



NOTES FROM THE FIELD

GOLDEN GATE NATIONAL PARKS
THREATENED AND ENDANGERED SPECIES
AND THE LANDSCAPE THAT CONNECTS THEM



BY MAYA KHOSLA
ILLUSTRATED BY RYAN JONES



For more precise cartographic details of the parks, please see the Guide to the Parks (published by the Golden Gate National Parks Conservancy) or any reliable local map.

*Or visit our website,
<http://www.parksconservancy.org/visit/map/index.asp>*



A grand clock of seasons

INTRODUCTION

THE LANDS AND WATERS of the Golden Gate National Parks fan out across three coastal California counties—San Mateo, San Francisco, and Marin. They include over 75,500 acres of wildlands: entire watersheds, coastal hills, valleys, and historic landmarks. Also known as the Golden Gate National Recreation Area (GGNRA), these parklands and their neighboring public lands are literally alive with movement. Creatures creep along the ground; mushroom out of fog-drip and rain; crawl; swim; glide; or soar into the air for a span of time that may be as brief as a handful of days or longer than our own lifetimes. They produce offspring that may grow rapidly or simply curl back for a while, springing up later when they and their surroundings are ready. A grand clock of seasons cycles around them, marking their time. And a surprising number of these living treasures are federally listed as endangered or threatened.

Imagine hiking from the southern to the northern limits of the Golden Gate National Parks along a network of trails and roads, through a patchwork of federal, state, and county lands, a trek that could take ten days or more and cover approximately 60 miles. It would begin at the southernmost parkland, Phleger Estate (San Mateo County). The walk would lead you north through the Peninsula Watershed lands, across Sweeney Ridge and Milagra Ridge, then toward the Pacific Ocean. You would hike along the coastline, past Fort Funston and Ocean Beach (San Francisco County); five days and roughly 38 miles after you left Phleger Estate, you would arrive at the Presidio. Crossing the Golden Gate Bridge, your hike would continue through the Marin Headlands (Marin County), across Tennessee Valley, past Muir Woods National Monument, through Olema Valley, and up along Tomales Bay.

Flushed with sun or half-hidden by fog and the contour of a hill, you might surrender yourself to the landscapes and natural processes around you. To the daytime and nighttime rhythms of wilderness, the hum or silence of wild beings busy at work. To the constant shifts in light intensity. Immersed in the landscape, you might perceive yourself as a speck moving slowly across a vast expanse of forest, coastal prairie, and dune, the ocean distant or immediate, always to the west. You might also begin to feel the connectivity between one habitat and the next—the empowerment of travel through towering corridors of redwood; then oak; then diminutive, ankle-high quilts of

cycles around them, marking their time.



bluegrass, bent grass, and purple needlegrass and past blue-gray outcrops of serpentinite rock.

Your travel would reveal a series of habitat patches and natural corridors connecting larger wildland expanses. Underfoot, the surface would shift from sand to gravel and from gravel to hard-packed earth as mile followed mile. Dusk's colors would redden, then tire, while white-tipped waves momentarily delayed light's erasure. Filtered stream water would taste thinly of sapling, root, and leaf. Moving from one ecosystem to the next might become as familiar as consulting the wrinkled roadmaps on the palms of your hand.

Your hikes might reveal the way migrations and passages—from niche to niche, across ocean currents, or from one landscape to another—have been imprinted into the lives of winged, finned, and four-footed animals. How red-tailed hawks disperse from one coastal prairie to another, attention locked on the restless, bobbing movements of small mammals in grasslands far below. How plants, too, move: seeds fly—some lodging in fur that assures them a journey and yet others travelling in the gut of animals that eat their fruit and then eliminate them.

Allen's hummingbirds frolic in the jewel-flowered summer at Lobos Creek, then turn southward as the calendar advances, heading for areas with warmer, sweeter winter months. Monarch butterflies shimmer across western North America's air currents, to fasten themselves onto eucalyptus trees in the wind-protected coves within and around the Golden Gate National Parks. Salmon migrate thousands of ocean miles, a red river of intention whose flows move upstream, opposing the muddy gush of Redwood Creek and other swelling creeks. On a rare night, a young coyote from the Marin Headlands might steal across the Golden Gate Bridge, explore the Presidio, maybe even live there for a while.

In short, your peregrinations might reveal how much the native fauna and flora thrive on a similar tempo of movement, one that is vital to their continuing survival—how each wild dispersal across a patchwork of habitats has evolved over millennia, an a cappella more ancient than conscious thought.

Editor's note: *On the following pages, you'll find a sampling of the parks' federally listed threatened and endangered animals, creatures whose existence requires the integrity of this landscape's habitats. For a list of species protected within the parks' boundaries, see pages 14 and 15.*

Near-dry trickles have risen to a murky fullness,

STEELHEAD TROUT

Size: to 45"

Habitat: Stream (fry and juveniles) and ocean (adults)

Prey: Invertebrates, fish

Coastal northern California's Mediterranean climate brings gold-dry summers laced with fog and winters thick and gray with rain. At Phleger

Estate, drops slip off the pine needles and Pacific madrone leaves, melting into the earth and softening the soil. Restless chestnut-sided chick-

adees create a high-pitched chorus, an accompaniment for the muted roar of wind through the forest canopy of this once privately owned parcel of second-growth redwood.



Ferns and redwood sorrel leaves act as dripping umbrellas, covering hidden spots where tree frogs hide, emitting creaky calls. In the canyons, at the base of the tall trees, West Union Creek and its tributaries fill up with winter rain; near-dry trickles have risen to a murky fullness, flowing fast through the horsetails that frame their banks. After each spate of rain, the creek's racing waters go from muddy to clear silver.

Eventually this water drains into San Francisquito Creek, then into the San Francisco Estuary, where large silver-gray fish with black-spotted tails wait — steelhead trout require high flows for their upstream migration to the smaller creeks like West Union Creek and its tributaries, where they will breed. These threatened fish will course upstream to select shallow reaches of clean gravel in which they will lay oil-rich eggs. Unique among salmon, steelhead trout can survive spawning, moving back out into the ocean; they may even return to the small creeks to spawn the following year.



WESTERN SNOWY PLOVER

Length: 6.25", wingspan 17"

Habitat: Shoreline

Prey: Invertebrates

At San Francisco's Ocean Beach, shorebirds wheel through the air as they scan for a spot to land. Offshore, rows of waves foam up into whitecaps that hurl themselves shoreward, curling up and plunging down

flowing fast through the horsetails...

to grind at the salt-and-pepper sand grains, a saltwater mortar and pestle from geological time. This constant slam and fizz brings dissolved oxygen to the water-saturated sand, and to intertidal creatures that lie hidden just under the surface.

These invertebrates—crabs, snails, worms, gem clams, white sand clams, and purple clams—dig themselves down into a shallow refuge. Sand is their second skeleton, the well-protected hiding spot from which they pursue the business of living. But shorebirds have a keen sense for the sub-surface riches available during low tides. The birds race down and back to the cadence of each wave's ebb and flow. Shorebirds with relatively long legs (like the greater yellowlegs and the willet) have a longer, slower stride. Shorter-legged birds (like the sanderling and the western snowy plover) scurry faster in their constant search for invertebrate food.

Federally listed as threatened, the western snowy plover is a small, white-chested plover with a pale, beige-gray back. In mature males, the distinct gray side patches turn black with the passion to breed in the spring and summer. Snowy plovers lay their eggs in shallow sandy depressions—pale eggs that are near-invisible against the honey-blond sands. Both parents care for the eggs, and when young snowy plovers hatch, they can walk away from their sandy patch in a few hours. Young snowy plovers are often tended to by the male parent, while the females seek out new mates, which can lead to another clutch of eggs. A month after birth, juvenile snowy plovers still new to the world will dazzle the air with their first flight. Snowy plovers breed in areas away from Ocean Beach, and on the secluded beaches of Point Reyes National Seashore.

MISSION BLUE BUTTERFLY

Size: 21-33 mm (approx. the size of a quarter)

Habitat: Coastal prairie

Food: Plant matter, nectar

The mission blue butterfly, whose flying adult form awakens at spring's moments of bright, lengthening days, is native to Marin, San Francisco, and San Mateo counties.

In April, the number of daylight hours increases minute by minute, as the sun lights up those corners of dawn and dusk that were dim and shadowy-wet throughout the rainy winter months. Hikes across the vast meadows and winding steep hills of the Marin Headlands are now replete with all imagina-



ble shades of green, as air currents guide dusty rivers of pollen from bloom to bloom.

Amid the greens are several shades of blue-green: the palmate leaves of tiny silver-leaf lupine and varied lupine plants, small and close to the ground. Often entangled with grasses, these lupines are most visible when their blooms blaze blue-violet and lilac in wind-sheltered meadows. Silver-leaf lupine and varied lupine can just as often thrive in areas underlain by chert, a multi-layered rock that was formed on the ocean floor. These delicate plants support a tiny endangered butterfly, the mission blue, which spends most of its year as a caterpillar clinging to lupine leaves.

Most of the vital stitches in nature's grand weaving pass by, gone before we have a moment to look again. The butterfly stage of the mission blue's life is over in about ten days. Barely larger than a quarter in size, these delicate butterflies are iridescent blue and lavender on the surface, with tiny dark spots on the undersurface of their wings. Mission blues are like many other butterflies: sun-active, short-lived, and soundless. Mild morning breezes enhance their dizzy, erratic flight patterns.

Though the butterflies may look whimsical, they are here with a serious purpose—to meet and mate. The butterflies broadcast themselves, dancing to the brios and utterings of air currents. Having emerged, united, and laid their eggs, the mission blues fade quickly. Their last days find them tattered-winged and quiet on low-lying flowers, rubbing their wings together like hands expressing a plan. Then the butterflies are done and vanished, survived by eggs laid carefully on lupine plants. As if in response, the lupine blooms fall into seed while the leaves persist, salts and sap held tight against summer's afternoon winds. Soon the tiny green caterpillars will hatch in modest numbers, subsisting on their edible homes—with long pauses of sleep-like inactivity in between—until springtime arrives.

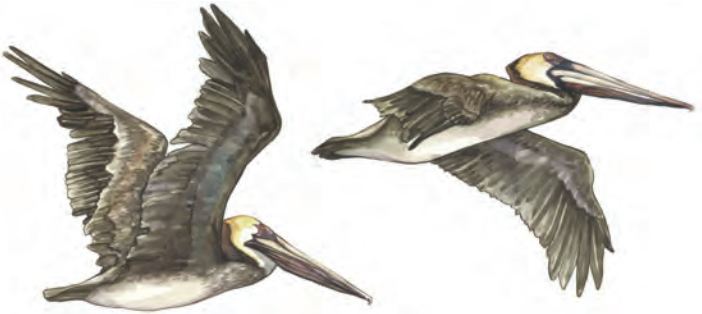


BROWN PELICAN

Size: 4' from bill to tail; wingspan, 7'; bill, 12";
pouch can hold up to 3 gallons of water

Habitat: Open water and near-shore

Prey: Schooling fish such as anchovies, sardines, mackerel



Facing the squareness of Rodeo Valley, you can see where the sharp drop of hills is broken by the startlingly flat valley that was created by time and the wash-away effects of wind, winter rains, and—small but significant—the burrowing of mammals. Creating tunnel homes, the gophers, voles, and shrews scrape and loosen the soil, which washes down in seasonal layers that build Rodeo Valley's wide, flat bed, a process that has taken thousands of years and continues today. A closer look at the valley reveals its moist and spongy center, where wetland grasses, rushes, and arroyo willows grow tangled and lush. Almost hidden in the summer, Rodeo Creek runs through the heart of the valley's wetland.

Rodeo Creek drains into Rodeo Pond, which spills over a weir structure under Bunker Road to drain into Rodeo Lagoon. Long, narrow, and silver-topped with wave action on windy mornings, the lagoon attracts flocks of endangered brown pelicans on their way north from breeding areas in southern California and Mexico. During the summer and early fall, brown pelicans fly in from the ocean and from roosts on the brooding, elephantine-shaped island called Bird Island, located just off the shore of Rodeo Beach. They crash into Rodeo Lagoon, head first, to bathe the ocean salt off their wings.

The lagoon waters are brackish, which encompasses a range of conditions between freshwater and saltwater. Rodeo Beach, an expanse of volcanic black sand and gravel, separates the lagoon from the foam-capped waves of the ocean. In spring when lagoon levels are low, its trickle of water into

...the loose and water-adapted roots of cattails, sedges,

the ocean ceases. But following winter's heavy storms, Rodeo Creek rises to spill over its narrow boundaries, flooding the valley's lowlands and pouring silt-heavy waters into Rodeo Pond, which in turn swells Rodeo Lagoon. The Pacific's waves lash at the sand bar separating ocean from lagoon, and eventually, the bar is breached with the loud slam of the sandy dam bursting open. The ocean waves ride into Rodeo Lagoon for a few days, sometimes a few weeks, until the winter storms subside. The process of flooding and periodic union with the ocean annually recreates the brackish blend that Rodeo Lagoon's native fishes and invertebrates depend upon.

Wholly invisible to our eyes, another world exists under the waters of Rodeo Lagoon. Closer to the shore, the loose and water-adapted roots of cattails, sedges, and submerged plants form a thick reedy forest where lagoon depths are clear and shallow enough for the sun's rays to reach through the soupy greens and browns. Farther out, the lagoon's sloping floor is rich with muck, a slurry of sediment and decomposing plant matter.

TIDEWATER GOBY

Size: 25-50 mm snout to caudal fin lobe

Habitat: Lagoons and freshwater habitat

Prey: Invertebrates



Both underwater forest and mucky habitat provide a cavernous refuge for an endangered fish, the tidewater goby. The diminutive gobies circle their dim world in search of the minute, flickering crustaceans and insect larvae that feast on muck. Pausing on the muddy substrate, their pectoral fins undulating, tidewater gobies are nearly invisible. Like all fish, the gobies have lateral lines, pressure-sensitive organs along their scales that translate the natural stirrings of water and allow the fish to understand and interpret flow and its periodic changes. Their lateral lines equip gobies to differentiate normal movement of water from the flitting of prey, or to detect the rush of predators such as the prickly sculpin, another, slightly larger, native of Rodeo Lagoon.



and submerged plants form a thick reedy forest...

CALIFORNIA RED-LEGGED FROG

Size: 3" snout to vent

Habitat: Marshes, ponds, slow-moving pools in streams

Prey: Invertebrates, occasionally smaller frogs, mammals



To the north of Rodeo Valley, the park's coastal lands continue along the dips of hill furrows and low valleys.

Water curves through the heart of Tennessee Valley and settles in the depressions of its ponds. A thick tangle of riparian vegetation, green and wild, surrounds most of these waterbodies. Riparian plants are rooted in low-lying floodplain soils with a supply of groundwater rich enough to sustain them; a riparian corridor can extend up to 100 feet of luxuriant growth on either side of a stream channel.

In places, the green web is a near-impenetrable weave of white alder and red alder trees, bay laurel, yellow willow, arroyo willow, native blackberry, prolific stinging nettle, cow parsnip, and, closer to the water, seep monkey flower, horsetail, rush, and sedge. Along riparian corridors, the network of water-dependent plants is multiplied over and over, knotted and criss-crossed, "shoulder to shoulder and neck to neck," so dense that you can barely wedge yourself into its mass without adding cobwebs and a host of displaced insects to your hair and clothes. Squatting in softened silt under this deep profusion of vegetation is the California red-legged frog, federally listed as threatened.

The red-legged frog tends to stay close to the slower-moving reaches of creeks and can be found, among other places in the park, on the banks of ponds and lakes in Tennessee Valley. The frog will often stay eye-deep in water; its 180-degree visual field captures the entire reach of riparian corridor. To the passing Cooper's hawk or red-winged blackbird, the red-legged frog is barely a nudge of flesh with two eyes protruding from the water's surface—or even a piece of woody debris. Its stillness is the tool it uses to find its prey.

In pre-Gold Rush times, California red-legged frogs were one of the most abundant frogs statewide, a close second to the smaller Pacific tree frogs. Alas, French cuisine, which featured frog legs as one of its delicacies, grew in popularity as the Gold Rush swelled San Francisco with optimistic newcomers



This diminutive creek trickles shallow,

headed for the mines. At the peak of the Gold Rush, about 80,000 California red-legged frogs were harvested annually. Frog-farming businesses boomed, and California red-legged frogs began to decline in number. It was during this period that Mark Twain's story, "The Celebrated Jumping Frog of Calaveras County," brought the California red-legged frog into the limelight.

As red-legged frog abundance waned, bullfrogs were imported from the East Coast to replace them. They would eventually compete with red-legged frogs and further their decline, since they eat both red-legged frog tadpoles and adults. Still, red-legged frogs thrive in the isolated waterbodies, and their soft, grunting calls have even been heard around Rodeo Pond during winter rains.

COHO SALMON

Size: to 38.5"

Habitat: Stream (fry and juveniles) and ocean (adults)

Prey: Invertebrates, fish

A small forest dominated by coast redwood trees lies in a canyon north of



Rodeo and Tennessee valleys. Muir Woods, the last old-growth coast redwood forest within the San Francisco Bay Area, was saved through the efforts of William Kent. Its namesake, conservationist John Muir, described it as the "best tree-lover's monument ... in all the forests of the world." The virgin forest of Muir Woods National Monument includes redwoods over 1,000 years old—here, the quiet air glows green through ancient curtains of leaves wrapped in light. The world's tallest trees dwarf the patches of redwood sorrel, sword fern, and the mossy branches of bay laurel trees arching over Redwood Creek.

Thick shade falls over the headwaters of Redwood Creek, where fish glide behind boulders like shadows seen, then rapidly unseen. This diminutive creek trickles shallow, clear-faced, and pebbly through redwoods, then farther downstream past corridors of interlacing alder, willow, and dogwood limbs. Finally, it empties into the Pacific Ocean at Muir Beach. It is the primary artery for a process more ancient than the age

clear-faced, and pebbly through redwoods...

of the oldest redwoods: the migration of coho salmon (federally listed as endangered), as well as steelhead trout.

When the earliest rains wash down the salts and smells of leaf-rot and silt, adult coho salmon in the ocean savor the particular smells of Redwood Creek that register as home. They gather close to the creek's mouth, their passage upstream blocked by a sand bar. By this point, the adult coho salmon have quit consuming food; stomach and intestine have been reabsorbed to make room for a body cavity filled with eggs or sperm. Waiting, at the sand bar, their strength wanes.

As soon as high flows break through the sand bar, the fish close in and begin their journey upstream in search of the right gravel in which to spawn. Winter rains turn Redwood Creek into a raging torrent several times its summer size. Cobble grinds against boulder and wind-blown branches crash into the creek. Undaunted, the salmon persist in their journey until they reach the shallow, clear riffles where water's shining flow cleans the gravel. (If you pay close attention, keeping eyes and ears keen, you may spot the splashing, writhing struggle of coho salmon in riffle habitat.) Female coho salmon use their worn, sometimes torn tails to dig out their redds (nests) and spawn, after which the males curl around, fertilizing the oil-rich eggs. The coho salmon will die within days of completing this arduous part of their life cycle.

Toward early spring, the pools in Redwood Creek flicker with new life as fingerling fish hatch and begin to swim. Meanwhile, year-old juvenile salmon go through changes that prepare them for their journey to the ocean. They turn into smolts, sea-ready salmon, growing more buoyant and becoming tolerant of the seawater they are about to enter. As they emigrate from the safety of their native stream, the very particular details of its smell are imprinted upon their senses. As adults, they will return to Redwood Creek to fulfill their biological destiny.

NORTHERN SPOTTED OWL

Size: Body length, 17.5"; wingspan, 40"

Habitat: Old-growth and secondary forest

Prey: Small mammals; invertebrates; occasionally birds, reptiles, amphibians

Among the whispers of the flowing creek waters are other forest noises that are all but inaudible to the human ear. Imagine them. Scampering notes, oddly out of tune with the music of wind in the conifers. Scraping sounds. The northern spotted owl, a federally threatened species, can tell these sounds apart from the rest of the forest's noises.



The night is chilly, and cold has fattened the spotted owl's feathers into thick, spotted flakes. Claws clutching a branch in a tall, dead snag, the owl holds eminent domain over the dense forest stretching out beyond its perch. The spotted owl dissects the soundscape, listening to the forest's sounds in stereo. One of its ear-openings points downward, the other is aimed upward. Sounds reach each ear at slightly different times, a perfectly essential imperfection in listening. By comparing the time of arrival and the intensity of sound in its two ears, the owl can detect the exact position of its small mammal prey.

Releasing the coast redwood branch, which gives a slight shudder, the owl glides in utter silence toward what it hears. Flying low, it is a passing shadow lowering itself quickly, claws extended. In forest and forest edge, the spotted owl will capture dusky-footed woodrats, deer mice, gophers, small birds, and small insects in its sturdy claws.

Northern spotted owls usually live in the depths of coniferous and oak woodland forests but they are also known to persist and hunt in the secondary forests of the northern parklands. Their sharp, barking calls have been heard in the redwood forests of Muir Woods National Monument. Northern spotted owls seek the tops or sometimes the cavities of large trees for their protected nests, in which they will raise a new generation of deft hunters.

YOU HAVE NOW TREKKED roughly 60 miles of trail, road, and shoreline, discovering some of the treasured species for whom the Golden Gate National Parks and neighboring parks are home. You have journeyed along trails both rugged and refined, and your progress has rarely been impeded by anything you couldn't overcome. You have likely witnessed the amassing of fog or rain clouds on the horizon; rich seasonal shadings of green and gold; the sloping expanses of wetland, bog, and forest abundant with native flora and fauna.



The secret of this splendor, the element that assures persistence of the parks' wild creatures, lies in the contiguity of wildlands. The mission blue butterfly and its lupine host, the salmon and their seasonally swelling creeks, the snowy plover and its expanses of sand: each is indivisible from its habitat.

While administrative boundaries are unimportant to wildlife, habitat is crucial. Wildlife corridors—the greenbelt that connects fragmented habitats—promotes movement between animals of linked populations and reduces the chance of extinction by maintaining genetic diversity. For threatened and endangered species, maintenance of these corridors is not only important, it is critical to their continued existence. Keeping the wildlands contiguous and the corridors between habitat types uninterrupted is the work of the National Park Service and Golden Gate National Parks Conservancy, which is committed to maintaining a sustainable balance between historic uses, visitor needs, and the needs of wild nature.

EPILOGUE: HOW TO HELP

ALTHOUGH THIS HIKE through the Golden Gate National Parks has ended, your quest for their preservation and conservation is only beginning. You can help write the next chapter in the fascinating ecological story of the parks. Dedicated volunteers have helped monitor, maintain, and restore the unique habitats that sustain all the diverse species within the parklands. In support of National Park Service and Parks Conservancy work, volunteers contribute directly to the survival and resurgence of endangered species like the dazzling San Francisco garter snake.

This snake—one of the rarest (and most beautiful) reptiles in all of North America—is now only found in a few marshy pockets and ponds of San Mateo County. Due to urbanization, pollution, and illegal collecting, this beautiful serpent once common on the San Francisco Peninsula currently numbers less than 1,500.

Efforts are underway to ensure this elusive and diminutive snake does not disappear from its few remaining habitats. The garter snake—which grows to about 2 feet in length—prefers to live near freshwater ponds inhabited by its favorite prey, the California red-legged frog (a species federally listed as threatened). To bolster populations of both the frog and the snake, the NPS and Parks Conservancy have partnered to dig three frog ponds at Mori Point in Pacifica. On the heels of that successful project, habitat restoration work continues at Mori Point and throughout the Golden Gate National Parks—thanks to the efforts of concerned and engaged community members like you.

You can help ensure the vitality of these parklands—for this and future generations—by volunteering in programs ranging from site stewardship and habitat restoration to native plant nurseries and raptor monitoring. For more information on all volunteer opportunities, please call (415) 561-3077 or send an e-mail to volunteer@parksconservancy.org.

To become a Parks Conservancy member or to contribute to the work that protects and preserves the national parks for all of us, call (415) 561-3000 or visit www.parksconservancy.org.



DEFINITION OF ENDANGERED AND THREATENED SPECIES

An **endangered species** is at risk of becoming extinct. Due to threats such as changing environment or predation, very few individuals of an endangered species remain.

Threatened species are at risk of becoming endangered. A threatened species also refers to an animal or plant species that is under a serious, but not as imminent, threat of extinction. As a conservation status, it is less serious than endangered, but of considerable importance.

Both threatened and endangered species are protected by law. For more information, visit www.fws.gov/endangered and www.dfg.ca.gov/habcon/.

Note: All species considered threatened or endangered on a federal level are also protected on a state level. Additionally, individual states have their own lists of state-specific native wildlife species that are seriously threatened with extinction throughout all or a significant portion of their range within the state; these species will appear on the state's threatened and endangered lists and are protected under state law.

Parklands Resident and Migratory Animal and Plant Species Federally Listed as Threatened or Endangered

ANIMALS

Bay checkerspot butterfly (*Euphydryas editha bayensis*)/Threatened/Native serpentine soil grasslands

California brown pelican (*Pelecanus occidentalis*)/Endangered/Open water, island, and near-shore habitat

California clapper rail (*Rallus longirostrus obsoletus*)/Endangered/Salt marshes

California freshwater shrimp (*Syncaris pacifica*)/Endangered/Low-gradient streams with dense riparian cover

California least tern (*Sterna antillarum browni*)/Endangered/Sandy beaches and inland mudflats

California red-legged frog (*Rana aurora draytonii*)/Threatened/Ponds, creeks, and associated riparian vegetation

Coho salmon (*Oncorhynchus kisutch*)/Endangered/Coastal rivers and creeks, ocean habitat

Humpback whale (*Megaptera novaeangliae*)/Endangered/Open ocean and sometimes San Francisco Bay

Marbled murrelet (*Brachyramphus marmoratus marmorata*)/Threatened/Shoreline and forest habitat

Mission blue butterfly (*Plebejus icarioides missionensis*)/Endangered/Coastal grasslands and scrub

Northern spotted owl (*Strix occidentalis caurina*)/Threatened/
Old-growth and secondary growth forests

Salt marsh harvest mouse (*Reithrodontomys raviventris*)/
Endangered/Salt marsh habitat

San Bruno elfin butterfly (*Incisalia mossii bayensis*)/
Endangered/Coastal scrub and grassland habitat

San Francisco garter snake (*Thamnophis sirtalis tetrataenia*)/
Endangered/Freshwater marshes, ponds, associated coastal
grassland and riparian

Southern sea otter (*Enhydra lutris nereis*)/Threatened/
Nearshore marine areas

Steelhead trout (*Oncorhynchus mykiss irideus*)/Threatened/
Coastal rivers and creeks, ocean habitat

Steller sea lion (*Eumetopias jubatus*)/Endangered/
Shoreline and ocean

Tidewater goby (*Eucyclogobius newberryi*)/Endangered/
Brackish water habitats along the coast

Western snowy plover (*Charadrius alexandrinus nivosus*)/
Threatened/Sandy beaches, salt pond levees, dunes

PLANTS

California seablite (*Suaeda californica*)/Endangered/Salt marshes

Fountain thistle (*Cirsium fontinale* var. *fontinale*)/Endangered/
Valley and foothill grassland, chaparral habitat

Marin western flax (*Hesperolinon congestum*)/Threatened/
Chaparral, valley and foothill grassland habitat

Presidio clarkia (*Clarkia franciscana*)/Endangered/Coastal scrub,
valley, and foothill grassland habitat

Presidio manzanita (*Arctostaphylos hookeri* ssp. *ravenii*)/
Endangered/Coastal scrub, chaparral, coastal prairie habitat

San Francisco lessingia (*Lessingia germanorum*)/Endangered/
Coastal sand dune habitat

San Mateo thorn mint (*Acanthomintha duttonii*)/Endangered/
Chaparral, valley, and foothill grassland habitat

San Mateo woolly sunflower (*Eriophyllum latilobum*)/Endangered/
Oak woodlands

Showy Indian clover (*Trifolium amoenum*)/Endangered/Valley
and foothill grassland, coastal scrub habitat

Tiburon Indian paintbrush (*Castilleja affinis* ssp. *neglecta*)/
Endangered/Valley and foothill grassland habitat

White-rayed pentachaeta (*Pentachaeta bellidiflora*)/
Endangered/Valley and foothill grassland habitat



ABOUT THE PARKS CONSERVANCY

The Golden Gate National Parks Conservancy is the nonprofit membership organization created to preserve the Golden Gate National Parks, enhance the experiences of park visitors, and build a community dedicated to conserving the parks for the future.

Since its establishment in 1981, the Conservancy has partnered with the National Park Service to nurture more than 30 park sites sprinkled across a 75,000-acre greenbelt north and south of the Golden Gate. Thanks to the strength of 13,000 members, the efforts of over 20,000 volunteers each year, and the vision of leadership donors, the Parks Conservancy works to fulfill a mission of “parks for all forever.” To protect these precious places (and all the living things they sustain), the Conservancy engages the community through conservation programs such as:

Site Stewardship Bringing people together to restore the ecological integrity of sensitive park sites and protect rare and endangered species.

Trails Forever Galvanizing staff and volunteers in the renovation and expansion of park trails and the enhancement of lands around them.

Native Plant Nurseries Cultivating native species for planting in critical areas throughout the parks—the “root” of all restoration work.

Golden Gate Raptor Observatory Monitoring and banding birds of prey along one of North America’s most important migratory flyways.

Crissy Field Center Inspiring future generations of environmental stewards through innovative educational and outreach initiatives.

www.parksconservancy.org





ABOUT THE NATIONAL PARK SERVICE

The National Park Service (NPS) was created in 1916 to preserve America's natural, cultural, and scenic treasures and to provide for their enjoyment by future generations. Today, the NPS manages 391 park sites across the country. For information about the Golden Gate National Parks, call (415) 561-4700, or visit www.nps.gov/goga.

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Cover photograph: Maggie Perry

Editors: Susan Tasaki, Michael Hsu

Design: Jami Spittler/Jamison Design, Bill Prochnow

Printed on recycled paper in the United States.





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