

# Endangered Species UPDATE

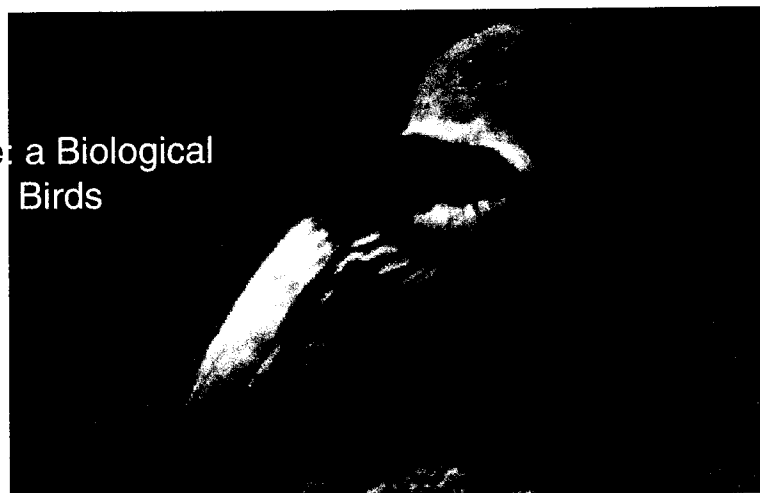
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pages 117 -148

School of Natural Resources and Environment  
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- 118 U.S. Endangered Species Management: the Influence of Politics  
John R. Stinchcombe

- 122 *Report from the Field*  
Assessing the Conservation  
Value of Shade-Grown Coffee: a Biological  
Perspective using Neotropical Birds  
Thomas V. Dietsch

- 125 Can Shade-Grown Coffee  
Help Tropical Biodiversity?  
A Market Perspective  
Kent D. Messer, Matthew J.  
Kotchen, and Michael R. Moore



- 132 *Book Review*  
Animal Underworld: Inside America's Black Market for Rare and Exotic Species  
Joel T. Heinen



- 133 *Marine Matters*  
Sustainable Salmon: Marine  
Stewardship Council's  
Eco-labeling Program  
Jim Humphreys and Karen Tarcia
- 138 Special Series: Habitat  
Conservation Planning  
Where Property Rights and  
Biodiversity Converge  
Part I: Conservation Planning  
at the Regional Scale  
Gregory A. Thomas
- 147 News from Zoos

# U.S. Endangered Species Management: the Influence of Politics

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## Abstract

*The influence of politics on the practice of conservation science and endangered species management is widely accepted, but usually reported in case studies. This approach, while helpful, prevents a comprehensive assessment of the role of politics in endangered species management. In an attempt to assess the influence of politics on the management of U.S. endangered species, this article compares the number of endangered species listings and recovery plan approvals during the last three presidential administrations. Results indicate that the Clinton administration appears to have approved significantly more endangered species listings and multispecies recovery plans than did Presidents Reagan and Bush. Once differences in U.S. Fish and Wildlife employee numbers are accounted for, however, these differences disappear. These results suggest that politics does influence endangered species management, and that this influence is manifested by different commitments of human and financial resources.*

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## Introduction

Conservation biology is a discipline that seeks to prevent the extinction of species and the associated loss of biodiversity. When the preservation of biodiversity conflicts with economic development or other social goals, conservation issues often become deeply politicized (e.g., the case of Northern Spotted Owl and timber interests). In these cases of competing interests and goals, conservation efforts are pursued in a political process—a process that determines both who governs and in whose interests the government is run. At the national level, actions by the president, congress, and courts are all measures of a changing balance in the competition for power and advantage, and this balance of power determines what conservation policies prevail, and thus in whose interests the government is run.

While some conservation biologists advocate the involvement of scientists in this political process, even to the point of filing briefs of amici curiae in the U.S. Supreme Court (e.g., Cairns et al. 1994), others have cautioned that involvement of conservation biologists in political and

legal disputes will compromise their public standing as impartial scientists (Wagner 1999). Despite this debate about whether the involvement of scientists in political disputes is beneficial, that politics definitely influences the practice of conservation is neither questioned nor debated. However, the extent to which politics influences conservation practices has proven to be difficult to quantify, and is generally reported as anecdotes. The U.S. Endangered Species Act, therefore, represents an ideal case study with which to evaluate the influence of politics on endangered species conservation using simple but easily quantifiable variables.

The U.S. Endangered Species Act (E.S.A) is the nation's strongest and most powerful conservation tool, and has served as a model for other countries (Rohlf 1991). The full mechanics of how the E.S.A. functions have been described in detail elsewhere (Bean 1983; Nicholopoulos 1999). Briefly, a decision is made to list a species as threatened or endangered, either by the U.S. Fish and Wildlife Service (FWS) or the U.S. National Marine Fisheries Service (NMFS);

these agencies publish their intent to list species in the U.S. Federal Register. After a period of public comment, a final decision by FWS or NMFS on whether to list a species is also published in the Federal Register. Once species have been listed, FWS and NMFS are mandated to produce recovery plans for each species, or for groups of species for so-called "ecosystem" or "multispecies" recovery plans that include suites of species. The recovery plan represents steps FWS and NMFS believe are necessary for the long term survival of the species. A species is ultimately delisted when certain objectives or recovery criteria are met that indicate that long-term survival is ensured.

There are at least three potential sources of political influence in the endangered species management process: listing, recovery plan approval, and delisting. This is because the actions of federal agencies can be just as politicized as campaigns for elected office. For example, because the agencies charged with these important conservation steps (NMFS and FWS) are federal agencies under the control of the U.S. executive

branch, the president is doubly important to their implementation. The president proposes policies, makes appointments to governmental agencies, presents budgets, lobbies for the passage of legislation, and either signs or vetoes legislation, all of which affect endangered species management. In addition, one of the most important powers of the presidency is the potential that its occupant has to persuade. Indeed, the ability to influence people both within and outside government is one of the distinguishing features of the modern presidency (Neustadt 1960). It is therefore possible that changes in the U.S. president (or the party controlling the U.S. presidency) could have indirect effects on endangered species management by altering the rate of endangered species listings, recovery plan approvals, and delistings.

## Methods

To quantitatively evaluate whether changes in the U.S. president or the partisan affiliation of the presidency affects endangered species management, I considered whether the simple response variables of the number of endangered species listings or the number of recovery plans approved differs by president or political party. Since few U.S. species that have been delisted, there is inadequate sample size to quantitatively examine the delisting process.

I gathered information on endangered species listings from a compilation and reprint of 50 CFR 17.11 and 17.12. These data were current as of 31 December 1999, and are available via <http://endangered.fws.gov>. For these counts, only listings for U.S. species were scored. I gathered data on endangered species recovery plan approvals from the U.S. Fish and Wildlife Reference Service (Bethesda, MD). This document was current through 1999, and is available via <http://fa.r9.fws.gov/r9fwrs/>. I only scored recovery plans approved from 1981 to 1999. Excluding plans approved from 1974-1980 eliminated only 7% of the plans that had been approved as December 31, 1999

from the dataset. While counting the number of plans approved by each administration, I also counted the number of multispecies plans approved by each administration. A recovery plan was scored as a multispecies plan if it was obvious from the recovery plan title if it pertained to more than one species (e.g., fishes).

I evaluated differences between presidential administrations in the number of plans and listings approved with the following statistical procedure. First, I calculated a null expectation of the number of approved listings or recovery plans. This was accomplished by dividing the total number of approved listings or recovery plans by the total number of years to give a mean rate of listings or recovery plan approval per year. The mean rate was multiplied by the number of completed years in office for each Presidential administration (8 for Reagan, 4 for Bush, and 7 for Clinton) to arrive at an expected number of listings and recovery plan approvals per administration. The observed and expected number of listings and recovery plan approvals were compared with a chi-squared test.

One potential mechanism underlying any differences between administrations detected with this procedure might be differential commitments of human and financial resources to endangered species management made by each president or each administration. If this is the case, then once these differences are accounted for, differences between the parties or presidents should disappear. To do this, I used the general linear models (GLM) procedure of SAS statistical software to compare the mean number of listings per employee and the mean number of recovery plan approvals per employee in each presidential administration (SAS Institute, 1990).

I calculated the number of FWS employees as the average number of employees for a given year employed by the U.S. Fish and Wildlife Service, from 1982-1999. Data from 1981 were not available, and were scored as missing data

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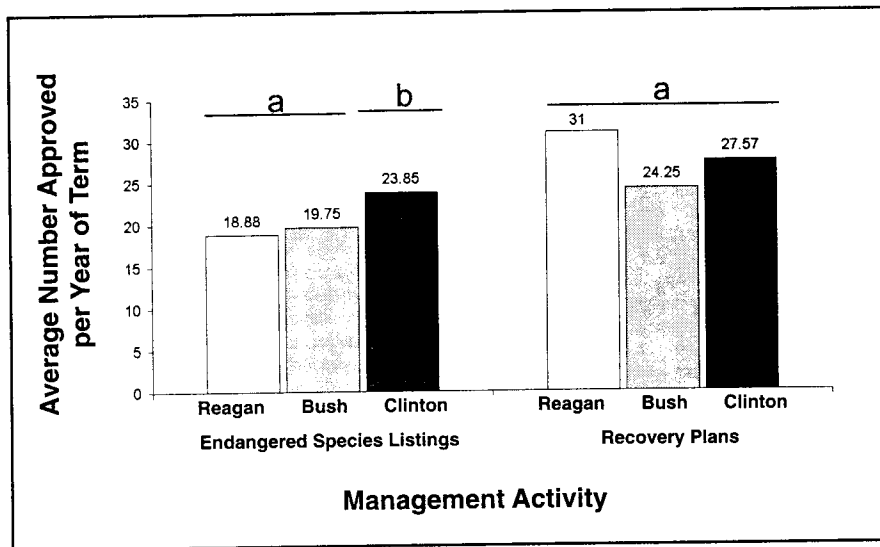
Cover: Western tanager (*Piranga ludoviciana*) and yellow warbler (*Dendroica petechia*), found in shade coffee plantations, courtesy of Seattle Audubon Society and Jim Flynn, Jr. (respectively).

The views expressed in the *Endangered Species UPDATE* may not necessarily reflect those of the U.S. Fish and Wildlife Service or The University of Michigan.

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**Figure 1.** The presence of political influence on two endangered species management processes, the listing of species and the creation of recovery plans. The number of listings per year and the number of recovery plans approved per year are shown for the last three U.S. presidential administrations. Bars sharing the same grouping letter are not statistically significantly different from each other.

in analyses. Since not all FWS employees work on endangered species management, these data represent a maximum upper bound. Data for these analyses were provided by the U.S. Office of Personnel Management, Statistical Analysis and Services Division, Washington, D.C., U.S.A.

### Results and discussion

The number of listings and the approval of endangered species recovery plans in the U.S. does not appear to be free of political influence or bias. There are marginally significant differences between the number of endangered species listings during the Reagan, Bush and Clinton administrations: the Clinton administration appears to have approved more endangered species listings than did the Reagan and Bush administrations, as compared to the null expectation that listings were approved at a fixed rate per year ( $p=0.09$ ; Figure 1). Indeed, when these comparisons are made on the basis of the political party that controlled the presidency, rather than individual presidential administrations, Democrats approved significantly more endangered species listings than did Republicans ( $p=0.031$ ).

Despite the apparent political bias in

the number of endangered species listings, there does not appear to be any significant difference in the number of recovery plans approved—either for comparisons of the Reagan, Bush, and Clinton administrations ( $p=0.10$ ) or for comparisons between Democrats and Republicans ( $p=0.64$ ).

When differences in the number of employees are accounted for, there is no significant difference between the Reagan, Bush, and Clinton administrations in the average number of listings per employee ( $p=0.56$ ) and the number of recovery plans per employee ( $p=0.11$ ). These patterns remain the same when considered on a party basis ( $p>0.17$  for all comparisons). These data indicate that differences between parties and presidents in endangered species listings appear to be driven by differences in the commitment of human and financial resources to endangered species management. These data also show the close connection between political, social, and economic factors and the practice of conservation science—the increased action taken on endangered species listings in the Clinton administration appears to be due to an increased commitment of human and financial resources

to the U.S. Fish and Wildlife Service. If the connection between FWS employees and administrative action on endangered species management is a firm one, then it is possible that increased funding for endangered species management would expedite the bureaucratic process.

Another potential area where political influences might be permeating the endangered species recovery planning process is the approval of multispecies recovery plans. The Clinton administration approved significantly more multispecies recovery plans than did the Reagan and Bush administrations ( $p=0.00002$ , Figure 2). It is difficult to distinguish, however, whether this is the manifestation of a policy shift between the Republican administrations of Presidents Reagan and Bush and the Democratic administration of President Clinton (Babbitt 1995), or a reflection of conservation biology's shift from single-species to ecosystem and multispecies management strategies (e.g., Scott et al. 1993). It is unlikely, however, that all of this difference is solely a temporal trend in conservation biology, because the data for multispecies plan approvals show no clear increasing or decreasing temporal trend. If the presidency changes parties in the 2000 elections, however, within a few years it would be possible to repeat the analyses reported here with similar data without temporal factors as a confounding variable.

### Limitations of the analysis

Another caveat that applies to this analysis is due to the limitations of the approach. The analyses I performed simply compared the number of listings or plan approvals during the years that a president held office with the null expectation, mainly because of the prominent role of the presidency in the American political and governance process (see above). It is possible that other factors acting during the time that a president was in office could also influence the variables measured here.

It is important to note, however, that

this procedure could be easily modified to evaluate their influence. For example, one could compare listings and approvals during election and non-election years, times of economic recession and expansion, times of military conflict versus international peace, before and after major court cases and settlements, before and after initiatives such as "Reinventing Government," or during blocks of time that different political parties controlled the House of Representatives or U.S. Senate. Despite the potential influences of these external factors, it is likely that the priorities and philosophy of a president can and do modify their relative influence on administrative actions on endangered species conservation.

### Conclusions

The apparent presence of political influence on U.S. Endangered Species management gives reasons for both caution and optimism. First, identifying political influence in listing species and approving recovery plans is necessarily a coarse-scale analysis, and simply listing species and creating recovery plans is not equivalent with actually managing them to recovery. Political considerations might in fact make some of the management options necessary for a true recovery unappealing, and the extent of this type of political influence would be difficult to quantify and analyze. Even if an absence of political bias in the listing of species and the approval of recovery plans is achieved, political considerations might prevent endangered species management from being fully funded. Indeed, U.S. Endangered Species recovery efforts are often hindered by a lack of funding (National Academy Press, 1995).

Second, the differences reported here between the three past presidents and the political parties on endangered species plan listings and multispecies plan approvals need not be bad news. Although these data indicate that endangered species management has not yet received bipartisan support despite the overwhelming support

of the U.S. public (Czech and Krausman 1999), they also suggest that differences, and therefore potential choices for the U.S. voter, exist between the two major political parties when it comes to conservation.

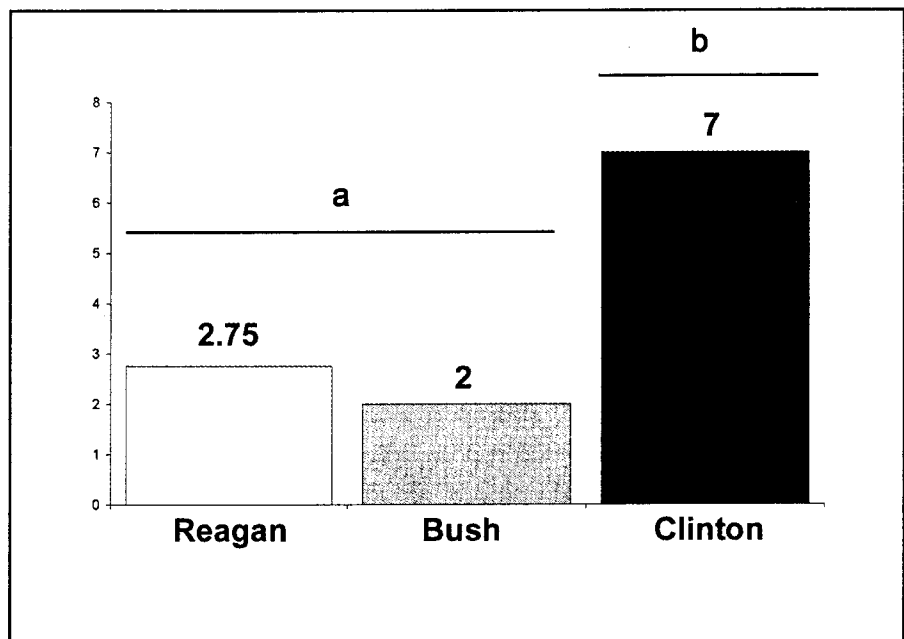
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**Figure 2.** The number of multispecies recovery plans approved per year for the last three U.S. Presidential administrations. Bars with different grouping letters are significantly different from each other.