

## Peer-Reviewed Articles

# **Narrowing the Definition of Endangered Species: Implications of the U.S. Government's Interpretation of the Phrase "A Significant Portion of its Range" Under the Endangered Species Act of 1973**

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*In 2007, the Solicitor for the Department of Interior advocated for an interpretation of the phrase, "a significant portion of its range," that would effectively narrow the definition of endangered species under the Endangered Species Act. We review the controversy concerning the government's interpretation of the "significant portion of its range" phrase, focusing on recent case law, the Solicitor's Memorandum, and relevant listing actions. We concentrate our discussion on two key conclusions reached by the Solicitor: (a) the term "range" in the phrase refers only to a species' current range, not its historical range and (b) the government is entitled to adapt its definition of the term "significant" on a case by case basis. We find that implementation of the Solicitor's interpretation could significantly reduce the number of species that qualify for protections and ultimately, result in a diminished capacity to provide for the conservation of threatened and endangered species.*

**Keywords** law, policy, listing, delisting, solicitor, endangered, species

### **Introduction**

Changes in how the U.S. government interprets ambiguous language in the Endangered Species Act (ESA) have the potential to dramatically impact the conservation of numerous imperiled species. The extent of the potential impact was made clear in 2007 when the Solicitor for the Department of Interior (Solicitor)—the Department's top lawyer—released a Memorandum Opinion advocating for a new interpretation of the phrase, "a significant portion of its range," a key component of the definition of endangered species. This phrase has been a recent source of debate, both in the courts, as well as among conservation scientists (McAnaney, 2006; Vucetich, Nelson, & Phillips, 2006; Waples, Adams, Bohnsack, &

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Taylor, 2007a, 2007b) because its interpretation determines not only which species qualify for protections, but where these species will be recovered. The Solicitor's interpretation effectively narrows the definition of endangered species, limiting the species that qualify for listing and decreasing the area where these species can be recovered.

We review the legal controversy regarding the federal government's interpretations of the "significant portion of its range" phrase, focusing on relevant court decisions, listing determinations, and the Solicitor's Memorandum, and outline the implications for the continued conservation of threatened and endangered species. We concentrate on two key conclusions reached by the Solicitor: (a) the term "range" in the phrase refers only to a species' current range, not its historic range and (b) the government is entitled to adapt its definition of the term "significant" on a case by case basis. We begin with a brief overview of the listing process under the ESA.

### **Listing Species Under the Endangered Species Act of 1973**

In 1973 Congress enacted the Endangered Species Act to "... provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved . . ." (ESA, 1973, p. 1,531). Although prior legislation had been enacted to protect endangered species, these laws were limited in scope (Bean & Rowland, 1997). Unsatisfied with the protections afforded imperiled species under these laws, Congress passed the ESA with overwhelming bipartisan support—the House of Representatives passed the bill 355 to 4, whereas the bill passed the Senate without opposition (Scott, Goble, & Davis, 2006). The ESA expanded the scope of protections afforded species under previous legislation by including protections for threatened species and providing for the protection of species threatened with or in danger of extinction in a significant portion of their range (ESA, 1973).

In order to list a species as threatened or endangered under the ESA, the Secretary of the Interior (Secretary) must determine whether a species is threatened with or in danger of extinction as a result of five, statutorily defined "listing factors" (i.e. the present or threatened destruction, modification, or curtailment of its habitat or range; overutilization for commercial, recreational, scientific, or educational purposes; disease or predation; the inadequacy of existing regulatory mechanisms; or other natural or manmade factors affecting its continued existence) any one of which is sufficient to justify listing. The ESA (1973, p. 1,533) further mandates that listing determinations be made "solely on the basis of the best scientific and commercial data available." Because listing determinations require expertise in biology, ecology, animal behavior and zoology, the Secretary delegates the analyses upon which determinations are based to scientists with the U.S. Fish and Wildlife Service (FWS) or the National Marine and Fisheries Service (NMFS), depending on the species.

For a species to qualify for ESA protections, the FWS/NMFS must determine if a population of plants or animals meets the definition of a "species" provided in the ESA. The ESA (1973, p. 1,532) defines the term "species" broadly, such that it includes all subspecies of fish, wildlife or plants, or "distinct population segments" (DPS) of vertebrates. Additionally, the Secretary must determine if the species (i.e. species, subspecies or DPS) in question meets the definition of a threatened or endangered species. The ESA (1973, p. 1,532) defines an endangered species as "any species which is in danger of extinction throughout all or a significant portion of its range," while a threatened species is "likely to become an endangered species within the foreseeable future . . ."

Although this process ostensibly grounds listing actions firmly within the biological and ecological sciences, there are considerable ambiguities in the language of the ESA that require interpretation. For example, the ESA does not specify what constitutes a

“significant portion” of a species’ range. Because this phrase is ambiguous, the Secretary’s interpretation is entitled to judicial deference—that is, courts are required to defer to an agency’s interpretation of a statute, so long as that interpretation is not unreasonable; however, if an agency decision is unreasonable and an interpretation that “would not be sanctioned by Congress” the court is not bound by the agency’s interpretation (*Chevron v. Natural Resources Defense Council*, 1984, p. 844–845). Whether the federal government’s interpretation of the “significant portion of its range” (SPR) phrase is reasonable or contrary to the intent of Congress is the primary legal issue addressed by the courts in the cases discussed in this article, and lies at the heart of the SPR controversy.

## Case History Review: The SPR Phrase Under the Scrutiny of Federal Courts

### *The Flat-Tailed Horned Lizard: Revisiting the Public Versus Private Lands Controversy*

The SPR phrase proved essentially unproblematic for roughly a quarter century. Although FWS proposed guidelines for interpreting the phrase in 1979 (see U.S. General Accounting Office, 1979), these guidelines were apparently never formalized, and so the phrase was largely ignored by the agencies when conducting listing analyses. However, this changed in July of 1997 when the Secretary withdrew a proposal to list the flat-tailed horned lizard (*Phrynosoma mcallii*, hereafter: FTHL). The Secretary justified the withdrawal by noting a Conservation Agreement had been reached whereby federal and state agencies agreed to take voluntary steps to reduce threats to the species. Although more than one third of the FTHL’s habitat had been lost to development and FWS had determined the FTHL faced significant threats on private lands, the Secretary argued in favor of withdrawing the proposed listing because “large blocks of habitat with few anticipated impacts exist[ed] on public lands throughout the range of this species . . .” (Withdrawal of the Proposed Rule To List the Flat-Tailed Horned Lizard as Threatened, 1997, p. 37,860).

Defenders of Wildlife (Defenders) challenged the decision, arguing that analysis of the best available science indicated the FTHL faced threats under at least four of the five ESA-defined listing factors. The Secretary did not dispute this claim, but argued that habitat on public land ensured the continued viability of the species. The Ninth Circuit Court of Appeals noted that whether the FTHL could be considered in danger of extinction depended not on the ownership characterization of its habitat (i.e., private vs. public) but on how one defined “a significant portion” of the species’ range. The Secretary indicated she interpreted the SPR phrase to mean a species was eligible for ESA protections only if it “face[d] threats in enough key portions of its range that the entire species [wa]s in danger of extinction, or [would] be within the foreseeable future.” The Ninth Circuit rejected this view, holding that the Secretary’s interpretation “assumes that a species is in danger of extinction in a ‘significant portion of its range’ only if it is in danger of extinction everywhere” (*Defenders v. Norton*, 2001, p. 1141) (*Defenders (Lizard)*). The court found this interpretation rendered the SPR phrase redundant—that is, there would be no need to include the phrase “a significant portion of its range” if it could be read synonymously with “all of its range.” The court reasoned: “[w]hen interpreting a statute, we must follow a ‘natural reading . . . , which would give effect to all of [the statutes] provisions.’ By reading ‘all’ and ‘a significant portion of its range’ as functional equivalents, the Secretary’s construction violates that rule” (2001, p. 1,142).

The court concluded a species “[could] be extinct ‘throughout . . . a significant portion of its range’ if there are major geographical areas in which it is no longer viable but once was” (*Defenders (Lizard)*, 2001, p. 1145). *Defenders (Lizard)* established a precedent

that was upheld by at least seven federal district courts. This precedent—that a species could be considered to be in danger of extinction if there were major geographical areas in which it is no longer viable but once was—played an important role in the listing of the Canada lynx (*Lynx canadensis*) a short time later.

### ***The Canada Lynx: The Significance of the Size of a Species' Range***

About the same time Interior was deliberating over the status of the FTHL, they received a petition to list the Canada lynx. In March 2000, Interior published the Lynx Final Rule, listing the lynx as threatened throughout the conterminous 48 states. Although FWS acknowledged that threats to the lynx varied over its range, it concluded that the area in which the lynx was at greatest risk of extinction was not a significant portion of its range. Specifically, it asserted, “collectively, the Northeast, Great Lakes and Southern Rockies [regions] do not constitute a significant portion of the [lynx’s] range . . .” (Determination of Threatened Status for the Contiguous U.S. Distinct Population Segment of the Canada Lynx and Related Rule, 2000, p. 16,061). Once again Defenders challenged Interior’s application of the SPR phrase. The court, noting the dictionary defined “significant” as “a noticeably or measurably large amount,” held that an application of the standard established in *Defenders (Lizard)* (i.e., major geographical areas in which it once resided) indicated that the determination was not adequately reasoned and ordered Interior to explain how such a large portion of the lynx’s historical habitat could be considered insignificant for listing purposes (*Defenders v. Norton*, 2002).

Following this decision, Interior issued another determination, again concluding the lynx was not in danger throughout a significant portion of its range. In this determination, Interior defined “significant” as “important” to the conservation of the species (Notice of Remanded Determination of Status for the Contiguous United States Distinct Population Segment of the Canada Lynx, 2003). However, the determination failed to address the court’s order—it did not explain how three of four regions that comprised the lynx’s historical range could be considered insignificant. The court admonished FWS for failing to address the issue and again ordered the agency to explain its decision (see *Defenders v. Kempthorne*, 2006).

On 10 January 2007, Interior issued a statement in an attempt to clarify its decision not to list the lynx across much of its historical range, noting that its views regarding the meaning of endangered species were evolving. Interior contended that in determining what portions of the Lynx’s range were significant in 2000, it focused on the biological importance of existing habitat:

In the 2000 final listing rule, we evaluated ‘significance’ primarily in this biological context . . . [w]e considered the ability of the area to support populations needed for recovery to be the primary consideration. We did not consider sizable area with poor-quality habitat for the species or prey limitations to be significant from a biological perspective. (Clarification of Significant Portion of the Range for the Contiguous United States Distinct Population Segment of the Canada Lynx, 2007, p. 1,188)

Thus, it concluded, “. . . the Northern Rockies/Cascades Region was the primary region necessary to support the long-term existence of the contiguous U.S. Lynx DPS” (2007, p. 1,189). In effect, this decision rendered all other areas of the lynx’s historical range insignificant for the purposes of listing.

### ***The Grey Wolf: Current Versus Historical Range in Determining Significance***

Although both the FTHL and lynx cases flirted with the issue of how to define “range,” it was not until 2003, when Interior issued its Final Rule on grey wolves (*Canis lupus*) that this issue came to a head. The 2003 Grey Wolf Final Rule established three DPSs (Eastern, Western, and Southwestern) for wolves and “downlisted” wolves in two of the DPSs from endangered to threatened. Conservation groups filed suit, alleging that Interior failed to consider whether wolves were in danger of extinction in significant portions of their range. They contended wolves remained endangered because they were rare or absent from the vast majority of their historical range within the United States. Pointing to the Ninth Circuit’s opinion, they argued wolves could not be downlisted “if there are major geographical areas in which [they are] no longer viable but once [were]” (*Defenders (Lizard)*, 2001, p. 1,145). Interior disagreed, arguing that a species need not be recovered throughout its historical range to be removed from the endangered species list. It reasoned: “We believe that when an endangered species has recovered to the point where it is no longer in danger of extinction throughout all or a significant portion of its current range, it is appropriate to downlist . . . even if a substantial amount of the historical range remains unoccupied” (Final Rule To Reclassify and Remove the Gray Wolf From the List of Endangered and Threatened Wildlife in Portions of the Conterminous United States, 2003, p. 15,857).

The court rejected this analysis, noting it was based on the threats faced by existing wolf populations within relatively small “core” areas within the wolf’s historical range. For example, the Eastern DPS that Interior proposed would have downlisted wolves in an area that ranged from South Dakota to Maine, despite the fact that wolf populations were only viable in portions of Minnesota, Wisconsin, and the upper peninsula of Michigan. The decision to downlist based on recovery in a core area that constituted a fraction of the wolves’ historical range in the Eastern DPS conflicted with the legal standard set forth in *Defenders (Lizard)*, because major geographical areas existed in which the wolf was once viable, but was no longer (*Defenders v. Norton*, 2005) (*Defenders (Wolf)*).

The court noted that Interior’s use of the DPS policy to delist wolves essentially turned the policy on its head. Rather than using DPS policy as Congress intended—to vary the level of protection to fit the needs of distinct populations of species—the boundaries of the DPS appeared to have been designed to downlist the species across vast areas as quickly as possible. In support of this conclusion the court pointed to statements made by a co-author of the Final Rule, who argued, “I think this [reclassification] is the best and quickest way to get the policy and legal framework greased for delisting” (*Defenders (Wolf)*, 2005, citing AR Doc. 974 at 15,316). Similarly, another co-author opined, “a three-state Northern Rockies DPS leaves the rest of the West not delistable unless we establish additional recovered populations in the areas outside the DPS,” suggesting that Interior’s goal was not the recovery of grey wolf, but rather delisting the species in as large an area as possible (*Defenders (Wolf)*, 2005, citing AR Doc. 908 at 11,467). The Court vacated the 2003 Grey Wolf Final Rule and ordered FWS to reconsider the matter in a manner consistent with the court’s order. Approximately nine months later, a Vermont Court issued a similar decision, finding the DPS’s Interior established violated DPS policy and the ESA, and the Secretary’s determination that wolves were not in danger of extinction in a significant portion of their range was arbitrary and capricious (*National Wildlife Federation v. Norton*, 2005).

In response to its losses in the courts FWS redrew the DPS boundaries of both the Northern Rocky Mountain and Western Great Lakes populations, and again proposed delisting these wolf populations. Although these new DPS boundaries were drawn more narrowly, they still contained vast expanses of historical habitat where wolves were not present.

For example, the Western Great Lakes DPS included the entire state of Michigan, despite the fact that the only confirmed wolf populations were found in the State's Upper Peninsula, which comprises less than a third of the state's total land area<sup>1</sup> (Proposed Rule Designating the Great Lakes Population of Gray Wolf as a Distinct Population Segment and Removing This Distinct Population Segment from the Federal List of Endangered and Threatened Wildlife, 2007).

### ***The Rio Grande Cutthroat Trout: A Different Opinion***

By the time the wolf decisions were issued, seven federal district courts had adopted the reasoning of the Ninth Circuit. This changed in 2005, when the Federal District Court in New Mexico considered a listing case involving the Rio Grande cutthroat trout (*Onco-rhynchus clarkii virginalis*) (hereafter: RGCT). The New Mexico District Court dismissed the reasoning of the Ninth Circuit and instead deferred to Interior's interpretation—that the SPR phrase means that portion of a species' range that is “so important to the continued existence of a species that threats to the species in the area can have the effect of threatening the viability of the species as a whole” (*Center for Biological Diversity v. Norton*, 2005, p. 1,279). Following this logic, the court asserted the geographic size of a species' lost range need not play any role in determining significance of the species' range. The court reasoned: “it is possible to conclude that 99% of a species' historic range may be lost, yet the species will still be thriving in the 1% that is left, in sufficient numbers and sufficient health . . . that no listing is necessary” (2005, p. 1,280).

The court also addressed whether Interior was obligated to list species in their historical range, as opposed to their current range. The court concluded it would make no sense to “require a listing in each instance in which evidence exists that a particular species no longer occupies its historical range” (2005, p. 1,280). Indeed, the court argued, even when a species experienced a reduction in range, “. . . if the remaining core populations ensure[d] the species' survival throughout its range or a significant portion thereof, then the species is not endangered” (2005, p. 1,280).

### **The Solicitor's Memorandum**

The Office of Solicitor for the Department of Interior provides legal services to the Secretary of Interior and all of the bureaus and agencies overseen by the Secretary. In March of 2007, in response to the controversy regarding the SPR phrase, the Solicitor issued a memorandum detailing his interpretation of the SPR phrase. The Solicitor makes two key conclusions that are discussed in detail in what follows: (1) the term “range” refers to the current but not historical range of a species and (2) Interior is entitled to broad deference in their interpretation of the term “significant” and should be able to employ different definitions on a case-by-case basis (Solicitor's Memorandum on The Meaning of “In Danger of Extinction Throughout All or a Significant Portion of its Range,” 2007) (hereafter: Solicitor's Memorandum).

### ***The Solicitor's Interpretation of “Range”***

The Solicitor argued that the word “range” in the SPR phrase does not apply to a species' historical range, but only to its current range. His argument hinged on the present tense use of language within the ESA. He reasoned: “The phrase ‘is in danger’ denotes a present-tense

condition of being at risk . . . [h]ence, to say a species 'is in danger' in an area where it no longer exists—i.e., in its historical range—would be inconsistent with common usage. Thus, 'range' must mean 'current range,' not 'historical range'" (Solicitor's Memorandum, 2007, pp. 7–8). Therefore, the Solicitor contended, the Ninth Circuit's conclusion that a species could be considered endangered "if there are major geographical areas in which it is no longer viable but once was," must have been based on an "inadvertent misquote of the statutory language." The Solicitor explained:

In addressing this issue, the Ninth Circuit states that the Secretary must determine whether a species is 'extinct throughout . . . a significant portion of its range.' If that were true, the Secretary would necessarily have to study the historical range. But that is not what the statute says . . . [rather] Under the ESA, the Secretary is to determine not if a species is 'extinct' . . . but if it 'is in danger of extinction throughout . . . a significant portion of its range'. (Solicitor's Memorandum, 2007, p. 8)

Thus, according to the Solicitor, the core question imposed by the ESA is whether the species is in danger of extinction in its current range.

### ***The Solicitor's Interpretation of "Significant"***

The Solicitor concluded that the Secretary has wide discretion in interpreting the term "significant" and argued that courts should show greater deference to the Secretary's interpretation. The Solicitor's argument focuses on the lynx case, where the court observed that the ESA did not define the concept of significance but applied the dictionary definition of the term—"a noticeably or measurably large amount." The Solicitor acknowledged the legitimacy of the definition applied by the court; however, the Solicitor argued that the Secretary has "broad discretion" in defining that portion of a species' range which is significant. In defining the term, the Solicitor asserted that the Secretary could also employ an alternative, "equally plausible definition of 'significant,'" such as "important" or "meaningful" (Solicitor's Memorandum, 2007, p. 9). Thus, the Solicitor concluded that the Secretary should not be held to one definition of significant (i.e., large, or important), but rather should be able to adapt the definition on a case-by-case basis.

## **Discussion and Implications of the Solicitor's Interpretation of the SPR Phrase**

### ***Limiting Range to Current Range***

Implementing the Solicitor's interpretation of the SPR phrase could have profound detrimental effects on the viability of numerous species. The definition of range advocated by Solicitor would actually prevent the Secretary from listing a species in suitable portions of its historical range that are not part of its current range—even if FWS determined that expanding protections to include adjacent habitat was the best method for preventing a species' extinction. In the Solicitor's estimation, FWS is precluded from listing a species outside of its current range because in unoccupied historical range the species would be considered "extinct," not "in danger of extinction," and therefore would not qualify for ESA protections. Thus, the Solicitor contends that whenever the Secretary finds a species

is in danger of extinction in a significant portion of its current range, “it is to be listed and the protections of the ESA applied . . . in that portion of its [current] range where it is specified as an ‘endangered species’” (Solicitor’s Memorandum, 2007, p. 3).

As demonstrated by the cases of the wolf, lynx, and lizard, species listings and other ESA-related conservation actions can be held up for years, and in some cases, decades. In cases such as the northern spotted owl, where species are threatened by human activities (e.g., logging), it is clear that delaying listings could result in significant reductions in a species’ habitat which, in effect, reduces its current range—in the Solicitor’s view, the only areas in which it is entitled to protections. Such delays are doubly harmful, because even after listing occurs there are additional delays before full-scale recovery efforts are implemented. For example, after listing species spend an average of 6.4 years (8.7 years for animals) awaiting approval of final recovery plans (Tear, Scott, Hayward, & Griffith, 1995; U.S. General Accounting Office, 1988). Moreover, research indicates that such delays can adversely impact species recovery (Taylor, Suckling, & Rachlinski, 2005).

Furthermore, the Solicitor’s interpretation could create incentives for those who oppose the listing of an endangered species to delay or litigate listings. By delaying the listing of a species in rapid decline, opponents of endangered species could reduce the areas in which a species is eligible for protection because, as a species declines so too does the extent of its distribution. Thus, individuals or industries wishing to engage in activities that may negatively impact species need only ensure that those species do not reside within an area to avoid ESA protections; once a species is eliminated from an area, whether legally or illegally, this area would no longer be part of the species’ current range, and thus the species would be ineligible for ESA protections in that area.

An examination of the dilemma of the Florida panther (*P. concolor coryi*) (panther), provides an illustration of the flaws inherent in the Solicitor’s argument. The panther once roamed much of the southeastern United States. Today it is restricted to less than 5 percent of its historical range—likely insufficient for supporting a viable population (Notice of Availability Technical/Agency Draft of the Third Revision of the Florida Panther Recovery Plan for Review and Comment, 2006, p. 5,066). Applying the Solicitor’s memorandum to the panther (i.e., limiting protections to the panther’s current range) recovery of the panther beyond the areas where it is currently distributed becomes extremely improbable. In fact, the Solicitor’s interpretation of the SPR phrase directly conflicts with FWS’s recovery objectives for the panther, which include securing and restoring potential habitat “within the panther’s historic range” and establishing viable panther populations outside of its current range (2006, p. 5,067).

### ***Interior’s Interpretation of Range***

Both the Solicitor and the Secretary have recently argued that the term “range” refers to a species current range, not its historical range. Their argument hinges on their analysis of the syntax of the statute; specifically, the use of the present-tense form of the word “range” within the ESA. This interpretation is a significant departure from the ESA legislative intent and more than a quarter century of ESA-related actions that indicate Interior equated range with a species’ historical distribution. For example, FWS clearly interpreted range to include historical range when it recognized and listed four subspecies of the gray wolf despite the fact that the best available science indicated at least one of these subspecies (the Texas gray wolf; *C. lupus monstabilis*) was “probably extinct” (Reclassification of the Gray Wolf in the United States and Mexico, with Determination of Critical Habitat in Michigan and Minnesota, 1978, p. 9,607). If it had not recognized historical range,

FWS would have only been able to list one sub-species of the wolf in parts of Minnesota, the only state in the contiguous United States with a verified wolf population at that time. Instead, FWS listed the wolf throughout the 48 contiguous states. Furthermore, when wolves were reclassified and critical habitat designated in 1978, FWS specifically noted:

The gray wolf formerly occurred in most of the conterminous United States and Mexico. Because of widespread habitat destruction and human persecution, the species now occupies only a small part of its original range in these regions . . . the Service wishes to recognize that the entire species *Canis lupus* is Endangered or Threatened to the south of Canada. (1978, p. 9,607)

Other ESA-related actions demonstrate FWS's interpretation of "range" to include historical range was not exclusive to wolves. For example, in May of 1979, FWS crafted draft guidelines for determining a species' status. These guidelines defined a significant portion of a species' range as "more than half of a species' range, which may include historical as well as recent and anticipated future losses or . . . losses of habitat totaling less than 50 percent for species of relatively small range, or in other circumstances where the loss may have an inordinately large negative impact on the species' survival" (U.S. General Accounting Office, 1979, p. 59). FWS's guidelines demonstrate that it not only recognized that historical range should be included when considering what constitutes a significant portion of a species' range, but also that *significant* could be defined both quantitatively—in terms of a species total historical range, and qualitatively—in terms of the range's overall importance or "impact" on the survival of the species.

The Solicitor's analysis also appears to conflict with Congress' understanding of the concept of range in the listing process. In 1978, Congress amended the critical habitat requirement of the ESA. The Act as amended required the FWS to first determine a species eligibility for listing and then to identify and designate critical habitat. The House Report noted that "[t]he term 'range' is used in the general sense and refers to the historical range of the species" H. Rep. No. 95-1625 (1978, p. 18). The Report then cautioned the Secretary to take a more restrictive approach to the designation of critical habitat noting: "the Secretary should be exceedingly circumspect in the designation of critical habitat outside of the presently occupied area of the species" (1978, p. 18).

Importantly, the Solicitor's conclusion that range refers only to current range was not based on any change in the scientific meaning of the word "range." The Solicitor cites no evidence, nor are we aware of any, that the term range has undergone any significant shift in meaning since the passing of the ESA. Rather, the Solicitor's conclusion is based on the premise that, since the passage of the ESA in 1973, FWS has misinterpreted Congressional intent (i.e., that Congress never intended species to be listed outside of their current range). Yet, it is noteworthy that despite numerous amendments to the Act, Congress never amended the ESA to correct for the alleged error.

### *A Shifting Definition of Significance*

The primary issue in determining what constitutes a "significant" portion of a species' range is which criteria the Secretary should use: is a portion of a species' range significant if it is "noticeably or measurably large," or is significance dependant on the biological importance of the range to the species? The Solicitor asserts that both definitions are equally valid; thus, the Secretary should not be bound to a single definition but should be permitted to apply the definition he or she deems appropriate to the individual circumstance. In effect,

this would mean the term significant could shift to meet the whims and political pressures imposed on the Secretary. Instituting such a “shifting” definition with no consistent, measurable criteria will create more ambiguity regarding what criteria can be considered when determining which portion of range is significant, inviting additional lawsuits.

Wolves provide an illustration of how such a shifting definition could lead to confusion regarding the criteria for determining significance. In deciding what constituted a significant portion of Great Lakes wolves’ range, Interior argued factors such as “quality, quantity, and distribution of habitat” as well as the “uniqueness or importance of habitat . . . genetic diversity . . . [and] other biological factors” may, but need not be considered. In addition, they argued that they may consider the values listed in the ESA (e.g., esthetic, educational, historical, and recreational values) that could be impaired by the loss of a species (Proposed Rule Designating the Great Lakes Population of Gray Wolf as a Distinct Population Segment and Removing This Distinct Population Segment from the Federal List of Endangered and Threatened Wildlife, 2007, p. 6,056). Yet, when it came to actually determining the significant portions of the Great Lake wolves’ range, Interior noted that it based its determination “on the biological needs of the species in the DPS” (2007, p. 6,071). This suggests that FWS simply reverted back to focusing on the biological importance of “core” populations—the same reasoning that in the past led it to conclude that whole regions of the country (i.e., the northeast, southern Rockies) were not “significant” portions of the wolf’s range. This reasoning was rejected by the court as contrary to the underlying intent of the ESA. Indeed, use of this criteria leads to the conclusion that so long as healthy, isolated populations of a species exist, the species is not in danger of extinction. Furthermore, FWS’s argument that it may consider the values listed in the ESA that could be impaired by the loss of a species leads the logical reader to ask why these criteria were not evaluated in the listing analysis.

FWS employed a similar approach when listing the RGCT. In this case, FWS’s focus on the importance of 13 core populations, which it held up as indicators of the RGCT’s viability, allowed them to exclude more than 250 other populations as not “significant.” Rather than protect the RGCT in areas where they were threatened with extinction, this approach permitted FWS to ignore and leave unprotected populations within large geographic areas so long as some viable remnant of the species existed.

These examples illustrate that interpreting the term “significant” to mean “important” could lead to the denial of protections for populations of species over vast expanses of their current and historical range, and perhaps more importantly, a reframing of the underlying purpose of the ESA. Although the stated purpose of the ESA is “to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved” under this new analysis the purpose of the ESA becomes the prevention of species-wide extinction through the protection of those populations least at risk (ESA, 1973, p. 1,531). Rather than protect the endangered species and the ecosystems on which they depend, this approach could lead to the creation of “wilderness zoos,” in which remnant populations are confined to relatively small portions of their historical range.

### ***Recommendations for Interpreting the SPR Phrase***

Scientists have recently begun to weigh in on the question of what constitutes a significant portion of a species’ range. Vucetich et al. (2006) recognized the importance of the size/proportion of a species’ lost (historical) range for determining significance, and concluded that it was “difficult to conceive of circumstances in which 33% or more of a species’ range could be considered insignificant.” In contrast, Waples et al. (2007a) asserted that a significant portion of a species’ range can be defined as “a geographic area(s) that contains a

population unit(s) that, if lost, would cause the entire species to be in danger of extinction or likely to become so in the foreseeable future.” The fundamental difference between Vucetich et al.’s (2006) and Waples et al.’s (2007a) approaches is that the former defines significance in terms of the size or proportion of range in which a species is endangered, whereas the latter defines range in terms of its overall biological importance for the prevention of extinction.

In our view, these interpretations can be rectified by defining significance such that both geographic size *and* biological importance of an area must be considered when making listing determinations. We do not believe that the Secretary should be able to pick and choose among these criteria—that is, the ambiguity in the SPR phrase should not be used in such a way as to minimize the range over which a species is entitled to ESA protections. Consequently, we suggest the Secretary establish some criteria for addressing both meanings of the term significant. Under this interpretation, a portion of range would be considered significant if it was determined to be *either* (1) biologically important *or* (2) measurably large. In defense of this view, we note that Congress did not use the phrase, *an important portion of its range*, nor did it use the phrase, *a large portion of its range*—although either phrase would have been arguably less ambiguous than the SPR phrase. Rather, Congress chose to use the word *significant*—perhaps because it understood that the term conveys both importance *and* size and that both were needed for species recovery. Establishing such fixed, measurable criteria for determining what constitutes a significant portion of a species’ range makes the listing process more transparent, and could help FWS and NMFS avoid future litigation.

In draft guidelines for interpreting the phrase proposed in 1979, FWS suggested that loss of 50% of a species’ historical range should qualify as significant; however, Vucetich et al. (2006) recommended a more stringent standard of 33%. In practice, Easter-Pilcher (1998) demonstrated that, at least before 1991, the loss of 40% of historical range triggers listing under the threatened status, whereas a 60% loss triggers listing as endangered—in the majority of cases. We will refrain from making specific recommendations as to what proportion of historical range needs to be lost in order to trigger listing; rather, we note that the similarity between the three figures proposed (ranging from 33–50%) suggests that establishing a fixed criteria should not be beyond the capabilities of the scientists at FWS and NMFS.

### **Summary and Conclusions: Providing Historical Context for the Controversy**

Almost a decade ago, Meine (1999) warned that conservation scientists are too often unaware of the historical context in which their research takes place. Consistent with his view, a basic knowledge of the historical context surrounding the SPR controversy is crucial to understanding why the actions of Interior have been so controversial.

Despite bipartisan congressional support under which the ESA passed, federal protections for threatened and endangered species were controversial almost from the act’s inception (Greenwald, Suckling, & Taylor, 2006; Sidle, 1990; U.S. General Accounting Office, 1993). Controversies surrounding the ESA spawned numerous attempts to amend the act. The U.S. Supreme Court’s 1978 decision—which halted construction of the multimillion dollar Tellico dam to protect the snail darter (*Percina tanasi*)—prompted Congress to make several important amendments to the ESA (Dwyer, Murphy, & Ehrlich, 1995). For example, Congress amended the act to allow projects to be exempted from ESA requirements when the economic costs associated with protections were deemed unacceptable

(Dwyer et al., 1995). Yet protections for species under the ESA remained divisive and pressure to modify the act continued to build into the 1990s, with national controversies over protections for the northern spotted owl (*Strix occidentalis caurina*) and the reintroduction of gray wolves into the western United States, which were viewed by many as restricting development of both federal and private lands.

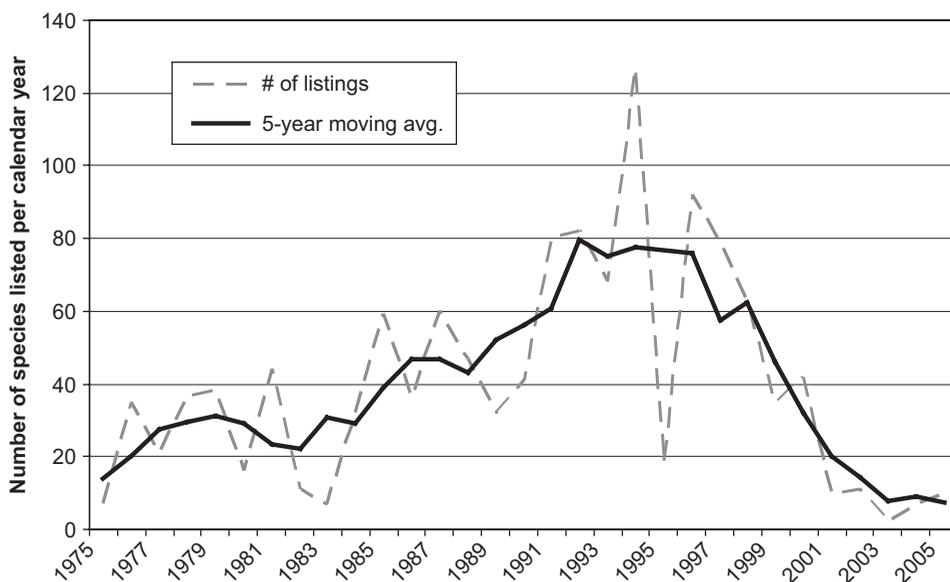
On the heels of these controversies and following the year in which the number of species listings peaked (1994), Congress passed Public Law 104-6, which contained a rider prohibiting the Secretary of Interior (Secretary) from using existing funding “for making a final determination that a species is threatened or endangered.” In effect, this law placed a moratorium on new endangered species listings, which was lifted a year later by then President William Jefferson Clinton. The moratorium did little to mollify those opposed to the ESA as, during the same year (1995), the Supreme Court ruled that the modification of an endangered species’ habitat could constitute “harm” to that species, and affirmed the power of the Secretary to regulate such harmful activities on private property under the ESA (*Sweet Home Chapter of Communities for a Great Oregon v. Babbitt*, 1995). This ruling was particularly upsetting to those who opposed government regulation on private lands.

Following these controversial cases and the sharp rise in species listings that occurred in the early to mid 1990s, biologists with the Fish and Wildlife Service (FWS) were “under intense pressure” to curtail listings and protect species through some means other than the ESA, such as the use of Conservation Agreements (Sidle, 1998, p. 249). Efforts to reduce endangered species listings prompted the resignation of Ronald Nowak, a zoologist with FWS who argued the agency was actually working against the protection of endangered wildlife, Nowak explained:

My primary reason for seeking this opportunity to retire is that this agency is no longer adequately supporting the function for which I was hired, the classification and protection of wildlife pursuant to the Endangered Species Act of 1973, and indeed, often is working against this function. I have become particularly concerned about the agency’s seemingly unrestrained use of public funds to carry on litigation and other actions to thwart or delay appropriate classification and regulation of species such as the lynx. (Letter of resignation of Mr. Ronald M. Nowak, 1997)

According to Greenwald et al. (2006, p. 60), the reduction in the number of listings that began in 1996 was the result of a series of administrative policies adopted by Interior that were designed “to limit petitions and lawsuits that had been successfully used to increase listings.” They cite, for example, an increase in the agencies “not practicable” findings that began in 1997 (this provision permits Interior to delay issuing findings on listing petitions when it is not practicable to do so). Ultimately, the efforts to reduce species listings resulted in a dramatic drop in listings that began in the late 1990s (Figure 1). While Interior listed an average of 42 species per year from 1973–1996, this number fell to 25 species per year from 1997–2007 (U.S. Department of Interior, FWS, 2008). The number of listings continues to fall; from 2001 through 2007, Interior listed an average of just 9 species per year—a roughly 80% decrease from the historical (1973–2000) average (U.S. Department of Interior, FWS, 2008).

An examination of more recent actions of Interior also helps to provide some insight as to why the SPR phrase is so controversial. Recent endangered species-related actions have turned up disturbing evidence of political tampering. For example, in a suit challenging



**Figure 1.** Five-year moving average of the number of species listed, 1975–2005.

the delisting of the desert bald eagle, a Freedom of Information Act request filed by plaintiff conservation groups revealed FWS biologists were ordered to make an unwarranted finding as a matter of policy. The documents showed FWS biologists received “marching orders” from the Southwest Regional Director and Associate Director in Washington, D.C. that the “answer has to be that [the desert population] is not a DPS” (*Center for Biological Diversity v. Kempthorne*, 2008, citing AR Doc. 1985). Another FWS employee characterized the situation as follows: “we’ve been given an answer now we need to find an analysis that works . . . [n]eed to fit [an] argument in as defensible a fashion as we can” (2008, citing AR Doc. 1986–87). In other words, the listing decision was not made by the agency’s scientists, but the political appointees in Washington, D.C. The court concluded that the agency’s decision regarding the desert bald eagle DPS exemplified an arbitrary and capricious action.

Another example of political tampering in Interior’s decision making was unearthed in 2006, when an investigation by the Inspector General for the Department of Interior revealed that Julie MacDonald—then a Deputy Assistant Secretary for Fish, Wildlife and Parks—released nonpublic information about listing actions to interest groups opposed to endangered species and ordered agency biologists to change biological findings. MacDonald resigned her post in May 2007, but her political tampering led FWS director Dale Hall to order the review of eight endangered species decisions in which she had been involved. Although these cases are hardly indicative that political tampering is the norm, they do make it clear that improper political influence on listing actions has not been confined to a few isolated incidents.

The FWS has also been repeatedly criticized for delaying various endangered species–related actions, including species listings (U.S. General Accounting Office, 1993) and recovery plans (Tear et al., 1995; U.S. General Accounting Office, 1988), as well as for its frequent failure to designate critical habitat (see Hagen & Hodges, 2006). In an analysis of factors that affect species recovery, Taylor et al. (2005) found these same three factors (i.e., time listed, the designation of critical habitat, and the presence of a recovery plan) all

had positive impacts on species' population trends. Thus, by delaying listing and other ESA-related actions FWS could negatively impact a species' ability to recover.

Taken together, the actions of Interior have significantly limited the number and scope of endangered species listings, and by extension, the power of the ESA to protect species that are threatened or in danger of extinction. Specifically, in recent years Interior has (a) decreased the number of species listings, (b) delayed ESA-related actions such as species listings, the designation of critical habitat and the development of recovery plans, and (c) suffered from political tampering with ESA-related decisions (Greenwald et al., 2006; Hagen & Hodges, 2006; Sidle, 1998; Tear et al., 1995).

It is in this context that the controversy regarding how to interpret the SPR phrase must be understood. The Solicitor's interpretation of the SPR phrase would further limit the number of species listed and the area in which they qualify for protections, ultimately diminishing the government's ability to conserve threatened and endangered species. Implementing such an interpretation would reduce the ability of the ESA to protect endangered species and the ecosystems on which they depend and could result in the creation of a system of disconnected, remnant populations of species—the functional equivalent of wilderness zoos. Perhaps more importantly, the Solicitor's interpretation of the SPR phrase is likely to be perceived as simply the newest in a series of political efforts to limit the scope of the ESA. This perception has the potential to negatively impact public trust in FWS decisions, making litigation more likely, which will only serve to further delay ESA-related actions. Over the long term, these actions could erode public support for the agency in general, which should concern everyone interested in the continued conservation of our nation's wildlife resources.

## Note

1. Subsequent law suits challenging both the Western Great Lakes and Northern Rocky Mountain populations resulted in the relisting of both wolf populations. In the case of the Western Great Lakes, plaintiffs challenged the FWS's use of DPS policy for the purpose of delisting a population. The court ordered FWS to explain how its use of the DPS policy as a tool for delisting is consistent with the legislative history, judicial interpretations, and policy objectives of the ESA (*Human Society v. Kempthorne*, 2008). In the case involving the Northern Rocky Mountain population, the District Court in Montana granted a preliminary injunction against the FWS citing a lack of genetic exchange between subpopulations (a prerequisite of recovery under the initial recovery plan) and inadequate protection of wolves in Wyoming under Wyoming's 2007 wolf management plan (*Defenders v. Hall*, 2008).

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