






RESEARCH ARTICLE

Words are monuments: Patterns in US national park place names perpetuate settler colonial mythologies including white supremacy

Bonnie M. McGill^{1,2}  | Stephanie B. Borrelle^{1,3}  | Grace C. Wu^{1,4,5,6}  |
Kurt E. Ingeman^{1,7}  | Jonathan Berenguer Uhuad Koch^{1,8}  | Natchee B. Barnd⁹

¹David H. Smith Conservation Research Program, Society for Conservation Biology, Washington, DC, USA; ²Anthropocene Studies Section, Carnegie Museum of Natural History, Pittsburgh, PA, USA; ³Birdlife International, Pacific Secretariat, Suva, Fiji; ⁴National Center for Ecological Analysis and Synthesis (NCEAS), Santa Barbara, CA, USA; ⁵The Nature Conservancy, Minneapolis, MN, USA; ⁶Environmental Studies, University of California, Santa Barbara, CA, USA; ⁷Ecology, Evolution, and Marine Biology, University of California, Santa Barbara, CA, USA; ⁸Tropical Conservation Biology and Environmental Studies, University of Hawai'i, Hilo, HI, USA and ⁹Ethnic Studies, Oregon State University, Corvallis, OR, USA

Correspondence

Bonnie M. McGill

Email: bonniemcgill@gmail.com

Funding information

Cedar Tree Foundation, Grant/Award Number: David H. Smith Conservation Research Fellowships

Handling Editor: Marc Tadaki**Abstract**

1. Ecologists, outdoor professionals and the public work and play in lands with complex histories. Part of decolonizing our professional and recreational practices is to expose settler colonial biases and recognize the histories of colonized lands and the peoples who have stewarded these lands for millennia prior to colonization.
2. To provide a quantitative example of settler colonial biases in a familiar context, we examined the origins of over 2,200 place names in 16 national parks in the United States (US; 26% of the parks). Through iterative thematic analysis of place name origins and meanings, we constructed a decision tree for classifying place names according to emergent categories, which enabled the quantification and spatial analysis of place name meanings.
3. All national parks examined have place names that tacitly endorse racist or, more specifically, anti-Indigenous ideologies, thus perpetuating settler colonialism and white supremacy at the system scale for future generations.
4. Looking east to west across the US, the proportion of place names per national park that appropriated Indigenous names increased in parallel with the westward expansion and evolution of US settler colonialism.
5. This examination of place names, name origins and their consequences is an opportunity to make everyday complicity in systemic oppression more visible and to more actively advance decolonizing practices for land and language.

KEYWORDS

national parks, place names, racism, settler colonialism

This is an open access article under the terms of the Creative Commons Attribution License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited.

© 2022 The Authors. *People and Nature* published by John Wiley & Sons Ltd on behalf of British Ecological Society.

1 | INTRODUCTION

Around the world, statues of historic figures who symbolize colonialism, settler colonialism and white supremacy are being critically examined, and often removed. Statues of King Leopold II in Belgium; Egerton Ryerson in Toronto; and John Hamilton in Kirikiriroa (Hamilton), Aotearoa New Zealand have all recently been taken down (BBC News, 2021; Radio New Zealand, 2020; Rannard & Webster, 2020). Across the United States, Confederate figures and statues with clear racist symbolism, for example, the Theodore Roosevelt Equestrian Statue, have been uninstalled or actively torn down (American Museum of Natural History, 2020; Wikipedia, 2021). These removals represent a paradigm shift that de-centres such historical figures and their myths and responds to the knowledges, worldviews and experiences of Indigenous and racialized peoples. But these same critical examinations are also needed where the symbols of colonialism can seem less obvious than a statue.

Place names provide a window into the layered histories and meanings of places (Brasher et al., 2017; Freire, 1987; Oliveira, 2009; Rose-Redwood et al., 2020). In this study, we explore the degree to which place names perpetuate settler colonial myths, including white supremacy, by looking at the pervasiveness of and spatial patterns in place names and their meanings. We do this across a subset of US national parks. Parks are key places where people develop awareness of and empathy for the more-than-human natural world and construct and socialize identities such as environmental steward and naturalist identities (Braun & Dierkes, 2017; Groulx et al., 2016; Hecht & Nelson, 2021), thus white hegemonic symbols embedded in parks can contribute to a perception that white people are the primary stewards and knowledge keepers of nature. Parks are also sites of extensive ecological research, resource management and recreation and places with layers of cultural meanings. Thus, one facet of decolonizing ecological and conservation methods is to normalize a practice of building cultural competence in the places we work and play.

Language is one of the most important means by which humans announce and demonstrate values (Freire, 1987; Rose-Redwood et al., 2020). Like statues and monuments, place names are cultural symbols that can embody or erase Indigenous knowledges. Critical examination of place names is not new—for at least a century, Native Americans have resisted settler colonizer place names, including in what are now national parks (Figure 1). To many Indigenous groups, specific places and their place names reflect relationships to the lands and waters, and are a fundamental part of how they define their cultures and identities (Basso, 1996; Christian, 2019; Deloria, 1994; Gilio-Whitaker, 2019, p. 138; Martin & William, 2019; Oliveira, 2009). Names embody ancient creation and origin stories, serve as mnemonic devices for Indigenous knowledges and memory, and recall generations of ancestors in relation with specific places (Basso, 1996; Christian, 2019; Deloria, 1994; Martin & William, 2019; Oliveira, 2009). Settler colonial place names can explicitly or unintentionally normalize and perpetuate hegemonic myths, naturalize racist structures and erase or displace



FIGURE 1 Native Americans resist settler colonial place names in national parks. (a) Blackfeet leaders Bird Rattler (far left), Curly Bear (second from left) and Wolf Plume (third from left) meet with Stephen Mather, soon-to-be Park Service director (sitting), and others in Washington, DC in 1915 to protest the use of English-language names in Glacier National Park. Photo courtesy of the National Park Service, Harpers Ferry Center. (b) In 2018 Chief Stanley Charles Grier of the Piikani Nation (a member nation of the Blackfoot Confederacy, which spans across the US and Canada) gives Yellowstone National Park deputy superintendent Pat Kenney a declaration from several Indigenous Nations demanding a change to the place names Mount Doane and Hayden Valley (more information in Results and Discussion section). Lee Juan Tyler (Shoshone-Bannock Tribes) and Brandon Sazue, Sr. (Crow Creek Sioux) stand behind Chief Grier. Individuals shown have given the authors permission to use their image. Photo courtesy of Nate Hegyi of Mountain West News Bureau

Indigenous knowledges (Berg & Kearns, 1996; Dunbar-Ortiz & Gilio-Whitaker, 2016; Hunt & Stevenson, 2016). In all these ways, words are monuments.

An audit of parks' place names effectively measures which place names are replaced, which are made 'hypervisible', and which reflect racist mythologies and value systems (D'Ignazio et al., 2022). In this study, we look to place names in US national parks to investigate:

1. Who and what do place names in US national parks commemorate?
2. Do US settler colonial and racial processes show up in spatial patterns in US national park place names? If so, how?
3. To what extent do place names in US national parks perpetuate settler colonial, including white supremacy, mythologies?

2 | BACKGROUND

Touted as 'America's best idea' (Stegner, 1983), US national parks began and remain today among the most visible and popular hallmarks of Western conservation. To address the role and significance of place names within the parks, however, we also need to more fully consider the historical context for the establishment of US national parks and the evolution of 'wilderness' in the American imagination.

First, here are a couple of definitions. Wolfe (2006) defines settler colonialism as a structure, an on-going project in which colonizers invade an Indigenous territory and dispossess and eliminate the people and cultures in order to access and settle territory in perpetuity. For white supremacy we use the definition from Ansley (1989), who veers us away from '*the self-conscious racism of white supremacist hate groups*'. Rather white supremacy is, she emphasizes,

a political, economic and cultural system in which whites overwhelmingly control power and material resources, conscious and unconscious ideas of white superiority and entitlement are widespread, and relations of white dominance and non-white subordination are daily reenacted across a broad array of institutions and social settings.

We use a white supremacy (and not white privilege) analytic frame following Bonds and Inwood (2016) who, similar to Ansley above, argue that white supremacy is the underlying structure that produces racism and privilege as well as contemporary geographies that reinforce the white hegemony. Both terms refer to structures that have changed over time and are still in action today in the United States and around the world.

The establishment of the first US national parks happened amidst a time of major changes in society and land use by settler colonizers. The Yosemite Reserve was established in 1864, followed by Yellowstone National Park in 1872 (National Park Service, 2016). Much of the parks' policy creation and implementation was the work of white urban power elites, for example, Theodore Roosevelt and Stephen Mather (Figure 1a), without public input (Taylor, 2016, p. 388). Simultaneously, the 'frontier' was closing: homesteading, accessible only to whites, was first enacted in 1862; Jim Crow laws re-institutionalized Black inequality in response to the Reconstruction era (Blackmon, 2008); the railroad was transcontinental by 1869 and expanding (Gilio-Whitaker, 2019, p. 57); and the American Bison (*Bison bison*) was near extermination by 1889 (Hornaday, 1904, p. 100). By the 1890s, after six decades of the 'Indian Removals', Native American nations had been forced onto reservations on marginal and greatly reduced land bases (Dunbar-Ortiz, 2014, p. 153, 157). The Native American population reached its lowest (228,000 people) in 1890, largely due to European diseases, cultural and ecological disruptions, and direct deaths at the hands of colonizers and settler colonizers (Dunbar-Ortiz, 2014, p. 42; Gilio-Whitaker, 2019, p. 49; Treuer, 2019, p. 96). These factors together contributed to the end of the 'Indian Wars', the US government forcing many Native peoples

not yet on reservations onto reservations, and fed the 'disappearing Indian' myth (Dunbar-Ortiz, 2014, p. 153; Gilio-Whitaker, 2019, p. 59; Taylor, 2016, p. 26; Treuer, 2019, p. 158). This myth is part of the US origin myth that Native peoples were destined to disappear regardless of settler colonialism, a social Darwinism logic (Dunbar-Ortiz, 2014, p. 118, Dunbar-Ortiz & Gilio-Whitaker, 2016, p. 9).

The 'closing of the frontier' in the late 1800s also brought a shift in how European Americans perceived wilderness. Historian Roderick Frazier Nash (2014, p. 143) notes that with the conquering of the American frontier and the rise of urban industrial sprawl, the repugnance towards the wilderness was flipped onto the urban environment, and a new sense of nostalgia erupted for the natural world. Wilderness came to be understood as pristine and devoid of humans, a way to escape the pollution and disease of the city, the ills of industrialization—a flawed dichotomy that relieves environmentalists of concern for non-wilderness and omits the possibility of sustainable land use (Cronon, 1995).

Most of terrestrial Earth has been stewarded for thousands of years by Indigenous peoples (Ellis et al., 2021). In fact, national park ecosystems were dramatically changed, rather than preserved, with the loss of Native American stewardship and the Euro-American hands-off approach to management of the parks (e.g. preventing forest fires), (Anderson, 2013; Geniusz, 2015; Kimmerer & Lake, 2001; Kimmerer, 2012). Thus, the idea of wilderness and 'pristine' national parks is an invention and ecologically unsound. In the words of historian Mark David Spence, '...uninhabited wilderness had to be created before it could be preserved, and this type of landscape became reified in the first national parks' (1999, p. 4). Perhaps evidence that wilderness is a western invention is that many Indigenous languages do not have a word for wilderness (Dowie, 2009, p. 19).

As many national parks were being established, these areas were actively managed and inhabited by Indigenous peoples, visible today by how many national parks share a boundary with one or more American Indian reservations (Keller & Turek, 1998, p. xiii). To create a pristine wilderness out of the lands re-imagined as parks, however, settler colonizers forcibly removed Indigenous peoples, marking the beginning of 'fortress conservation' (an idea exported around the world), in-step with US government anti-Indigenous policies and actions described above (Brockington, 2002, p. 3; Fletcher et al., 2021; Kantor, 2007; Keller & Turek, 1998; Spence, 1999, p. 4). Once Native Americans were removed from the parks, the uninhabited wilderness myth was disseminated through writing, for example, John Muir, and photography, for example, Carleton Watkins and later Ansel Adams (Deluca & Demo, 1990; Dowie, 2009, p. 8; Spence, 1999, p. 131; Taylor, 2016, p. 358). With the creation of parks, Indigenous peoples became 'trespassers' in their homelands (Keller & Turek, 1998, p. 51; Spence, 1999, p. 7), doubly marked as interlopers in a white nation and out of place within that nation's spaces of environmental 'purity'. Meanwhile, assimilation policies made these places even more important to Indigenous peoples for cultural practice and survival (Spence, 1999, p. 6).

Law Professor Robert A. Williams, Jr. (Lumbee) explains that Native American land dispossession was made legal in the United

States by way of an 1823 US Supreme Court ruling, *Johnson v. McIntosh* (also see Dunbar-Ortiz, 2014, p. 199; 1992, p. 316). This enactment of manifest destiny was built on the centuries-old Doctrine of Discovery, which is based on codes from the Roman Catholic Church that legitimized European imperialism (Williams, 1992, p. 287). The doctrine and ruling, along with the disappearing Indian myth, gave settler colonizers superior rights to land ownership (Dunbar-Ortiz, 2014, p. 200; Dunbar-Ortiz & Gilio-Whitaker, 2016, p. 9).

Settler colonial maps and place names that naturalize this narrative of white dominance or that displace Indigenous knowledges and presence are, thus, direct reflections of white supremacy and settler colonialism (Hunt & Stevenson, 2016; Williams, 1992). Place names are part of larger 'technologies of power' (Rose-Redwood et al., 2017) used to inscribe national heritage and identity narratives justifying contemporary social structures (Alderman, 2020, in press). Indeed, Indigenous scholar Linda Tuhiwai Smith (Ngāti Awa and Ngāti Porou Māori) has long argued that 'renaming the landscape was probably as powerful ideologically as changing the land' (2012, p. 53). Today, place names (and statues) are a form of 'socio-spatial exclusion' defined by Sibley (2003, p. ix) as 'the more opaque instances of exclusion...taken for granted as part of the routine of daily life' by the mainstream. Yet, the mundane nature underlying the politics of naming and place names is now well documented (Berg & Vuolteenaho, 2009; Rose-Redwood et al., 2017). To many non-Indigenous people, a settler place name might appear benign. But, even 'neutral' place names (e.g. Inspiration Point) communicate non-neutral choices to ignore the history of settler colonial violence, obscure the fact that landscapes were and are Indigenous spaces, and accept the continued invisibility of marginalized people (Barnd, 2017; Brasher et al., 2017). Thus, for Indigenous peoples, a settler place name may represent colonization and a history of exclusion from their homelands, such that restoring Indigenous place names is often understood as a small (even symbolic) step towards justice and restoring powers of self-determination (Figure 1; Hegyi, 2018; Oliveira, 2009; Rose-Redwood et al., 2020).

Beyond the issues of Indigenous displacement and erasure, we must also consider the relationship between parks and other minoritized peoples, including how representations within parks can mitigate or further exacerbate differential visitor rates and quality of experiences. Black people, in particular, have experienced high degrees of socio-spatial exclusion from outdoor spaces in the US. For example, Black people are 13% of the US population yet they are only 1% of US national park visitors, while white people are 76% of the US population and 96% of visitors (US Census Bureau, 2019; Vaske & Lyon, 2014, p. 21). Some of the signals for Black absence or exclusion from parks include: Park histories of racial discrimination and the white-washing of history (Lee & Scott, 2016; MacEachern, 1998), the outdoors embodying a legacy of white terrorism, for example, lynchings and agricultural enslavement (Glave, 2010; Taylor, 2018), the lack of Black representation in outdoor media and outdoor spaces (Finney, 2014, p. 91), and the complex interplay of these factors. Such routine socio-spatial exclusions tend to conceal the means

by which society oppresses marginalized groups (Sibley, 2003, p. ix), including how Black people do or do not experience national parks.

3 | POSITIONALITY STATEMENT

We offer the following information about ourselves for transparency and recognition that, despite our best efforts to conduct an unbiased analysis (outlined below), everyone brings different backgrounds, experiences and worldviews to the subjective practice of science. Our author group is made up of individuals with Filipino, Chinese, North American Indigenous and European ancestries. Five of us are trained in western scientific practices, specifically ecology, with skills in statistics; three of us are trained in qualitative research methods; and N.B. is an expert in ethnic studies, Indigenous studies and cultural geography. The six of us have various ethnic backgrounds and sets of experiences that have made us attuned to the power in place naming in parks. Therefore, we set out to apply our qualitative and statistical skills along with ideas from cultural geography and Indigenous studies to review as systematically as we could the meanings of place names in national parks. This means that we used statistical tools to advance the cause of racial justice, although we recognize that statistical approaches are imperfect and limited. Therefore, we recognize and hold space for Indigenous and additional knowledges and experiences to make claims in this space.

4 | MATERIALS AND METHODS

We selected 16 (26%) of the 62 US national parks that encompass a wide range of geographies, dates of establishment, visitation rates and sizes (Table 1). We worked with 16 parks rather than all 62 due to the amount of time required to research and categorize each place name in the parks. Parks were primarily chosen to ensure geographic representation across the key regions of the United States, and secondarily, for a broad range of visitation rates (Table 1). Our sample of the parks is unintentionally dominated by parks established before 1950 ($n = 12$), but the four newer parks did not stand out as different from the older parks in the analyses.

We used the PDF visitor map of each park available on each park's web page within NPS.gov (Table 1, includes dates of downloads) to list all place names within the park boundaries except for roads, resulting in 2,241 place names. We focused on names on park visitor maps because maps are a key way visitors interact with place names. However, park maps are not exhaustive: the US Board of Geographic Names (BGN) Geographic Names Information System (GNIS) has all officially named features and variants of the names. We researched the origin of each place name using peer-reviewed sources, books (Table S1), National Park Service (NPS) webpages, grey literature and Wikipedia. These resources are biased towards settler colonizer place name histories and histories that situate settler colonizer historic figures in a positive light. This bias means our analysis could, for example, underestimate the true number of

TABLE 1 US national park maps analysed in this study. Park map files used can be accessed in McGill et al. (2021b)

Park name	US state(s) park is in	Year established	Area (km ²) ^a	Average annual visitors 2009–2019 (in millions) ^b	No. of place names	Date map downloaded from NPS.gov
Acadia	Maine	1919	199	2.8	100	13 February 2020
Big Bend	Texas	1944	3,242	0.4	136	16 April 2019
Canyonlands	Utah	1964	1,366	0.6	120	11 February 2019
Crater Lake	Oregon	1902	742	0.6	109	16 April 2019
Cuyahoga Valley	Ohio	2000	132	2.3	91	11 February 2019
Denali	Alaska	1917	19,186	0.5	133	4 December 2018
Everglades	Florida	1934	6,107	1	304	16 August 2019
Glacier	Montana	1910	4,100	2.5	259	16 April 2019
Grand Canyon	Arizona	1919	4,863	5.2	83	11 February 2019
Great Smoky Mountains	North Carolina, Tennessee	1934	2,114	10.4	62	21 May 2021
Hawai'i Volcanoes	Hawai'i	1916	1,318	1.5	86	23 June 2021
Mesa Verde	Colorado	1906	212	0.5	52	13 March 2019
Theodore Roosevelt	North Dakota	1978	285	0.6	76	11 February 2019
Wrangell-St. Elias	Alaska	1980	33,683	0.07	118	13 March 2019
Yellowstone	Idaho, Montana, Wyoming	1872	8,983	3.7	208	21 March 2019
Yosemite	California	1890	3,083	4	304	17 January 2019

^aSource: The National Park Service Office of Communications and Office of Legislative and Congressional Affairs. 2016. The National Parks: Index 1916–2016. <http://go.nps.gov/national-parks-index>.

^bSource: National Park Service Visitor Use Statistics. Accessed 11 December 2020. <https://irma.nps.gov/STATS/>.

place names that should be classified as derogatory, replacement, perpetrated violence and supported racism (classifications explained in Results and Discussion). Also, the resulting information gathered on Indigenous place names is limited and does not reflect the true wealth of Indigenous knowledges of place names, often recorded orally, for example, see Oliveira (2009). Efforts to decolonize mapping (Hunt & Stevenson, 2016; Rose-Redwood et al., 2020) and catalogue Indigenous place names are underway, for example, Pearce and Hornsby (2020) and Hercus and Koch (2009), but were beyond the scope of this study.

4.1 | Qualitative methods for research question 1

Our process for categorizing place names and developing classes within each category was highly iterative, grounded in thematic analysis methodology (Braun & Clarke, 2006), and involved consensus-building among five of the co-authors conducting the thematic coding of the data. To demonstrate replicability, we iteratively developed decision trees for the classification of name meanings within emergent categories (categories explained and decision trees referenced in Results and Discussion). The purpose of this classification exercise is to group together place names with similar origins allowing us to describe patterns in a large number of place names and look for patterns across parks. One could imagine an infinite number of

ways to categorize and classify place name origins. In our iterative process we identified categories and classes of origins relevant to our research questions. For each place name at least two and usually three co-authors were involved: one in researching the origin and meaning of a place name and classifying the name in each category, and then one or two additional co-authors classified the name again with initial classifications concealed, as part of quality assurance and quality control (QAQC) testing. QAQC testing involved five co-authors classifying the same randomly chosen subset of 200 place names and comparing resulting classifications to the data and among ourselves. Early on, iterations of QAQC testing helped us refine our definitions for classes, determine how to treat specific origin conditions, and create decision trees to ensure specific conditions were treated consistently across the dataset. Later, QAQC testing helped us determine when the data classification was complete: once QAQC testing reached <10% error rate compared to the data on a randomly selected subset of 200 place names.

Our ability to consistently classify the data is due in large part to the level of detail iteratively built into the decision trees, which account for nearly all place name origin types we encountered with regard to our research questions (the few origin types that did not fit the classifications were counted in an 'other' class). Another group of researchers following the same decision trees for these place names should arrive at similar classifications and counts per park, but if they used different decision trees built on different research

questions their results would surely differ from ours. Naming and categorizing objects, counting objects and statistical analyses reflect a western/settler colonizer worldview. We intentionally chose this route because, in part, that is what we are trained in, but also, we wanted to use what the settler colonizer scientific community considers our most powerful tools (classification, replicability, statistics, etc.) to reveal the results of our research questions. Our group does not include people Indigenous to these areas now called US national parks—if/when a group of scholars Indigenous to these areas takes up similar research questions, they might approach the research in an entirely different, yet just as legitimate, way yielding potentially different answers. Given our reliance on literature by Indigenous scholars whenever possible it is reasonable to expect that some of our framing and interpretations would align.

4.2 | Quantitative methods for research question 2

Once the names were classified, we calculated totals and proportions of place name types per park and explored patterns among the parks. We used a spider plot to visually compare how parks' proportions of the different classes varied. Spider plot scores were calculated by finding the park with the maximum proportion of each name type. Then, each park's proportion for each name type was divided by that type's maximum proportion among all parks, that is, normalized to a maximum score of 1.

To determine if spatial patterns exist among the emergent classes, we developed models to test for the effect of longitude on the proportion of each class of interest per park by fitting beta regression models (classes of interest detailed in Results and Discussion). We chose longitude instead of year of park establishment as a predictor, because year of establishment does not reflect when all the place names were given. Longitude supports the investigation of how place names changed east to west, thereby acting as a proxy for the evolving nature of settler colonialism through time, which happened in a predominantly westward direction in the United States. First, we fit beta regression models to the data because it is appropriate for regressions with proportional or percentage data. We treated longitude as continuous. The models were fit using maximum likelihood, because the dependent variables are clearly right-skewed and follow a beta distribution (Zeileis et al., 2020). Furthermore, to meet the assumptions of the beta distribution, we either added or subtracted 1×10^{-6} to proportions that made up either 0% or 100% of a park's place names respectively. To test the hypothesis that category proportions changed with longitude, we conducted likelihood ratio tests to determine whether the models with longitude are different than their null models without longitude. To test the hypothesis that the proportion of place names that are Indigenous are different from the proportion that are non-Indigenous, we fit a beta regression model for the proportions with the predictors longitude and the factor identifying the proportions as Indigenous or non-Indigenous.

All beta regression models used the log link function, and hypothesis testing was performed using a significance level of

$\alpha = 0.05$. Model construction and evaluation was conducted in R (R Core Team, 2019) using the packages: betareg (function: betareg()) (Cribari-Neto & Zeileis, 2010), emmeans (function: joint_tests()) (Lenth, 2020) and lmer (function: lmer()) (Zeileis & Hothorn, 2002). The scripts (and data) are publicly available in McGill et al. (2021), and the data alone are publicly available in McGill et al. (2021a).

We recognize that statistics are tools of imperialism, colonialism and western science that have been used to invalidate and marginalize Indigenous knowledges (Smith, 2012, p. 58). We use the colonial language of statistics here to speak in terms that are currently meaningful in the scientific community and to draw attention to those invalidations.

4.3 | Quantitative method for research question 3

Settler colonial place names in the most visible locations, frequented by the greatest number of visitors, arguably play the largest roles in maintaining these myths. Thus, to assess the degree to which place names perpetuate settler colonial myths, we calculated a metric, 'potential visitor exposure' for each park by multiplying the number of place names for each category by the park's 10-year average (2009–2019) annual visitation rate (Table 1). This metric has units of potential visitor views per year. Even though most visitors will not visit all the places on the park map, the metric serves as an indicator of a place name's degree of familiarity in society.

5 | RESULTS AND DISCUSSION

Names that are traditional Indigenous place names, their translations, and those commemorative of a Native American individual or people or a Black individual were outnumbered more than 2:1 by place names that perpetuate settler colonialism and white supremacy in obvious and less obvious ways. Our spatial analysis showed east-to-west patterns that parallel the evolution of settler colonialism across the United States moving from a greater proportion of Eurocentric names in the east towards a greater proportion of appropriation of Indigenous peoples and languages in the west. Place names in US national parks that continue to extend settler colonialism myths, such as the uninhabited wilderness myth, perpetuate white supremacy and the continued erasure of Indigenous peoples.

5.1 | Who and what do place names in US national parks commemorate?

Based on our research of the origins and meanings of each place name in 16 national parks, we assigned each place name one exclusive class from each of four emergent categories: (a) Language origin—whether the place name is from an Indigenous or non-Indigenous (settler colonial) language or if it was unclear what language type it originated from. In an attempt to differentiate traditional Indigenous place

names from Indigenous-sounding names settler colonizers appropriated from Indigenous languages, we tracked (where possible) traditional Indigenous place names, that is, those in use before settler colonialism. (b) Derogatory—if the name is a racial slur. (c) Erasure—if the name represents erasure or replacement of Indigenous names. (d) Dimensions of racism and colonialism—if the name is appropriated from an Indigenous language; promotes racism; commemorates a person who supported racist ideas; commemorates a person who perpetrated physical, racial violence (often acts of anti-Indigenous genocide); or a ‘first’ settler colonizer who capitalized on Indigenous dispossession and colonization. Hereafter we mainly refer to the class names within the categories. See Table 2 for more specific definitions and the class names corresponding to labels in figures. The resulting decision trees are available in Figures S1–S3.

Twelve percent of place names on visitor maps use words from Indigenous languages or names of Indigenous peoples. Less than 5% of named features bear traditional Indigenous place names. All 16 parks that we examined had at least one or more places or features named after people who supported racist ideologies, capitalized on Indigenous dispossession and colonization, and/or participated in acts of genocide. Of the 2,241 names examined, 79% were assigned a class other than ‘no’, ‘no information’ or ‘other’, in the categories for derogatory, erasure and dimensions of racism and settler colonialism. Ten names were widely acknowledged racial slurs, consisting of the words ‘sq**w’ (in Canyonlands and Theodore Roosevelt), ‘c**n’ (in Everglades) and ‘savage’ (in Denali). Note that we intentionally adopt and have expanded redacted spelling practices following models by previous scholars, such as King (2003). Also note that all official US place names containing the ‘n’-word were replaced with ‘N*gro’ in 1964 and names with ‘J*p’ were replaced with ‘Japanese’ in 1974 (US Board on Geographic Names, 2016, p. 15). Twenty-eight names support racist ideas, consisting of the three slurs plus other names, for example, Indian Canyon Creek (Yosemite), Black Betsy Keys (Everglades) and Dixie Pass (Wrangell–St. Elias). Fifty-two were named for a person who perpetrated physical, racial violence (more details below; Figure 2a).

We found 107 natural features with traditional Indigenous place names (4.8% of the data). The meaning and origin of these traditional Indigenous place names demonstrates the knowledge and culture embedded in the names. Denali is one of these names. Known to the US government as Mt. McKinley from 1896 to 2015, Denali is the tallest mountain in North America (National Park Service, 2020). In Koyukon, one of 11 Athabascan languages traditionally spoken in Alaska, the peak is Deenaalee meaning ‘The Tall One’ or ‘The High One’ and has been in use for millennia (Palermo, 2015). Adopting the Indigenous name, which never went out of use in Alaska (Palermo, 2015), as the US official name acknowledges that the settler colonial era is a small fraction of the time Indigenous peoples have been in relationship with the mountain.

In Hawai‘i Volcanoes, Moku‘āweoweo is the traditional and US government name for the crater at the summit of Mauna Loa, the Earth’s largest active volcano (USGS, n.d., ND). ‘Moku’ in Native Hawaiian means island or section, ‘ā’ means a burning fire, and

‘weoweo’ refers to an intense red colour, altogether literally meaning island of intense red burning fire (University of Hawai‘i Hilo, n.d., ND). Furthermore, ‘āweoweo’ is also the name for an endemic shrub (*Chenopodium oahuense*) and fish (*Priacanthus meeki*) for their red colours suggesting volcanic fires (Papahānaumokuākea Marine National Monument, 2020). The shrub’s leaves when crushed produce the scent of fish. This pairing is an example of the Hawaiian concept of duality, which emphasizes a holistic understanding of nature and the need for human interactions with the environment to maintain pono (balance; Papahānaumokuākea Marine National Monument, 2020). Retired and active park rangers at Hawai‘i Volcanoes are working to restore more native place names to the park and make new signs (National Park Service, 2021).

Forty-five place names were English translations of traditional Indigenous place names. One example is Chief Mountain. Many tribes in northwest Montana refer to the unmistakable, flat top mountain as Chief Mountain, consider it sacred, and have used it as a site for vision quests for millennia (Craig et al., 2012; Holterman, 2006, p. 52). Chief Mountain is split between Glacier National Park and the Blackfeet Reservation; the border is a product of the Blackfeet selling land from their reservation to the US government in 1895 out of desperation for food and basic supplies following the US government’s near-extermination of bison and failure to provide rations guaranteed by treaty, which led to starvation winters (Craig et al., 2012; Spence, 1999, p. 80). Upon reluctantly accepting the sale agreement on behalf of the Blackfeet, Chief White Calf said, ‘Chief Mountain is my head. Now my head is cut off. The mountains have been my last refuge’ (Spence, 1999, p. 80). Chief Mountain demonstrates how Indigenous cultural identity as well as dispossession can be wrapped into the collective memory of one place. Using the name Chief Mountain, although a translation, keeps this complex history more in the open than if it was replaced.

We found 205 settler colonizer place names replacing a known traditional Indigenous place name. For example, Kīlauea Caldera is the US government name for Kaluapele or ‘pit of Pele’. Kaluapele is a mnemonic name reminding Kānaka Maoli (Native Hawaiians) of their stories, chants and dances that tell the story of Pelehonuamea (Pele of the sacred land), the volcano deity. The Pele story explains the formation of Kaluapele between 1440 and 1600 CE, which is in agreement with radiocarbon dating of layers of volcanic ash (Swanson, 2008). Another example of replacement comes from Glacier, where Am’unis O’muksikimi (‘Otter Lake’ in the Blackfeet language) honours the presence of otters in those waters, who are part of Blackfeet origin stories and whose skin is sometimes used in prayer bundles (Bastien & Kremer, 2004; Schultz, 1916). The official US government name, Elizabeth Lake, is for a daughter of one of the US government surveyors of the park (Holterman, 2006, p. 80). The replacement of Indigenous place names erases Indigenous knowledges, a form of ‘cultural genocide’ (Oliveira, 2009) and perpetuates the uninhabited wilderness myth by insinuating settler colonizers assigned names to a blank map. Yet these 205 ‘unofficial’ traditional Indigenous place names in national parks are further evidence that uninhabited wilderness is a myth.

TABLE 2 Emergent place name (PN) meaning categories, classes and definitions developed by iterative thematic analysis and consensus building among five co-authors of 2,241 PNs. Each PN was assigned one class within each category

Category	Classes	Definition	Examples	Total place name count
Source	<i>Indigenous</i>	From an Indigenous, not European/settler colonial, language	Kintla Lake, Teklanika River	273
	<i>Non-Indigenous</i>	From a European/settler colonial, not Indigenous, language	Panhandle Key, Jones Creek	1,962
	<i>Unclear</i>	The word could be from Indigenous or European languages	Chisos Mountains, Donoho Peak, Illilouette Fall	6
Derogatory	<i>Derogatory^a</i>	Evidence that the word is offensive to at least some. Racial slurs and swear words go here	Sq**w Creek, C**n Key	10
	<i>Potentially derogatory</i>	May be offensive but no evidence found. Any PN containing 'Indian' (without 'American'), 'ruin' or 'devil'. Any settler-built structures named for Indigenous person or people, which is potentially trivializing or appropriating and commonly done without their consent	Roadside Ruin, Indian Creek, Devils Backbone, Shawnee Hills Golf Course	38
	<i>No information</i>	No evidence that the name itself, as opposed to its meaning or origin, is offensive	Mount Doane	2,193
Erasure	<i>Not erasure</i>	A traditional Indigenous PN, place is settler constructed, or it is an Indigenous PN commemorating an Indigenous person or people (i.e. overlaps with 'potentially derogatory'). Count at right includes 107 traditional Indigenous PNs	Pu'u'ula'ula Cabin, Logan Pass Visitor Center	699
	<i>Translation</i>	A European PN that is a translation of a traditional Indigenous PN	Belly River, Many Glacier	45
	<i>Replacement^a</i>	A traditional Indigenous PN is known but not used. Or place was inhabited or built by Indigenous Peoples (even though no traditional Indigenous PN found)	Lake McDonald, Isle Au Haut, Roadside Ruins	205
	<i>Erasure</i>	Regardless of whether or not the PN origin is known, PNs for natural features or landmarks that may have had an Indigenous PN	Otter Lake, Harney River	1,261
	<i>No information</i>	An Indigenous PN and unclear if it is or is not a traditional Indigenous PN	Tiltill Creek, Kuna Crest	31
Dimensions of settler colonialism and racism	<i>Not settler colonialism or racism</i>	Indigenous PN, settler built with European PN, or erasure is the only dimension of settler colonialism or racism	Chief Mountain, Eleanor Creek	1,542
	<i>Racist word^a</i>	The name itself promotes racist ideas and/or violence against a group and/or contains the word 'Indian'. This includes Brown Betty Rapids, whose meaning at the surface is racist, but the underlying story behind the name reminds us of a Black cook named George W. Gibson on an 1899 survey of what is now Canyonlands (discussed below)	Sq**w Creek, Dixie Pass, Indian Key, C**n Key	28
	<i>Perpetrated Violence^a</i>	Commemorates a person who directly or used power to perpetrate physical violence against a group, including individuals who participated in or led massacres (in most cases against Indigenous peoples), were so-called 'Indian fighters' or 'Indian killers', fought in the US Indian Wars, were slave owners, were in power leading domestic or international war against a group, includes some US Presidents (e.g. McKinley River) and a US Secretary of War (Mount Stimson)	Mount Doane, North Harney River	52
	<i>Supported Racism^a</i>	Commemorates a person who supported racist ideas but no evidence that they were physically violent as above. 'Supported' includes financially supported, sympathizer, politically affiliated with, enabled racist ideology, wrote or spoke publicly in favour of racism	Lamar River, Roosevelt Point	21

TABLE 2 (Continued)

Category	Classes	Definition	Examples	Total place name count
	<i>Memorializes settler colonialism^a</i>	Named after a non-violent person or company who gained financially from Indigenous dispossession from that specific area in the initial settlement period, or were part of the process of colonization, for example, an English governor, Catholic mission, surveyor/explorer of that place, surveyor/explorer's funder/sponsor. Gained financially includes natural resource extraction (farming, prospecting, mining, ranching, homesteading, fur trapping) and ferry operating	Kerrick Canyon (a sheep herder), St. Sauveur Mountain (an early Jesuit missionary)	254
	<i>Appropriation^a</i>	An Indigenous PN (but not a traditional Indigenous PN) used without Indigenous consent/gifting, or an Indigenous reference (e.g. Indigenous person) with a European name, or a European translation of an Indigenous name (but not a traditional Indigenous PN), or unclear if it is or is not a traditional Indigenous PN. This includes gendered slurs, potentially offensive or incorrect use of an Indigenous word or name, as well as named for an Indigenous person or people. PNs that use a relevant traditional Indigenous PN (such as a campground named for the traditional Indigenous PN of the area) were noted as 'relevant use of a traditional Indigenous PN' but counted as appropriation in statistical analyses. The count at the right includes 54 'relevant use'. PNs with documentation of Indigenous consent were rare. An example of a PN used with Indigenous consent (<i>not</i> 'Appropriation') is Pu'u Ō'ō in Hawai'i Volcanoes	Shoshone Lake, Shawnee Hills Golf Course, Halapē (campground, relevant use)	214
	<i>No information</i>	European PNs with no information available on origin of name, or European names that are descriptive or lyrical including named for a plant or animal, with low possibility that it could be named after a known person or other entity or idea with meaning. Or there are competing theories about the meaning that would suggest different class designations. Or information found but does not explain name meaning	Peters Glacier, Mount Thompson	121
	<i>Other</i>	Information on name meaning found but does not fit any of the above classes	Bradley Key, Paul Bunyans Potty, Jackson Glacier	9

^aIndicates classes featured in Figures 2 and 3.

We classified 214 place names as appropriation. These are Indigenous-sounding names that are the name of an Indigenous person or people or not a traditional name, that is, settler colonizers using an Indigenous language. An example of appropriation is Yosemite Valley. 'Yosemite' comes from the Sierra Miwok word meaning 'some of them are killers', probably referring to the Paiute individuals, distrusted by the Sierra Miwok, living among the Ahwahneechee people in the valley (Anderson, 2011; Spence, 1999, p. 103). A member of the Mariposa Battalion of 1851 mistook this as the name for the Ahwahneechee and named the valley Yosemite in so-called honour of the people they intended to eradicate (Anderson, 2011; Spence, 1999, p. 103). Appropriation of Indigenous names and words is largely done without the consent of the Indigenous person or people the name or word is taken from in violation of Article 11 of the UN Declaration on the Rights of Indigenous Peoples (UN General Assembly, 2007). Also, this appropriation is what Tuck and Yang (2012) call a 'settler move to

innocence' where the settler imagines they are the benevolent keeper of the disappearing Natives' land and identity.

There were 254 place names that memorialize settler colonialism, such as Cadillac Mountain in Acadia, which memorializes French explorer and colonizer Antoine Laumet de La Mothe, sieur de Cadillac (Zoltvany, 2003). Other places are named for less famous individuals, such as Roys Peak in Big Bend, named for one of the 'first' settlers in the Big Bend region of West Texas (Madison & Stillwell, 1997, p. 57). Like the replacement of Indigenous names, place names that memorialize settler colonialism erase Indigenous knowledge and insinuate settler colonizers assigned names to a blank map. Names that memorialize white settler colonialism also signal white hegemony to people today and into the future.

We found 21 place names that commemorate an individual who supported racist ideas. For example, Hayden Valley, in what we now call Yellowstone, commemorates Ferdinand Hayden, a geologist

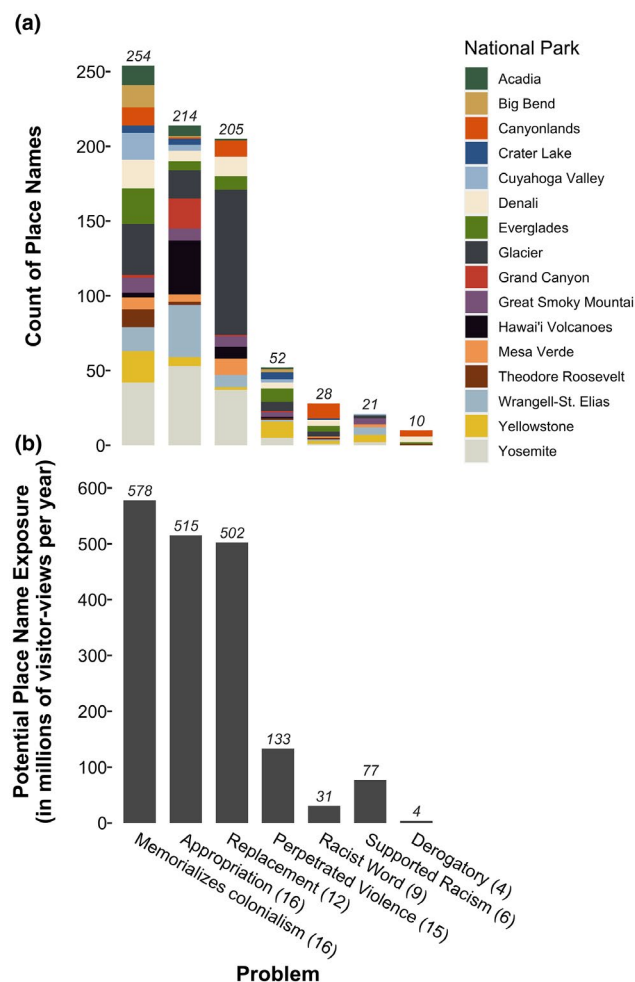


FIGURE 2 Place name counts by categories (a) and potential number of times a problematic place name was exposed to park visitors annually (b). None of the bars are zero. Numbers following x-axis labels are the number of parks with at least one place name in that category. Numbers on top of the bars are the bar values. Note the different y-axis ranges

who led the first federally funded geological survey of Yellowstone in 1871. His report was essential in persuading Congress to establish the national park. His report also called for the forced assimilation or, failing that, extermination of Native Americans: 'Unless they [Indians] are localized and made to enter upon agricultural and pastoral pursuits they must ultimately be exterminated. There is no middle ground between these extremes...If extermination is the result of non-compliance, then compulsion is an act of mercy' (Hayden, 1872, pp. 263–264). Some argue that the extermination passage was written by a co-author, but Hayden ultimately approved the text and presented it to the Secretary of the Interior as the author of the entire work (US Board on Geographic Names, 2017). Hayden, author of the sections on the United States, in Hayden and Selwyn (1883) expounded his white supremacist worldview by writing, 'Equally incontestable is the pre-eminence, both intellectual and moral, of the white race, which thus forms a natural aristocracy in the truest sense of the word' (p. 173). The Crow Creek Sioux Tribe wrote about Hayden Valley in their 2017 letter to the US Board

on Geographic Names (BGN), the body charged with assigning or changing US names, with these words:

If, as Wallace Stegner suggested, the world's first national park was America's "best idea," how do you reconcile having the main thoroughfare of America's best idea named to honor an individual who proposed the extermination — the genocide — of the land's original inhabitants? (quoted in Thuermer Jr., 2018)

The sovereign Tribal Nations of Yellowstone formally requested the Yellowstone Superintendent to support changing the name to Buffalo Nations Valley (US Board on Geographic Names, 2017; Figure 1b). As of this writing the NPS has yet to take a position, stalling the BGN decision (US Board on Geographic Names, 2021).

Fifty-two place names commemorate individuals that perpetrated physical, racial violence (often with clear notions of anti-Indigenous genocide in mind). Here are two examples. Mt. Doane, also in Yellowstone, was named by Hayden in honour of US Army Lt. Gustavus Doane, who was part of the military escort for the 1871 Hayden survey mentioned above (Bonney & Bonney, 1970, p. 30). In January 1870, Doane led his company F, under the command of Major Eugene Baker, in the massacre of Chief Heavy Runner's Piikani (Piegan Blackfeet) camp on the Marias River in Montana, known as the Baker Massacre, Marias River Massacre or the Bear Massacre—the Blackfeet name for the river is Kiaayoai'tahtaa, or Bear River (Bonney & Bonney, 1970, p. 22; Mabie, 2020). The able-bodied Piikani men were out hunting that morning, the air was 44° F below zero, and Doane and the Army proceeded to attack the remaining elderly, women and children, including many with smallpox (Bonney & Bonney, 1970, p. 22; Mabie, 2020). They killed 173–200 Piikani; shot into the doors of lodges; burned the bodies, camp, their winter provisions; and left 140 women and children with no food or shelter in north central Montana in January (Bonney & Bonney, 1970, p. 25; Mabie, 2020). The same group of nations proposing to change the name for Hayden Valley also proposed to change Mt. Doane to First Peoples Mountain, which is also still waiting for a BGN decision (US Board on Geographic Names, 2017, 2021).

The second example is the North Harney River in Everglades, which commemorates US Army General William Harney (Perez, 2007, p. 95). Harney is known for beating an enslaved woman, Hannah, to death with his cane in St. Louis in 1834 for which he was acquitted; hunting down and murdering Seminole warrior Chekika and hanging his body at their camp to serve as a warning in 1840 during the Second Seminole War; and in 1855 leading his troops to massacre Little Thunder's band of Lakota in what is now Nebraska, burning their village, and mutilating the bodies of dead women, earning Harney the Lakota moniker 'Woman Killer' (Adams, 2001; Marshall III, 2004; Perez, 2007, p. 96). Harney's name was also put on the tallest peak in Paha Sapa (the Black Hills), a sacred site to the Lakota, but in 2016 the BGN accepted Oglala Lakota Elder Basil Brave Heart's proposal to change the name to Black Elk Peak in honour of Nicholas Black Elk (Daley, 2016; USGS, 2016). Harney Peak and Mt. Doane

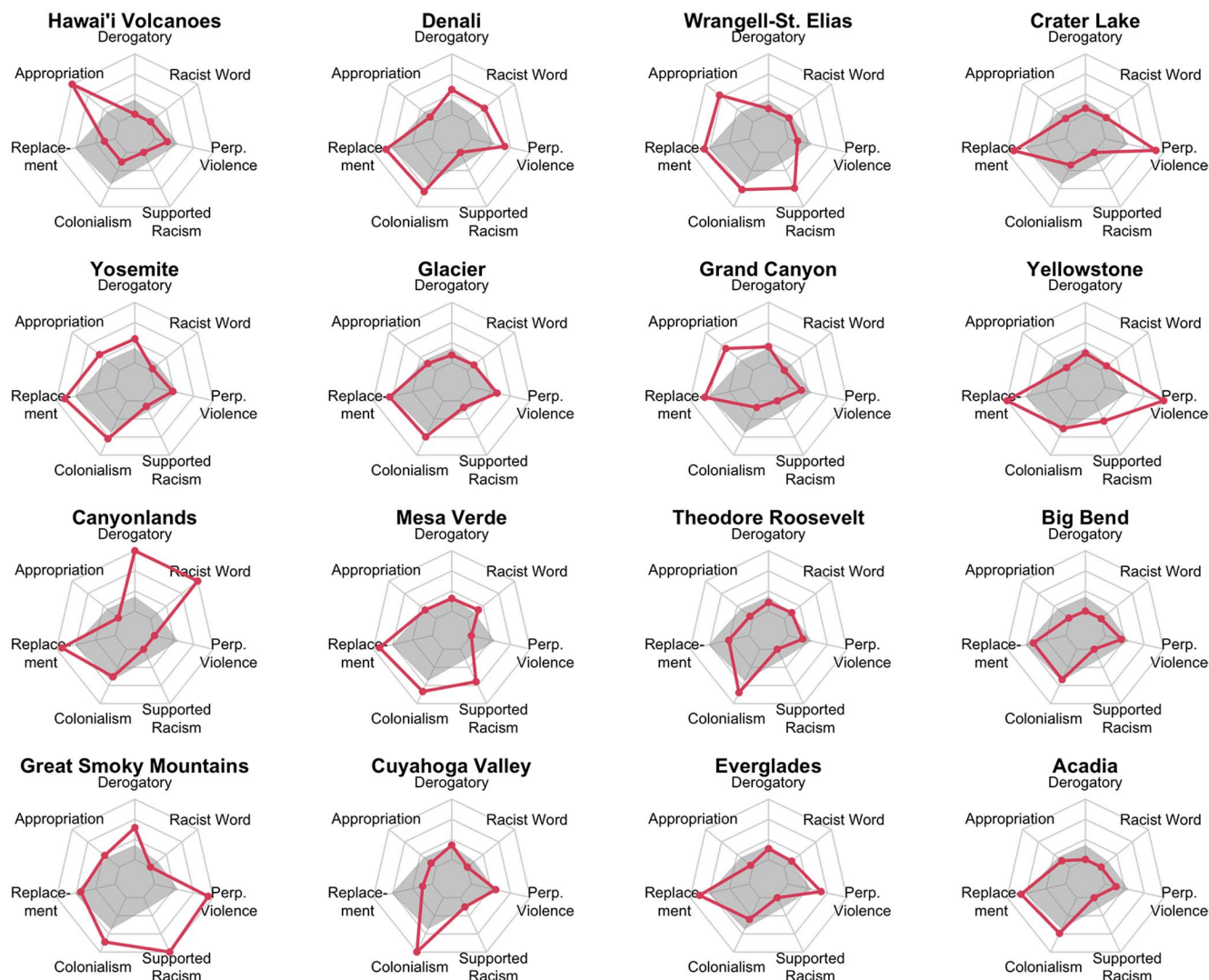


FIGURE 3 The proportion of place name problem types varied among the parks. Each park's scores (red line) are that park's proportion of each problem type, scaled by the maximum proportion observed for each problem type among all the parks. The grey shape in each plot is the average score among the parks. Parks are ordered west (top left) to east (bottom right)

are examples of how a settler place name honouring a proponent-perpetrator of genocide inflicts trauma on generations of Indigenous people, and Black Elk Peak is an example, like Denali, of how official US government place names can change to support Native American self-determination.

Although not an emergent category or class, we did find four places commemorating Black people or named by a Black person: Frazer Point in Acadia (Acadia National Park, 2021), Rankin Bight and Rankin Key in Everglades (Perez, 2007, p. 118) and Brown Betty Rapids on the Colorado River in Canyonlands (Allen, 2012). Brown Betty Rapids is a confusing name that ultimately refers to a dessert with a racist name, but the rapids may have been named by George W. Gibson, the Black cook for the Brown-Stanton Survey of 1889 in honour of his boat named *Brown Betty*, which nearly crashed at these rapids (Allen, 2012; Birdsall, 2012). Four place names are a paucity of Black representation in these 16 national parks, especially when contrasted with the 52 place names commemorating whites who

perpetrated physical, racial violence. These gaps, in the words of Carolyn Finney (2014, p. 5) 'legitimate the invisibility of the African American in the Great Outdoors'.

Another name type worth noting that was not an emergent theme, were the 364 names that are European in origin, not proper nouns, and with no record of their meaning. Seemingly descriptive names such as Clear Creek (Wrangell-St. Elias), Sharp Peak (Crater Lake) and Long Pond (Acadia) are nevertheless not neutral. Such names do not record cultural knowledge of place, such as how a place was traditionally used, how the place relates to other features in the landscape, nor help people in the present understand teachings from the past. In the 1915 meeting shown in Figure 1a, Tail-Feathers-Coming-Over-The-Hill called settler names 'foolish names of no meaning whatever!' (Keller & Turek, 1998, p. 51). Seemingly innocuous names, and names of forgotten or obscure individuals are perhaps just as pernicious as names for outright racist or violent individuals. Neutral-seeming settler names build a white-normative culture in the place (Brasher

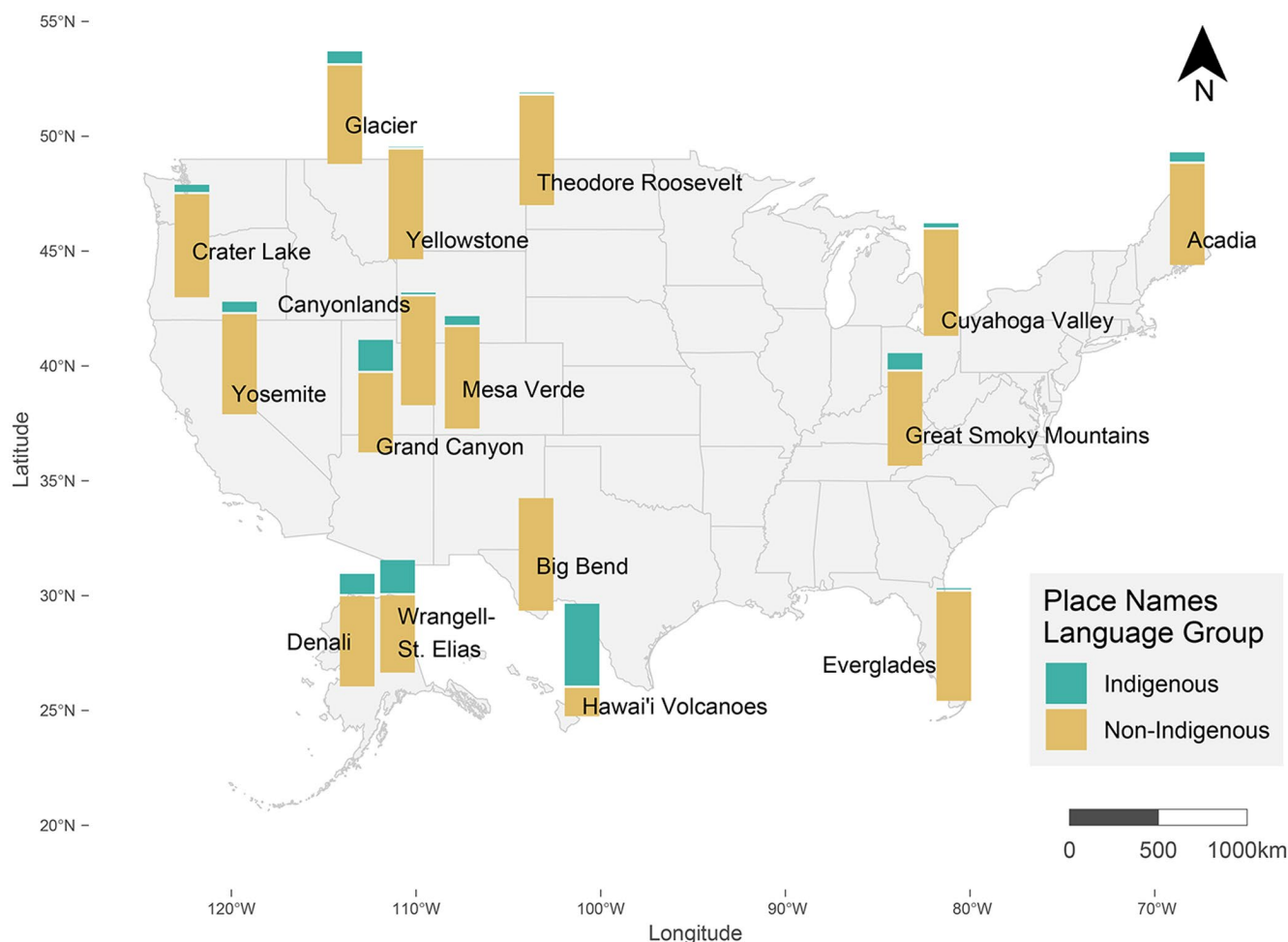


FIGURE 4 Map of lands now called the United States (Alaska and Hawai'i not shown to scale or geographic position). Each national park shown with a bar indicating the proportion of place names that originated from Indigenous or non-Indigenous language groups. Indigenous names include those categorized as appropriation. Non-Indigenous significantly outnumber Indigenous names, and the proportion of Indigenous names increases moving westward (see text for details)

et al., 2017), perpetuate the invisibility of Indigenous people on landscapes, and demonstrate that settlers have the power to suppress deep Indigenous knowledge with relatively shallow Eurocentric names.

To summarize the results for our first research question, *Who and what do place names in US national parks memorialize?*, the 'who' ranged from Indigenous peoples, individuals and characters from Indigenous stories (knowledge); to plants and animals; to homesteaders, Confederate generals (e.g. Clingmans Dome), a proponent of eugenics (Pinchot Creek), and individuals responsible for acts of anti-Indigenous or anti-Black violence. The 'what' was a continuum spanning knowledge in the form of traditional Indigenous place names and the presence of Native peoples and cultures as well as appropriation of Indigenous names and words without consent, erasure and replacement of Indigenous knowledge and presence resulting in perpetuation of the myth of the uninhabited wilderness, and racial slurs and seemingly innocuous Eurocentric names, both of which are reminders and markers of white hegemony.

5.2 | Do US settler colonial and racial processes show up in spatial patterns in US national park place names? If so, how?

Two patterns emerged when mapping place name meanings across parks: no park was uniformly low across all categories, except for potentially Hawai'i Volcanoes where many of the names counted as 'appropriation' are appropriation of a relevant Indigenous place name, and the relative prevalence of each of these categories varied widely among parks (Figure 3). Thus, each park's collection of place names shapes a unique constellation of hidden-in-plain-sight myths of settler colonialism and white hegemony.

We found significantly fewer traditional and appropriated Indigenous place names (park mean = $15 \pm 4.5\%$ SE) relative to settler colonizer place names (park mean = $79 \pm 6.9\%$ SE; Figure 4). The preponderance of settler colonizer place names in the parks erases the lands' Native peoples, and the uninhabited wilderness myth lives on.

The proportion per park of the following place name classes did not change significantly with longitude: perpetrated violence; supported racism; and racist words. However, per degree of longitude moving westward, Indigenous names increased 0.03% (95% CL = -0.04, -0.02; Figure 4) and appropriated Indigenous names increased 0.02% (95% CL = -0.03, -0.01; Figure 5). The model for the proportion of park names that were Indigenous was significant ($p = 0.01$) while the appropriation model was marginally significant ($p = 0.06$). The model for 'memorializes settler colonialism' was not significant ($p = 0.15$), but the trend was decreasing moving westward. These results suggest that the specific local contexts of place names might trace the east-to-west trajectory of settler colonialism in North America. On the east coast, early in US colonial history, place names represent fundamental claims on the lands where colonizers (re)named natural features to create geographies that reflected their Eurocentric identities (Hunt & Stevenson, 2016; Smith, 2012; Williams, 1992). In later years, as settler colonialism proceeded westward and shifted into a mode of domination of Indigenous peoples and the landscape, US settlers were like other conquering societies who tend to revert to 'imperial nostalgia'— the reclamation by the colonizer of colonized peoples' culture including names and words (Green, 1988; Rosaldo, 1989). In effect, this repositions Indigenous peoples as symbolic ancestors, (Green, 1988; Rosaldo, 1989). The myths of 'disappearing Indians' and uninhabited wilderness provide relief from what Dina Gilio-Whitaker (Colville Confederated Tribes) (2019, p. 50) calls the inherent contradictions

between the European American history of violence towards peoples of colour, especially Indigenous and Black people, and the US narrative of democracy and freedom.

5.3 | To what extent do place names in US national parks perpetuate settler colonial, including white supremacy, mythologies?

Place names in national parks are highly visible to the millions that visit the parks every year. To estimate the potential exposure of park visitors to settler colonial names, we multiplied the count of each of the highlighted classes per park by that park's 10-year average (2009–2019) annual visitation rate (visitation rates: Table 1, visitor views: Figure 2b). We acknowledge this will be an overestimate because most park visitors do not see every park feature (although they do get a map), but it provides an indication of the potential reach harmful mythologies have. For example, we found that each year there are 133 million potential views of park features named for individuals who perpetrated racial violence (Figure 2b). Many visitors will not know the lesser-known history of Mt. Doane or other such features. Nonetheless, park maps impose visitors' participation in and perpetuation of settler colonial value systems. Furthermore, park features named for men like Clingman, Hayden, Doane and Harney act as 'dog whistles', coded messages about minoritized groups that go unrecognized by some but clearly heard by others (López, 2015), validating white supremacy generation after generation.

Altogether, we found that US national parks commemorate individuals and words that tacitly endorse settler colonial, white supremacist and anti-Indigenous ideologies. The choice to preserve these place names today normalizes systems of domination over the racialized 'other' and contributes to the socio-spatial exclusion of Indigenous and other peoples of colour from outdoor spaces (Barnd, 2017; Finney, 2014; Sibley, 2003; Wolfley, 2016). As D'Ignazio et al. (2022) point out, 'heritage struggles are never only about a single issue [or, in our case place name], but additionally about recognizing and challenging the pattern that elevates dominant groups in the hegemonic domain and erases and excludes minoritized groups'. By extension, maintaining implicitly and explicitly racist and settler colonial place names signals, intentionally or unintentionally, that keeping those markings of space and racial hierarchy are more important than the harms they recall or the ongoing harms they create.

6 | IMPLICATIONS

Our results demonstrate the system-wide scale at which place names reflect settler colonialism and white supremacy in US national parks. Place names in any one national park were chosen at different times by different people with varying backgrounds, yet the resulting spatial patterns quantified in this study suggest a systemic issue. The BGN is not procedurally designed nor does it have

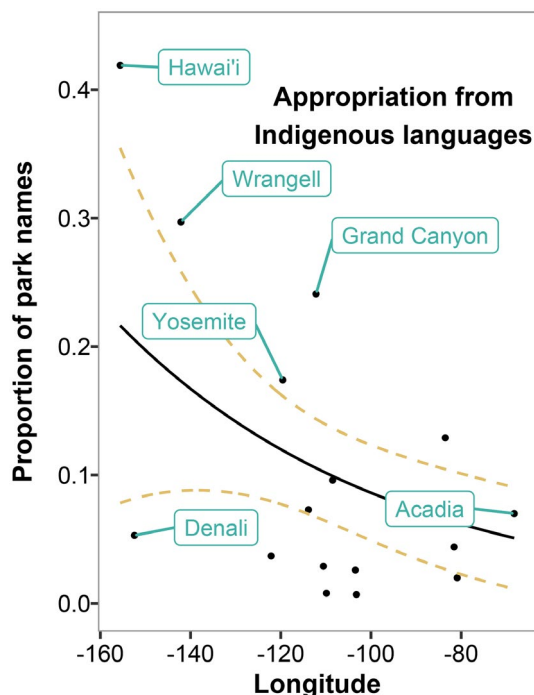


FIGURE 5 Proportion of park place names that are appropriated from Indigenous languages by longitude. Solid black lines represent model fit of the data and dashed lines represent the 95% confidence interval using a beta regression approach (see text for model details)

the capacity for an internal review at the scale required (US Board on Geographic Names, 2016). Indeed, in September 2020 then-Representative now-Secretary of the Interior Deb Haaland (Laguna Pueblo) introduced Bill H.R. 8455 'Reconciliation in Place Names Act' to establish a diverse committee to advise the BGN on renaming geographic features with offensive place names. The bill states, 'no geographic feature in the United States should have a name which disparages racial minorities, perpetuates prejudice, or honors those who committed or supported atrocities against racial minorities' (116th Congress, 2020).

The review commission, once approved by Congress, could look to the policy used by the Ngā Pou Taunaha o Aotearoa (Aotearoa New Zealand Geographic Board), which prioritizes original names, including Indigenous original names (Aotearoa New Zealand Geographic Board, 2018). The review process might, in the context of national parks, question the BGN policies that privilege local opinions and enable individual members of Congress to prevent name changes (US Board on Geographic Names, 2016). After all, national parks are 'for the benefit and inspiration of all the people of the United States' (US Congress, 1970). The review commission could build on the qualitative methodology developed here for categorizing place names.

The process for renaming would be part of the larger project of making visible those historically silenced by white supremacy and re-defining a sense of place and who belongs there and could invoke the process of memory-work (Brasher et al., 2017; Brasher et al., 2020; Till, 2012). Memory-work empowers marginalized groups and their knowledges via communal surfacing of collective memories through shared experiences of landscapes, performances and other commemorative practices (Brasher et al., 2020; Johnson, 2013; Till, 2012). For Indigenous groups in particular, sacred sites elicit more than collective memory, what Hawaiian scholar Leilani Holmes (2000, p. 46) calls 'heart knowledge'. Holmes writes, 'As the kupuna [Elders] share knowledge, they articulate the voice of the land...[H]eart knowledge, blood memory, and the voice of the land constitute an ancestry of experience...' Place names from memory-work and heart knowledge could contribute to a physical and cultural landscape that empowers marginalized peoples, values Indigenous knowledge and reminds settler colonizers of the original and contemporary stewards of colonized lands. As noted above, renaming with neutral-seeming names can still support white hegemony.

Some of the patterns we observed might be unique to national parks, but they also reflect trends in US place names more generally. Individual members of the public can get involved by learning about place names in the parks or place names in their own neighbourhood. Any individual or group can propose name changes to the BGN—instructions are available at <https://www.usgs.gov/core-science-systems/ngp/board-on-geographic-names/how-do-i>. Based on conversations with a BGN member and individuals who have gone through the name change process, we offer a few tips. The foremost advice is: *do your homework*. Read the BGN's 'Principles, Policies, and Procedures' (see above link), research the origin and meaning behind the current name, understand how the community feels about the name, and build a case for why it needs changed/restored following

the 'Principles' document. For finding traditional Indigenous place names, consult Native knowledge keepers and old maps. If you are non-Indigenous, it is essential to establish a relationship and collaborate with Native American groups with current and historical connections to the place to understand their views of the current place name and if they have a traditional place name for the place; come with an open mind and understand that they are busy people and your name change effort may not be their priority. The BGN prefers name proposals that capture the history of the place including traditional Indigenous place names. If you are not local to the place, a name that seems offensive to you might have historical meaning to the community, you will need to account for this in your proposal. Finally, get the support of local organizations for your proposal, and be patient—it is not a fast process. A retired Hawai'i Volcanoes NPS ranger, Mr. Bobby Camara, offers his research on traditional Indigenous place names in that park as an example here: <https://tinyurl.com/nuyapwx9> (shared with permission).

A natural progression from giving names back is to eventually give land back. A land back movement is underway, for example, in Paha Sapa (the Black Hills), which are sacred to the Lakota and other members of the Oceti Sakowin (Sioux Nation) but were, according to the US Supreme Court, stolen from them by the US in violation of treaties ('United States v. Sioux Nation of Indians', 1980). The Land Defenders have started with Mt. Rushmore, a symbol of white supremacy and systemic racism to Indigenous people (NDN Collective, 2020). David Treuer (Ojibwe; Treuer, 2021) recently advocated for the return of all national parks to Indigenous peoples to be managed for themselves and all Americans with universal access in perpetuity. Treuer's idea is not new, the Havasupai called for this in testimony before Congress in 1973 (Keller & Turek, 1998, p. 169). To the average European American, Treuer's and the Havasupai's proposals might sound radical. But once we peel away settler bias, recognize the lesser-told histories of national parks and how much of what we love about them is a product of millennia of Indigenous stewardship, 'parks back' becomes more convincing and ethically and ecologically sound.

What does all of this mean for ecologists and additional outdoor professionals? Some first steps to make our practices more just and inclusive are to look beyond conventional maps, question place names, and build intentional relationships with the places where we work, their histories and the peoples who have stewarded those places for millennia. These efforts represent small acts of refusal to participate in and perpetuate settler colonial myths. In the words of Carolyn Finney (2014, p. 6),

By placing ideas of wilderness in a historical context and deconstructing their implicit and explicit racial connotations, scholars can push mainstream environmental institutions and the society at large to consider alternate understandings and experiences of the outdoors.

Alternate understandings include traditional ecological knowledge, a type of Indigenous knowledge. Native American activists and

scholars who work to increase awareness of Indigenous knowledges do this not only to resist the hegemony but also because Indigenous knowledge is necessary for addressing the challenges of contemporary global change (Treuer, 2019, p. 417), that is, 'the master's tools will never dismantle the master's house' (Lorde, 1984). Many ecologists work to understand and curb the loss of biodiversity, anthropogenic greenhouse gas emissions and environmental threats to human health. Following the teachings of Indigenous Rights attorney and author Sherri Mitchell (2021) of the Penobscot and Passamaquoddy tribes, if western science stems from the same worldview responsible for these ecological crises, that is, settler colonialism and capitalism as the 'master's house', then peeling away these hegemonic biases will make space for integrating new information for solving the urgent crises we face.

ACKNOWLEDGEMENTS

McGill, Borrelle, Wu, Ingeman and Koch were supported by David H. Smith Conservation Research Fellowships. We thank Chief Arvol Looking Horse (19th generation keeper of the Sacred White Buffalo Pipe and Bundle of the Lakota, Dakota & Nakota Great Sioux Nation) and Mrs. Paula Looking Horse (*H'e Sapa winyan*, Black Hills Woman) for their work on place names and early support of these ideas; Chief Stanley C. Grier (Piikani Nation), Lee Juan Tyler (Shoshone-Bannock Tribes), and Brandon Sazue, Sr. (Crow Creek Sioux) for their work on place names and their permission to publish their image; Noelani Puniwai, Nicole Heller, Max Lambert, Beka Economopoulos and Jason Jones for their feedback on earlier drafts; Bobby Camara for sharing his research about traditional place names in Hawai'i Volcanoes National Park; Michael Shelton and Jennifer Runyon at the US Board of Geographic Names for their patience with our questions, time and service. This manuscript was improved by constructive reviews from Kai Chan, Marc Tadaki, Leonora King and an anonymous reviewer. Any mistakes belong solely to the authors. Land Acknowledgements: The authors wish to acknowledge their occupation on the traditional lands of the Seneca, Monongahela, Lenape, Wyandot, Shawnee and Osage (B.M.M.); the Huron-Wendat and Mississauga of the Credit River and Ngāti Paoa and Te Kawerau a Maki (S.B.B.); the Barbareño Chumash (G.C.W.); the Kalapuya, Chinook, and Cowlitz (K.E.I.); the Kānaka 'Ōiwi (J.B.U.K.); and the Ampinefu Band of Kalapuya (N.B.B.).

CONFLICT OF INTEREST

The authors declare no conflict of interest.

AUTHORS' CONTRIBUTIONS

All authors conceived the ideas and conducted the investigation; B.M.M., S.B.B., G.C.W., K.E.I. and J.B.U.K. designed the methodology, curated the data, conducted statistical analyses and made visualizations; B.M.M. managed the project and led the writing. All authors contributed critically to the drafts and gave final approval for publication.

DATA AVAILABILITY STATEMENT

The data and R scripts associated with this analysis and plots are publicly available in McGill et al. (2021); the data alone are publicly

available in McGill et al. (2021a); the maps used in this analysis are publicly available in McGill et al. (2021b).


ORCID

Bonnie M. McGill  <https://orcid.org/0000-0002-5417-3519>

Stephanie B. Borrelle  <https://orcid.org/0000-0002-1802-7354>

Grace C. Wu  <https://orcid.org/0000-0002-8290-119X>

Kurt E. Ingeman  <https://orcid.org/0000-0002-0111-3619>

Jonathan Berenguer Uhuad Koch  <https://orcid.org/0000-0002-6654-7370>

REFERENCES

- 116th Congress. (2020). *Reconciliation in place names act*.
- Acadia National Park. (2021). No title. Retrieved from Facebook website <https://www.facebook.com/AcadiaNPS/photos/a.784251498269074/4299457443415111>
- Adams, G. R. (2001). *General William S. Harney: Prince of dragons*. University of Nebraska Press.
- Alderman, D. H. (2020). Commemorative place naming: To name place, to claim the past, to repair futures. In F. Giraut & M. Houssay-Holzschuch (Eds.), *Naming places*. ISTE-Wiley. Retrieved from <https://www.researchgate.net/publication/341412389>
- Allen, S. (2012). *Utah's canyon country place names volumes 1 and 2*. Canyon Country Press.
- American Museum of Natural History. (2020). *AMNH requests the equestrian statue on central park west be moved*. Retrieved from <https://www.amnh.org/about/press-center/amnh-requests-statue-removal>
- Anderson, D. E. (2011). *Origin of the word yosemite*. Retrieved from http://www.yosemite.ca.us/library/origin_of_word_yosemite.html
- Anderson, M. K. (2013). *Tending the wild: Native American knowledge and the management of California's natural resources*. University of California Press.
- Ansley, F. L. (1989). Stirring the ashes: Race, class and the future of civil rights scholarship. *Cornell Law Review*, 74(6), 993–1077. Retrieved from <http://scholarship.law.cornell.edu/clr/vol74/iss6/1>
- Aotearoa New Zealand Geographic Board. (2018). *Frameworks of the New Zealand Geographic Board Ngā Pou Taunaha o Aotearoa*. (April). Retrieved from <http://www.lin.govt.nz/placenames/about-geographic-board/nzgb-standards/index.aspx>
- Barnd, N. B. (2017). *Native space: Geographic strategies to unsettle settler colonialism*. Oregon State University Press.
- Basso, K. H. (1996). *Wisdom sits in places: Landscape and language among the Western Apache*. UNM Press.
- Bastien, B., & Kremer, J. W. (2004). *Blackfoot ways of knowing: The world-view of the Siksikaitapi*. University of Calgary Press.
- BBC News. (2021). Egerton Ryerson: Statue toppled of architect of 'shameful' school system. Retrieved from BBC News website <https://www.bbc.com/news/world-us-canada-57381522>
- Berg, L., & Kearns, R. (1996). Naming as norming: 'Race', gender, and the identity politics of naming places in Aotearoa/New Zealand. *Environment and Planning D: Society and Space*, 14, 99–122.
- Berg, L. D., & Vuolteenaho, J. (2009). *Critical toponymies – The contested politics of place naming*. Ashgate.
- Birdsall, J. (2012). Apple brown betty, a race-based dessert. Retrieved from Chowhound website <https://www.chowhound.com/food-news/106699/apple-brown-betty-a-race-based-dessert/>
- Blackmon, D. A. (2008). *Slavery by another name: The re-enslavement of Black Americans from the Civil War to World War II*. Anchor Books.
- Bonds, A., & Inwood, J. (2016). Beyond white privilege: Geographies of white supremacy and settler colonialism. *Progress in Human*

- Geography*, 40(6), 715–733. <https://doi.org/10.1177/0309132515613166>
- Bonney, O. H., & Bonney, L. (1970). *Battle drums and geysers: The Life and Journals of Lt. Gustavus Cheyney Doane, Soldier and Explorer of the Yellowstone and Snake River Regions* (1st ed.). Sage Books. Retrieved from <https://archive.org/details/battledrumsgeyse00bonn/page/n5/mode/2up>
- Brasher, J. P., Alderman, D. H., & Inwood, J. F. J. (2017). Applying critical race and memory studies to university place naming controversies: Toward a responsible landscape policy. *Papers in Applied Geography*, 3(3–4), 292–307. <https://doi.org/10.1080/23754931.2017.1369892>
- Brasher, J. P., Alderman, D. H., & Subanthore, A. (2020). Was Tulsa's Brady Street really renamed? Racial (in)justice, memory-work and the neoliberal politics of practicality. *Social and Cultural Geography*, 21(9), 1223–1244. <https://doi.org/10.1080/14649365.2018.1550580>
- Braun, T., & Dierkes, P. (2017). Connecting students to nature—how intensity of nature experience and student age influence the success of outdoor education programs. *Environmental Education Research*, 23(7), 937–949. <https://doi.org/10.1080/13504622.2016.1214866>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp0630a>
- Brockington, D. (2002). *Fortress conservation*. Indiana University Press.
- Christian, D. (2019). Indigenous visual storywork for Indigenous film aesthetics. In J. A. Q'um Q'um Xiim, J. B. J. Lee-Morgan, & J. De Santolo (Eds.), *Decolonizing research: Indigenous storywork as methodology* (pp. 40–55). Zed Books Ltd.
- Craig, D., Yung, L., & Borrie, W. (2012). Blackfeet belong to the mountains: Hope, loss, and Blackfeet claims to Glacier National Park, Montana. *Conservation and Society*, 10(3), 232–242. <https://doi.org/10.4103/0972-4923.101836>
- Cribari-Neto, F., & Zeileis, A. (2010). Beta regression in R. *Journal of Statistical Software*, 34(2), 1–24.
- Cronon, W. (1995). The trouble with wilderness or, getting back to the wrong nature. In W. Cronon (Ed.), *Uncommon ground: Rethinking the human place in nature* (pp. 69–90). W. W. Norton & Co. <https://doi.org/10.2307/3985059>
- D'Ignazio, C., So, W., & Ntim-Addae, N. (2022). The audit: Perils and possibilities for contesting oppression in the heritage landscape. In F. Haghighi & N. Bobic (Eds.), *The Routledge Handbook of Architecture, Urban Space and Politics: Vol. I: Violence, Spectacle and Data*. Routledge.
- Daley, J. (2016, August). Highest peak in South Dakota renamed for Oglala Lakota Medicine Man. *Smithsonian Magazine*. Retrieved from <https://www.smithsonianmag.com/smart-news/highest-peak-south-dakota-renamed-ogla-lakota-medicine-man-180960133/>
- Deloria, V. (1994). *God is red: A native view of religion: The classic work updated* (2nd ed.). Fulcrum Publishing.
- Deluca, K., & Demo, A. (1990). Imagining nature and erasing class and race: Carleton Watkins, John Muir, and the construction of wilderness. *Environmental History*, 6(4), 541–560. <https://doi.org/10.2307/3985254>
- Dowie, M. (2009). *Conservation Refugees: The hundred-year conflict between global conservation and native peoples*. MIT Press.
- Dunbar-Ortiz, R. (2014). *An Indigenous peoples' history of the United States*. Beacon Press.
- Dunbar-Ortiz, R., & Gilio-Whitaker, D. (2016). *'All the real Indians died off': And 20 other myths about Native Americans*. Beacon Press.
- Ellis, E. C., Gauthier, N., Klein Goldewijk, K., Bliege Bird, R., Boivin, N., Diaz, S., ... Watson, J. E. M. (2021). People have shaped most of terrestrial nature for at least 12,000 years. *Proceedings of the National Academy of Sciences of the United States of America*, 118(17), e2023483118. <https://doi.org/10.1073/pnas.2023483118>
- Finney, C. (2014). *Black faces, white spaces*. UNC Press.
- Fletcher, M.-S., Hamilton, R., Dressler, W., & Palmer, L. (2021). Indigenous knowledge and the shackles of wilderness. *Proceedings of the National Academy of Sciences of the United States of America*, 118(40), e2022218118. <https://doi.org/10.1073/pnas.2022218118>
- Freire, P. (1987). *Literacy: Reading the word and the world*. Routledge and Kegan Paul.
- Geniusz, M. S. (2015). *Plants have so much to give us, all we have to do is ask* (W. M. Geniusz, Ed.). University of Minnesota Press.
- Gilio-Whitaker, D. (2019). *As long as grass grows: The indigenous fight for environmental justice, from colonization to standing rock*. Beacon Press.
- Glave, D. E. (2010). *Rooted in the earth*. Chicago Review Press.
- Green, R. (1988). The tribe called Wannabee: Playing Indian in America and Europe. *Folklore*, 99(1), 30–55. Retrieved from. <https://blueline.instructure.com/courses/269554/files/4779428/download>
- Groulx, M., Lemieux, C., Dawson, J., Stewart, E., & Yudina, O. (2016). Motivations to engage in last chance tourism in the Churchill Wildlife Management Area and Wapusk National Park: the role of place identity and nature relatedness. *Journal of Sustainable Tourism*, 24(11), 1523–1540. <https://doi.org/10.1080/09669582.2015.1134556>
- Hayden, F. V. (1872). *Preliminary report of the United States Geological Survey of Wyoming, and Portions of Contiguous Territories*. Government Printing Office. <https://doi.org/10.5962/bhl.title.61284>
- Hayden, F. V., & Selwyn, A. R. C. (1883). *Stanford's compendium of geography and travel based on Hellwald's 'Die Erde Und Ihre Völker'*. Edward Stanford. Retrieved from. [https://hdl.handle.net/2027/uc1.\\$b59045](https://hdl.handle.net/2027/uc1.$b59045)
- Hecht, M., & Nelson, T. (2021). Youth, place, and educator practices: Designing program elements to support relational processes and naturalist identity development. *Environmental Education Research*, 27(9), 1401–1420. <https://doi.org/10.1080/13504622.2021.1928608>
- Hegy, N. (2018). *Native Americans propose change to yellowstone landmark names*. Retrieved from National Public Radio website. <https://www.npr.org/2018/09/09/641330248/native-americans-propose-change-to-yellowstone-landmark-names>
- Hercus, L. A., & Koch, H. J. (2009). *Aboriginal placenames: Naming and re-naming the Australian landscape* (L. Hercus & H. Koch, Eds.). Australian National University E Press and Aboriginal History Incorporated.
- Holmes, L. (2000). Heart knowledge, blood memory, and the voice of the land: Implications of research among Hawaiian elders. In G. Dei, B. Hall, & D. Goldin Rosenberg (Eds.), *Indigenous knowledges in global contexts* (pp. 37–53). University of Toronto Press.
- Holterman, J. (2006). *Place Names of Glacier National Park* (3rd ed.). Riverbend Publishing.
- Hornaday, W. T. (1904). *The American natural history*. Charles Scribner's Sons.
- Hunt, D., & Stevenson, S. (2016). Decolonizing geographies of power: Indigenous digital counter-mapping practices on Turtle Island. *Settler Colonial Studies*, 7(3), 1–21. <https://doi.org/10.1080/2201473X.2016.1186311>
- Johnson, N. (2013). Space, memory, identity. In P. Cloke, P. Crang, & M. Goodwin (Eds.), *Introducing human geographies* (pp. 509–525). Routledge.
- Kantor, I. (2007). Ethnic cleansing and America's creation of national parks. *Public Land and Resources Law Review*, 28, 41–64. Retrieved from. <https://scholarworks.umd.edu/cgi/viewcontent.cgi?article=1267&context=plrlr>
- Keller, R. H., & Turek, M. F. (1998). *American Indians & National Parks*. University of Arizona Press.
- Kimmerer, R. W., & Lake, F. K. (2001). Maintaining the Mosaic: The role of indigenous burning in land management. *Journal of Forestry*, 99(11), 36–41. <https://doi.org/10.1093/jof/99.11.36>
- Kimmerer, R. W. (2012). *Braiding sweetgrass: Indigenous wisdom, scientific knowledge and the teachings of plants* (1st ed.). Milkweed Editions.

- King, R. C. (2003). De/Scribing Squ*w: Indigenous women and imperial idioms in the United States. *American Indian Culture and Research Journal*, 27(2), 1–16.
- Lee, K. J., & Scott, D. (2016). Racial discrimination and African Americans' travel behavior: The utility of habitus and vignette technique. *Journal of Travel Research*, 56(3), 381–392.
- Lenth, R. (2020). *emmeans: Estimated marginal means, aka least-squares means*. Retrieved from <https://cran.r-project.org/web/packages/emmeans/index.html>
- López, I. H. (2015). *Dog whistle politics: How coded racial appeals have wrecked the middle class*. Oxford University Press.
- Lorde, A. (1984). The master's tools will never dismantle the master's house. In *Sister outsider: Essays and speeches by Audre Lorde* (pp. 110–113). The Crossing Press. Retrieved from <https://archive.org/details/sisteroutsideres00lord/mode/2up>
- Mabie, N. (2020). A story of genocide, survival and resilience: Blackfeet Nation remembers Baker Massacre. Retrieved from Great Falls Tribune website <https://www.greatfalls Tribune.com/story/news/2020/01/16/montana-blackfeet-nation-tribe-baker-massacre-150th-anniversary/4434910002/>
- MacEachern, A. (1998). Where he didn't spend his summer vacation: Martin Luther King, Racism, and Fundy National Park. In J. S. Marsh & B. W. Hodgins (Eds.), *Changing parks: The history, future and cultural context of parks and heritage landscapes*. Natural Heritage/Natural History, Inc.
- Madison, V., & Stillwell, H. (1997). *How come it's called that? Place Names in the Big Bend Country*. Iron Mountain Press.
- Marshall, J. M., III. (2004). *The Journey of Crazy Horse*. Penguin Books.
- Martin, G., & William, J. (2019). Le7 Q'7es te Stsptekwll re Secwépemc: our Memories long ago. In J. A. Q'um Q'um Xiim, J. B. J. Lee-Morgan, & J. De Santolo (Eds.), *Decolonizing research: Indigenous storywork as methodology* (pp. 56–71). Zed Books Ltd.
- McGill, B. M., Borrelle, S. B., Wu, G. C., Ingeman, K. E., Berenguer Uhuad Koch, J. & Barnd, N. B. (2021). Words_are_monuments_archive (2.0.0). Zenodo, <https://doi.org/10.5281/zenodo.5712009>
- McGill, B. M., Borrelle, S. B., Wu, G. C., Ingeman, K. E., Berenguer Uhuad Koch, J., & Barnd, N. B. (2021a). Words are monuments data-only archive (v1.0.1). Zenodo. <https://doi.org/10.5281/zenodo.6326515>
- McGill, B. M., Borrelle, S. B., Wu, G. C., Ingeman, K. E., Berenguer Uhuad Koch, J. & Barnd, N. B. (2021b). Words are Monuments: US national park visitor maps used for analysis. Zenodo, <https://doi.org/10.5281/zenodo.5716406>
- Mitchell, S. (2021). Comments made at the Indigenous Knowledge & Western Science: Collaboration, relationship, and climate solutions (session 4) at 20:45. Retrieved from <https://www.gcseglobal.org/spring-learning-series-session-4-recording-and-resources>; Global Council on Science and the Environment. Retrieved from <https://www.gcseglobal.org/spring-learning-series-session-4-recording-and-resources>
- Nash, R. (2014). *Wilderness and the American Mind (Fifth)*. Yale University Press.
- National Park Service. (2016). *The National Parks: Index 2012–2016*. Retrieved from <http://go.nps.gov/national-parks-index>
- National Park Service. (2020). *Denali or Mount McKinley?* Retrieved from <https://www.nps.gov/dena/learn/historyculture/denali-origins.htm>
- National Park Service. (2021). *Restoration of indigenous place names*. Retrieved from <https://www.nps.gov/havo/learn/historyculture/place-names.htm>
- NDN Collective. (2020). *HESAPA – A LANDBACK FILM*. Retrieved from <https://landback.org/hesapa/>
- Oliveira, K.-A. R. K. N. (2009). Wahi a Kahiko: Place names as vehicle of ancestral memory. *AlterNative: An International Journal of Indigenous Peoples*, 5(2), 100–115.
- Palermo, E. (2015). *Why 'Denali'? Explaining Mount McKinley's New (Old) Name*. Live Science. Retrieved from LiveScience.com website <https://www.livescience.com/52056-mount-mckinley-renamed-denali.html>
- Papahānaumokuākea Marine National Monument. (2020). *Cultural feature: The Hawaiian concept of duality*. Retrieved from https://www.papahanaumokuakea.gov/education/cultural_duality.html
- Pearce, M. W., & Hornsby, S. J. (2020). Making the coming home map. *Cartographica*, 55(3), 170–176.
- Perez, L. (2007). *Words on the wilderness: A history of place names in South Florida's National Parks*. ECity Publishing.
- R Core Team. (2019). *R: A language and environment for statistical computing*. R Foundation for Statistical Computing. Retrieved from <http://www.R-project.org/>
- Radio New Zealand. (2020). *Controversial statue of Captain John Hamilton has been removed*. Radio New Zealand. Retrieved from Radio New Zealand website <https://www.rnz.co.nz/news/te-manu-korihi/418833/controversial-statue-of-captain-john-hamilton-has-been-removed>
- Rannard, G., & Webster, E. (2020). *Leopold II: Belgium 'wakes up' to its bloody colonial past*. BBC News. Retrieved from BBC News website <https://www.bbc.com/news/world-europe-53017188>
- Rosaldo, R. (1989). Imperialist Nostalgia. *Representations*, 26, 107–122.
- Rose-Redwood, R., Alderman, D., & Azaryahu, M. (2017). The urban streetscape as political cosmos. In R. Rose-Redwood (Ed.), *The Political Life of Urban Streetscapes: Naming, Politics, and Place* (pp. 1–24). Routledge. <https://doi.org/10.4324/9781315554464>
- Rose-Redwood, R., Barnd, N. B., Lucchesi, A. H., Dias, S., & Patrick, W. (2020). Decolonizing the map: Recentering indigenous mappings decolonizing the map: Recentering Indigenous Mappings. *Cartographica: The International Journal for Geographic Information and Geovisualization*, 55(3), 151–162. <https://doi.org/10.3138/cart.53.3.intro>
- Schultz, J. W. (1916). *Blackfeet tales of glacier national park*. The Riverside Press.
- Sibley, D. (2003). *Geographies of exclusion: Society and difference in the west* (3rd ed.). Routledge.
- Smith, L. T. (2012). *Decolonizing methodologies: Research and indigenous peoples* (2nd ed.). Zed Books Ltd.
- Spence, M. D. (1999). *Dispossessing the wilderness: Indian removal and the making of the national parks*. Oxford University Press.
- Stegner, W. (1983). The best idea we ever had. *Wilderness*, 46(Spring), 4–13.
- Swanson, D. A. (2008). Hawaiian oral tradition describes 400 years of volcanic activity at Kilauea. *Journal of Volcanology and Geothermal Research*, 176(3), 427–431. <https://doi.org/10.1016/j.jvolgeores.2008.01.033>
- Taylor, D. E. (2016). *The rise of the American conservation movement: power, privilege, and environmental protection*. Duke University Press.
- Taylor, D. E. (2018). Racial and ethnic differences in connectedness to nature and landscape preferences among college students. *Environmental Justice*, 11(3), 362–372. <https://doi.org/10.1089/env.2017.0040>
- Thuermer Jr., A. M. (2018). Tribes meet Wyoming resistance to Yellowstone Name Changes. Retrieved from WyoFile.com website <https://www.wyofile.com/tribes-meet-wyoming-resistance-to-yellowstone-name-changes/>
- Till, K. E. (2012). Wounded cities: Memory-work and a place-based ethics of care. *Political Geography*, 31(1), 3–14. <https://doi.org/10.1016/j.polgeo.2011.10.008>
- Treuer, D. (2019). *The heartbeat of wounded knee: Native America from 1890 to the present*. Riverhead Books.
- Treuer, D. (2021, May). Return the national parks to the tribes. Retrieved from The Atlantic website <https://www.theatlantic.com/magazine/archive/2021/05/return-the-national-parks-to-the-tribes/618395/>
- Tuck, E., & Yang, K. W. (2012). Decolonization is not a metaphor. *Decolonization: Indigeneity, Education & Society*, 1(1), 1–40.

- UN General Assembly. (2007). *United Nations declaration on the rights of indigenous peoples: A resolution/adopted by the General Assembly*. United Nations. Retrieved from <https://www.un.org/en/about-us/universal-declaration-of-human-rights>
- United States v. Sioux Nation of Indians. (1980). Retrieved from <https://supreme.justia.com/cases/federal/us/448/371/>
- University of Hawai'i Hilo. (n.d.). Mokuaweoweo. Retrieved from Wehewehe Wikiwiki website <https://hilo.hawaii.edu/wehe/?q=Mokuaweoweo>
- US Board on Geographic Names. (2016). *Principles, policies, and procedures – Domestic geographic names*. Retrieved from https://geonames.usgs.gov/docs/pubs/DNC_PPP_DEC_2016_V.2.0.pdf
- US Board on Geographic Names. (2017). *Quarterly review list 430*. Retrieved from https://geonames.usgs.gov/apex/f?p=GEONAMES_WEB:REVIEW_LISTS:
- US Board on Geographic Names. (2021). *Action list 5-18-2021*. Retrieved from https://geonames.usgs.gov/apex/f?p=GEONAMES_WEB:REVIEW_LISTS:
- US Census Bureau. (2019). *Population estimates, July 1, 2019 (V2019)*. Retrieved from QuickFacts United States website <https://www.census.gov/quickfacts/fact/table/US/PST045219>
- US Congress. (1970). *General Authorities Act (84 Stat. 825)*.
- USGS. (2016). *Highest point east of rockies gets new name*. Retrieved from <https://www.usgs.gov/news/highest-point-east-rockies-gets-new-name-1>
- USGS. (n.d.). *Mauna Loa geology and history*. Retrieved from https://www.usgs.gov/volcanoes/mauna-loa/geology-and-history?qt-science_support_page_related_con=3#qt-science_support_page_related_con
- Vaske, J. J., & Lyon, K. M. (2014). *Linking the 2010 census to national park visitors*. Retrieved from <https://irma.nps.gov/DataStore/DownloadFile/495294>
- Wikipedia. (2021). *List of monuments and memorials removed during the George Floyd protests*. Retrieved from Wikipedia website https://en.wikipedia.org/wiki/List_of_monuments_and_memorials_removed_during_the_George_Floyd_protests#Confederate_monuments
- Williams, R. A. J. (1992). *The American Indian in Western Legal Thought: The Discourses of Conquest*. Oxford University Press.
- Wolfe, P. (2006). Settler colonialism and the elimination of the native. *Journal of Genocide Research*, 8(4), 387–409. <https://doi.org/10.1080/14623520601056240>
- Wolfley, J. (2016). Reclaiming a presence in ancestral lands: The return of native peoples to the National Parks. *Natural Resources Journal*, 56(1), 55–80.
- Zeileis, A., & Hothorn, T. (2002). Diagnostic checking in regression relationships. *R News*, 2(3), 7–10.
- Zeileis, A., Cribari-Neto, F., Gruen, B., Kosmidis, I., Simas, A. B., & Rocha, A. V. (2020). *Package 'betareg'*. Retrieved from <https://cran.r-project.org/web/packages/betareg/betareg.pdf>
- Zoltvany, Y. F. (2003). *LAUMET, de Lamothe Cadillac, ANTOINE*. Retrieved from Dictionary of Canadian Biography website http://www.biographi.ca/en/bio/laumet_antoine_2E.html

SUPPORTING INFORMATION

Additional supporting information may be found in the online version of the article at the publisher's website.

How to cite this article: McGill, B. M., Borrelle, S. B., Wu, G. C., Ingeman, K. E., Koch, J. B. & Barnd, N. B. (2022). Words are monuments: Patterns in US national park place names perpetuate settler colonial mythologies including white supremacy. *People and Nature*, 00, 1–18. <https://doi.org/10.1002/pan3.10302>