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Two Endangered Species in the Adirondacks
in the Context of Constitutional “Wilderness”

“There is no force more potent in the modern world than stupidity
fueled by greed.”

Edward Abbey, *A Voice Crying in the Wilderness*

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Prof. Philip Weinberg
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Michael A. DiBrizzi

I Intro

“God created man in his image; in the divine image he created him; male and female he created them. God blessed them, saying: ‘Be fertile and multiply; fill the earth and subdue it. Have dominion over the fish of the sea, the birds of the air, and all living things that move on the earth.’”ⁿ¹ Thus began our environmental problems.

Our society has developed with a distinct homocentric view toward the natural world and all of its inhabitants. Wildlife has mostly been regarded as the exclusive chattel of man to dispense with at his discretion. This attitude has led to the extinction of some species and the near extinction of many others. Lawmakers have attempted through legislation to regulate the management and exploitation of different species, with varying success. The goal of a good number of

ⁿ¹ Genesis 1:27, 28 (The New American Bible 1970).

environmental regulations is to break from these traditional views and move to a balance that more closely resembles the “natural state.” These regulations recognize man’s superiority and control over the natural world, but also impose a fairly high burden of responsibility to protect and preserve wildlife for future generations.

Section two of this paper will briefly examine the legal framework for endangered species as provided for in the federal Endangered Species Actⁿ², as well as an examination of the laws of New York, due to the location of the Adirondack Park. Section three of this paper will review the current status of the Indiana Bat and wolves in the Adirondacks. Section four will discuss some of the biological issues concerning these two species and their presence in the Adirondacks. Section five will analyze these two species in the context of the constitutional mandate of Article XIV of the New York State Constitution. Finally, section six will draw some conclusions based on the previous examination of these issues.

II

a) The Endangered Species Act (ESA) endeavors to protect species of animals and plants that have been identified as either in danger of or threatened by extinction.ⁿ³ The Act seeks to protect both endangered and threatened species and “to provide a means whereby the ecosystems upon which endangered and threatened species depend may

ⁿ² Endangered Species Act of 1973, 16 U.S.C. §§ 1531-1544 (2006).

ⁿ³ 16 U.S.C. § 1531 (b).

be conserved.”ⁿ⁴ The conservation of domestic and endangered species of fish and wildlife can be achieved “through federal action and through cooperation with state endangered species programs consistent with federal law.”ⁿ⁵

Section 3 of the ESA provides the definitions that are utilized throughout the Act.ⁿ⁶ There are several definitions that are central to the purpose of the Act. The term “endangered species” means any species that is in danger of becoming extinct throughout all or a significant portion of its range other than a species of the Class Insecta.ⁿ⁷ The term “threatened species” means any species that is likely to become an endangered species within the foreseeable future

ⁿ⁴ 16 U.S.C. § 1531 (b).

ⁿ⁵ *Fouke v. Brown*, 463 F. Supp. 1142, 1144 (ED Cal, 1979). Examination of all the relevant cases dealing with the inherent constitutionality of the ESA is beyond the scope of this paper. In *Delbay Pharmaceuticals, Inc. v. Dept. of Commerce*, 409 F.Supp. 637, 645 (D.D.C. 1976), it was determined that the ESA does not violate the due process clause of the Fifth Amendment because its provisions have a rational basis. The ESA was deemed to be a valid constitutional exercise of power, since protection of endangered species of wildlife is a matter of general concern and in the public interest. *People v. Sakai Co.*, 56 Cal.App. 3d 531, 539 (1st Dist. 1976). The Ninth Circuit, in *Christy v. Hodel*, 857 F.2d 1324, 1336 (9th Cir. 1988), held that through the ESA, Congress did not unconstitutionally delegate its legislative authority to the Secretary of the Interior. The Court further held that by limiting the Secretary’s legislative authority to promulgation of regulations that promote conservation of certain species, and by defining and providing examples of such conservation, Congress established standards sufficiently definite and precise to permit the courts to determine whether the Secretary’s regulations comply with Congressional will.

ⁿ⁶ 16 U.S.C. § 1532.

ⁿ⁷ 16 U.S.C. § 1532 (6). The Class Insecta, which is a subdivision of the phylum Arthropoda, comprises the entire range of animals commonly known as insects. The insects are the largest class in animal world, outnumbering all other animals. At least 800,000 species have been identified. WEBSTER’S UNABRIDGED DICTIONARY 948 (2d ed. 1979).

throughout all or a significant portion of its range.ⁿ⁸ The word “conserve” means to use, and the use of all methods and procedures that are necessary to restore any endangered or threatened species to the point where the measures provided in the Act are no longer necessary.ⁿ⁹ The term “critical habitat” for an endangered or threatened species means the specific areas within the geographical area occupied by the species, at the time it is listed as endangered or threatened on which are found “those physical or biological features essential to the conservation of the species and which may require special management considerations or protection.”ⁿ¹⁰ The term “person” means an individual, corporation, or any other private entity; or any employee or agent of the Federal, State, or local government.ⁿ¹¹ The word “take” means “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct.”ⁿ¹²

Section 4 of the Act provides the mechanism that the Secretary of the Interior (“the Secretary”) must apply when classifying an endangered or threatened species.ⁿ¹³ The Secretary must determine whether a species is endangered or threatened due to habitat modification, overutilization, disease or predation, the inadequacy of

ⁿ⁸ 16 U.S.C. § 1532 (20).

ⁿ⁹ 16 U.S.C. § 1532 (3). The methods and procedures mentioned here refer to all relocation and reintroduction programs.

ⁿ¹⁰ 16 U.S.C. § 1532 (5)(a).

ⁿ¹¹ 16 U.S.C. § 1532 (13).

ⁿ¹² 16 U.S.C. § 1532 (19).

ⁿ¹³ 16 U.S.C. § 1533.

existing regulatory mechanisms or other natural or manmade factors affecting its continued existence.ⁿ¹⁴

Section 4 also prescribes how the Secretary is to make the preceding determinations. The Secretary must make determinations “solely on the basis of the best scientific and commercial data available to him after conducting a review of the status of the species” and taking into account any efforts being made to protect such species.ⁿ¹⁵ The Secretary must use the same criteria (best scientific data) in designating a critical habitat.ⁿ¹⁶ But when designating a critical habitat, the Secretary must also take into consideration “the economic impact, and any other relevant impact, of specifying any particular area as critical habitat.”ⁿ¹⁷ The Secretary also has the discretion to exclude an area from critical habitat if he determines that the benefits of such exclusion outweigh the benefits of designation as critical habitat.ⁿ¹⁸

Section 7 of the Act requires federal agencies, state and local governments, and private parties to consult with the U.S. Fish and Wildlife Service (or the National Marine Fisheries Service, for marine species) to find alternatives that will avoid jeopardy to a species when the governmental party undertakes an action.ⁿ¹⁹

ⁿ¹⁴ 16 U.S.C. § 1533 (a)(1).

ⁿ¹⁵ 16 U.S.C. § 1533 (b)(1)(a).

ⁿ¹⁶ 16 U.S.C. § 1533 (b)(2).

ⁿ¹⁷ *Id.*

ⁿ¹⁸ *Id.*

ⁿ¹⁹ 16 U.S.C. § 1536.

At the heart of the ESA are the sections that address prohibited acts (section 9), exceptions (section 10), and penalties and enforcement (section 11).ⁿ²⁰ Section 9 enumerates the ways in which the Act may be violated. Generally, a person may not import, export, take, possess or sell an endangered or threatened species within the United States or the territorial sea of the United States.ⁿ²¹ Many activities fall within this broad mandate. Not only does the statute regulate actions by the government and private parties, it affects permitting and leasing schemes of all levels of government which may have an effect on a listed species.ⁿ²²

Section 10 authorizes the Secretary to issue permits that allow for exemptions to the various prohibitions in the Act.ⁿ²³ This is the provision that allows otherwise prohibited acts to be permitted by the

ⁿ²⁰ 16 U.S.C. §§ 1538 (§ 9), 1539 (§ 10), 1540 (§ 11).

ⁿ²¹ 16 U.S.C. § 1538 (a).

ⁿ²² *See, e.g.,* Bob Marshall Alliance v. Hodel, 852 F.2d 1223 (9th Cir. 1988). In Hodel, the Ninth Circuit held that the federal government violated the ESA by not preparing a comprehensive biological opinion as to the effects of leases and of all post-leasing activities on threatened and endangered species (in this case, grizzly bear and gray wolf). The Court also held that stipulations that were placed in the oil and gas leases were not a substitute for a comprehensive biological opinion that must assess potential impacts. The section 9 prohibitions have far-reaching effects on both national and international commerce and trade. In *United States v. 3,210 Crusted Sides of Caiman Crocodilus Yacare*, 636 F.Supp. 1281 (S.D. Fla. 1986), a federal District Court acting pursuant to the ESA, in conjunction with the Convention on International Trade in Endangered Species of Wild Fauna and Flora, ordered the confiscation and forfeiture of 10,875 partially tanned crocodile hides en route from Bolivia to Paris by airplane, which had made a stop in Miami.

ⁿ²³ 16 U.S.C. §1539.

Secretary, if they are “for scientific purposes or to enhance the propagation or survival of the affected species.”ⁿ²⁴

Another permit that may be obtained has been frequently called the “incidental take permit.”ⁿ²⁵ The incidental take permit allows any taking otherwise prohibited by section 9 if such taking “is incidental to, and is not the purpose of, the carrying out of an otherwise lawful activity.”ⁿ²⁶ There is, however, a large caveat to the issuance of an incidental take permit. The permit cannot be issued unless the applicant submits a “conservation plan” to the Secretary.ⁿ²⁷ The plan must specify the impact that will result from the taking, what steps the applicant will take to minimize and mitigate such impacts, and what alternative actions were considered and why they are not being utilized.ⁿ²⁸ Section 10 also allows exceptions for persons that enter into contracts and will suffer undue economic hardship with respect to a species of fish, plant, or wildlife before that species is listed as being considered for endangered status.ⁿ²⁹ Alaskan natives are specifically exempted from the Act with respect to the taking or importation of an endangered or threatened species if the taking is primarily for subsistence purposes.ⁿ³⁰ In keeping with the intention of the Act

ⁿ²⁴ 16 U.S.C. § 1539 (a)(1)(A). This provision includes, but is not limited to, acts necessary for the establishment and maintenance of experimental populations pursuant to subsection § 1539 (j).

ⁿ²⁵ 16 U.S.C. § 1539 (a)(1)(B).

ⁿ²⁶ Id.

ⁿ²⁷ 16 U.S.C. § 1539 (a)(2)(A).

ⁿ²⁸ Id.

ⁿ²⁹ 16 U.S.C. § 1539 (e).

ⁿ³⁰ 16 U.S.C. § 1539 (e)(1).

regarding recovery of endangered or threatened species, there is a provision in section 10 for “experimental populations.”ⁿ³¹

Section 11 spells out the various penalties that may be assessed for violation of the Act.³² There are both civil and criminal penalties that may be assessed when it can be shown that a person knowingly violates a provision of the Act.ⁿ³³

b) New York has extensive fish and wildlife regulations, and the State maintains its own list of threatened and endangered species which differs from federal classifications. These species are protected under New York’s *Environmental Conservation Law* (ECL), Article 11, Title 5, §§11-0535 to 11-0536 and 6 N.Y.C.R.R. §182.ⁿ³⁴ Species classified as endangered meet criteria specified in §182.2(g), whereas threatened species meet criteria specified in §182.2(h).ⁿ³⁵ In 2005, New York amended §11-0535 of the ECL to include a third category, not recognized by the federal government. The species in this category

ⁿ³¹ 16 U.S.C. § 1539 (j). This subsection is the governing provision with regard to all reintroduction programs, such as the most recent with the gray wolf in Idaho, Montana and Wyoming. Basically, species that are reintroduced are designated experimental/non-essential and are not protected by all of the “take” provisions elsewhere in the Act. The Secretary is authorized to reintroduce or release species if such action will further the conservation or will lead to the eventual delisting as an endangered or threatened species.

ⁿ³² 16 U.S.C. § 1540.

ⁿ³³ 16 U.S.C. §§ 1540 (a) and (b). Civil penalties range from a \$500 to \$25,000 fine for each violation. Criminal penalties can range from six months imprisonment and/or a \$25,000 fine, to one year imprisonment and/or a \$50,000 fine.

ⁿ³⁴ McKinnney’s E.C.L. §§ 11-0535 to 11-0536 (2010). 6 NYCRR §182 (New York Code of Rules and Regulations) (1999).

ⁿ³⁵ 6 NYCRR §182.

are designated as “species of special concern” as defined in §182.2(i).ⁿ³⁶ Species of special concern warrant attention and consideration but current information, collected by the DEC, does not justify listing these species as either endangered or threatened.ⁿ³⁷ Nonetheless, this is a proactive effort to identify and protect species at risk of becoming threatened before their populations decline to the point of endangerment.

NY has mandated that the Commissioner of DEC, and the department in general, promote and coordinate the management of water, land, fish, wildlife and air resources to assure their protection, enhancement, provision, allocation, and balanced utilization consistent with the environmental policy of the State.ⁿ³⁸ They must also take into account the cumulative impact upon all of such resources in making any determination in connection with any license, order, permit, certification or other similar action or promulgating any rule or regulation.ⁿ³⁹ This overall scheme has become known as the *State Environmental Quality Review Act* (SEQRA).ⁿ⁴⁰ These rules and regulations are applicable to all State and Local Agencies within New York State including all political subdivisions, Districts, Departments, Authorities, Boards, Commissions and Public Benefit

ⁿ³⁶. Id.

ⁿ³⁷. Id.

ⁿ³⁸. ECL § 3-0301(1)(B).

ⁿ³⁹. ECL § 3-0301(1)(B).

ⁿ⁴⁰. ECL §§ 3-0301(1)(B), 3-0301(2)(M) and §8-0101 et seq. Adopted: 9.20.1995; Effective: 1.1.1996.

Corporations. SEQRA's provisions are analogous to the federal statute *National Environmental Policy Act of 1969* (NEPA).ⁿ⁴¹

To facilitate compliance with the provisions under SEQRA, an environmental assessment must be prepared which may identify any endangered or threatened species that is likely to be affected by such action, as well as determining the short and long-term effects of the proposed action in relation to the environment.ⁿ⁴² There are three potential findings allowed as a result of this impact statement; a positive declaration, a negative declaration and a conditioned negative declaration.ⁿ⁴³ A positive declaration means a written statement prepared by the lead agency indicating that implementation of the action as proposed may have a significant adverse impact on the environment and that an environmental impact statement will be required.ⁿ⁴⁴ A negative declaration acknowledges that there will be no significant impacts, whereas a conditioned negative declaration identifies specific conditions that must be met and actions that must be performed (the conditions imposed must be practicable and reasonably related to impacts identified in the EIS or the conditioned negative declaration).ⁿ⁴⁵

ⁿ⁴¹. 42 U.S.C. §4321 et seq. Adopted 1.1.1970

ⁿ⁴². ECL §8-0109 (2).

ⁿ⁴³. NYS DEC Regulations, Chapter 6, §617.7.

ⁿ⁴⁴. NYS DEC Regulations, Chapter 6, §617.2.

ⁿ⁴⁵. NYS DEC Regulations, Chapter 6, §617.3.

III

ETW

Wolf protection was set in motion at the nascency of the Endangered Species Act, when the wolf was one of the first species covered under the Endangered Species Protection Act of 1966.ⁿ⁴⁶ As the ESA has been amended, so has gray wolf protection. When the ESA was rewritten in 1973, the gray wolf was included.

In 1973, the FWS renewed its efforts to protect wolves when it listed four subspecies of gray wolf as endangered: the northern Rocky Mountain gray wolf (*C. l. irremotus*), the eastern timber wolf (*C. l. lycaon*) in the northern Great Lakes region, the Mexican wolf (*C. l. baileyi*) in Mexico and the southwestern U.S., and the Texas gray wolf (*C. l. monstrabilis*) of Texas and Mexico.ⁿ⁴⁷ In 1978, the FWS reclassified the gray wolf as endangered at the species level throughout the coterminous 48 States and Mexico, except for Minnesota, where the gray wolf was downlisted to threatened.ⁿ⁴⁸ By shifting the protection of the wolf to the species level, the FWS was avoiding conflict due to constant scientific and taxonomic reclassifications. Technological advances had repeatedly revised the list of subspecies, substantially

ⁿ⁴⁶. P.L. 89-669, 80 Stat. 926; 16 U.S.C. 668aa(c) (1966). The first list of endangered species included the timber wolf (*Canis lupus lycaon*) and the red wolf (*Canis niger*, now called *Canis rufus*). 32 Fed. Reg. 4001 (March 11, 1967).

ⁿ⁴⁷. Amendments to Lists of Endangered Fish and Wildlife, 38 Fed. Reg. 14678 (June 4, 1973).

ⁿ⁴⁸. Reclassification of the Gray Wolf in the United States and Mexico, with Determination of Critical Habitat in Michigan and Minnesota, 43 Fed. Reg. 9607 (Mar. 9, 1978).

reducing the number from the previous recognized 50 subspecies; which scientists had identified largely based on geography, and differences in morphology.ⁿ⁴⁹ According to the FWS at the present time, there are 2 species of wolves extant in the United States, the Gray Wolf (*Canis lupus*) and the Red Wolf (*Canis rufus*).ⁿ⁵⁰ The subspecies that are recognized by the FWS in the lower 48 states are the Mexican Wolf (*C. l. baileyi* – which occupies the Southwest U.S.) and the Eastern Timber Wolf (*C. l. lycaon* – which occupies the Great Lakes region and previously occupied the Northeast U.S.). The gray wolf is listed as endangered throughout the lower 48 states, except in Minnesota.ⁿ⁵¹ The red wolf is listed as both endangered, throughout its range along the southeast U.S. coast, and non-essential experimental (in portions of

ⁿ⁴⁹. L. DAVID MECH, THE WOLF – THE ECOLOGY AND BEHAVIOR OF AN ENDANGERED SPECIES 23-25 (1970).

ⁿ⁵⁰. U.S. Fish and Wildlife Service (ECOS), *supra* note 5.

ⁿ⁵¹. 74 Fed. Reg. 47485 (2009). The exceptions to the general status of “Endangered” are: (1) the wolves found in MN (that are listed as “Threatened” due to the estimated population of 2192-3525 animals, *See* DISTRIBUTION AND ABUNDANCE OF WOLVES IN MINNESOTA 2007-08, John Erb, MN Dept. of Natural Resources (2008) available at http://files.dnr.state.mn.us/fish_wildlife/wildlife/wolves/2008_survey.pdf); (2) Non-essential experimental populations that have been reintroduced to parts of WY (gray wolf in Yellowstone ecosystem), the Northern Rockies region (gray wolf in portions of MT, ID, WY, eastern WA, eastern OR and north central UT) and the Southwest (Mexican wolf in portions of AZ, NM and TX) pursuant to the ESA, 16 U.S.C. §1539 (j). (The wolf is not protected in Alaska due to the estimated population of 7500-11000 animals. 2 subspecies are recognized in AK, the Alexander Archipelago wolf (*C. l. ligoni*) found in southeast AK, and the Mackenzie Valley Wolf (*C. l. occidentalis*) found throughout the remainder of AK, *See* GENERAL INFORMATION ON WOLVES, Bob Stephenson and Rod Boertje, AK Dept. of Fish and Game (2008) available at <http://www.adfg.state.ak.us/pubs/notebook/furbear/wolf.php>).

NC and TN).ⁿ⁵² The position of the FWS and NYS DEC is that there are currently no wild wolves extant in New York State.

Indiana Bat

The Indiana bat was one of the mammals included on the original list of endangered species, commonly called, “the Class of ’67,” pursuant to the Endangered Species Preservation Act of 1966ⁿ⁵³. In fact, the Indiana Bat was the first animal on the list in the Federal Register of the 78 mammals, birds, reptiles, amphibians and fishes. In terms of sheer numbers, the species is rather abundant, with an estimated 388,000 animals existing range-wide, as estimated in 2009.ⁿ⁵⁴ However, 85 percent of these bats winter in only seven caves or mines, with nearly one-half of the world's population being found in only two caves.ⁿ⁵⁵ Even though other populations have been discovered in recent years, the additions have not offset the losses recorded over the full extent of the specie's range.

ⁿ⁵². Endangered status conferred in 1967 (32 Fed. Reg. 4001). The non-essential experimental population reintroduction program was finalized in 1986, and commenced in 1987 (51 Fed. Reg. 41790).

ⁿ⁵³ P.L. 89-669, 80 Stat. 926; 16 U.S.C. 668aa(c) (1966). The first list of endangered species enumerated under the Endangered Species Preservation Act of 1966 included the Indiana Bat, the Timber wolf and the Red wolf. 32 Fed. Reg. 4001 (March 11, 1967).

ⁿ⁵⁴. U.S.F.W.S., *2009 RANGEWIDE POPULATION ESTIMATE FOR THE INDIANA BAT (Myotis sodalis) BY USFWS REGION*, Ecological Services Field Office, Bloomington, Indiana (Revised 4-23-10).

ⁿ⁵⁵. U.S. F.W.S., *SIGNIFICANT HABITATS AND HABITAT COMPLEXES OF THE NEW YORK BIGHT WATERSHED*, NY BIGHT ECOSYSTEMS PROGRAM, Charlestown, RI. (NOVEMBER 1997).

In New York, approximately 33,000 Indiana bats are known to exist in 8 of the 120 sites searched to dateⁿ⁵⁶. Recent surveys conducted have shown drastic declines rangewide, including a 38% decrease in population in New York from 2007 estimates.ⁿ⁵⁷ The most serious problem for hibernating bats is believed to be disturbance by people exploring caves.ⁿ⁵⁸ Bats are sensitive to noise and light and are aroused from their motionless state by passing cavers. Each time they are awakened, precious energy reserves stored as fat are depleted; too many disturbances and the animals will not survive until spring.ⁿ⁵⁹ Outside of the hibernating season, factors which may be contributing to declines probably vary. For example, pesticide poisoning is believed to be contributing to the decline of some North American bat species, a condition identified as Whitenose Syndrome has been documented (for which the origins and causes are presently unknown), as well as large quantities of deaths related to wind farms and wind turbines.⁶⁰

IV

ⁿ⁵⁶. Id. at 32.

ⁿ⁵⁷. U.S.F.W.S., *2009 RANGEWIDE POPULATION ESTIMATE FOR THE INDIANA BAT (Myotis sodalis) BY USFWS REGION*, Ecological Services Field Office, Bloomington, Indiana. 4-5 (Revised 4-23-10).

ⁿ⁵⁸. AR Richter, SR Humphrey, JB Cope, V Brack, Jr., *Modified Cave Entrances: Thermal Effect on Body Mass and Resulting Decline of Endangered Indiana Bats* 7(2) Conservation Biology 407-415 (1993).

ⁿ⁵⁹. Id. at 410

ⁿ⁶⁰. DS Reynolds, *Monitoring the Potential Impact of a Wind Development Site on Bats in the Northeast* 70(5) The Journal of Wildlife Management, 1219-1227 (2006).

A reintroduction of a species is not a new concept or practice in New York State. By 1895, the once plentiful beaver had been reduced to two known colonies due to excessive trapping and trading.ⁿ⁶¹ Between the years of 1902 and 1909, 35 beavers were translocated from Canada and Yellowstone National Park and released in the Adirondacks.ⁿ⁶² At the beginning of the 20th century, efforts were made to restore the moose population but were hampered by illegal killings by hunters, collisions with trains and an ungulate parasite.ⁿ⁶³ By 1908, the project had been deemed a failure since no calves were born.ⁿ⁶⁴ Introduction of elk occurred roughly during the same period as the initial releases of moose in 1900.ⁿ⁶⁵ However, the elk reintroduction followed a much more aggressive plan by releasing elk in several locations, which resulted in successful reproduction.ⁿ⁶⁶ Releases continued until 1907, when there were an estimated 350 elk in the central Adirondacks.ⁿ⁶⁷ Unfortunately, by 1920 they were largely gone due to illegal hunting.ⁿ⁶⁸

Biologists estimate that there are presently 300-500 moose in New York. These estimates are based on animals and tracks observed during winter aerial surveys, known moose mortalities, moose sightings by the public, observed reproduction, and recently scat identification by

ⁿ⁶¹. William F. Porter, *Wildlife Exploitation in the Adirondacks - From Beavers to Biodiversity*, in THE GREAT EXPERIMENT IN CONSERVATION-VOICES FROM THE ADIRONDACK PARK 87-95 (WF Porter, JD Erickson, RS Whaley, eds.) (2009).

ⁿ⁶². Id. at 89.

ⁿ⁶³. Id. at 90.

ⁿ⁶⁴. Id.

ⁿ⁶⁵. Id.

ⁿ⁶⁶. Id. at 91.

ⁿ⁶⁷. Id.

ⁿ⁶⁸. Id.

dogs and subsequent genetic testing.ⁿ⁶⁹ These animals have naturally re-colonized the area and are not the result of any reintroduction programs. A recent study surveyed the Adirondacks regarding suitability for sustaining an elk population.ⁿ⁷⁰ The study found that there were no areas in New York that were identified as optimal.ⁿ⁷¹ However, they concluded that if human exploitation of elk is not substantial, a large amount of the habitat in the peripheral Adirondack and Catskill regions is highly suitable for restoration.ⁿ⁷² If human exploitation is substantial, portions of these two regions are moderately suitable, but little high suitability habitat exists.ⁿ⁷³

Between 1989 and 1992, S.U.N.Y. Environmental Science and Forestry (ESF) conducted an experimental program of lynx releases in northern New York.ⁿ⁷⁴ Over 80 lynx were caught in northwestern Canada and released in the Adirondacks.ⁿ⁷⁵ All of the lynx were radio-collared at the time of release, and the radios provided information of survival and dispersal of these animals.ⁿ⁷⁶ Some of the released lynx dispersed farther than anyone expected. Lynx from the ESF release

ⁿ⁶⁹. H Kretser, M Glennon, *Using Genetics to Evaluate Re-Colonization by Moose Populations in the Northeast*, Wildlife Conservation Society, Unpublished report (2009).

ⁿ⁷⁰. KA Didier, WF Porter, *Large-Scale Assessment of Potential Habitat to Restore Elk to New York State*, 27 (2) Wildlife Society Bulletin 409-418 (1999).

ⁿ⁷¹. Id. at 415.

ⁿ⁷². Id. at 416.

ⁿ⁷³. Id. at 417.

ⁿ⁷⁴. RH Brocke, *Restoration of the lynx *Lynx canadensis* in Adirondack Park: a problem analysis and recommendations*, Federal Aid Project E-1-3 and W-105-R. NYS DEC Study XII, Job 5, p. 2-3 (1992).

ⁿ⁷⁵. Id. at 3.

ⁿ⁷⁶. Id. at 4.

showed up in Pennsylvania, New Jersey, Massachusetts, New Hampshire, Quebec, Ontario, New Brunswick, and other parts of New York.ⁿ⁷⁷ Home ranges of the released lynx were large, and there is still no firm evidence of lynx reproduction.⁷⁸ The researchers did receive reports of lynx with litters but were unable to confirm them.ⁿ⁷⁹

ETW

The historical range of the Eastern Timber Wolf is the eastern region of North America (Quebec and Ontario Provinces in Canada, and the New England states of the U.S.).ⁿ⁸⁰ In the early days of European colonial expansion, it had been documented that the ETW was physically different, in that they were much smaller than their western counterparts.ⁿ⁸¹ In fact, the first taxonomic descriptions of the eastern wolf by Schreber, in 1775, referred to a distinct species, *C. lycaon*, found in the southern regions of Ontario and Quebec extending southwards toward a poorly defined boundary.ⁿ⁸² Similarly, the red wolf that inhabited the southeastern U.S. was also recognized as being

ⁿ⁷⁷. Id. at 16.

ⁿ⁷⁸. Id. at 16.

ⁿ⁷⁹. RH Brocke, KA Gustafson, LB Fox, *Restoration of large predators: potentials and problems*, in CHALLENGES IN THE CONSERVATION OF BIOLOGICAL RESOURCES. A PRACTITIONER'S GUIDE. 303-315 (DJ Decker, ME Krasny, GR Goff, CR Smith, DW Gross, eds.) (1993).

ⁿ⁷⁹. ADRIAN FORSYTH, MAMMALS OF NORTH AMERICA: TEMPERATE AND ARCTIC REGIONS 171 (1999).

ⁿ⁸¹. RM Nowak, *Another look at Wolf Taxonomy*, in ECOLOGY AND CONSERVATION OF WOLVES IN A CHANGING WORLD: PROCEEDINGS OF THE SECOND NORTH AMERICAN SYMPOSIUM OF WOLVES 375-398 (LN Carbyn, SH Fritts, DR Seip, eds.) (1995).

ⁿ⁸². Id. at 379.

smaller than the gray wolf found in the western U.S and northern Canada.ⁿ⁸³ These two smaller wolves were closer in size to the coyote (*Canis latrans*), which had originated in the western U.S., but rapidly migrated east as human settlements grew and expanded westward.ⁿ⁸⁴ Continuing through the late 20th century, most morphological studies maintained that the eastern wolf was a subspecies of gray wolf.ⁿ⁸⁵ Currently, there are three main hypotheses regarding the taxonomic status of this animal:

- (1) It is a smaller subspecies of the gray wolf, potentially resulting from post-Pleistocene/pre-European settlement hybridization between gray wolves and red wolves.
- (2) It is a hybrid, and not a distinct species, resulting from gray wolf and coyote hybridization.
- (3) It is a distinct species closely related to red wolves from the southeastern United States.ⁿ⁸⁶

In any event, wolves were extirpated from the Northeast region of the U.S. at the beginning of the twentieth century.ⁿ⁸⁷

In the late 1990's, the DNA profiles of different groups of animals were examined to determine the relatedness of the eastern Canadian wolf and the red wolf; and then to compare these two animals to several

ⁿ⁸³. Id. at 388.

ⁿ⁸⁴. RM Nowak, *The original status of wolves in eastern North America*, 1 Southeastern Naturalist 95–130 (2002).

ⁿ⁸⁵. Id. at 109.

ⁿ⁸⁶. CJ Kyle, AR Johnson, BR Patterson, PJ Wilson, BN White, *The conspecific nature of eastern and red wolves: conservation and management implications* 9 Conservation Genetics 699-701(2008).

ⁿ⁶². BARNEY FOWLER, ADIRONDACK ALBUM 69 (1974).

other canids.ⁿ⁸⁸ It had been theorized that the reason for the apparent relatedness of these two smaller wolves was the introgression of coyote genetic material, due to interbreeding with the recently arriving western coyotes.ⁿ⁸⁹ However, the analysis indicated that it was not coyote genetic material which led to the close genetic affinity between red wolves and eastern Canadian wolves, despite the fact that the mtDNA confirmed the presence of coyote sequences in both.ⁿ⁹⁰ None of the red wolves or eastern Canadian wolf samples from the 1960s contained gray wolf mtDNA sequences.ⁿ⁹¹ The majority of captive red wolves overlapped the distribution of the eastern Canadian wolf population in both assignment tests.ⁿ⁹² If coyote genetic material resulted in the apparent similarity of these two wolves, it would have been expected that the red wolf would fall within or closer to the distribution of its geographic neighbors, the Texas coyote population, and not that of the geographically distant population of eastern

ⁿ⁶³. PJ Wilson, S Grewal, ID Lawford, JNM Heal, AG Granacki, D Pennock, JB Theberge, MT Theberge, DR Voigt, W Waddell, RE Chambers, PC Paquet, G Goulet, D Cluff, BW White, *DNA Profiles of the eastern Canadian wolf and the red wolf provide evidence for a common evolutionary history independent of the gray wolf*. 78 Canadian Journal of Zoology 2156–2166 (2000). Generally, there are three types of DNA profiles that can be assembled and tested in animals. The types are: (1) mitochondrial DNA (mtDNA) that represents maternal inheritance; (2) patriarchal DNA that is inherited through the Y chromosome; (3) and nuclear DNA (nDNA), which encodes more of the organism's genome than mtDNA. See LH HARTWELL, L HOOD, ML GOLDBERG, A REYNOLDS, LM SILVER, AND RC VERES, GENETICS – FROM GENES TO GENOMES 144-152 (2000).

ⁿ⁸⁹. Robert M Nowak, *Another Look at Wolf Taxonomy* at 382.

ⁿ⁹⁰. PJ Wilson, et al., *DNA Profiles of the eastern Canadian wolf and the red wolf provide evidence for a common evolutionary history independent of the gray wolf*, at 1158.

ⁿ⁹¹. Id. at 1159.

ⁿ⁹². Id.

Canadian wolves in Algonquin Park.ⁿ⁹³ Neither was the data consistent with the hypothesis that the eastern Canadian wolf is a subspecies of gray wolf, as it is presently designated.ⁿ⁹⁴ The researchers suggested that both the red wolf and the eastern Canadian wolf evolved in North America sharing a common lineage with the coyote until 150,000 – 300,000 years ago.ⁿ⁹⁵ Additionally, they proposed that it retain its original distinct species designation, *Canis lycaon*.ⁿ⁹⁶

Several years later, some of the same researchers examined mtDNA from two historical samples of eastern North American wolves; the last wolf reported to have been killed in northern New York State (ca. 1890s) and a wolf killed in Maine in the 1880s.ⁿ⁹⁷ These wolves were representative of the eastern wolves which were present well before the expansion of western coyotes into these regions. Once again, the analysis showed the absence of gray wolf mtDNA in these wolves.ⁿ⁹⁸ Both animals contained New World mtDNA, supporting previous findings of a North American evolution of the eastern timber wolf and red wolf independently of the gray wolf, which originated in Eurasia.ⁿ⁹⁹ The presence of a third wolf species in North America could have

ⁿ⁹³. Id. at 1161.

ⁿ⁹⁴. Id.

ⁿ⁹⁵. Id. at 1165.

ⁿ⁹⁶. Id.

ⁿ⁹⁷. PJ Wilson, S Grewal, T McFadden, RC Chambers, BN White, *Mitochondrial DNA extracted from eastern North American wolves killed in the 1800s is not of gray wolf origin* 81 Canadian Journal of Zoology 936–940 (2003).

ⁿ⁹⁸. Id. at 938.

ⁿ⁹⁹. Id. at 939.

important implications for the conservation and management of wolves. Furthermore, the historical distribution of the ETW, as revealed by the skin samples, could also have implications for the reintroduction of wolves into the northeastern U.S.

After genetic analysis had been performed on eastern coyotes, showing that the eastern coyote displayed eastern wolf mtDNA, there still remained the question of whether the ETW was a wholly separate animal, or a recent hybrid between wolves and coyotes.ⁿ¹⁰⁰ The largest protected area containing this eastern wolf is the Algonquin Provincial Park, in Ontario Canada which is bounded to the south by areas containing the eastern coyote.ⁿ¹⁰¹ A careful examination of the present-day animals needed to be done throughout the entire Park to determine the degree of coyote DNA introgression. The relationships of animals in the park were assessed by compiling mtDNA profiles, and examining Y-linked microsatellite loci.ⁿ¹⁰² These profiles were used to establish maternity, paternity, and kin relationships for 102 wolves that were studied from 24 packs over a 12-year period.ⁿ¹⁰³ It was found that there were high levels of genetic relatedness between the coyotes to the southeast and some of the Algonquin Park wolves.ⁿ¹⁰⁴ Likewise, there

ⁿ¹⁰⁰. R Kays, A Curtis, JJ Kirchman, *Rapid adaptive evolution of northeastern coyotes via hybridization with wolves*, 1 Biological Letters 1, 89-93 (2004).

ⁿ¹⁰¹. SK Grewal, PJ Wilson, TK Kung, K Shami, MT Theberge, JB Theberge, BN White, *A Genetic Assessment of the Eastern Wolf (Canis lycaon) in Algonquin Provincial Park* 85 Journal of Mammalogy 4, 625-632 (2004).

ⁿ¹⁰². Id. at 627.

ⁿ¹⁰³. Id.

ⁿ¹⁰⁴. Id. at 628.

were much lower levels of genetic similarity with wolves to the north and west; and that the high genetic diversity suggested that the park animals were not an island population of wolves, but the southern part of a larger metapopulation of *C. lycaon*.ⁿ¹⁰⁵ Currently, there are animals of pure, New World ETW with no coyote or gray wolf introgression present in their mtDNA profile. These animals are located in Algonquin Provincial Park, in Ontario Canada .ⁿ¹⁰⁶

As early as 2003, the FWS acknowledged that molecular genetic studies had identified the historical northeastern United States wolf as a different animal. But due to the alleged uncertainty over wolf taxonomy, and extreme political pressure they have adopted no final position on the identity of that wolf; they have maintained the previous classification of the wolf in the northeastern U.S. as a subspecies of gray wolf, because they stated there was insufficient data showing that listing to be in error.ⁿ¹⁰⁷

The FWS is charged with the responsibility of administering the ESA.ⁿ¹⁰⁸ However, the genetic research into the identification and classification of the species of wolf that once inhabited the Northeast U.S. requires a thorough reevaluation of the actions taken by the FWS in recent years.

ⁿ¹⁰⁵. Id. at 629.

ⁿ⁸¹. PJ Wilson, SK Grewel, FF Mallory, BN White, *Genetic Characterization of Hybrid Wolves across Ontario* 100 *Journal of Heredity* Supp. 1, S80-S90 (2009).

ⁿ⁸². 68 Fed. Reg. 15806.

ⁿ⁸³. 16 U.S.C. §§1531 - 1544 (2006). The FWS, along with the National Oceanic and Atmospheric Administration (NOAA), administer the operation and mandates of the ESA.

The ESA requires the Service to prepare a recovery plan for all “endangered species and threatened species.”ⁿ¹⁰⁹ Absent a formal finding that it will not benefit a species, or distinct subspecies, the obligation to prepare a recovery plan is mandatory.ⁿ¹¹⁰ In this case, although the Service has prepared recovery plans for subspecies that it no longer recognizes, it has never prepared a comprehensive recovery plan for the ETW, as currently listed. There have, however, been several plans developed during the last twenty-five years for the gray wolf. Relying solely on these disconnected and uncoordinated recovery plans cannot substitute for preparing a recovery plan for the ETW. By failing to develop a recovery plan that is focused on a listed entity, the Service has failed to assess comprehensively the dramatic reduction in wolf abundance, distribution, and continued decline of habitat conditions throughout the range of the listed species.ⁿ¹¹¹ Even if it were legally acceptable for the Service to rely on recovery plans that relate to a superseded listing entity, the gray wolf recovery plans are badly out of date (the most recent plan is over 15-years old), do not reflect the most recent scientific data on wolves, and set recovery goals that are grossly inadequate. Contemporary scientific literature suggests that minimum population viability for wolves requires multiple, connected populations, forming a metapopulation of at least several thousand

ⁿ¹⁰⁹. 16 U.S.C. § 1533(f)(1).

ⁿ¹¹⁰. 16 U.S.C. § 1533(f)(1)(A).

ⁿ¹¹¹. 16 U.S.C. § 1532(3).

individuals.ⁿ¹¹² The Service's recovery plans, however, call for population targets well below these levels. The recovery plan for the Northern Rocky Mountain wolf, for example, calls for three groups of 10 breeding pairs of wolves (defined by the Service as 2 wolves of opposite sex and adequate age, capable of producing offspring).ⁿ¹¹³ This is grossly insufficient. Thus, at a minimum, the Service needs to revise each of these recovery plans to reflect a contemporary scientific understanding of wolf recovery needs.

The concept of Minimum Viable Population size (MVP) has been steadily developed during the last 2 decades. The idea of a MVP had its foundation in efforts to capture the many and interacting determinants of extinction risk.ⁿ¹¹⁴ An MVP is defined as the smallest number of individuals required for a population to persist in its natural environment.ⁿ¹¹⁵ Most published population viability analyses (PVA) include genetic effects.ⁿ¹¹⁶ Yet, even the PVAs that take genetic factors into account usually underestimate their impacts on extinction risk.ⁿ¹¹⁷ First, these only encompass the deleterious genetic impacts of inbreeding on reproduction and survival, but they do not consider the loss of genetic diversity which effectively reduces a population's ability

ⁿ¹¹². LW Traill, BW Brook, RR Frankham, CJA Bradshaw, *Pragmatic population viability targets in a rapidly changing world*, 143 *Biological Conservation*, 28-34 (2010).

ⁿ¹¹³. 59 Fed. Reg. 60266-281 (November 22, 1994).

ⁿ¹¹⁴. LW Traill, et al., *Pragmatic population viability targets in a rapidly changing world*, at 29.

ⁿ¹¹⁵. Id.

ⁿ¹¹⁶. Id. at 30.

ⁿ¹¹⁷. Id.

to evolve and cope with environmental change.ⁿ¹¹⁸ Second, all studies that include inbreeding generally underestimate its effect on population viability.ⁿ¹¹⁹ Many use small impacts of inbreeding depression based on juvenile mortality in captive populations, rather than those for all components of reproduction and survival in wild populations.ⁿ¹²⁰

In 1998, Defenders of Wildlife commissioned a study to assess wolf reintroduction feasibility in the Adirondack Park.ⁿ¹²¹ After conducting a comprehensive analysis of the geography of the region, political boundaries, as well as an inventory of the prey base, the authors of the survey stated that they did not believe gray wolves could be permanently reestablished in the AP.ⁿ¹²² Despite there being a sufficient prey base, adequate levels of road density, and ample locations for denning, the ultimate factor determining population viability for wolves was human attitude.ⁿ¹²³ Coupled with tremendous regional planning issues and wildlife corridor connectivity problems associated with private property, the authors believed it would be a mistake to reintroduce the animals.ⁿ¹²⁴

ⁿ¹¹⁸. Id.

ⁿ¹¹⁹. Id. at 31.

ⁿ¹²⁰. Id.

ⁿ¹²¹. PC Paquet, JR Strittholt, NL Staus, Conservation Biology Institute, *Wolf Reintroduction Feasibility in the Adirondack Park*, Prepared for the Adirondack Citizens Advisory Committee on the Feasibility of Wolf Reintroduction (October, 1999).

ⁿ¹²². Id. at 40.

ⁿ¹²³. Id. at 37.

ⁿ¹²⁴. Id. at 43.

Most courts have defined the phrase "significant portion of its range" in the ESA to mean the historical range of a species.ⁿ¹²⁵ This interpretation is consistent with the legislative history of the ESA and the historical listing practices of the FWS. However, when the FWS has recently attempted to designate and delist discrete and significant gray wolf populations (DPSs) based on the gray wolf's current range, this is contrary to the ESA.ⁿ¹²⁶ By limiting the delisting analysis to the area within the DPS boundaries, the FWS circumvents the statutory requirement to assess threats to the gray wolf throughout its historical range. Moreover, this action does not comport with the DPS Policy promulgated by the FWS and National Oceanic and Atmospheric Administration (NOAA) Fisheries.ⁿ¹²⁷ Therefore, the FWS's action of designating and delisting these gray wolf DPSs is arbitrary and capricious.

Similar to the questions raised by the ETW genetic work, a recently published study has called into question the validity of the classification and downlisting of the wolves found in the Great Lakes region.ⁿ¹²⁸ The study showed that the pre-recovery population of wolves was dominated by mtDNA haplotypes from an endemic

ⁿ¹²⁵. 16 U.S.C. § 1532(20).

ⁿ¹²⁶. 61 Fed. Reg. 4724. *See* The Humane Society of the United States, et al., v. Dirk Kempthorne, Secretary, U.S. Dept. of the Interior, et al., 579 F. Supp. 2d 7, 19 (Dist. D.C. 2008).

ⁿ¹²⁷. *Id.* at 4725.

ⁿ¹²⁸. JA Leonard, RK Wayne, *Native Great Lakes wolves were not restored*, 4 Biology Letters 95–98 (2008).

American wolf (the Great Lakes wolf).ⁿ¹²⁹ In contrast, the recent population is admixed, and probably derives from the gray wolf of Old World origin and the coyote.ⁿ¹³⁰ Consequently, the pre-recovery population has not been restored with the historical animal that once populated the region, casting doubt on delisting actions.ⁿ¹³¹

Indiana Bat

Since the most vulnerable period in the life-cycle of the Indiana bat is during winter hibernation, management efforts are concentrated on protecting the hibernacula.ⁿ¹³² The problem of human disturbance is curtailed by eliminating unauthorized access at major hibernacula through gating or agreements with the landowners.¹³³ Searches for additional wintering sites continue so that they too can be protected. Long-term monitoring is needed to identify population trends. We will also need to know if population trends we observe in the caves and mines reflect what is occurring in the entire population.ⁿ¹³⁴

There are three known winter hibernacula in the Hudson River - New York Bight watershed, one of which is among the largest in the

ⁿ¹²⁹. Id.

ⁿ¹³⁰. Id. at 96.

ⁿ¹³¹. Id. at 98.

ⁿ¹³². Interview with Dr. Nancy B. Simmons, Chair, American Museum of Natural History, Div. of Vertebrate Zoology, Curator-in-Charge, AMNH Dept. of Mammalogy (Nov. 8, 2010).

ⁿ¹³³. Id.

ⁿ¹³⁴. Id.

country.ⁿ¹³⁵ Threats to Indiana bat include commercialization of roosting caves, destruction by vandals, disturbance by spelunkers, and possibly insecticide poisoning.ⁿ¹³⁶ Recovery efforts focus on protecting the wintering sites, while the long-term viability of Indiana bat depends on protecting its known cave sites with gates, protecting foraging habitat within several miles of the hibernacula, and protecting forested habitat along river corridors for summer foraging.¹³⁷ Biologists are stumped by a plague that has killed tens of thousands, and perhaps hundreds of thousands, of bats this year in Northeastern states.¹³⁸ The cause of "white-nose syndrome," so named because of the white fungus that appears on bats' noses and wings, remains a mystery.ⁿ¹³⁹ First spotted in four New York caves in 2007, the bat syndrome spread to 24 caves by March, killing 90% of the bats in some locations.¹⁴⁰

In NYS the goal of preservation of this endangered species can be attained by setting aside areas in which the animal uses, both during the winter hibernation and summer roosting and nesting period. Unlike the wolf, there is little intrusion into human activity by this animal. The bat though is greatly impacted by human activity, both in

ⁿ¹³⁵. U.S. Fish and Wildlife Service, *SIGNIFICANT HABITATS AND HABITAT COMPLEXES OF THE NEW YORK BIGHT WATERSHED*, 37-39 Report (Nov. 1997).

ⁿ¹³⁶. AR Richter, SR Humphrey, JB Cope, V Brack, Jr.. *Modified cave entrances: thermal effect on body mass and resulting decline of endangered Indiana bats (Myotis sodalis)*. 7(2) Conservation Biology 407-415(1993).

ⁿ¹³⁷. Id.

ⁿ¹³⁸. Interview with Dr. Nancy B. Simmons, AMNH (Nov. 8, 2010).

ⁿ¹³⁹. Id.

ⁿ¹⁴⁰. Id.

the area where they live and the locales in which they feed. One such danger that has been documented is from wind turbines and wind farms.ⁿ¹⁴¹ It is unknown why the bats have difficulty navigating near the turbines, but there are specific periods of time where more fatalities are recorded, thereby giving a possible management solution to reduce deaths until a permanent solution can be found.ⁿ¹⁴²

Breeding colonies of the Indiana bat most often utilize the underside of exfoliating bark of dead or dying trees.ⁿ¹⁴³ Breeding females and roosting males also often select live shagbark hickory trees with their characteristic exfoliating bark, or larger black locust trees with deeply furrowed bark.ⁿ¹⁴⁴ The Indiana bat also roosts in a number of other tree species in the Croton and Catskill/Delaware Watersheds, including bitternut hickory, northern red oak, white oak and sugar maple.ⁿ¹⁴⁵ The density of large snags that provide roosting habitat affects the abundance and distribution of Indiana bats, therefore loss of dead (and living) trees within the Croton and Catskill/Delaware Watersheds would result in the loss of important habitat for the

ⁿ¹⁴¹. Reynolds, *Monitoring the Potential Impact of a Wind Development Site on Bats in the Northeast* at 1220.

ⁿ¹⁴². *Id.* at 1227.

¹⁴³ A Wilder, E Kiviat, *The Functions and Importance of Forests, with Applications to the Croton and Catskill/Delaware Watersheds of New York*, Report to the Croton Watershed Clean Water Coalition (Sept. 2008).

ⁿ¹⁴⁴. *Id.* at 5.

ⁿ¹⁴⁵. *Id.*

endangered Indiana bat as well as a number of other important species.ⁿ¹⁴⁶

V

Article XIV, Section 1 of the NYS Constitution states, “The lands of the state, now owned or hereafter acquired, constituting the forest preserve as now fixed by law, shall be forever kept as wild forest lands.”ⁿ¹⁴⁷ Courts have wrestled with the “*forever wild*” phrase since 1894 in how to define and apply this ideal to a modern world where man is a voracious consumer of natural resources.

During the last four decades there has been a fundamental change in attitude toward the environment, in Environmental Law, and scientific knowledge relating to ecosystems and biodiversity. Courts have slowly come to the realization that despite the honorable intentions of lawmakers to protect the environment, it frequently falls upon the judiciary to interpret laws and then mandate that governments adhere to them.

The importance of protecting the Adirondacks and Catskills cannot be overstated. Bob Marshall extolled the virtues of the wilderness in his seminal article, “The Problem of Wilderness.”ⁿ¹⁴⁸ He recognized that there were three benefits which accrue from the wilderness that

ⁿ¹⁴⁶. Id. at 9

ⁿ¹⁴⁷. NYS Constitution, Art XIV §1.

ⁿ¹⁴⁸. R Marshall, *The Problem of the Wildernes*, 30(2) The Scientific Monthly 141-148 (1930).

may be separated into 3 broad divisions: the physical, the mental, the esthetic.ⁿ¹⁴⁹

So the question remains, can Article XIV be rewritten in a way so as to strengthen environmental protections, and prevent degradation of the Forest Preserve and habitat for wildlife? If biodiversity and species protection is the ultimate goal, then new strategies must be developed. Forest management practices that preserve the character of the land, but which also enhance populations of various species are essential for increasing biodiversity. The use of conservation easements to help support local communities, rather than have the Adirondacks and Catskills remain static as “Forest Preserve” would add to the economic vitality of a depressed region that currently is only benefitting from tourist dollars.

VI

A solution may be attained by not focusing on specific species that are near the brink of extinction. Attention to a particular species close to extinction may be too little, and most certainly, too late. A broad approach to ecosystem preservation would be more effective. In addition, the government must provide more incentives for private parties to protect endangered or threatened species, instead of the current “command and control” statutory scheme. Prudence should be

ⁿ¹⁴⁹. Id. at 145.

the ethical imperative.ⁿ¹⁵⁰ As man slowly comes to understand the true value of biodiversity and what it means for humanity, he must guard it as priceless. Only recently in human history have we had the delusion that man can flourish apart from the rest of the natural world.ⁿ¹⁵¹ Every species is part of an ecosystem, and to remove it is to devalue and entrain changes that we cannot fully comprehend in relation to the integrity of that system.ⁿ¹⁵² Restoring animals means restoring the spirit of a place.ⁿ¹⁵³ Unfortunately, humans have become a geophysical force, capable of swiftly changing the atmosphere and climate.

The entwined concepts of title in property law, the right to use and enjoy said property, and the notion of what “rights” have attached to an individual owner when taking title were addressed by the U.S. Supreme Court in *Lucas v. South Carolina Coastal Council*.ⁿ¹⁵⁴ There has emerged an opinion that there is an inherent, deeply imbued value in land and property that is coupled with the moral obligation to protect and preserve.¹⁵⁵ By adopting this land ethic that expands the boundaries of an inclusive community, the role of humans can change

ⁿ¹⁵⁰. EDWARD O. WILSON, *THE DIVERSITY OF LIFE*, 351 (1999).

ⁿ¹⁵¹. *Id.* at 349.

ⁿ¹⁵². *Id.* at 308.

ⁿ¹⁵³. Bill McKibben, *Human Restoration*, in *THE RETURN OF THE WOLF: REFLECTIONS ON THE FUTURE OF WOLVES IN THE NORTHEAST* (John Elder ed., 2000).

ⁿ¹⁵⁴. A full examination of the Takings issue, as it relates to property rights, is outside the scope of this article’s inquiry. *See Lucas v. South Carolina Coastal Council*, 505 U.S. 1003 (1992). *See*, Robert J. Goldstein, *ECOLOGY AND ENVIRONMENTAL ETHICS: GREEN WOOD IN THE BUNDLE*, 91-105 (2004).

ⁿ¹⁵⁵. ROBERT J. GOLDSTEIN, *ECOLOGY AND ENVIRONMENTAL ETHICS: GREEN WOOD IN THE BUNDLE*, 95 (2004).

from conqueror of this land-community, to plain member and citizen of it.ⁿ¹⁵⁶

Albert Schweitzer recognized that ethics is, in essence, a reverence for life.ⁿ¹⁵⁷ But Schweitzer lamented that the great fault of all previous examinations of ethics had been that they believed themselves to have only to deal with the relations man to man. He noted that, “[I]n reality, the question is what is his attitude to the world and to all life that comes within his reach. A man is ethical only when life is sacred to him, that of plants and animals, as that of his fellow men.”ⁿ¹⁵⁸

ⁿ¹⁵⁶. ALDO LEOPOLD, A SAND COUNTY ALMANAC, 237-264 (BALLANTINE ED. 1991).

ⁿ¹⁵⁷ Albert Schweitzer, *Reverence For Life*, in READINGS IN WILDLIFE CONSERVATION 71, 72 (Bailey, Elder, and McKinney, eds., 1974).

ⁿ¹⁵⁸ Id. at 73.