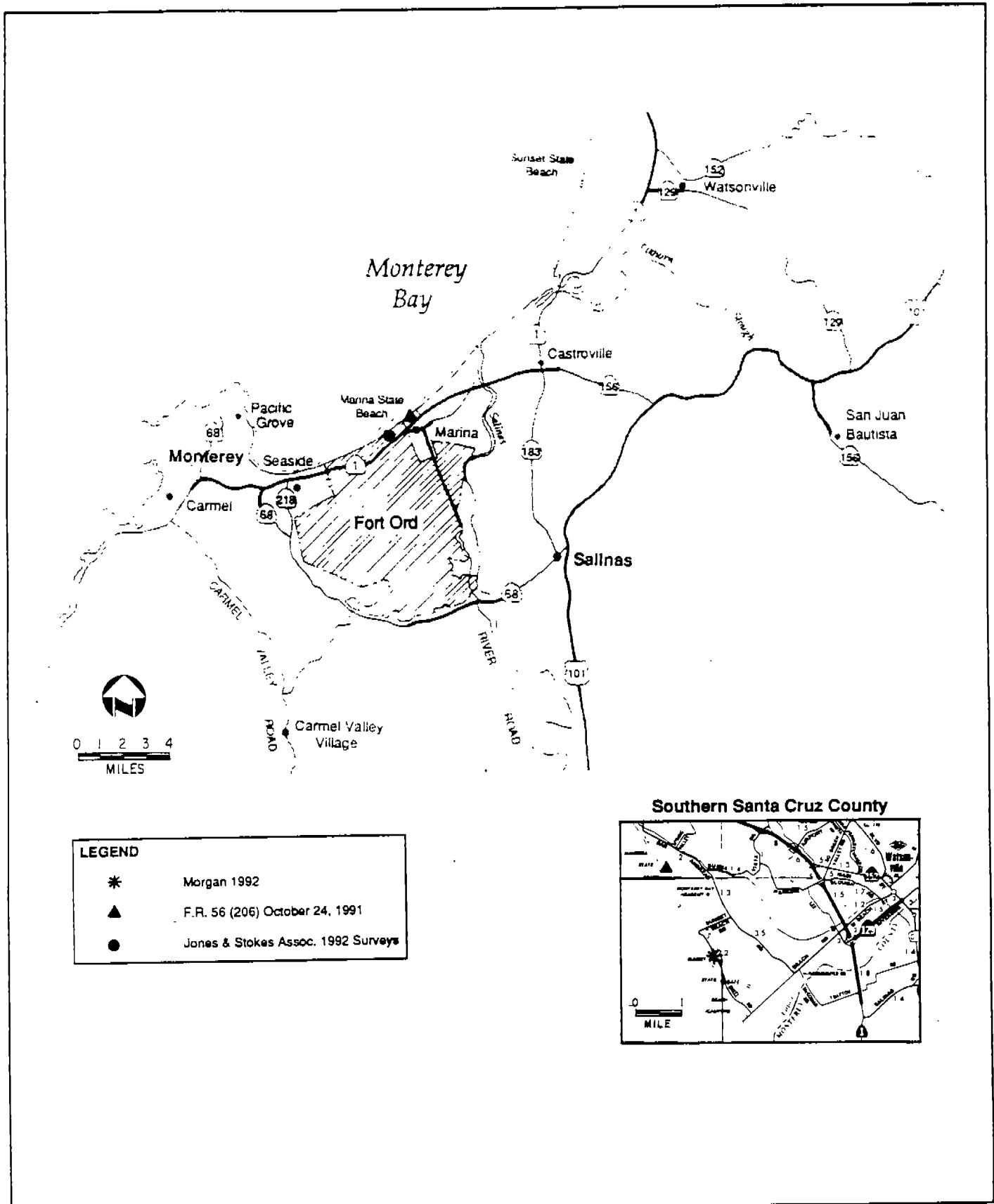


Figure 4.11-9
 Known Distribution of Seaside Bird's-Beak (*Cordylanthus rigidus* var. *littoralis*)
 at Fort Ord

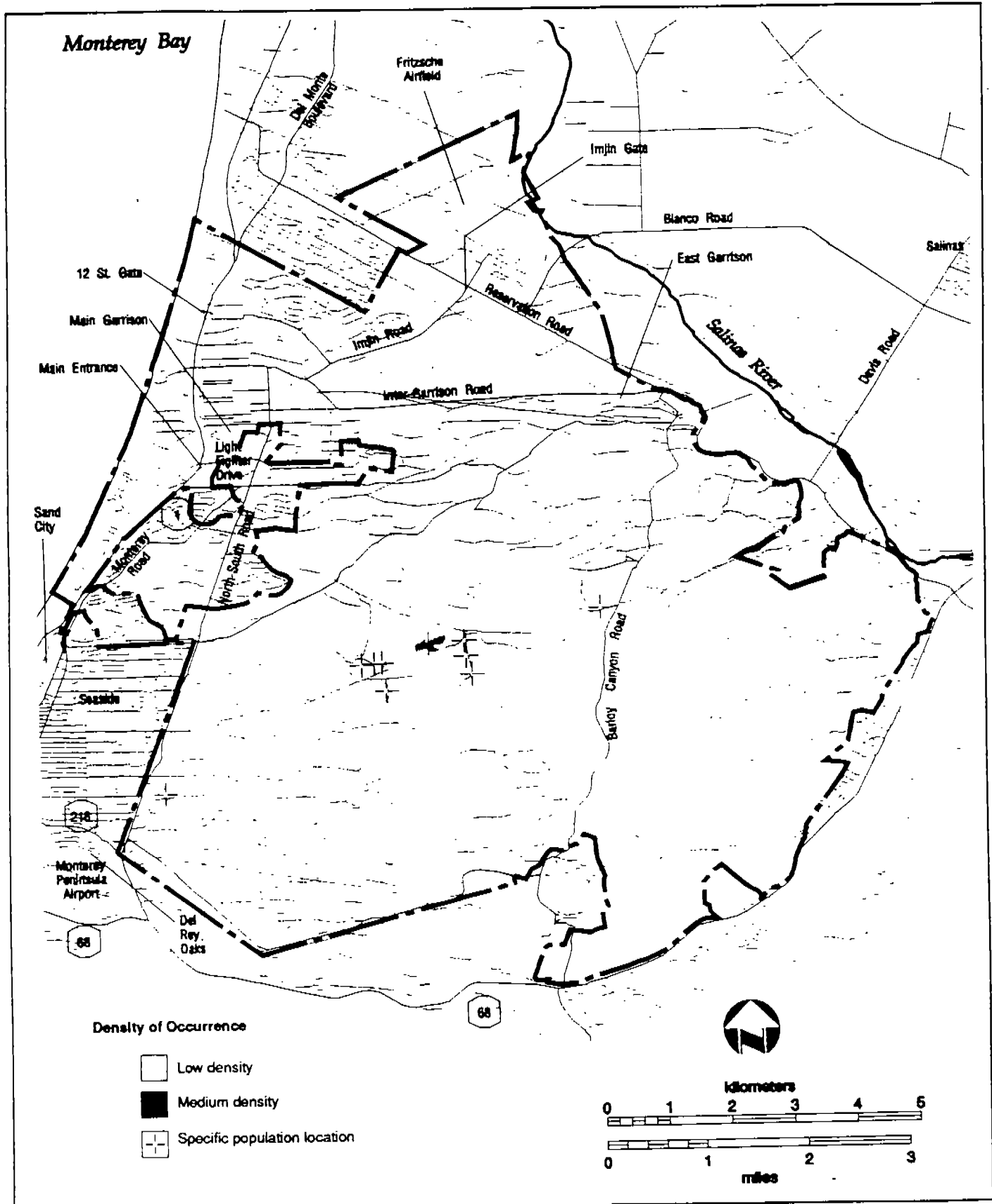


Figure 4.11-10
 Known Distribution of Seaside Bird's-Beak (*Cordylanthus rigidus* var. *littoralis*)
 near Fort Ord

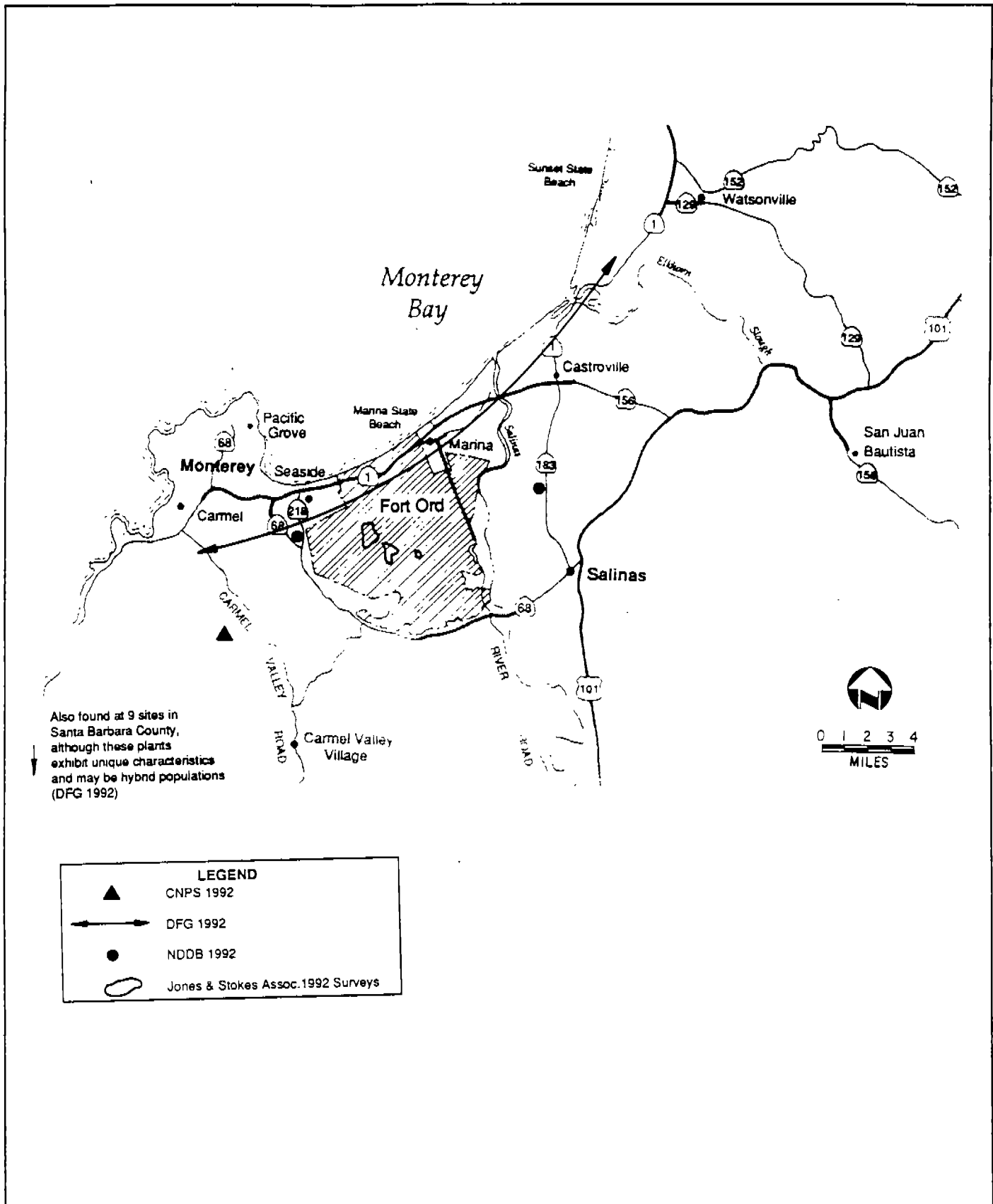


Figure 4.11-12
 Known Locations of Plant and Butterfly Reserve Areas at Fort Ord

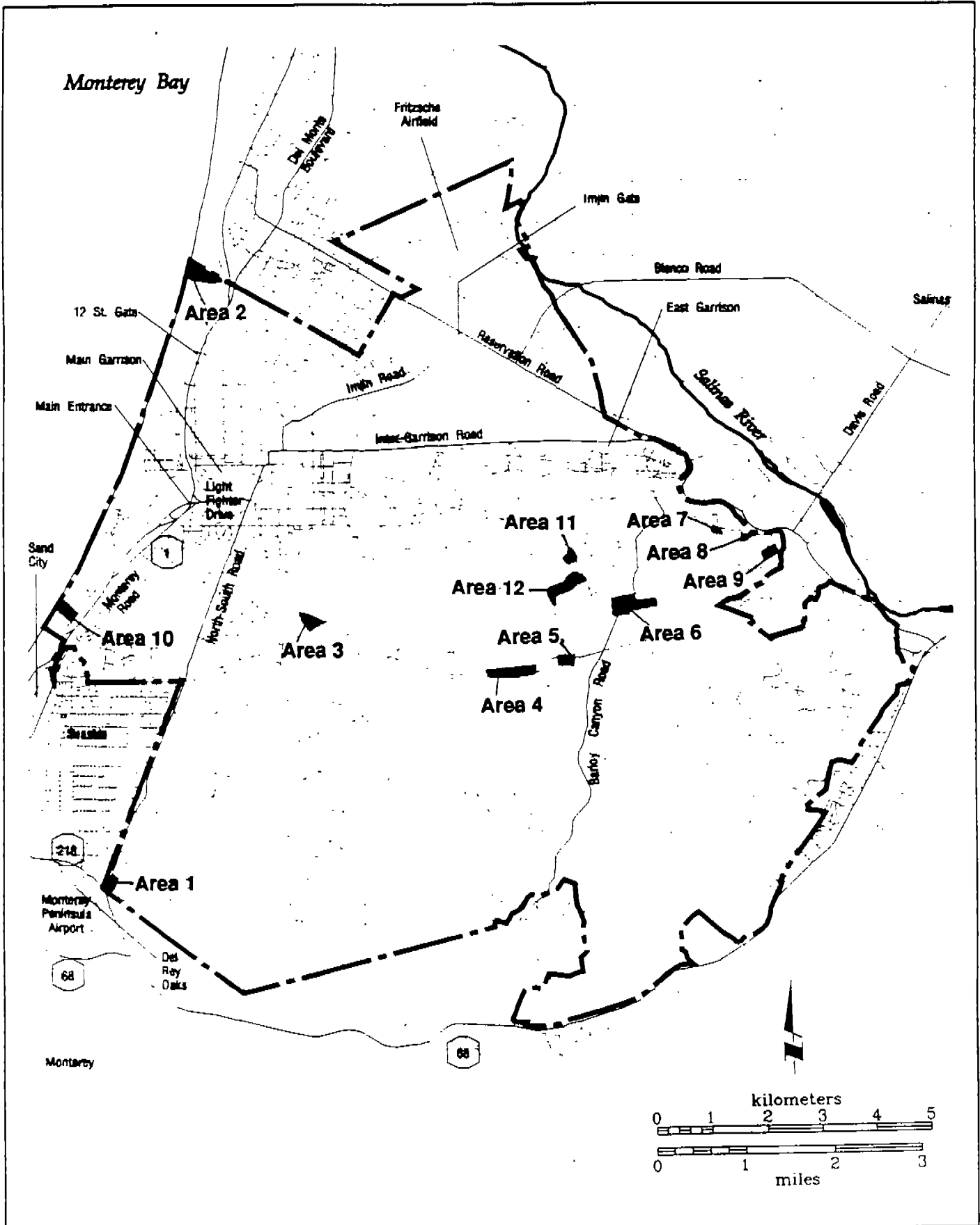
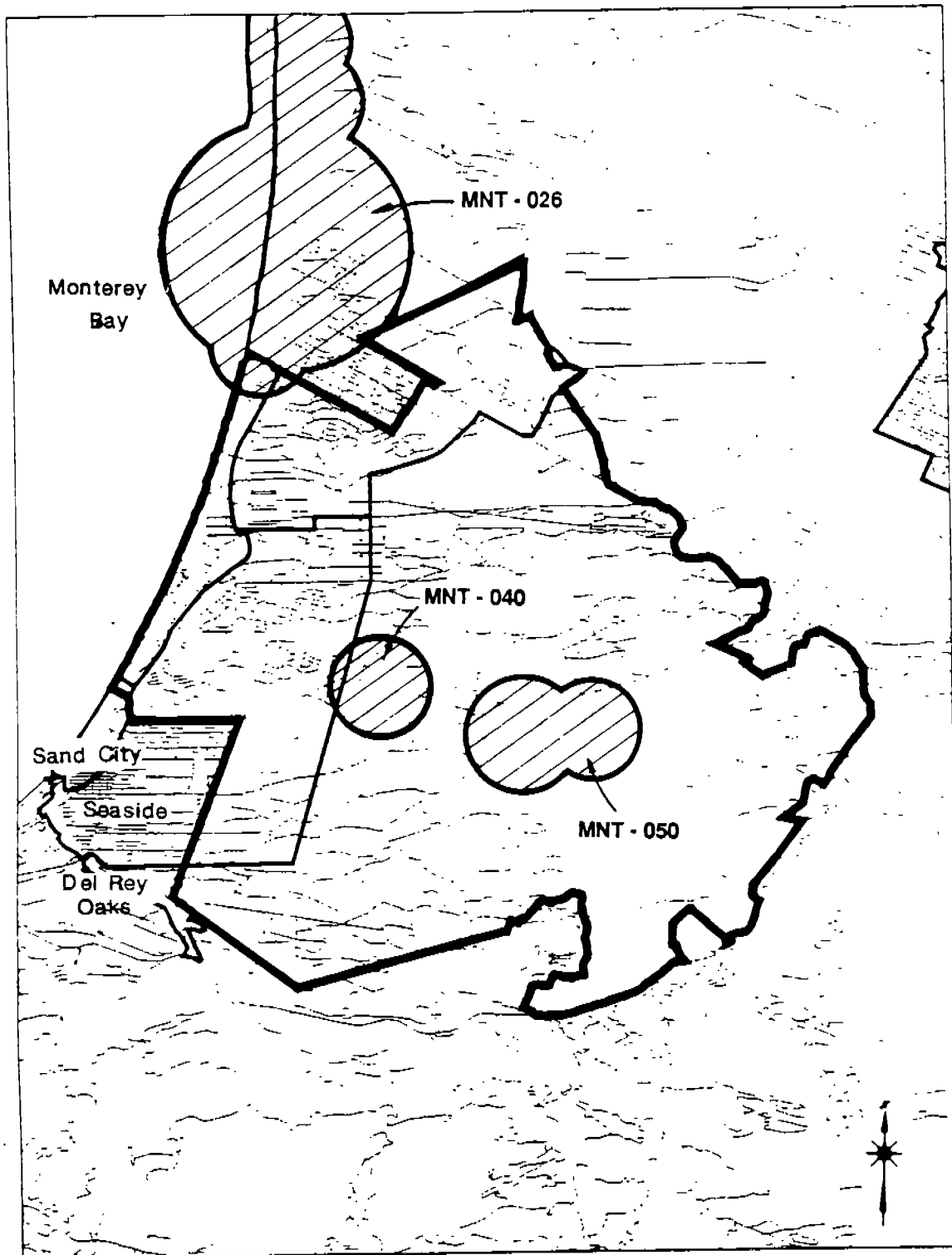


Figure 4.11-13
General Locations of Significant Natural Areas at Fort Ord



MNT - 026, MNT - 040, MNT - 050 = California Department of Fish and Game designation numbers for significant natural areas in Monterey County

Source: Natural Diversity Data Base 1992.

Figure 4.11-14

Principal Sea Otter, Seal, and Sea Lion Areas of Concentration and Seabird Nesting Areas in Monterey Bay Area

