Wilderness, Indigenous land zones and regionality in North American forests

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The concept and conservation approach of wilderness in the United States has been criticized as Eurocentric, as incompatible with Indigenous land use and as ignoring Native people's longstanding presence on the North American landscape. In opposition to this view, this paper argues that many Indigenous societies recognized parts of the landscape as analogous to wilderness – dwelling on, and limiting disturbance practices to, a minor portion of their homelands, primarily living spaces. For instance, the Nimiipuu in the Rocky Mountains and Algonquian nations of the Northeast left the uplands and mountains uninhabited, restricting activities there to ceremonial, spiritual, or seasonal hunting and gathering purposes. Indigenous terms such as titoqa-nót wétes ('people-less land') and táuohkômuk ('wilderness') align closely with the 1964 Wilderness Act's definition of wilderness as lands "untrammeled by man" and "where man is a visitor who does not remain". Studies on the impacts of northeastern Indigenous land use on vegetation corroborate these land use restrictions, revealing local rather than widespread regional impacts. Taken together, Indigenous classifications and empirical evidence suggest that great swaths of upland forested areas of Turtle Island (North America) grew and self-organized with minimal human impact before European colonization.

Keywords: Indigenous culture; wildlands

Citation: Faison EK and Cachat-Schilling NR (2026) Wilderness, Indigenous land zones and regionality in North American forests. *The Ecological Citizen* **9**(1): 38–49.

Euro-American considerations of the history of the term and concept of *wilderness* in North America almost invariably begin with the arrival of Europeans. Forged in the depths of Judeo-Christian values and thought, the idea of wilderness – or so the conventional history has it – was brought to North America and imposed upon Indigenous peoples who did not recognize a dichotomous divide between 'the uninhabited' and 'the civilized' (*e.g.* Cronon,

1996; Callicott, 2000; Nash, 2001). This claim effectively bundles the diverse lifeways of more than five hundred Native nations into a single 'Native' perspective, typically based on a single Indigenous source – Chief Standing Bear of the Lakota (1868–1939): "Only to the white man was nature a wilderness". The notion that wilderness is an inherently ethno/Euro-centric idea has become axiomatic in United States conservation discourse and is closely related to a second major critique of wilderness conservation: that the concept of land uninhabited and undisturbed by people is fundamentally flawed because it ignores Native people's longstanding presence on and management of the land (Deneven, 1992; Cronon, 1996; Mann, 2005).

Wilderness *is* a loaded term. Viewed by English colonists as an enemy to civilization, uninhabited wilderness often inspired a conquering mindset towards nature and Indigenous peoples in America (Nash, 2001). Later, US government agencies restricted or excluded Indigenous peoples from practicing longstanding traditional lifeways such as hunting, gathering and ceremonies in National parks like Yosemite and Yellowstone (Spence, 1999).

However, we argue that the concept and conservation approach labeled 'wilderness' – when stripped of its cultural and political connotations and interpreted in its denotative sense – is compatible with Indigenous lifeways and principles of caring for Our Mother, treading lightly, and caring for the coming generations – values central to Northeastern Algonquians and many others. We further argue that the above criticisms of wilderness treat Indigenous people and their lands as monolithic and therefore fail to acknowledge the diversity of nations, lifeways and distinct land classifications practiced by Native Americans (Cachat-Schilling, 2018). In doing so, these criticisms have overlooked Indigenous words analogous to 'wilderness' and Indigenous traditions analogous to contemporary wilderness management. They have also neglected the predominantly low population densities of Indigenous societies and localized character of traditional lifeways that left many elevated landscapes unmarked by habitation and primarily shaped by natural processes and dynamics (Vale, 1998; Cachat-Schilling, 2018; Faison, 2024).

The meaning of wilderness

Wilderness is defined in the Merriam-Webster dictionary as land uninhabited, uncultivated, and otherwise undisturbed by human activity that is free to self-organize. According to the Oxford English Dictionary, the word's first known usage is in the 13th century, with its etymology being the Middle English *wildern* ('wild or uncultivated'), which in turn derives from the Old English *wild-dēoren* (lit. 'wild deer'). Wilderness as a formal conservation strategy arrived much later in the nineteenth and twentieth centuries and is defined in the 1964 US Wilderness Act as follows:

> *A wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized 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. An area of wilderness is further defined to mean in this Act an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable [...] (US Congress, 1964).*

The key points across both the term's etymology and its use in US legislation, is that wilderness is *uninhabited* – though not devoid of people who may visit regularly but stay only temporarily – and therefore *largely undisturbed and undirected by humans.*

As noted above, it has been argued that this concept of wilderness is a Euro-centric construction, and not shared by other cultures, most notably Indigenous Americans (Callicott, 2000; Nash 2001; Fletcher *et al.*, 2021). However, centuries before the first usage of the English term – and more than 1,000 years before the passing of the Wilderness Act – the classical Maya (250–900CE) recognized a sharp divide between settled lands and outer, uninhabited forestlands (Taube, 2003). The Maya were not unique in this regard. In what follows, we present several examples of Indigenous nations from the western and eastern regions of today's United States that recognized specific land use designations, including a distinction between wildlands and uninhabited lands. Context is key here, where locale, ethnicity and time period are essential factors for obtaining an accurate understanding of land stewardship history.

Nimiipuu and the people-less land

In the Rocky Mountains of present-day Idaho and neighboring lands, the Nimiipuu (Nez Perce) were primarily a hunter-gatherer people who tended certain wild plant species (Hunn and Selam, 1990). The Nimiipuu settled in low elevation valleys along major rivers, and, pragmatically, avoided settling in the higher elevations of the Bitterroot Mountains (Spezio, 2000). Deep snow (up to fifteen metres from mid-autumn to early summer) and extreme and unpredictable weather made these mountains impractical to use, let alone settle in, for three seasons of the year (Spezio, 2000). The Nimiipuu gathered and stewarded many plants including, but not limited to, quamash (*Camassia quamash*), kouse (*Lomatium* spp.), yampa (*Perideridia gairdneri* and *P. bolanderi*), and bitterroot (*Lewisia rediviva*) in the low-to-mid elevations of the mountains (National Park Service, 2019). However, the Nimiipuu apparently spent so little time in the upper elevations that they referred to these areas as *the people-less land*, or titoqa-nót wétes (Spezio, 2000).

William Clark, in journal entries from 16–17 June 1806 during the Lewis and Clark expedition's return trip over the Bitterroots, speaks to why these mountains were titoqa-nót wétes:

> *we set out [...] through a thick wood much obstructed with fallen timber, and intersepted [*sic*] by many steep ravines and high hills [...] we ascended about 3 miles when we found ourselves invelloped [*sic*] in snow from 12 to 15 feet deep*

> *even on the south sides of the hills with the fairest exposure to the sun; here was winter with all its rigors; the air was cold, my hands and feet were benumbed. (DeVoto, 1953)*

It was not until late June that the high elevations became usable, and by mid-August the highest elevation began to get snow again (Spezio, 2000). The Nimiipuu did not view the Bitterroots as distinct from their existence in the same sense that the English Pilgrims might have; after all, these lands were part of the homeland that they used for hunting, gathering and traveling. Yet, they nonetheless distinguished the mountains as a separate land use type from the lands that they regularly settled and occupied as part of their seasonal movements.

The Nimiipuu did view the Bitterroots as an important landscape in which to enter into adulthood. Like many other nations (*e.g.* Cree, Missouri, Peoria, Miami and Naskapi) that carried out various ceremonies in forested uplands (Adams, 1905), Nimiipuu adults sent their adolescent children into these mountains alone as part of a week-long rite of passage ritual or wéyekin. An absence of people and any sign of their daily activities were integral to the wéyekin (Spezio, 2000).

Viewed through a coarse-grained, regional lens, the Bitterroot Mountain region could be considered 'inhabited' or 'settled' by the Nimiipuu, but viewed through a more appropriately finer-grained lens, the high elevations were uninhabited (*i.e.* not built upon with long houses and lodges) and impacted minimally by short stays over the year. In fact, the 1964 Wilderness Act could be describing the very land designations of the Nimiipuu: "A wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized 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". Today, two of the largest Federal wilderness areas overlap significantly with the titoqa-nót wétes of the Nimiipuu: the Selway-Bitterroot Wilderness and the Frank Church River of No Return Wilderness.

Northeastern Algonquian land zones and designations

In the densely forested and topographically diverse Northeastern temperate region (today's Northeastern United States), relatively fertile, resource rich and mild river valleys and coastal lowlands are juxtaposed with less fertile and more climatically and topographically rugged uplands (US Geological Survey, 1998). In this landscape, the Algonquian nations primarily practiced a semi-sedentary lifestyle of hunting and gathering mixed with limited horticulture. It was also a landscape in which discrete land use zones were employed.

In the dialects of Massachusetts, kuttinakísh (planting lands) and otanak (village sites) lay wholly near the floodplains of large rivers and creeks, and by ponds. The vast uplands and ridges formed the táuohkômuk – a term deriving from *taueu-ohke*, literally 'open land', 'not cultivated land' or 'deserted place', and commonly translated as 'wilderness' (Trumbull, 1903). *Taueu* indicates communal status, 'open' as opposed to 'allotted or inhabited' which refers to

cultivated and village lands (kuttinakísh and otanak). In the táuohkômuk, hunting, collecting, and ceremonial practices with ritual stone complexes occurred.

People stayed overnight in the táuohkômuk at camps and rockshelters – just as people camp temporarily in wilderness areas today – but stays were short and impacts were limited (Burns and Raber, 2010). Animals were harvested, plants were gathered, stones were moved, and dead wood was collected for campfires. However, tree girdling, cutting, and burning were mostly limited to clearings in the kuttinakísh and otanak in the river valleys. Gathering houses or seasonal camps (mauwikenk and mukkkineut) at lower elevations in the foothills – a transitional zone between táuohkômuk and otanak – were used for longer periods of time and persistently year to year, with somewhat greater impact. Algonquian land zones were not casually applied. There were a range of restrictions on activities within those zones where all actions were circumscribed by ritual mandates and prohibitions. In the táuohkômuk, there was a code of 'treading lightly', and thus the footprint of people is, by intention, hard to find in these areas.

In the deeds for Mt Toby (called Kunn'kwaciw or 'Highest Mountain') in today's Sunderland Massachusetts, an Algonquian leader, Mishalisk, allowed colonists the free use of kuttinakísh in the lowlands, but placed restrictions on the sacred mountain, forbidding pigs, cows and the building of houses (Cachat-Schilling, 2018), which massif covers most of the current town lands. This place was never clear cut in the subsequent centuries, and today 170 acres of the high elevations of Mount Toby are a wildland in which no harvesting or management takes place (Foster *et al.*, 2023), while much of the rest is in conservation. The entire massif has not a single house above its feet to this day. It is also the most biodiverse landmass in Massachusetts (Cachat-Schilling, 2018).

The archaeology in táuohkômuk reflects these traditional restrictions. Artefacts are found almost entirely at rockshelters and at camp spots on ridges. These sites generally contain a few hearths, debitage from toolmaking, some points, some animal bones and little else. They almost uniformly lack any postholes for wigwams, plant processing materials, and other signs of long-term stays or presence of full communities. Middens – considered a true sign of extended residency – are entirely absent at high relative elevation across the Northeast and much of Turtle Island. What people use most ends up at their homes in their hearths. At otanak (villages) of Northeast Algonquians from Early Archaic to Late Woodland, flotation analyses of hearth materials show use of diverse plant materials – 60 or more species in a single location – while most of the valued species require either mature forest or wetland habitat (Wiegand, 1978; Lindner, 1998; Lavin and Banks, 2010). Algonquians thus had strong motivation to preserve mature forests. About three-quarters of more than 130 medicine and cultural plants in author Cachat-Schilling's personal reservoir require mature forest or shallow wetlands for habitat.

Like those of the Nimiipuu and many other nations, Lenape adolescents were taken into the forest to remote places for spiritual preparation where they

isolated in bark huts (hokesikaon) for many days until they acquired a spiritual helper. These were regarded as isolated places. The youths were brought food by their fathers or uncles (Adams, 1905) during this period of spiritual isolation. Táuohkômuk is also the primary location for Ceremonial Stone Landscapes (Hoffman, 2019; Lavin and Thomas, 2023).

Táuohkômuk lands are therefore appropriately described as conserved lands or sacred lands, and the restrictions and rituals associated with them have distinct parallels with the Euro-American concept and management of wilderness: a place to visit, camp, hunt, gather deadwood, find spiritual experience and renewal away from civilization, but not a place to clear trees and build structures (Nash, 2001). When the 1964 Wilderness Act states that wilderness is an area of land which "generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable", this is an apt description of Algonquian táuohkômuk lands.

Algonquians practiced limited agriculture and horticulture along the coast and the river valleys, with planting less common in the northern regions. Although the large and more sedentary Haudenosaunee nations in the lower Great Lakes region had fields of square kilometres in extent near their settlements (Munoz *et al.*, 2014), the planting lands of the more mobile Algonquians of the Northeast are generally on record at a scale of 20 acres or less. For instance, in 1604 Samuel Champlain exploring the inlets of Passamaquoddy Bay along New Brunswick and Maine Coast noted: "There are 15 to 20 acres of cleared land [...] All the rest of the country is covered with very thick forests" (Champlain, 1878). In South Hadley Massachusetts in 1678, a sachem named Quonquont signed a lease for what is described as a cornfield of "about twelve, sixteene [*sic*] or twenty acres of Ground". Other planted lands are named in land agreements around present-day Chicopee near Uskuaiok and Nayasset. The lands named as "now planted" again in 1636, lying between "muskeosquittaj" (*miskeketash* = shrubby wetlands) by the river and uplands, appear to be mostly between ten and 20 acres (Wright, 1905: 33–55). Lastly, Massachusett writings describe Indigenous fields of about fifteen acres in size (Goddard and Bragdon, 1988).

The size of these horticultural fields combined with their locations almost exclusively in river valleys and along the coast greatly restricted the amount of land impacted ('managed') by Indigenous peoples in the Northeast (Tulowiecki *et al.*, 2022). Algonquian narrative traditions further reveal that intentional use of fire was limited to planting lands to clear and prepare horticultural fields and reduce agricultural pests; there is no mention of intentional fire set in the vast táuohkômuk lands. Empirical evidence corroborates this limited use of fire, as charcoal deposits in sediment cores are over an order of magnitude higher in paleoecological sites near Indigenous settlement areas along the coast than in upland interior sites away from settlement areas (Parshall and Foster, 2002). Studies on the influence of Indigenous land use on forest composition bear this out as well; for example, even-aged white pine stands grew back on abandoned village and agriculture sites of the Hodinoshyoni and Algonquians (Munoz *et al.*, 2014). However, beyond the scope of the village and

planting lands in the lowlands – akin in size to scattered small hamlets – the Indigenous land use effect disappears, revealing the untrammeled condition of táuohkômuk lands. As Figure 1 shows, the vast upland regions in the Northeastern US remained largely unsettled and unmarked by habitation with little to no impact on the vegetation by people.

The localized impact of Indigenous lifeways and land zones was further reinforced by population densities that are estimated to be over 100 times lower than those found in the eastern US today (Milner and Chaplin, 2010; Faison, 2024). For instance, data from the archaeological and ethnohistorical record suggest that population densities at 1500CE were predominantly in the order of 0.15–0.7 people per square km in the Northeastern US, with localized areas of especial density including patches of eastern Massachusetts, southeastern coastal Maine, Long Island and eastern New York around present-day Albany (see Figure 2; Milner and Chaplin, 2010). To put those densities into perspective, the US Census Bureau in 1890 defined as "unsettled" land with less than 0.77 people per square km.

Interestingly, the largest wilderness areas in the Northeastern US today occur in visited but unsettled táuohkômuk areas: the Adirondack Forest Preserve of New York, Green and White Mountain National Forest Wilderness areas in Vermont and New Hampshire, and Baxter State Park in Maine (Faison *et al.*, 2023). The Adirondacks with 2.6 million acres of designated Forever Wild forestland offer a particularly instructive example of the concordance between

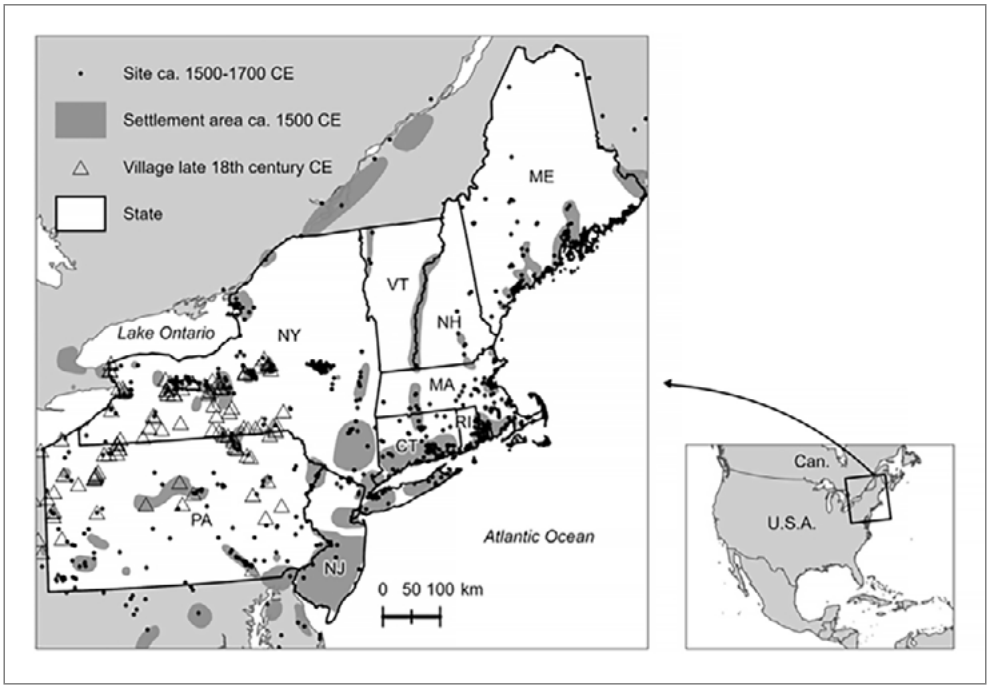

Figure 1. Incomplete but broadly accurate location of Native American settlements in the river valleys and along the coast in Northeastern US. Note the vast upland areas (in white) that remained unsettled and the tight clusters of village site locations that reflect periodic relocations. Map from Tulowiecki *et al.* (2022). Used with permission.

modern land use designations and traditional Indigenous land zone practices. There is evidence of seasonal Indigenous planting fields and settlements in the lowlands around today's Indian Lake, Lake Piseco and Lake George (Otis, 2018); these same areas are largely in private ownership and in developed hamlets today. In contrast, there is no evidence of Indigenous settlements or planting fields in the higher elevations of the Adirondack Forest Preserve – in fact there is a tradition that the high central mountains were a place of avoidance – as is true with Euro-American settlements today. Thus (like the Bitterroot Mountains), the Adirondack region could be considered to have been largely 'inhabited' or 'settled' by Indigenous peoples prior to European contact, just as the region is 'settled' and 'inhabited' today: in the valleys near water. But in both cases, millions of acres in the vast uplands remain in an uninhabited and unmanaged state, even as they are and were frequently

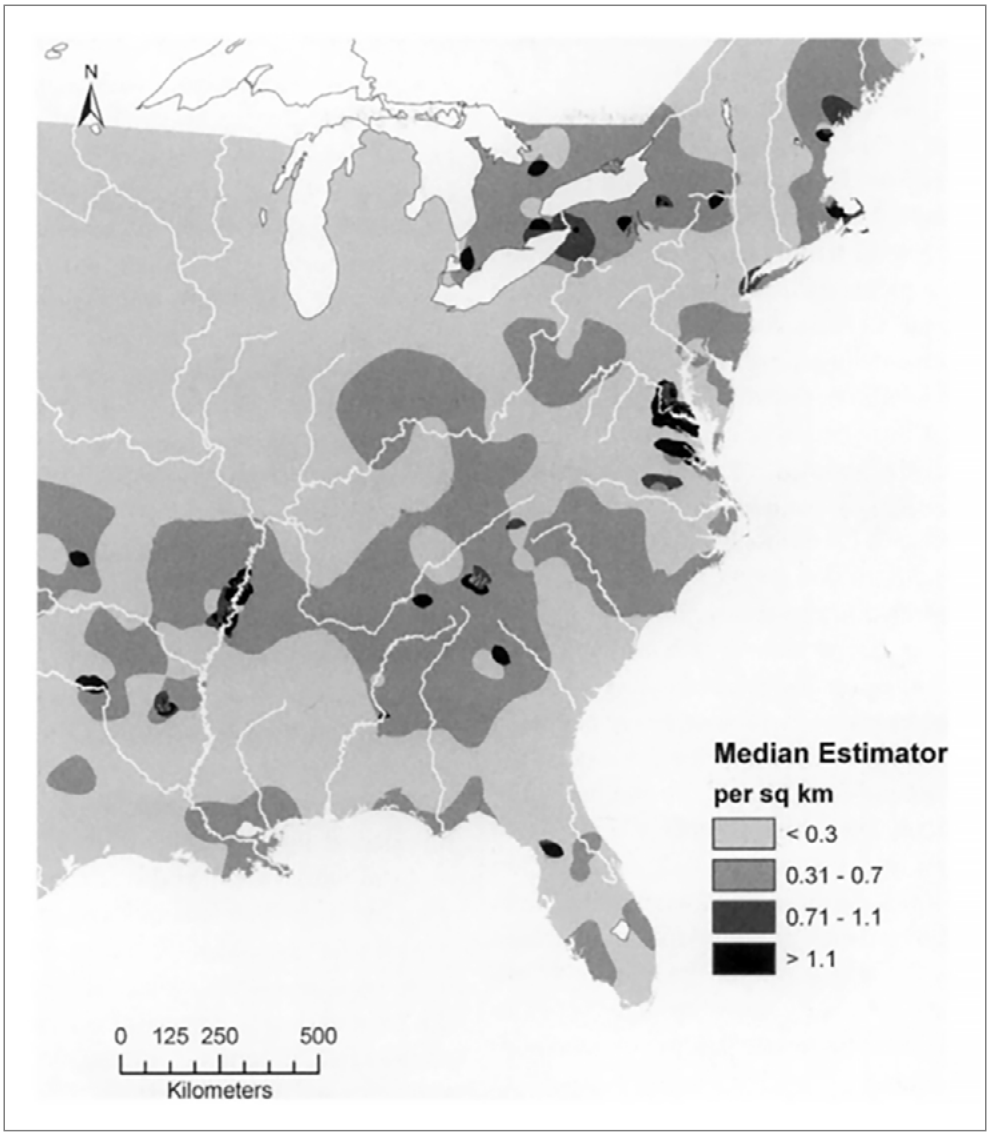

Figure 2. Estimated human population densities in eastern North America at 1500CE. Map from Milner and Chaplin (2010). Used with permission.

visited, camped in and used for hunting and collecting. In other words, the Adirondack Preserve's Forever Wild designation partly carries forward Indigenous land tradition by continuing as táuohkômuk.

The Pacific Northwest

Indigenous land use patterns in the Bitterroots and the Northeast are broadly consistent with those found in the Pacific Northwest Cascades and Olympic mountains (Burtchard, 2007). Nisqually, Taidnapam, Puyallup Muckleshoot and Yakama peoples – as corroborated by archaeological evidence – used temporary basecamps and rockshelters primarily in the sub-alpine and alpine zones of Takhoma (Mount Rainier) above 5,000 feet (Smith, 2006; Burtchard, 2007). Here, people hunted mountain goats, marmots, and other game and foraged for huckleberries. According to Burtchard (2003), "no unequivocal evidence of exclusively plant processing locations has been found" in Mount Rainier National Park, and no evidence of permanent or semi-permanent village sites have been detected within the National Park boundaries (Smith, 2006). Along the densely forested mid-slopes below 5,000 feet, where game was less abundant, only scattered archaeological sites have been found, with no evidence of residential features (Burtchard, 2007). In the late Holocene, hunters and foragers on Takhoma were associated for most of the year with lowland village sites that were situated along salmon-bearing streams and coastal sites where anadromous fish, and to a lesser extent marine animals, were harvested and stored for winter subsistence. Additionally, camas, wapato and biscuit root were harvested and processed in particularly productive locations in low and mid-elevation wetlands. Quamash fields were tended in a semi-horticultural manner. The closest lowland village site to Takhomawas along the Upper Cowlitz drainage, some five to six miles south of contemporary park boundaries (Smith, 2006).

Extended seasonal camps in the Great Basin

In the Great Basin region, numerous seasonal camps from the late Holocene occur in the alpine zone between 10,000 and 12,000 feet in Nevada's Toquima mountains and the White Mountains of California. Alta Toquima, located at 11,000 feet – just above the tree line – in today's Alta Toquima Wilderness Area, consists of 31 stone structures (Thomas, 2020). Similarly, in the White Mountains of California (today's White Mountains Wilderness), more than a dozen seasonal camps with house foundations, the remains of timber(or pole)-and-thatch dwellings, have been found (Bettinger, 1991). In both locations, middens and plant processing tools occur. These sites are interpreted to have been used more intensively and for longer durations by families or groups of families than traditional elevated hunting and foraging camps (Bettinger, 1991; Thomas, 2020). In that sense, these sites are not entirely consistent with contemporary wilderness principles of an absence of structures and "the imprint of man's work substantially unnoticeable". However, given that these sites were generally above the tree line, no forest clearing was required to establish the camp; and, like any residential area, these seasonal alpine sites concentrated impacts, leaving the surrounding landscape lightly used.

Conclusion

In his critique of wilderness, Cronon (1996) wrote that "to create an 'uninhabited wilderness' – uninhabited as never before in the human history of the place – reminds us just how invented, just how constructed, the American wilderness really is". But is the idea of wilderness truly a European-American invention, or did uninhabited land largely undirected by people already exist in the titoqa-nót wétes of the Bitterroot Mountains and the táuohkômuk of the Northeastern mountains? Algonquian and other Indigenous people employed and continue to employ complex stewardship systems. No wide brush paints Indigenous stewardship true to life. Indigenous words speak to wilderness through táuohkômuk, titoqa-nót wétes, and the whole library of our land language.

When stripped of its cultural and political connotations and understood in its denotative sense – land predominantly shaped by natural processes and free of extended human habitation – the concept of wilderness aligns closely with the conditions described and managed within several Indigenous land classifications. The evidence of Northeast Algonquian and Nimiipuu land use zones along with the archaeological record suggest that forests designated as wilderness today are not an historic aberration but reflect a continuation of the dominant condition in large swaths of North American upland forests prior to European settlement. Although forests grew out of Native American fields and cleared village sites, or were altered by use of fire, wood gathering and the planting of nut trees in settled lowlands, substantial evidence for large-scale disruption of upland forests is not found in archaeology, soil sediment records or other sources in the Northeast, Pacific Northwest and many other locations in Turtle Island (Vale, 1998). One might even say that the authors of the 1964 Wilderness Act sanctified a land use condition that the Nimiipuu and Algonquian peoples had observed and labeled long before the English and their word 'wilderness' arrived in North America.

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