



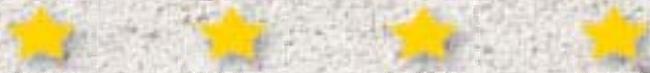
# FOR THE GOOD





# OF US ALL

## CONSERVATION PARTNERSHIPS WITH THE MILITARY



BY MARY ELLEN COLLINS



## Conservationists at Association of Zoos and Aquariums (AZA)-accredited facilities count military personnel among their most committed partners.

One major reason for this involvement is the fact that the United States Department of Defense owns a great deal of land, with many bases located on large tracts that encompass multiple ecosystems and are home to threatened or endangered species. This has resulted in a wide range of collaborative efforts that serve conservation goals while enabling the U.S. military to carry out their training and other activities.

“Beyond the fact that there are several laws, regulations and policies governing the protection of wildlife and their habitats on military installations, it is just the right thing to do,” said Joe Madison, natural and cultural resources manager at U.S. Naval Base Guantanamo Bay in Cuba. Madison is the liaison for work being done by Dr. Peter Tolson, director of conservation and research at the Toledo Zoo in Toledo, Ohio. Tolson has been studying and tracking the Cuban boa in order to develop a species management plan to ensure its survival on the base. This project, which began in 2000, perfectly illustrates the symbiotic relationship between a zoo and the military.

“Joe handles all my logistics and aids me in tracking the boas,” Tolson explained. “The veterinary detachment there is staffed by the Army, and the vet does the radio-transmitter implantations for me. I also have a naval partner at the Naval Facilities Engineering Command Atlantic in Norfolk, Virginia. I send him all of the radio telemetry data I acquire, and he’s using GIS (Geographic Information System) for conservation mapping for Guantanamo. We are united in a common goal of recovering and protecting species at risk.”

Although all bases have a natural resources department, the expertise brought by zoo and aquarium professionals is invaluable. “Pete brings a level of knowledge on specific species, such as the Cuban boa, that the natural resource manager simply doesn’t have the time to master,” said Madison. “Consequently, our partnership allows us to tap into his knowledge and expertise to the benefit of the wildlife, the natural resource program and the military.”

Tolson’s project is just one example of the ways in which partnering with the military is a positive force in conservation today.







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### **Research and Monitoring**

In some cases, collaborations take the form of research partnerships, with the military funding studies that will help them conduct their activities without negatively affecting the environment.

“The Navy and the Department of Defense are very interested in our work,” said Mark Swingle, director of research and conservation at the Virginia Aquarium & Marine Science Center in Virginia Beach, Va. “We’re dealing with protected and endangered species, and the military has to monitor their impact on them.” He has been contracted to work on a variety of projects with naval bases in the area, including air and boat surveys documenting mammal activities in waterways that are training courses.

“In order to do anything on the water, you have to do an environmental assessment of any impact you will have,” he said. “When it’s time to do more construction or bring in more vessels, the military wants to have the baseline information that informs how their actions may or may not affect endangered species. For example, we are finishing up our second year on a grant to look at fine-scale movement of sea turtles in the Chesapeake Bay and other waters in and around naval facilities. We’re tagging and monitoring sea turtles and analyzing data on turtle movement, so the Navy scientists can take that information and do modeling with it”

Although the Navy has its own experts, non-Navy researchers perform most of the work on their marine species monitoring program, according to Joel T. Bell, senior marine resources specialist at Naval Facilities Engineering Command Atlantic.

“We rely heavily on researchers from academic institutions and groups like the Virginia Aquarium & Marine Science

Center to support much of our work. The researchers from the Aquarium are great partners for this project because they are local and have extensive experience working with sea turtles. They have the facilities and permits to support the tagging project and also have research staff experienced both in the field and doing data analysis. We have a very good working relationship with them and frequently join them on day trips to collect turtles for tagging.”

### **Species Recovery**

In the Puget Sound area, the Washington Department of Fish and Wildlife (WDFW) has taken the lead in working with local AZA-accredited facilities to restore populations of the Taylor’s checkerspot butterfly and the Oregon spotted frog on Joint Base Lewis-McChord (JBLM).

“Only 1 percent of prairie habitat remains in the Puget lowlands,” said Karen Lewis, conservation research associate at the Oregon Zoo in Portland, Ore. “All prairie species are in trouble. The last population of Taylor’s checkerspot butterflies is on the live fire artillery range at JBLM.”

WDFW collected butterfly offspring from the base, and the Zoo handled the subsequent rearing, feeding and housing of them while they overwintered. When they woke up, staff from both organizations released them back on the base.

“The collaboration between these three very different entities has been key to our reintroduction success,” said Mary Linders, prairie/oak species recovery biologist with WDFW. “We bring technical expertise to the table, including knowledge of life history and population requirements, assessment of habitat quality and other threats, as well as design and implementation of reintroduction

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and monitoring methods. The Oregon Zoo brings a wealth of animal husbandry experience, rearing facilities and an impressive capacity to interpret animal behavior and adjust rearing techniques to maximize animal welfare and productivity. Finally, none of it would be possible without the support of JBLM. They supply us with funding and access to training lands to support propagation, reintroduction and monitoring, and in turn, WDFW supplies JBLM with data on the species distribution and numbers, and recommendations on managing habitat and threats to avoid, minimize and mitigate impacts to the species, enabling no net loss in military training.”

The WDFW also worked with the Oregon Zoo and other AZA-accredited facilities, including the Northwest Trek Wildlife Park in Eatonville, Wash., Point Defiance Zoo & Aquarium in Tacoma, Wash., and Woodland Park Zoo in Seattle, Wash., to reestablish the local population of the Oregon spotted frog, which is endangered in Washington.

“The habitat the frog needs is wetland prairie, and most of that land is taken up by malls and housing,” said Dr. Jennifer Pramuk, curator at Woodland Park Zoo. “The military holds the best remaining habitat for the frog.” Since 2008, the WDFW has collected eggs, taken them to the zoos for

head starting and released more than 5,000 frogs onto JBLM’s wetlands.

“The ultimate goal of the Oregon spotted frog reintroduction effort at JBLM was to see if we could get a self-sustaining population,” said Lisa Hallock, wildlife biologist with WDFW. “WDFW will continue to manage habitat to enhance sites for Oregon spotted frog egg laying, and we will both continue to monitor suitable habitat in the spring for egg masses.”

#### **Habitat Restoration**

The National Aquarium in Baltimore, Md., has joined forces with the Department of Defense to restore the 4-mile sand dune along the Naval Air Station Oceana Dam Neck Annex in a mutually-beneficial effort. Storms like Hurricane Isabel have compromised beach stability and had a negative impact on training sites, as well as natural habitats.

“A lot of naval bases are built on the shoreline, and the dunes are their only defense. If a dune is washed away, it threatens the base operations,” said Charmaine Dahlenburg, manager of the Aquarium’s Chesapeake Bay program. “From the Navy perspective, the goal of dune restoration is to defend the base. From the Aquarium’s perspective, the goal is to restore the habitat for sea turtles, birds and

crustaceans. It is also a protection from breaching or saltwater intrusion because if saltwater moves inland, it can harm the ecosystem that is not salt tolerant.”

Once or twice a year, the Aquarium hosts two-day events during which staff, base personnel and community volunteers plant native vegetation and install fencing. “The Navy also collects Christmas trees and puts them on the dune because they’re great for collecting sand,” said Dahlenburg.

In a unique collaboration, Mote Marine Laboratory & Aquarium in Sarasota, Fla., has engaged volunteers from the Combat Wounded Veteran Challenge program and SCUBAnauts International to rebuild dead and damaged areas of the reef in the Florida Keys National Marine Sanctuary. The veterans group became involved through SCUBAnauts, a youth organization that was already assisting in the effort to plant coral fragments grown in Mote’s underwater coral nursery.

Retired U.S. Navy Captain Dave Olson founded SCUBAnauts and is co-founder and executive director of the Combat Wounded Veteran Challenge program. “The first year Mote worked with SCUBAnauts, the Combat Wounded Veteran Challenge team also arrived by boats, ready to plant corals,” said Dr. David Vaughan, Mote’s manager of the Coral Reef Restoration Program. “It was a pleasant surprise for us, and a great project was initiated.”

This year, more than 50 divers planted approximately 250 fragments of coral. “The most rewarding part is seeing how well the Combat Wounded Veteran Challenge team, the SCUBAnauts and the Mote scientists hit it off as a diverse group with a common cause,” said Vaughan. “This amazing team effort has done great things for corals and for the people involved.”

For those who do not automatically associate the military with conservation, these collaborations provide a fresh perspective. Whether they are funding research projects or taking a more hands-on role, military facilities and personnel play an important part in preserving and protecting natural habitats and the animals that occupy them. Being committed to ecosystem health adds a whole new meaning to the concept of protecting and defending our country.

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