



# **Establishing New Pathways to Recovery of Species Listed Under the Endangered Species Act**

06-330

## **Background:**

Increasing human populations and resulting urban, suburban, and rural development have increased the value of generally undisturbed military reservations to federally listed T&E species. Military natural resource managers are thus increasingly faced with challenges of balancing endangered species conservation with military missions and the need for training readiness. This challenge is complicated by incomplete or inconsistent directives for recovery of listed species. Ambiguous recovery goals for species found on Department of Defense (DoD) lands can lead to resource management programs that fail to identify the most successful recovery actions, yet compromise the military's mission to provide realistic training opportunities.

## **Objective:**

The primary objectives of the proposed research are 1) assess the recovery status of T&E on DoD installation lands and identify success stories; 2) compare the status of T&E species on military lands with that of T&E species not found on military lands; 3) identify those species that could be future success stories in relatively short time periods; 4) develop realistic time frames for evaluating the recovery status of a listed species; and 5) identify management practices on DoD lands that could prove effective in general species recovery.

## **Summary of Approach:**

We developed a database that included conservation status of conservation species that occur on DoD lands. We used this information to provide a comprehensive assessment of the conservation status and recovery potential for T&E species on DoD lands and identify possible future success stories. We assessed information available about the status and recovery programs for listed species (e.g., population status, status of recovery plans, percentage of recovery tasks accomplished, funding received for each species) from US Fish & Wildlife Service (USFWS) annual reports to Congress we also examined reports to congress, articles in the referred literature. We compared these numbers for species on DoD lands with those for other T&E species nationwide. We examined success stories identified by DoD. The rate of recovery of a listed species, even under the most optimal conditions for its population growth, will ultimately be limited by the demographic characteristics of its life history. Demographic attributes such as age at first reproduction, average number of young produced, and survival of young to reproductive age will determine

the minimum possible time period over which a listed species can possibly experience 'recovery'. Recovery times for T&E species will vary by species and the status of the species' population(s) at the time of listing. The multiple factors influencing recovery times can be partitioned into those that are inherent to the species life history and ecology (intrinsic factors) and those that have to do with the human-induced threats and natural environmental variation (extrinsic factors).

## **Benefit:**

No criteria exist to assess recovery goals that are based on the biology of listed species. To evaluate the success of the ESA at achieving recovery, the evaluation criteria must be based on the demographics of the listed species. Given such criteria it is possible to make a fair evaluation of whether the conservation actions that have been implemented are moving the species towards recovery. Failure to meet recovery goals in the expected timeframe should then trigger an investigation of where recovery efforts are failing. Results of this research should provide managers with tools to more effectively recover species and identify species that could be recovered quickly and the foundation for more in-depth studies of improved methods for recovery.

## **Accomplishments:**

There is a conservation advantage to T&E species occurring on DoD lands: fewer extinctions, more recovered species achieved and for those species with 75% or more of occurrences on DoD installations improved population status and greater number of recovery objectives achieved. Thirty two species are possible speedy success stories species that could be delisted in the near future. Seventy-one percent of species occurring on DoD lands will require species specific management intervention after recovery goals have been met. Recovery Management Agreements provide a means by which delisting may occur for these species that are conservation reliant.

## **Contact Information:**

Name: J. Michael Scott  
Title: Senior Scientist, USGS  
Address: P.O. Box 441141  
Phone: 208-885-6960  
Fax: 208-885-9080  
Email: mscott@uidaho.edu