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## Defending Against the Fourth Horse<sup>1</sup>: The Endangered Species Act and the Threat of Communicable Disease

There is an unavoidable tension in the relationship between human beings and the remainder of the natural world. This tension is present due to the dual role that human beings perform when acting as both ruler<sup>2</sup> and servant.<sup>3</sup> When acting as ruler, we utilize the remainder of the natural world to satisfy our immediate needs and wants. Thus, when an individual cuts down a tree for firewood or lumber, butchers a cow for meat and leather, or calls an exterminator to get rid of an infestation, that individual is acting in his or her ruling function. The individual holds his or her needs paramount to the remainder of creation. Nature is subdued.

When acting as servant, we place the needs of the remainder of creation above our own immediate needs and wants. We are moved to have compassion for species other than our own. Acting in this role, we create wilderness areas<sup>4</sup> and enact conservation laws<sup>5</sup> in order to give the remainder of creation a safe haven. The motive behind acting as a servant of nature is to protect the richness of creation. Nature is protected.

Each role is remarkably different and a balance between the two must be achieved for ecological and ethical reasons.<sup>6</sup> If the scales are tipped heavily in favor of our “ruler” role, the amount of ecological richness in the world will consistently decrease because of our over-consumption and greed.<sup>7</sup> We will always choose to satisfy our needs and wants at the expense of the remainder of creation.<sup>8</sup> However, if the

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1. *Revelation* 6:8 (Revised Standard Version). The Fourth Horse of the Apocalypse brings death through, among other things, pestilence and wild beast attacks.

2. *Genesis* 1:28 (New Jewish Publication Society Translation).

3. FRANCIS SCHAEFFER, POLLUTION AND THE DEATH OF MAN: THE CHRISTIAN VIEW OF ECOLOGY 54 (1970) [hereinafter SCHAEFFER].

4. *E.g.* Yellowstone National Park, discussed in section II(a) *supra*.

5. *E.g.* Federal Water Pollution Control Act 33 U.S.C. §§ 1251 *et seq.* (2002). The conversational fervor is quite strong in that Congress intended to eliminate all water pollution by 1985. 33 U.S.C. §1251(a)(1).

6. SCHAEFFER, *supra* note 3, at 70.

7. *Id.* at 83.

8. For a discussion on this point *see id.* at 86 and ALDO LEOPOLD, A SAND COUNTY

converse were true and the scales were tipped heavily in favor of our “servant” role, we might find ourselves in a world where the same ethical rights and biological importance currently held by humans are afforded to plants and animals.<sup>9</sup> This view of the world would make it impossible to justify cutting down a tree in order to build a house.<sup>10</sup> All of creation would exist in a state of Pan-everythingism; every living thing would be equal in value.<sup>11</sup> Neither extreme is acceptable—the virtue is in the balance.<sup>12</sup>

This article examines the tension described above within the context of the Endangered Species Act<sup>13</sup> (hereafter “ESA” or “the Act”). Part one of this article discusses the Endangered Species Act and its history. Part two discusses West Nile Virus and Chronic Wasting Disease and how the authorities dealt with recent outbreaks of these diseases. Part three discusses how the ESA would function if the U.S. were faced with a similar situation as those in discussed part two, but if an endangered species were involved. In other words, part three discusses how we should act when human beings are threatened with a lethal or debilitating disease<sup>14</sup> and any action taken to prevent the spread the disease harms a listed species.<sup>15</sup>

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ALMANAC 165-228 (Special Commemorative Edition 1989) [hereinafter LEOPOLD].

9. Thomas G. Kelch, *Toward a Non-Property Status For Animals*, 6 N.Y.U. ENVTL. L.J. 531, 533 (1998). Although Kelch does not argue that animals should be granted rights equivalent to those currently held by humans, he does argue that animals should be granted the right to achieve their biological “telos”. See also *Palila v. Hawaii Dep’t of Land and Natural Res.* 639 F.2d 465 (9th Cir. 1981) (The Palila bird was a party to the action and listed as the lead plaintiff.)

10. SCHAFFER, *supra* note 3, at 19.

11. A term used by Schaffer to explain an ethical system in which everything in creation has the same value. Thus, a tree has as much value as a mouse, as a cow, and as a human. The problem with this system arises when one organism must be sacrificed for the benefit of the other. See *Generally* SCHAFFER, *supra* note 3, at 17-33.

12. ARISTOTLE, *NICOMACHEAN ETHICS*, 43 (Martin Oswald trans., Library of Liberal Arts 1962) [hereinafter ARISTOTLE]. Aristotle argued that virtue is the mean between two non-ethical extremes, e.g., generosity is the mean between extravagance (giving one’s money away to everyone) and stinginess (hoarding one’s money).

13. 16 U.S.C. § 1531 et seq. (2002).

14. Plagues and viral hemorrhagic fevers, such as Ebola, are two classes of diseases that could be transmitted via animal hosts. For more information see Centers for Disease Control and Prevention, *Viral Hemorrhagic Fevers*, at <http://www.cdc.gov/ncidod/dvrd/spb/mnpages/dispages/vhf.htm> (last modified Jan. 29, 2002). See also RICHARD PRESTON, *THE HOT ZONE* (1995) (specifically discussion the Ebola Virus), and Centers for Disease Control and Prevention, *Facts about Pneumonic Plague*, at <http://www.bt.cdc.gov/documentsapp/FactSheet/Plague/About.asp> (last modified Oct. 14, 2001).

15. Species are listed as either endangered or threatened under section four of the ESA. 16 U.S.C. § 1533 (2002).

## I. The Endangered Species Act and Relevant Statutory History

### A. Pre-ESA Legislation (late 1800's-1973)

Congress enacted the first wildlife conservation laws in the United States in 1868. However, Congress passed this legislation for economic reasons rather than species protection.<sup>16</sup> Hunters and fishermen requested this legislation after witnessing a decline in game and fish numbers in the late 1800's.<sup>17</sup> The decline could be seen most dramatically in the Great Plains American Bison population.<sup>18</sup> In order to protect the remainder of the bison, whose numbers reached only a fraction of the original herd,<sup>19</sup> Congress established Yellowstone National Park as a national wildlife refuge.<sup>20</sup> In addition to this monumental federal action, individual States undertook the responsibility of regulating those species within their borders.<sup>21</sup> Although this effort eventually ensured the survival of the American Bison,<sup>22</sup> it is estimated that many species became extinct during the late 1800's due to over harvesting.<sup>23</sup>

The first national attempt at species regulation did not appear in the United States until Congress enacted the Lacy Act in 1900.<sup>24</sup> The Lacy Act prohibits interstate transportation of wild animals or birds killed in violation of state gaming laws.<sup>25</sup> However, it should be noted that

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16. The Act of July 27, 1868, ch. 273, 15 Stat. 240 (repealed 1944) prohibited the killing of certain fur animals in the territory of Alaska. THE ENDANGERED SPECIES ACT 14 (P. Stephanie Easley et al. eds., 2001) [hereinafter EASLEY].

17. STANLEY H. ANDERSON, *The Evolution of the Endangered Species Act*, in PRIVATE PROPERTY AND THE ENDANGERED SPECIES ACT 8 (Jason F. Shogren ed. 1998) [hereinafter ANDERSON].

18. Easley, *supra* note 16, at 15. The rapid decline of the American Bison was due partly to over-harvesting and partly to the division of the heard by the continental railroad. *Buffalo-Bison*, America's West at <http://www.americanwest.com/bison/buffindx.htm> (last visited January 10, 2003) [hereinafter America's West].

19. BRIAN CZECH & PAUL R. KRAUSMAN, THE ENDANGERED SPECIES ACT, 8 (2001). [Hereinafter CZECH]. Some sources estimate that only 300 bison from the original herd of 60 million remained by 1893. America's West, *supra* note 18.

20. *Id.*, ACT OF MAY 7, 1894, ch. 72, 28 Stat. 73.

21. See *Geer v. Connecticut*, 161 U.S. 519, 529 (1896). The Supreme Court ruled that the wild game within a State is the property of the State's citizens and that the State, deriving power from its citizens, has the power to regulate the harvesting of those animals.

22. Approximately 150,000 bison live in the United States in public and private herds. America's West, *supra* note 18.

23. CZECH, *supra* note 19, at 9.

24. 31 Stat 187 (1900), (currently codified at 16 U.S.C. § 701 *et seq.*).

25. The Lacy Act authorized states to prohibit the import and export of illegally killed game and also allowed the Secretary of Agriculture to adopt programs aimed at preserving and reintroducing game and other wild birds. ANDERSON, *supra* note 17, at

Congress exercised this power under the Commerce Clause of the U.S. Constitution, a power traditionally used to regulate economically related actions.<sup>26</sup> Congress used a purely economic power to protect wildlife; Congress viewed wildlife as an economic asset.

The next major Federal action in wildlife protection came from the Convention for the Protection of Migratory Birds in 1916.<sup>27</sup> The Convention, adopted by both the United States and Great Britain on behalf of Canada, established specific hunting seasons for game birds, and extended protection to non-game birds to prevent species endangerment.<sup>28</sup> The Convention also prohibited the removal of nests or eggs of protected birds, unless the removal aided in research or propagation of that species.<sup>29</sup> It is important to note that the driving force of the Convention aimed at prohibiting over-depletion of an important food resource, not at protecting a species because it has intrinsic value.<sup>30</sup>

In 1926, Congress turned its attention to the nation's marine life and passed the Black Bass Act.<sup>31</sup> This act regulates the importation and transportation of Black Bass and other fish. In 1934, Congress passed the Fish and Wildlife Coordination Act<sup>32</sup> to monitor the effects of water development projects on wildlife.<sup>33</sup> Though both of these acts appear to be wildlife focused, particularly the Fish and Wildlife Coordination Act, the statutes regarded wildlife as an economic asset. Congress continued to act as ruler over nature being concerned that the decreasing wildlife numbers would have an adverse impact on interstate commerce, ignoring the issue of biodiversity.

A paradigm shift occurred in 1940 when the United States took two giant non-economic steps towards protecting wildlife. First, the U.S. participated in a convention involving eleven other countries on the nature, protection, and preservation of wildlife in the Western Hemisphere.<sup>34</sup> The convention aimed at habitat protection in order to "preserve all representatives of all species" in their natural habitats.<sup>35</sup>

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11.

26. U.S. CONST. art. I, §8, cl. 3.

27. ANDERSON, *supra* note 17, at 11. The United States entered a similar treaty with Mexico in 1936.

28. *Id.*

29. *Id.*

30. *I.e.*, inherit value, having value without external qualification.

31. BLACK BASS ACT, 44 Stat. 76 (1926), currently codified at 16 U.S.C. § 851 *et seq.* (2002).

32. FISH AND WILDLIFE COORDINATION ACT, 48 Stat. 401, currently codified at 16 U.S.C. § 661 *et seq.* (2002).

33. *See* ANDERSON, *supra* note 17, 11.

34. *Id.*

35. *Id.*

The participating nations further agreed to take appropriate steps in order to protect migratory birds with not only economic value, but also purely aesthetic value and to prevent the extinction of any species threatened with such a fate.<sup>36</sup>

In the same spirit as the 1940 convention, Congress enacted the Bald Eagle Protection Act.<sup>37</sup> By this time, the bald eagle population in the United States had dwindled significantly from its pre-European colonization numbers.<sup>38</sup> Unique and unprecedented, this Act imposed the first complete ban on the taking of two specific and related species, the bald and golden eagle.<sup>39</sup> Although it took the threatened loss of the country's national symbol, Congress took the first step necessary for later legislation.

Further recognition of the need for endangered species protection occurred in 1964 when the Fish and Wildlife Service (FWS) formed the Committee on Rare and Endangered Wildlife Species.<sup>40</sup> The committee published the famous "redbook" on Rare and Endangered Fish and Wildlife of the United States.<sup>41</sup> The redbook listed sixty-three animal species in the United States as being endangered.<sup>42</sup> Despite the informative effect of listing endangered species, the redbook lacked the necessary legal power to protect any of the animals listed. However, from a public relations perspective, the redbook served as a way for the federal government to let the public know that the U.S. was aware of the problem.<sup>43</sup>

Taking notice of the redbook, Congress woke up from its twenty-six year slumber regarding endangered species regulation. In 1966, two years after the Committee published redbook, Congress passed the first statute to specifically address and attempt to correct the growing problem of species endangerment. The Endangered Species Prevention Act<sup>44</sup> ("ESPA") authorized the FWS to maintain a list of endangered species and allocated funding to the FWS to conduct research and acquire lands for endangered species habitats.<sup>45</sup> The following year, ESPA established

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36. *Id.*

37. BALD EAGLE PROTECTION ACT, 54 Stat. 250, currently codified at 16 U.S.C. § 668 et. seq.

38. It is estimated that the bald eagle population numbered close to 500,000 prior to European colonization. Hope Rutledge, *History of the Bald Eagle*, American Bald Eagle Information at <http://www.baldeagleinfo.com/eagle/eagle11.html> (last visited January 11, 2003).

39. CZECH, *supra* note 19, at 19.

40. *Id.* at 21.

41. The updated version is currently known as the "goldbook".

42. CZECH, *supra* note 19, at 21. Only vertebrate animals were listed.

43. ANDERSON, *supra* note 17, at 12.

44. THE ENDANGERED SPECIES PREVENTION ACT OF 1966, 80 Stat. 926 (1966).

45. ANDERSON, *supra* note 17, at 12.

the Office of Endangered Species to produce and update an official list of endangered species.<sup>46</sup>

Unfortunately, ESPA lacked any real teeth in that it had two major shortcomings. First, the FWS had no ability to regulate the trade or taking of an endangered species unless the taking took place on national wildlife refuges.<sup>47</sup> For example, if an individual shot an Indiana Bat<sup>48</sup> while on federal land, the taking would be covered by the statute. If an individual shot an Indiana Bat right next to federal land, but not on it, the taking would not be covered by the statute. Second, ESPA only applied to vertebrates, a classification that counts for only a fraction of all animals.<sup>49</sup>

Congress amended ESPA by passing the Endangered Species Conservation Act in 1969.<sup>50</sup> The 1969 Act provided three improvements to ESPA. The 1969 Act: 1) expanded the Act's scope to include invertebrates and endangered species residing outside the jurisdiction of the United States; 2) required the FWS to initiate recovery plans for endangered species; and 3) required the Departments of Defense, Agriculture, and Interior to consider the plight of endangered species and act to conserve them.<sup>51</sup> The amendments also established a ranking system for the listed endangered species.<sup>52</sup>

Only slight modifications to the overall federal scheme for species protection occurred in the four years from 1969-1973. In 1971, Congress amended the Fisherman's Protective Act of 1967 through the Pelly Amendment, allowing the President to block imports from countries not in compliance with the International Whaling Commission.<sup>53</sup> In 1972, the United States entered into a similar migratory bird treaty with Japan as it had with Great Britain and Mexico.<sup>54</sup> That same year, Congress enacted the Marine Mammal Protection Act<sup>55</sup> to protect seals and other

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46. *Id.* The official list of endangered species had increased from sixty-three to seventy-eight by the formation of the Office.

47. CZECH, *supra* note 19, at 21.

48. 50 C.F.R. § 17.3 (2002).

49. *Id.* Of the 388 current endangered species, 148 are invertebrates. *Summary of Listed Species*, available at <http://ecos.fws.gov/tess/html/boxscore.html> (last modified December 31, 2002).

50. ENDANGERED SPECIES CONSERVATION ACT OF 1969, 83 Stat. 275.

51. ANDERSON, *supra* note 17, at 12.

52. CZECH, *supra* note 19, at 22. The Act provided three levels of classification with a classification of 1 being assigned to species that were most endangered and a classification of 3 to those species that were only slightly endangered.

53. FISHERMAN'S PROTECTIVE ACT OF 1967, 68 Stat. 883, currently codified at 22 U.S.C. § 1971 *et seq.* (2002).

54. ANDERSON, *supra* note 17, at 12.

55. MARINE MAMMAL PROTECTION ACT, 86 Stat. 1027 (1972), currently codified at 16 U.S.C. § 1361 *et seq.* (2002).

marine animals.<sup>56</sup> Finally, Congress ratified the Convention on International Trade in Endangered Species of Wild Fauna and Flora, which prohibits international trade of certain plants and animals.<sup>57</sup>

There are two main points to be made regarding the history discussed above: 1) Congress's approach toward species regulation shifted in 1940 from a purely economic approach to a species-value approach, and 2) endangered species legislation had increased in both strength and scope. Prior to this time, the vast bulk, if not all, of Congressional wildlife legislation focused on the economic impact that non-regulation of certain species would have on the commerce of the United States. After 1940, Congressional wildlife legislation shifted when Congress moved towards protecting species purely for their aesthetic and ecological value and away from acting out of purely economic motives regarding species protection.<sup>58</sup> Congress adopted a mentality of conservation for conservation's sake. This shift can be seen in the Bald Eagle Protection Act and subsequent legislation.<sup>59</sup> Accompanying this shift in motivation, the scope of species protection increased in the number of countries involved<sup>60</sup> and in the diversity of species protected.<sup>61</sup> Modern endangered species legislation emerged in this historical context.

### B. *The Endangered Species Act*

Congress enacted the Endangered Species Act ("ESA") of 1973<sup>62</sup> because of the shortcomings found in the 1966 and 1969 Acts.<sup>63</sup> The ESA, in its amended form, is the current act regulating endangered species in the United States.<sup>64</sup> At the time of its enactment, the official list of endangered species had increased from the original sixty-three

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56. CZECH, *supra* note 19, at 22.

57. ANDERSON, *supra* note 17, at 12.

58. See CZECH, *supra* note 19.

59. 16 U.S.C. § 668.

60. *I.e.*, the 1916 treaty with Great Britain, the 1936 treaty with Mexico, and the 1972 treaty with Japan.

61. Invertebrates were included in the 1969 Act.

62. ENDANGERED SPECIES ACT OF 1973, 87 stat. 884, (currently codified at 16 U.S.C. § 1531 *et. seq.*).

63. President Nixon stated that the 1969 Act "simply does not provide the kind of management tools needed to act early enough to save a vanishing species." Despite the earlier legislation, the 93<sup>rd</sup> Congress believed that "It [had] become increasingly apparent that some sort of protective measures must be taken to prevent further extinction of many of the world's animal species." The earlier legislation contained a conservation "spirit" without any means to expand the intent of that spirit. S. Rep. No 93-307, 93d Cong. (1973) [hereinafter 93d Senate Report].

64. The ESA has been amended three times since 1973, but has essentially remained the same. 93 Stat. 1225 (1979), 96 Stat. 1426 (1982), 102 Stat. 2315 (1988).



listed in the FWS redbook to one hundred and nine.<sup>65</sup> Congress was equally alarmed by the worldwide one-species-per-day extinction rate.<sup>66</sup>

The ESA focuses on protecting biodiversity. Unlike previous legislation, Congress's motive for enacting the ESA extended beyond a purely economic or even aesthetic motive. A new shift had occurred. Through the ESA, Congress sought to protect endangered plant and animal species because "these animals perform vital biological services" to maintain a "balance of nature,"<sup>67</sup> and because rich biological diversity is important to the quality of scientific research.<sup>68</sup>

Section two of the ESA states Congressional findings and the Act's purpose and policy.<sup>69</sup> The section states that various species have become extinct, that other species are in danger of or are threatened with extinction, and that these species have a variety of value to the U.S. and its people.<sup>70</sup> The purpose of the act is to preserve the ecosystem of endangered species, conserve endangered and threatened species, and to

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65. The number of endangered species on the foreign list, which are regulated in section 9 of the Act, had exceeded 300. 93d Senate Report, *supra* note 63. It is estimated that over 500 species had become extinct in North America since the time of British colonization. CZECH, *supra* note 19, at 11.

66. 93d Senate Report, *supra* note 63.

67. The primary concern here is to protect "the unknown uses that endangered species might have and about the unforeseeable place such creatures may have in the chain of life on this planet." Tennessee Valley Authority v. Hill, 437 U.S. 153, 178-179 (1978).

68. 93d Senate Report, *supra* note 63. Although this language is encouraging from a conservation standpoint, it should be noted that the committee reports on the ESA never step beyond treating endangered species and animal species in general, as having anything more than instrumental value, *i.e.*, that they are good because they provide some service or are nice for people to look at. The next step, if following Leopold (*supra*, note 8) or Shaffer (*supra*, note 3), would be to grant animals intrinsic value and provide protection because the animals are good in themselves. See ARISTOTLE, *supra* note 12, Book I for a discussion on intrinsic vs. instrumental value. It is questionable whether Congress would have the power to make such a declaration under the U.S. Constitution. U.S. CONST. art. I, § 8, cl. 3; United States v. Lopez, 514 U.S. 549 (1995).

69. 16 U.S.C. § 1531.

70. 16 U.S.C. § 1531(a)(1-3). Section 1531(a)(3) specifically states: "[T]hese species of fish, wildlife, and plants are of esthetic, ecological, educational, historical, recreational, and scientific value. . ." All of the values listed by Congress are purely instrumental uses. Only the ecological and esthetic values have the possibility of being truly intrinsic values, but the legislative history negates this notion. It is curious that Congress did not include "commercial" or "economic" values even though Congress enacted the ESA based on its Commerce Clause powers. See *Gibbs v. Babbitt*, 214 F.3d 483, (4th Cir. 2000). In *Gibbs*, the court upheld a regulation as Constitutional under the Commerce Clause where the regulation prohibited the killing of red wolves residing solely in North Carolina. The court reasoned that the killing of red wolves was an economic activity because it impacted tourism, scientific research, and the fur industry. The court also found that the killing of red wolves to protect one's livestock is "connected to interstate markets for agricultural products and livestock". 214 F.3d at 493-496.

insure compliance with the treaties and conventions mentioned therein.<sup>71</sup> Section two of the ESA also expands agency involvement beyond the Department of the Interior, Agriculture and Defense, as required by 1969 Act.<sup>72</sup> The ESA requires all federal departments and agencies to consider species survival when acting and “utilize their authorities in furtherance of the purposes of this chapter.”<sup>73</sup>

In keeping a holistic approach to biodiversity, Congress extended species protection to plant species and species that are threatened and would become endangered if human neglect of the threatened species plight continued.<sup>74</sup> Through these actions, Congress reinforced notions of ecosystem balance and conservation through the inclusion of plants, a vital component of ecosystems, coupled with preventative action by the inclusion of threatened species.<sup>75</sup> Finally, Congress designed the ESA to address the two major causes of extinction in the United States: 1) over harvesting<sup>76</sup> and 2) habitat destruction.<sup>77</sup>

C. *Species protection under the ESA.*<sup>78</sup>

Only those animals covered by the ESA enjoy the protections the ESA provides. Despite this limit in coverage, Congress drafted the scope of the ESA extremely broad through the definitions listed in section three.<sup>79</sup> For example, the term “plant” includes not only every member of the plant kingdom, but also any seed, root, or part of any endangered plant.<sup>80</sup> Therefore, an individual has violated<sup>81</sup> the ESA if he or she committed one of the prohibited acts against a seed of an endangered

71. *Id.*

72. 16 U.S.C. § 1531(c)(1).

73. *Id.* Section seven requires that each agency must consult with the Secretary to ensure that proposed action would not violate the ESA. See 16 U.S.C. § 1536(a) (2002).

74. Endangered plant species were unprotected until the 1973 act. 16 U.S.C. § 1531(a)(1).

75. Under section four, Congress granted the Secretary of the Interior the authority to list species that may become threatened. 16 U.S.C. § 1533(c) (2002). Congress believed this power would allow the Secretary to “forecast population trends” and take steps to protect those species before the danger of extinction becomes “imminent.” 93d Senate Report, *supra* note 63.

76. See 16 U.S.C. § 1538(a)(1)(B), (2002); 16 U.S.C. § 1532(19), (2002); and 50 C.F.R. § 17.3. Plants received special attention under the ESA due to the increasing over harvesting of rare plants. A very lucrative market had developed for rare plants stolen from national lands. CZECH, *supra* note 19, at 12-13.

77. 93d Senate Report, *supra* note 63. Loss of habitat through urbanization is currently the leading cause of species endangerment. CZECH, *supra* note 19, at 95.

78. Sections 5, 6, 8, 8a, and 12-18 will not be discussed.

79. 16 U.S.C. § 1532, (2002).

80. 16 U.S.C. § 1532(14).

81. A person can be both criminally guilty and civilly liable under the ESA. See 16 U.S.C. § 1540 (2002).

plant.<sup>82</sup> Thus, if an individual burned the seed of a Santa Cruz cypress, that individual has violated the ESA.<sup>83</sup> It is clear from this definition that Congress desired that no plant species would be wiped off the face of the earth if a small “seed” of hope that the species could be reintroduced existed.

Equally broad are the definitions of “species,”<sup>84</sup> “endangered species,”<sup>85</sup> and “threatened species.”<sup>86</sup> For example, the definition of the word species includes any subspecies and distinct populations.<sup>87</sup> Thus, a subspecies may be listed as endangered even though the larger species class is not. It is sufficient that the distinct population is threatened or endangered for the distinct population to be afforded the protections of the ESA.

Despite the broad definition of endangered species, Congress provided one explicit exception: any insect or other segmented invertebrate that presents an overwhelming risk to humans.<sup>88</sup> For example, if an individual stepped on a Zayante band-winged grasshopper,<sup>89</sup> and the Secretary of the Interior had determined that the grasshopper presents an overwhelming risk to humans,<sup>90</sup> then that person would not have violated the ESA even if she did so deliberately and with full knowledge that she could be wiping the species off the face of the Earth.

Even if a species fits the definition of “endangered”, a species will

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82. See 16 U.S.C. § 1538.

83. 50 C.F.R. § 17.3.

84. The term “species” includes any subspecies of fish, wildlife, or plants, and any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature. 16 U.S.C. § 1532(16).

85. The term “endangered species” means any species which is in danger of extinction throughout all or a significant portion of its range. . . 16 U.S.C. § 1532(6). The Secretary determines which species are endangered or threatened under section four. 16 U.S.C. § 1533 (2002).

86. The term “threatened species” means any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. 16 U.S.C. § 1532(20).

87. 16 U.S.C. § 1532(16).

88. The specific language of the statute provides that: “The term “endangered species” means any species. . . other than a species of the Class Insecta determined by the Secretary to constitute a pest whose protection under the provisions of this chapter would present an overwhelming and overriding risk to man. 16 U.S.C. § 1532(6). Congress did not included this exception in anticipation that it would ever be used, but because it did not want to “tie the Secretary’s hands if such an unlikely event were ever to come to pass.” S. CONF. REP. NO. 93-740 at 1 (1973).

89. 50 CFR §17.3. *U.S. Listed Invertebrate Animal Species*, U.S. Fish and Wildlife Service, available at

<http://ecos.fws.gov/servlet/TESSWebpageVipListed?code=I&listings=0#I>  
(last modified January 11, 2003).

90. The Secretary has not made such a determination.

not receive the protections guaranteed by the ESA until it is listed.<sup>91</sup> Upon a finding by the Secretary that a species has become endangered based on any of the relevant factors listed in the ESA, the Secretary is required to list the species through regulation.<sup>92</sup> The Secretary must also designate the species' critical habitat simultaneously with listing the species.<sup>93</sup> This second step is crucial to the preservation of the listed species. Without protection of its habitat, the species chances of survival would be diminished.

In section nine, Congress indicates those actions prohibited by the ESA.<sup>94</sup> Prohibited acts fall into one of two categories: 1) prohibitions addressing the taking of a species,<sup>95</sup> and 2) prohibitions addressing certain commerce related actions with the species.<sup>96</sup> Embracing the overall broadness of the act, section nine provides that any person who actually commits one of the prohibited acts, any person who attempts to commit any of the prohibited acts, or person who causes a prohibited act to occur has violated the Act.<sup>97</sup> The message sent by Congress through section nine is clear: protected species are sacred; violators will not be tolerated.

The statute provides an individual "takes" an endangered or threatened species when he or she harasses, harms, pursues, hunts, shoots, wounds, kills, traps, captures, or collects, or *attempts* to engage in any such conduct towards a threatened or endangered species.<sup>98</sup> The definition of harm has been defined by regulations to include indirect killings of endangered species through "significant habitat modification

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91. 16 U.S.C. § 1533.

92. The factors listed in 16 U.S.C. § 1533(a)(1) include: (A) the present or threatened destruction, modifications, or curtailment of its habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) the inadequacy of existing regulatory mechanisms; or (E) other natural or manmade factors affecting its continued existence.

93. 16 U.S.C. § 1533(a)(3)(A). *See* Natural Res. Def. Council v. United States, Dep't of Interior, 1133 F.3d 1121, 1125-1125 (9th Cir. 1997) (holding that the Secretary could not list a species as endangered without designating critical habitat).

94. 16 U.S.C. § 1538, (2002).

95. 16 U.S.C. § 1538(a)(1)(B) (prohibiting the taking of any endangered species within the jurisdiction of the United States); § 1538(a)(1)(C) (prohibiting the taking of any endangered species on the high seas); § 1538(a)(2)(B) (prohibiting reducing to possession any endangered plant species in a Federal area or knowingly reducing to possession or destroying in non-Federal areas).

96. 16 U.S.C. § 1538(a)(1)(A),(2)(A) (importation of endangered species); § 1538(a)(1)(D),(2)(C) (transportation of any endangered species obtained in violation of § 1538(a)(1)(B) or (C)); § 1538(a)(1)(E) (transportation of any endangered species in foreign or interstate commerce); § 1538(a)(1)(F),(2)(D) (sell any endangered species in foreign or interstate commerce); and § 1538 (a)(1)(G),(2)(E) (violate any regulation concerning endangered or threatened species).

97. 16 U.S.C. § 1538(g).

98. 16 U.S.C. § 1532(19).

or degradation” that impairs behavior such as “breeding, feeding, or sheltering.”<sup>99</sup> Again, Congress provides endangered species an immensely large shelter from human action. If a person wants to cut down a grove of trees for lumber that is also the primary habitat for an endangered species, that person cannot cut down the grove without violating the ESA. Additionally, if an individual wants to cut down a grove of trees that is the primary habitat for the food source of an endangered species, under the language of the regulation, that person cannot cut down the grove without violating the ESA.

There are two exemptions to the section nine prohibitions that warrant attention.<sup>100</sup> First, an exemption from a section nine violation may be granted by the Endangered Species Committee (ESC).<sup>101</sup> An agency<sup>102</sup> may seek an exemption from the ESC only after fulfilling the consultation and biological assessment requirements of section seven.<sup>103</sup> The ESC is comprised of seven members<sup>104</sup> and may grant an exception to an agency<sup>105</sup> when the proposed agency action is likely to “jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification” of the species

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99. 50 C.F.R. § 17.3. This definition of harm is the main focus of *Babbitt v. Sweet Home Chapter of Communities for a Great Oregon*, 515 U.S. 687 (1995). In *Sweet Home*, the Court upheld the regulation promulgated by the secretary to include habitat modification in the definition of harm. The Court reasoned that the definition of harm in the regulation was in accordance with the plain meaning, the statutory scheme, and the permitting system. 515 U.S. at 697-701.

100. There are other permits and exceptions to section nine, such as the section ten incidental take permit, which will not be discussed. “The Secretary may permit . . . any act otherwise prohibited by section 1538 of this title for scientific purposes or to enhance the propagation or survival of the affected species . . .” 16 U.S.C. § 1539(a)(1)(A); “The Secretary may permit . . . any taking otherwise prohibited by section § 1538(a)(1)(B) of this title if such taking is incidental to, and not the purpose of, carrying out of an otherwise lawful activity.

101. 16 U.S.C. § 1536 (2002). The ESC is also known as the “God squad.” The overall process of receiving an exemption from the ESC is more complex than presented in this article.

102. The Governor of a State in which an agency action will occur or any other permit or license applicant may seek this exemption. 16 U.S.C. § 1536(g).

103. 16 U.S.C. § 1536(a)(2),(c). If an endangered species is present in the area where an agency action is to take place, the agency must conduct a biological assessment to determine if and how an endangered species will be affected by the proposed action. The agency must complete the biological assessment within 180 days of beginning the assessment.

104. The ESC members include: 1) The Secretary of Agriculture, 2) The Secretary of the Army, 3) The Chairman of the Council of Economic Advisors, 4) The Administrator of the Environmental Protection Agency, 5) The Secretary of the Interior, 6) The Administrator of the National Oceanic and Atmospheric Administration, and 7) one individual appointed by the President from each state in which the exemption is being sought. 16 U.S.C. § 1536(e)(3)(A)-(G).

105. 16 U.S.C. § 1536(h).

habitat.<sup>106</sup>

Exemptions by the ESC must be granted or rejected within thirty days of application.<sup>107</sup> Furthermore, an exemption may only be granted if all of the four following criteria are met: 1) that there are no reasonable and prudent alternatives to the agency action, 2) the benefits of such action clearly outweigh the benefits of alternative courses of action consistent with conserving the species or its critical habitat, and such action is in the public interest; 3) the action is of regional or national significance; and 4) neither the Federal agency concerned nor the exemption applicant made any irreversible or irretrievable commitment of resources.<sup>108</sup> If five of the seven ESC members find that the four criteria have been satisfied, an exemption will be granted. After receiving the exemption, the agency must make reasonable efforts to mitigate the damage that may be caused by the agency action.<sup>109</sup>

The ESC exemption requires a bit of patience on the part of the applicant. First, the biological assessment and consultation process could take up to 210 days. Second, if an individual opposes the ESC's decision to grant an exemption, that individual may challenge the ESC's decision under the Administrative Procedure Act.<sup>110</sup> If this avenue is pursued, administrative and judicial proceedings could result in substantial delay.

The second exemption is best illustrated by *Shuler v. Babbitt*.<sup>111</sup> In *Shuler*, four grizzly bears raided a sheep farm operated by Shuler.<sup>112</sup> One night, Shuler noticed that his sheep were acting peculiar, perhaps a little spooked. Shuler went outside to check on his sheep and took his shotgun with him for protection. Grizzlies had attacked the Shuler farm on four previous occasions. He had experienced grizzlies in the area before. While checking on his flock, Shuler found a grizzly. Shuler shot and wounded the grizzly. The next morning, Shuler tracked the grizzly to see if the grizzly had died from its wounds. Shuler found the bear, the bear charged him, and Shuler shot and killed the bear. The Department of the

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106. 16 U.S.C. § 1536(a)(2). Agencies are required to consult with the Secretary and adopt only those proposed actions that do not jeopardize a species' existence.

107. 16 U.S.C. § 1536(h)(1).

108. 16 U.S.C. § 1536(h)(1)(A). The four requirements are not required if the Secretary of Defense finds that an exemption must be granted for reasons of national security, 16 U.S.C. § 1536(j), or in an area the President has designated as a major disaster area if the exemption is for the reconstruction of public facilities that are necessary to prevent a recurrence of the disaster and the urgency of such construction requires normal procedures not to be followed. 16 U.S.C. § 1536(p).

109. 16 U.S.C. § 1536(h)(1)(B).

110. 5. U.S.C. § 551 *et seq.* (2002).

111. *Shuler v. Babbitt*, 49 F.Supp.2d 1165 (D. Mont. 1998).

112. The facts of *Schuler* are located at *id.* at 1165-1169. Grizzly bears are a threatened species under the ESA. 50 C.F. R. § 17.3.

Interior cited Shuler with an ESA section nine violation. Shuler appealed.

The district court overturned the Department's finding that Shuler violated section nine.<sup>113</sup> Specifically the court rejected the Department's finding that Shuler's had not acted in self-defense.<sup>114</sup> Section eleven of the ESA states that no penalty resulting from a section nine violation shall be enforced if the defendant acted on a good faith belief that she was acting to protect herself or a member of her family from imminent bodily harm from an endangered species.<sup>115</sup> An individual has acted in good faith if they have not provoked the animal to a state of aggression, causing the need to exercise self-defense.<sup>116</sup> In *Shuler*, the court found that Shuler acted in self-defense when he shot the grizzly that he found his sheep pen.<sup>117</sup> He did not provoke and had no intention of provoking the bear and had no intention of aggravating the bear.<sup>118</sup> Additionally, the court found that Shuler did not violate section nine when he tracked the injured bear the following morning.<sup>119</sup>

The ESC exemption and self-defense exception are two exceptions to section nine relevant to the present discussion.<sup>120</sup> They fulfill a necessary role in species protection in that the exceptions allow human progress and protection. However, these exceptions may not be utilized on a whim; the exceptions are in place to provide agencies and individuals an "out" when faced with extreme circumstances. If the ESC exemption were not in place, agencies projects would be blocked even though mitigating efforts would ensure little or no harm to the species. If the self-defense exception did not exist, individuals would have to weigh the consequences of violating section nine and suffering the penalties with the probability that the beast is bluffing in its aggression. Although the protections provided by the two exceptions are needed in order to preserve a tolerable balance between humankind and the remainder of creation, the exceptions fall short when applied in situations where quick action is important and to stop a threat that inflicts human bodily harm.

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113. *Shuler*, 49 F. Supp. at 1169.

114. *Id.*

115. 16 U.S.C. § 1540(a)(3).

116. *Shuler*, 49 F. Supp.2d at 1169. See *Christy v. Hodel*, 857 F.2d 1324, 1329 (9th Cir. 1988) (denying extension of self-defense rule to defense of property).

117. *Shuler*, 49 F. Supp.2d at 1169.

118. *Id.*

119. *Id.* The court stated that, "On the morning [after the initial encounter], Shuler was simply trying to ascertain whether a wounded grizzly bear posed a danger to everyone in the area."

120. See note 100, *supra*.

## II. Recent Outbreaks of Diseases Transmitted by Animal Contact

There are two events in recent history that are worth considering for the current discussion: the emergence of the West Nile Virus in the United States,<sup>121</sup> and the spread of Chronic Wasting Disease among Wisconsin's deer population.<sup>122</sup> Both of these ecological situations involve a disease that is carried by animals and is potentially lethal to humans.

### A. West Nile Virus

West Nile Virus ("WNV") is a disease carried in the saliva glands of mosquitoes and in the blood stream of birds.<sup>123</sup> WNV was first diagnosed in an Egyptian woman in 1957 and emerged in the U.S. in 1999.<sup>124</sup> Currently, the WNV can be found in Africa, Europe, the Middle East, and west and central Asia.<sup>125</sup>

Humans become infected with WNV when they are bitten by a mosquito that has also been infected with the virus.<sup>126</sup> Mosquitoes typically become infected by taking blood from an infected bird.<sup>127</sup> In the most severe cases, WNV causes meningoencephalitis, an inflammation of the spinal cord and brain.<sup>128</sup> Although only about one percent of the population will have a severe reaction to the virus, many people have died from WNV.<sup>129</sup> States with the highest infection rates among humans include Illinois, Michigan, Ohio, and Louisiana.<sup>130</sup>

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121. Centers for Disease Control and Prevention, *West Nile Virus Background: The Virus' History and Distribution*, at <http://www.cdc.gov/ncidod/dvbid/westnile/background.htm> (last modified July 2, 2003) [hereinafter *West Nile Background*].

122. Sandra Blakeslee, *Brain Disease Rises in Deer, Scaring Hunters*, N.Y. Times, Sept. 3, 2002, at F1 [hereinafter Blakeslee]. Other states, such as Colorado, have acted to control their own problems with CWD. See Debra Melani, *Man vs. Nature: Mad Cow Disease Has Researchers Taking a Close Look at Deer and Elk*, Denver Rocky Mountain News, Jan. 23, 2001, at 3D [hereinafter Melani] (Colorado utilizes a testing system and encourages hunters to wear gloves to prevent transmission of the disease), and Theo Stein, *State Struggles to Rein Elk Illness: 1,000 With Brain-Wasting Disease Will Be Destroyed in Latest Effort*, DENVER POST, Sept. 21, 2001, at A.01.

123. Centers for Disease Control and Prevention, *Transmission: Questions and Answers About West Nile Virus*, at <http://www.cdc.gov/ncidod/dvbid/westnile/qa/transmission.htm> (last modified Aug. 29, 2002) [hereinafter *West Nile Transmission*].

124. *West Nile Background*, *supra* note 121.

125. *Id.*

126. *Id.*

127. *Id.*

128. *Id.*

129. *West Nile Transmission*, *supra* note 123.

130. Illinois: 813 cases, 53 deaths; Michigan: 565 cases, 47 deaths; Ohio: 432 cases, 30 deaths; Louisiana: 329 cases, 24 deaths. Centers for Disease Control and Prevention,



The first outbreak of WNV in the U.S. occurred in New York City.<sup>131</sup> To protect its citizens from the spread of WNV, the city used insecticides as part of an intensive spraying program to eradicate mosquitoes and mosquito larvae that could one day carry the disease.<sup>132</sup> Most of the spraying took place near large bodies of water, a major breeding ground for mosquitoes.<sup>133</sup> To ensure that almost all mosquitoes were exterminated by the spraying, New York City wanted use large volumes of insecticides. These two facts quickly caught the attention of several environmental groups.

Led by the No Spray Coalition (“No Spray”), environmental groups sued the city to stop the use of insecticides. No Spray claimed that the chemicals could potentially harm the environment and endanger human health.<sup>134</sup> In *No Spray Coalition v. New York*,<sup>135</sup> No Spray argued that New York City’s plan to spray large amounts of insecticide violated the Federal Insecticide, Fungicide, and Rodenticide Act (“FIFRA”)<sup>136</sup> and the Clean Water Act (“CWA”).<sup>137</sup>

No Spray rested these claims on two facts. First, New York City planned to use insecticides. Second, because the insecticides would be sprayed from helicopters and trucks, the chemicals would drift into the New York’s surrounding waters in violation of the CWA.<sup>138</sup> No Spray requested injunctive relief to prohibit New York City from spraying the insecticides.<sup>139</sup>

The District Court rejected No Spray’s request for injunctive relief under FIFRA for two reasons.<sup>140</sup> First, FIFRA did not extend standing to bring suit to No Spray.<sup>141</sup> Unlike other environmental statutes, Congress

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*West Nile Virus Case Count*, at <http://www.cdc.gov/od/oc/media/wncount.htm> (last modified Nov. 1, 2002).

131. New York, New Jersey, West Virginia, and Connecticut reported cases of West Nile in 1999. Centers for Disease Control and Prevention, *Surveillance and Control of West Nile Virus*, <http://www.cdc.gov/ncidod/dvbid/westnile/surv&control.htm> (last modified Aug. 19, 2003).

132. *No Spray Coalition, Inc. v. New York*, 2000 Westlaw 1401458 at ¶ 1 (S.D.N.Y. 2000).

133. *Id.*

134. *Id.*

135. *Id.*

136. 7 U.S.C. §§ 136-136y (2002). FIFRA requires manufactures to register any of the covered substances if those substances are distributed. Only a product that “will perform its intended function without unreasonable adverse effects on the environment” when used “in accordance with widespread and commonly used practice” are approved for distribution. 7 U.S.C. § 136a(c)(5)(C),(D).

137. 33 U.S.C. § 1251.

138. *No Spray Coalition*, *supra* note 132, at ¶ 2.

139. *Id.* at ¶ 1.

140. *Id.* at ¶ 5.

141. *Id.* at ¶ 2.

did not include a citizen's suit provision in FIFRA.<sup>142</sup> Because Congress refrained from granting standing to groups like No Spray, the Court denied No Spray's FIFRA claim.<sup>143</sup>

Second, even if Congress had granted No Spray and other private citizens standing under FIFRA, No Spray's FIFRA claim would still fail because the city's use of the insecticides would not violate FIFRA.<sup>144</sup> The court found that the city's intended pesticide spray plan complied with the prescribed requirements directed by the pesticide labeling as approved by the EPA.<sup>145</sup> Under FIFRA, pesticide labels must be EPA approved in order of the product to be registered.<sup>146</sup> This requirement had been done for the insecticide used by the city.<sup>147</sup> The court refused to second guess the EPA's expertise on pesticide regulation and disturb EPA's approval of the pesticides.<sup>148</sup>

The Court also rejected No Spray's CWA claim.<sup>149</sup> No Spray argued that the city violated the CWA when city workers sprayed insecticides into the atmosphere and the insecticide drifted into nearby "navigable waters".<sup>150</sup> The court rejected this claim and found that the spraying did not constitute a "discharge" into the navigable waters of the United States.<sup>151</sup> A violation of the CWA only occurs when a pollutant is discharged by a point source *into* the waters of the United States, not into the air nearby navigable waters.<sup>152</sup> Because the insecticides were sprayed into the air and not directly into navigable waters, the court would not find a violation of the CWA.<sup>153</sup> The Court did not decide, however, whether spraying *directly* over the bodies of water surrounding New York City constituted a violation of the CWA.<sup>154</sup>

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142. *But see* Clean Water Act § 505, 33 U.S.C. § 1365; Endangered Species Act § 11(g), 16 U.S.C. § 1540(g).

143. *No Spray Coalition*, *supra* note 132, at ¶ 2.

144. *Id.* at ¶ 3, see 7 U.S.C. § 136a(c)(5).

145. *Id.*

146. 7 U.S.C. § 136a(d).

147. *No Spray*, *supra* note 132, at ¶ 3.

148. *Id.*

149. *Id.*, 33 U.S.C. §§ 1251 *et seq.* (2002).

150. *No Spray Coalition*, *supra* note 132, at ¶ 3. "Navigable water" is defined as "the waters of the United States, including the territorial seas." 33 U.S.C. § 1362 (2002). In *Solid Waste Agency of N. Cook County v. United States Army Corps of Eng'rs*, 539 U.S. 159, 167 (2001), the U.S. Supreme Court found that "navigable water", as defined in the CWA, only includes those waters used for navigation or have a significant "nexus" to those waters.

151. *No Spray Coalition*, *supra* note 132, at ¶ 3.

152. 33 U.S.C. § 1311(a) states: "Except as in compliance with this section. . . the discharge of any pollutant by any person shall be unlawful. A "discharge" is defined as: "any addition of any pollutant to navigable waters from any point source. . ." 33 U.S.C. § 1362(12)(A).

153. *No Spray Coalition*, *supra* note 132, at ¶ 4.

154. *Id.*

*B. Chronic Wasting Disease in Wisconsin*

Chronic Wasting Disease (CWD) is similar to mad cow disease and other transmissible spongiform encephalo-pathies.<sup>155</sup> The disease causes animal proteins to misfold into what are known as prions.<sup>156</sup> Prions accumulate in clusters forming plaque in the brain, spinal cord, and other body disuse, poking holes in surrounding cells and creating a sponge-like affect in the victim's tissue.<sup>157</sup> Humans become infected with CWD after consuming the meat of an animal that is infected with CWD.<sup>158</sup> It is a slow death for both human and animal. The infected creature literally "wastes" away as the central nervous system deteriorates, slowly taking away the infected beings life functions.<sup>159</sup> Anyone diagnosed with the disease will suffer a slow and horrific fate.

CWD first appeared in Wisconsin in the spring and summer of 2002 when twenty-four White Tail deer were diagnosed with CWD.<sup>160</sup> Based on this discovery, the Wisconsin hunting industry estimates that local business stand to collectively lose one-third of the one billion dollars of revenue that hunting season brings.<sup>161</sup> To protect this industry and its citizens, Wisconsin needed to take quick action.

In response to the fear of widespread CWD, the Wisconsin Department of Natural Resources (WDNR) issued emergency regulations to initiate a deer eradication program.<sup>162</sup> The program is designed to curtail the disease by eliminating *all* of the deer located in a 12 county CWD management zone near Madison, Wisconsin where CWD has been diagnosed.<sup>163</sup> The most focused portion of the management zone is called the eradication zone.<sup>164</sup> In the eradication

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155. Blakeslee, *supra* note 122, at F1. Transmissible spongiform encephalopathies derive their name from the sponge-like cavities they form inside the victim's brain.

156. *Id.*

157. *Id.*

158. The human variation of CWD is Creutzfeldt-Jakob or variant Creutzfeldt-Jakob. Currently, it appears that only the variant form of Creutzfeldt-Jakob is related to CWD. Reuters, *Wisconsin Hunters' Deaths Checked for Link to Deer*, available at [http://www.enn.comnews/wire-stories/2002/08/08012002/reu\\_48010.asp](http://www.enn.comnews/wire-stories/2002/08/08012002/reu_48010.asp) (August 1, 2002) [hereinafter *Wisconsin Hunters' Deaths*].

159. *Id.*

160. *Id.* Colorado has been monitoring CWD and implemented an education and testing approach several years ago. Melani, *supra* note 122.

161. Blakeslee, *supra* note 122.

162. WISCONSIN DEPARTMENT OF NATURAL RESOURCES, pamphlet PUB-WM-401-2002, WISCONSIN REGULATIONS RELATED TO CHRONIC WASTING DISEASE, 4 (2002) [hereinafter *Hunting Regulations*], available at <http://www.dnr.state.wi.us/org/land/wildlife/regs/02CWDregs.pdf> (last viewed Nov. 3, 2002). These regulations were promulgated pursuant to WI ADC § NR 10.104, which relates to the management of the Wisconsin deer heard by the WDNR.

163. Blakeslee, *supra* note 122.

164. *Hunting Regulations*, *supra* note 162, at 4.

zone, the WDNR will issue an unlimited number of deer permits to hunters, without daily limitations.<sup>165</sup> Additionally, in order to ensure a high level of participation in the management zone, hunters who participate in the eradication plan will not lose their opportunity to receive tags for other regions of the state.<sup>166</sup>

WDNR's plan will need to be successful if it is to successfully undercut CWD before it has the opportunity to spread to other parts of the state. If successful,<sup>167</sup> WDNR's CWD management program will help save the purity of Wisconsin's deer populations by eliminating the threat of disease.<sup>168</sup> More importantly, the program may prevent a large number of Wisconsin hunter's and others who eat Wisconsin venison from being infected with variant Creutzfeldt-Jakob disease (vCJD),<sup>169</sup> the human variation of CWD.<sup>170</sup> Fortunately, no human deaths have been officially linked to CWD, but this statistic might change if the program is unsuccessful.<sup>171</sup>

### III. Disease, the ESA, and Endangered Species

As the above examples of WNV and CWD demonstrate, it is likely that human beings will find themselves in situations where an animal carries a disease that may inflict great bodily harm to humans. It may be only a matter of time until one of the animals involved as either a carrier

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165. *Id.* at 8.

166. *Id.*

167. Unfortunately, the program has yet to achieve its goal. Five White-Tailed deer have tested positive for CWD outside the eradication zone as of early January, 2003. *Chronic Wasting Disease and Wisconsin Deer: Five Deer Test Positive for Chronic Wasting Disease in CWD Management Zone*, available at [http://www.dnr.state.wi.us/org/land/wildlife/whealth/issues/CWD/mz\\_pos.htm](http://www.dnr.state.wi.us/org/land/wildlife/whealth/issues/CWD/mz_pos.htm) (last modified January 14, 2003).

168. *Hunting Regulations*, *supra* note 162, at 2.

169. The first case of VCJD was connected to the Mad Cow Disease epidemic in England. Centers for Disease Control and Prevention, *Probable Variant Creutzfeldt-Jakob Disease in a U.S. Resident*, at <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5141a3.htm> (last modified October 17, 2002).

170. *Id.* Non-variant CJD usually attacks the elderly and is found throughout the world, and is unrelated to the presence of CWD. The median age for CJD is 68 years. Centers for Disease Control and Prevention, *Bovine Spongiform Encephalopathy and Creutzfeldt-Jakob Disease*, at [http://www.cdc.gov/ncidod/diseases/cjd/cjd\\_fact\\_sheet.htm](http://www.cdc.gov/ncidod/diseases/cjd/cjd_fact_sheet.htm) (last modified Apr. 18, 2002). VCJD, however, attacks people much younger than CJD and is transmitted when a person consumes the meat of an animal infected with CWD, or any other transmissible spongiform encephalopathies, such as mad cow. Blakeslee, *supra* note 122.

171. The deaths of two Wisconsin outdoorsmen have sparked an investigation by the CDC. The men, who hunted and ate wild game, died of Creutzfeldt-Jakob disease. The disease has been connected to the consumption of eating beef infected with Mad Cow disease. *Wisconsin Hunters' Deaths* *supra* note 158.

or closely related but interested bystander is an endangered species. The issue that Congress, the EPA, and the individual participants must face is how to prevent human harm while upholding the letter and spirit of the ESA.

There are three possible situations in which protective human action may run afoul of the ESA. First, an endangered or threatened species could be the carrier of a disease harmful to humans. There is no need to speculate when this may first happen because it has already happened with the transmission of WNV. To date, one endangered bird species, the sand hill crane,<sup>172</sup> and one threatened bird species, the bald eagle,<sup>173</sup> are among the 138 bird species that have been officially counted as dying from WNV infections.<sup>174</sup>

This scenario presents a very pressing paradox, especially if the endangered species is more than just a carrier of the disease and suffers from infection. If no action is taken, we run the risk of human infection and the risk that the disease might spread within the endangered species. If the disease is lethal, the species may be lost. If we do act, our action will likely violate the ESA. It is clear that taking any action similar to those used by New York City to fight WNV or WDNR's plan to eradicate CWD would constitute a take under section nine of the ESA.<sup>175</sup>

The real tension in this scenario will be how individuals seek to protect themselves from an infected species. Supposing similar facts to the *Shuler* case, would Mr. Shuler be able to claim self-defense if he found an endangered species in with his flock of sheep that is otherwise harmless but is infected with a horrible disease?<sup>176</sup> The threat of disease is clearly different than the threat of being mauled by a grizzly bear. With the grizzly, the threat of bodily harm is immanent. The bear is likely to attack and the attack will inflict severe bodily harm. But, if the grizzly is replaced with a more docile species that happens to be infected, the immediacy of bodily harm is less clear. If the disease is transmitted through bodily fluids, it is highly unlikely that Mr. Shuler would be infected by the species, but his flock still might become infected and his flock may possibly infect him.

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172. 50 C.F.R. § 17.11. See also U.S. Fish and Wildlife Service, *U.S. Listed Vertebrate Animal Species by Taxonomic Group*, available at [http://eco.fws.gov/webpage/webpage\\_vip\\_listed.html?&code=V&listing=0](http://eco.fws.gov/webpage/webpage_vip_listed.html?&code=V&listing=0) (last modified Jan. 15, 2003).

173. *Id.*

174. Centers for Disease Control and Prevention, *Bird Species: West Nile Virus*, at <http://www.cdc.gov/ncidod/dvbid/westnile/birdspecies.htm> (last modified July 2, 2003).

175. 16 U.S.C. § 1532(a)(19). If the species is of the class Insecta, then it is likely that the Secretary would declassify it as an endangered species. See note 88, *supra*.

176. “[A] person must be in imminent or immediate danger of bodily harm in order to avail himself of a claim of self-defense.” *Shuler v. Babbitt*, 49 F. Supp. 2d at 1169.

Is this chain of transmission immediate enough to activate the self-defense exception? Because Shuler has the opportunity to quarantine his animals and the uncertainty that the disease will be successfully transmitted, it is unlikely the self-defense exception is available. Thus, Shuler must weigh the probability of infection with violating section nine.

Second, the food supply of an endangered or threatened species could be diseased or the carrier of a disease harmful to humans. This scenario is more realistic than the previous one, as demonstrated by CWD. If Wisconsin's deer population were the food source of a large endangered predator, then the food supply could not be eradicated in a manner similar to WDNR's deer eradication plan without running the risk that an endangered species may be harmed either through the diminished food supply or a more frequent human presence. Eradication of an endangered species food supply interferes with the feeding habits of the endangered species and ESA regulations have extended the definition of harm to include any habitat modification that interferes with a species feeding habits. These regulations have been upheld by the Supreme Court in *Sweet Home*.<sup>177</sup> Thus, eradicating the endangered species food supply would violate the ESA. As in the first scenario, the self-defense exception is not available because the threat of disease is not immanent to the individual committing the taking.

Finally, an animal sharing the same habitat of an endangered species could be the carrier of a disease harmful to humans. This scenario could easily crop-up in a situation very similar to WNV in New York City, where the city sprayed mosquitoes to slow the disease. The legality of any action taken to eliminate the threat of disease will depend on whether the action results in a "take" of an endangered species. The take need not result in the death of the species, but may only interfere with the species' "breeding, feeding, or sheltering."<sup>178</sup> If the action impairs the endangered species in these ways, then it would be prohibited by the act and no self-defense exception would be available for the same reasons described above. If the species is unaffected by the action taken, then the action is not prohibited by the act.

It is assumed that if a state or federal agency planned to undertake an action similar to New York City or the WDNR, the disease would be either moderately or highly contagious to humans. If the disease is also one that runs its course very quickly, then the state or agency would want to act quickly to minimize the threat. However, the issue remains

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177. 50 C.F.R. § 17.3. See *Babbitt v. Sweet Home Chapter of Communities for a Great Oregon*, 515 U.S. 687 (1995).

178. 50 C.F.R. § 17.3.

whether the ESA would prohibit a state or agency to act quickly so as to protect human health and welfare. In other words, will our role as the “servant” of nature trump our own desires to be safe from disease?

Despite the unavailability of the self-defense exception, there remains the “last resort” possibility of an ESC exemption.<sup>179</sup> Although it is almost certain that the ESC would grant an exemption in any of the scenarios described above, the urgency of containing the disease may be in conflict with procedural requirements. If the disease is serious enough to warrant drastic state or federal action, the timeliness of the action may be central to successfully containing the disease. The ESC exemption process, however, does not operate with great speed. The process must be completed within 30 days of submission.<sup>180</sup> If a biological assessment is required, the exemption process could take up to 210 days.<sup>181</sup> Add to this the possibility of judicial review of the ESC’s decision,<sup>182</sup> which is likely if the communicability of the disease is at issue, and the exemption process could take considerable time to complete.

What the above scenarios demonstrate is that the present structure of the ESA provides uncertain results when faced with new problems. The ESA is a wonderful piece of legislation enacted for the preservation of biodiversity and should not be altered in any significant way. However, the ESA should be nominally altered to remove the uncertainty the above three scenarios demonstrate. The alterations must reinforce the general spirit of species protection as it has changed since the 1800’s. Human lives must be given value and protected above all; biodiversity must be protected as a unique system of creation. Hopefully none of the above situations will ever come to pass. In the event that they do, the ESA must be flexible enough to address the problems that arise in a manner that is both quick and free of legal uncertainty.

*Jonathan Coy*

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179. The ESC has been referred to as “an administrative court of last resort.” *Portland Audubon Soc’y v. Endangered Species Comm.*, 984 F.2d 1534, 1541 (9th Cir. 1992).

180. 16 U.S.C. § 1536(h).

181. 16 U.S.C. § 1536(c)(1).

182. The decision of the ESC is a final agency action and is reviewable under the APA. 5 U.S.C. § 551 *et seq* (2002).