

Effective strategies in conservation biology for safeguarding endangered species.

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Introduction

Moreover, the procedures of federal agencies charged with implementing the Endangered Species Act in some cases make it difficult for interested outside reviewers to evaluate the agencies' scientific findings and methodology. However, the Endangered Species Act also gives interested individuals and groups several opportunities to provide input into the process of managing threatened and endangered species. Conservation biologists should practice focused advocacy by taking advantage of such opportunities to steer law in a more biologically sound direction [1].

As a result, direct manipulation of genetic structure in endangered species may rarely be necessary. In contrast, the techniques that genetics provides (e.g., allozyme, restriction site, and nucleotide sequence analysis) are likely to be broadly useful. They can help to identify evolutionarily distinct populations worthy of conservation concern, and they can provide a window on otherwise unobservable demographic processes. Although conservation at an ecosystem or landscape scale has naturally focused on ecological issues, long-term success depends on the ability of native populations to respond adaptively to environmental change. The evolutionary impacts of habitat fragmentation are uncertain, but it is likely that widespread continuously distributed species are already feeling them. Invasive exotics pose a severe threat to many native populations and communities. The limited success of biological and herbicide control programs, even in asexual species with relatively little genetic variation, only emphasizes the importance of identifying invasives before they become widely established [2].

The chapter discusses different theories that are useful in controlling pests in the ecosystem. From ages, different methods are adopted to conserve the natural enemies of the pests. It also explores the way the endangered species or the species that are at the brink of extinction are utilized in the conservation of natural enemies of the pests. Because the endangered species are utilized in controlling pests, it is benefiting the ecosystem. In the last a few decades, different concepts have emerged in the conservation of the natural enemies of the pests. The new concepts that have emerged to conserve the natural enemies of the pests have benefited

the ecosystem. Different ecological theories have come up to control pests. The chapter says that one should understand, before thinking of controlling pests, the habitat in which the pests grow. If one can have a clear idea about the environment in which the pests thrive, it is easier to control them. If the target animal species are predatory birds or primary parasitoids, necessary action can be taken depending on that [3].

Species threatened with extinction are the focus of mounting conservation concerns throughout the world. Thirty-seven years after passage of the U.S. Endangered Species Act in 1973, we conclude that the Act's underlying assumption—that once the recovery goals for a species are met it will no longer require continuing management—is false. Even when management actions succeed in achieving biological recovery goals, maintenance of viable populations of many species will require continuing, species-specific intervention. Such species are “conservation reliant.” To assess the scope of this problem, we reviewed all recovery plans for species listed as endangered or threatened under the Act. Our analysis indicates that 84% of the species listed under the Act are conservation reliant. These species will require continuing, long-term management investments. If these listed species are representative of the larger number of species thought to be imperiled in the United States and elsewhere, the challenge facing conservation managers will be logistically, economically, and politically overwhelming. Conservation policies will need to be adapted to include ways of prioritizing actions, implementing innovative management approaches, and involving a broader spectrum of society [4, 5].

Conclusion

The U.S. Endangered Species Act does not recognize distinctions among species at different points on this conservation-reliance continuum; species are either listed (as threatened or endangered) or not. After a previously listed species is delisted, it receives no legal protection beyond that accorded to other species that are not (legally) imperiled. It is this lack of species-specific protection following delisting that is the source of the problem facing the Kirtland's warbler, the grizzly bear, and the other species that are conservation reliant.

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