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Conceptualizing Wilderness Through GIS

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Conceptualizing Wilderness Through GIS

Sarah Stevens '09

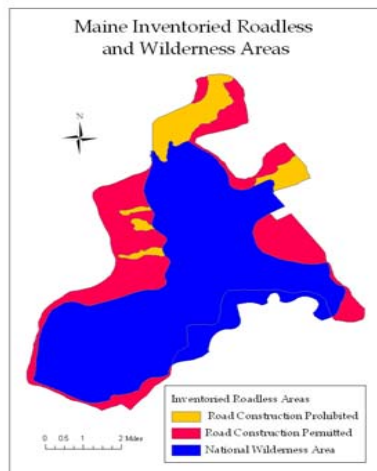
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What is wilderness?

The word "wilderness" in America is generally identified with pristine places where humans are not among the primary influences on the land and its ecology. The American wilderness ethic creates a strict dichotomy between humans and nature. The Wilderness Preservation Act of 1964 defines wilderness as "an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain" (wilderness.net). This statutory definition of wilderness is essentially the functional embodiment of the American wilderness ethic. Wilderness can also be interpreted in ways that incorporate humans as active players in the natural world. Land which is managed for human use but is uninhabited can be considered wilderness to some degree because "man himself is a visitor who does not remain." Wilderness, especially in the Northeast, can be visualized based on different land use characteristics. Conservation in the Northeast requires a redefinition of wilderness in order to incorporate land that has been utilized by humans.

How do we conceptualize wilderness?

The use of the word "wilderness" in the context of land conservation is generally associated with the American wilderness ethic that has evolved with the country. Americans typically identify wilderness as parcels of land which are beyond the influence of humans. This definition of wilderness that strictly excludes humans can be problematic for designating conservation lands because we have affected most of the land in the country at some point in history.



Roadless Areas in Maine:

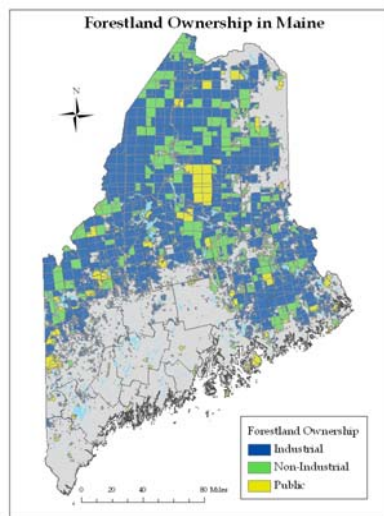
The historical use of land in Maine has primarily been industrial, which has led to a proliferation of forest roads. The Maine woods are crisscrossed with roads, both active and inactive. Perceiving wilderness as roadless areas is not an effective conservation strategy for the Maine forest because most forest parcels are in close proximity to roads.



This map shows a close-up view of the road regulations for the Caribou-Speckled Mountain wilderness area in western Maine. The National Wilderness Area was designated under the Wilderness Preservation Act in 1990, and does not contain any active roads. The surrounding areas are designated as inventoried roadless areas, but some sections are classified to permit road construction and reconstruction.

Wilderness in the Northeast:

The American wilderness ethic's distinction between humans and nature presents a difficulty for identifying wilderness areas in the Northeastern United States. Land in the Northeast, especially in Maine's North Woods, has traditionally been utilized by the timber industry. This trend of privately-owned forestland has resulted in small public land parcels which are often separated from one another by private holdings. The government has only been able to procure conservation lands by buying out private owners as land becomes available for sale. Although the northern forest is fairly continuous, there are large gaps between public conservation lands. Private forestland ownership in the Northeast calls for a different perspective on wilderness which accommodates human activity. As we have influenced almost all of the northern forest, often by timbering, preservation strategies must recognize the importance of conserving land beyond that which is considered statutory wilderness.

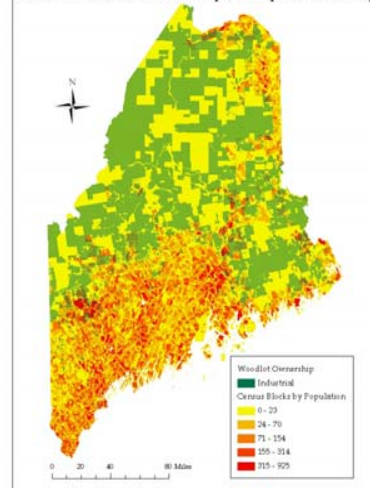


Woodlot ownership based on a 1993 Northern Forest Land Survey. Industrial owners are those who have at least one primary wood processing facility, while non-industrial owners are classified as those with no primary wood processing facility. Public owners include all levels of government ownership. Private land ownership is not included in this data.

References:

Maine Office of GIS: <http://apollo.ogis.state.me.us/catalog/catalog.asp>; Roadless Area Conservation: <http://roadless.fs.fed.us/documents/feis/data/gis/coverages/index.shtml>; Cronon, William, ed. *Uncommon Ground: Toward Reinventing Nature*. New York: W.W. Norton & Company, Inc., 1995; Klyza, Christopher M., ed. *Wilderness Comes Home: Rewilding the Northeast*. Hanover: University Press of New England, 2001.; *Wilderness Legislation: The Wilderness Act of 1964*. Wilderness.net. 30 April 2007. <<http://www.wilderness.net/index.cfm?fuse=NPWS&sec=legisact>>.

Industrial Forestland Ownership and Population Density



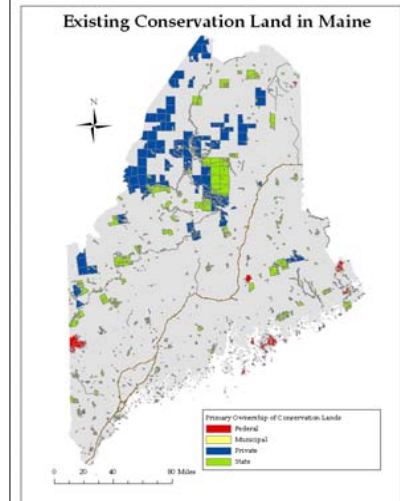
Population densities are based on population by census blocks as defined by the 2000 redistricting data. Industrial forestland ownership is representative of firms which own at least one primary wood processing facility. Areas of forestland ownership are sparsely inhabited, with less than twenty three people per census block.

Industrial Forest Lands in Maine:

Timber companies own the majority of the Maine woods and actively manage them for wood production. Recently, timber company land sales have allowed for private and government entities to obtain more sections of the Maine forest. Availability of timberland for private or public acquisition drives the ownership composition of Maine conservation lands. As more land becomes available on the market, the quantity of forestland in Maine that is dedicated to conservation will change. Thus, current industrial forest ownership can serve as a prediction of areas that will potentially be available for conservation in the future.

Conservation Lands in Maine:

Existing conservation lands in Maine are owned by a combination of organizations, individuals, and governments. Although not all of the conserved lands would be considered wilderness, several prominent areas could be perceived as such. Baxter State Park, for example, is a large piece of protected land that has few roads. It is administered by the State of Maine, and is used for recreational purposes. Many of the other conservation lands are also available to the public for access, even if the parcels are not owned by the government. Conservation land in Maine is an important resource for the public and for ecological studies.



Land that is dedicated to conservation purposes in Maine, stratified by primary land ownership. Private lands are those owned by nonprofit organizations. Each category of land ownership represents full ownership, a conservation easement, or a lease on the land. This data includes all types of conservation lands, not solely forested areas.