

Bioregional Conservation May Mean Taking Habitat

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The forest sets the visual tone of New England. It is difficult to find a place outside of a central city where a woodlot or wooded hillside is not in view. The pine-lined lakeshore and the stone walls rambling through the woods are essential ingredients of New England's scenery and quality of life, which are in turn key attractions for the region's bustling tourist trade.¹

SYNOPSIS—Conservation's richest innovation in decades has been the conservation easement and, by most accounts, it is still growing in both prevalence and scale. Private actors have used this device to innovate around the gridlock of the public sphere, achieving broad scales with limited capital. But this turn toward private ordering to protect nature has begun revealing some of the possibilities it will foreclose over the long term. With the demand for homes and second homes in rural and "exurban" environments soaring, the price of landscape scale conservation keeps rising, even as more of what is owned is already facing grave risks from, among other threats, climate change. Furthermore, because of the scarcity of capital and the internal structure of nonprofits capable of operating at such scales, it is increasingly unlikely that they will continue purchasing in the U.S. when global biodiversity faces the risks it does abroad. My claim is that the necessity of condemning conservation easements from those who would subdivide and develop large ownerships must prevail over the political complications and costs of doing so, at least if local communities hope to preserve the biodiversity in their own backyard.

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I. INTRODUCTION

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¹ LLOYD C. IRLAND, *WILDLANDS AND WOODLOTS: THE STORY OF NEW ENGLAND'S FORESTS* 2 (1982).

Americans are converting their continent into a semi-built landscape of scattered homes, malls, recreational resorts, and the infrastructure that connects them, and doing so at an arresting rate. We face a species loss pandemic globally, but in America habitat degradation is the single worst factor.² Sprawl now is as much about explosive *exurban* growth as suburban growth, a function of socioeconomic and technologic advantages that have altered the nature of work and travel.³ Forest Service specialists predict that by 2030, another 21.7 million acres will shift in usage intensity from rural or exurban to urban, and some 22 million more will shift from rural to exurban.⁴ An environment hospitable to us, together with a few of our hyperabundant commensals, is fast becoming the most pervasive landscape in North America.⁵ Northern New England and the Adirondacks are exemplary. Investors buying timberlands to break them up have, in about a decade, come to dominate this region's land markets.⁶ Of course, no one is *for* "dumb" growth, but neither are they for radically curtailing the rights of private property

² See David S. Wilcove *et al.*, *Quantifying Threats to Imperiled Species in the United States*, 48 *BIOSCIENCE* 607 (1998). Habitat degradation, of course, is an umbrella for many different kinds of environmental change, most of which are anthropogenic in origin. "Habitat" can be defined as any physical or biological resource or condition of an area that affects the presence of a species, population, or individual. See MICHAEL L. MORRISON, *WILDLIFE RESTORATION: TECHNIQUES FOR HABITAT ANALYSIS AND ANIMAL MONITORING* 44 (2002).

³ There is evidence to conclude that some metropolitan regions have expanded to their geographic limits. See, e.g., ROBERT BRUEGMANN, *SPRAWL: A COMPACT HISTORY* 64-65 (2005) (finding that the Los Angeles basin dramatically increased in population density per square mile from 1950-2000 to become the most densely populated metro-area in the country). But to leap to the further conclusions that sprawl is a bygone phenomenon or that the environmental costs of sprawl are overstated because, for example, residential development often replaces agricultural or silvicultural uses that themselves generate environmental costs, see, e.g., *id.* at 58-73, 138-51, oversimplifies the issue. See Part III.

⁴ See Susan Stein *et al.*, *Forests on the Edge: Housing Development on America's Private Forests* 6-7 (U.S. Forest Service 2005) (definitions of urban, suburban, exurban, rural). While Stein and colleagues also predict that some agricultural land is likely to revert to forest, this is land that is also heavily fragmented and disturbed as habitat. See Part III.

⁵ See, e.g., John M Hagan *et al.*, *Changing Timberland Ownership in the Northern Forest and Implications for Biodiversity* (Manomet Ctr. for Conservation Sciences Report # MCCS-FCP 2005-1).

⁶ See Hagan *et al.*, *supra* note 5. Much of the science being done by nonprofits like the Nature Conservancy is tailored to this reality. See, e.g., CRAIG R. GROVES ET AL., *DRAFTING A CONSERVATION BLUEPRINT: A PRACTITIONER'S GUIDE TO PLANNING FOR BIODIVERSITY* (2003).

and local control producing it.⁷ Regions like this “Northern Forest,” in short, are in dire need of innovation in the institutions of conservation.

It has been said that “[l]andowners are much more open to listen if it’s a suggestion rather than a demand,”⁸ and this country’s conservationists have divided sharply over the power of that insight for years now. Command-and-control *or* market, public *or* private, and a series of other false choices have consequently dominated a field where virtually no one denies that the type of normative mechanism is critical and virtually everyone concedes that most normative mechanisms have their time and place. In this paper, I use the Northern Forest to explore this intersection of habitat, land use, and our regulatory state. In two decades, the financing of private conservation has become big business at the same time its practitioners have become ubiquitous.⁹ The Uniform Conservation Easement Act (“UCEA”), a model act proposed in 1982 by the National Conference of Commissioners on Uniform State Laws,¹⁰ is beginning to dominate the conservation landscape nationally and in this region.¹¹ By 2003, across the nation an average of about 825,000 acres *per year* was being encumbered by some form

⁷ See Part IV.

⁸ See John F. Turner & Jason C. Rylander, *The Private Lands Challenge: Integrating Biodiversity Conservation and Private Property*, in PRIVATE PROPERTY AND THE ENDANGERED SPECIES ACT 92, at 103 (Jason F. Shogren ed., 1999).

⁹ See James N. Levitt, *Financial Innovation for Conservation: An American Tradition*, in FROM WALDEN TO WALL STREET: FRONTIERS OF CONSERVATION FINANCE 1 (James N. Levitt ed., 2005); RICHARD BREWER, *CONSERVANCY: THE LAND TRUST MOVEMENT IN AMERICA* (2003).

¹⁰ See Uniform Conservation Easement Act with Prefatory Note and Comments, Approved by the American Bar Association (Jan. 26, 1982) (hereafter “UCEA”); Mary Ann King & Sally K. Fairfax, *Public Accountability and Conservation Easements: Learning from the Uniform Conservation Easement Act Debates*, 46 NAT. RES. J. 65 (2006).

¹¹ Versions of the UCEA have been enacted in twenty-four states while twenty-five others have analogous enabling legislation. See Nancy A. McLaughlin, *Rethinking the Perpetual Nature of Conservation Easements*, 29 HARV. ENVTL. L. REV. 421, 426 & n.13 (2005)

of conservation easement,¹² making it far and away the most pervasive conservation mechanism in America today.¹³ Indeed, if our land ethic ever finds Leopold's path,¹⁴ it will likely be with this vehicle.

A privatized conservationism that raises capital to buy from willing sellers is showing itself to be *the* structural development of a generation. But this strategy is beginning to reveal its own limitations, in part because its agents are in a bidding war, raising their costs at the same time they depress the conservation value of their own bargains. In the end, thus, I sketch three arguments for a targeted response: condemning title or fractions of title to land in order to protect habitat and/or what I shall call landscape *permeability*. I argue that it is a legitimate use of sovereign power and that enabling statutes ought to clarify this authority wherever necessary. I also suggest that there are ways of condemning interests in such lands that may not even amount to "takings" in the constitutional sense. In conclusion, though, I assume condemning conservation restrictions can, in some circumstances, amount to a taking. But I argue that liability in that event can be minimized or even, in some cases, eliminated. Before coming to that argument, though, I frame it in its larger context: the protection and restoration of intact landscapes and species assemblages.

¹² See Rob Aldrich, *Land Trusts Double the Number of Acres Protected*, EXCHANGE: J. LAND TRUST ALLIANCE, Winter 2005, at 10, 10. LTA's census figures composite several forms of easements, including cultural preservation restrictions and other concerns independent of biodiversity.

¹³ By 2003, the annual fee simple and easement purchases of the Conservation Fund, Nature Conservancy, Trust for Public Land, and Ducks Unlimited averaged \$266 million annually from 1991-2000. See Frank Casey, *Contours of Conservation Finance in the United States at the Turn of the Twenty-first Century*, in FROM WALDEN TO WALL STREET: FRONTIERS OF CONSERVATION FINANCE 37, 43 (James N. Levitt ed., 2005). The data also suggest that, of the \$2.7 billion total dedicated to conservation, preservation, and farmland acquisitions nationally (including federal, state and private sources), the \$898 million federal conservation contribution is falling while the \$266 million private contribution is rising (and is itself an underestimate, perhaps by a significant margin). *Id.* at 40-44.

¹⁴ See ERIC T. FREYFOGLE, *THE LAND WE SHARE: PRIVATE PROPERTY AND THE COMMON GOOD* (2003) (describing how American land use must change if Aldo Leopold's "land ethic" is to be the norm).

II. WHAT DOES BIOREGIONALISM MEAN?

Bioregionalism, though simple in concept, has thus far proven intractable operationally. “A key to making bioregionalism work is a close examination of boundaries and what they mean.”¹⁵ Most of our boundaries are completely unrelated to the earth’s “ecoregions”¹⁶ or “bioregions”—regions defined by their biota. But a close examination of legal boundaries often reveals that, though unrelated to biophysical realities, they are fixed and powerful nevertheless.¹⁷ Working to keep landscapes¹⁸ intact, in short, requires confronting our legal system’s fragmentative and commodifying tendencies and improvising the mechanisms to bridge its divides. Doing such work at a ‘bioregional’ scale entails understanding the ecological relationships binding organisms and their environments together and promoting collective self-governance motivated by that understanding. Part II unpacks this ideal.

A. Scale and Scope: The Challenges for Integrative Conservation

Late in the 1980s, the 1.8 million residents of northern New York, Vermont, northern New Hampshire, and inland Maine coalesced for a short time and came to the brink of forming a politically cohesive *bioregional* identity.¹⁹ That is, they came to view

¹⁵ Christopher McGrory Klyza, *Bioregional Possibilities in Vermont*, in *BIOREGIONALISM* at 81, 81 (Michael Vincent McGinnis ed. 1999) (hereafter Klyza, “*Bioregional Possibilities*”).

¹⁶ See ROBERT G. BAILEY, *ECOREGIONS: THE ECOSYSTEM GEOGRAPHY OF THE OCEANS AND CONTINENTS* (1998) (using climate, soil type, elevation, and ocean circulation to classify geographic ecoregions).

¹⁷ Cf. Klyza, *Bioregional Possibilities*, supra note 15, at 81 (“One of the major problems with theories calling for significant changes in the way modern societies and institutions are designed is that they are too abstract, removed from practical concerns and issues. This is true of bioregionalism.”).

¹⁸ I use “landscape” as an indexical concept, *i.e.*, a “spatially heterogeneous area used to describe features of interest (stand type, site, soil).” MORRISON, supra note 2, at 47. In this sense, it is the features of interest themselves that serve to integrate otherwise spatially fragmented lands. *Id.* at 48 (“The perception of “landscape” to a small animal . . . is likely much different than that perceived by a large one.”).

¹⁹ See Christopher McGrory Klyza, *The Northern Forest: Problems, Politics, and Alternatives*, in *THE FUTURE OF THE NORTHERN FOREST* 36, 37 (Stephen C. Trombulak & Christopher McGrory Klyza eds., 1994) (hereafter Klyza, “*Problems, Politics, and Alternatives*”).

their socioeconomic fortunes as intertwined with the region's ecology. The catalyst was a perceived threat to "traditional patterns of land ownership and uses"²⁰ in the sweeping 26 million acre (mostly montane) region comprising the "Northern Forest."²¹ Yet, as quickly became evident, the content of those traditions is contentious. The threat provoked a pair of blue ribbon study groups, public agitation, and a multitude of proposals for legal reform. It even built momentum to create a massive national park in the region that still ripples today.²² In the end, though, what it produced were recriminations on why nothing concrete was actually done. No public structure of any kind collectivizes the region or its ecosystems in any way today.²³ The same localism New England unleashed on the nation²⁴—a faith in local control that has dulled and blunted the collection of federal tools for protecting nature in ways I have detailed elsewhere²⁵—stunted the Northern Forest agenda, too. Consequently, the threats the region's citizens perceived then remain perceptible today. By the end of the 1990s, the

²⁰ See NORTHERN FOREST LANDS COUNCIL, FINDING COMMON GROUND: CONSERVING THE NORTHERN FOREST 1 (1994) (hereinafter "NFLC REPORT"); see also STEPHEN C. HARPER ET AL., THE NORTHERN FOREST LANDS STUDY OF NEW ENGLAND AND NEW YORK (1990). Fifty eight percent of the study area is in Maine. *Id.* at 20.

²¹ The Northern Forest Lands Council ("NFLC") was as much a construction of the socioeconomic commonalities joining inland Maine, New Hampshire, northern Vermont and New York as it was any particular ecological association. See NFLC REPORT, *supra* note 20 at 2.

²² See JONATHAN S. ADAMS, THE FUTURE OF THE WILD: RADICAL CONSERVATION FOR A CROWDED WORLD 44 (2006) (describing the movement for Maine North Woods National Park still being held together by an upstart nonprofit, RESTORE—The North Woods).

²³ See, e.g., Stephen C. Trombulak, *The Northern Forest: Conservation Biology, Public Policy, and a Failure of Regional Planning*, 11 ENDANGERED SPECIES UPDATE 7 (1994).

²⁴ See, e.g., RICHARD C. JUDD, COMMON LANDS, COMMON PEOPLE: THE ORIGINS OF CONSERVATION IN NORTHERN NEW ENGLAND (1997); STEPHEN INNES, CREATING THE COMMONWEALTH: THE ECONOMIC CULTURE OF PURITAN NEW ENGLAND (1995).

²⁵ See Jamison E. Colburn, *Localism's Ecology: Protecting and Restoring Habitat in the Suburban Nation*, 33 ECOLOGY L.Q. 945 (2006) (hereafter Colburn, "Localism's Ecology"); Jamison E. Colburn, *The Indignity of Federal Wildlife Habitat Law*, 57 ALABAMA L. REV. 417 (2005) (hereafter Colburn, "Indignity"); Jamison E. Colburn, *Habitat and Humanity: Public Lands Law in the Age of Ecology*, 39 ARIZ. ST. L.J. (forthcoming 2007).

region's 'Northern Forest Initiative' had cratered, which is precisely what every ecosystem-wide management initiative to date has done.²⁶

Biodiversity professionals have come to this (painful) realization in efforts to achieve integrated, bioregional responses to environmental degradation in places as diverse as Greater Yellowstone,²⁷ the Northern Cascades,²⁸ the Great Lakes,²⁹ the interior Columbia River basin,³⁰ the Chesapeake Bay,³¹ and elsewhere. In the abstract, it is rational to focus finite management resources on whole species assemblages, whole watersheds—whole natural systems. Conservation biology speaks of “representation,” of saving some of everything.³² Such insight has thus far been a chimera, though.³³

Bounding any landscape or natural system and learning enough about it to “manage” it

²⁶ The last blue ribbon panel disbanded and issued its 100+ page report in 1994. See NFLC REPORT, supra note 20. Just a few years later it was evident that little of the panel's prescription would be implemented. A “report card” was commissioned by the North East State Foresters Association in 2000, see Robert W. Malmshiemer *et al.*, *The Implementation of the Northern Forest Land Council's Recommendations: An Analysis Six Years Later* (2000), which found that the four states had failed to act on many of the most important recommendations of the Council and that, though they had refined their land acquisition programs as suggested, funding levels were far below what would be needed for progress at a regional scale. *Id.* at 26-27. Public coordination at such scales has never been sustained, though.

²⁷ See Robert B. Keiter, *Taking Account of the Ecosystem on the Public Domain: Law and Ecology in the Greater Yellowstone Region*, 60 COLO. L. REV. 923 (1989). Greater Yellowstone is perhaps the best-known example of failed attempts to dictate “ecosystem management” from the top down. See ADAMS, supra note 22, at 177-206.

²⁸ See Barry R. Noon and Jennifer A. Blakesley, *Conservation of the Northern Spotted Owl Under the Northwest Forest Plan*, 20 CONSERV. BIO. 288 (2005).

²⁹ See, e.g., Jon Cannon, *Choices and Institutions in Watershed Management*, 25 WM. & MARY ENVTL. L. & POL'Y REV. 379 (2000).

³⁰ See, e.g., Michael C. Blumm, *Practiced At the Art of Deception: Salmon Recovery Under the Endangered Species Act*, 36 ENVTL. L. 709 (2006).

³¹ See HOWARD R. ERNST, *CHESAPEAKE BAY BLUES: SCIENCE, POLITICS, AND THE STRUGGLE TO SAVE THE BAY* (2003).

³² On the shifts in strategy being provoked by this philosophy, see ADAMS, supra note 22.

³³ See ROBERT B. KEITER, *KEEPING FAITH WITH NATURE: ECOSYSTEMS, DEMOCRACY, AND AMERICA'S PUBLIC LANDS* (2003). As Professor Doremus has observed,

[I]f we move away from the focal points of the [Endangered Species Act] to protection of ecosystems or biodiversity, then we risk sinking in a quagmire of ambiguity. We struggle to define ecosystems and biodiversity, or thresholds of unacceptable harm to either, with sufficient precision to constrain an overzealous agency. We encounter similar difficulties if we stick with species but seek to intervene before their populations are drastically depleted, or if we choose locations as our focus but try to move beyond the designation of a handful of special locations as nature preserves.”

Holly Doremus, *Biodiversity and the Challenge of Saving the Ordinary*, 38 IDAHO L. REV. 325, 347 (2002).

rationality turns out to be (1) practically impossible given the laws of ecology,³⁴ and (2) politically naïve given the geography of popular sovereignty under our Constitution.³⁵

The changing land use patterns in the Northern Forest are often summed up in a word—sprawl—but as to prescribing alternatives, public action usually stalls.³⁶

Deforestation has been a constant of human history³⁷ and the struggle to define “sustainability” involves those far beyond the borders of even the largest forested regions.³⁸ Moreover, this region is not facing deforestation *per se*. It is facing something much more incipient: exurban sprawl and all of its consequent biological disturbances. Indeed, the steady pace at which this region is being carved into the semi-built landscape of exurban America—a landscape of roads, trails, transmission lines, cell towers, scattered homes and retail, ski slopes, golf courses, *etc.*—is rivaled by only one other influence in its potency: climate change.³⁹ With the vast majority of the land privately owned and regional property values rising steadily as affluent Americans seek out their

³⁴ See Marco A. Janssen, *A Future of Surprises*, in PANARCHY: UNDERSTANDING TRANSFORMATION IN HUMAN AND NATURAL SYSTEMS 241 (Lance H. Gunderson & C.S. Holling eds., 2002) (hereinafter “PANARCHY”); see also Robert B. Keiter, *Ecological Concepts, Legal Standards and Public Land Law: An Analysis and Assessment*, 44 NAT. RES. J. 943 (2004).

³⁵ See Colburn, *Localism’s Ecology*, supra note 25; see also Jamison E. Colburn, *Waters of the United States: Theory, Practice and Integrity at the Supreme Court*, 34 FLA. ST. U.L. REV. (forthcoming 2007).

³⁶ Localist opposition to centralized regulation of land use in the region circumscribes the range of tools available to protect the natural resources of the region. See King & Fairfax, supra note 10, at 67 (“[T]he private nature of [conservation easements] has been a major part of their charm; they have been embraced as a private, voluntary, or win-win alternative to regulation that protects resources while compensating affected landowners.”); see infra notes 140-158 and accompanying text.

³⁷ See MICHAEL WILLIAMS, *DEFORESTING THE EARTH: FROM PREHISTORY TO GLOBAL CRISIS* (2006).

³⁸ See Errol Meidinger, *The Administrative Law of Global Private-Public Regulation: the Case of Forestry*, 17 EUR. J. INT. L. 47, 48-53 (2006). For a trenchant argument that the concept itself is broken, see Julianne Lutz Newton & Eric T. Freyfogle, *Sustainability: A Dissent*, 19 CONSERV. BIO. 23 (2005).

³⁹ On the threat habitat alterations of the kind represent, see Wilcove *et al.*, supra note 2 (finding that, empirically, habitat degradation is single greatest threat to biodiversity in North America); REED F. NOSS & ALLEN Y. COOPERRIDER, *SAVING NATURE’S LEGACY: PROTECTING AND RESTORING BIODIVERSITY* 30-66 (1994) (same). Estimates vary and rates change annually depending on market fluctuations, but one recent estimate by Maine’s Forest Service concluded that between 30,000 and 45,000 acres of Maine timberlands are now “liquidated”—clear-cut and subdivided—annually. Charles R. Scott, *Liquidation Timber Harvesting in Maine Potential Policy Approaches*, 29 HARV. ENVTL. L. REV. 251, 255 (2005). In the rest of the region, the numbers are probably higher (especially in Vermont), although one enormous development proposal in Maine is currently pending and particularly poignant. See infra notes 226-251 and accompanying text.

place “away from it all,” the region’s future as a land market is threatening to undo what it has become over the last century: the greatest expanse of continuous habitat east of the Mississippi.

The states and federal government seem paralyzed, leaving the Northern Forest to suffer what Michael Heller has called a *tragedy of the anticommons*. If the commons is the opposite of private property, *i.e.*, private property is the division and distribution of what are otherwise rights to use or exclude held in common,⁴⁰ then it is possible to have too many owners whose property is too small and/or too divided to manage their interrelated resources efficiently, making failures to bargain out optimal arrangements likely.⁴¹ There are perhaps several hundred thousand landowners in this region.⁴² And consider that, as of 1990, more than 70 million people lived within a day’s drive of the region.⁴³ Even for those whose land is not for sale, they generally have little inclination to back laws flatly prohibiting the profitable subdivision of land.⁴⁴ A long tradition of property rights and localism stalls virtually all such approaches.⁴⁵ A more bottom-up and iterative strategy is something else altogether, though, and buying from “willing sellers” ad hoc seems to be that strategy.

⁴⁰ See, e.g., Carol M. Rose, *Possession as the Origin of Property*, 52 U. CHI. L. REV. 73, 76 (1985) (using the rule of capture to make this point about property in wildlife).

⁴¹ See Michael A. Heller, *The Tragedy of the Anticommons: Property in the Transition from Marx to Markets*, 111 HARV. L. REV. 621 (1998); Michael A. Heller, *The Boundaries of Private Property*, 108 YALE L.J. 1163 (1999).

⁴² See Klyza, *Problems, Politics, and Alternatives*, supra note 19, at 36-37 (SWT data).

⁴³ NFLC REPORT, supra note 20, at 2.

⁴⁴ See generally WILLIAM A. FISCHER, *THE HOMEVOTER HYPOTHESIS* (2001) (contending that local voters vote in ways that support the value of their single largest investment, their homes). This is *not* to say, however, that such owners are generally predisposed against collective or cooperative management or that they lack incentives to control subdivision and sale. See Andrew O. Finley *et al.*, *Interest in Cross-Boundary Cooperation: Identification of Distinct Types of Private Forest Owners*, 52 FOREST SCI. 10 (2006).

⁴⁵ See generally JUDD, supra note 24.

Thus, while the “traditional patterns of land ownership and uses” may *be* changing,⁴⁶ the public is unsure it can or will do anything about it. Ecosystem-level approaches, here as elsewhere, have been too weighed down by their own mass. The immensity, technicality, and cost just of *describing*—of understanding—large natural systems put almost beyond reach any regulatory structure that is “ecoregional” or “bioregional” in scale and scope. Working at such scales requires “[a]n approach to maintaining or restoring the composition, structure, and function of natural and modified ecosystems for the goal of long-term ecological and human sustainability.”⁴⁷ And even the courts now seem to recognize that that demands “adaptive management” wherein “policy choices are made incrementally. As each choice is made, data on the effects of these choices are collected and analyzed in order to assess whether to retain, reverse, or otherwise alter the policy choice.”⁴⁸ Because means and ends are, thus, reciprocally shaped, protection of the natural and human systems’ *resilience*—their capacity to absorb disturbances without changing in fundamental ways—is about the only incorrigible goal.⁴⁹ Not surprisingly, the record of attempts to build such models (assuming they are even legal) is a record of institutional failure.⁵⁰ So the dilemma is this: what is the alternative?

⁴⁶ See generally Hagan *et al.*, *supra* note 5; Malmshemer *et al.*, *supra* note 26; Scott, *supra* note 39.

⁴⁷ Gary K. Meffe *et al.*, *Ecosystem Approaches to Conservation*, in PRINCIPLES OF CONSERVATION BIOLOGY 467, 468 (Martha J. Groom *et al.* eds., 3d. ed. 2005).

⁴⁸ *In re Operation of the Missouri River System Litigation*, 363 F. Supp.2d 1145, 1163 (D. Minn. 2004).

⁴⁹ See C.S. Holling and Lance H. Gunderson, *Resilience and Adaptive Cycles*, in PANARCHY, *supra* note 34, at 54.

⁵⁰ See Stephen R. Carpenter *et al.*, *Collapse, Learning, and Renewal*, in PANARCHY, *supra* note 34, at 173. Several of the major federal statutes are structurally incongruent with that kind of adaptive management. See, e.g., Julie Thrower, *Adaptive Management and NEPA: How A Nonequilibrium View of Ecosystems Mandates Flexible Regulation*, 33 ECOLOGY L.Q. 871 (2006). As to the possibilities for adaptive management by administrative agencies generally, see J.B. Ruhl, *Regulation By Adaptive Management—Is It Possible?*, 7 MINN. J.L., SCI. & TECH. 21 (2005).

The Northern Forest epitomizes bioregionalism's dilemma. Few species inhabit the whole region and, of those that do, none are managed federally. There are almost a dozen major watersheds.⁵¹ Combined, the states possess twice as much land as the federal government.⁵² Yet, all combined, public lands are still less than a sixth of the region and are dispersed.⁵³ Forest types and species mixes are highly diverse, as are the kinds of ownership and the predominant local land uses. Lastly, there are very few fragments of "natural" forest remaining,⁵⁴ whether to serve as anchors of conservation reserves or as reference landscapes. The result has been regionally fractious, often incoherent public policies. And, despite the obvious linkages between these failures in governance and the trappings of private property and local autonomy,⁵⁵ few seem to share Thoreau's deep suspicions of owning discrete pieces of nature.⁵⁶

B. The Unnatural History of the Northern Forest

Upland Maine and New Hampshire, northern Vermont, and parts of western Massachusetts comprise a discrete "bioregion." Along with the Adirondacks, these lands

⁵¹ See Stephen Trombulak, *A Natural History of the Northern Forest*, in *THE FUTURE OF THE NORTHERN FOREST* 11, 17 (Christopher McGrory Klyza & Stephen C. Trombulak eds. 1994) ("Also present are 68,500 miles of rivers and streams, over 1 million acres of lakes, and over 2.5 million acres of wetlands . . .").

⁵² Lloyd C. Irland, *U.S. Forest Ownership: Historic and Global Perspective*, 14 *MAINE POL'Y REV* 27, 28 (2005).

⁵³ All told, public lands in the region make up less than 16% of the land. See Klyza, *Problems, Politics, and Alternatives*, supra note 19, at 84-85.

⁵⁴ Though debatable, it has been estimated that 90-95% of the region has been logged/cleared at some point in the last four centuries. See Glenn Motzkin *et al.*, *Forest Landscape Patterns, Structure, and Composition*, in *FORESTS IN TIME: THE ENVIRONMENTAL CONSEQUENCES OF 1,000 YEARS OF CHANGE IN NEW ENGLAND*, at 171 (David R. Foster & John D. Aber eds., 2004) (hereinafter "FORESTS IN TIME").

⁵⁵ Cf. Heller, supra note 41, at 1165 ("The danger with fragmentation is that it may operate as a one-way ratchet: Because of high transaction costs, strategic behaviors, and cognitive biases, people may find it easier to divide property than to recombine it.").

⁵⁶ On Thoreau's misgivings, see DAVID R. FOSTER, *THOREAU'S COUNTRY: JOURNEY THROUGH A TRANSFORMED LANDSCAPE* 86 (1999) (hereafter "THOREAU'S COUNTRY") ("[O]wnership was a term that Thoreau often used contemptuously because he did not regard legal title as conveying any true rights to nature."). On the property rights uprising that took public acquisitions off the table in the NFLC process, see DAVID DOBBS & RICHARD OBER, *THE NORTHERN FOREST* 267-98 (1995).

constitute the southern edge of an immense boreal forest that sweeps the northern half of North America.⁵⁷ Most of this Northern Forest is, indeed, an *ecotone*—a natural boundary—that remains quite “rural” compared to what lies to the south and west.⁵⁸ Even as Thoreau retreated into this forest to escape the dehumanizing urbanity of 1840s Concord and become the Puritan congregation of one in *Walden*, a portrayal of it as “wild” was ironic at most.⁵⁹ And yet his communion with it was transcendental. It was still a medium for punctuating his “disdain for the common life.”⁶⁰ Indeed, Thoreau’s poetry about his *unnatural* forest fueled a century of American romance with nature and efforts to commune with it in some pre-modern, sylvan state.⁶¹

Of all North America’s biomes, the forests in this region have probably been disturbed by the modern economy as much or more than any other. From a massive trade and export of fish and wildlife,⁶² to extensive logging and forest conversion,⁶³ to the release and spread of countless invasive species,⁶⁴ what there is in this region today that should be “preserved” is a mystery to citizen and ecologist alike. But consider what has

⁵⁷ See E.C. PIELOU, *THE WORLD OF NORTHERN EVERGREENS* 1-7 (1988); RICHARD M. DEGRAAF & MARIKO YAMASAKI, *NEW ENGLAND WILDLIFE: HABITAT, NATURAL HISTORY, AND DISTRIBUTION* 5 (2001).

⁵⁸ More than a quarter of the U.S. population bounds this rural and exurban expanse to the south and immediate west. 2000 CENSUS TRACT. The Nature Conservancy’s “ecoregion” studies categorize most of the Northern Forest together, see GROVES ET AL., *supra* note 6, at 213, even though it hosts more than a dozen forest species types. See DEGRAAF & YAMASAKI, *supra* note 57, at 384-92.

⁵⁹ LEO MARX, *THE MACHINE IN THE GARDEN: TECHNOLOGY AND THE PASTORAL IDEAL IN AMERICA* 242-65 (1964); WILLIAM R. JORDAN, III, *THE SUNFLOWER FOREST: ECOLOGICAL RESTORATION AND THE NEW COMMUNION WITH NATURE* 155 (2003) (“[I]n 1844, barely a year before Thoreau took up residence in Walden Woods, the Fitchburg Railroad completed track that passed just a few rods from the pond, and during his two years there loggers cut a stand of timber on the shore of the pond across from his cabin.”).

⁶⁰ MARX, *supra* note 59, at 264; see also JORDAN, *supra* note 59, at 44 (“Our canonic environmental literature, from Henry David Thoreau and John Muir on, depicts withdrawal from the human community as the essential first step toward entry into the biotic community.”).

⁶¹ See DANIEL B. BOTKIN, *NO MAN’S GARDEN: THOREAU AND A NEW VISION FOR CIVILIZATION AND NATURE* (2001); William Cronon, *The Trouble with Wilderness, Or Getting Back to the Wrong Nature*, in *UNCOMMON GROUND: TOWARD REINVENTING NATURE* 69 (William Cronon ed., 1995).

⁶² See *infra* notes 65-68 and accompanying text.

⁶³ See *infra* notes 69-72 and accompanying text.

⁶⁴ See *infra* notes 82-86 and accompanying text.

been wasted. The first official bounty on predators here was early in the seventeenth century.⁶⁵ The beaver, a species of extraordinary ecological impact, was trapped throughout the region to extirpation, in parts as early as the eighteenth century.⁶⁶ With the elimination of beaver and most ungulates (caribou, deer, and moose), the principal prey of the gray wolf was gone, hastening its extirpation⁶⁷ along with most other predators.⁶⁸ By 1650, sawmills were common,⁶⁹ the average home was being heated with 30-40 cords of wood a year,⁷⁰ and a march toward deforestation (by the turn of

⁶⁵ See PETER MATTHIESSEN, *WILDLIFE IN AMERICA* 57 (rev'd ed. 1987) (noting that the Massachusetts Bay Company established a bounty on wolves in 1630). In 1657, New Haven established a five pound bounty on a "great black wolfe of a more than ordinarie bigness, which is like to be more fierce and bould than the rest, and so occasion the more hurt." WILLIAM CRONON, *CHANGES IN THE LAND: INDIANS, COLONISTS, AND THE ECOLOGY OF NEW ENGLAND* 133 (20th Anniversary edition, 2003) (1983).

⁶⁶ The beaver was probably functionally extinct from most of Massachusetts by the time of the Revolution. Stephen Trombulak & Kimberly Royar, *Restoring the Wild: Species Recovery and Reintroduction*, in *WILDERNESS COMES HOME: REWILDING THE NORTHEAST* 157, at 161-62 (Christopher McGrory Klyza ed., 2001) (hereafter "WILDERNESS COMES HOME"). "In 1743, just one port in Rochelle, France, received the pelts of 127,080 beaver, 30,325 martens, 1,267 wolves, 12,428 otters and fishers, 110,000 raccoons, and 16,512 bears. These pelts were taken exclusively from the northeast United States and southeastern Canada." Alicia Daniel & Thor Hansen, *Remote, Rocky, Barren, Bushy Wild-woody Wilderness*, in *WILDERNESS COMES HOME*, supra, 27, at 40. Hudson's Bay Company trappers began to take bobcat and lynx in about 1700 and by the close of the century had taken some 750,000 of them. KEVIN HANSEN, *BOBCAT: MASTER OF SURVIVAL* 105 (2007). Lynx and bobcat mortality from trapping in the nineteenth century is thought to be around 2.6 million. *Id.* at 108.

⁶⁷ L. DAVID MECH, *THE WOLF: THE ECOLOGY AND BEHAVIOR OF AN ENDANGERED SPECIES* 325 (9th ed. 1994).

⁶⁸ The "predators" of the region are its carnivores, past and present: gray wolf, coyote, red and gray foxes, black bear, raccoon, martens and fishers, weasels and mink, river otter, striped skunk, mountain lion, bobcat, and lynx. See JOHN O. WHITAKER, JR. AND WILLIAM J. HAMILTON, JR., *MAMMALS OF THE EASTERN UNITED STATES* 393-497 (2d ed. 1998); DEGRAAF & YAMASAKI, supra note 57, at 340-57. On the importance of predators to resilience in a species assemblage, see John Terborgh *et al.*, *The Role of Top Carnivores in Regulating Terrestrial Ecosystems*, in *CONTINENTAL CONSERVATION: SCIENTIFIC FOUNDATIONS OF REGIONAL RESERVE NETWORKS* 39, 44-58 (Michael E. Soule & John Terborgh eds., 1999) (hereinafter "CONTINENTAL CONSERVATION"). The term easily encompasses birds of prey, too, but federal migratory birds (which include most birds of prey at risk in the region) are their own legal and management category. See MICHAEL J. BEAN & MELANIE ROWLAND, *THE EVOLUTION OF NATIONAL WILDLIFE LAW* 22 (2d ed. 1997).

⁶⁹ See Austin F. Hawes, *New England Forests in Retrospect*, 21 *J. FORESTRY* 209, 216 (1923).

⁷⁰ CRONON, supra note 65, at 21, 117-21; see generally David R. Foster & John D. Aber, *Background and Framework for Long-term Ecological Research*, in *FORESTS IN TIME*, supra note 54, at 4.

twentieth century) was under way.⁷¹ By 1850, farms were everywhere and creating all those stone walls Irland mentions in the epigraph.⁷²

Economically and culturally, this region, like others, evolved from a focus on a few readily extractable commodities like pelts and saw logs in the seventeenth century,⁷³ to the rural farming of pioneer communities in the eighteenth and nineteenth centuries,⁷⁴ to a pulp and paper industry of the late nineteenth and early twentieth centuries,⁷⁵ to now: the vacationing, recreating user-residents of the twenty-first century seeking their piece of the “wild.”⁷⁶ The latest threat of “liquidation” timber harvesting and subdivision for sale of house lots is more evolution than revolution.⁷⁷ With each of these economic shifts, the forest changed in ways long-term ecological research is only beginning to document and understand.⁷⁸ In every dimension, but especially in its species composition, the region is what ecologists call a “disturbed environment.”⁷⁹ Of course, human disturbance is not necessarily degradation in the strictest sense. For example, the region is apparently being enhanced as habitat for at least some species like the coyote, bobcat, and raccoon.⁸⁰ The concept of human disturbance, thus, either must accommodate some dissonance or be

⁷¹ Hawes, *supra* note 69, at 214-16.

⁷² See THOREAU'S COUNTRY, *supra* note 56, at 60-71.

⁷³ See generally CHARLES F. CARROLL, THE TIMBER ECONOMY OF PURITAN NEW ENGLAND (1973).

⁷⁴ See generally JUDD, *supra* note 24.

⁷⁵ See Thomas Carr, *The Northern Forest Economy*, in THE FUTURE OF THE NORTHERN FOREST 65-67 (Christopher McGrory Klyza & Stephen C. Trombulak eds. 1994). The pulp and paper industry continued in Maine to the present day. See IRLAND, *supra* note 1, at 151-58.

⁷⁶ Carr, *supra* note 75, at 52, 62-65. See, e.g., Mike Grudowski, *Location is Everything: Best Outside Towns 2006*, OUTSIDE MAGAZINE 63 (Aug. 2006).

⁷⁷ See Bill McKibben, *Epilogue*, in WILDERNESS COMES HOME, *supra* note 66, at 275. While fuel still accounts for over half of all the wood extracted from forests globally (an estimated 1.2 billion m³ by 2010), WILLIAMS, *supra* note 37, at 465, most of U.S. demand—the world's largest consumer of forest products—is for sawlogs, veneers, and other non-fuel products. *Id.* Regionally, sugarbushes, fire woodlots, and other micro-economic uses are still common in the region. McKibben, *supra*, at 276-78.

⁷⁸ See D. Bernardos *et al.*, *Wildlife Dynamics in the Changing New England Landscape*, in FORESTS IN TIME, *supra* note 54, at 132.

⁷⁹ See Bernardos *et al.*, *supra* note 78.

⁸⁰ GERRY PARKER, EASTERN COYOTE: THE STORY OF ITS SUCCESS 24-32 (1995).

subordinated within some larger, normative vision of “nature” and humanity’s relationship to it. Section II.C describes and situates this socio-ecological nexus and where that vision is pointing.

C. Four Centuries to the Dawn of Restoration Ecology

Our culture has accelerated the process Thoreau chronicled. For example, spruce, fir, hemlock, and northern hardwoods like maple, birch, oak, and beech species structure and delineate the Northern Forest today.⁸¹ But that may not be for long. That tree species mix is in flux for a variety of reasons, as it was even before English settlement.⁸² A menu of exotic insects and diseases has been released into this forest.⁸³ The most recent example, the hemlock woolly adelgid (“HWA”), an aphid-like insect inadvertently introduced via nursery stock, is eliminating a dominant tree species from the southern

⁸¹ DEGRAAF & YAMASAKI, *supra* note 57, at 5. Paleocological pollen studies indicate that tundra vegetation was replaced by boreal spruce forest and then by species associated with more temperate climates, including pine, oak, hemlock, and beech, beginning about 9,000 years ago. D. Foster *et al.*, *The Environmental and Human History of New England*, in *FORESTS IN TIME*, *supra* note 78, at 44. But, “[o]ver the past 1,500 to 2,000 years, climate cooling across the Northeast has initiated significant changes in vegetation. A reduction in the latitudinal and elevation range of some trees was accompanied by a regional increase in spruce, presumably resulting from the expansion of populations that had persisted in local sites like wetlands.” *Id.* at 45. Fire and storm disturbances are relatively rare occurrences regionally, although hurricane winds (of which there have been about 8 of significance since 1620 and especially from a 1938 hurricane that did extensive damage) have left locally significant windthrows and their associated effects. *Id.* at 48-59. Lastly, Native American tribes cleared land for subsistence agriculture and are believed to have used fire as a land-clearing technique for hunting as well. CRONON, *supra* note 65, at 50-70.

⁸² At the end of the last glacial period about 12,000 years ago, the climate and soils of New England cooperated to produce a succession of spruce, fir, pine, and finally mixed hardwood forests throughout the region, *see* D. Foster *et al.*, *supra* note 81, at 43, and an abundance of vernal pool complexes. ELIZABETH A. COLBURN, *VERNAL POOLS: NATURAL HISTORY AND CONSERVATION* 33-50 (2004). Even prior to European contact, Native Americans’ use of fire to manage forests for hunting and agriculture changed the canopy and age structure of the forest significantly (although most burning was done in southern and coastal New England). *See* Hawes, *supra* note 69, at 212-15.

⁸³ Foster & Aber, *supra* note 70, at 10 (“A series of introduced insects and diseases—chestnut blight, Dutch elm disease, gypsy moth, beech bark disease, and hemlock woolly adelgid—has selectively weakened, defoliated, or decimated major tree species across the region.”).

edges of the forest.⁸⁴ Before HWA, the spruce budworm was the attacker and, of the spruce the pest spared, “salvage” logging usually found.⁸⁵

Of course, what climate change will do to this forest is an even bigger question. HWA, for example, may spread substantially in a warming.⁸⁶ But it is anyone’s guess what else may result. As the mix of tree species changes, the forest structure changes, food supply changes, and significant, unpredictable alterations of the whole environment—cascading effects throughout the whole trophic web—can result. Such abrupt shifts almost always reduce the resilience of the system.⁸⁷ Researchers have just begun to document such biotic responses to global warming, but the evidence gathered to date suggests major phenological adaptations like range shifts poleward and upward.⁸⁸ Lacking any potential for such adaptations—lacking the necessary connectivity between their extant habitat patches—some species are destined for extinction.⁸⁹

⁸⁴ HWA “poses an immediate threat to eastern hemlock (*Tsuga canadensis*) in the eastern US.” Morgan W. Tingely *et al.*, *Avian Response to Removal of a Forest Dominant: Consequences of Hemlock Woolly Adelgid Infestations*, 29 J. OF BIOGEOGRAPHY 1505, 1506 (2002). Like many such threats before it, the cultural affinity for commodities like exotic plantings is the most obvious cause—having incentivized nursery practices that indirectly introduced this pest. As it moves slowly northward through the forests of New England and the Adirondacks (it was first detected in coastal Connecticut in 1985), HWA sometimes completely eliminates this conifer species, allowing the succession of various hardwood species. *Id.* Because hemlock creates a naturally diverse canopy structure, this is projected to lead to a more homogenized forest with potentially harmful effects on avian diversity in the process. *Id.* at 1511-13.

⁸⁵ *See* IRLAND, *supra* note 1, at 42-47.

⁸⁶ HWA, for the time being, is limited by colder temperatures. Tingely *et al.*, *supra* note 84, at 1506. HWA is, of course, only one species that may change its distribution or behavior in an altered climate. *See* Terry L. Root & Lesley Hughes, *Present and Future Phenological Changes in Wild Plants and Animals*, in CLIMATE CHANGE AND BIODIVERSITY 61 (Thomas Lovejoy & Lee Hannah eds., 2005).

⁸⁷ *See* Benjamin E. Wolfe & John N. Klironomos, *Breaking New Ground: Soil Communities and Exotic Plant Invasions*, 55 BIOSCIENCE 477 (2005).

⁸⁸ *See, e.g.*, Camille Parmesan, *Ecological and Evolutionary Responses to Recent Climate Change*, 37 ANN. REV. ECOL. EVOL. SYST. 637 (2006); Camille Parmesan, *Biotic Response: Range and Abundance Changes*, in CLIMATE CHANGE AND BIODIVERSITY, *supra* note 86, at 41.

⁸⁹ *See, e.g.*, U.S. Fish and Wildlife Service, Proposed Rule to List the Polar Bear (*Ursus maritimus*) as Threatened Throughout Its Range, 72 Fed. Reg. 1064 (2007).

Our culture and economy, in short, have defined the Northern Forest in virtually every way.⁹⁰ Its unnatural history of disturbance is deeper than a record of overexploitation or unleashed pests and disease: it defines a totally uncertain—perhaps grim, perhaps hopeful—future. For, the upshot of the region’s collapsing timber and other commodity markets has been its enhancement as a ‘wilderness’ destination.⁹¹ The waves of bungalow-blight flooding the forests of northern New England and the Adirondacks, indeed, were at least partly the cause of the Northern Forest initiatives and reform proposals mentioned.⁹² Thus, the sharpest point of this history is that after all the clearing, cutting, and killing had receded, the region’s value *as a forest* began regenerating.⁹³ By the end of the twentieth century, trees were as abundant as they had been in the seventeenth century.⁹⁴ Years of genetic research had opened up the possibility of restoring one of the iconic tree species long lost to an introduced disease.⁹⁵

⁹⁰ Modern markets, in the sense of an exchange- and commodity-based system of extracted goods and services that values land as a resource to be acquired, exploited, and sold, have existed in New England for almost four centuries. *See generally* CRONON, *supra* note 65. Though no crisp line separates this economy from its feudal predecessor, its conceptualization and politicization coincides strikingly well with English settlement of the New World. *See* ALBERT O. HIRSCHMAN, *THE PASSIONS AND THE INTERESTS: POLITICAL ARGUMENTS FOR CAPITALISM BEFORE ITS TRIUMPH* (1977).

⁹¹ As national and global forest-product markets grew more integrated in the post-war era, the commercial forests of New England—and the rural economies dependent upon them—suffered. *See generally* DOBBS & OBER, *supra* note 56. With prices depressed by competition, the incentives timber owners had to cut receded, although this also provided an incentive to such owners to subdivide their lands for sale/development. *See Carr, supra* note 75, at 53, 65-67.

⁹² The subdivision of large ownerships (primarily from the holdings of timber and paper companies) was of primary concern to the Northern Forest Lands Council. *See NFLC REPORT, supra* note 20, at A-17 (Appendix E). “During the 1980-91 period, at least 203,000 acres of land across the [NFLC study] region were parcelized in connection with the sale of large tracts of forest land (over 500 acres). This represents approximately 1% of the 26 million acre Northern Forest area and approximately 4% of the 5.5 million acres of these large ownerships which changed hands during the period.” *Id.* at A-18.

⁹³ *Compare* D. Foster *et al.*, *supra* note 81, at 74 (“Currently, forests cover from 60 percent to more than 90 percent of the New England upland, making it one of the most heavily forested regions in the United States.”), with Jane Braxton Little, *Timberlands Up For Grabs*, *HIGH COUNTRY NEWS* 9 (Jan. 23, 2006) (describing massive subdivision and sales and the consequent skyrocketing prices for timberlands throughout the country).

⁹⁴ *See generally* THOREAU’S COUNTRY, *supra* note 56.

⁹⁵ *See* <http://www.esf.edu/ResOrg/RooseveltWildlife/Research/AmericanChestnut/AChestnut.htm>.

Wildlife restoration had become a mainstream pastime,⁹⁶ wildlife viewing and other forms of wildlife-dependent recreation had become an economic engine.⁹⁷

Of course, trees alone do not make a forest: *ecological restoration* is a long-term prospect at best⁹⁸ and its challenges in this disturbed environment only begin with vegetation.⁹⁹ To recover what has been wasted, a regionally coordinated approach is necessary. The American dream of a home “away from it all” driving the region’s land markets (and thus, to a significant degree, its governance¹⁰⁰) is also potentially the most powerful catalyst for that approach. For, with this manifestation of wealth causing the development and fragmentation of nature comes the provocation of *conservative* reactions and it is the dialectic between those two that this study’s proposals aim to shape.¹⁰¹ The people of the region are accustomed to a rural lifestyle, not condos and ski resorts on every slope.¹⁰² And the people buying the condos are buying them to be away

⁹⁶ See PETER FRIEDERICI, *NATURE’S RESTORATION: PEOPLE AND PLACES ON THE FRONT LINES OF CONSERVATION* (2006).

⁹⁷ FRIEDERICI, *supra* note 96, at 20-35.

⁹⁸ Cf. JORDAN, *supra* note 59, at 28-53 (linking this aspect of restoration to the achievement of community and the reciprocal bonding necessary to do so).

⁹⁹ Species diversity, abundance, and resilience remain seriously depressed throughout the region—and that is probably the sharpest point to any ‘natural history’ of North America. It is important to note how few species are *provably* extinct. The passenger pigeon, for example, is known to have gone globally extinct. But many more species have been confined to mere fractions of their historic range or abundance and it is this problem U.S. wildlife managers must address. See *generally* MORRISON, *supra* note 2.

¹⁰⁰ Three of the four Northern Forest states have had their own specific subdivision control laws for a generation or more. Maine’s Land Use Regulation Commission and New York’s Adirondack Park Agency have each acted as specialized oversight agencies for subdivision and land use planning within the study area. I consider Maine’s experience in depth below. See Part IV.

¹⁰¹ I use “conservative” here as the adjectival form of *conservation*, its most natural sense. In the 1990s, the Nature Conservancy (“TNC”) recognized this trend and the motive it gave many people in the region as an opportunity to mount a \$57 million capital campaign for the conservation of, among other properties, the storied St. John River corridor. See BILL BIRCHARD, *NATURE’S KEEPERS: THE REMARKABLE STORY OF HOW THE NATURE CONSERVANCY BECAME THE LARGEST ENVIRONMENTAL ORGANIZATION IN THE WORLD* 114-26 (2005). By 2004, TNC’s Maine Chapter had acquired fee interests in some 265,000 acres and sub-fee interests in some 209,000 more. See

<http://www.nature.org/wherewework/northamerica/states/maine/about/art16029.html>. On this explosive growth of private conservation in the region, see *infra* notes 189-256 and accompanying text.

¹⁰² The region’s “industrial forests”—large ownerships devoted almost exclusively to logging—illustrate the point. In Maine, some 17.5 million acres—nine tenths of the state—are forested by most definitions.

from civilization. So while there is little doubt that more fragmentation, more crosshatching of landscapes with roads and other infrastructure, greater spread of invasive species and impervious surfaces, and the consequent homogenization and disturbance of habitats regionally, are all on the horizon, there is enormous capital being generated in this re-valuation of nature, too.¹⁰³ Because preserving regional biodiversity requires achieving and maintaining landscape “permeability,” and because that will require a robust, proactive response,¹⁰⁴ liquidating this capital and investing it in practicable restorative measures is arguably the lost agenda of the Northern Forest.¹⁰⁵

Habitat disturbance of the kind witnessed in this forest’s last four centuries represents a broad and deep alteration of its very ecology so complete in its regional implications that the very concept of nature has become indeterminate. That said, citizens and ecologists alike today appreciate the interconnections in most of the biomes they inhabit or study better than ever. Many view restoration ecology as *the* contemporary ethic of land management.¹⁰⁶ In trying to restore places like the Northern Forest, people are learning to compensate for their novel or “outside” influences so that nature can continue to behave or can resume behaving *as if* those influences were not

As of 1995, almost half of that (8.1 million acres) was owned by eight Fortune 500 paper companies and other industrial concerns. DOBBS & OBER, *supra* note 56, at 117-18. Because such timberlands traditionally served as de facto recreation areas—un-posted and sparsely occupied—and because, traditionally, clearcutting was disfavored as a management technique, residents benefited directly from large corporate ownerships. *Id.* at 121.

¹⁰³ Cf. GEOFFREY HEAL, *NATURE AND THE MARKETPLACE: CAPTURING THE VALUE OF ECOSYSTEM SERVICES* 33-41 (2000) (arguing that people seeking to experience nature will usually pay for that access and that this could become a powerful investment vehicle); *but cf.* James Saltzman, *Creating Markets for Ecosystem Services: Notes from the Field*, 80 N.Y.U.L. REV. 870, 883 (2005) (“Markets for [ecosystem] services can only be established if there are discrete groups of providers and beneficiaries. Otherwise, transaction costs become too high for contract formation.”).

¹⁰⁴ See Colburn *Indignity*, *supra* note 22, at 421-36; ADAMS, *supra* note 22, at 9-22.

¹⁰⁵ See generally HEAL, *supra* note 103; Klyza, *Bioregional Possibilities in Vermont*, *supra* note 15.

¹⁰⁶ See generally ADAMS, *supra* note 22; JORDAN, *supra* note 59; FRIEDERICI, *supra* note 103.

present.¹⁰⁷ They are building a vision that integrates the biosciences with a normative center: mitigating the ‘*Anthropocene*’ to the maximum possible extent.¹⁰⁸ Especially in places like the Northern Forest, this is producing whole new fields of professional study like “road ecology” which is emerging from the intensifying, interdisciplinary study of this most modern of habitat-disturbing land uses (which has caused marked habitat degradation in the Northern Forest in particular).

Roads and vehicles affect wildlife in several important and interesting ways. Most of the ways are well documented and have been described in the literature for over 50 years. Roads can cause a direct loss of habitat, alter the quality of adjacent habitat, lead to road kills, and impede animal movements. As roads are upgraded to accommodate greater traffic volume, the rate of successful wildlife crossing decreases significantly. Thus roads may effectively fragment habitats and otherwise continuous population distributions. Smaller populations typically result, with a greater potential of genetic problems and an increased chance of local extinction.¹⁰⁹

How well such influences can be excluded or corrected frames any restorative project in places like the Northern Forest. The most common restorative *mechanism*, though, remains the devotion of more land to habitat. Thus, as large holdings of timberland are subdivided and occupied, the regeneration of this forest could end up being fleeting.¹¹⁰ For without the biophysical elements necessary to sustaining species diversity over the long-term, any discussion of an “ecological integrity” to the region’s

¹⁰⁷ JORDAN, *supra* note 59, at 22.

¹⁰⁸ The “Anthropocene” is a term coined in P.J. Crutzen, *Geology of Mankind*, 415 NATURE 23 (2002), used to distinguish the epoch humanity is currently creating from the immediate past geologic epoch, the Holocene.

¹⁰⁹ RICHARD T.T. FORMAN ET AL., ROAD ECOLOGY: SCIENCE AND SOLUTIONS 114 (2003).

¹¹⁰ Whether out west or back east, the results of an economy based on recreation and tourism are similar. Rather than clearcuts and open pit mines, [the tourism-recreation economy’s] legacy is suburban-like sprawl . . . that chop[s] once pastoral landscapes into smaller and smaller fragments. As new homes and secondary roads spread across vacant agricultural lands, open space begins to disappear, winter wildlife habitat is lost, seasonal migration routes are disrupted, and erosion problems are exacerbated. . . . Unlike the site-specific impacts associated with a mine or timber sale, recreationists are ubiquitous; the mere presence of more people will generate more human waste, create more unauthorized travel routes, and disturb more wildlife.

KEITER, *supra* note 33, at 262.

forests is at best awkward and at worst utterly misplaced.¹¹¹ Tragically, as Part III argues, most state and federal legal mechanisms are ineffective as means for protecting such elements in environments like the Northern Forest, leaving local and private actors in the lead.

III. THE STRUCTURE OF HABITAT LAW

Over its long history, wildlife law in America has been anchored in *ownership*.¹¹² In theory, the states inherited wildlife from the Crown¹¹³ and they gradually shifted from managing it for maximizing exploitation to managing its scarcity.¹¹⁴ Only in its very recent past has American wildlife law taken habitat loss seriously at all. And throughout its evolution, the structure of federal (and most state) wildlife law has remained surprisingly constant. First, what focus there has been on habitat has overwhelmingly taken the form of public lands acquisition or retention.¹¹⁵ Without public land, there has been precious little public attention paid to biodiversity in land use.¹¹⁶ Second, when habitat has prompted controls on private land, the species protected have overwhelmingly skewed toward what biologists sarcastically call “charismatic megafauna”—not intact

¹¹¹ See Trombulak, *supra* note 51, at 8 (“The ecological health of this region is extremely poor. It would miss the point entirely to talk only about the threats to biological diversity here. Conditions are far worse than simply facing threats. A threat is what Pearl Harbor faced on 6 December 1941.”); Daniel J. Simberloff *et al.*, *Regional and Continental Restoration*, in CONTINENTAL CONSERVATION, *supra* note 68, at 65, 71 (“Just as restoration requires attention to spatial scale, so it demands attention to scales of time. . . . A local restoration project or protected area may be needed not so much for its current contribution . . . as for its role in promoting the persistence or reintroduction of species and communities in the future.”).

¹¹² See BEAN & ROWLAND, *supra* note 68, at 7-15.

¹¹³ See *Geer v. Connecticut*, 161 U.S. 519, 522-23 (1896). Little, if anything, remains of *Geer*’s ownership notions following a series of later cases. See BEAN & ROWLAND, *supra* note 68, at 27-35.

¹¹⁴ See THOMAS A. LUND, AMERICAN WILDLIFE LAW 101-110 (1980); DALE D. GOBLE & ERIC T. FREYFOGLE, WILDLIFE LAW: CASES AND MATERIALS 21-23 (2002).

¹¹⁵ See Shannon Petersen, *Congress and Charismatic Megafauna: A Legislative History of the Endangered Species Act*, 29 ENVTL. L. 463 (1999); see also Christine A. Klein, *Preserving Monumental Landscapes Under the Antiquities Act*, 87 CORNELL L. REV. 1333 (2002).

¹¹⁶ The case has been made that protection of “wilderness” as such was not only discouraged at common law, but was positively antithetical to the common law of property. See John G. Sprankling, *The Antiwilderness Bias in American Property Law*, 63 U. CHI. L. REV. 519 (1996).

species assemblages.¹¹⁷ Third, the law has done little to curb the introduction or spread of invasive species and it has almost never provided the capital needed for other rehabilitative work at landscape scales.¹¹⁸

In its most recent structural turn, though, federal (and most state) wildlife habitat law has commanded its agents to attempt the impossible. It has saddled them with judicially enforceable duties to create comprehensive plans for their parcels of public land in order to protect and restore resident wildlife populations while simultaneously depriving them of the geography, the human capital, and the authority necessary to achieving such objectives.¹¹⁹ Thus, as I have argued elsewhere and summarize here, federal and most state habitat law has evolved into a structural dead-end where bioregional conservation goes: it is, with extraordinary efforts, keeping a few populations of charismatic species on life support in a few places. For all our systemic and pervasive conservation challenges like those confronting the Northern Forest, though, it is almost entirely beside the point.

A. Imperiled Species and Prohibitive Norms

When it took shape in 1973, the Endangered Species Act (“ESA”) was envisioned as legislation to address and even perhaps solve the extinction crisis we were just then noticing—at least within the confines of U.S. jurisdiction.¹²⁰ Since then, we have learned that legislation can do no such thing. Today the ESA is the keystone of our “strictly

¹¹⁷ See David Orr, *The Constitution of Nature*, 17 CONSERV. BIO. 1478 (2003).

¹¹⁸ Colburn, *Indignity*, supra note 25, at 446-53.

¹¹⁹ See generally Colburn, *Habitat and Humanity*, supra note 25.

¹²⁰ See LAWRENCE R. LIEBESMAN & RAFFAEL PETERSEN, ENDANGERED SPECIES DESKBOOK 5-10 (2003).

science” federal conservation laws.¹²¹ Yet, paradoxically, it is the very structure showing how ill-adapted our administrative state is to the real problems of species loss and the applied science of conservation biology.¹²² The agencies charged with its implementation have always been under-funded and under-staffed.¹²³ Yet they still may only set land use policy when they can document the presence of a listed species and then only to the extent they can justify use restrictions with the “best available scientific or commercial information.”¹²⁴ These agencies face constant legal challenges by aggrieved stakeholders alleging they have ignored the law.¹²⁵ No matter how careful government biologists are in their assessments of an ecosystem or any of its components (which is not to say they are always careful), the very structure of their authority—the Act’s moral stakes, procedural rigidity, and atomistic focus on particular organisms—embeds them in legal conflict, deterring the very kinds of deliberation and collaboration they must sustain to succeed.¹²⁶

¹²¹ See generally Holly Doremus, *Listing Decisions Under the Endangered Species Act: Why Better Science Isn’t Always Better Policy*, 75 WASH. U.L.Q. 1029 (1997) (hereafter Doremus, “*Listing Decisions*”).

¹²² See Colburn, *Indignity*, supra note 25, at 436-53; Doremus, *Listing Decisions*, supra note 121, at 1057-1129.

¹²³ See, e.g., Fish and Wildlife Service, Endangered and Threatened Wildlife and Plants, Notice of Intent to Clarify the Role of Habitat in Endangered Species Conservation, 64 Fed. Reg. 31871, 31873 (1999) (acknowledging that the Service’s entire budget in a fiscal year could be spent on just one duty under the ESA: the designation of “critical habitat” for listed species pursuant to court orders).

¹²⁴ 16 U.S.C. § 1533(b)(1)(A). In *Northern Spotted Owl v. Hodel*, 716 F. Supp. 479 (W.D. Wash. 1988), the court held that this statutory language requires the federal government to rely, wherever possible, on expert analysis and not simply the conclusory assertions of staff or interested private parties. See also *Center for Biological Diversity v. Norton*, 254 F.3d 833 (9th Cir. 2001). This statutory mandate also specifically excludes the use of economic considerations for listing, see, e.g., *Save our Springs v. Babbitt*, 27 F. Supp. 2d 739 (W.D. Tex. 1997), but it has been extremely difficult to say what constitutes the best scientific or commercial information amid the kinds of normative conflicts listing decisions produce.

¹²⁵ Doremus, *Listing Decisions*, supra note 121, at 1033-34 (“Federal conservation statutes consistently invoke the mantra of science, demanding that executive branch agencies base their actions on the “best available scientific information,” a term not defined in any statute.”).

¹²⁶ See George Cameron Coggins, *A Premature Evaluation of American Endangered Species Law*, in ENDANGERED SPECIES ACT: LAW, POLICY, AND PERSPECTIVES, at 1 (Donald C. Bauer & William Robert Irvin eds., 2002) in ENDANGERED SPECIES ACT: LAW, POLICY, AND PERSPECTIVES, at 1 (Donald C. Bauer & William Robert Irvin eds., 2002); Colburn, *Indignity*, supra note 25.

Of course, without listed species around, habitat degradation is marginalized and, along with it, so is bioregional thinking.¹²⁷ In fact, even when a species *is* listed, habitat protection is usually partial at best. ESA § 9 prohibits anyone within the jurisdiction of the United States from killing or even bringing “harm” to listed species.¹²⁸ The agencies’ administrative definition of “harm,” though, limits it to action, “including habitat modification, *which actually kills or injures wildlife.*”¹²⁹ Thus, draining a pond in which a listed turtle lives, depriving that turtle of its habitat, *may*—depending on that turtle’s reaction—be a prohibited act if, for example, the turtle then meets its demise on an adjacent road searching out other habitat.¹³⁰ Of course, having to *prove* that the action—

¹²⁷ Colburn, *Habitat and Humanity*, supra note 25.

¹²⁸ Under the Act, the “take” of any listed species is specifically prohibited and “take” is defined to mean “harass, harm, pursue, shoot, wound, trap, capture, or collect, or to attempt to engage in any such conduct. 16 U.S.C. § 1532(19).

¹²⁹ See Fish and Wildlife Service, Endangered and Threatened Wildlife and Plants; Final Redefinition of Harm, 46 Fed. Reg. 54748, 54748 (1981) (emphasis added). “Harm in the definition of “take” in the Act means an act which actually kills or injures wildlife. Such act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.” 50 C.F.R. § 17.3. “Harass in the definition of “take” means an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding or sheltering.” Id.

In Babbitt v. Sweet Home Chapter of Comms. for A Great Oregon, 515 U.S. 687 (1995), the Supreme Court rejected the proposition that ESA § 3’s definition of “take” could not bear an administrative definition of “harm” that included habitat modifications injurious *to a population* rather than to definite individuals. See *id.* at 696-714; *cf. id.* at 710 (O’Connor, J., concurring) (“One need not subscribe to theories of “psychic harm” . . . to recognize that to make it impossible for an animal to reproduce is to impair its most essential physical functions and to render that animal, and its genetic material, biologically obsolete. This, in my view, is actual injury.”). Somehow, though, construction industry lawyers still argue that “the harm regulations provide that a land use activity does not become harm unless and until the activity kills or actually injures a member of a listed wildlife species.” Steven P. Quarles & Thomas R. Lundquist, *When Do Land Use Activities “Take” Listed Wildlife Under ESA Section 9 and the “Harm” Regulation?*, in *ENDANGERED SPECIES ACT: LAW, POLICY AND PERSPECTIVES* 207, 217 (Donald C. Baur & Wm. Robert Irvin eds., 2002). This seems like a specious argument calculated to preclude federal prohibitions on broad scale habitat degradation. While the “harm” definition was amended in 1981 to require “significant” habitat destruction/degradation that “actually” kills or injures “wildlife,” see 46 Fed. Reg. at 54749, one can do so by impairing the “essential behavioral patterns of a listed species” like breeding, *id.* at 54748, *i.e.*, by disrupting the population and not just its individuals. There would be nothing for the “harm” part of the definition of “take” left to signify—given ESA § 3’s other defining terms like “wound,” “kill,” and “harass”—if it necessarily required provable harm to particular individuals.

¹³⁰ See BEAN & ROWLAND, supra note 68, at 218 n.121; Babbitt, 515 U.S. at 733 n.5 (Scalia, J., joined by Rehnquist, C.J., and Thomas, J., dissenting) (remarking that this seems absurd).

and let us stipulate it is a proximate cause of the turtle's actions¹³¹—was the legal cause of the “harm” deters most governmental responses.¹³² There is a broader point here about prohibitive norms and habitat: the scarcity of public resources prevents them from being, certainly at the federal level, “a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved.”¹³³

ESA § 9 and a few of its state copies specifically prohibit the “adverse modification” of any listed species’ designated “critical habitat.”¹³⁴ But critical habitat designations have themselves become parodies of regulatory politics.¹³⁵ The ESA

¹³¹ Cf. H.L.A. HART & TONY HONORÉ, CAUSATION AND THE LAW 32-44 (2d ed. 1985) (differentiating between “causes” and “mere conditions” as predicates in ordinary language and arguing that the two are often confused in causal analysis in the law). Of course, the driver would be a but-for cause as well, but nothing in the Act suggests the first party’s liability should be severed because of another, contributory cause. And without knowing much more than we do about animal consciousness, it would be impossible to prove that the turtle’s reaction was, in any sense, conscious. See DONALD R. GRIFFIN, ANIMAL MINDS: FROM COGNITION TO CONSCIOUSNESS (2d ed. 2001).

¹³² See Colburn, *Indignity*, supra note 25.

¹³³ 16 U.S.C. § 1531(b). The agencies’ experiences with consultations pursuant to ESA § 7 in which “take” has been inferred on the basis of incomplete proof underscores this point. See, e.g., Arizona Cattle Growers’ Assoc. v. U.S. Fish & Wildlife Serv., 273 F.3d 1229 (9th Cir. 2001) (invalidating “Incidental Take Statements” issued in the course of consultation as being insufficiently supported by proof).

¹³⁴ 16 U.S.C. § 1533(b)(2). On states’ imperiled species programs generally, see Lawrence Niles and Kimberly Korth, *State Wildlife Diversity Programs*, in THE ENDANGERED SPECIES ACT AT THIRTY: RENEWING THE CONSERVATION PROMISE 141 (Dale D. Goble et al eds., 2006). Take Maine as an example. Under its endangered species law, the Maine Department of Inland Fisheries and Wildlife (“MDIFW”) is empowered to protect by rule “essential wildlife habitat” for listed species. See 12 M.R.S.A. §§ 12804, 12806. To date, the only designated habitat—other than that of a few shorebirds—have been bald eagle nesting sites. See MDIFW Rules, Chapter 8.05 (2005).

¹³⁵ See, e.g., Amy Sinden, *The Economics of Endangered Species: Why Less Is More in the Economic Analysis of Critical Habitat Designations*, 28 HARV. ENVTL. L. REV. 129 (2004). The government now routinely admits it makes its critical habitat decisions in response to lawsuits and threats to sue. See Amy N. Hagen and Karen E. Hodges, *Resolving Critical Habitat Designation Failures: Reconciling Law, Policy, and Biology*, 20 CONSERV. BIO. 399, 404 (2006). Though the statute proclaims its goal to be the conservation of ecosystems, the means Congress actually provides consist chiefly in the designation and protection of resources for listed species. And critical habitat designations have become harder and harder for the agencies to complete. See Center For Biological Diversity v. Norton, 240 F.Supp.2d 1090 (D. Ariz. 2003).

Between April 1996 and July 1999, FWS designated more than 250 species as threatened or endangered under the ESA, but had made critical habitat designations for only 2. Of a total 1,200 species listed by FWS as threatened or endangered, FWS has designated critical habitat for only 113 (9%). Furthermore, while FWS must designate critical habitat once a species is listed, “the FWS has typically put off doing so until forced to do so by court order.”
Id. at 1103 (internal citations omitted) (quoting New Mexico Cattle Growers Assn. v. U.S. Fish & Wildlife Serv., 248 F.3d 1277 (10th Cir. 2001).

requires that, concurrent with the listing of an imperiled species, the federal government “shall designate critical habitat . . . on the basis of the best scientific data available and after taking into consideration the economic impact, and any other relevant impact, or specifying any particular area as critical habitat.”¹³⁶ Yet, if it deems the costs too high to landowners within the “geographical area occupied by the species, at the time it is listed,”¹³⁷ the government simply elects not to designate private lands.¹³⁸ And as stakeholders and courts clarify the diversity of ways in which habitat actually suffers “adverse modification” from traditional land uses,¹³⁹ the resource-starved agencies have a growing incentive not to designate more.

This was evident recently in a decision to exclude *all* of Maine from the finalized critical habitat designations for the Canada lynx, a species listed as threatened (under court order) in 2001.¹⁴⁰ “Many commenters,” the agency observed without a hint of

¹³⁶ 16 U.S.C. § 1533(b)(2). In New Mexico Cattle Growers Assn. v. U.S. Fish & Wildlife Serv., 248 F.3d 1277 (10th Cir. 2001), the court held that the ESA required a detailed analysis of the economic impacts fairly traceable to the designation of critical habitat even if those impacts would also be caused in the absence of (would be caused irrespective of) critical habitat designations, *i.e.*, by the listing of the species in and of itself. *Id.* at 1283-85. This decision, besides slowing the agencies’ designations considerably, *see* Sinden, *supra* note 135, at 161-83, has created a real incentive to be under-inclusive in critical habitat designations. *See, e.g.*, Center for Biological Diversity v. Norton, 240 F. Supp. 2d 1090 (D. Ariz. 2003).

¹³⁷ The statutory definition of “critical habitat” for a listed species is “the specific areas within the geographical area occupied by the species, at the time it is listed in accordance with [ESA § 4] on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection” The designation can be extended to areas “outside the geographical area occupied by the species at the time it is listed” but only if FWS specifically finds “that such areas are essential for the conservation of the species.” 16 U.S.C. § 1532(5)(A).

¹³⁸ *See* 16 U.S.C. § 1533(b)(2) (“The Secretary may exclude any area from critical habitat if he determines that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat”). In New Mexico Cattle Growers v. U.S. Fish & Wildlife Service, 248 F.3d 1277 (10th Cir. 2001), the court held that FWS has a statutory duty to analyze the quantifiable costs and benefits of designating protected habitat even if those factors are coordinately caused by the listing of the species itself (through the operation of ESA § 9) or other regulatory requirements. *Id.* at 1285.

¹³⁹ *See* Gifford Pinchot Task Force v. U.S. Fish and Wildlife Serv., 378 F.3d 1059 (9th Cir. 2004); Sierra Club v. U.S. Fish and Wildlife Serv., 245 F.3d 434 (5th Cir. 2001).

¹⁴⁰ *See* Defenders of Wildlife v. Norton, 239 F. Supp.2d 9 (D.D.C. 2002); U.S. Fish and Wildlife Service, Designation of Critical Habitat for the Contiguous United States Distinct Populations Segment of the Canada Lynx, 71 Fed. Reg. 66008 (2006). The decades-long saga of the lynx listing is a story I take up

irony, “expressed concern that commercial and recreational activities such as logging, mining, snowmobiling, off-road vehicles, and downhill skiing, would be prohibited or severely restricted by a designation of critical habitat.”¹⁴¹

Conservation groups have purchased conservation easements on hundreds of thousands of acres of forestland. These easements are negotiated with private timber companies to assure protection from development and promote sustainable forestry and wildlife management. Most of these easements have required significant Federal funds, especially from Forest Legacy and the North American Wetlands Conservation Act. Currently, about [2 million acres] of the [6.4 million acres] in Maine considered for inclusion in lynx critical habitat are under permanent easements, with several hundred thousand acres more under negotiation.¹⁴²

So in its final rulemaking designating the lynx’s “critical habitat,” it simply excluded all of Maine—indeed, it excluded virtually everything but the two National Parks within the lynx’s range in the contiguous United States.¹⁴³ Because the ESA’s own habitat acquisition program has long been beside the point,¹⁴⁴ public acquisition and/or regulation of land for the lynx is virtually nonexistent at the federal level.¹⁴⁵

Restoration of species long extirpated locally is usually out of the question. For example, the agency stated explicitly in its lynx critical habitat rulemaking that *no* areas

elsewhere. See Jamison E. Colburn, *Predator Conservation and Restoration: A Case Study in Localism’s Ecology* (unpublished manuscript on file with author).

¹⁴¹ 71 Fed. Reg. at 66012.

¹⁴² 71 Fed. Reg. at 66040.

¹⁴³ 71 Fed. Reg. at 66012-66054.

¹⁴⁴ Funding for ESA § 5 acquisitions has been sporadic at best. See Barton H. Thompson, Jr., *The Endangered Species Act: A Case Study in Takings and Incentives*, 49 STAN. L. REV. 305 (1997).

¹⁴⁵ See Hagen & Hodges, *supra* note 135, at 404 (“Even when we have substantial knowledge, turning biological understanding into critical habitat designation can be difficult. For example, literally dozens of scientific papers, including many on habitat use, have been published on the lynx. . . . Despite [a] rich knowledge base it is not clear how to . . . designate appropriate critical habitat.”). MENTION LAWSUIT WHEN FILED.

Just the incidental catch of lynx by trappers seeking bobcats or other furbearers could be a significant cause of concern—or not—depending on key assumptions. In 2005, some 40 Maine lynx were *reported* caught in traps. See Phyllis Austin, *Rising Lynx Take Worries Advocates*, ME. ENVTL. NEWS, May 12, 2005 (available at <http://www.meeepi.org/files05/pa051205.htm>) (describing the vagueness of this finding).

were being designated “solely because they provide habitat for dispersing animals.”¹⁴⁶ In fact, the agencies have said they will seek to restore historically occupied habitat to the range of a species “only when a designation limited to its present range would be inadequate to ensure the conservation of the species.”¹⁴⁷ It is perhaps not surprising, then, to learn that the Northern Forest has *no* designated critical habitat today.¹⁴⁸ Indeed, its forests lack virtually any listed species, including predators—the lynx being the exception.¹⁴⁹ Of course, *most* extant predators are listed.¹⁵⁰ Peregrine falcons recovered remarkably (and in unexpected places) when captive breeding and other extraordinary measures were funded and implemented—when it became strictly verboten even to bother them and where extraordinary restorative work was done.¹⁵¹

Thus, the “harm” prohibition and the geography of listing both encapsulate a broader structural reality of federal and state habitat protection law: it is only the *exceptional* constituents of nature that trigger federal (and most state) land use controls.

¹⁴⁶ 71 Fed. Reg. at 66025. Moreover, no habitat was even considered for designation without documented presence of lynx as of 1995. *Id.* at 66010. This is curious given the agency’s initial findings that the population within the contiguous United States is possibly comprised entirely of dispersers from Canada. *See* U.S. Fish and Wildlife Service, Determination of Threatened Status for the Contiguous U.S. Distinct Population Segment of the Canada Lynx and Related Rule, 65 Fed. Reg. 16052, 16053 (2000).

¹⁴⁷ 50 C.F.R. § 424.12(e). Lynx abundance throughout Alaska and Canada precludes such a finding in this case. *See* Clarification of Findings, 68 Fed. Reg. 40082.

¹⁴⁸ *See* <http://criticalhabitat.fws.gov> (“Critical Habitat Mapper”) (visited Oct. 7, 2005). My own quite unsystematic confirmation of the absence of designated critical habitat in forested New England and the Adirondacks is a page-by-page search of the two CFR volumes laying out all the designated geography. *See* 50 C.F.R. Part 17, Vols. 2-3 (2005). Not a *single* designation listed in the CFR applies to upland, forested New England or the Adirondacks, although listed species of the region include several raptors, the lynx, several Atlantic salmon populations, dozens of insects, and eventually the New England cottontail. *See* Fish and Wildlife Service, Candidate Notice of Review, 71 Fed. Reg. 53756, 5757-758 (2006).

¹⁴⁹ The eastern cougar is another listed predator of the region (listed since 1973), although its probable extinction was finally acknowledged indirectly in 2005. *See* Florida Panther Recovery Plan FR Notice. The government never devoted serious attention to the restoration of the eastern cougar.

¹⁵⁰ At its inception, the ESA reversed official policies on (most) predators because many were instantly candidates for listing. *See* MICHAEL J. ROBINSON, PREDATORY BUREAUCRACY: THE EXTERMINATION OF WOLVES AND THE TRANSFORMATION OF THE WEST 337-46 (2005). Counting up the mammalian predators that are now, were once, or will soon be listed endangered or threatened species is a potent reminder of the Anthropocene.

¹⁵¹ *See, e.g.,* Stephanie Paige Ogburn, *Bred For Success*, HIGH COUNTRY NEWS 4 (Nov. 13, 2006).

At those junctures, administrative agencies usually view local land use authorities as *obstacles* to—not as essential elements of—an eventual solution.¹⁵² The statutory authorities that empower administrative agencies to control land uses, especially on private land, thus skew toward the “special”—to the exclusion of the “ordinary.”¹⁵³ No place is more ordinary in this sense than the northeastern United States.¹⁵⁴ Species on the brink of oblivion and habitats that are provably essential to their survival are ostensibly protected.¹⁵⁵ Everything else—everything more common, familiar, and adapted to disturbance—is mostly ignored.¹⁵⁶

In places like the Northern Forest, where the thinning of its wildlife began generations ago, fire has been suppressed for centuries, where so much of what remains is adapted to traditional “multiple use,” and where real biodiversity planning is habitat dependent, federal wildlife law is a footnote.¹⁵⁷ Conservation in this environment is much more a question of *restoration* than it is maintaining a status quo. Yet species restoration always entails affirmative biological and physical intervention, not to mention

¹⁵² See Colburn, *Localism's Ecology*, supra note 25, at *10-12. There is reason to believe that this is changing, especially under the FWS's current policy guiding the weighing of the factors in ESA §§ 4(a)(1)(D), (E) and 4(b)(1)(A) in listing determinations. See U.S. Fish and Wildlife Serv., Policy for Evaluation of Conservation Efforts When Making Listing Decisions, 60 Fed. Reg. 15100 (2003). But there is no reason to believe that the changes are improvements where habitat protection is concerned.

¹⁵³ See Colburn, *Indignity*, supra note 25, at 457-60; Holly Doremus, *Biodiversity and the Challenge of Saving the Ordinary*, 38 IDAHO L. REV. 325 (2002).

¹⁵⁴ Others have documented this paradox at length. See, e.g., Holly Doremus, *Patching the Ark: Improving Legal Protection of Biological Diversity*, 18 ECOLOGY L.Q. 265 (1991); Daniel J. Rohlf, *Six Biological Reasons Why the Endangered Species Act Doesn't Work—And What to Do About It*, 5 CONSERVATION BIOLOGY 273 (1991).

¹⁵⁵ How effective ESA protections for such habitats have been in fact is the subject of some disagreement. See Martin F.J. Taylor et al., *The Effectiveness of the Endangered Species Act: A Quantitative Analysis*, 55 BIOSCIENCE 360 (2005).

¹⁵⁶ Holly Doremus, *Biodiversity and the Challenge of Saving the Ordinary*, 38 IDAHO L. REV. 325, 334 (2002) “Human beings simply are not wired to care about, or even to notice, the ordinary. We cannot attend to everything that competes for our attention. We have therefore developed a variety of filtering mechanisms to help us focus effectively on some things by more or less shutting out others. . . . The ordinary provides a poor focal point.”

¹⁵⁷ When a trigger does arise, it is big news. See, e.g., Felicity Barringer, *With Scraggly Habitat Disappearing, So Is a Rabbit*, N.Y. TIMES, A14, Sept. 1, 2004 (describing the conversion of scrub- and new growth forests in New England as a principal threat to the New England cottontail and its imminent listing).

protecting adequate landscape “permeability.”¹⁵⁸ For these, federal (and most state¹⁵⁹) endangered species law is increasingly irrelevant.

B. Public Lands as Islands

To read most analyses of the law of biodiversity, one would think public lands are the answer. The facts are otherwise: the major federal public lands systems and the statutes governing them have been shaped to fit other priorities¹⁶⁰ and the potential connectivity between public lands as habitat is, as a rule, very low.¹⁶¹ Indeed, according to analyses of these systems keyed to conservation values, crippling deficiencies are the norm, especially east of the Rockies.¹⁶² No landscapes better exemplify this condition than those of the Northern Forest. The Northern Forest has half a dozen units of the National Wildlife Refuge System, two National Forests, and no significant national parks. Each is managed by different planners with different priorities,¹⁶³ is many miles from the others, and by itself—compared to the 40,000+ *square miles* of the Northern Forest—is a rounding error.¹⁶⁴

¹⁵⁸ Colburn, *Indignity*, supra note 25, at 421-36.

¹⁵⁹ See Susan George & William J. Snape III, *The State of State Endangered Species Acts*, in *ENDANGERED SPECIES ACT: LAW, POLICY, AND PERSPECTIVES*, at 503, 504 (Donald C. Bauer & William Robert Irvin eds., 2002) (“Most of the existing 45 state endangered species acts merely provide a mechanism for listing and prohibit the taking of or trafficking in listed species.”).

¹⁶⁰ Robert B. Keiter, *Ecological Concepts, Legal Standards, and Public Land Law: An Analysis and Assessment*, 44 NAT. RES. J. 943 (2004); Colburn, *Habitat and Humanity*, supra note 25.

¹⁶¹ Colburn, *Indignity*, supra note 25, at 432-34.

¹⁶² See, e.g., J. Michael Scott et al., *National Wildlife Refuge System: Ecological Context and Integrity*, 44 NAT. RES. J. 1041 (2004); J. Michael Scott et al., *Nature Reserves: Do They Capture the Full Range of America’s Biological Diversity?*, 11 ECOL. APPS. 999 (2001); J. Michael Scott et al., *Gap Analysis: A Geographic Approach to Protection of Biological Diversity* (Wildlife Monograph No. 123) (1993).

¹⁶³ Klyza, *Public Lands in the Northeast*, supra note 19, at 102-03.

¹⁶⁴ Even in regions where this equation is reversed and where public land managers have gradually committed to conservation planning, private lands are proving essential to regional objectives. See Joseph L. Sax & Robert B. Keiter, *The Realities of Regional Resource Management: Glacier National Park and Its Neighbors Revisited*, 33 ECOLOGY L.Q. 233, 258-65 (2006).

While state ownership in the region is rising, it is still improbable at best that the “islands” of public lands will ever grow to become a “continent.”¹⁶⁵ Many residents fought bitterly to prevent federal or state acquisitions throughout the NFLC process and would do so again today.¹⁶⁶ Linking the public lands together to make more continuous, permeable landscapes, thus, is a task increasingly fit only for private actors. And as the nonprofit sector has scaled up, it has become the driving force for habitat conservation in this region, as in many others.¹⁶⁷

C. Privatizing Governance: The Arc of Protecting Nature in America

Notwithstanding the American romance with wilderness, in most regions collecting enough land to join existing reserves together into meta-reserves (as conservation biology recommends¹⁶⁸) will come, if at all, from the private sector.¹⁶⁹ The problem is not that federalism or anything else in the Constitution deprives the federal government of the authority needed to build larger or more integrated systems of public

¹⁶⁵ Simberloff *et al.*, supra note 111. Public ownership in the Northern Forest in particular, contrary to the national norm, is lopsided and tilting further in favor of the states. In 1978, it was estimated that all conservation lands combined totaled about 5.1 million acres, with 3.4 million acres in New York, 240,000 in Vermont, 110,000 in New Hampshire, and 342,000 in Maine. See Gustav A. Swanson, *Wildlife on the Public Lands*, in WILDLIFE AND AMERICA 428, 436-437 (Howard P. Brokaw ed., 1978) (Table 4). While federal holdings have been roughly constant since, state holdings are rising. By 2001, the states of Vermont, New Hampshire, Maine, and New York combined held over 5.3 million acres for conservation, in addition to the roughly 1.3 million acres comprising the White Mountain and Green Mountain National Forests and the collection of wildlife refuges in the region. Klyza, *Public Lands in the Northeast*, supra note 19, at 76 (Table 4.1).

¹⁶⁶ Large-scale public acquisitions were dismissed by NFLC commissioners, see Klyza, *Problems, Politics, and Alternatives*, supra note 15, at 44-46, continuing a New England tradition of long-standing. JUDD, supra note 24, at 90-120. Most of what little federal land there is in New England was acquired through the Weeks Act early in the twentieth century at a moment of exceptional public interest in public lands acquisition. See SALLY K. FAIRFAX ET AL., BUYING NATURE: THE LIMITS OF LAND ACQUISITION AS A CONSERVATION STRATEGY, 1780-2004, at 70-72 (2005) (hereafter “BUYING NATURE”). Conservation easements, being the modern alternative, BREWER, supra note 9, at 146-47, were encouraged instead.

¹⁶⁷ See BUYING NATURE, supra note 166, at 255-72; Emily Bateson & Nancy Smith, *Making It Happen: Protecting Wilderness on the Ground*, in WILDERNESS COMES HOME, supra note 66, at 183-209.

¹⁶⁸ See Simberloff *et al.*, supra note 111, at 68-71.

¹⁶⁹ See Jamie Sayen, *An Opportunity for Big Wilderness in the Northern Appalachians*, in WILDERNESS COMES HOME, supra note 66, at 124.

lands.¹⁷⁰ It is not even that innovative structures joining public and private lands into landscape-scale partnerships have never been devised.¹⁷¹ It is that whatever Americans' regard for biodiversity (and I have argued before that it is wide but shallow), the American land ethic is basically private and divisionary in nature.¹⁷² Thus, barring a seismic shift, the majority of Americans will support conservation by government if and only if it does not entail severe strictures on property rights (real or perceived).¹⁷³

With sprawl so obvious a threat to regional biodiversity and with no reconstitution of our land ethic in sight, there has been a growing urgency to private initiatives. Indeed, one of the NFLC's principal recommendations was the conservation easement,¹⁷⁴ a tool that has (coincidentally) become enormously popular since.¹⁷⁵ But the trend of groups like The Nature Conservancy and its local analogues purchasing fee and easement interests from willing sellers marks a transformation in our conservation politics¹⁷⁶—one that arguably *began* in the Northern Forest.¹⁷⁷ Whether by fee simple or through some kind of sub-fee interest to better leverage limited capital, these organizations are the leading edge of conservation today.¹⁷⁸ Fairfax and others link this turn to the

¹⁷⁰ See, e.g., United States v. Albrecht, 496 F.2d 906 (8th Cir. 1974) (upholding federal authority to create an easement not recognized at common law and enforcing it against successors-in-interest); Cappaert v. United States, 426 U.S. 128 (1976) (upholding federal authority to reserve unappropriated water rights independent of state law restrictions on doing so).

¹⁷¹ See, e.g., Pub. L. No. 87-126, 75 Stat. 284 (1961) (act establishing Cape Cod National Seashore and empowering the Secretary of Interior to acquire title to lands within the designated "seashore" through various mechanisms and empowering Secretary to exercise veto authority over the zoning policies of six Massachusetts towns within the proclamation boundary).

¹⁷² See Colburn, *Habitat and Humanity*, supra note 25.

¹⁷³ I am dubious that any such shift is likely notwithstanding some highly nuanced work arguing its necessity (and possibility). See, e.g., FREYFOGLE, supra note 14.

¹⁷⁴ See NFLC REPORT, supra note 20, at 51-52; Malmshemer *et al.*, supra note 26.

¹⁷⁵ See BUYING NATURE, supra note 166, at 203-43.

¹⁷⁶ See ADAMS, supra note 22, at 46-68; BIRCHARD, supra note 101.

¹⁷⁷ See BUYING NATURE, supra note 166, at 180-89.

¹⁷⁸ See generally ADAMS, supra note 22; Bateson & Smith, supra note 167, at 182; BUYING NATURE, supra note 166.

neoconservative attack on the regulatory state.¹⁷⁹ Whatever its causes, it is bringing us an unmistakably privatized conservationism. Today, there are more than 1,600 groups nationwide “doing deals” for conservation easements and other interests in land.¹⁸⁰ The largest and most sophisticated of them, of course, are at work in the Northern Forest: “[m]uch of [its] vast woods . . . is cheap, unpeopled, essential for restoring wilderness, and for sale.”¹⁸¹ Finding the capital is often viewed as a solution to its regional problems.

This is not just a shift in tactics, though. It is changing the structure of political power behind conservation. Private property managed to provide a public good like habitat is still *private* property.¹⁸² Its management need never weather the exacting scrutiny heaped upon the Forest Service (or FWS, for that matter).¹⁸³ And, with no improvised mechanisms of accountability, private deals can be of dubious merit, can be used to conceal sham transactions, and can even be contrary to the public interest.¹⁸⁴ Furthermore, concerned citizens who are willing to pay to protect nature paradoxically

¹⁷⁹ See BUYING NATURE, supra note 166, at 203.

¹⁸⁰ See BUYING NATURE, supra note 166, at 261. Collectively, local land trusts have over “one million members, many of them avid, hard-working volunteers.” BREWER, supra note 9, at 1.

¹⁸¹ Bateson & Smith, supra note 167, at 196.

¹⁸² *But cf.* Federico Cheever, *Public Good and Private Magic in the Law of Land Trusts and Conservation Easements: A Happy Present and a Troubled Future*, 73 DENV. U.L. REV. 1077 (1996) (arguing that creating a government right to enforce conservation easements might protect against their abuse).

¹⁸³ In the context of characterizing particular environmental degradations, this can be extremely advantageous. See Saltzman, supra note 103, at 880 (“In most cases, our scientific knowledge is inadequate to undertake meaningful marginal analysis—to predict with any certainty how specific local actions affecting these factors will impact the local ecosystem services themselves. For example, it is difficult to predict how developing thirty percent of *this* wetland will impact water quality, flooding events, or local bird populations.”). But it can also block needed transparency. See Part IV.

¹⁸⁴ A series of *Washington Post* articles in 2003 heaped suspicion on The Nature Conservancy with allegations that the organization was party to arguably fraudulent, tax sheltering deals. See Statement of Steven J. McCormick On Behalf of The Nature Conservancy, Hearing before the Committee on Finance, U.S. Senate, *The Tax Code and Land Conservation*, June 8, 2005; infra note 245 and accompanying text.

ensure that the price of doing so is always going up.¹⁸⁵ Thus, as more complex, finer-grained mosaics of public and private ownership emerge,¹⁸⁶ the individuated strategies driving these deals become ever more complicated and contingent.¹⁸⁷ For even the most impressive of such acquisitions are always separated by still more “unprotected” land that is fragmented in ownership, of sinking value as timber (or farmland), and beset by invasive species and other systemic disturbances. That all frames one simple deduction: conservation easements in themselves cannot constitute a complete, regional scale strategy for places like the Northern Forest.¹⁸⁸ Part IV presents the evidence.

IV. THE DEAL AND THE WOODLOT: BIOREGIONAL CONSERVATION IN PRIVATE

In March 2001, the nonprofit New England Forestry Foundation (“NEFF”) announced one of the largest conservation easements in U.S. history.¹⁸⁹ NEFF presented a check to the Pingree family for more than \$28 million—the purchase price, at \$37.10 per acre, for an easement on 762,192 of the family’s 900,000+ acres scattered across the unincorporated areas of Maine.¹⁹⁰ That money had come from dozens of contributing

¹⁸⁵ See James Boyd *et al.*, *The Law and Economics of Habitat Conservation: Lessons from an Analysis of Easement Acquisitions*, 19 STAN. ENVTL. L.J. 209 (2000); see *infra* notes 226-246 and accompanying text.

¹⁸⁶ Innovative dealmaking, including the use of conduit organizations passing acquisitions into eventual public ownership, public/private partnership, debt market and revolving fund financing, *etc.*, is becoming the stock-in-trade for the larger organizations like the Trust for Public Land, The Nature Conservancy, and some others. See Casey, *supra* note 13.

¹⁸⁷ See Kevin W. Schuyler, *Expanding the Frontiers of Conservation Finance*, in FROM WALDEN TO WALL STREET: FRONTIERS OF CONSERVATION FINANCE 109, 118-21 (James N. Levitt ed., 2005).

¹⁸⁸ The result is more attention being paid to “limited development” schemes for finance and other purposes. See Ned Sullivan & Steven Rosenberg, *Employing Limited Development Strategies to Finance Land Conservation and Community-Based Development Projects*, in FROM WALDEN TO WALL STREET: FRONTIERS OF CONSERVATION FINANCE 90 (James N. Levitt ed., 2005); Jeffrey C. Milder, *An Ecologically-Based Evaluation of Conservation and Limited Development Projects* (2005) (unpublished masters’ thesis, Cornell University) (hereafter “Milder Thesis”).

¹⁸⁹ At the time of the announcement, the Maine Governor heralded it as *the* largest timberland easement in U.S. history, although that was a temporary honor.

¹⁹⁰ See Conservation Easement On Land of Six Rivers Limited Partnership, et al., Located in the Counties of Aroostook, Franklin, Oxford, Penobscot, Piscataquis and Somerset, State of Maine, Granted to New

foundations and a two-year, multilateral fundraising campaign that had attracted national attention.¹⁹¹ It represented new hope for assembling and preserving permeable, continuous landscapes over the long-term. This Part uses that deal, though, to show how *unsustainable* the game is under the current rules and the hard choices on the horizon.

By the time the “Pingree Partnership” was announced, it had become totemic to conservation in the Northern Forest. Harvard Forest researchers, awed by its scale and its balance between “working forest” uses and prohibitions on subdivision and development, dubbed it “the next level” in private conservation.¹⁹² The scale of the deal was undeniable. Inasmuch as markets dictated its terms, though, some argued the deal was just a continuation of the region’s last four centuries. Indeed, as Section A argues, a general critique of conservation easements developed over the last decade seems to fit this deal—at least the parts of it that are public—all too well. Section B suggests that its widespread emulation may eventually prove tragic.

A. Working Forests: ‘Sustainable’ For How Long?

From 1998-2006, some 7 million of Maine’s 17 million acres of timberlands changed hands.¹⁹³ Indications are that this hyperactivity, with much of it aimed at subdivision and development, will continue for the foreseeable future.¹⁹⁴ Maine seems

England Forestry Foundation, Inc., available at <http://www.neforestry.org/conservation/pingree.shtm> (hereinafter “Pingree Easement” or “Pingree Partnership”).

¹⁹¹ See James N. Levitt, *The Next Level: The Pingree Forest Partnership as a Private Lands Conservation Innovation* (Harvard Forest Occasional Research Paper 03-01) (hereafter Levitt, “*The Next Level*”).

¹⁹² See Levitt, *The Next Level*, supra note 191, at 5-41.

¹⁹³ See Maine Natural Resources Council, available at http://www.nrcm.org/land_sales.asp (copy on file with author). Incredibly, the Northern Forest from 1980-2005 saw 23.8 million acres change hands—an area almost as great as the region itself, although the figure includes several large ownerships that changed hands repeatedly. Hagan *et al.*, supra note 5, at iii.

¹⁹⁴ See Hagan *et al.*, supra note 5. Last year, a Brookings Institution study found that, from 1980-2000, some 826,000 acres of rural land were actually converted to exurban and suburban uses in Maine—making

convinced that long-term ownership of timberlands is its own kind of conservation guarantee: it has only reacted in recent years where quick turnaround of timberlands occurs.¹⁹⁵ But where conservationists will muster the capital needed to encumber all these lands as their development potentials rise remains a mystery.

The Pingree deal came together without any real development pressure and it was done in collaboration with one of the first adopters of the notoriously stringent Forest Stewardship Council (FSC™) sustainability protocols.¹⁹⁶ The Pingrees were known for practicing conscientious forestry and probably did the deal in order to lessen tax burdens and other pressures to sell.¹⁹⁷ Its “success” is now taken for granted. Indeed, in the years since the NFLC Report, many Mainers have migrated from what had been categorical support for private conservation—including fee simple acquisition of large natural areas—to what now seems a clear preference for “working forest” easements.¹⁹⁸ Timber companies traditionally have allowed access to their land for sportsmen, trappers,

it one of the fastest growing states in this category. See Brookings Institution Metropolitan Policy Program, *Charting Main's Future: An Action Plan for Promoting Sustainable Prosperity and Quality Places* 7 (2006) (copy on file with author).

¹⁹⁵ Dobbs and Ober, writing in 1995 (before the latest cyclone of exchanges and consolidation), maintained that Maine's Forest Practices Act—which targeted large-scale clearcutting and “liquidation”—had done little to encourage conservative forestry. DOBBS & OBER, *supra* note 56, at 126-36. Many people like Lloyd Irland, an influential former state economist and instructor at the Yale School of Forestry and Environment, argued that the industrial landowners were (and still are) engaging in ruinous timber practices. See *id.* at 130-32; Irland, *supra* note 52, at 18-19. Just recently, Maine enacted prohibitions on “liquidation” timber harvesting, *i.e.*, clearcutting and quick land sales thereafter, although the rules' actual effectiveness is open to serious doubts. See Scott, *supra* note 39, at 253-55, 263-263.

¹⁹⁶ Seven Islands, the partnership that manages the Pingree family lands, originally sought FSC certification in 1993 in hopes of earning a “green” premium on its timber. See Norman Boucher, *How to Have Your Wood and Your Forest Too*, 35 NATIONAL WILDLIFE 14 (Aug./Sept. 1997). So far, the strategy appears not to have worked very well as FSC certification has yet to generate real market premiums. See Misty L. Archambault, Note, *Making the Brand: Using Brand Management to Encourage Market Acceptance of Forestry Certification*, 81 N.Y.U.L. REV. 1400, 1414-1417 (2006); Meidinger, *supra* note 38.

¹⁹⁷ Levitt, *The Next Level*, *supra* note 191. Like most states, Maine law entitles an owner to a proportionate property tax reduction upon transfer of a conservation easement. See *Forbes v. Town of Southwest Harbor*, 763 A.2d 1183 (Me. 2001).

¹⁹⁸ Philanthropists acquiring large fees in the North Woods for habitat conservation alone, *see, e.g.*, Scott, *supra* note 39, at 275 n.124 (describing Roxanne Quimby), have actually become the subject of local scorn and hostility—including that of the sitting governor. *Id.* at 275-76.

snowmobiles, *etc.* While that is very popular with residents¹⁹⁹ (a fact not lost on the conservation community²⁰⁰), whether timber planning can be called “conservation” is contentious at best.²⁰¹ That debate was not had prior to the Pingree deal, though.

Monitoring and enforcement of large-scale easements are often problematic and the Pingree Partnership made a real advance on this front.²⁰² NEFF’s monitoring protocols, carried out with medium-resolution satellite imagery, aerial photography, algorithmic analysis of GPS data, and confirmed with periodic “ground-truthing,” are state of the art in balancing cost and accuracy.²⁰³ They minimize the need for “boots on the ground” in the actual enforcement of the restrictions.

Yet a potent critique of conservation easements that has matured over the last decade fits this deal all the same.²⁰⁴ The problem with the Pingree easement lay not just in its actual content (truly, the will of the “willing seller” drove this deal), but also in the legal durability of the bargain. First, the easement controls forestry practices hardly at

¹⁹⁹ Scott, *supra* note 39, at 260-63, 274-76.

²⁰⁰ See BIRCHARD, *supra* note 101, at 108-12 (describing TNC strategies); Scott, *supra* note 39, at 271-72 (describing public support for Forest Society of Maine’s “working forest” easements). TNC in particular pioneered a “New Market Tax Credit” on these grounds, securing a \$30 million federal award to support a struggling paper mill in northern Maine. Schuyler, *supra* note 187, at 115.

²⁰¹ Complaints about how the Pingrees manage their lands pale in comparison with those about the publicly traded corporate owners of the region. DOBBS & OBER, *supra* note 56, at 133. In short, the ecological restoration of Maine timberlands generally is quite another matter. See *generally* IRLAND, *supra* note 1, at 140-45 (describing Maine’s experience with industrial forestry); MORRISON, *supra* note 2 (describing restoration of species assemblages and the enormity of reversing decades of disturbance).

²⁰² The Pingree easement is widely touted as a model. See Kenton Williams *et al.*, *Application of Geospatial Technology to Monitor Forest Legacy Conservation Easements*, 104 J. FORESTRY 89 (March 2006); Steven A Sader *et al.*, *Pingree Forest Partnership: Monitoring Easements at the Landscape Level*, 100 J. FORESTRY 20 (May/June 2002).

²⁰³ See James N. Levitt, *Conservation Via Satellite*, INNOVATIONS 44 (Spring 2006). NEFF raised an endowment of over \$1 million to support the easement’s annual monitoring costs (currently \$60,000-70,000) and can carry out that monitoring indefinitely if annual costs are reduced to around \$50,000. *Id.* at 58-59. NEFF has said, although it refuses detailed comment on the record, that *substantial compliance* is the norm for each of its industrial owners. Author phone interview with Frank Reed, NEFF Director of Development, December 27, 2006 (notes on file with author). In the end, any dispute over easement compliance is subject to mandatory arbitration under AAA rules. See Pingree Easement, *supra* note 190, at § 8.2.

²⁰⁴ See King & Fairfax, *supra* note 10, at 98-103.

all, even though industrial forestry has itself been a significant cause of habitat disturbance regionally.²⁰⁵ It never even mentions sensitive species or habitat concerns of any kind. From that, it may even be fair to argue that the deal’s only “conservative” point was its exclusion of development. Second, the agreement specifically preserved all existing leases, mines, and dumps on the land²⁰⁶ while saying nothing about vernal pools²⁰⁷ or other significant natural elements.²⁰⁸ Indeed, virtually all usage rights of the property are preserved indefinitely to the Pingrees’ discretion. This could mean anything from an insignificant seasonal hunting camp to a built-out, modern resort. (Without public access to the baseline conditions documentation, it is hard to say.²⁰⁹)

Furthermore, while it cost dearly, this instrument may turn out to have been, if not precatory, at least highly fungible on a key element. Notwithstanding its touted value, the \$28 million price tag was based on an *assumption* of the easement’s perpetuity—not

²⁰⁵ See Pingree Easement, *supra* note 190, at § 4.4 (defining permitted “forestry activities” as “all forest management practices allowable under law and the harvesting and removal of any and all forest products by any and all current and future harvesting and removal techniques allowable under law”). Besides requiring compliance with all laws (an easement could hardly be otherwise), the parties agreed to append certain “Landowner Guidelines” which were, notwithstanding a mandatory tone, quite *advisory* in nature given one guideline in particular: a proviso that the owners could seek “an after tax return that is comparable over the long-term with competitive uses of capital.” Pingree Easement, *supra* note 190, at Exhibit C. It is far from clear, though, that *that* level of return on American timberlands, barring the development of unforeseen markets, is even possible. See Irland, *supra* note 52.

²⁰⁶ See Pingree Easement, *supra* note 190, at §§ 3.1.4, 3.3, 3.4, 3.5. Each lease—which could be anything from a hunting camp to a mountain top resort—is set out and described in the baseline conditions documentation done at the time of the deal. The Pingree Clan specifically required that the baseline conditions information be kept confidential, though. Author phone interview with Frank Reed, NEFF Director of Development, December 27, 2006 (notes on file with author).

²⁰⁷ Vernal pools are a unique and vital habitat element of the Northern Forest, particularly in northern Maine. COLBURN, *supra* note 82, at 3-11, 264-77.

²⁰⁸ It may be tempting to defer in such questions to Seven Islands’ FSC certification because FSC requires adherence to several stringent protocols where conservation is concerned. See Meidinger, *supra* note 38, at 61. But FSC certification is not *required* by the easement and, in its most recent FSC compliance audit, one of Seven Islands’ weakest scores (bordering failure, in fact) was for principle nine, “protection of high conservation value forests.” See Scientific Certification Systems, Certification Evaluation Report for the Pingree Lands Managed by Seven Islands 22 (2006) (hereafter “FSC Recertification Audit”), *available at* http://www.scscertified.com/PDFS/forest_seven.pdf.

²⁰⁹ Owners in the region—including the Pingrees—bear an unfortunate history of excluding scientists and others who have sought to survey their lands for flora, fauna, and other natural elements. See Sayen, *supra* note 169, at 142.

its guarantee. Perpetuity is, of course, disfavored in property law. Yet most conservation easements are supposedly forever,²¹⁰ the one facet of these deals that has garnered nearly universal skepticism.²¹¹ Indeed, very few restrictions on land are ever permanent in any true sense. Twenty-five states (including Maine) adopted the provision of the UCEA allowing wholesale termination of these instruments in equity.²¹² Thus, even setting aside doubts that such “easements” may not run with the land at all,²¹³ the restrictions might just be dissolved one day by court order. Maine law expressly provides for that very contingency.²¹⁴ Finally, some of the conservation value in the deal turns on the

²¹⁰ Cheever, *supra* note 182, at 1083. To take advantage of the federal tax deduction for a conservation easement it must be granted “in perpetuity.” *See* 26 U.S.C. § 170(f)(3). This strongly incentivizes the creation of perpetual easements notwithstanding the fact that the IRS’s interest in the deal usually “ends three years after the donor contributes the easement.” Todd D. Mayo, *A Holistic Examination of the Law of Conservation Easements*, in *PROTECTING THE LAND: CONSERVATION EASEMENTS PAST, PRESENT, AND FUTURE* 26, 42 (Julie Ann Gustanski & Roderick H. Squires eds., 2000) (hereafter “*PROTECTING THE LAND*”).

²¹¹ *See, e.g.*, Julia D. Mahoney, *Perpetual Restrictions on Land and the Problem of the Future*, 88 VA. L. REV. 739 (2002); Jeffrey M Tapick, *Threats to the Continued Existence of Conservation Easements*, 27 COLUM. J. ENVTL. L. 257 (2002); McLaughlin, *supra* note 11. In a nutshell, many think conservation “easements” are actually contracts in disguise (not property) and that they are therefore vulnerable to dissolution in all the ways that contracts may be dissolved. *See generally* Thomas W. Merrill & Henry R. Smith, *The Property/Contract Interface*, 100 COLUM. L. REV. 773 (2000).

²¹² *See* McLaughlin, *supra* note 11, at 446; 33 M.R.S.A. § 478 (3) (1998) (“A court may deny equitable enforcement of a conservation easement when it finds that change of circumstances has rendered that easement no longer in the public interest.”). Very little of the uncertainty about how our legal system will treat this *statutory* servitude has been eliminated in the years of its explosive growth in popularity. *Compare* McLaughlin, *supra* note 11, at 425 (“There is considerable confusion and uncertainty regarding whether, when, and how ostensibly “perpetual” conservation easements may be modified or terminated to respond to changed conditions.”), *with* Andrew Dana & Michael Ramsey, *Conservation Easements and the Common Law*, 8 STAN. ENVTL. L.J. 2 (1989) (making the same claim). At issue remains the fact that the common law discouraged negative servitudes where no discrete dominant estate was benefited and that the easement’s perpetuity leaves it otherwise ambiguous as any form of *in personam* right. *Id.*

²¹³ *See, e.g.*, Dana & Ramsey, *supra* note 212, at 12-17; McLaughlin, *supra* note 11, at 423-26.

²¹⁴ *See* 33 M.R.S.A. § 478(1). Maine first adopted a statute removing the common law bar on negative servitudes in gross in 1969 and adopted a slightly amended version of the UCEA in 1985. Karin Marchetti & Jerry Cosgrove, *Conservation Easements in the First and Second Circuits*, in *PROTECTING THE LAND*, *supra* note 210, at 78, 86. Maine’s statute is regarded by many as more restrictive of the equitable power to dissolve these easements, *see id.* at 89, but it does not foreclose the possibility. *Id.* McLaughlin argues convincingly that charitable trust law can and should serve to modify easements when they are no longer in the beneficiaries’ or the public interest and argues persuasively that many easements are actually charitable trusts. McLaughlin, *supra* note 11; *see also* Alexander R. Arpad, *Private Transactions, Public Benefits, and Perpetual Control Over the Use of Real Property: Interpreting Conservation Easements as Charitable Trusts*, 37 REAL PROP. PROB. & TR. J. 91 (2002).

lands not being *condemned* for development—a possibility that is, though difficult to quantify, probably more than *de minimis*.²¹⁵

There is language addressing some of these questions in the agreement, but no deal can hide from the equitable power of the courts indefinitely²¹⁶ or from the sovereign authority over land.²¹⁷ Moreover, for all the goodwill and promotion of sustainable forestry as the means of keeping the region’s landscapes intact, this may turn out to be economically impossible—notwithstanding hefty subsidies from organizations like NEFF.²¹⁸ In fact, the Pingree easement expressly contemplates subdivision and development under certain circumstances.²¹⁹ The current generation of Pingrees may wish to practice conscientious forestry and forego sales and subdivision. But there are no guarantees about the *next* generation and, should they change course, it is unclear how the law will respond.²²⁰

²¹⁵ See Robert H. Levin, *When Forever Proves Fleeting: The Condemnation and Conversion of Conservation Land*, 9 N.Y.U. ENVTL. L.J. 592 (2000). “Because governments and private condemners have an incentive to look for the least expensive and least controversial means of constructing a project, conservation properties are singularly vulnerable to condemnation.” *Id.* at 601.

²¹⁶ See Mayo, *supra* note 210, at 40-48; Cheever, *supra* note 182, at 1098-1102.

²¹⁷ See Levin, *supra* note 215, at 601-08. While condemnation of conservation easements has thus far been thought of exclusively in terms of their extinguishment, Part V turns the tables and considers the use of eminent domain to *create* conservation easements. See *infra* notes 258-281 and accompanying text.

²¹⁸ The steady decline in domestic sourcing, notwithstanding a steady increase in U.S. forest products demand, see Stephen R. Shifley, *Sustainable Forestry in the Balance*, 104 J. FORESTRY 187, 187-88 (2006), has left many in the U.S. timber industry anxious about its future. See Irland, *supra* note 52, at 17-19.

²¹⁹ See Pingree Easement, *supra* note 190, at § 3.2 (“There shall be no subdivision or division of any of the Property in any township into tracts of less than 1,000 acres without the prior written consent of the Grantee, which approval shall be granted only upon a determination of the Grantee, in its reasonable judgment, that the action will not be inconsistent with the purpose of this Easement.”). Putting aside the discretion this gives NEFF to interpret the easement’s “purpose” as against individual development ideas, there are many forms of development that would be completely exempt from NEFF’s veto under § 3.2 as written. The applicable subdivision and development controls permit the owner to seek rezoning for large-scale condominium construction—perhaps on a several-thousand-acre parcel. See 12 M.R.S.A. § 685-B(2).

²²⁰ Indeed, Seven Islands has already sold a “significant” parcel in the northern portion of the ownership. See FSC Recertification Audit, *supra* note 208, at 37; *cf.* BREWER, *supra* note 9, at 171 (“It wouldn’t be surprising if half of the 11,700 properties on which local land trusts hold easements were to be sold in the next ten years.”). Clearly, the advantages of regional (or global) nonprofits holding easements, should purchasers wish to break them, are the resources they can bring to bear in defending these interests. *Id.* at 172-74.

Nonetheless, as the next section shows, the price for restrictions on land use in the Northern Forest is going up at the same time their overall conservation value is going down. Forestry can be better and worse for wildlife and it is usually a complicated set of trade-offs that turn on how different species' needs are weighed.²²¹ Some species, such as the lynx, can benefit from fast-rotation forestry and clearcutting if it is limited in scale and combined with other, less intensive uses.²²² Other species like migratory birds often depend on the absence of such disturbances.²²³ Indeed, *very* few threats to a whole species assemblage's resilience are recognizable as such. Thus, because recreationists and others are free to use private timberlands in the region,²²⁴ the costs of industrial forestry are easy to discount. This explains Maine's pronounced public support of the timber industry. What will be a sure setback to regional biodiversity, though, is if timberlands, wetlands, and shorelands are fragmented and crosshatched by more development—a possibility that is *not* foreclosed in deals like the Pingree Partnership.²²⁵

²²¹ Bernardos *et al.*, supra note 78, at 164-68.

²²² "Forest practices in lynx habitat that result in or retain a dense understory provide good snowshoe hare habitat that in turn provides good foraging habitat for lynx. In Maine, extensive clear cutting over the past 25 years has resulted in large amount of the forest currently in a stage of regeneration that is optimal for snowshoe hares and lynx." Clarification of Findings, 68 Fed. Reg. at 40083.

²²³ DEGRAAF & YAMASAKI, supra note 57, at 400-16. For habitat purposes, clearcutting is probably of less concern, assuming scale and location are planned at regional scales, than the use of fertilizers and herbicides, fire suppression, road building, and many other aspects of industrial forestry. See Colburn, *Habitat and Humanity*, supra note 25, at *30-32.

²²⁴ For example, Maine "boasts one of the most broadly applicable, and effective, landowner liability protection acts in the nation, an act that encourages landowners to allow others access to their land for outdoor recreation and traditional harvesting activities" Marchetti & Cosgrove, supra note 214, at 86.

²²⁵ The complexity of the 300,000+ acre deal buying out Champion International's holdings in the region, a deal brokered by the highly secretive Conservation Fund in 1998-99 for some \$76 million, likewise raised concerns, both in its sticker price and in the nature of the restrictions purchased. See Bateson & Smith, supra note 167, at 190.

B. Misgivings: A Game-Theoretic Critique of Privatization

Since the Pingree deal, the flaws in the easement strategy for the Northern Forest have become clearer on another front, too. More land is changing hands more often, creating more volatility and more inflationary pressures on the price of easements. At the outset, let us stipulate that “[t]he value of an easement is the appropriately discounted difference in land value, over the time period that difference is enjoyed, times the probability the development occurs.”²²⁶ And “[s]ince the probability and timing of development are always speculative, easement appraisals should be expected to exhibit a large degree of variability and error.”²²⁷ “Speculative” only begins to describe the probability and timing of development where the Pingree lands were concerned.²²⁸ In another deal now pending, though, all of this is moot because the easement and the sprawl come hand-in-hand.

Interspersed with the Pingree lands lay a substantial ownership of timberlands surrounding Moosehead Lake and linking it to the 320 square mile Baxter State Park. In a deal rivaling the Pingree Partnership’s scale, The Nature Conservancy (“TNC”) and the nation’s largest landowner/developer announced a proposal in late 2006 that would take the dealmaking in the Northern Forest to yet another level again. But this one has some in the region voicing serious misgivings about the future of conservation easements. The

²²⁶ Boyd *et al.*, supra note 185, at 237.

²²⁷ Boyd *et al.*, supra note 185, at 238.

²²⁸ As Boyd and colleagues observe, “there are 5.6 billion ways to choose twelve of forty parcels, and thirty trillion (3×10^{25}) ways to choose thirty of one hundred parcels.” Boyd *et al.*, supra note 185, at 247 (emphasis in original). Given the legal questions about the actual durability of such instruments, the duration of conservation easements is yet another variable—one more variable ensuring that the search for a strictly rational acquisition strategy is virtually hopeless. “Conservation planning [by private acquisition] at the regional scale is complicated immensely by the sheer number of different parcel selection combinations facing planners. The number of possibilities grows astronomically large as parcels become smaller and more numerous.” *Id.* Strategic behavior undermining the effectiveness of conservation purchases, thus, becomes more likely. See MORTON D. DAVIS, GAME THEORY: A NONTECHNICAL INTRODUCTION 6 (1997).

920,000+ acres at issue were being shopped a lot before the Plum Creek Timber Company²²⁹ hatched its plan.²³⁰

Plum Creek bought this portfolio in 1998 for almost \$200 million—*after* much of it had been logged.²³¹ Why pay top dollar for heavily logged timberlands with depressed value *as timber* and rising taxes? For the chance to take \$35 million from TNC while simultaneously garnering credibility for a proposal to build the region’s largest resort/condo complex about to be laid before the Land Use Regulation Commission (“LURC”)—the state agency that hears such proposals.²³² The details of this deal have not yet been released, but its rudiments are enough as it is.

The parties’ “Conservation Framework” would transfer two parcels in fee simple (one 45,200 acres along the Moose River, one 28,320 acres in the Roach Ponds area), together with a 270,000 acre “Moosehead Legacy” conservation easement, to TNC, the Appalachian Mountain Club, and a local organization.²³³ But it would be in exchange for the \$35 million *and* permission to develop 975 house lots, three RV parks, two mega-resorts, a large golf course, and a 1,000 acre commercial district.²³⁴ The whole deal, that

²²⁹ Plum Creek, a real estate investment trust (“REIT”), has quietly become the nation’s largest landowner with some 8.2 million acres in eighteen states. See <http://www.plumcreek.com/>. It is gaining a reputation for acquiring timberlands with high development potential and breaking them up. See *The Spread of Private Forests*, THE ECONOMIST, June 8, 2006 (describing Plum Creek’s “Suncadia,” a \$1 billion venture subdividing Washington timberlands into ultra-premium house lots, golf courses, and retail).

²³⁰ At the time of the NFLC research in 1990, this particular holding was S.D. Warren Company’s. But Warren sold it to South African Pulp & Paper Industries (SAAPI) in 1994. SAAPI liquidated tens of thousands of acres of timber before selling in 1998. See Phyllis Austin, *Plum Creek’s Big Plan*, ME. ENVTL. NEWS, Feb. 10, 2005.

²³¹ Phyllis Austin, *Plum Creek’s Big Plan*, ME. ENVTL. NEWS, Feb. 10, 2005.

²³² Maine’s Land Use Regulation Commission (“LURC”) is the state agency that oversees land use planning in the vast region of Maine (all of which lies within the NFLC study area) because the region lacks any incorporated local government. See 12 M.R.S.A. § 683.

²³³ Curiously, the easement costs come to \$37 per acre—the price NEFF paid in the Pingree deal. See *supra* notes 190-204 and accompanying text.

²³⁴ See CONCEPT PLAN FOR PLUM CREEK’S LANDS IN THE MOOSEHEAD LAKE REGION: 1 CONCEPT PLAN I-3-I-6 (2006) (hereafter CONCEPT PLAN VOL. 1). The price of the deal has been broken down as \$25 million for the two fee simples and \$10 million (or about \$37 per acre) for the easement—with a separate 72,000 acre conservation easement, yet to be described, that would be “donated.” *Id.*

is, rides on LURC's approval of Plum Creek's "Concept Plan," which will require rezoning the land from eleven different kinds of "protection zone" into a zoning category that delegates land use authority to the plan adopted for the area.²³⁵

Of course, Plum Creek still has enough land in Maine to threaten to develop and eventually sell another one or perhaps two more of these easements—supposing it could find buyers with \$70 million to spend there.²³⁶ Perhaps most troublingly, though, this deal is what gives Plum Creek's proposal a real chance with Maine's LURC.²³⁷ LURC requires that plans like Plum Creek's be "at least as protective of the natural environment as those standards which would otherwise be applicable."²³⁸ That requirement could hardly be met absent the so-called 'Conservation Framework.'²³⁹ The deal is, after all,

²³⁵ See DEPARTMENT OF CONSERVATION, COMPREHENSIVE LAND USE PLAN FOR AREAS WITHIN THE JURISDICTION OF THE MAINE LAND USE REGULATION COMMISSION 147 (1997 ed.) (hereafter "COMPREHENSIVE PLAN"). Both TNC and Plum Creek bizarrely maintain that the Concept Plan is being proposed on its own merits and that their Conservation Framework should play no role in LURC's deliberations. But it is clear from the terms of the deal and the documents backing up the proposal that it was heavily influenced by LURC and LURC's standards. See CONCEPT PLAN VOL. 1, supra note 234, at I-2 (listing the changes made to the proposal based on LURC input).

²³⁶ In this regard, Plum Creek is not unlike other owners who can create demand for their own product by threatening to develop large fractions of a landscape unilaterally. See, e.g., Ned Sullivan & Steve Rosenberg, *Employing Limited Development Strategies to Finance Land Conservation and Community-Based Development Projects*, in FROM WALDEN TO WALL STREET: FRONTIERS OF CONSERVATION FINANCE, 90, 103-05 (James L. Levitt ed., 2005); Sax & Keiter, supra note 164, at 261-65. Northern Maine may be among the lowest-priced land markets in the nation, but the conservation community cannot be expected to invest there at current levels: the scarcity of conservation capital globally is forcing hard choices that are now being driven by opportunity costs as much or more than biology. See Robin Naidoo and Wiktor L. Adamowicz, *Modeling Opportunity Costs of Conservation in Transitional Landscapes*, 20 CONSERV. BIO. 490, 491 (2006). As their cost/benefit analyses grow in sophistication and internal significance, it is increasingly unlikely that global organizations like TNC will commit resources to environments as heavily disturbed as the Northern Forest where the risks of global extinctions is comparatively low. Id.

²³⁷ With the totality of encumbrances, Plum Creek is able to maintain in its LURC filing that "residential development" is confined to 2.5% of the plan area. See, e.g., CONCEPT PLAN VOL. 1, supra note 234, at 18-2. Of course, this statistic does not speak to the plan's overall potential to *disturb* the "plan area," its potential to degrade the area's natural *resilience*, or its potential for broad scale habitat degradation in its attraction of people and infrastructure to the region. See, e.g., Simberloff *et al.*, supra note 111.

²³⁸ See COMPREHENSIVE PLAN, supra note 235, at ch. 10 § 23(H) (2002).

²³⁹ Maine law is thus far silent on the point (the "concept plan" alternative was only put into the law in 1997).

the outgrowth of a proposal to fragment and disturb the Moosehead region to an unprecedented degree.²⁴⁰

Such a deal, even (or perhaps *especially*²⁴¹) involving a repeat player like TNC, raises the hard questions. Did it play as powerful a role as local reporting suggests in FWS's decision to exclude the region from an endangered species' critical habitat designation?²⁴² More basically, why is the price point on TNC's easement the same as that paid in the Pingree Partnership? One easement was far in advance of the landscape's disturbance and fragmentation, the other accompanies it. Indeed, if anything, the probability of development on the lands to be encumbered in the Plum Creek deal is *greater* than that of the comparatively remote Pingree lands.²⁴³ Supposing the Moosehead region is developed as proposed, the land within the Conservation Framework seems much more prone to conversions of various kinds than any of the Pingree lands were.²⁴⁴ Of course, if organizations like TNC now raise their capital in conjunction with *fear*, then this particular deal may be a benchmark.²⁴⁵ But that proves

²⁴⁰ TNC's "Conservation by Design" philosophy generally seeks to minimize this kind of fragmentative development. *See* GROVES ET AL., *supra* note 6.

²⁴¹ An argument can be made that TNC's governance troubles, *see infra* notes 245-46, stem from its having internalized a (somewhat desperate) need to raise the capital that deals of this magnitude demand. *See* BUYING NATURE, *supra* note 166, at 259-60.

²⁴² The Maine Forest Products Council, on behalf of "15-20 members who own about 5.5 million of the roughly 6 million acres" at issue in the lynx critical habitat proposal—including Plum Creek and Seven Islands—lobbied furiously opposing the critical habitat designation. *See* John Richardson, *Landowners Fight Lynx Habitat Designation*, PORTLAND PRESS HERALD, Sept. 25, 2006. In its finalization of the lynx critical habitat rule, the Fish and Wildlife Service seemed to oblige. *See supra* notes 141-143 and accompanying text.

²⁴³ Real comparability between the Pingree lands and the Plum Creek lands, assuming the development of Moosehead as envisioned in the Concept Plan, seems *extraordinarily* unlikely. *Cf.* Boyd *et al.*, *supra* note 185, at 241 ("A property is comparable for the purposes of easement evaluation if its current use and future development use are the same as the property for which the easement has been purchased, and if its *likelihood* of future development is equivalent to that of the property subject to easement.") (emphasis in original).

²⁴⁴ Sprawl is, by all accounts, an incremental phenomenon in which preexisting, proximate infrastructure can serve as an attractant. *See* BRUEGMANN, *supra* note 3, 17-30.

²⁴⁵ In 2003, the *Washington Post* ran a series of ten stories over three days purporting to expose ill-conceived and underhanded work by the Nature Conservancy. *See, e.g.*, David B. Ottaway & Joe Stephens,

too much about the extortionate future such organizations face and the ethical dilemmas they are framing for all of us.²⁴⁶

Hobbled by staff and budget cuts,²⁴⁷ unable to do even its routine permitting work,²⁴⁸ LURC is at a big disadvantage in this episode and has wondered aloud whether it even has the resources to consider the merits of so gigantic a proposal.²⁴⁹

Understandably, the state is given pause when confronted with the chance to delegate real oversight responsibility to the world's largest, most sophisticated conservation organization.²⁵⁰ Doing so on these terms, though, would draw into question the very sovereignty of the state—not to mention that of the United States if the critical habitat rulemaking really was as heavily influenced by timber interests as seems evident.²⁵¹

At broad scales, easements are a powerful tool for a critical public problem—a so-called tragedy of the anticommons where habitat is undervalued because private ordering

Nonprofit Land Bank Amasses Billions, WASH. POST, at A1 (May 4, 2003) (in response to charges that the organization's "bucks and acres" focus had produced ethical lapses and undue corporate influence [TNC CEO Steven] McCormick said: "By working with corporations, which control a lot of land, which are very influential, we think we make a big difference."): Nonetheless, after exhaustive investigations by the Senate Finance Committee and the IRS, not a single prosecutable offense was discovered. BIRCHARD, *supra* note 101, at 218-33.

²⁴⁶ I am dubious of the *Washington Post*'s rhetoric (to say nothing of its innuendo) regarding TNC's organizational ethics, not just because it failed to uncover a single deal that was even arguably illegal, but because it failed even to find one clearly contrary to the organization's purposes. See Max Stephenson, Jr., & Elisabeth Chaves, *The Nature Conservancy, the Press, and Accountability*, 35 NONPROFIT & VOL. SECTOR Q. 345 (2005).

²⁴⁷ Scott, *supra* note 39, at 266; CITE FOR LURC FUNDING TREND FYs 01-07.

²⁴⁸ Scott, *supra* note 39, at 266.

²⁴⁹ See Phyllis Austin, *Plum Creek's Big Plan*, ME. ENVTL. NEWS, Feb. 10, 2005 ("As Plum Creek's application looms, there's a real question about LURC's ability to handle a project of this size. In recent years, the agency has been downsized so much that director Catherine Carroll doesn't know at this point how the staff will handle such an enormous proposal."):

²⁵⁰ See Phyllis Austin, *Plum Creek's Big Plan*, ME. ENVTL. NEWS, Feb. 10, 2005. "[M]easured by revenues," TNC is "the largest environmental group in the world, bringing in over \$800 million each year. It employs 3,450 people operating from four hundred offices in fifty states and twenty-eight countries." BIRCHARD, *supra* note 101, at 2.

²⁵¹ Similar doubts are being raised as to other ESA programs, including habitat conservation planning. See Matthew E. Rahn *et al.*, *Species Coverage in Multispecies Habitat Conservation Plans: Where's the Science?*, 56 BIOSCIENCE 613, 615 (2006).

predictably fails to produce optimal development.²⁵² And while most public structures atrophy over time because they are polycentric and inherently rigid,²⁵³ the easement strategy is adaptive and problem-oriented by nature. Yet, at a bioregional scale, the strategy produces a kind of moral hazard where opportunists can threaten landscape permeability, only to exact their price from conservationists—who are at the mercy of any “willing seller” should they harbor ambitions of achieving broad scale objectives.²⁵⁴ Indeed, because third-party reactions to conservation restrictions in a region can *reduce* the habitat values of encumbered land, conservationists may actually be incentivizing the very economic behavior they are trying to overcome. After all, people seeking their access to “nature” pay premiums to be near it, *i.e.*, “away from civilization.”²⁵⁵ Thus, in a sense, a perverse flaw of the easement strategy in places like the Northern Forest is that the legal interests buyers are acquiring with their easements can actually be devalued by

²⁵² Milder Thesis, *supra* note 188; BREWER, *supra* note 9, at 219-26. “When resources are so fragmented that internal governance mechanisms predictably fail and multiple owners cannot productively manage the resources with respect to the external world, then the ownership fragments are no long usefully protected as private property.” Heller, *supra* note 41, at 1201.

²⁵³ See Charles F. Sabel and William H. Simon, *Destabilization Rights: How Public Law Litigation Succeeds*, 117 Harv. L. Rev. 1016, 1053-62 (2004); Lowell Pritchard Jr. and Steven E. Sanderson, *The Dynamics of Political Discourse in Seeking Sustainability*, in PANARCHY, *supra* note 34, at 147, 166 (“Part of the puzzle of adaptive management is how to build a nonbureaucratic bureaucracy. Is it possible to have a legitimate, capable, and responsible management organization that is constantly reforming and reinventing itself, undergoing revolt?”).

²⁵⁴ TNC’s achievements of scale and its fundraising aims for ever-larger scales are a function of the new politics our privatized conservation movement has made. But, as Milder and others have argued, it is only the acquisition of land and easements with measurable conservation benefits that set this program apart from the “greenwashing” of large-lot subdivisions, *etc.* Milder Thesis, *supra* note 188, at 15-17.

²⁵⁵ Colburn, *Localism’s Ecology*, *supra* note 25, at *23-45; Andrew O. Finley and David B. Kittredge, Jr., *Thoreau, Muir, and Jane Doe: Different Types of Private Forest Owners Need Different Kinds of Forest Management*, 23 NORTH. J. APP. FORESTRY 27 (2006). The irony about such buyers, of course, is that they bring civilization with them. *Cf.* FREDERICK JACKSON TURNER, *THE FRONTIER IN AMERICAN HISTORY* (1920). It does not seem unfair to criticize, then, that actors like NEFF or TNC give their neighbors an incentive to devalue their own property interests. Admittedly, the incentive stems at least in part from the culture’s obsession with access to authentic nature. But that obsession is pronounced and growing among the 70+ million people proximate to this region. Finley & Kittredge, *supra*, at 30; Bateson & Smith, *supra* note 167, at 192-205.

strategic actors who simply shift *their* plans to other, adjacent owners.²⁵⁶ Part V argues that exacting appropriate restrictions from those with the means to convert landscapes and jeopardize regional biodiversity may be the only way to neutralize this increasingly corrosive cycle.

V. EXACTIONS: TAKING HABITAT FOR BIOREGIONAL GOALS

Professor Cheever and some others have already chronicled the crumbling wall separating “public” from “private” conservation land acquisition.²⁵⁷ But this Part diagrams the constitutional issues raised by a specific vehicle for those efforts: the exaction of land and interests in land from those who would convert a landscape by developing it. Again, the Northern Forest (and Maine in particular) is exemplary—with one exception. In most locales, it is a municipal structure of some kind possessed of the authority to regulate land use, not a state agency like LURC. This simplifies the analysis here but, in my view, does not alter it fundamentally. Part V argues that exacting landscape scale conservation easements from parties like Plum Creek is legal and increasingly necessary.

²⁵⁶ The disturbance and fragmentation of habitat can be as threatening to system resilience as all out conversion. See *supra* notes 106-111 and accompanying text. In this connection, it is worth acknowledging that the region where private conservation arguably began a century ago, see JUDD, *supra* note 24, at 90-120; BUYING NATURE, *supra* note 166, at 157-58, arguably faces the same risks of fragmentation and disturbance today that it did a century ago.

²⁵⁷ See Federico Cheever, *Property Rights and the Maintenance of Wildlife Habitat: The Case for Conservation Land Transactions*, 38 IDAHO L. REV. 431 (2002); see also Jessica Owley Lippmann, *Exacted Conservation Easements: The Hard Case of Endangered Species Protection*, 19 J. ENVTL. L. & LIT. 293 (2004); FREYFOGLE, *supra* note 14.

A. Zoning Discretion Into Existence: The Takings Issues

Zoning favored land uses into mapped districts based on prospective plans instead of findings of harm *per se* began as an urban extension of police power.²⁵⁸ In about a century, it has become a ubiquitous element of title to real property, even in places as rural as the Northern Forest.²⁵⁹ Being as broadly and deeply regulated a commodity as land is has meant that regulatory takings challenges are virtually formless until an adjudicative process of some kind applies local law to a given parcel of land and articulates the precise restrictions thereon.²⁶⁰ And with comprehensively zoned entitlements set and a right to seek adjustments, it quickly became routine to condition the grant of further use rights on an exchange of considerations.²⁶¹ The Supreme Court

²⁵⁸ See DANIEL R. MANDELKER, *LAND USE LAW* § 4.15 (5th ed. 2003).

²⁵⁹ See, e.g., *Agins v. City of Tiburon*, 598 P.2d 25 (Cal. 1979) (“The expanding developments of our cities and suburban areas coupled with a growing awareness of the necessity to preserve our natural resources, including the land around us, has resulted in changing attitudes toward the regulation of land use.”), *aff’d*, 447 U.S. 255 (1980). Given the prevalence of twentieth century land use cases in the Court’s regulatory takings case law, this reality of property in land may explain why the Court has failed to elaborate any coherent concept of property for purposes of the Takings and Due Process clauses. See GREGORY S. ALEXANDER, *THE GLOBAL DEBATE OVER CONSTITUTIONAL PROPERTY: LESSONS FOR AMERICAN TAKINGS JURISPRUDENCE* (2006). But this tradition’s long, gradual evolution is the best reason to conclude that its wholesale upset by the Roberts’ Court is unlikely. Cf. Robert C. Ellickson, *Property in Land*, 102 *YALE L.J.* 1315, 1400 (1993) (“A land institution that has evolved over time is far more subtle than the mind of any single individual.”).

²⁶⁰ See *Williamson County Regional Planning Comm v. Hamilton Bank*, “[A] claim that the application of government regulations effects a taking of a property interest is not ripe until the government entity charged with implementing the regulations has reached a final decision regarding the application of the regulations to the property at issue.”; *McDonald, Sommer & Frates v. Yolo County*, 477 U.S. 340, 348 (1986) (“It follows from the nature of a regulatory taking claim that an essential prerequisite to its assertion is a final and authoritative determination of the type and intensity of development legally permitted on the subject property.”).

²⁶¹ See ALAN A. ALSHULER & JOSE GOMEZ-IBANEZ, *REGULATION FOR REVENUE: THE POLITICAL ECONOMY OF LAND USE EXACTIONS* (1993). Such exactions, indeed, expanded dramatically as federal subsidies to localities declined, eventually becoming highly variable in character and magnitude. See Lee Anne Fennell, *Hard Bargains and Real Steals: Land Use Exactions Revisited*, 86 *IOWA L. REV.* 1, 3-5 (2000); Ann E. Carlson & Daniel Pollak, *Takings on the Ground: How the Supreme Court’s Takings Jurisprudence Affects Local Land Use Decisions*, 35 *U.C. DAVIS L. REV.* 103, 119 (2001) (“Localities in California [a state bearing a disproportionate share of development pressures nationally] have used exactions for an array of purposes including streets, parks, school construction, sewage, public art, low income housing, environmental mitigation and child care centers.”). Critics argue that zoning authorities have a real incentive to zone well below the qualitative and quantitative optima of use intensities in order to create the needed discretion that can occasion such exactions. Fennell, *supra*, at 33-37.

has said that such “exactions” must be germane to the policy underlying the general use restriction(s) and bear a “rough proportionality” to the externalities the proposed use(s) could generate.²⁶² Several state high courts had arrived at about this doctrinal point well in advance of the Supreme Court.²⁶³

Importantly, though, it seems as if only those exactions involving coerced dedications of *possessory* interests in real property need bear the Court’s nexus and proportionality.²⁶⁴ In *Nollan*, the California Coastal Commission proposed to Fred Nollan that he dedicate a lateral right of way to beachgoers in exchange for permission to expand his beach home dramatically—a permission California’s Coastal Act required in all cases.²⁶⁵ The Court distinguished the proposed exchange as one justifying searching

²⁶² See *Nollan v. California Coastal Comm.*, 483 U.S. 825, 837 (1987) (“[U]nless the permit condition serves the same governmental purpose as the development ban, the building restriction is not a valid regulation of land use but “an out-and-out plan of extortion.””); *Dolan v. City of Tigard*, 512 U.S. 374, (1994) (consciously adopting a test with the verbal formulation “rough proportionality” for the means/ends element of its scrutiny to avoid confusion with traditional rational basis scrutiny); Fennell, *supra* note 261. ²⁶³ See, e.g., *Pioneer Trust and Savings Bank v. Village of Mt. Prospect*, 176 N.E.2d 799 (Ill. 1961); *Aunt Hack Ridge Estates v. Planning Comm. of Danbury*, 273 A.2d 880 (Conn. 1970); *Collis v. City of Bloomington*, 246 N.W.2d 19 (Minn. 1976). Other courts had refused to take that path. See, e.g., *Ayres v. City Council of Los Angeles*, 207 P.2d 1 (Cal. 1949). Of the four NFLC states, New York and New Hampshire had adopted a nexus test, too. See *Fred F. French Investing Co. v. City of New York*, 350 N.E.2d 381 (N.Y. 1976); *J.E.D. Assocs. v. Town of Atkinson*, 432 A.2d 12 (N.H. 1981) (quoted in *Nollan*). Indeed, New York courts have traditionally been skeptical of any exchanged consideration (including fees) for favorable zoning changes. See, e.g., *Municipal Art Society v. City of New York*, 552 N.Y.S.2d 800 (App. Div. 1987). But even New York’s courts seem to have softened substantially in their skepticism of this kind of bargaining. See *Smith v. Town of Mendon*, 822 N.E.2d 1214 (N.Y. 2004) (upholding town’s conditions on final approval of site plan requiring donation of a conservation easement). Vermont and Maine have long taken a more sympathetic view of exactions. See, e.g., *Robes v. Town of Hartford*, 636 A.2d 342 (Vt. 1993) (declining to engage even in rational basis scrutiny of town’s impact fee exaction); *Curtis v. Town of South Thomaston*, 708 A.2d 657 (Me. 1998) (deferential review of exacted land dedication for fire protection purposes).

²⁶⁴ The Court has explicitly refused to extend its exactions test to generally applicable land use restrictions, see *Monterey v. Del Monte Dunes at Monterey, Ltd.*, 526 U.S. 687, 702-04 (1999), and seems unlikely to extend the test to impact fees or other non-possessory exactions. See *Lingle v. Chevron, U.S.A., Inc.*, 125 S. Ct. 2074, 2086-87 (2005); J. David Breemer, *The Evolution of the “Essential Nexus”*: *How State Courts Have Applied Nollan and Dolan and Where They Should Go From Here*, 59 WASH. & LEE L. REV. 373 (2002); but see *Ehrlich v. Culver City*, 911 P.2d 429, 444-47 (Cal. 1996) (interpreting *Nollan* and *Dolan* to extend to impact fees).

²⁶⁵ 483 U.S. at 830. Without this or some other limit, literally any permitting requirement could become a prohibited “exaction” drawing the nexus and proportionality scrutiny and that does not seem to be the Court’s intention. Cf. *Lucas v. South Carolina Coastal Council*, 505 U.S. 1003, 1027 (1992) (“It seems to

judicial scrutiny. “[W]here government action results in “[a] permanent physical occupation” of the property, by the government itself or by others,”²⁶⁶ the taking occurs irrespective of the size of the owner’s loss or of the public purposes served.²⁶⁷ Indeed, the coercion and the physicality of the interest at issue seemed of signal importance to the narrow *Dolan* majority.²⁶⁸ But if the “greater power” (denying permission altogether) does not necessarily include the “lesser” (imposing conditions the applicant is free to reject), neither does the constitutional protection of property require that “nexus” or “proportionality” be proven with that much precision.²⁶⁹ Even if covered by *Nollan/Dolan*, that is, there is significant room for exactions to avoid Takings Clause liability. The Court has shown time and again that its ad hoc analyses in regulatory takings are easily resolved in the government’s favor²⁷⁰ and the *Nollan/Dolan* tests are no exception.

us that the property owner necessarily expects the uses of his property to be restricted . . . by various measures newly enacted by the State in legitimate exercise of its police powers. . . .”).

²⁶⁶ 483 U.S. at 831 (quoting *Loretto*, 458 U.S. at 432-33).

²⁶⁷ 483 U.S. at 831-33. *Cf. id.* at 831 (“Had California simply required the Nollans to make an easement across their beachfront available to the public on a permanent basis in order to increase public access to the beach, rather than conditioning their permit to rebuild their house on their agreeing to do so, we have no doubt there would have been a taking.”). The Court has several times since emphasized that this scrutiny is particularly fit to the “adjudicative” context of exactions, where the coercion of particular parties is at issues. *See, e.g., City of Monterey v. Del Monte Dunes at Monterey, Ltd.*, 526 U.S. 687, 702 (1999). And there is no need here to dwell on the fact that the now defunct means-ends test identified with *Agin v. City of Tiburon*, 447 U.S. 255 (1980) (requiring that the law “substantially advance a legitimate state interest”), overruled by *Lingle*, 125 S. Ct. 2074, underlay the reasoning and result in *Nollan*. *See Nollan*, 483 U.S. at 833-36.

²⁶⁸ *See Dolan*, 512 U.S. at 392-96; *Parking Ass’n of Georgia v. City of Atlanta*, 450 S.E. 200 (Ga. 1994), *cert. denied*, 515 U.S. 1116 (1995) (Thomas & O’Connor, JJ., dissenting) (criticizing the legislative/adjudicative distinction limiting *Nollan/Dolan* to exactions). The majority in *Dolan* deliberately limited its test to adjudicative exactions (not those set generally by rule) at least partly because of the perceived risk of power abuses. *See Dolan* 512 U.S. at 385; *Texas Mfd. Housing Assn., Inc. v. Nederland*, 101 F.3d 1095, 1105 (5th Cir. 1996); Fennell, *supra* note 261, at 13-27.

²⁶⁹ The *Dolan* majority twice emphasized the “roughness” of its proportionality prong. *See Dolan*, 512 U.S. at 391, 395-96 (no “mathematical” formula required). Indeed, at the close of its opinion, the Court even suggested that the traditional dedication requirements of “streets, sidewalks, and other public ways” were presumptively reasonable. *See id.* at 395.

²⁷⁰ *See* Jeremy Paul, *The Hidden Structure of Takings Law*, 64 S. CAL. L. REV. 1393 (1991); ALEXANDER, *supra* note 259, at 80-95.

So the question is threefold. First, would the exaction of a conservation easement trigger *Nollan/Dolan*? Second, if it did trigger them, what could establish the requisite nexus and proportionality? Finally, supposing the two thresholds are crossed—that the test is applicable and that an exaction lacks an essential nexus or proportionality—what would just compensation entail?²⁷¹ I regard this last prong of the analysis as appropriate following *Lingle v. Chevron*,²⁷² where the Court recently and unanimously (albeit in dicta) affirmed that *Nollan* and *Dolan* are takings—not due process—precedents.²⁷³ This means that violating the nexus/proportionality norm should not be grounds for undoing the exaction, but rather only for requiring some compensation be added to the deal.²⁷⁴ Of course, neither of the opinions in *Nollan* or *Dolan* further specified that just compensation could fix the constitutional problem. But neither case presented the question of a land use authority seeking to bargain through to a dedication²⁷⁵ and the logical extension of the Court’s takings doctrine, as clarified in subsequent cases including *Lingle*, is just so.²⁷⁶

²⁷¹ While the matter is contentious, and one could take the Court at its (most recent) word that “just compensation” is measured by the “owner’s pecuniary loss,” see *Brown v. Legal Found. of Washington*, 538 U.S. 216, 240 (2003), this rule seems unfit to the exactions context. See Fennell, *supra* note 261, at 41-67. Measuring the “compensation” that would offset a dedication/exaction, thus, must look to the costs and risks being guarded against by the authority seeking the exaction. *Id.*

²⁷² 544 U.S. 528 (2005).

²⁷³ See 544 U.S. at 546-48.

²⁷⁴ Cf. *First English Evangelical Lutheran Church v. County of Los Angeles*, 482 U.S. 304, 314 (1987) (observing that the Takings Clause “is designed not to limit the governmental interference with property rights *per se*, but rather to secure *compensation* in the event of otherwise proper interference amounting to a taking.”).

²⁷⁵ The City of Tigard, in fact, did eventually settle the case with Dolan after the Supreme Court ruling, paying her \$1.5 million for the dedication it sought. See RICHARD H. CHUSED, *CASES, MATERIALS AND PROBLEMS ON PROPERTY* 1039-40 (2d ed. 1999).

²⁷⁶ Cf. ALEXANDER, *supra* note 259, at 239 (“The [Takings Clause] is not primarily aimed at preventing the state from redistributing wealth. Rather, its objective is to secure a realm of personal governance concerning particular assets, not to assure that the level of wealth individuals enjoy is unaffected by governmental action.”). The Court has made clear that “just compensation” is a legal remedy, like any other damages award for constitutional purposes. See *City of Monterey v. Del Monte Dunes at Monterey, Ltd.*, 526 U.S. 687, 710 (1999). Condemning an easement that itself raises a nexus or proportionality issue, thus, might be *remedied* with some added consideration offsetting the exaction. In *Tahoe-Sierra*

Developers, of course, expect to pay a price for their approvals and it is usually more a matter of setting that price.²⁷⁷ Furthermore, while the police power easily embraces the protection of habitat and other natural resources,²⁷⁸ the political and institutional complexities of *regulating* for something so intricate, dynamic, and critical as habitat protection/restoration are enormous and growing.²⁷⁹ Large nonprofits like TNC, NEFF, and others offer a unique vehicle to state and local governments confronting this abyss. Where local (and many state) governments are lacking in scale, scope, or both, many nonprofits present unparalleled opportunities. When facing the challenges that confront regions like the Northern Forest, these firms can face developers as peer-to-peer land advocates, continuously improving their monitoring and enforcement methods while helping to structure deals to pull them off.²⁸⁰ Indeed, these organizations have both

Preservation Council v. Tahoe Regional Planning Agency, 535 U.S. 302 (2002), where the Court held that the “interest in protecting the decisional process” of planners engaged in a regional planning exercise must be weighed in the analysis, *id.* at 340, it at least implicitly acknowledged that the regulatory bargain with any certain landowner is an inherently dynamic equilibrium, appropriately influenced by a wide array of considerations at planners’ disposal. *Id.* at 337-40. Given the uniqueness of interests that easements can protect, offering an offset as a counterbalance for an exacted easement may be necessary and planners typically have power to do so through side agreements of various kinds. See MANDELKER, *supra* note 258, at § 6.23; Frona M. Powell, *Challenging Authority for Municipal Subdivision Exactions: The Ultra Vires Attack*, 39 DEPAUL L. REV. 635, 645-70 (1990).

²⁷⁷ See Gus Bauman & William H. Ethier, *Development Exactions and Impact Fees: A Survey of American Practices*, 50 L. & CONTEMP. PROBS. 51 (1987). The Court has said that they should also expect substantial delays for regulatory approvals. See *Tahoe-Sierra Preserv. Co. v. Tahoe Regional Planning Agency*, 535 U.S. 302, 337-40 & n.31 (2002). Some state courts have even widened the scrutiny of exactions (including legislated fee schedules, for example) without deepening it by finding that the “important factor in determining the constitutionality of an [impact fee] ordinance is whether the ordinance is unduly burdensome in application” *Homebuilders Assn. v. City of Beavercreek*, 729 N.E.2d 349, 353 (Ohio 2000).

²⁷⁸ See, e.g., *Caspersen v. Town of Lyme*, 661 A.2d 759 (N.H. 1995); *Droste v. Bd. of County Commissioners of Pitkin*, 85 P.3d 585 (Colo.App. 2003).

²⁷⁹ See Colburn, *Habitat and Humanity*, *supra* note 25; Colburn, *Localism’s Ecology*, *supra* note 25.

²⁸⁰ See BREWER, *supra* note 9, at 204-14. Ducks Unlimited has been a critical catalyst in coordinating habitat acquisitions at a *continental* scale, both in maximizing the leverage of federal matching funds like those available through the North American Wetlands Conservation Act, and in selecting properties as high priorities for migratory bird habitat. See Gildo Tori, *Birds Beyond Borders*, 56 MASS. WILDLIFE 30 (No. 4 2006). Furthermore, like the Trust for Public Land, TNC is increasingly serving a brokering role whenever it can find mobilized and capable local land trusts to assume monitoring and enforcement responsibilities over the long term. See Patrick Coady, *Conservation Finance Viewed as a System: Tacking the Financial*

the incentive and capacity to appreciate human disturbance in multiple spatial and temporal scales—and to counteract it.²⁸¹ Section B argues that putting easements into their hands may prove to be a significant innovation.

B. Condemning Easements and Choosing Partners

In Schattschneider’s words, “people are not apt to fight if they are sure to lose,”²⁸² and condemning even nonpossessory property interests (like conservation easements) into the hands of third parties raises political as well as constitutional issues, certainly. The *realpolitik* of property rights rhetoric alone may confine the practice of condemning easements to the special context of threats to develop.²⁸³ This proposal is thus aimed at those situations framed by such a threat.²⁸⁴ But those situations are increasingly common.²⁸⁵

Each exaction, of course, must be weighed on its own terms, but there are a few points to be made generally. The first issue, whether the transference of such a property interest would run afoul of the “public use” requirement and thus be entirely void, seems

Challenge, in FROM WALDEN TO WALL STREET: FRONTIERS OF CONSERVATION FINANCE 22, 29-34 (James N. Levitt ed., 2005).

²⁸¹ See GROVES ET AL., supra note 6.

²⁸² E.E. SCHATTSCHNEIDER, THE SEMI-SOVEREIGN PEOPLE: A REALIST’S VIEW OF DEMOCRACY IN AMERICA 4 (1975).

²⁸³ For example, in the context used for this study, the Northern Forest, it is easy to imagine a timberlands development proposal provoking such a conservative reaction at some point in the future. See DOBBS & OBER, supra note 56, at *xix-xxvi*.

²⁸⁴ By no means, however, should it be implied that general statutory amendments clarifying when and how easements may be condemned are any more constitutionally suspect than exactions. Indeed, the Court’s case law suggests just the opposite. See, e.g., *Palazzolo v. Rhode Island*, 533 U.S. 606, 633 (O’Connor, J., concurring) (stating that, under the Court’s *Penn Central* balancing test, “interference with investment-backed expectations [such as through the change in background principles of property law] is one of a number of factors that a court must examine.”). Conservation easements are, furthermore, creatures of statutes that themselves are amenable to adjustment for the public’s needs. See Julie Ann Gustanski, *Protecting the Land: Conservation Easements, Voluntary Actions and Private Lands*, in PROTECTING THE LAND, supra note 210, at 9, 14-18.

²⁸⁵ See Lippmann, supra note 257, at 1094-1106.

easily resolved.²⁸⁶ Except for state constitutional precedents in a handful of states,²⁸⁷ the public use requirement, restated in *Kelo v. City of New London*,²⁸⁸ is highly deferential when property is transferred to a third party for bona fide reasons.²⁸⁹ Nevertheless, while conservation easements are, strictly speaking, nonpossessory interests,²⁹⁰ any instrument allowing for monitoring and enforcement—periodic entry still being a necessary element of most easements for now²⁹¹—will almost certainly be a *Nollan/Dolan* trigger.²⁹²

²⁸⁶ For example, challenges on these grounds to the condemnation of “scenic” easements behind highway beautification were easily rejected. *See, e.g., Kamrowski v. Wisconsin*, 142 N.W.2d 793 (Wis. 1966).

²⁸⁷ Lately, some state high courts, in confronting takings done with the intent to transfer to a third party, have invalidated them as inconsistent with the constitutional requirement that condemned property be for “public use.” *See Southwestern Ill. Dev. Auth. v. National City Envtl., LLC*, 768 N.E.2d 1 (Ill. 2002); *County of Wayne v. Hathcock*, 684 N.W.2d 765 (Mich. 2004); *City of Norwood v. Horney*, 853 N.E.2d 1115 (Ohio 2006).

²⁸⁸ 125 S. Ct. 2655 (2005).

²⁸⁹ In a concurrence offering further “observations,” Justice Kennedy characterized the majority’s rational basis review of the “public use” justification of a condemnation as not entirely without substance. *See Kelo*, 125 S.Ct. at 2669:

A court applying rational-basis review under the Public Use Clause should strike down a taking that, by a clear showing, is intended to favor a particular private party, with only incidental or pretextual public benefits, just as a court applying rational-basis review under the Equal Protection Clause must strike down a government classification that is clearly intended to injure a particular class of private parties, with only incidental or pretextual public justifications.

Even with this gloss, the scrutiny *Kelo* aims at the public justification for condemnation is deferential. *See* John D. Echeverria, *The Triumph of Justice Stevens and the Principle of Generality*, in *THE SUPREME COURT AND TAKINGS: FOUR ESSAYS* 22, at 35-40 (2005)

²⁹⁰ *See* UCEA § 1(1) (“Conservation easement” means a nonpossessory interest of a holder in real property”); *Dana & Ramsey*, *supra* note 212, at 4-21.

²⁹¹ NEFF’s innovative monitoring and enforcement protocols (satellite imagery, *etc.*), point to a future where physical entry may not be necessary. *See supra* note 202 and accompanying text. At present, though, an effective conservation easement is one that provides for periodic entry for monitoring and verification purposes—and one where that monitoring and enforcement is actually carried out. *See Mayo*, *supra* note 210, at 31 (“The effectiveness of a conservation easement is largely dependent on the commitment of the easement holder. The holder’s diligence in monitoring the easement and its willingness and ability to enforce the easement are two of the cornerstones of an effective easement.”).

²⁹² In both *Nollan* and *Dolan*, the “physical invasion” element was pivotal. That some third party’s rights are augmented by a change in the law is immaterial standing alone because most property is, by nature, a division of common resources and is therefore subject to frequent adjustment. *See, e.g., Andrus v. Allard*, 444 U.S. 51, 64 (“[G]overnment regulation—by definition—involves the adjustment of rights for the public good. Often this adjustment curtails some potential for the use or economic exploitation of private property.”); *cf. FREYFOGLE*, *supra* note 14, at 143-56 (exploring implications of viewing land as a “community”). An easement is functionally indistinct from any other use restriction, constitutionally, *except* insofar as it may allow a third party to enter upon the premises, *i.e.*, a “physical invasion.” Moreover, not all imposed physical invasions have risen to the level of a taking. *See, e.g., Pruneyard Shopping Ctr. v. Robins*, 447 U.S. 74 (1980).

The question is basically one of tailoring: is the particular easement to be condemned, and are the receiving organization's purposes, germane to the government's underlying policies restricting use in the first place and is the scale of the easement roughly proportionate to the risks the development presents? Consider the Plum Creek easement. Barring intensive study of the region's biogeography, resident species, and imminent threats, a detailed accounting of the easement's proportionality would be impossible. Indeed, notwithstanding a maturing literature on "ecosystem services," attempts to quantify the benefits of continuous, unfragmented landscapes as habitat are probably misguided given our ignorance of how nature is organized and functions.²⁹³ Structuring and justifying any such exaction according to provable "harms," thus, invites several kinds of confusion.

While conservation biologists have established the importance of genetic and structural "permeability" across landscapes,²⁹⁴ with climate change on the horizon that project is only growing more urgent at the same time it is becoming less certain in execution.²⁹⁵ Habitat protection is, thus, justifiably identified with the exclusion—or, more likely, the *correction*—of humanity's urbanizing influences to the greatest extent feasible.²⁹⁶ Establishing that an easement's terms bear a rough proportionality to the risks a development proposal like Plum Creek's represents, in short, is a question of

²⁹³ See Colburn, *Indignity*, supra note 25, at 430-31; MORRISON, supra note 2, at 41-66. In fact, it is beginning to seem as if the whole ideal of planning in terms of "ecosystem services" may be misguided. See Kai M.A. Chan *et al.*, *Conservation Planning for Ecosystem Services*, 4 PUB. LIB. SCI./BIO. 2138 (2006).

²⁹⁴ See Colburn, *Indignity*, supra note 25, at 431-36.

²⁹⁵ See supra notes 86-89 and accompanying text.

²⁹⁶ Simberloff *et al.*, supra note 111; JORDAN, supra note 59, at 28-53; Holling & Gunderson, supra note 49. The exclusion of roads or road improvements and land parcelization are, at least generally speaking, perhaps the strongest indicia in such efforts. See FORMAN ET AL., supra note 109, at 351-74.

biogeography.²⁹⁷ Now, the power to conform land use to the local public will (the power that has made exactions pervasive) is a sovereign power, to be sure. But easements are possibly the best tool for achieving or safeguarding landscape permeability, at least where they are coordinated at broader scales. Piecemeal set-aside requirements by planners boxed into small jurisdictions may, with this tool, be transformed into a vehicle for reaching broader scales, depending on which nonprofit partners are chosen. Thus, habitat and broad scale coordination seem to be the best framework for public officials justifying such easements in the face of litigation.

There are no objective criteria for selecting “focal” species to these ends.²⁹⁸ But framing the dialogue that would unfold between developer, planner, and nonprofit, the species of the region facing the most tangible threats—predators and migratory birds in the Northern Forest’s case—are perhaps the best starting point and their habitat needs must be key.²⁹⁹ Such a dialogue could serve, especially if easements were granted on a term basis,³⁰⁰ as a means of keeping regional land use policies open to continuous integration and improvement. Selecting focal species and identifying their habitat needs could be an integrative and transformative exercise politically because of how much learning is needed to make such findings. (But if agencies have any role to play in that, it

²⁹⁷ *Cf.* Sax & Keiter, *supra* note 164, at 246-58 (finding in a twenty year retrospective on threats to Glacier National Park that national forest lands had essentially become a de facto buffer zone to the park with wildlife serving as the single greatest catalyst of that trend).

²⁹⁸ “Focal” species are the conservation indicia chosen when developing explicit guidelines for “determining the composition, quantity, and configuration of habitat patches at the landscape scale for restoration purposes.” GROVES ET AL., *supra* note 6, at 94.

²⁹⁹ *Cf.* MORRISON, *supra* note 2, at 41 (“Habitat is considered one of the few unifying concepts in contemporary wildlife ecology.”); Terborgh *et al.*, *supra* note 68.

³⁰⁰ The perpetuity element of conservation easement statutes today is a remnant of concerns over authenticity (and tax consequences) that are readily resolvable through other means (or absent). Thus, in this context, there is no good reason to rule out the use of term easements.

is chiefly to pool and distribute information.³⁰¹) In the Northern Forest’s past, whole resident populations have been extirpated while others have been “released” from the checks previously regulating them as the result of broad scale changes in use.³⁰² To be sure, selecting the right focal species and keying the appropriate use inclusions and exclusions thereto would be a necessarily complex and context dependent undertaking. But if LURC were to condition its approval of the Concept Plan on Plum Creek’s transfer of the easement it negotiated with TNC—*minus* the \$35 million—and if it were to make calibrated findings linking the easement to any of *several* goals articulated in its comprehensive land use plan,³⁰³ the move would fit within a reasonable interpretation of many states’ general exactions statutes³⁰⁴—including Maine’s.³⁰⁵

³⁰¹ The Forest Service, for example, has for years supported work by several of its scientists studying regional habitat overlaps and incompatibilities. *See, e.g.*, RICHARD M. DEGRAAF ET AL., LANDOWNER’S GUIDE TO WILDLIFE: FOREST MANAGEMENT FOR THE NEW ENGLAND REGION (2005). But it has done virtually nothing to publicize or distribute this work, nor to use it as a federal benchmark of any kind.

³⁰² *See Foster et al.*, *supra* note 81. On the concept of species “release” in the elimination of natural checks such as through predation, see Terborgh *et al.*, *supra* note 68.

³⁰³ *See, e.g.*, COMPREHENSIVE LAND USE PLAN, *supra* note 235, at 139 (Goal L) (“Conserve and protect the aesthetic, ecological, recreation, scientific, cultural, and economic values of wildlife and fisheries resources.”); *id.* at 138 (Goal J) (“Preserve, protect, and enhance the quality and quantity of surface and ground waters.”).

³⁰⁴ *See* Mark Fenster, *Regulating Land Use in a Constitutional Shadow: The Institutional Contexts of Exactions*, 58 HASTINGS L.J. *27-30 (forthcoming 2007). To be sure, several states have statutes that would prohibit such an exaction. *See, e.g.*, Thompson v. Village of Newark, 768 N.E.2d 856 (Ill. App. 2002) (Illinois statute limits authority for exactions to road or school use only). In fact, Professor Fenster argues persuasively that state statutes are, in light of *Nollan* and *Dolan*’s deferential posture, “the most significant mechanism for controlling local discretion to impose exactions.” Fenster, *supra*, at *27. I have argued that, where necessary and proper in light of development pressure and public support for conservation, states should amend their law to allow exactions of conservation easements if they hope to achieve landscape scale conservation objectives in the near or medium term.

³⁰⁵ *See* 30-A M.R.S.A. § 4354 (authorizing municipal exactions where they are “reasonably related” to the public infrastructure needs and other public costs a development proposal may generate). The novelty of LURC’s jurisdiction over Maine’s unincorporated territory arguably sets it apart from most of the rest of the East in that it is a state agency, not a municipality. But Maine has provided analogous authority to LURC. *See* 12 M.R.S.A. § 685-A (8-B) (“Adoption or amendment of land use standards may not be approved unless there is substantial evidence that the proposed land use standards would serve the purpose, intent and provisions of [the Use Regulation Statute] and would be consistent with the comprehensive land use plan.”). And, in any event, LURC’s decisionmaking *capacity* is apparently no greater than most municipalities’: it uses its authority to charge large processing fees, *see id.* at § 685-B(2), presumably in order to pay consultants to evaluate such proposals. Admittedly, though, my conclusion assumes that the easement’s terms are based in sound biology. By not making the details of the deal public, TNC and Plum Creek have made it impossible to determine whether the easement is that sound. However, I see no reason

More important are the differences between traditional use restrictions of the kind and the entrepreneurial step of condemning an interest in land into a nonprofit's hands. Connecting large nonprofits and their technical acumen to such processes could be, with the right networking and information pooling,³⁰⁶ an important mode of accountability for all parties—one that transcends the turgid and ritualistic forms of “public participation” endemic to land management planning generally.³⁰⁷ Improvised procedures for doing such deals and noticing them to the wider public³⁰⁸ could be more than just novel public/private partnering: they could be a new mode of integrating science and politics. Distributed design and production, after all, are the only *imaginable* paths to the kind of adaptive management that sustaining ecological and social systems' resilience will require.³⁰⁹ Perhaps just as importantly, though, condemning these easements instead of demanding cash payments would free up precious capital being acquired by the nonprofit sector for other purposes, most especially for research, capacity building, and further innovation.³¹⁰ It would also acknowledge that the public service these organizations provide in enforcing conservation easements is compensation enough for fairness's sake.

VI. CONCLUSION

in the abstract, *i.e.*, because of its scale, that the easement is either disproportionate or lacking an essential nexus.

³⁰⁶ See YOCHAI BENKLER, *THE WEALTH OF NETWORKS: HOW SOCIAL PRODUCTION TRANSFORMS MARKETS AND FREEDOM* (2006) (describing the competitive advantages of social production in a digitally networked environment and arguing that a networked public sphere would dramatically enhance public welfare and freedom).

³⁰⁷ BUYING NATURE, *supra* note 166, at 245-72; Colburn, *Habitat and Humanity*, *supra* note 25 at *30-34.

³⁰⁸ See, e.g., Cheever, *supra* note 182, at 439-43; Lippmann, *supra* note 257, at 321-29 (describing the procedures that have been used in habitat conservation plan (“HCP”) easements and offering a critique).

³⁰⁹ See BENKLER, *supra* note 306, at 212-72 (describing an “institutional ecology” of peer-to-peer collaboration in which the influences of state coercion are of diminished importance because collective creativity and private initiative are harnessed to demand, thereby driving production).

³¹⁰ Levitt, *Conservation Finance System*, *supra* note 9, at 29-32.

Forestry and agriculture in this country are struggling not just in how to define “sustainability” or how to achieve it one landowner at a time. They are struggling over their very nature as land uses and the extent to which they are worthy of public subsidy. The economics of owning timberlands or farmland in America have encouraged subdivision and sale for many years now and no fundamental change in that market reality is likely anytime soon.³¹¹ Yet, while the easement strategy was a subtle, adaptive response to this reality, it is beginning to generate monumental risks for conservation³¹² at the same time it is rising in cost and incentivizing markets to undermine its effectiveness.³¹³ In places all over North America as different from the Northern Forest as are the Southern Rockies, these are the threats we face for the medium and long term.³¹⁴

“Multiple use” is exactly the standard of care by which the vast majority of land in America, including the Northern Forest, is and has always been managed.³¹⁵ But easements condemned into the hands of third parties can be structured as “working forest” easements administered by organizations like NEFF as easily as they can be made more stringent. Professor Costonis long ago mused that easements could be a middle ground between uncompensated regulatory takings and condemnations with ‘just

³¹¹ Irland, *supra* note 52, at 18.

³¹² BREWER, *supra* note 9, at 175 (“[A] prudent observer is drawn to the position that many land trusts have begun to rely too much on a single land-protection device whose durability has yet to be established. Easements are becoming the monoculture of the land trust community.”).

³¹³ See *supra* notes 226-56 and accompanying text.

³¹⁴ See THE STATE OF THE SOUTHERN ROCKIES ECOREGION: A REPORT BY THE SOUTHERN ROCKIES ECOSYSTEM PROJECT 62 (2004) (finding that by 2020, “nearly one fourth of the Southern Rockies’ total land area will either be replaced by urban or suburban landscapes, modified by “exurban” and “ranchette” level development, or occur within one mile of these developments.”).

³¹⁵ See Bradley C. Karkkainen, *Biodiversity and Land*, 83 CORNELL L. REV. 1 (1997).

compensation.’³¹⁶ I have argued that he was more right than he knew and that easement exactions should be considered as a vital link in the connectedness of conservation efforts—whether public, private, or something new under the sun.

³¹⁶ See John J. Costonis, “Fair” *Compensation and the Accommodation Power*, in REGULATION V. COMPENSATION IN LAND USE CONTROL: A RECOMMENDED ACCOMMODATION, A CRITIQUE, AND AN INTERPRETATION 3 (John J. Costonis et al. eds., 1977).