

Conserving Wildlife

One Base at a Time



By Don Lyman

I lived at Marine Corps Base Quantico for about five years as a kid when my dad was in the Marines. The approximately 59,000-acre military installation is located in northern Virginia, about 35 miles south of Washington, D.C. The small towns between Washington, D.C., and Quantico have grown a great deal since I lived there in the late '60s and early '70s and have become a contiguous sprawl of shopping malls, fast food restaurants, hotels, and housing developments. MCB Quantico's landscape, however, has remained virtually unchanged.

I've returned to Quantico many times as an adult, and when I leave the traffic jams of I-95 and drive through the main gate of the base, it's like stepping back in time. The same woods, fields and creeks I explored as a boy are still there, and I still find lots of snakes, lizards, frogs, turtles and other animals in the same places I used to find them 50 years ago. Despite training exercises, large numbers of troops, and the use of heavy military equipment and munitions, military bases often make great conservation areas largely because unlike civilian communities, military bases are protected from extensive de-



CPL BREANNA L. WEISENBERGER, USMC

Above: Col Michael Scalise, right, deputy commander of Marine Corps Installations East, Camp Lejeune, shakes hands with Representative Walter B. Jones of North Carolina, after planting Loblolly Pine seedlings at the Stone Creek Game Land on Sneads Ferry, N.C., April 30, 2018.

Top: A volunteer guide with the Conservation Volunteer Program paddles out into the Chopawamsic Creek to set up a duck blind for wounded warriors participating in a hunt aboard MCB Quantico in January. (Photo by Adele Uphaus-Conner)

velopment and have restricted access.

Rob Lovich, a biologist and senior natural resource specialist for Naval Facilities Engineering Command Southwest, helps manage natural resource-related issues on United States Navy and Marine Corps installations. He has been

working on a survey of reptiles and amphibians at MCB Quantico over the past year. Lovich, who is based in San Diego, Calif., said that although his focus is on military bases in southwestern U.S., he and his colleagues sometimes work on bases in other parts of the country as well.

Military installations in the U.S. make good conservation areas for a variety of reasons. “Military lands are generally secure areas, with limited access and have very specific land uses,” said Lovich. “Those factors contribute to healthy wildlands and habitats for species conservation.” In addition to state laws, the military also upholds federal laws such as the Sikes Act, the Endangered Species Act, the Clean Water Act and the Clean Air Act which protect species and habitats. “In upholding and being in compliance with those laws, the military is required to protect species and habitats while at the same time conducting its training and testing mission,” said Lovich. “This means not only providing passive protections for species and habitats, but also providing thorough and active conservation.”

For instance, the Sikes Act, originally enacted in 1960, does exactly that. Every military installation with “significant natural resources” as defined under the Sikes Act is required to complete an Integrated Natural Resource Management Plan (INRMP). Each plan must be approved by the installation’s commanding officer, the state wildlife agency, and the U.S. Fish and Wildlife Service. These plans are updated every several years, and the signatories gather annually to review compliance and performance in implementing the plans. “Thus, every conservation action on military lands basically has its roots in these INRMPs,” said Lovich. “These documents and the installation natural resource management programs involve every facet of required and voluntary actions.” The management programs can include regular monitoring of species and habitats, on and off-base land acquisitions to support species and habitats and partnering actions.

The 2015 to 2019 INRMP for MCB Quantico states that in part, its management actions provide for fish and wildlife management, land management, forest management, outdoor recreation management and environmental restoration. The INRMP states that nearly 88 percent of the land area of the base—about 52,000 acres—is forested and approximately 6 percent of the installation is classified as wetlands.

According to Lovich, the military did not set out to be as significant as it is in conservation. “Today, military lands have three times more threatened and endangered species per acre of any U.S. Federal landowner on a per acre basis,” said Lovich. “Basically they have the best of the last of many species and habitats,



Above: The nesting area of Western Snowy Plover and California Least Tern at Del Mar Beach on Camp Pendleton, Calif. Inset: A California Least Tern prepares to take flight from its nesting area at Del Mar Beach on Camp Pendleton, Calif., May 19, 2017. (Photos by LCpl Brooke C. Woods, USMC)



Personnel with the Conservation Natural Resource section of Range Management Department, MCAS Yuma, Ariz., pose for a photo on the air station’s ranges Jan. 17, 2017. The conservation staff is responsible for all areas of wildlife management and recreation on the air station’s 1.2 million acres of ranges.

SGT ALLISON LOTZ, USMC



LCpl David Im, engineer equipment operator, Support Co, 7th Engineer Support Battalion, 1st Marine Logistics Group, uses a medium crawler tractor to cultivate the soil in order to improve the tern breeding colony area terrain at Del Mar Beach, MCB Camp Pendleton, March 5. (Photo by Cpl Emmanuel Necochea, USMC)

and got there unwittingly because of the secure and protected nature of its lands.”

The Department of Defense has about 25 million acres of land, and about 415 installations with INRMPs, just in the United States, said Lovich. In contrast, the National Park Service manages 84 million acres of land according to Boston University biology professor Richard Primack in the 2014 edition of his textbook, “Essentials of Conservation Biology.” Many military bases have become de facto refuges for hundreds of federally listed threatened and endangered species, many of which have their largest populations on military bases.

Lovich considers Naval Weapons Station Seal Beach in southern California and Patuxent River Naval Air Station in Maryland to be great examples of conservation areas. These bases both also double as national wildlife refuges. “They are true examples of conservation and mission,” said Lovich.

A 2018 Department of Defense Natural Resources Program fact sheet states the number of federally listed plant and animal species on military installations is approximately 450. Threatened and endangered species such as desert tortoises, manatees and red-cockaded woodpeckers have found safe havens on military lands.

To accomplish conservation goals and comply with federal and state laws, the Department of Defense spends a lot on conservation efforts. The DOD Natural Resources Program fact sheet indicates that the Department of Defense invested nearly \$340 million in FY2017 to continue to implement long-term conservation programs on military installations.

Lovich explained that another reason military bases preserve natural habitat is to support the training mission of the troops. “Having large wildlands and open spaces for training is vital to ensuring our troops train how they fight, and accomplish their mission,” said Lovich. “In

this sense, wildland habitats are looked upon favorably by the military, and such landscapes are actually vital to the training mission.”

Of course, there are downsides to conservation on military bases as well. Many bases contain toxic waste dumps and high levels of chemical pollutants. Training exercises can have detrimental effects on the environment. “Military testing and training is not always beneficial to the environment,” said Lovich. “We drop bombs, drive tanks, and maneuver gigantic equipment. But we don’t do it every day, everywhere.” The INRMP for MCB Quantico calls for “No net loss in the



EVE A. BAKER

Training may be changed or delayed due to challenges caused by animals on bases throughout the Corps. Beavers are prevalent aboard MCB Quantico and can change the landscape by felling large trees such as the one seen here.



COURTESY OF RALEIGH ECOLOGICAL SERVICES

The endangered dwarf wedgemussel is a small bivalve, rarely exceeding 45 mm in length, and is found on MCB Quantico, Va.

capability of military installation lands to support the military mission of the installation.”

“The good thing about military lands is that we have enough land to accomplish our mission, and don’t need all of it all the time,” said Lovich. “There is a net benefit to our landscapes such that species generally have enough habitat that is not impacted to survive, and even thrive.” For example, the Air Force uses only about 3,000 acres of its 106,000 acre base in Avon Park, Fla., according to Primack.

Surprisingly, damage caused by military training maneuvers can benefit some organisms, said Lovich. For example, in some cases, the holes left from bombing and ordnance are vital to vernal pool species such as fairy shrimp. Vernal pools are temporary pools of water that form after spring rains and snowmelt. They provide breeding habitats for amphibians like frogs and salamanders, as well as invertebrates, like fairy shrimp and aquatic insects. The holes from explosions also fill with rainwater, and in effect, provide artificial vernal pools. “Same for our ruts from tracked vehicles,” said Lovich. He adds that buffers around firing ranges for human safety can become a virtual “no man’s land” and provide a home to at-risk species and habitats.

The Quantico INRMP states that populations of threatened and endangered species are being protected through the establishment of buffer zones around locations where they have been discovered. One threatened and one endangered plant species—the small whorled pogonia and the harperella—and the endangered freshwater dwarf wedge mussel were found on the base. Bald eagles, which were taken off the endangered species list in 2007, were also found nesting at Quantico. The INRMP states that many more common species of animals, such as red and gray foxes, coyotes, deer, beavers,

otters and wild turkeys are also found on the base.

Lovich explained that the most interesting animals he has found so far on his herpetology survey at Quantico are spotted turtles, which are rare in that area, and had not been found on the base in 24 years. Lovich also caught the first copperhead, a venomous snake species, during the survey at Quantico last spring. “It’s nice to be rewarded with significant finds,” he said.

“Most Americans wouldn’t understand that if you want to see the best of the rarest things in America, don’t go to a national park, go to a military base. That’s simply a fact.” He thinks that most people would be surprised by the overall contribution of military bases to America’s biodiversity heritage.

Access to military bases differs among and within areas on those bases and is fluid. Lovich recommends checking about access with local military installations ahead of time or checking base websites.

“Some are national wildlife preserves under USFWS, like Naval Weapons Station Seal Beach, and have considerable opportunities for access,” said Lovich. “Others have nukes or high-tempo operations that are virtually prohibitive to access by the public. The wildlife doesn’t know the difference, of course.”

Author’s bio: Don Lyman grew up in a Marine Corps family. He is a freelance science and environmental journalist, biologist and hospital pharmacist. He writes regularly for The Boston Globe and has also been published in Undark, The Christian Science Monitor, Southwest Airlines Magazine, High Country News, earthisland.org and elsewhere. He is also a regular contributor to the Living on Earth environmental radio program on National Public Radio. He can be reached at donlymannature@gmail.com. 🐍



COURTESY OF CHRIS PETERSEN

Chris Petersen holds spotted salamanders that were found during a recent herpetology inventory at MCB, Quantico, Va.



COURTESY OF CHRIS PETERSEN

Rob Lovich displays a copperhead snake found during a herpetology inventory at MCB, Quantico, Va.