



BASES LOADED

by Laura Tangley

As sprawl eats up habitat from coast to coast, some of the nation's military installations have become sanctuaries for a surprising number of birds and other wildlife



With the sun sinking fast over the salt marsh, Chris Eberly had barely half an hour to complete his mission. Armed with high-powered binoculars and a spotting scope, he hurried down a trail that headed toward the Tijuana River just south of San Diego. Eberly, an East Coast-based ornithologist and avid birder, was hoping to spot—or at least hear—the endangered light-footed clapper rail, a secretive wading bird found only in Southern California's increasingly scarce saltwater estuaries, including this one in Tijuana Slough National Wildlife Refuge.

Hearing a sound—a clattering *kek, kek, kek, kek, kek*—Eberly froze. “That’s it!” he shouted, pointing to a dense clump of spiky cordgrass.

More striking than the rail’s call, though, was another, even louder sound, which neither the bird nor the birder seemed to notice—the steady hum of a half dozen

U.S. MARINES MONITOR a protected nesting site for the endangered California least tern (adult with newly hatched chick, above) on Camp Pendleton. More than a third of the world's entire population of the birds nest on Marine Corps or Navy lands.

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Navy Seahawk helicopters circling overhead. The Seahawks' pilots were practicing tricky takeoffs and landings at the Navy's nearby Outlying Landing Field, one of seven installations that make up a sprawling, 42,573-acre military complex known as Naval Base Coronado.

According to Timothy Burr, a senior wildlife biologist for the Navy, more helicopters take off and land at this field than anywhere else in the country. Yet in addition to protecting the light-footed clapper rail, the Tijuana refuge—half of which occupies Navy-owned land—is a haven for four other endangered birds and a diversity of other wildlife species.

ACCIDENTAL OASES

The scene, while apparently incongruous, is not unusual. Fifty miles up the coast from Coronado, Marine Corps Base Camp Pendleton, the Marines' premier western amphibious training facility, is an oasis for the endangered Southwestern willow flycatcher and least Bell's vireo, as well as dozens of other creatures whose riparian and sage scrub habitat have nearly been obliterated elsewhere. In Kansas, the U.S. Army's Fort Riley shelters the nation's largest remaining native tallgrass prairie, habitat for imperiled grassland birds such as the dickcissel and Henslow's and grasshopper sparrows. And in the Southeast, more than a third of all remaining pairs of the critically endangered red-cockaded woodpecker are found on four military installations: Eglin Air Force Base in Florida, Fort Bragg in North Carolina and Fort Stewart and Fort Benning in Georgia.

Nationwide, more than 300 federally listed threatened or endangered species inhabit military lands and waters—more than are found throughout the entire national park system, which has nearly three times more land. "I've visited a lot of wildlife refuges and a lot of military bases, and it can be hard to tell them apart," says Eberly, who manages the U.S. Department of Defense Partners in Flight program. "Often, the bases are better for wildlife," he adds, "because, unlike many refuges, they do not have mandates for multiple uses



AN ISLAND OF HABITAT surrounded by dense development, Tijuana Slough National Wildlife Refuge (above) is an oasis for endangered birds such as the light-footed clapper rail (right) and other wildlife. Half of the refuge occupies U.S. Navy-owned property.

like grazing, timber harvesting and recreation."

Some military installations, including Coronado, even include areas where the

NWF PRIORITY MAKING THE MILITARY MORE WILDLIFE FRIENDLY

IMPROVING THE FATE of wildlife on U.S. military lands is a high priority at NWF. For several years, the federation has been working with Congress and other conservation groups to oppose Department of Defense (DOD) requests for exemptions from environmental laws, including the Endangered Species Act. One positive outcome of the conflict is that DOD is now asking NWF for advice on its natural resource management plans. NWF also is helping DOD counter the negative effects of sprawl and invasive species. A new NWF report on invasive species and the military will be released this fall. See "Action Report" on page 50 or www.nwf.org/news.

public can watch wildlife, especially birds (see page 44). On his own life list, for example, Eberly says he has chalked up nearly 40 species on U.S. military lands.

The Pentagon, of course, never set out to create these wildlife sanctuaries. But because the military requires large tracts of uninhabited land to train troops, vast holdings it acquired decades ago have remained largely intact, while beyond base borders, development has boomed. Nationwide, the Pentagon manages nearly 30 million acres encompassing a diversity of ecosystems—from deserts and alpine meadows to forests, wetlands and seashores—that are home to an even greater variety of wildlife.

BIG BLACK HOLE

Traveling Interstate 5 up the coast from San Diego to Los Angeles, for example, drivers cross an unmarked, yet unmistakable, boundary separating Camp Pendleton from adjacent private land. On one side, apparently untouched beaches and coastal scrub forest stretch as far as the eye can see. On the other, there is little more than condos, shopping malls and fast-food joints.



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"It's even more impressive flying over at night," says Eberly. "The base looks like a big black hole surrounded by lights. It's easy to see why a place like this has a disproportionate number of endangered species and other wildlife."

Yet the Pentagon rarely gets kudos for housing such a diversity of wildlife. Indeed, the relationship between the military and most environmental organizations has tended to be acrimonious. In one recent battle, the Defense Department two years ago asked Congress for an exemption to the Endangered Species Act's (ESA) mandate to establish critical habitat for federally listed species. The department claimed that designating critical habitat on military lands could potentially interfere

with training, and therefore the nation's readiness for war.

Following a series of Capitol Hill skirmishes—in which NWF played a major part—conservationists and the Pentagon agreed to a compromise. Military installations may be excluded from critical habitat requirements, but only if they have prepared and implemented Integrated Natural Resource Management Plans that provide a "benefit" to endangered species and have been approved by the U.S. Secretary of Interior (or Secretary of Commerce for marine species).

Today some 380 resource management plans are in place. And according to NWF legislative representative Corry Westbrook, "officers at the high-

est levels are realizing that natural resource protection and training are not mutually exclusive." She adds, however, that ESA and other environmental laws remain "the hammer that makes sure they follow through. We must ensure that the military continues to abide by these laws."

Still many installations go beyond what's required by law. One warm breezy morning last fall, for instance, Peter Bloom, a zoologist for the Western Foundation of Vertebrate Zoology, stood at the crest of a hill in Camp Pendleton preparing to release a red-tailed hawk he had just banded. Commenting that the bird "looks like a really healthy girl," Bloom told a group of visitors that the Marines have allowed him

ON THE ROAD

TEN GREAT BIRDING DESTINATIONS ON MILITARY LANDS

1. NAVAL BASE CORONADO

When to go: year-round
Habitats: freshwater and saltwater marshes, estuary, beaches, coastal scrub
What to look for: light-footed clapper rail, Belding's savannah sparrow, western snowy plover, California gnatcatcher, California least tern, hooded oriole, least Bell's vireo

2. VANDENBERG AIR FORCE BASE

When to go: year-round
Habitats: riparian, freshwater and saltwater marshes, estuary, chaparral, coastal sage
What to look for: western snowy plover, California least tern, oak titmouse, Bell's sage sparrow, white-tailed kite, Nuttall's woodpecker



3. FORT HUACHUCA

When to go: year-round
Habitats: high-elevation riparian, montane grasslands, Chihuahuan desert scrub, pine-oak and mixed conifer forests
What to look for: Mexican and Steller's jays; bridled titmouse, painted redstart, gray vireo; gray, sulfur-bellied and vermilion flycatchers; elegant trogon, Montezuma quail, Gould's wild turkey, Mexican spotted owl

4. FORT CARSON

When to go: early summer, fall
Habitats: grasslands, foothill shrublands, riparian woodlands, wetlands
What to look for: pygmy nuthatch, Lazuli bunting, Say's phoebe, black-headed grosbeak, plumbeous vireo, lesser goldfinch, "pink-sided" junco, Clark's nutcracker

5. ORCHARD TRAINING AREA

When to go: spring, early summer
Habitats: sage shrublands, grasslands, streams and rivers, cliffs
What to look for: golden eagle, prairie fal-

con, long- and short-eared owls, canyon wren, bald eagle, peregrine falcon, Northern goshawk, ferruginous and Swainson's hawks, Wilson's phalarope, long-billed curlew

6. FORT MCCOY

When to go: spring, summer, fall
Habitats: conifer/deciduous woodlands, sand prairie, grasslands, oak barrens, wetlands
What to look for: bald eagle, rough-legged hawk, northern saw-whet and short-eared owls, evening grosbeak, rose-breasted grosbeak, Baltimore oriole, dickcissel, upland sandpiper, black-billed cuckoo, veery

7. FORT DRUM

When to go: spring, summer
Habitats: coniferous-deciduous forest, oak savannas, grasslands, wetlands
What to look for: American woodcock, upland sandpiper, bobolink, vesper and grasshopper sparrows, common nighthawk, Blackburnian and chestnut-sided warblers, snow bunting, snowy owl, scarlet tanager

8. FORT BELVOIR

When to go: year-round
Habitats: hardwood/pine forests, grass-shrub, freshwater marshes, mud flats, open water
What to look for: bald eagle, brown creeper, northern parula, Louisiana waterthrush, prothonotary, prairie, hooded and worm-eating warblers—plus other songbirds, shorebirds and waterfowl in migration

9. AVON PARK AIR FORCE RANGE

When to go: year-round
Habitats: prairie, upland hammock, oak/sand pine scrub, cypress swamp, freshwater marsh
What to look for: Florida scrub jay, Florida grasshopper sparrow, red-cockaded woodpecker, Bachman's sparrow, short-tailed hawk, swallow-tailed kite, crested caracara.

10. EGLIN AIR FORCE BASE

When to go: year-round
Habitats: longleaf pine (including old growth), bottomland hardwoods, freshwater marshes, beach dunes.
What to look for: red-cockaded woodpecker, Southeastern American kestrel, prothonotary and Swainson's warblers, snowy plover, least tern, black skimmer, Mississippi kite

To learn more about these sites, including additional bird species, locations and access requirements, see www.nwf.org/nationalwildlife. Checklists for most sites are available at www.dodpif.org.

to study hawks and other birds of prey on the base for more than 30 years. As a result, said Bloom, "I've developed a long-term database on raptor ecology that's not available anywhere else."

As for its accidental role as endangered species sanctuary—housing 18 endangered or threatened species in all—Camp Pendleton owes much of its success to real estate holdings alone, which in addition to coastal scrub and oak woodlands, include Southern California's largest stretch of undeveloped coastline and its only undammed river, the Santa Margarita.

But the installation's "active and successful" natural resource managers also play a pivotal role, says Eberly. To assist Neotropical migrants including the least Bell's vireo, for example, base personnel trap cowbirds that parasitize the migrants' nests and rip out nonnative plants that degrade their riparian habitat. Today Camp Pendleton houses approximately 850 least Bell's vireo pairs, about a third of the world's entire breeding population.

SHOREBIRD SANCTUARIES

Shorelines and wetlands of both Camp Pendleton and Coronado are also oases for the federally listed California least tern and western snowy plover, species hit particularly hard by coastal development. Most places, even when the birds manage to find scraps of suitable habitat, their chicks and eggs—camouflaged and laid directly on bare sand—are often trampled by beachgoers or gobbled up by sprawl-associated predators such as crows, raccoons, coyotes and domestic or feral cats.

Bucking trends elsewhere in the state, both plover and tern populations are increasing on military lands. Success is due in part to habitat availability and restrictions on public access, as well as avoiding training when and where the birds are nesting. Yet base personnel also have mounted aggressive conservation actions, from grading beaches and removing trash and vegetation from nesting sites to installing protective fences and shelters for hatchlings. Their efforts have paid off. Between 1993 and



BIRDERS CAN SPOT a variety of songbirds on several military installations open to the public. These include (clockwise from right) the hooded warbler, varied thrush, scarlet tanager and elegant trogon. On bases such as Fort Carson (where a soldier watches Bradley armored fighting vehicles, below), both birds and military training are at risk as human populations expand toward the posts' borders. Despite major training activities, Fort Carson harbors a significant amount of shortgrass prairie teeming with wildlife.



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2004, the number of plover nests on Naval Base Coronado property grew from 12 to 116, and tern nests increased from 187 to 1,205. Today more than a third of the world's entire California least tern population breeds on Navy or Marine Corps lands.

COST OF VICTORY

But success has come at a price. Over the past three years, so many terns and plovers have nested on Naval Base Coronado that populations are spilling over onto sections of beach considered critical for training. So far, the U.S. Fish and Wildlife Service has given Navy officials permission to discourage nesting on some beaches and to collect and incubate in captivity eggs that end up in training zones. But according to Navy biologist Burr, it's only a matter of time before even these expensive, time-consuming measures will be inadequate, and Coronado's "primary mission as a Navy training facility will be compromised."

At Camp Pendleton, wildlife biologist Bill Berry expresses a similar frustration. "There's a tendency to look at military installations as de facto wildlife refuges," he says. "But the military cannot bear the entire burden of endangered species recovery in the region."

Unfortunately, the force fueling such conflicts—urban sprawl—is not likely to go away. Sprawl hurts the military in

other ways, because the closer people live to military installations, the further from base boundaries training is allowed. Seeing eye to eye on this problem, environmental groups, including NWF, are trying to convince Congress to mandate the creation of buffer zones around many military bases.

Another trend both conservationists and military personnel find worrisome is the Defense Department's ongoing plan to save money and improve security by shutting down many of the country's bases. In crowded regions like Southern California, such closures would quickly make military lands vulnerable to development. In the latest round of potential cuts, announced in May, the Pentagon proposed eliminating 180 installations over the next six years.

Watching his newly banded hawk soar above Camp Pendleton's vast scrublands, Bloom pointed out what could be at stake. "If Pendleton closed," he said, "none of this would be around for long." Because the base is so critical to Marines Corps training, it is unlikely to be affected by cuts. "But if it were," added Bloom, "the environmental community would come out to support the military in a really big way."

Senior Editor LAURA TANGLEY went birding with Chris Eberly on three West Coast military installations last fall.

PHOTO CREDIT



A LONGLEAF PINE FOREST on Eglin Air Force Base (left) in the Florida panhandle shelters a number of animals threatened by the destruction elsewhere of this now rare habitat. One species is the red-cockaded woodpecker (removing a fecal sac and empty egg shell from its nesting cavity, below). More than a third of all remaining pairs of this endangered bird inhabit Eglin and other military installations in the Southeast.