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From Wilderness to Timberland to Vacationland to Ecosystem: Maine's Forests, 1820–2020

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From Wilderness to Timberland to Vacationland to Ecosystem:

Maine's Forests, 1820–2020

by Lloyd C. Irland

Abstract

The 200 years since Maine statehood span a series of changing metaphors used by people to understand the forest and its values: the forest as wilderness, as timberland, as vacationland, and as ecosystem. These metaphors have succeeded each other over time, but broadly speaking, they all persist to one degree or another. These ways of viewing and using the forest can conflict or can come to uneasy truces, but new developments can revive the tensions. Public policy is always well behind the shifting needs as timberland comes to be seen as vacationland and vacationland as ecosystem. Further, conflicts between different visitors to vacationland can be among the most difficult to solve. As Maine moves into its third century, the momentum of forest regrowth has shifted into reverse gear: for the first time in a century or more, total forest area is beginning to shrink.

Maine's state seal is centered on a stylized pine tree, flanked by the figures of a farmer and a sailor. This ensign displays two key forces shaping Maine's forest: the farmer and the navigator. The story of Maine's forest interweaves many themes in American economic history, including technology and markets for wood products, trade tensions, labor-management conflicts, financial technology, logging equipment, and transportation systems to name just a few. These influences can only be briefly touched here.¹

For this story of Maine's forests, no set of periods seems airtight enough to clearly demarcate every facet of their complex history. Treating themes on their own across the period will lead to a more coherent narrative than trying to divide everything into discrete time periods. To simplify an opening overview, Table 1 divides the bicentennial period into just two halves. This article will identify three Maines: the forests of southern Maine, the North Woods or wildlands, and the suburbanizing wildland urban interface (WUI). A fourth, the forests of the coast,

islands, and points, has its own history and dynamic, but space forbids considering it here (Figure 1).

THE FORESTS AT STATEHOOD

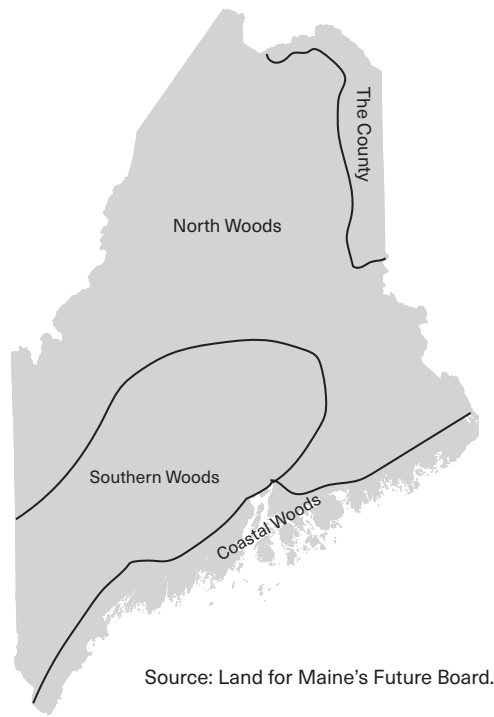
Maine at statehood was a troubled place. People and communities were trying to restitch a political society and economy buffeted by three dramatic crises: Jefferson's embargo, the War of 1812, and 1816—the “year without a summer.” Two years of unprecedented harsh weather brought famine to the countryside and stimulated significant outmigration. A rudimentary state government and legislature were emerging; local town government remained in place. For Maine's forests, however, events in

TABLE 1: **Maine's Land Area—Rough Sketch, 1820, 1920, 2020**

Land Type	1820 (%)	1920 (%)	2020 (%)
Forest	92	76	89
Wild	84	1	3
Managed timber	1	75	86
% plantations	0	0	2
Wetland/marsh/waste	11	12	4
Farmland, improved	4	10	2
Urban, infrastructure, other	1	1	4
Total land (thousand acres)	19,739	19,100	19,739

Note: Assembled from a variety of sources with a liberal dose of “Kentucky windage” by author (Irland 1998, 1999). Authoritative sources, accurately measured and using consistent definitions, do not exist. Even today's satellites do not eliminate all ambiguities.

FIGURE 1: Schematic Map of Maine Forest Regions



Augusta and southern Maine echoed only faintly across the “damp and intricate wilderness” (Thoreau 1972: 80) beyond the frontiers.

By 1820, Maine’s population, concentrated along the coast and a few inland rivers, had reached almost 300,000. In the rural areas, many of these people spent some part of a year cutting wood, if only for the 10 or more cords of annual wood needed for the kitchen stove, or for nearby towns or even Boston. During these early years, visitors lamented that Maine people preferred fishing and lumbering to the hard work of clearing land and establishing farms. This preference, they said, retarded the development of the state. Few of these writers, of course, ever bent their backs to axes, spades, and scoots to clear stumps and stones or plowing to raise wheat. During the 1820s, Moses Greenleaf (1829) looked ahead to a glowing future in which Maine’s northern forests were cleared except for woodlots and town forests.

Massachusetts had owned all ungranted lands in Maine, based on the royal grants to its successive governments. So, as of 1787, the federal government held no

lands in Maine. Before Maine’s first legislature met, 9.8 million acres of Maine had already been sold or granted away, notably in the Bingham purchases and royal grants. At statehood, then, Maine forests were already owned to a large extent by out-of-staters.² The outlines of these large holdings can be dimly perceived in the maps of several major private holdings to this day.

In 1820, 6.6 million acres of land, mostly in forest, were in the settled towns and plantations. In the Act of Statehood, Maine and Massachusetts split 5 million acres of surveyed public lands into two roughly equal parts (Greenleaf 1829). A remaining 6.3 million acres to the north and west remained a wilderness. The legislature ended Massachusetts’s interest in Maine lands with a buyout in the 1840s. Following ancient custom, the state inherited interests, termed the public lots, in those wild-land towns (Urquhart, forthcoming).

Many decades passed before surveyors completed monumenting the corners of the typical six-mile-square townships or towns in the wildlands (Irland 1986; Wilkins 1963). Until the 1970s, the public lots in many wildland towns were held in common and undivided tenure with the majority owners and never laid out on the ground. In this vast district of the so-called unorganized towns, there were no public roads or local public services. Maine is third in the nation in terms of total area of unorganized land within its borders, after North and South Dakota.

THE FOREST RECEDES

Greenleaf’s prophecy of a region whose forest is largely replaced by thriving farms and small villages probably supported the morale of a new state emerging from serious challenges. Farmers could look ahead to growing nearby populations, roads and railroads reaching their towns, rising land values, and prosperity, even as nearby land remained for the children to farm. By the 1820s, such hopes were already fading in the long-settled towns of eastern Massachusetts and southern New Hampshire. What happened? To shorten a complex segment of economic history (Irland 2011), the first event was the transportation revolution: the Erie Canal (1825) followed by the Suez Canal (1869) and railroads (Pacific Railroad, 1869). The second was modern agricultural technology that works best on the large, flat fields of the Corn Belt with their deep soils. The Old Northwest became the nation’s farm heartland for more than a century. By 1880,

as the prairies filled up, Maine’s farmland was simply not needed anymore. Many of the farmers and their children stayed put, seeking employment in small-scale manufacturing, logging, and other trades.

Still, Maine forests fell to the farmer’s axes until the 1880s (Irland 1998, 1999). A surging agricultural economy through the 1880s left behind important bequests, however. One was a large labor force in place around the fringe of the wildlands, available for winter woods work. Local farms formed a critical supply base for later logging contractors who needed to feed thousands of horses and workers every winter. More importantly, though, the farm economy created numerous blacksmith shops and small metalworking businesses who supplied horseshoes and wagon parts, then morphed into small-scale producers of tools and machines of every description. Industrial directories of the late nineteenth century offer impressive arrays of such gear available locally. This was a key competitive advantage for Maine as later generations graduated from horses to tracked Lombard log haulers, to skidders, and then to complex, high-capacity forwarders, feller-bunchers, and processors. These toolmakers and machinists were essential to the builders of ships, locomotives, paper mills, small woodworking specialty plants, and hydroelectric facilities that would become so important in the next century. A detailed history of technology could be written of this sector’s development and its key linkages to other parts of Maine’s economy. One way to indicate the impact of technology and changing demands is to compare the proportion of an average forest acre that could be utilized in the days of white pine masts, with what modern equipment can cut and chip into logs and biomass (Table 2).

So, Greenleaf’s dream foundered on the region’s stony and poorly drained soils, its harsh climate, and the Erie Canal. In the end, the lumberers were proven right. Farmland clearing, mostly in southern Maine and communities on the fringes of the wildlands reached floodtide only 60 years after statehood. Aroostook, with its soils favorable for potatoes, was the exception, increasing its cropland area to the late 1940s. Many rural towns and villages still display fine brick commercial buildings and roomy homes with huge barns behind them. The prosperity reflected by these streets came not just from agriculture but from a wide array of small- and medium-sized businesses serving agricultural and industrial customers around the state and region.

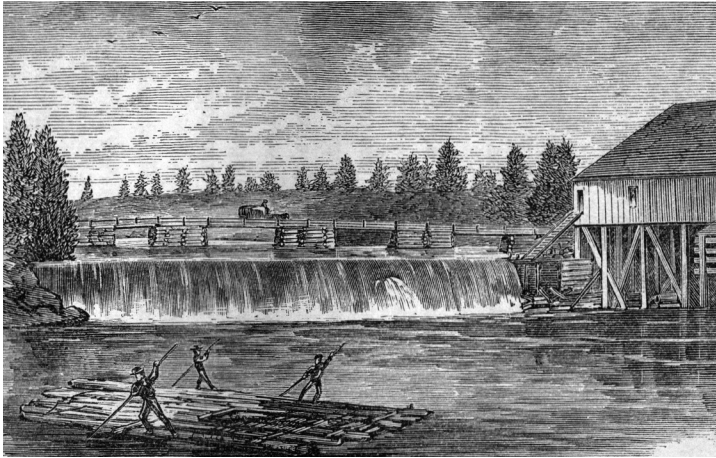
TABLE 2: Utilization Changes of Forests—Illustrative

Forest product	Percentage of forest used	Century
Pine masts and spars	5	18th
Pine and spruce sawlogs for lumber	30	19th
Paper and logs	60	20th
Biomass	100	late 20th, early 21st

By 1880, the most deforested counties were York, Kennebec, and Waldo. Even in that pivotal year, Cumberland County was still 50 percent forested. Farmers still owned a good deal of land, but increasingly it went to grazing sheep and horses, producing hay for the market, or just slowly filling in with aspen, birch, or pine. By the late nineteenth century, all but the largest farms were supported by a variety of seasonal activities, from logging to working in local food processing plants like the corn shops. By 1920, less and less land was under the plow.

THE RIVERS

The trajectory of Maine’s forests over the nineteenth and twentieth centuries cannot be untangled from its rivers. Indeed, until the early twentieth century, writers always referred to the forests by their watersheds: the forests of the Kennebec, the Penobscot, the St Croix. Early on, the lumbermen began re-engineering the rivers, beginning with dams near tidewater. They then needed bigger dams to power bigger mills. Upstream, they dammed tiny headwater brooks to hold water to flush the logs downstream with the spring freshet. In the legislature, they tangled over control of the rivers when they needed ever bigger dams to move their wood (Smith 1961). When the hydropower industry arrived, compromises were negotiated and major dams had flumes installed to move the logs downstream. Not content, contractors then went after the rivers themselves, armed with drills and dynamite. Oxbows were cut off and boulders blasted to bits to smooth the way. In the 1950s—amazingly with state permits—operators lowered bulldozers into rivers to smooth the logs’ way even more. River drives continued well into the twentieth century, to the 1940s on the Saco and until 1976 on the Kennebec.



Upper Dam, Ellsworth 1869

Source: Wells (1869)

Up until about 1900, engineers used the term *horse-power* when referring to the energy produced by the dam, a term familiar to its most important users, millowners and other industrialists. Or they rated damsites in terms of how many spindles a given dam privilege might turn. By the turn of the twentieth century, though, electricity emerged as a driving force in manufacturing. Mills grew ever larger, and their power needs grew with them. Existing lakes were raised by dams, often more than once. Thomas Edison indeed changed Maine's rivers. Urban power companies and manufacturers also reached into the wildlands for damsites. A full-scale re-engineering of the state's waterways took place. Today, every one of Maine's eleven largest lakes is an impoundment or a raised lake.

Papermakers need water. Water brings logs to the mills, helps prepare and cook the pulp, rinses the pulp clean, forms the sheet on the huge paper machines, and carries away the waste. Falling water powers the whole system. As the paper industry grew and required ever larger mills following the 1890s, these requirements ruled the major papermaking streams. By the 1950s, the Androscoggin, Kennebec, and Penobscot had become stinking sewers during the summertime low flows. At that time, few citizens penetrated deeply into the woods, but they lived near these rivers, and in time the people's sense of powerlessness turned into rage and then into action. By 2020, well-dressed young professionals sip their microbrews on verandahs overlooking these very rivers. Their

grandparents built fine homes well away from the rivers to avoid the stink.

THE FOREST RETURNS AS TIMBERLAND

Statewide after 1880, the Maine forest gained some 4 million acres, virtually all of it reseeding naturally (Irland 1998). Most of this was in the southern counties, which saw their landscapes change noticeably. After World War I, crop prices crashed, and Maine's farm economy was then dealt its final blow: tractors replaced horses. The demand for hay, which had supported many marginal farms, virtually disappeared. As farmland area continued to shrink in response to its diminished competitiveness, plowland and hay fields shifted first to pasture, then went back to scraggly, uneven forests (Irland 1999; Smith 2004). The species differed from place to place: pine and oak in the south, aspen, birch, and spruce in the north. Even with expanding populations and sprawl in southern Maine after the 1960s, enough land was released from farming that the total area of wooded land continued to increase until the early 2000s (McCaskill et al. 2016).

In the 1970s and 1980s, Maine forest owners and industry were challenged by a severe outbreak of spruce budworm (Irland et al. 1988). The heavy mortality and rising demand for lumber and paper triggered a subsequent outbreak of clear-cutting. Concurrently, corporate owners undertook a bold experiment. The paper companies foresaw continued increases in demand for paper and needed to ensure their mills could supply it. They embarked on forest practices not previously known in Maine, including planting after logging instead of relying on natural regeneration. They used herbicides to control competing vegetation and experimented with fertilization. These practices produced a great deal of unease and scientific and policy conflict over the implications for ecosystems.

STRESSES ON THE INDUSTRY

By the early 1990s, the business model underlying the vertically integrated paper and lumber companies had begun to fray at the edges. Demand for paper slowed and then turned down. Scope for expanding harvest was limited (McCaskill et al. 2016). The mills were aging;

modern mills in the South and on other continents became the low-cost producers. While Maine's mills had largely caught up with pollution control requirements, the costs were burdensome. Long-established mills were traded back and forth among ever bigger corporations and then to private equity groups. Even as these restructuring efforts continued, the bottom fell out of paper markets. People got their information from the internet, TV comedians, and echo-chamber TV personalities instead of newspapers and weekly news magazines. Communities felt the impact as paper mills modernized and cut their labor requirements. Main streets began to look shopworn. Progress in the paper mill towns went into reverse gear. Finally, all that was left at the millsites in town after town were rusty abandoned rail sidings and weedy abandoned foundations. By 2019, significant capital investment from China arrived, raising hopes for stabilization after the long dark time.

In the 1950s, more lumber was produced in southern Maine than in the paper company forests of the north. Modern technology saved the industry by making two-by-fours out of far smaller trees than was possible before. But this new world needed far fewer mills and fewer workers. During the 1970s and early 1980s, most paper companies believed they needed a sawmill to get better yield from their logs and to supply their mills with chips. In the early 1990s, cutbacks in timber production on western national forests drove up lumber prices, prompting new investment in eastern sawmills. Maine pine sold as far away as Oregon. Modern sawmills loaded with electronics can produce a million board feet a year per worker. Today, no major spruce sawmill is owned by the multinationals, while most of the pine mills have always been independent. But a shrinking paper industry no longer needed sawmills; today's Maine paper companies own none.³

In logging, new high-tech machines brought many benefits—they were safer for workers and were able to move larger quantities of smaller wood. Some generated less soil damage than their predecessors. But the new machines required burdensome capital investments and displaced much hand labor, which further diminished employment options around the wildland fringe. The post-2006 Great Recession slashed national housing production, reducing national lumber demand by 50 percent;



Maine as Vacationland

housing production has not yet reached the prerecession peak. The recession also accelerated the decline of paper-making in Maine as well (Irland, forthcoming).

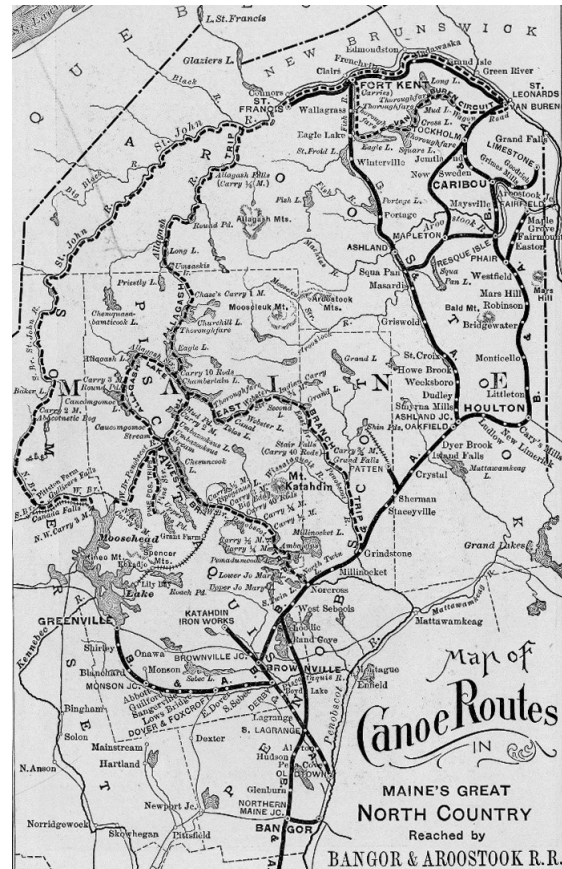
MAINE AS VACATIONLAND

When Thoreau visited Maine, he encountered Indian hunters, the occasional Boston sport, and timber cruisers. Historians say puritanical New Englanders thought that sport fishing and hunting were for ne'er-do-wells; hard work was king. However that may be, few people had the leisure and funds to spend time in the woods, whether in York County's quieter lakefront villages or in Franklin County's rugged Rangeley Lakes Region or on Washington County's Bold Coast. Late in the nineteenth century, though, resort hotels along the coast and the lakes became popular; a few hotels sprouted in Rangeley and on Moosehead Lake. Prosperous families

summered at these high-ceilinged hostleries with wide verandahs and captivating views. Public transportation provided ready access to wealthy tourists by steamer up the coast then by train, coach, and lake steamer to reach the resorts. Few of these urbanites ventured out of sight of the resort's dock, however. The Boston *sports* participated in a genteel culture of small sporting camps with their guides, guide boats, and refined fly-fishing techniques. These gentry were also among the first to explore the paths up the region's peaks to see the views.

Three things changed this forever, generating a post-World War II rush of visitors to the woods. First was union membership, the 40-hour week, and higher wages in manufacturing. The second was widespread auto ownership. Blue-collar families now had the means and the time. Returning GIs in the late 1940s sought well-earned peace and recreation in the forests and brought the kids along. Many were used to camping out and preferred the outdoor air to the Brahmin atmosphere of the old and costly hotels. With the advent of heavy trucks, log driving gradually ended and roads opened the North Woods. The sturdy riverman, balancing on a log with pick pole in hand, vanished into the history books. The rivers were opened to the Old Town Canoe Company's famous canoes. Third, the turnpike and the Eisenhower era's interstate highways trimmed travel times dramatically. The gateways to the Northwoods became busy on summer weekends and during hunting season.⁴

Few of the big resort hotels survived the Depression and World War II. Ways of enjoying the outdoors switched for a time to tenting, then to camping with travel trailers or motor homes in developed sites. As the offspring of early campers prospered, they wanted to buy their own little piece of heaven. Lakefronts filled up with camps on 100-foot-wide lots; later, full-featured suburban-style homes, with lawns to the water, appeared. As the shore-front built out, the more distant "view lots" spawned midslope roads and leisure castles with wide decks and expansive views. Rafting and canoeing groups jostled for places at crowded put-in points on major wilderness rivers. Allagash paddlers sought more solitude and fought bitterly against access points that might allow motorized canoes to disturb their peace. Managers of Baxter State Park struggled to contend with large groups holding parties atop Katahdin in defiance of regulations designed for a more prim and conservative age. The age of snowmobiles and all-terrain vehicles brought baffling new conflicts to both



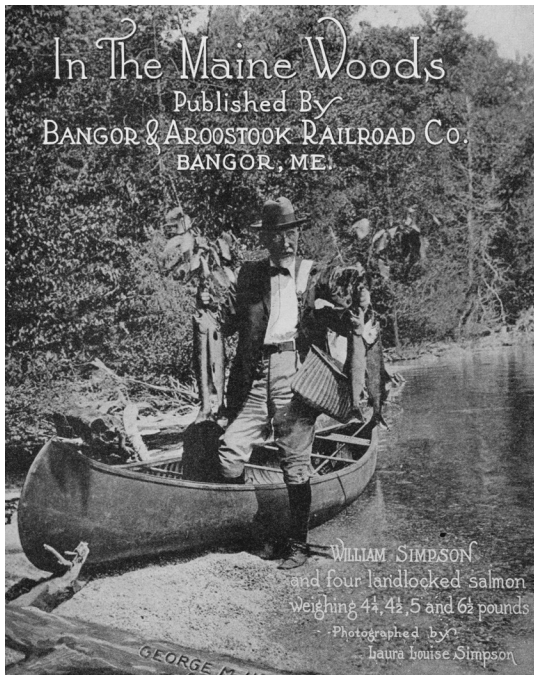
Maine North Woods Canoe Routes, 1920s

Source: Bangor & Aroostook Railroad

private and public timberlands managers, now rebranded by the tourism industry and outdoor magazines as the wilderness. For the first time, then, recreationists travelled the Maine Woods in numbers, and many did not like what they saw. The wildlands they remembered from childhood visits had sprouted large clear-cuts, with little evidence of regrowth. The impression was not one of care for long-term sustainability or for the forest as home for wildlife and fish.

All conservation of wilderness is self-defeating, for to cherish we must see and fondle, and when enough have seen and fondled, there is no wilderness left to cherish. (Leopold 1966: 101)

By the 1980s, it became evident that vacationland, timberland, and wilderness do not always comfortably



An elite angler, 1921

Source: Bangor & Aroostook Railroad

coexist (Irland 2017a). Larger numbers of visitors were welcomed by the tourist trade, but popularity brought its own problems. Wealthy individuals buying large lots on mountainsides and lakefronts threatened to change the view and restrict public access. By the 2010s, hunters were reporting that the extensive road network spawned, ironically, by the wave of clear-cutting, was shrinking. Roads were blocked and reverting to shrubs; bridges were being removed. Old hunting haunts could no longer be reached on wheels.

WILDLIFE

For many visitors, their first encounter with ecology was learning the birds, animals, and fish of the woods and lakes, not just in remote uplands but across the state. People and groups concerned with wildlife, in general, and hunting, in particular, began to register their concerns with legislators and in a growing outdoor press. Foresters and land managers also learned new things—about vernal pools, deer-wintering areas, and rare species. The story of Maine's wildlife requires its own long essay, or better yet,

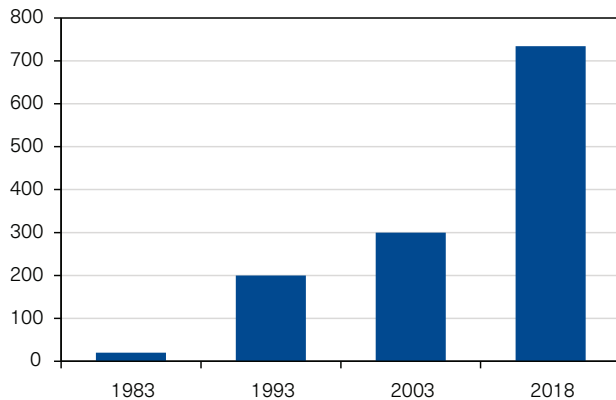
a book. By 1820, deer populations near settlements were severely reduced (Stanton 1963). While not a creature of wilderness, or necessarily a single indicator of ecological health, deer are strongly identified with the Maine forest and its outdoor culture. Estimates of their numbers have been trending upwards since the 1950s, with wide fluctuations due to severe winters. But the heyday for deer hunters was 1945–1962, with the annual kill averaging about 36,000; it fell to 27,000 in the period 1982–2018. Major losses in winter habitat for deer due to the changing forest as well as predation by coyotes are concerns for the future. The two birds recognized as symbols of Maine's outdoors, eagles (Meehan and Todd n.d.) and loons,⁵ have encouraging population trends since the 1970s (Figures 2 and 3).

FORESTS AS ECOSYSTEM AND CARBON SINK

When Thoreau visited Maine, the ecosystem concept was in the distant future. While thoughtful observers and naturalists long recognized various forms of interdependence between organisms and observed long-term changes in vegetation, a rich and fully developed concept of the ecosystem was not developed until the early 1900s for terrestrial systems (ecology) and the 1940s for lakes and rivers (limnology). Starting in the 1960s, scientists at Hubbard Brook in New Hampshire elaborated the ecosystem concept into biogeochemical cycles involving not just plants and soils but the atmosphere and the hydrologic cycle. Scientists began to explore factors controlling carbon fixation within ecosystems and how various organisms interact in food chains and food webs.

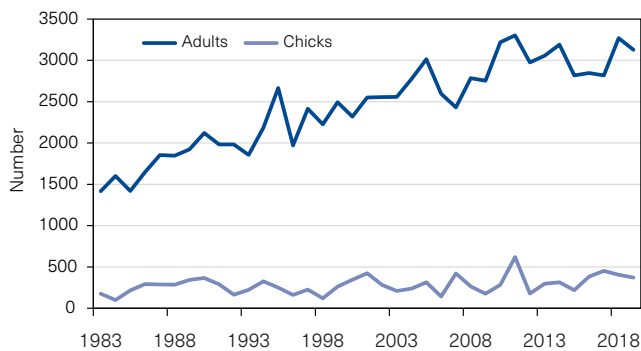
Intense ecological research came later to Maine, however. Until the late 1970s, logging and roading seemed to pose little threat to Maine's regrowing forests and its ecosystems (Irland 1999, 2011). Further, during the nineteenth and much of the twentieth century, timber harvesting in Maine was relatively benign compared to today's technology. Amazingly, crews with horses or oxen logged the steep upper slopes of major mountain ranges, even building flumes to run logs to drivable water. Here grew fine spruce, growing slowly, with small knots, little rot, and straight stems. The old loggers worked in winter, on frozen ground and snow, leaving the woods at snowmelt. This system little disturbed the soil and often spared regenerating trees as well, for they took only the largest trees. It was common to cut a quarter township for all its

FIGURE 2: Eagles Nesting in Maine, 1983–2018



Source: Maine Dept of Inland Fisheries and Wildlife

FIGURE 3: Adult Loon Counts, 1983–2019



Source: Maine Audubon Society

merchantable logs and return 20 or 25 years later to find another bountiful harvest. Although this harvesting system spared the land, it was only possible because of the re-engineered rivers. All these and other new issues led to an increase in capacity for research on Maine's forests, notably the Cooperative Forest Research unit at the University of Maine in Orono as well as individuals and groups at other institutions.

In their own business world, foresters had long been measuring trees and forests. They measured what paid the bills—commercial trees. They focused on factors controlling how rapidly they could grow trees and forests for commercial value. Although informed about

ecological ideas and wildlife management, woods managers paid little attention to such concepts. Now, however, in an age of changing priorities, the long-continued measurements of the forest's timber resources provide a valuable base for estimating supplies of biomass for energy (US DOE 2016) and for measuring the role of forests as *carbon sinks*—ecosystems that capture and store carbon by fixing carbon dioxide into carbohydrates and turning it into long-lived wood, leaves, and roots.⁶ Additionally, detailed data that forest managers collected on forest structure have proven useful in characterizing ecological conditions and trends.

As more research agencies and colleges and universities inaugurated ecology departments, researchers began to dig more deeply into Maine's ecosystems. They uncovered disturbing facts about the effects of DDT on birds and the effects of intensive harvesting on soils.⁷ Naturalists noticed that some rare species were in danger of disappearing. Conservation efforts are now focused on keeping track of a list of federal and state threatened and endangered species and their habitats, as well as a list of hundreds of species of conservation concern.

In the twenty-first century, Maine woods came to be threatened by global change: the warming climate and its ominous implications (Janowiak et al. 2018). Changing temperature regimes, longer growing seasons, lower snowfall, and more frequent intense storms are likely to shift habitats for many trees, shrubs, animals, and associated creatures and create new ecological stresses. Economic effects will not be far behind. Further, scientists and managers are trying to understand how forests could be managed to store more carbon, and how they might better adapt to the changing climate regime that lies ahead. These problems are more complex and difficult than many realize. To date, much of the discussion has been at the level of vague and unhelpful generalizations. The knowledge base is so limited that virtually every constructive suggestion is promptly attacked by skeptics.

It became evident that in the absence of national leadership on reducing carbon dioxide emissions, state and local action was essential. Soon after her inauguration, Governor Janet Mills appointed a Governor's Climate Council. At this writing, the Maine Climate Council is wrestling with a host of problems facing its citizens, communities, industries, and governments as it tries to reduce Maine's carbon emissions.

FOREST RECOVERY HITS ITS LIMIT: LAND BOOMS AND THE WUI

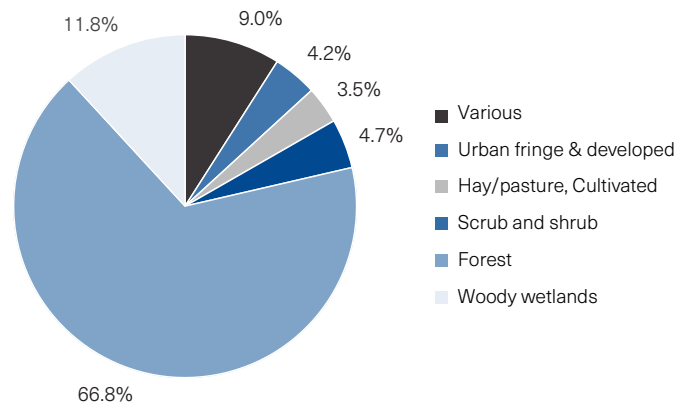
The major change in the North Woods during the nineteenth century was the distribution of public lands into private hands. By 1900, ownership of forestland was widely dispersed among lumber companies, families, and investors. The paper companies gradually added to their holdings, not reaching their greatest extent until the later third of the twentieth century. By then, local and regional companies and their lands had come into the hands of multinational corporations. This created a political bloc in which you could seat the owners of approximately 80 percent of the wildlands around a large conference table.⁷ Some would say that this was the heyday of the power and scale of the *paper plantation*, to use the term from a widely read and highly critical Ralph Nader publication (Osborn 1974).

After the 1980s, land ownerships assembled over most of a century began to fragment (Irland et al. 2010). By Maine’s bicentennial, no US-based Fortune 500 wood products or paper corporation owned timberland in Maine. The largest forest owner is a privately held New Brunswick company; the second largest is a real estate investment trust (REIT). Many ownerships in the 100,000- to 700,000-acre-size range were held by wealthy individuals seeking low-return but low-volatility alternative assets and by pension funds, including those of educational institutions, which echoes the origins of some of the tracts in land grants supporting educational institutions (e.g., the Bowdoin College Grant).

As the multinationals left Maine, new patterns of ownership emerged. Nongovernmental organizations and governments bought land in the traditional manner. And a number of private groups negotiated conservation easements, leading to 2.3 million acres of land managed under conservation easements (Irland 2018). This was a striking change in a brief time.

In the southern Maine woods, periodic land booms and accompanying sprawl ushered in a new term for forest analysts. Noticing these trends nationally and using computers and census microdata, they began measuring the wildland urban interface (WUI) in increasing precision and detail. The Maine woods of the late 1940s had been protected by a slow-growing economy, abundant land at low prices, and fairly concentrated settlement patterns. By

FIGURE 4: Maine Land Cover, Generalized, 2016



Source: NLCD

2010, however, fully 20 percent of Maine was in the WUI, meaning much of the forest was turning into potential house lots. More wood was growing in southern Maine than was being harvested, so analysts worried that instead of being cut down, the forest might be cut up—into tiny lots useless for recreation, habitat, or timber growing. This change was worrying for a state whose forests had expanded significantly over the previous century and led to a small movement to discuss how to “keep forests as forest” (Foster 2010; Wiersma 2009). (See Appendix [<https://digitalcommons.library.umaine.edu/mpr/vol29/iss2/7/>] for Maine landcover and wildland-urban interface maps.)

FOREST POLICY: FROM DISTRIBUTION TO CONSERVATION AND REGULATION

Maine’s nineteenth-century land policies did not closely mirror the nation. In the Old Northwest, the South, and the West, the federal government controlled an empire of farm- and rangeland and mining prospects. Congress argued intensely over how to distribute these resources for most of the nineteenth century. The remaining public domain was closed in the 1930s, with exceptions for minerals. This process took a century and a half. Much of the mountainous, semiarid, and arid West remained in federal control as national forests, parks, wildlife refuges, and grazing districts. In contrast, Maine sold and granted away its public domain over its first half century of statehood. I argue elsewhere that disposing of its

public land was Maine's most successful forest policy ever (Irland 2018). Beyond that, state government stayed out of the landowners' way. Policy supported private enterprise and active capital that was building dams, cutting forests, and building towns and factories. Policy didn't just support passive, speculative capital that waited for something to happen, as was too often the case with many colonial grants.⁸ There was no public pressure to do otherwise.

From 1890 to 1920, the first progressive conservation movement largely passed Maine by, except for establishment of fire control, a forestry school, and a few minor ripples. The Federal Power Act of 1920 was a bit late as only a few promising damsites remained undeveloped. The New Deal's second conservation era also largely passed Maine by. Intense public land acquisition activity had to await the 1970s and 1980s. Even then, acquisitions were largely responsive to individual private initiatives (Irland 2018; Urquhart, forthcoming).

In the 1970s, Maine entered a period of increased environmental regulation. Heavy cutting; a damaging spruce budworm outbreak; serial land booms causing scattered, low-density sprawl in the wildlands as well as in the southern Maine woods; and public outrage over the condition of Maine's rivers sparked a contentious period of regulation. Both federal and state government activism reached a new peak. Lake and river frontage was a key target for developers and speculators. Eager buyers scooped up badly cut chunks from 1 acre to 40 acres. A new Land Use Regulation Commission was created to try to rein in the subdivision of the remote forests and lakefronts. Also, in the 1970s, like a long-dormant underground fire in a coal seam, Indian land claim issues reemerged, questions that had been thought settled in 1820. Through Thoreau's time and later, Indians hunted and fished the North Woods much as they had done for centuries, but their land, fishing, and water rights never made it to Maine's policy agenda. A lawsuit in the mid-1970s changed that. Although all issues have not been settled, today two of the tribes are substantial landowners.

AFTER TWO CENTURIES: TAKING STOCK

Today, Maine's forest is nearly as large as it was when Captain John Smith first gazed on it in 1614. Maine's forests have survived heavy cutting and budworm outbreaks and to this day remain largely in private hands.

No turn-of-twentieth-century lumber production crash occurred in Maine as it did in the Lake States and the South. Still, our wildlands are not as wild as they once were. New and baffling issues concern the public and policymakers. A new concern is keeping forests as forests. How relevant are Maine's use-value tax programs and the successive land-use regulations in the wildlands under the Land Use Regulation Commission and the Land Use Planning Commission? The tax provisions and regulatory rules from the 1970s' third conservation era may be losing their grip to rising land prices and changing social priorities (LUPC, 2010; LURC 1976). How to help forest ecosystems adapt to the changing climate presents unprecedented scientific, operational, and policy challenges (see, for example, Janowiak et al. 2018).

Interest in the 1980s in modern intensive timber growing, accompanied by extensive clear-cutting, produced further conflict between timberland owners, the industry, and recreational and hunting interests and led to the sense that an ecosystem was under fundamental threat. In short order, however, the experiment in intensive management came to an end. Maine's forest future seems likely to follow a different path from that of the South, where private forestry seems bound to intensify further, or the public lands of the West, where wood production has already shifted to a byproduct of salvaging insect damage and trying to fireproof forests overstuffed with flammable fuels.

In 2020, private owners still owned large swaths of the wildlands, though some had sold development rights in the form of easements. Offshore capital, nontransparent investment funds, and a few wealthy individuals joined the roster of timberland owners. Public and conservation ownership now accounts for 20 percent of Maine's land area, an amazing accomplishment, born of intense effort in less than 30 years. Additionally, key reaches of the re-engineered rivers, especially where they blocked migratory fish, have been restored to free-flowing condition.

Yet, the recent rearrangements of ownership and expansion of conservation interests have not led to full agreement on the larger purposes of all this activity (Irland 2017a). Have these changes been done to retain wood production potential and a basic industry? To conduct re-wilding as some advocate (Klyza 2001)? To preserve deer or canoeing opportunities? To preserve scenic views from the decks of high-end homes on mountain view lots?

Receding farmland, recovered naturally by the forest, turned southern Maine's rural farmscape into a major vacationland, as well as into an expanding wood basket for local industries and hideout for deer. The roads built by North Woods landowners from the 1970s through the 1990s opened remote wildlands to mechanized recreation. The image of the forest as vacationland often contends with its status as private, income-producing property. Various subgroups of vacationers are not of one mind on what vacationland ought to be.

For a century and a half, Maine citizens and successive governments welcomed new mills, dams, power facilities, and railroads as tokens of progress and improved life prospects for Maine people and for immigrants as well. Interregional and international changes in demand, competition, and technology have brought creative destruction to the doorsteps of Maine's small farms, mill towns, and rural communities and changed the prospects for the entire forest. Today, in mill town after mill town, local civic and economic development groups struggle to find new manufacturers or other occupants for the vacant spaces and to create new housing projects, to bring a few jobs, pay taxes, and provide community stability.

The days when passive state and federal governments could gaze calmly over Maine's forest as it shifted from wilderness to timberland to vacationland and to an ecosystem and carbon sink have passed. We are only beginning to learn how our forest—the backdrop of Maine's 200-year history as a state—can continue to produce the benefits offered by these often-competing paradigms for the forest's meaning.

NOTES

- 1 The author wishes to honor David Smith (1961), Richard Wood (1961), and Richard Judd (1989) who taught so many of us the history of our Maine woods. Readers interested in the industry will wish to watch for Hillard (2021).
- 2 In common with other northeastern states, no Maine land was owned by the post-1778 federal government. The largest single federal acquisition in Maine history was the Katahdin Woods and Waters National Monument in 2018, which was a donation by a private person. All federal land in Maine today is acquired; all nondefense lands have been acquired since 1914.
- 3 An exception is the mill at Nashville Plantation owned by JD Irving, Ltd, a privately held New Brunswick concern.
- 4 Observations are based on several decades of studying Maine's economy and participating in many of these activities. Maine's tourism industry and its long-term economic,

environmental, and social effects have not yet found their historian. Raw material is abundant in histories of local communities and land management units, specific time periods, and particular kinds of activities. Documentary sources would include the various economic development plans and assessments dating back to the New Deal, sectoral studies documenting surveys of visitors and their economic impact. Valuable sources are also found in periodic assessments of the New England economy going back at least to the 1940s, when postwar defense readjustment and declining traditional industries spawned concerns for the region's future. A good start, though, might be chapter 7 in Irland (1999) and the essays by Cumber and Richardson in Harrison and Judd (2013: 213–230, 145–162) and Vail (2004).

- 5 <https://www.maineaudubon.org/projects/loons/>
- 6 Since the early 1990s, the USDA Forest Service has been periodically reporting carbon stored in forests. See, for example, Janowiak et al. (2018: 156 ff).
- 7 As a public official or consultant, this writer was present at more than a few such meetings.
- 8 Hurst's (1964) detailed legal history of the Wisconsin lumber industry elaborates this idea; a similar history for Maine would surely reach the same conclusions.

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