

# *Defenders of Wildlife v. Norton: A Closer Look at the “Significant Portion of Its Range” Concept*

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*In Defenders of Wildlife v. Norton, the Ninth Circuit addressed what meaning should be attributed to the phrase, “throughout all or a significant portion of its range,” contained in the Endangered Species Act’s definition of endangered species. While the court rejected the interpretations proposed by the parties, it declined to identify a precise definition for the term. How the Secretary of the Interior construes this term will have important consequences for species’ ability to gain protection under the ESA. An appropriate reading will be heavily grounded in the context of the surrounding statutory language, and will allow a certain amount of leeway for ESA listing decisions to account for the biological and ecological needs of individual species.*

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## INTRODUCTION

*Defenders of Wildlife v. Norton*<sup>1</sup> represents the first time that a court has examined, in any detail, the phrase “significant portion of its range” contained in the Endangered Species Act definitions of “endangered” and “threatened.” Under the ESA, a species is endangered if it “is in danger of extinction throughout all or a significant portion of its range.”<sup>2</sup> Likewise, a species is threatened if it “is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.”<sup>3</sup> The *Defenders of Wildlife* court did not provide a simple way to delineate “significant portion of its range,” but left its definition open to the Secretary of the Interior to resolve. This note uses *Defenders of Wildlife* as a starting point for an examination of this phrase and concludes that the phrase can be interpreted effectively only alongside the definition of “species” contained in the ESA definitions of “endangered” and “threatened.”

## I

## DEFENDERS OF WILDLIFE V. NORTON: A PRELIMINARY LOOK AT “SIGNIFICANT PORTION OF ITS RANGE”

A. *Legal Background*

The Endangered Species Act (ESA) provides protection for species of fish, wildlife and plants that the Secretary of the Interior (Secretary) identifies as either “endangered” or “threatened.”<sup>4</sup> Two precursors to the ESA, the Endangered Species Preservation Act of 1966<sup>5</sup> and the Endangered Species Conservation Act of 1969,<sup>6</sup> did not include the “significant

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1. 258 F.3d 1136 (9th Cir. 2001).

2. 16 U.S.C. § 1532(6) (1994).

3. 16 U.S.C. § 1532(20) (1994).

4. 16 U.S.C. §§ 1531-1540 (1994).

5. Pub. L. No. 89-669, § 1(a), 80 Stat. 926 (1966) (repealed by Endangered Species Act of 1973, 16 U.S.C. §§ 1531-1540).

6. Pub. L. No. 91-135, 83 Stat. 275 (1969) (repealed by Endangered Species Act of 1973, 16 U.S.C. §§ 1531-1540). The Endangered Species Conservation Act of 1969 (Pub. L. No. 91-135, 83 Stat. 275, repealed by Endangered Species Act of 1973 14, 87 Stat. 884, 903) supplemented the 1966 Act by allowing for the listing of species endangered worldwide. Shannon Petersen, *Congress and Charismatic Megafauna: A Legislative History of the Endangered Species Act*, 29 ENVTL. L. 463, 472 (1999) Two other acts were also passed before the ESA came into being – the Wild and Free Roaming Horses and Burros Act and the Marine Mammals Protection Act. *Id.*

portion of its range" language in their definitions of endangered species. The Endangered Species Act of 1973 added this phrase and provided a category for threatened species.

Despite the apparent importance of the changes incorporated by the 1973 Act,<sup>7</sup> and the fact that the Secretary must apply the definition of endangered each time a listing is made, the major case law before *Defenders of Wildlife* focused primarily on other issues.<sup>8</sup>

### B. *The Flat-Tailed Horned Lizard Question*

The flat-tailed horned lizard [hereinafter "lizard"], *Phrynosoma mcallii*, is "a small, cryptically colored iguanid" that

Finally, the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES) was passed in early 1973. *Id.* at 473.

The ESA, which was passed later that year, repealing the 1966 Act, incorporated several changes. The ESA expanded coverage to plants and all classes of invertebrates, as is the case under CITES. *Id.* at 478; 16 U.S.C. § 1532(16) (1994). U.S. and foreign species lists were combined, with uniform provisions applied to both. U.S. Fish and Wildlife Service, *A Summary of the ESA and Implementation Activities*, available at <http://endangered.fws.gov/esasum.html#History> (last updated October 1996). Federal agencies were required to undertake programs for the conservation of endangered and threatened species, and were prohibited from authorizing, funding, or carrying out any action that would jeopardize a listed species or destroy or modify its "critical habitat." *Id.*: 16 U.S.C. § 1536(a)(2) (1994). Taking prohibitions were applied to endangered species, limiting import, export, transport, sale, and related activities. U.S. Fish and Wildlife Service, *supra*; 16 U.S.C. §1538(a) (1994). Matching federal funds became available for States with cooperative agreements. U.S. Fish and Wildlife Service, *supra*; 16 U.S.C. §1535(d) (1994). Authority was provided to acquire land for listed animals and for plants listed under CITES. U.S. Fish and Wildlife Service, *supra*; 16 U.S.C. §1534 (1994).

7. "The ESA's broadened protection for species in danger of extinction throughout a 'significant portion of [their] range' was thus a significant change. The House Report accompanying the bill acknowledged as much, noting that the new definition's expansion to include species in danger of extinction 'in any portion of its range' represented 'a significant shift in the definition in existing law which considers a species to be endangered only when it is threatened with worldwide extinction.'" H.R.Rep. No. 412, 93rd Cong., 1st Sess. (1973)." *Defenders of Wildlife v. Norton*, 258 F.3d 1136, 1144 (9th Cir. 2001); see also James Kilborne, *The Endangered Species Act Under the Microscope: A Closeup Look from a Litigator's Perspective*, 21 ENVTL. L. 499, 502-04 (1991).

8. The Court has examined other critical definitions under the ESA. It upheld regulations that included habitat modification within the definition of "harm" in *Babbitt v. Sweet Home Chapter of Communities for a Greater Oregon*, 515 U.S. 687 (1995). The court has examined the meaning of "evolutionarily significant units," which may be protected under the ESA definition of species even if they do not represent a traditional, full species classification. *Oregon Natural Resources Council v. Daley*, 6 F. Supp. 2d 1139 (D. Or. 1998). Additionally, the court examined the meaning of "foreseeable future" in the context of the definition of threatened species. *Id.*

Further, a significant body of standing law has emerged under the ESA. See, e.g., *Lujan v. Defenders of Wildlife*, 504 U.S. 555 (1992).

has adapted to harsh conditions of the Western Sonoran desert.<sup>9</sup> The lizard's natural habitat spans portions of southern California, southwestern Arizona and northwestern Mexico.<sup>10</sup> Urban and agricultural development in these areas has resulted in the disappearance of approximately 34 percent of the lizard's historic range.<sup>11</sup>

In response to these pressures on the lizard's habitat, the Secretary first identified the lizard as a candidate for listing in 1982.<sup>12</sup> However, the Secretary did not issue a proposed rule listing the lizard as a threatened species until 1993.<sup>13</sup> The Secretary then failed to either publish a final rule listing the lizard for protection or withdraw the proposed rule by November 29, 1994, in violation of the one-year time allotment set forth by the Act.

In 1995, before the Secretary took any further action on the lizard's status, Congress passed a statute which reduced by \$1.5 million the funds available for making species listing determinations under the ESA.<sup>14</sup> The statute provided that remaining funds were not to be used "for making a final determination that a species is threatened or endangered. . . ."<sup>15</sup> Further, the statute stated that if this reduction of funds made it impracticable to make a listing determination by the date required by the ESA, the deadline should be waived.<sup>16</sup> This suspension of species listings remained in place until President Clinton signed an executive waiver in April of 1996.<sup>17</sup>

Following Clinton's waiver, Defenders of Wildlife brought suit in federal district court in Arizona seeking to compel the Secretary to fulfill his duties under the ESA with respect to the

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9. 59 Fed. Reg. 62,624, 62,625/1 (Dept. Interior, Nov. 29, 1993)

10. *Id.*

11. *Id.*

12. In 1982, the lizard was identified as a category 2 candidate for listing under ESA in 1982. A category 2 candidate is one for which "sufficient data on biological vulnerability and threats were not currently available to support proposed rules." 258 F.3d at 1138 (citing 62 Fed. Reg. 7,596, 7,597 (Dep't Interior, Feb. 28, 1996)). In 1989, the lizard's status was changed to category 1. Category 1 status indicates that there is "sufficient information on biological vulnerability and threats to support issuance of a proposed rule." *Id.*

13. *Defenders of Wildlife v. Norton*, 258 F.3d at 1138.

14. Emergency Supplemental Appropriations and Rescissions for the Department of Defense to Preserve and Enhance Military Readiness Act of 1995, Public L. No. 104-6, Ch. IV, 109 Stat. 73 (1995). This statute's primary purpose was to replenish funds for various overseas military operations; the section affecting the ESA was a rider. *See id.*

15. *Id.*

16. *Id.*

17. *Defenders of Wildlife v. Norton*, 258 F.3d at 1139.

lizard. On May 16, 1997, the district court in Arizona ordered the Secretary to publish a final decision on the lizard within 60 days.<sup>18</sup>

During this 60-day period, several state and federal agencies implemented a range-wide management strategy to protect the lizard.<sup>19</sup> The Conservation Agreement implementing this strategy designated five management areas where protective measures would be put into place.<sup>20</sup> Parties to the agreement agreed to “take voluntary steps aimed at ‘reducing threats to the species, stabilizing the species’ populations, and maintaining its ecosystem.”<sup>21</sup>

On July 15, 1997, the Secretary issued his final decision on the lizard (Final Decision), withdrawing the proposed rule that recommended the lizard for listing as a threatened species under the ESA.<sup>22</sup> The Secretary’s decision to withdraw the proposed rule was based on the following rationales: population data did not conclusively show significant population declines, some threats to the lizard’s habitat had lessened since the proposed rule was issued, the newly-implemented Conservation Agreement would further reduce threats, and “large blocks of habitat with few anticipated impacts exist on public lands throughout the range of this species. . . .”<sup>23</sup>

### C. Procedural History

In 1998, Defenders of Wildlife brought a second suit, this time challenging the Secretary’s decision to withdraw the proposed rule to list the lizard as a threatened species under the ESA.<sup>24</sup> The United States District Court for the Southern District of California granted summary judgment for the Secretary, accepting the Secretary’s conclusion that none of the five statutory factors for ESA eligibility were present in the case of the lizard, and allowing the Conservation Agreement to serve as

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18. *Id.*

19. These agencies included the U.S. Fish and Wildlife Service, the U.S. Bureau of Land Management, the U.S. Bureau of Reclamation, the U.S. Marine Corps, the U.S. Navy, the Arizona Fish and Game Department, and the California Department of Parks and Recreation. *Id.* at 1140 n.5.

20. These measures included the monitoring of lizard populations, limitation of habitat disturbance, and acquisition of private inholdings. *Id.* at 1140.

21. *Id.* at 1139-40

22. *Id.* at 1140.

23. *Id.* (citing Endangered and Threatened Wildlife and Plants; Withdrawal of the Proposed Rule To List the Flat-Tailed Horned Lizard as Threatened, 62 Fed. Reg. 37,852, 37,860 (Dep’t Interior, July 15, 1997)).

24. *Id.*

a basis for this conclusion.<sup>25</sup> On appeal to the U.S. Court of Appeals for the Ninth Circuit, Defenders of Wildlife challenged the decision of the lower court.<sup>26</sup>

#### D. *The Ninth Circuit's Decision*

The Ninth Circuit concluded that the Secretary's decision to withdraw the proposed rule was arbitrary and capricious.<sup>27</sup> The court based this conclusion on its finding that the Secretary failed to expressly consider the "significant portion of its range" issue in her Notice.<sup>28</sup> The court reversed the district court's decision and remanded the case to the Secretary for consideration consistent with the court's analysis.<sup>29</sup>

On appeal, Defenders of Wildlife argued that as many as four of the five factors set forth by statute as criteria for listing a species were present in the case of the lizard.<sup>30</sup> In defense, the Secretary first argued that, despite the existence of threats to the lizard on private land, the availability of habitat on public lands justified the withdrawal of the proposed rule.<sup>31</sup> Second, the Secretary argued that the newly implemented Conservation Agreement would remove the threat of extinction by establishing

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25. *Id.* at 1137, 1140. In determining whether a species is eligible for protection under the ESA, the Secretary of the Interior must consider five statutorily defined factors. These factors are: (A) the present or threatened destruction, modification, or curtailment of habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) the inadequacy of existing regulatory mechanisms; (E) other natural or manmade factors affecting continued existence. *Id.* at 1137 n.1 (citing 16 U.S.C. § 1533(a)(1) (1994)). If, based on the "best scientific and commercial data available," the Secretary determines that one or more of these factors indicates that a species is threatened or endangered, she must issue a proposed rule to list the species as protected under the ESA. *Id.* at 1138 (citing 16 U.S.C. § 1533(b) (1994)). Within one year of the issuance of the proposed rule, following a public comment period, the Secretary must either issue a final rule listing the species as protected or, if available evidence does not support a listing, withdraw the proposed rule. *Id.* (citing 50 C.F.R. § 424.17(a)(iii) (2001); 16 U.S.C. § 1533(b)(6)(A) (1994)). If there is "substantial disagreement" in the scientific community regarding the sufficiency or accuracy of the available data relevant to the determination," the Secretary may delay a final decision for up to six months. *Id.* at 1138 n.2 (citing 16 U.S.C. § 1533(b)(6)(B)(i) (1994)).

26. *Id.* at 1136. In 2001, Bruce Babbitt completed an eight year stint as Secretary of the Interior under President Clinton. The Bush administration appointed Gale Norton to the position. She was subsequently substituted for Bruce Babbitt as a party to this case.

27. *Id.* at 1137.

28. *Id.* at 1145-1146.

29. *Id.* at 1146-1147.

30. *Id.* at 1140.

31. *Id.*

added protections.<sup>32</sup> The court rejected both of these defenses to Defenders' claim. The court's analysis rested largely upon a careful examination of the phrase "in danger of extinction throughout . . . a significant portion of its range."<sup>33</sup> The court began by looking to the statutory language and found that the plain meaning of the ESA's text was not very revealing. Looking to the dictionary definition of "extinction,"<sup>34</sup> the court found that the use of this word together with the phrase "throughout a significant portion of its range" was oxymoronic because "extinction suggests total rather than partial disappearance."<sup>35</sup> The court thus found the statutory language to be "inherently ambiguous, as it appear[ed] to use language in a manner in some tension with ordinary usage."<sup>36</sup>

The Secretary proposed resolving this ambiguity by interpreting the statute to mean that a species is in danger of extinction only if it is in danger of extinction everywhere.<sup>37</sup> The court concluded that this interpretation would render the statute redundant on two counts. First, there would be no need for the terminology adding "a significant portion of its range" if it were to be read as synonymous with the phrase "all of its range."<sup>38</sup> Second, the Secretary's definition would render the separate provisions for "endangered" species and "threatened" species meaningless.<sup>39</sup> The Secretary suggested that by allowing protection for a species in danger of becoming extinct throughout a *significant* portion of its range, the ESA gives life to Congress' intention to provide protection for species not yet faced with imminent extinction.<sup>40</sup> However, the court found that this purpose is satisfied elsewhere in the ESA, through the establishment of distinct "threatened" and "endangered" categories. The court thus refused to accept the Secretary's

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32. *Id.*

33. *Id.* at 1140-46 (citing 16 U.S.C. § 1532(6) (1994)).

34. *Id.* at 1141. The Court cited the Oxford English Dictionary definition of "extinct." "Extinct" means "has died out or come to an end. . . . Of a family, class of persons, a race of species of animals or plants: Having no living representative." *Id.*

35. *Id.* It is interesting that Congress used the term "extinction" in conjunction with this language when an alternative term, "extirpation," would seem to convey a more precise meaning.

36. *Id.*

37. *Id.*

38. *Id.* at 1141-42.

39. *Id.* at 1142.

40. *Id.*

interpretation, which would have rendered portions of the statute superfluous.<sup>41</sup>

The court also rejected Defenders' interpretation of the phrase "extinction throughout. . . a significant portion of its range." Defenders approached this terminology quantitatively, arguing that the 82 percent projected loss of habitat for the lizard constituted a "significant portion of its range."<sup>42</sup> In support of this argument, Defenders cited cases where courts found that a species should be listed based on a loss of smaller portions of habitat.<sup>43</sup> The court set forth two problems with this approach. First, identifying "significant portion" as simply the percentage of the lizard's total range which had been lost would not account for the absolute size of the remaining habitat or the varying importance of certain portions of a habitat.<sup>44</sup> Second, the court explained that if Congress had intended a purely quantitative approach, it could have provided an actual percentage value in the ESA itself.<sup>45</sup>

Having rejected each party's interpretation of "significant portion of its range,"<sup>46</sup> the court looked to the legislative history and concluded that the addition of the phrase "significant portion of its range," after the initial adoption of the statute, constituted a significant change in the scope of the statute that the Secretary needed to account for in her listing decisions.<sup>47</sup> Where the Secretary under earlier versions of the ESA could only list a species for protection if it were threatened throughout its

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41. *Id.* (citing *United Food and Commercial Workers Union Local 751 v. Brown Group, Inc.*, 517 U.S. 544, 549 (1996)).

42. *Id.* at 1143.

43. *Id.* Defenders cited two cases: *Federation of Fly Fishers v. Daley*, 131 F. Supp. 2d 1158, 1164 (N.D. Cal. 2000) (holding that the listing of steelhead trout was merited even though protections covered 64% of its range); *ONRC v. Daley*, 6 F. Supp. 2d 1139, 1157 (D. Or. 1998) (finding Coho salmon in danger of extinction even though 35% of its range is protected federal regulations). It also cited a regulation, *Endangered and Threatened Wildlife and Plants; Listing as Threatened with Critical Habitat for the Coachella Valley Fringe-Toed Lizard*, 45 Fed. Reg. 63,812, 63,817-18 (Dep't Interior, Sept. 25, 1980) (codified at 50 C.F.R. part 17) (adding the Coachella Valley fringe-toed lizard to the list of threatened species even though 50% of its historical habitat remained). 258 F.3d at 1143.

44. 258 F.3d at 1143.

45. *Id.* at 1144.

46. The Court explained that the different approaches to "significant portion of its range" taken by the parties were largely rooted in their different understandings of the roles of public and private land as species habitat. The Secretary emphasized the conservation efforts on public lands to support her conclusion that the lizard was not endangered. In contrast, Defenders' focused on the loss of lizard habitat on private land and argued the lizard's habitat located on private land constitutes a significant portion of its range. *Id.* at 1140-41.

47. *Id.* at 1144.

entire range,<sup>48</sup> after the addition the Secretary could target listings to address regional threats to species survival, even in cases where a species might be overpopulated in other locations. Although the court found clear evidence in the legislative history that the “significant portion of its range” phraseology broadened the meaning of the terms “endangered” and “threatened,” it did not find guidance in that history regarding what specifically constitutes a “significant portion” of a species’ range.<sup>49</sup>

In the absence of clear direction either from the statutory language itself or from the legislative history, the court concluded that “a species may 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.”<sup>50</sup> The court held that these areas could, but need not coincide with national or state political boundaries, and that habitat on private land could constitute a significant portion of a species’ range.<sup>51</sup> Within these parameters, the Secretary “has a wide degree of discretion in delineating ‘a significant portion of its range,’ since the term is not defined in the statute.”<sup>52</sup> Despite this discretion, the Secretary cannot ignore this language; the court found the Secretary’s failure to account for this phraseology in the statute to be fatal to her interpretation.<sup>53</sup> The court also rejected the Secretary’s argument that the Conservation Agreement would mitigate threats to the lizard’s habitat.<sup>54</sup> The Conservation Agreement was not fully implemented at the time that the Secretary withdrew the proposed rule to list the lizard under

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48. “The previous two [Acts]. . . defined endangered species narrowly, including only those species facing total extinction. Neither extended protection to a species endangered only in a ‘significant portion of its range.’” *Id.*

49. *Id.* at 1144-45.

50. *Id.* at 1145.

51. *Id.*

52. *Id.*

53. *Id.* at 1145-46. The court explained that its conclusion was consistent with established doctrine regarding deference to agencies, emphasizing that where the Secretary has ignored statutory provisions in issuing a decision, the court owes her finding no deference. *Id.* (citing *Chevron v. Natural Resources Defense Council, Inc.*, 467 U.S. 837 (1984) and quoting *International Longshoreman’s Ass’n, AFL-CIO v. National Mediation Bd.*, 870 F.2d 733, 736 (D.C. Cir. 1989) (“[Deference] is not due when the [agency] has apparently failed to apply an important term of its governing statute. We cannot defer to what we cannot perceive.”)). It stated that

[w]here, as here, it is on the record apparent that the area in which the lizard is expected to survive is much smaller than its historical range, the Secretary must at least explain her conclusion that the area in which the lizard can no longer live is not a ‘significant portion of its range.’

*Id.* at 1145.

54. *Id.* at 1146.

ESA<sup>55</sup> and, the court found, could not have been a mitigating factor as described by the Secretary.

Following this analysis, the court reversed the district court's decision granting summary judgment to the Secretary and remanded the case to the Secretary for consideration consistent with the court's analysis.

## II

### A CONTEXTUAL ANALYSIS OF THE TERM "SIGNIFICANT PORTION OF ITS RANGE"

The court in *Defenders of Wildlife* rejected two possible interpretations of the phrase "significant portion of its range" on the grounds that they were oversimplified. The Secretary's proposed interpretation failed to account for complexities in the statutory language, while the percentage approach proposed by *Defenders of Wildlife's* did not account for the absolute size of a species' range and other features that bear on whether a portion of range is significant. Rather than providing its own definition, the court in *Defenders of Wildlife* left the definition of the phrase to the Secretary, within the guidelines set by the court.

In holding that the term must have a meaning, while refusing to provide an exact definition, the *Defenders of Wildlife* decision highlights important unanswered questions about the meaning of the phrase "significant portion of its range" in ESA's definitions of "endangered species" and "threatened species." Below is a simple diagram depicting the "significant portion of its range" concept in terms of the relationship between the total range of a species and the range in which the species is in danger<sup>56</sup> of becoming extinct.<sup>57</sup> This diagram illustrates the

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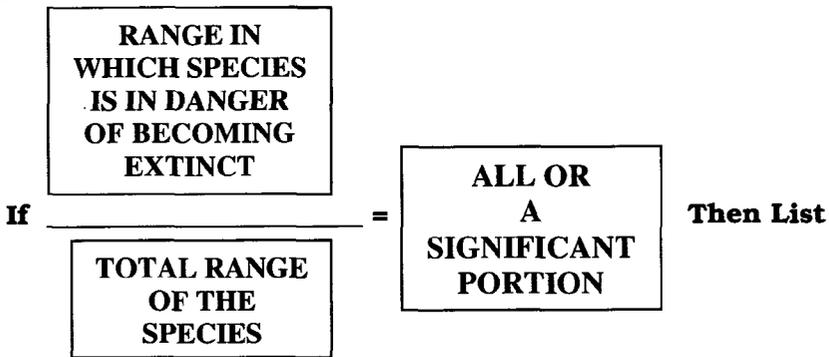
55. *Id.*

56. A thorough discussion of the phrase "in danger of" is beyond the scope of this article. The phrase "in danger of" is not explicitly defined in fixed terms by the ESA. Nor is it a term that can be defined scientifically. Rather, it requires that the Secretary make a value judgment regarding the tolerable extent of risk of species extinction before determining what portion of a species' range corresponds with that risk level. See generally Holly Doremus, *Listing Decisions Under the Endangered Species Act: Why Better Science Isn't Always Better Policy*, 75 WASH. U. L.Q. 1029, 1035 (1997). A quantitative definition of risk, applied uniformly to all species, would help to limit discrepancies in assessments of endangerment that may arise inadvertently or due to certain biases, such as the empirically demonstrated preference for charismatic megafauna. For a general discussion of this bias, see Petersen, *supra* note 6, at 479-484. Some authors have suggested that this level of risk should be stated as a percent chance that a species will become extinct in a fixed number of years. See NATIONAL RESEARCH COUNCIL, SCIENCE AND THE ENDANGERED SPECIES ACT 152 (1995).

However, even if an acceptable risk level were set in quantitative terms, it is not clear that it would be possible to determine whether existing conditions and threats

determination that must inform any determination of the “significant portion” of a species’ range, and the remainder of this note is framed around its elements. Part A examines several issues that arise in assessing the denominator, the total range of a species, and includes a closer look at the ESA definition of “species.” Part B returns to both the numerator of the equation and the question left open in *Defenders* – what constitutes a significant portion of a species’ range. I conclude that the determinations of each variable in the equation necessarily will involve related contextual considerations, allowing for the characteristics and needs of individual species to be taken into account in listing decisions.

Figure 1:



A. Total Range of a Species

The ESA definition of “species” is integrally related to the identification of the total range of a species. The ESA defines the term “species” to include “any subspecies of fish or wildlife or plants, and any distinct population segment of any species of

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correspond to this risk level. With regard to species extinction, there is a great deal of scientific uncertainty stemming from factors such as genetic, demographic and environmental stochasticity, and lack of information about actual populations size and other actual conditions. See NATIONAL RESEARCH COUNCIL, *supra*, at 81. Limitations in our theories of extinctions, coupled with limitations in our data collection abilities, may render any realistic application impossible. See Doremus, *supra* note 56, at 1118-19. In light of these uncertainties, some general principles of “decision-making constructs” in support of diversity have been offered. For a discussion of these, see Oliver Houck, *On the Law of Biodiversity and Ecosystem Management*, 81 MINN. L. REV. 869, 878 (1997).

57. The concept of an equation is only intended to illustrate the relationship between the terms and not to suggest that these terms should be defined quantitatively.

vertebrate fish or wildlife which interbreeds when mature."<sup>58</sup> This range of categorizations allows the Secretary flexibility when determining the denominator of the equation, as the listing unit that the Secretary selects is necessarily inseparable from the total range of the listed "species." The choice of listing unit that the secretary makes is likely to involve factors that may later require reconsideration when she seeks to determine what portion of this listed unit's range is significant.

The ESA itself does not provide extensive guidance regarding when a distinct population segment should be listed. The Senate, in a report, stated that it was "aware of the great potential for abuse of this authority and expects the FWS to use the ability to list populations sparingly and only when the biological evidence indicates that such action is warranted."<sup>59</sup> In 1996, the FWS and the National Marine Fisheries Service "adopted a joint policy to clarify their interpretation of the phrase 'distinct population segment...'" for the purposes of listing, delisting, and reclassifying species under the [ESA].<sup>60</sup> This policy outlines three principles for determining whether or not to list a distinct population segment: "(1) the discreteness of the population segment in relation to the remainder of species to which it belongs, (2) the significance of the population segment to the species to which it belongs, and (3) the conservation status of the population segment."<sup>61</sup>

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58. 16 U.S.C. § 1532(16) (1994).

59. TONY A. SULLINS, ENDANGERED SPECIES ACT 8 (2001) (citing Policy Regarding the Recognition of Distinct Vertebrate Population Segments Under the Endangered Species Act, 61 Fed. Reg. 4,722, 4,722 (Dep't Interior, Feb. 7, 1996)).

60. Policy Regarding the Recognition of Distinct Vertebrate Population Segments Under the Endangered Species Act, 61 Fed. Reg. at 4,722.

61. Sullins, *supra* note 59, at 154 (citing Policy Regarding the Recognition of Distinct Vertebrate Population Segments Under the Endangered Species Act, 61 Fed. Reg. at 4,725). These principles apply to all species covered under the ESA except species of salmonids native to the Pacific which are covered by similar principles issued by NMFS. *Id.* at 154. FWS has not been able to clearly settle upon a coherent application of the distinct population segment listing authority. *Id.* at 8 (citing Southwest Ctr. For Biological Diversity v. Babbitt, 926 F. Supp. 920, 926-27 (D. Ariz. 1996)).

Written before the adoption of this policy, one of the only law review articles to look in any detail at the "significant portion of its range" language highlighted a potential ambiguity in the statute, which the FWS policy later addressed. The article stated:

The ESA... does contain two definitions of the term "species," one defining the term standing alone and another defining the term as modified by the terms "threatened" and "endangered." The former definition contains the ambiguous term "distinct population segment." This term makes no sense when plugged into the definitions of threatened species and endangered species.

Even in light of this policy, the Secretary has substantial discretion in determining whether to identify an entire species, a subspecies, or a distinct population segment for listing. Without specifically delineating “a significant portion of [the species] range,” the Secretary thus can make strategic listing decisions to afford greater protections to species. Organisms that would have no protection as members of a species may be protected as members of a subspecies or distinct population segment. By allowing the range of a subspecies or distinct population segment to serve as the denominator in an ESA listing assessment, much smaller scale threats to that organism’s viability can be taken into account.<sup>62</sup>

A good example of this is the case of the California gnatcatcher, a small songbird found in the southwestern U.S. and northwestern Mexico.<sup>63</sup> The Secretary found that the U.S. population was a distinct subspecies from the population in Mexico.<sup>64</sup> As a result, she was able to list the northern population, which had experienced severe declines. Without the ability to consider subspecies afforded in the ESA, the gnatcatchers probably would not have been eligible for listing.<sup>65</sup>

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Daniel J. Rohlf, *Pacific Salmon: There’s Something Fishy Going on Here: A Critique of the National Marine Fisheries Service’s Definition of Species Under the Endangered Species Act*, 24 ENVTL. L. 617, 664 (1994). In a footnote the author goes on to explain, “if one substitutes distinct population segment for the term ‘species’ in the definitions of threatened species and endangered species, the result is nonsensical. In this context, the statute would refer to a distinct population segment ‘in danger of extinction throughout all or a significant portion of its range.’” *Id.* at 664 n.194.

However, it seems that this is exactly what the FWS policy requires. Posing the third principle as a question, the policy asks, “is the population segment, when treated as if a species, endangered or threatened?” Policy Regarding the Recognition of Distinct Vertebrate Population Segments Under the Endangered Species Act, 61 Fed. Reg. at 4,725. Further, the policy provides, “If a population segment is discrete and significant (i.e. it is a distinct population segment) its evaluation for endangered or threatened status will be based on the Act’s definitions of those terms and a review of the factors enumerated in section 4(a).” It thus appears that, under the FWS policy, a distinct population unit thus may be “in danger of extinction throughout all or a significant portion of its range.”

62. Despite the importance of distinct population segments and subspecies as units for categorizing and listing under the ESA and the light they shed on the proper interpretation of the statute, it should be noted that around 80 percent of the taxa listed or proposed for listing by 1991 were full species and 20 percent were subspecies or populations. Steven R. Beissinger and John Perrine, *Extinction, Recovery and the Endangered Species Act*, in PROTECTING ENDANGERED SPECIES IN THE UNITED STATES 51, 56 (Jason F. Shogren et al. eds., 2001) (citing David S. Wilcove et al., *What exactly is an endangered species? An analysis of the U.S. endangered species list: 1985-1991*, CONSERVATION BIOLOGY, Mar. 1993, at 87-93).

63. Doremus, *supra* note 56, at 1104.

64. *Id.*

65. *Id.*

Likewise, the U.S. population of the lizard could receive protection even if the Mexican population was thriving.

Another source of flexibility that is available to the Secretary stems from the fact that the ESA does not provide a temporal baseline for assessing a species' total range. The *Defenders of Wildlife* court did not seem troubled by this when it concluded, "consistently with the Secretary's historical practice, that a species can 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."<sup>66</sup> However, the point in history where the Service chooses to examine the range of a species bears heavily on whether a species receives protection under the ESA, and provides the Secretary with an additional source of flexibility.

This flexibility in delineating listing units may serve as either a benefit or a detriment to species conservation. By allowing the Secretary to account for smaller-level threats to species, the ESA listing scheme benefits the larger species as well as the listed population, because the gene pool of the listed unit can be a valuable source of protection against disease and similar threats to the species as a whole. However, this flexibility also introduces an element of strategy into the listing process that may or may not have a positive effect on listing decisions. As one commentator has noted,

[o]n the one hand, this means that the Secretary may list a distinct population segment of a species as endangered even if the species is abundant in the rest of its geographical range. On the other hand, it also allows the Secretary to propose delisting distinct population segments of a species no longer in jeopardy even if the species is still endangered throughout the rest of its range."<sup>67</sup>

Whether or not the agencies elect to recognize certain subspecies units "appears in practice to depend on whether [doing so] is consistent with the agencies' preferred course of action."<sup>68</sup>

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66. *Defenders of Wildlife v. Norton*, 258 F.3d at 1145.

67. Philip Kline, *Grizzly Bear Blues: A Case Study of the Endangered Species Act's Delisting Process and Recovery Plan Requirements*, 31 ENVTL. L. 371, 379 (2001).

68. Doremus, *supra* note 56, at 1111. It is possible that this flexible listing authority also allows for the use of strategy in delisting decisions. Federico Cheever provides a very interesting discussion of this in his article, *The Rhetoric of Delisting Species Under the Endangered Species Act: How to Declare Victory Without Winning the War*, 31 ENVTL. L. REP. 11302 (2001).

Even if the flexible definition of species sometimes might lead to reduced protection, there are other reasons why the ESA's inclusion of species, subspecies, and populations is appropriate. First, this broad definition of species "is based on a consistent policy decision by Congress to afford a domestic population segment of a species' protected status before the entire species faces global extinction."<sup>69</sup>

Second, "species" is not the fixed concept that it is often perceived to be.<sup>70</sup> The concept of species varies significantly between disciplines.<sup>71</sup> Some disciplines apply the "species" concept at a much more general level of taxa-classification.<sup>72</sup> As a result, a legal scheme limiting ESA listings to the species level would afford uneven protection to different classes of species based upon the classification system established by the scientists and systematists in a particular field.

Third, even if the range of disciplines attached a uniform meaning to the concept of "species," the existence of species in nature is dynamic. A species does not come into existence overnight. Rather, there are countless intermediate steps on the speciation path, possibly including the establishment of distinct populations and the development of subspecies.<sup>73</sup> Consequently, there are groups of organisms below the species level that may warrant protection in order to preserve genetic variation.<sup>74</sup>

The flexibility in determining listing units is important in understanding the relationship between the ESA definition of "species" and the "significant portion of its range" language in the definitions of "endangered species" and "threatened species." At first glance, a determination of what constitutes a "significant portion" of a species' range would logically follow the identification of a listing unit, and the corresponding

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69. Tanya Gulesserian, *The Departments of Commerce and Interior: Bifurcating an Evolutionary Significant Unit Under the Endangered Species Act*, 23 VT. L. REV. 605, 619 (1999).

70. Sullins, *supra* note 59, at 7 ("Nowhere in the ESA. . . will one find any rigid adherence to a purely taxonomic definition of species.").

71. NATIONAL RESEARCH COUNCIL, *supra* note 56, at 55.

72. Sullins, *supra* note 59, at 55 (2001) (citing 61 Fed. Reg. 4,721 (Dep't Interior, Feb. 7, 1996)). For example, the authors point out that ornithologists dedicate much more time to studying variation at the subspecies level while fish biologists may tend to focus on a higher level of distinction. *Id.* at 55.

73. See Doremus, *supra* note 56, at 1097-99. Further, this path may be bi-directional. Two distinct populations, perhaps by breeding with each other through irregular migration, may reverse, or slow, the gradual trend towards speciation. *Id.*

74. There is a general consensus that genetic variation within species is central to the ability of a species to survive and adapt over the long run. NATIONAL RESEARCH COUNCIL, *supra* note 56, at 142-43.

determination of that listing unit's total range. However, due to the degree of flexibility built into the ESA definition of "species", the "significant portion" determination may actually precede the identification of a listing unit. By first identifying the area in which a species is endangered, and then selecting a listing unit that corresponds closely to this area, the Secretary may more effectively guarantee ESA protections to listing units.

### B. *Significant Portion of Its Range*

The ESA does not define what is meant by "a significant portion of its range," and the *Defenders of Wildlife* decision provided FWS only limited assistance in interpreting this term. The court did hold that "habitat on private land may constitute 'a significant portion of [a species'] range' demanding enhanced protections not required on public lands; alternatively, the inverse may be true."<sup>75</sup> The *Defenders of Wildlife* court also allowed that the areas which constitute a significant portion of a species' range "need not coincide with national or state political boundaries, although they can."<sup>76</sup> Nevertheless, the *Defenders of Wildlife* court found that, so long as she acts consistently with the guidance provided in its opinion, "the Secretary necessarily has a wide degree of discretion in delineating 'a significant portion of its range,' since the term is not defined in the statute." This section discusses how the Secretary might best employ her discretion in interpreting the "significant portion of its range" language, and concludes that her decision should be informed by some of the same considerations that factored into the original listing decision.

Because the selection of a listing unit affects not only the absolute size of the relevant range but also the character and quality of that range, the Secretary cannot define "significant portion of its range" without considering the nature of the population unit being listed. A sensible interpretation of "significant portion of its range" should vary depending on the characteristics of the population identified for listing under the ESA and, depending on the needs of the population, may

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75. *Defenders of Wildlife*, 258 F.3d at 1146. For an interesting discussion regarding the protection of species on private lands, see Rodney B. W. Smith and Jason F. Shogren, *Protecting Species on Private Land*, in PROTECTING ENDANGERED SPECIES IN THE UNITED STATES 326-342 (Jason F. Shogren et al. eds., 2001).

76. *Defenders of Wildlife*, 258 F.3d at 1145. For a recent discussion of the listing of species which span multiple nations, see William Snape III et al., *Protecting Ecosystems Under the Endangered Species Act: The Sonoran Desert Example*, 41 WASHBURN L.J. 14, 18-20 (2001).

appropriately be defined quantitatively, qualitatively, or by a combination of these approaches.

This determination also should be made on a case-by-case basis. A case-by-case approach would avoid the two concerns that the court expressed in relation to Defenders' proposed quantitative approach. First, a case-by-case quantitative approach would allow FWS consider absolute range size and other unique attributes of each species. As the Ninth Circuit noted,

A species with an exceptionally large historical range may continue to enjoy healthy population levels despite the loss of a substantial amount of suitable habitat. Similarly, a species with an exceptionally small historical range may quickly become endangered after the loss of even a very small percentage of suitable habitat.<sup>77</sup>

Second, the fact that Congress did not include a fixed actual percentage of range in the definition of "endangered species" suggests Congressional comfort with a case-by-case approach.

Several other characteristics of a species' range may provide additional bases for determining what portion of a species range is significant. The Service has set forth a number of factors that may be considered in assessing a species' "critical habitat."<sup>78</sup> These include:

space; food, water, air, light, minerals, or other nutritional or physiological requirements; cover or shelter; sites for breeding, reproduction, or rearing of offspring; habitats protected from disturbance or representative of the historic geographical distribution and ecological distribution of the species. . . The Secretary must focus his or her consideration on 'primary constituent elements' such as roost sites, nesting grounds, spawning site, feeding sites, wetlands, vegetation, soil type, and water quantity or quality."<sup>79</sup>

These primary constituent elements should be carefully considered in determining whether a particular segment of a species' range constitutes a significant portion of its range, as their protection may be as or more important than the preservation of a particular percentage of area to the continued existence of the species.

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77. *Defenders of Wildlife*, 258 F.3d at 1143.

78. Sullins, *supra* note 59, at 26 ("The ESA defines critical habitat as the specific areas containing features essential to the conservation of the species, and that may require 'special management considerations and protection.'" (citing 16 U.S.C. § 1532 (5)(A) (1994))).

79. *Id.* at 26-27 (citing § 424.12(b)).

There are, however, limits to using listing criteria for guidance in determining what portion of a species' range is significant. The listing unit selected might induce the Secretary to ignore important portions of the species' range. For example, a species may be comprised of several distinct population segments, each of which may be eligible for listing under the ESA definition of "species," and each of these segments may be assessed as occupying a localized, limited range. However, corridor and peripheral areas which are critical, but rarely occupied by members of any given population, may not be included in the calculation of significant portion of the species' range. This is a case where the total may be greater than the sum of its parts.

These connecting corridors are important partly because a population may depend for its long-term survival on occasional interbreeding with other sub-populations,<sup>80</sup> and isolation will place the species as a whole at risk.<sup>81</sup> These infrequently used corridors might be identified as peripheral to the range of a particular distinct population segment, but *would* more easily be identifiable as a core part of the range of the species as a whole. The Secretary should be careful to review this type of qualitative factor in her assessment of whether a significant portion of a species' range is at risk.

The FWS criteria for listing subspecies populations<sup>82</sup> thus highlight the interrelation between the "species" and "significant portion of its range" concepts. For example, if a discrete population segment were selected primarily due to its *discreteness* in relation to the remainder of species to which it belongs, then the Secretary may feel that corridor areas are less "significant" to the range than they would be in a case where the population segment was selected for its *significance* to the larger species to which it belongs.

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80. NATIONAL RESEARCH COUNCIL, *supra* note 56, at 59. For a brief discussion of the importance of linking corridors to grizzly bears, see Kline, *supra* note 67, at 406-7.

81. NATIONAL RESEARCH COUNCIL, *supra* note 56, at 59. For example, a study of California cougars found that these animals live largely in relatively isolated local populations connected by riparian corridors. *Id.* at 100. The cougars rely on such corridors to maintain and replenish colonies in each of these semi-isolated sub-ranges. *Id.*

82. Sullins, *supra* note 59, at 154.

## CONCLUSION

The court in *Defenders of Wildlife* appropriately declined to set forth a simple formula for delineating a "significant portion of [a species'] range," likely recognizing that the issues to be considered in determining how this concept should be applied in individual listing decisions are numerous and intertwined. The scientific determinations underlying a specific risk assessment, the determination of the most sensible taxa for ESA listing purposes, and the identification of what constitutes a "significant portion of [a species'] range" are best made by the Secretary, who is prepared to look at the special characteristics of particular species and to evaluate the most appropriate and beneficial population unit for listing.

As discovered by the court in *Defenders of Wildlife*, simple solutions are not to be found in the statutory language or the legislative history of the ESA. As such, the Secretary's task is not an easy one. The Secretary will only be able to effectively apply the "significant portion of its range" concept by defining it within the statutory context provided by the surrounding terms to which it is closely bound, and in light of the biological and ecological concerns faced by individual species.

