



# Species at Risk Assessment & Recommendations (Part II): Planning and Management

### Background:

Department of Defense lands play an essential role in maintaining homeland security, and are also important for safeguarding the nation’s natural heritage. The 25 million acres managed by the Department of Defense (DoD) support more federally listed species than any other major federal agency. Yet DoD installations are often islands of biodiversity within increasingly developed landscapes, which raises difficult natural resource management issues.

### Objectives:

- 1) to complete an analysis of species at risk found on military lands in order to focus management efforts on high-priority installations and towards high-priority species, with the goal of preventing population declines that could lead to the need for federal listing.
- 2) to develop management guidelines for protecting four important species at risk found on DoD installations.

### Summary of Approach:

For this study, we defined species at risk on DoD installations to be: (1) plant and animal species that are not yet federally listed as threatened or endangered under the Endangered Species Act (ESA), but that are either designated as candidates for listing or are regarded by NatureServe as critically imperiled or imperiled throughout their range **and** (2) with populations on or near DOD installations.

### Benefit:

Proactive conservation of imperiled species and their habitats on and around DoD installations can help preclude the need for federal listing, reduce recovery costs, and protect significant biological diversity, while enabling the services to continue providing high-quality military training.

### Accomplishments:

Key findings of the nationwide assessment of species at risk found on DoD installations included:

- Of the 995 DoD installations analyzed, 281 (28%) contain species at risk, representing a total of 587 different species, about two-thirds of which are plants.
- Just 63 of these 587 species are currently identified as candidates for federal listing under the ESA. The remainder are considered critically imperiled or imperiled based on NatureServe global conservation status assessments.

- Twenty-eight of these species are known to exist only on DoD installations, underscoring the importance of DoD conservation efforts.
- Geographic patterns of species imperilment on military lands are consistent with nationwide patterns, with particularly high numbers found in Hawaii, central and southern California, southern New Mexico, and Florida.



Detailed management guidelines were developed for key species at four DoD installations, with scientists from state natural heritage programs working with biologists and natural resources managers from the U.S. Fish and Wildlife Service and each DoD installation. The species and pilot locations were:

- **Army:** Round leaf four o'clock (*Mirabilis rotundifolia*) on Fort Carson and Piñon Canyon Maneuver Site in Colorado.
- **Navy:** Island fox (*Urocyon littoralis*) on San Clemente Island Naval Reserve and San Nicolas Island in California.
- **Marines:** Coastal goldenrod (*Solidago villosicarpa*) on Camp Lejeune in North Carolina.
- **Air Force:** Florida bog frog (*Rana okaloosae*) on Eglin Air Force Base in Florida.

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Photos top to bottom:  
• Round leaf four-o'clock by Susan Spackman Panjabi, Colorado NHP.  
• Florida bog frog by David Printiss.  
• Coastal goldenrod by Dale Suiter, USFWS.  
• Island fox.