

Environmental Law
Summer 1995

Symposium

***689 REFLECTIONS ON THE ENDANGERED SPECIES ACT**

By Oliver A. Houck [FNa]

Copyright (c) 1995 Environmental Law; By Oliver A. Houck

Senator Baucus . The hearing will come to order. Good morning, everybody.

A Voice . Extinction is forever.

Senator Baucus . One thing I can say is I really appreciate the spirit here. It's a beautiful day. We should be out fishing. We should be out in the woods.

A Voice . There's no fish left.

Senator Baucus . We're working on that.

-- Hearing Before the Comm. on Environment and Public Works on S. 921, 103d Cong., 2d Sess. 1 (1994). In 1973 the United States Congress made a national commitment to the protection and recovery of endangered species. The commitment was neither accidental nor casual. The Endangered Species Act (ESA) followed nearly a decade of unsuccessful federal and state programs that failed even modestly to minimize the effects of federal and private development on even the most well-identified and endangered vertebrates. The ESA's legislative history shows prolonged discussion in both houses of Congress over what protecting and restoring species would mean, and recognition that saving species would have to include the habitats on which they depend. The relationship between species and their habitats has since proven, as a matter of biology, to be all the more irrefutable and direct. It has also proven to be one of the most controversial, if not well understood, provisions of environmental law -- a controversy that has grown to almost mythical proportions and now threatens the Act itself. This Article explores the roots of this controversy and concludes that the ESA raises two questions that may simply be too uncomfortable to bear. The first concerns the extent of our dependence on federal welfare. The second concerns the extent of our dependence on other living things.

I. Reflections on the Premise: Habitat Protection

A. Habitat Protection and the Phenomenon of Species Extinction

The diversity of life on earth is nearly beyond human imagination. The baseline number of living organisms is unknown, even to the nearest ***690** order of magnitude. [FN1] About 1.4 million species have been identified to date, and the actual number of species may range as high as 100 million. [FN2] Already, the mind swims.

The extinction rate for these species is nearly as unimaginable. Recent estimates suggest that as many as twenty percent of the Earth's life forms may be extinguished in the next thirty years, [FN3] a date that is not exactly receding into the distance. One study projects that two-thirds of all plant life and more than two-thirds of all bird species will disappear from the Amazon River Basin during this brief time. [FN4] Harvard biologist Edward O. Wilson estimates the worldwide rate of loss from tropical rainforest destruction at fifty thousand species a year, one hundred-thirty-seven a day, or six every hour. [FN5] Wilson's estimates are based only on habitat loss and do not account for further endangerment from other causes such as the introduction of exotic (nonnative) species and pollution. [FN6]

The phenomenon of extinction in the United States, while slowed and in some cases reversed, [FN7] continues despite the passage of the Endangered Species Act (ESA) [FN8]. Less than one thousand species are currently listed as threatened or endangered under the ESA. [FN9] Nearly four thousand are formally identified as candidates, [FN10] although the number of legitimate candidates may be closer to ten thousand. [FN11] In Hawaii alone, seven avian species are known to have disappeared since 1963, five of them since *691 1980. [FN12] For a nation optimistic about quick, technological solutions, this is unwelcome news.

The most unwelcome news of all, however, is the emerging confirmation of a basic premise of the ESA: its focus on habitat protection. [FN13] A recent review of all endangered species listings in the Federal Register identified habitat loss as a primary cause of endangerment in eighty percent of the cases. [FN14] Habitat destruction is the leading cause of extinction and endangerment in North American freshwater fisheries. [FN15] The correlation is linear, [FN16] as is the everyday-before-your-eyes correlation between habitat loss and human development. [FN17] The unhappy fact is that species extermination at the rate currently taking place does not result from natural forces, evolution, or the planet Mars. In the words of the philosopher Pogo, “we have met the enemy, and he is us.” [FN18] It is the ESA's lot to have forced this meeting.

B. The Effects of Habitat Protection on Public and Private Development

The current level of rhetoric surrounding the ESA exceeds anything this author has witnessed in the brief history of environmental law. [FN19] The Act has been variously characterized as the “pit bull of environmental law” [FN20] and, by no less than then-President George Bush, “a sword aimed at the jobs, families and communities of entire regions.” [FN21] Stories surround the ESA like those found at dockside in the days of sailing ships -- stories of sea monsters that wrecked ships on the reefs with fatal songs and then attacked their crews. Problematically, few sailors could be found who actually*692 witnessed these events. The stories of those who claimed to be witnesses turned out to be something less on closer examination. So it is with the ESA.

Section 7 of the ESA prohibits federal agencies from jeopardizing endangered species. [FN22] In the past five years, the U.S. Fish and Wildlife Service (USFWS) has conducted nearly 100,000 section 7 consultations with federal agencies over actions that could jeopardize listed species. [FN23] Of these, nearly 95,000 were conducted informally and quickly, often by telephone, and resulted in no project delay or modification. [FN24] Of the 2,719 formal consultations, 2,367 resulted in “no jeopardy” opinions, allowing the projects to go forward as planned. [FN25] Of the 352 “jeopardy” opinions, 126 related to only two proposals (for a group of pesticide approvals and a group of timber sales). [FN26] At bottom, only fifty-four projects were identified as terminated in the five-year period, [FN27] many of which were permits for additional marinas along manatee-occupied waters in Florida. [FN28] Thus, in the past five years, 100,000 consultations have resulted in jeopardy opinions exactly .054 percent of the time. [FN29]

The facts on section 7 consultations do not stop here. A review of these bottom-line, “pit bull” jeopardy findings reveals that the great majority of them allowed projects to go forward with only minimal harm-avoiding conditions, such as “don't dredge while the eagles are nesting,” speed limit signs in manatee waters, and a wider median strip in a federal highway routed through wolf habitat to enable wolves to pause safely while crossing. [FN30] In practice, the ESA is a statute of accommodations.

Section 9 prohibits the taking of endangered species by any person. [FN31] Section 10 allows the same taking under permit, after consultation and habitat conservation planning. [FN32] The effects of these provisions on minimizing harm to endangered species from private actions are more difficult to assess. Section 10 has resulted in only a few dozen actual or even proposed*693 habitat conservation plans. [FN33] While this planning is by all evidence as contentious, tedious, and unpleasant as any zoning or land use plan that tries to accommodate multiple public and private interests, [FN34] it has hardly been pandemic. Like the mythical monsters of the sea, the reaction to sections 9 and 10 is more a fear-of-the-unknown response to the unstructured, discretionary nature of the habitat planning process. [FN35]

Whether sections 9 and 10 will continue to apply to private-party habitat modifications that jeopardize endangered species is, at the time of this writing, very much at issue. [FN36] It is a matter of objective fact, however, that nearly

two-thirds of the United States is privately owned [FN37] and that more than fifty percent of listed species are exclusively found on private lands. [FN38] Attempting to save endangered species without modifying development of private lands is an oxymoron. Reasonable people may disagree over the means and mechanisms. Sound proposals for improved mechanisms do exist and are currently on the table. [FN39] But nothing is more mythical than the idea of an ESA that does not lead to significant, harm-avoiding planning for private lands.

II. Reflections on the Controversy: Why is There So Much Fuss?

Anyone looking at the rising rate of extinction and the program to reverse it which has led more to minor development modifications than to injunctions might wonder why the ESA should have caused the legislative backlash currently underway. [FN40] The answer could be, of course, “the will of the people” speaking through their elected representatives, but that answer would still beg the question. A fuller answer is that endangered species requirements for both federal and private actions are running up *694 against the most sacred cows on the American landscape, cows that are up to their flanks in subsidies and shielded by other myths about human beings and the natural world. Legislators react promptly to threats to subsidized constituencies, be they cattle ranchers or senior citizens, and their myths.

A. The Federal Hand

Early ESA litigation involved individual federal projects that, while controversial, only affected relatively small, local areas [FN41] and did not significantly impact federal programs and their beneficiaries as a whole. [FN42] More recently, the ESA has arrived at the underlying problem that entire federal programs are being administered in a way that continues to push species toward endangerment and extinction. Foremost of these cases in the public mind are those challenging the practice of clearcutting Pacific old-growth forests, habitat for the northern spotted owl. [FN43] Similar litigation is pending over the operation of hydroelectric dams on the Snake and Columbia Rivers in the Pacific Northwest, which threaten many salmon species; [FN44] whatever outcome emerges, it will include more water for salmon and less low-cost electricity for the aluminum industry, the hydroelectric system's chief beneficiary. [FN45] The Environmental Protection Agency (EPA), with an ESA suit looming, has issued water quality criteria for endangered fish in the Sacramento River delta that will change irrigation practices and require water conservation in the Sacramento Valley. [FN46] Federal grazing plans are being revised to protect riparian habitats of endangered birds and burrows of the threatened Mojave Desert tortoise. [FN47] In Texas, the U.S. Forest Service is scaling back timber harvests to accommodate the red-cockaded woodpecker. [FN48] None of these practices -- clearcutting, grazing, irrigation, or power production -- are arrested or even seriously impacted on a national level by the ESA. The ESA does impact locally, however, and runs afoul of enormous federal incentives *695 that cut exactly the opposite way, calling into question the programs themselves and the federal monies they provide.

The extent of these monies is difficult to appreciate, but such appreciation is nonetheless worthwhile, because it helps to explain where so much of the controversy derives. A recent Department of Interior (DOI) report identifies no fewer than eight multi-million federal subsidy programs in agriculture, thirteen separate subsidies in water resources development, thirteen more in transportation and housing, and eleven for development of the public lands. [FN49] Federal import restrictions and price floors for one agricultural sector alone, the sugar industry, increase consumer costs by an estimated \$1.4 billion a year; [FN50] seventeen sugar corporations receive fifty-eighty percent of these benefits. [FN51] The story repeats itself for below-cost timber, below-cost grazing, below-cost irrigation, below-cost navigation, royalty-free mining, [FN52] and oil and gas depletion allowances. America's natural resource-based industries are on the receiving end of a cornucopia of subsidies that, individually and collectively, are as immutable as commitments to social security. With all of the priority the Contract with America [FN53] places on reducing the federal budget, very little is said about these federal expenditures. [FN54] Few questions are even raised until natural systems are finally reduced below sustainability, jeopardizing endangered species and creating new ones, which then take the political hit. [FN55]

*696 B. The Not-So-Private Hand

Even larger federal subsidies support development that is generally considered private, be it new subdivisions, condominiums lining the Florida coast from Jacksonville to Miami, or ski resorts in the Rockies. A number of these

projects impact endangered species; some are taking their last home ranges. [FN56] The most obvious of these subsidies to private development include transportation, which has received more than \$300 billion for highways alone, [FN57] and sewage treatment, which gets the lion's share of another \$75 billion; [FN58] highway access and sewage treatment are the sine qua non of new commercial and residential development. Less obvious is federally subsidized insurance which, under the National Flood Insurance Program (NFIP) [FN59] for example, provides cut-rate premiums (at less than fifteen percent of private rates in coastal areas, where private rates are even available) [FN60] for housing along the most exposed coastlines and in the most flood-prone river basins of the United States. More than fifty percent of all listed endangered species occupy these same coastlines, floodplains, and wetlands. [FN61] A recent federal district court opinion requires Federal Emergency Management Agency administrators to consult with USFWS regarding the effects of new development underwritten by the NFIP in Key West, Florida. [FN62] As the court noted, the Lower Keys happen to be a high-hazard hurricane corridor, the last remaining habitat of the Florida Key deer -- and prime real estate. [FN63] More enemies for the ESA.

Quite unobvious, at least in public discourse, are the largest subsidies for private development in America: deductions for first- and second-home mortgages under the Internal Revenue Code. [FN64] According to the Joint Committee on Taxation, home mortgage interest deductions cost the U.S. Treasury \$41.7 billion in 1994 [FN65] and were projected at \$253.9 billion in the *697 period from 1994 to 1998. [FN66] These mammoth incentives are compounded by tax-free roll-overs (\$14.3 billion in 1994, \$76.7 billion in 1994-98); [FN67] exemptions for the elderly (worth another \$4.7 billion in 1994, \$25.5 billion in 1994-98); [FN68] and real estate tax deductions (\$13.7 billion in 1994, and \$76.8 billion in 1994-98). [FN69] Against subsidies of this magnitude and the resultant wave of ranchettes across California's Coachella Valley, the Coachella Valley fringe-toed lizard does not stand much of a chance. [FN70]

Perhaps the most surprising aspect of implementing the ESA on private lands is not the degree of threat, defensiveness, or grief it has raised, [FN71] but rather the degree to which the participants have been able to get beyond it and work out solutions, over time. [FN72] The most difficult part of the ESA is that it requires Americans to do what they should be -- but are not -- doing with public resource management, growth management, and local government zoning. The Act does not dictate any particular choices; lack of workable solutions shuts someone down once in a blue moon. [FN73] But in a fashion similar to the proposed Balanced Budget Amendment seeking sustainability in federal expenditures, the ESA asks inconvenient questions about the sustainability of life, and it requires answers. [FN74]

C. The Mythology: Biophilia and Bio-Phobia

The current hysteria over endangered species cannot simply be explained by the questions they raise and challenges they present to development subsidies on which so many Americans have come to rely. The rhetoric from some quarters is simply too extreme. The chair of the *698 House Resource Committee (the adjective "Natural" was eliminated at the chair's request) has recently stated about an endangered mammal in California: "It's a pest. It's a nothing. It has no value." [FN75] Of course, the same observation could have been made at one time about the tomato, [FN76] about the penicillin mold prior to 1930, [FN77] and until very recently about the Pacific yew, now thought to be the most promising cure for ovarian cancer. [FN78]

These facts sway no one. What stirs the passions and the current furor over the ESA is the intersection of two mythologies. One is a phenomenon called "biophilia," described as the innate -- indeed genetic -- affinity of humankind for wildlife and the natural world. [FN79] To holders of this world view, extinguishing species is like burning libraries, something one can only tolerate out of ignorance for the consequences to future generations. [FN80] To many who hold this view, deliberate extinction is more than an ignorant act; it is an immoral act, one that no species on earth has the right to do to another. [FN81]

The opposite phenomenon could be called "bio-phobia," and in this world view the ESA is simply a gratuitous act of insanity. [FN82] God gave this world to human beings and not to snail darters or wolves. [FN83] If He wanted to give it to the bird-winged pearly mussel, He would have given brains to bivalves rather than humans. Humans are not animals; they rule over animals. The ESA questions this independence from nature and the supremacy over it as no other environmental law has done. As such, it threatens the moral authority of humans on earth. [FN84]

***699** These two views have been in running conflict at least since the rise of medical science (when autopsies were considered a criminal act), and surfaced again with the thesis of evolution, [FN85] for which Charles Darwin was pilloried in his time. [FN86] They surfaced once more in the Scopes Monkey Trial of 1925, pitting evolutionary theory against the Biblical teaching of creation. [FN87] They are igniting another donnybrook today, remarkably similar in its juxtaposition of philosophies, goaded forward by a sweeping, national anxiety over the loss of jobs, lifestyles, purpose, and pride that has left Americans looking for explanations [FN88] and scapegoats. [FN89] Apparently, at least one such scapegoat has been found. If the message of the ESA is that the miners' canaries are about to die and that people might want to change the way they do their mining, the bio-phobic response is: kill the canaries. The best scientific evidence available suggests that this will be a risky answer. [FN90]

III. Reflections on Alternatives: Biodiversity and Contemporary Legislation

An often heard criticism of the ESA is that it tries to do too much. Some argue for reliance instead on the Federal Lands Policy and Management Act (FLPMA) [FN91] to regulate grazing, on the mining laws to regulate ***700** mineral extraction, [FN92] on the National Forest Management Act (NFMA) [FN93] to control clearcutting, and on local zoning laws to address other land-use decisions. Fair enough; in a more perfect world these observations make perfect sense. In this world, however, it is hard to believe they are made with complete sincerity. Any practitioner or teacher of natural resource law knows that the federal land management statutes, because of inevitable compromises forged in their enactment, are so self-conflicted in their goals and so discretionary in their requirements that they stand little chance of redirecting federal programs and private industries that both benefit from and influence the execution of these laws. [FN94] Consider, for example, NFMA's provision for the protection of biological diversity, the closest provision found in any federal natural resource statute for a holistic approach to the protection of endangered species and the ecosystems on which they depend:

[The Secretary of Agriculture will issue guidelines to] provide for diversity of plant and animal communities based on the suitability and capability of the specific land area in order to meet overall multiple-use objectives, and within the multiple-use objectives of a land management plan adopted pursuant to this section, provide, where appropriate, to the degree practicable, for steps to be taken to preserve the diversity of tree species similar to that existing in the region controlled by the plan. [FN95]

There are few practitioners who would perceive, in this mirage of qualifications, a rule of law. [FN96] Furthermore, no one exposed to local zoning could come away from that experience with confidence that local zoning boards -- in jurisdictions that even have them -- can resist the latest development proposal and its promise of local jobs and revenue, whatever the environmental impacts. It is for this very reason that federal laws exist in the first place for air, water, wetlands, waste disposal, migratory waterfowl, commercial fisheries, historic preservation, endangered species, and other resources important to the nation as a whole. The rely-on-other-laws alternative is not a serious one.

***701** A more enlightened alternative is propounded by those who would replace the ESA with legislation calling for the protection of biodiversity. This proposal would be more effective if anyone could say more precisely what biodiversity means and what its protection would require or allow. [FN97] The process of determining whether any specific habitat-altering development is likely to "jeopardize" a single listed endangered species is difficult and often hotly contested. [FN98] Attempting this exercise for protection of biodiversity as well, with the myriad of combinations, ratios, and requirements of all living species in a given area, stretches current scientific and political abilities to their breaking point. [FN99] None of this should be misinterpreted to read that attempts to identify and protect ecosystems on a larger scale should not go forward, and in haste -- they must. They are the long-term future of all species, including (however unwilling we are to recognize it) human beings. But for the moment, for a law capable of implementation, the ESA is at the front edge of science, politics, and law. Like Hans Brinker, it is out there with its finger in the dike until help arrives.

As we all know, help will not arrive any time soon. Bills currently pending in Congress do little to enhance other natural resource laws, biological diversity, or the ESA itself. [FN100] The proposed amendments require compensation of private interests affected by as little as twenty percent of potential development value, but provide no

mechanism or appropriations for funding this compensation. [FN101] They require the separation of species into those that are deserving of protection and those that are not, [FN102] a triage that no scientist with a smidgeon of integrity would consider attempting. They also require benefits of endangered species listings to exceed costs; [FN103] when the costs are as identifiable as forging casino profits in habitat of the Everglades kite, and the benefits are as intangible as the possibility that a mold in the lining of the kite's digestive system may hold a cure for diabetes, an endangered species will rarely be listed. These legislative*702 proposals are not about compensation, benefit analysis, or scientific review. Instead, they are about repealing the ESA without paying the political penalty of appearing to do so directly. They are not understandable from the factual record of the ESA. They are only understandable from the mythology of its "seabeast" reputation and the underlying mythology of our supremacy over, and independence from, other life on this planet.

IV. Reflections

The ESA is an extraordinary attempt at national self-restraint. The actual number of attorneys who represent clients with serious endangered species problems in most states could be counted on one's toes without using the second foot. From the controversy surrounding the Act, however, one would think it has brought America to its knees. Facts to the contrary are not terribly relevant when riots begin, and riots can begin over feelings. The ESA is in trouble, to be sure, because it has paid inadequate attention to private incentives, long-range planning, more structured processes, and other accommodations that the current DOI Secretary, who inherited an extremely bad hand, is now trying to remedy. [FN104] But the ESA is fundamentally in trouble because it challenges a horizon of federal beneficiaries that have successfully resisted all other proposals for change. And because it challenges, for many Americans, their beliefs about themselves.

[FN_a]. Professor of Law, Tulane University. This Article is based on a presentation to the Natural Resources Law Section of the Association of American Law Schools at the Annual Meeting in New Orleans, Louisiana, on January 5, 1995. An abbreviated version of this Article appeared in *Nat. Resources & Env't*, Summer 1995, at 9.

[FN1]. Edward O. Wilson, *Biophilia and the Conservation Ethic*, in *The Biophilia Hypothesis* 31, 35 (Stephen R. Kellert & Edward O. Wilson eds., 1993).

[FN2]. *Id.*

[FN3]. Robert L. Peters & Thomas E. Lovejoy, *Terrestrial Fauna*, in *The Earth as Transformed by Human Action : Global and Regional Changes in the Biosphere over the Past 300 Years* 353, 353 (B.L. Turner II et al. eds., 1990).

[FN4]. Daniel Simberloff, *Are We on the Verge of a Mass Extinction in Tropical Rainforests?*, in *Dynamics of Extinction* 165, 177 (David K. Elliot ed., 1986).

[FN5]. Wilson, *supra* note 1, at 36.

[FN6]. *Id.*

[FN7]. See David S. Wilcove & Michael J. Bean, *An Introduction to "The Endangered Species Act: A Record of Success,"* Report (Env'tl. Defense Fund, New York, N.Y.), Sept. 16, 1992 (discussing reports on the recovery of the gray whale, whooping crane, peregrine falcon, bald eagle, and other species).

[FN8]. *The Endangered Species Act of 1973*, 16 U.S.C. ss 1531-1544 (1988 & Supp. V 1993). For a comprehensive discussion of the Act, see Oliver A. Houck, *The Endangered Species Act and Its Implementation by the U.S. Departments of Interior and Commerce*, 64 *U. C olo. L. Rev.* 277 (1993); see also James C. Kilbourne, *The Endangered Species Act Under the Microscope: A Closeup Look From a Litigator's Perspective*, 21 *E nvtl. L.* 499 (1991) (reviewing the ESA's provisions on listing of species, the taking of listed species, and the obligations of federal agencies); see generally Daniel J. Rohlf, *The ESA: An Influential Past, Rocky Present, and Uncertain Future*, in *The Animal Law Conference* 3 (1993) (briefly reviewing the history and structure of the ESA).

[FN9]. Endangered and Threatened Wildlife and Plants, 50 C.F.R. ss 17.11-.12 (1994).

[FN10]. Council on Env'tl. Quality , Environmental Quality: 21st Annual Report 137 (1990).

[FN11]. *Id.* (citing the Nature Conservancy, December 1990 Database on Natural Heritage Programs); see also James A. Salzman, Evolution and Application of Critical Habitat Under the Endangered Species Act, 14 *H arv. Env'tl. L. Rev.* . 311, 312 (1990) (discussing critical habitat and explaining that species often do not receive a critical habitat designation due to unspoken political, bureaucratic, and economic pressures).

[FN12]. Hawaii State Dep't of Land & Natural Resources, Hawaii's Extinction Crisis: A Call to Action 18 (1991) (on file with author).

[FN13]. The first criterion for listing species under the Act is the actual or potential destruction of its habitat. 16 U.S.C. s 1533(a)(1)(A) (1988). Each listing is to be accompanied by a designation of the habitat necessary for survival. *Id.* s 1533(b)(2). Federal agencies are to discuss likely destruction or adverse modification of critical habitat with the Secretary before agency action is taken. *Id.* s 1536(a)(4). Nonfederal parties must also engage in conservation planning to avoid harm to listed species. *Id.* s 1539(a)(2); see Katherine S. Yagerman, Protecting Critical Habitat Under the Federal Endangered Species Act, 20 *Env'tl. L.* 811 (1990) (discussing the importance of habitat protection for ensuring the survival of species under the ESA).

[FN14]. Telephone Interview with David Wilcove, Staff Attorney, Environmental Defense Fund (Mar. 1, 1995).

[FN15]. Edward O. Wilson, *The Diversity of Life* 254 (1992).

[FN16]. *Id.* at 253-54. In biological fact, the correlation is more like an ascending curve. Speaking approximately, a 90% loss of habitat will lead to a 50% loss of species; the last 50% go with the last 10% of their range. Wilson, *supra* note 1, at 36.

[FN17]. See Wilson, *supra* note 1, at 36.

[FN18]. Walt Kelly, in *Bartlett's Familiar Quotations* 398 n.1 (Justin Kaplan ed., 16th ed. 1992) (quoting Pogo).

[FN19]. The author began practicing environmental law in 1971.

[FN20]. Timothy Egan, Strongest U.S. Environment Law May Become Endangered Species, *N.Y. Times* , May 26, 1992, at A1, A11 (quoting Donald Barry of the World Wildlife Fund).

[FN21]. Michael Wines, Bush, in Far West, Sides with Loggers, *N.Y. Times* , Sept. 15, 1992, at A25 (quoting George Bush).

[FN22]. 16 U.S.C. s 1536 (1988). More specifically, section 7 requires that federal agencies consult with the U.S. Fish and Wildlife Service, or the National Marine Fisheries Service for marine species, when their projects could affect endangered species. *Id.* s 1536(a). Through this consultation, agencies shall "insure" that their actions are not likely to jeopardize listed species or adversely modify habitats critical to their survival. *Id.* s 1536(a)(2).

[FN23]. World Wildlife Fund, *Talk Is Cheaper Than We Think: The Consultation Process Under the Endangered Species Act* i (1994).

[FN24]. *Id.* at 3-4.

[FN25]. *Id.* at 4.

[FN26]. *Id.* at 6.

[FN27]. *Id.* at ii.

[FN28]. See Houck, *supra* note 8, at 320 n.284.

[FN29]. For corroborative data, see U.S. Gen. Accounting Office, *Endangered Species Act: Types and Number of Implementing Actions* (1992).

[FN30]. See Houck, *supra* note 8, at 359-70.

[FN31]. 16 U.S.C. s 1538 (1988).

[FN32]. *Id.* s 1539. These two summary statements oversimplify a body of law that is discussed in Robert D. Thornton, *Searching for Consensus and Predictability: Habitat Conservation Planning Under the Endangered Species Act of 1973*, 21 *Env'tl. L.* 605 (1991).

[FN33]. Michael J. Bean et al., *Reconciling Conflicts Under the ESA: The Habitat Conservation Planning Experience* vii (1991).

[FN34]. J.B. Ruhl, *Regional Habitat Conservation Planning Under the Endangered Species Act: Pushing the Legal and Practical Limits of Species Protection*, 44 *Sw. L.J.* 1393, 1404-08, 1413-23 (1991).

[FN35]. *Id.* at 1408-13; Thornton, *supra* note 32, at 639-52.

[FN36]. See *Babbitt v. Sweet Home Chapter of Communities for a Great Oregon*, 115 S. Ct. 2407 (1995) (reversing the D.C. Circuit and upholding Department of Interior regulations defining “take” to include habitat modification jeopardizing listed species). Whether the Republican-led Congress will allow this interpretation to stand remains to be seen.

[FN37]. See George C. Coggins et al., *Federal Public Land and Resources Law* 1 (3d ed. 1993).

[FN38]. Hank Fisher & Wendy Hudson, *Building Economic Incentives into the Endangered Species Act*, in *Defenders of Wildlife* i, vii (1993).

[FN39]. *Id.* (considering the use of economic incentives to improve ESA effectiveness on private lands); see also *infra* note 102 and accompanying text.

[FN40]. See, e.g., Paul M. Barrett, *Supreme Court Prepares to Decide If Regulations Have Gone Too Far to Aid Endangered Species*, *Wall St. J.*, Apr. 14, 1995, at A10 (discussing the backlash against the ESA); Timothy Noah & Phil Kuntz, *Proposed Bill Signals Battle Over Guarding Endangered Species*, *Wall St. J.*, May 10, 1995, at B8 (discussing controversies about Senator Slade Gordon's (R-Wash.) bill to weaken the ESA); John H. Cushman, Jr., *Republicans Take Aim at an Extensive List of Environmental Statutes*, *N.Y. Times*, Feb. 22, 1995, at A14 (reporting on Republican proposals for a moratorium on regulations and other limitations on federal environmental intervention).

[FN41]. See, e.g., *National Wildlife Fed'n v. Coleman*, 529 F.2d 359, 361 (5th Cir.), *reh'g denied*, 532 F.2d 1375 (5th Cir.), *cert. denied*, 429 U.S. 979 (1976) (involving a 5.7-mile section of highway with a single interchange and its threat to the Mississippi sandhill crane).

[FN42]. See W. Robert Irvin, *The Endangered Species Act: Keeping Every Cog and Wheel*, *Nat. Resources & Env't*, Summer 1993, at 36, 38.

[FN43]. *Northern Spotted Owl v. Hodel*, 716 F. Supp. 479 (W.D. Wash. 1988).

[FN44]. See, e.g., *Pacific Northwest Generating Cooperative v. Brown*, 38 F.3d 1058, 1060-61 (9th Cir. 1994).

[FN45]. See Brian Collins, *Salmon Were an Afterthought to 136 Columbia River Dams*, *High Country News*, July 13, 1992, at 15, 17-18 (reviewing the aluminum industry's current burden on other power users).

[FN46]. *Water Quality Standards for Surface Waters of the Sacramento River, San Joaquin River, and San Francisco Bay and Delta of the State of California*, 60 Fed. Reg. 4664 (Jan. 24, 1995). The same day, EPA, other federal agencies, and the State of California executed a side agreement prescribing water flows to assure compliance with these water quality standards. *Id.* (evidencing commitment to the conservation effort).

[FN47]. *Natural Resources Defense Council v. Babbitt*, 1994 WL 361811, at *2 (N.D. Cal., July 1, 1994), order amended, 1994 WL 507710 (N.D. Cal., Aug. 22, 1994).

[FN48]. See *Sierra Club v. Yeutter*, 926 F.2d 429 (5th Cir. 1991).

[FN49]. U.S. Dep't of Interior, *The Impact of Federal Programs on Wetlands* (1994). The agricultural subsidy programs include community price supports, tax credits, and other credits; the water resources development subsidies include monies for dams, irrigation, navigation, and hydroelectric systems; local infrastructure grants include namely housing and federal-aid highways; and the public lands development subsidies entail timber, grazing, predator control, and mining activities. *Id.*

[FN50]. U.S. Gen. Accounting Office, *Sugar Programs Under Changing Conditions* 3 (1993).

[FN51]. *Id.*

[FN52]. Bruce Alpert, *Subsidies Targeted by Labor Chief*, *Times-Picayune*, Dec. 8, 1994, at C1 (noting that a 12.5% royalty alone would yield \$9.2 billion to the U.S. Treasury).

[FN53]. On September 27, 1994, over 300 Republican Congresspersons and candidates signed what has come to be known as the "Contract with America." The Contract set forth ten items of legislation ranging from tax cuts to a balanced budget amendment that would be presented in the first 100 days of Congress if the Republicans took control of the House of Representatives. See Kenneth J. Cooper, *GOP Offers a "Contract" to Revive Reagan Years*, *Wash. Post*, Sept. 28, 1994, at A1; see also David E. Rosenbaum, *Republicans Offer Voters a Deal for Takeover of House*, *N.Y. Times*, Sept. 28, 1994, A16.

[FN54]. But see *Public Resources Deficit Reduction Act of 1995*, H.R. 721, 104th Cong., 1st Sess. s 101(a) (1995) (stating that "no ... natural resource owned by the United States ... may be sold, leased, or otherwise disposed of ... for an amount less than fair market value").

[FN55]. Unlike other environmental programs that address a single practice, such as grazing or toxic water discharges, and hence a single constituency, such as cattle ranchers or the metal-plating industry, the ESA receives the accumulated grief of virtually every federally-subsidized and regulated sector.

[FN56]. See generally Wilson, *supra* note 1.

[FN57]. Federal-aid highways were financed through federal taxes on gasoline, automobiles, and automotive parts, at more than \$14.4 billion in 1991. See U.S. Bureau of the Census, U.S. Dep't of Commerce, *Statistical Abstract of the U.S.* (1994). In 1991, section 1002(a) of the *Intermodal Surface Transportation Efficiency Act* authorized \$108.5 billion for fiscal years 1992 through 1997 for transportation planning primarily involving highway construction. *Intermodal Surface Transportation Efficiency Act of 1991*, Pub. L. No. 102-240, s 1002(a), 105 Stat. 1914, 1916

(1991), reprinted in 23 U.S.C. s 104 (Supp. V 1993).

[FN58]. Robert V. Percival et al., *Environmental Regulation Law, Science and Policy* 916 (1992).

[FN59]. 42 U.S.C. ss 4011-4029 (1988 & Supp. V 1993).

[FN60]. Monica Yant, *Bill to Cut Flood Insurance Draws Tide of Resentment*, *Times-Picayune*, June 28, 1992, at A10 (noting that federal flood insurance costs coastal home owners approximately \$950 a year; the same insurance is close to \$7,500 on the private market).

[FN61]. National Wildlife Fed'n, *Wetlands Fact Sheet: Endangered Species, Endangered Wetlands: A Dizzying Death Sentence* 103 (1993).

[FN62]. *Florida Key Deer v. Stickney*, 864 F. Supp. 1222, 1242 (S.D. Fla. 1994).

[FN63]. *Id.* at 1230.

[FN64]. 26 U.S.C. s 163(h)(3)-(4) (1988).

[FN65]. Joint Comm. on Taxation, U.S. Congress, *Estimates of Federal Tax Expenditures for Fiscal Years 1994-1998*, at 24 (1993).

[FN66]. *Id.* at 13.

[FN67]. *Id.*

[FN68]. *Id.*

[FN69]. *Id.*

[FN70]. See Bean et al., *supra* note 33, at 66-80 (describing planning efforts to protect the endangered fringe-toed lizard from booming residential and tourist development).

[FN71]. One USFWS state coordinator has analogized the process to getting over a death in the family: 1) denial, 2) grief, 3) reconciliation, and then 4) solutions. Telephone Interview with Sam Hamilton, USFWS State Coordinator, State of Texas (Jan. 1994).

[FN72]. See Lindell L. Marsh, *Conservation Planning Under the Endangered Species Act: A New Paradigm for Conserving Biological Diversity*, 8 *Tul. Env'tl. L.J.* 97 (1994) (discussing the development of a habitat conservation plan for San Bruno Mountain, California and using it as a paradigm for conservation planning); see also John H. Cushman, Jr., *US and California Sign Water Accord*, *N.Y. Times*, Dec. 16, 1994, at A24 (describing a plan to protect endangered fish species by limiting water withdrawals in the Sacramento Valley, praised by state officials and representatives of the region's business, agricultural, and environmental groups).

[FN73]. See U.S. Gen. Accounting Office, *supra* note 29. Compare ESA-generated project terminations with projected rates of plant closure caused by application of Clean Water Act requirements. See, e.g., *Association of Pacific Fisheries v. EPA*, 615 F.2d 794, 808 (9th Cir. 1980) (predicting that 7 of 16 nonremote Alaskan seafood canneries would close as a result of their inability to meet best practicable technology (BPT) requirements); see also Oliver A. Houck, *The Regulation of Toxic Substances Under the Clean Water Act*, 21 *Env'tl. L. Rep. (Env'tl. L. Inst.)* 10,528, 10,537-39 (1991).

[FN74]. For answers too tough to swallow, the Act provides an exemption mechanism for federal actions that in fact

jeopardize, or even completely extirpate, an endangered species. 16 U.S.C. s 1536(e)-(p) (1988).

[FN75]. See Timothy J. McNulty, *Endangered Species Act on List*, *Times-Picayune*, Mar. 12, 1995, at A10 (quoting Chair Don Young's comments concerning the Fresno kangaroo rat).

[FN76]. In France and northern Europe, the tomato was considered to be poisonous. 11 *The New Encyclopedia Britannica Micropaedia* 834 (Encyclopedia Britannica Inc., 15th ed. 1992).

[FN77]. Penicillin's beneficial effects were first observed in 1928. 9 *The New Encyclopedia Britannica Micropaedia* 258-59 (Encyclopedia Britannica Inc., 15th ed. 1992).

[FN78]. See Warren E. Leary, *Drug Made from Rare Tree Is Approved to Treat Cancer*, *N.Y. Times*, Dec. 30, 1992, at A10.

[FN79]. Wilson, *supra* note 1, at 31. Specifically, Wilson defines biophilia as “the innately emotional affiliation of human beings to other living organisms.” *Id.*

[FN80]. See Wilson, *supra* note 15, at 215-351.

[FN81]. See Stephen R. Kellert, *The Biological Basis for Human Values of Nature*, in *The Biophilia Hypothesis*, *supra* note 1, at 51, 51-56.

[FN82]. See *id.* at 56-58; see also U.S. Mines Director: *Doesn't Believe in Endangered Species*, *Times-Picayune*, Mar. 23, 1991, at A10. T.S. Ary, then-Director of the U.S. Bureau of Mines, said “I don't believe in endangered species. I think the only ones are sitting here in this room.” *Id.*

[FN83]. “Be fruitful, and multiply, and replenish the earth, and subdue it; and have dominion over the fish of the sea, and over the fowl of the air, and over every living thing that moveth upon the earth.” *Genesis* 1:28.

[FN84]. None of this is to say that Christianity compels this world view. The story of Noah, saving the animals with his ark, is one of the most enduring of the pre-Testament teachings. *Genesis* 6:9. The concept of stewardship, including the duty to protect living resources, is taught in Catholic, Protestant, and Jewish congregations across America. Further, Pope John Paul II has reminded Catholics of their duty to protect all of creation. Albert Gore, Jr., *Earth in the Balance: Ecology and the Human Spirit* 243, 262 (1992).

[FN85]. Geoffrey West, *Charles Darwin, A Portrait* 249-64 (1938).

[FN86]. See 16 *The New Encyclopedia Britannica Micropaedia* 978 (Encyclopedia Britannica Inc., 15th ed. 1992).

[FN87]. See generally Jerome Lawrence & Robert Lee, *Inherit the Wind* (1955).

[FN88]. Renee Askins, Executive Director of the Wolf Fund in Moose, Wyoming, testified to the House Committee on Resources in favor of a DOI plan, since enacted, to reintroduce wolves to Yellowstone National Park and central Idaho:

If I were a rancher I probably would not want wolves returned to the West. If I faced the conditions that ranchers face in the West -- falling stock prices, rising taxes, prolonged drought, and a nation that is eating less beef and wearing more synthetics -- I would not want to add wolves to my woes.... I would be afraid and I would be angry. I would want to blame something, to fight something, even kill something.

The wolf is an ideal target: it is tangible, it is blamable, and it is real. Or is it? When ranchers talk about wolves they say, “You know, it's not the wolves we're worried about, it's what the wolves represent; it's not what they'll do, it's what they mean.” Wolves mean changes. Wolves mean challenges to the old ways of doing things. Wolves mean loss of control.

Readings: *Releasing Wolves from Symbolism*, *Harper's Mag.*, Apr. 1995, at 15, 15 (quoting Renee Askins).

[FN89]. At a recent hearing on the efforts of the Wyoming Farm Bureau to enjoin restoration of the endangered gray wolf to Yellowstone Park, a spectator was quoted as observing: “ ‘Course you know it's the New York Jews that are shoving this down our throat.” Thomas McNamee, *Warring over Wolves, Defenders*, Winter 1994/1995, 15 at 17. This remarkable statement manages to combine two of the leading scapegoats in modern world history.

[FN90]. See Margaret Kriz, *The Scientist as Agent of Change*, *Nat'l J.*, Dec. 10, 1994, at 2922 (discussing research showing the harmful effects of exposure to industrial and agricultural chemicals).

[FN91]. 43 U.S.C. ss 1701-1784 (1988 & Supp. V 1993).

[FN92]. *Hard Rock Mining Laws*, 30 U.S.C. s 22 (1988); *Mineral Leasing Act of 1920*, 30 U.S.C. ss 181-287 (1988 & Supp. V 1993); *Federal Coal Leasing Amendments of 1976*, 30 U.S.C. ss 201-209 (1988); *Onshore Oil and Gas Leasing Reform Act*, 30 U.S.C. s 226 (1988 & Supp. V 1993); *Outer Continental Shelf Lands Act*, 43 U.S.C. ss 1331-1356 (1988 & Supp. V 1993).

[FN93]. 16 U.S.C. ss 1600-1687 (1988 & Supp. V 1993).

[FN94]. Compare 43 U.S.C. s 1701(a)(8) (1988) (stating that “the public lands [will] be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource and archeological values”) with 43 U.S.C. s 1701(a)(12) (1988) (stating that “the public lands [will] be managed in a manner which recognizes the Nation's need for domestic sources of minerals, food, timber, and fiber from the public lands”). As for similar ambiguities in NFMA, see *National Wildlife Fed'n v. United States Forest Serv.*, 592 F. Supp. 931, 937-38 (D. Or.), amended, 643 F. Supp. 653 (D. Or. 1984), order vacated in part, appeal dismissed, 801 F.2d 360 (9th Cir. 1986) (interpreting NFMA guidelines as permitting clearcutting).

[FN95]. 16 U.S.C. s 1604(g)(3)(B) (1988) (emphasis added).

[FN96]. Federal courts have experienced similar difficulty interpreting the plain meaning of these provisions. See *Sierra Club v. Marita*, 46 F.3d 606, 615 (7th Cir. 1995).

[FN97]. For discussions attempting to apply biodiversity in several legal contexts, see generally *Biodiversity Symposium*, 8 *Tul. Envtl. L.J.* 21 (1994).

[FN98]. Compare *Idaho Dep't of Fish & Game v. National Marine Fisheries Serv.*, 850 F. Supp. 866, 900 (D. Or. 1994) (reversing NMFS's finding of no jeopardy to endangered species under the ESA) with *The Bay's Legal Fund v. Browner*, 828 F. Supp. 102 (D. Mass. 1993) (upholding a no-jeopardy finding regarding endangered whales and turtles).

[FN99]. For one such heroic effort, see *Marsh*, *supra* note 72, at 97-99 (describing efforts to plan for multiple-species habitats along California's coast). It must be remembered, however, that these efforts are generated by ESA requirements in the first place.

[FN100]. See H.R. 925, 104th Cong., 1st Sess. (1995) (requiring payment for diminution of 20% of any portion of affected property); S. 605, 104th Cong., 1st Sess. (1995) (requiring the same, at 30%).

[FN101]. See H.R. 925, 104th Cong., 1st Sess. (1995); S. 605, 104th Cong., 1st Sess. (1995).

[FN102]. Timothy Egan, *Industries Affected by Endangered Species Act Help a Senator Rewrite Its Provisions*, *N.Y. Times*, Apr. 13, 1995, at A20. In describing his approach to ESA reform, Senator Slade Gorton (R-Wash.) stated that the Secretary of Interior should ask “ ‘is this species so important that a single person should lose their job over it?’ If the answer is no, ... little or nothing would be done to save the species.” *Id.* (quoting Sen. Gorton).

[FN103]. See H.R. 1022, 104th Cong., 1st Sess. (1995) (requiring favorable benefit-to-cost analysis of new federal listing proposals).

[FN104]. See U.S. Fish & Wildlife Serv., News Release: Administrative Changes Will Make Endangered Species Act User-Friendly and Improve Benefits to At-Risk Species (1994) (on file with author); John McQuaid, Endangered Species Act Retooled to Avoid Fights, *Times-Picayune*, June 15, 1994, at A10 (discussing reactions to administrative changes); see also Bruce Babbitt, The Endangered Species Act and “Takings”: A Call for Innovation Within the Terms of the Act, 24 *Envtl. L.* 355 (1994) (discussing ways to minimize burdens on private landowners while continuing to protect species).