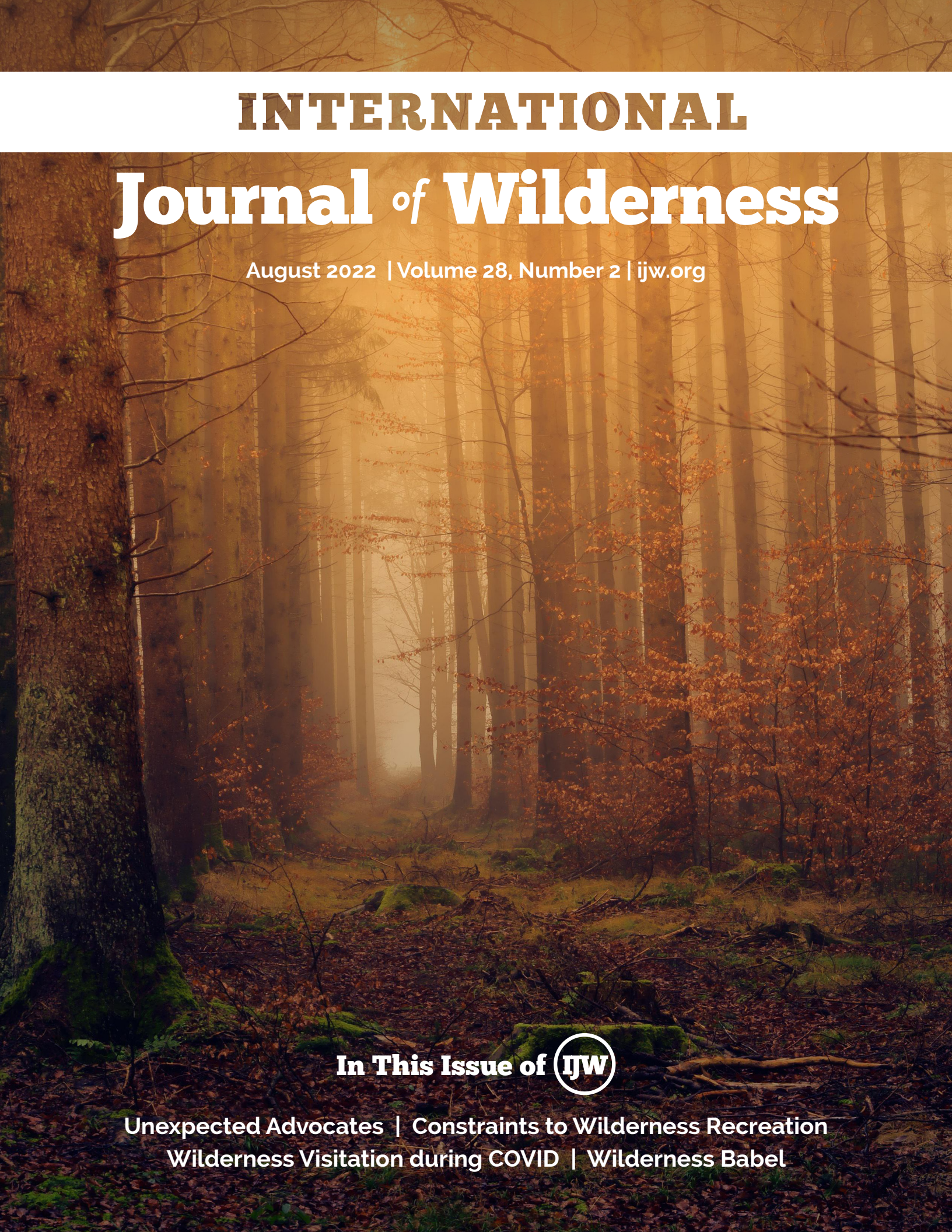

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Wilderness Visitation during COVID | Wilderness Babel

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FEATURES

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EDITORIAL PERSPECTIVES

Reaching Nature "Through the Noise"

by ROBERT DVORAK

Robert Dvorak

Wilderness and wildlands are often epitomized by their opportunities for solitude. They can be vastly quiet places where nature's sounds dominate the landscapes. Their remoteness gives humans the opportunity to take time away from society and find respite, recovery, and rejuvenation. Wilderness and wild places provide a contrast to the "noise" of modern society.

The global COVID-19 pandemic has given us a new perspective on society's noise. For extended periods, we witnessed the halt of activity in urban and rural areas across business, tourism, and recreation sectors. Society slowed down. However, this did not come without consequences and impacts. Many individuals have struggled through quarantines, restrictions, isolation, and personal loss. During these immensely challenging circumstances, individual sought out parks, forests, and wildlands to escape, to address their physical and mental health, and to interact with other people once again socially.

As the pandemic moves into a new phase, elements of our daily life are coming back. Dining, entertainment, transportation, travel, and production are all moving toward a new type of "normalcy." The noise of human society is returning in many places. But for many, life is not back to normal. In the United States, the federal government acknowledged more than 1 million deaths related to COVID-19. The pandemic is still unequally impacting many people worldwide as outbreaks and different stages occur. Global gas

prices are rapidly increasing. Inflation is straining family budgets. The conflict in Ukraine continues to expand a global humanitarian crisis. While society has returned, the noise has returned in an increasingly challenging way.

Unfortunately, crises and conflicts are not new phenomena. But current conditions have created a new noise that jeopardizes the newly emerging value of nature and wild places people discovered during the pandemic. This noise threatens the growth of advocacy and action among younger generations and new constituencies. It dominates individuals' priorities and influences their capacity for engagement. And this noise distracts individuals from recognizing the role nature can have in their daily physical and mental well-being.

We must seize on this opportunity to recognize the worth of nature, wilderness, and wild places as an antithesis to the noise. Many individuals have experienced the benefits and worth of nature in our global community. They have been exposed to the great and vital role it plays in our lives. We sought out nature's solitude during one of the most difficult times in many of our lives. We should recognize this opportunity moving forward to create a community where nature is vital and critical to everyone's well-being.

In this issue of IJW, Rebecca Rasch finds wildland advocates in unexpected places. Elena Thomas, William Rice, Jenn Thomsen, Jaclyn Rushing and Chris Armatas investigate constraints to wilderness recreation. Tina Tin documents wilderness area visitation during the COVID pandemic. And Marcus Hall, Wilko Graf von Hardenberg, Tina Tin, and Robert Dvorak reintroduce the Wilderness Babel project.

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Landscape on the Flathead National Forest, MT. **Photo credit:** USDA Forest Service

Wildland Advocates in Unexpected Places

by REBECCA RASCH

COMMENTARY

Rebecca Rasch

For the past few decades, lobbying for increased US federal environmental protections has been considered the stomping ground of liberal, urban Democrats. Polls continually demonstrate that Democrats are overwhelmingly more supportive of stronger US federal environmental protections compared to Republicans. For example, a Pew research poll found that 68% of Democrats agree that protecting the environment from effects of energy development should be a top priority of the federal government, compared to only 32% of Republicans (Pew Research Center 2017).

Yet in the intermountain western United States, environmentalists, defined here as those in favor of increased federal protections for public wildlands, reside in unexpected places. Results of a household survey fielded in 2018 and 2019 across Montana, northern Idaho, northern Wyoming, and western Washington show broad geographic dispersion of those with strong environmental values. The survey data were collected by the Bureau of Business and Economic Research (BBER), University of Montana, and the USDA Forest Service and intended to capture local perspectives on federal public land management in the region. Two waves of survey data were collected through a randomized mail survey of households located inside census tracts within 50 miles of the national forests in the region from

January to April of 2018 and 2019. The surveys were administered by BBER (2019), University of Montana, with an overall response rate of 36%. BBER created a weighted, pooled data set of both waves.

This region of the United States is historically conservative, consistently votes Republican in presidential elections, and has been associated with antifederal government militia groups including the Oath Keepers and the Three Percenters (Berlet and Sunshine 2019). The region is also the designated homeland of the American Redoubt, a Christian libertarian political migration movement that advocates for like-minded (e.g., separatist, survivalist and antifederal government) conservatives to relocate to Montana, Idaho, eastern Washington, and eastern Oregon (Rawles 2011) (Figure 1).

The movement's founder, James Wesley Rawles, describes the region, as part of a manifesto that is considered, by some survivalists, as the birth of the Redoubt migration movement: "I'm inviting people with the same outlook to move to the Redoubt States, to effect a demographic solidification. We're already a majority here. I'd just like to see an even stronger majority."

"For wilderness advocates, these data point to new opportunities. Catalyzing the voices of these environmentalists in unexpected places may be a more effective strategy for lobbying land management agencies to preserve more wildlands."

This region is also home to militia groups linked to the Patriot movement, which centers in part on efforts to decentralize government, weaken or remove federal environmental regulations, and return federally managed public lands to state and/or county ownership.

While the region has been anointed by right-wing militias as a haven of tolerance for and promotion of ultraconservative values, there are also both longtime residents and recent migrants who reject the America Redoubt philosophy and politics. When an armed militia, led by Ammon Bundy, occupied a US federal building on the Malheur Wildlife Refuge in Oregon 2016 to protest federal government ownership of public lands, there was not widespread community support of the occupation. Strauss (2017) explains how tribal community leaders, longtime ranchers, and local community leaders in the region united to expel Bundy's group of

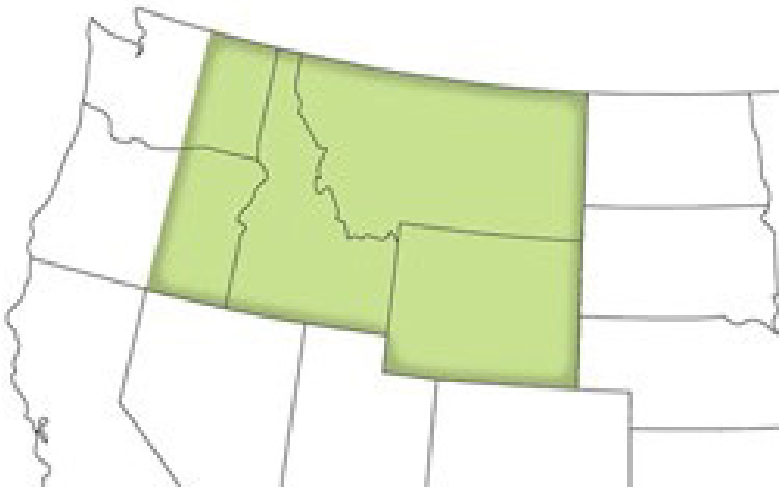

Figure 1 - Redoubt states map. Source: www.survivalblog.com.

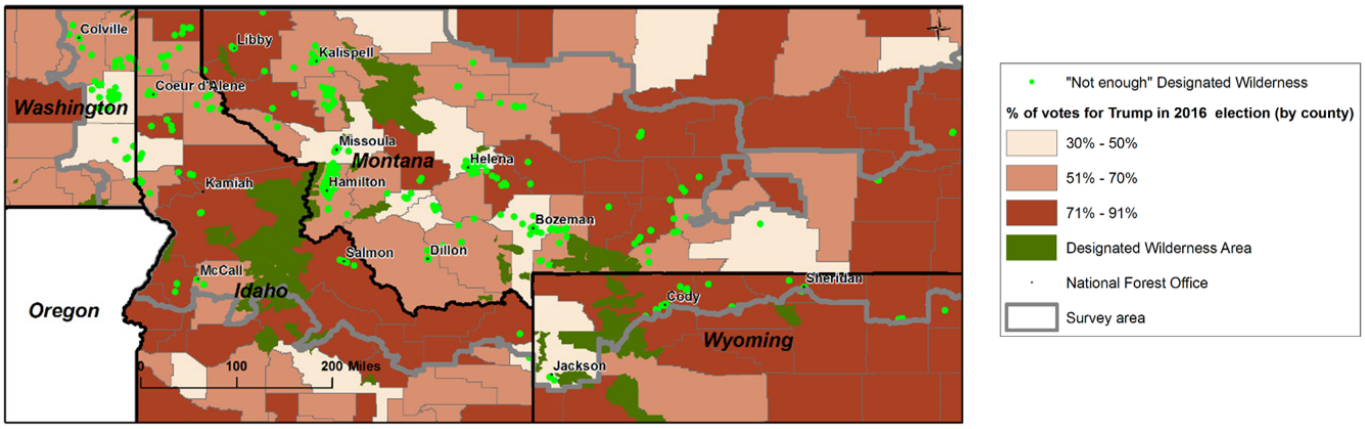

Figure 2 - Distribution of survey respondents who note there is currently not enough designated wilderness (preserved wildlands). Data Source: BBER 2019.

armed occupiers from the refuge and highlights how the militia group did not represent the values of many longtime residents in the area.

Figure 2 shows the distribution, by county, of respondents of the household survey who indicated there is not enough designated wilderness (preserved wildlands) and the percent of votes cast for Donald Trump (a Republican) in the 2016 presidential election (one indicator of Republican values). The data are from a household survey focused on public land management values administered by the University of Montana's Bureau of Business and Economic Research in 2018 and 2019 (BBER 2019). The survey asked respondents to indicate their preferences for a host of public land purposes and management activities. For example, respondents were asked to indicate how important they believe protecting water quality, rare and endangered species, and wildlife habitat are as purposes of local, federal public lands. Across all counties, these environmental protections were considered very or extremely important purposes by a vast majority of respondents.

One question addressed the preservation of additional wildlands, a key indicator of pro-environment values. Specifically, the survey asked respondents: "Please indicate if you feel that there are NOT ENOUGH, an ADEQUATE AMOUNT, TOO MUCH, or DON'T KNOW: Designated wilderness (preserved wildlands)."

Interestingly, the data indicate support for additional wilderness in traditionally conservative strongholds such as rural areas around Colville, Washington, Bonner's Ferry, Idaho, Sheridan, Wyoming, and Libby, Montana. Amidst the conservative social architecture in the region, there are also some political anomalies. These include socially liberal college towns such as Missoula, Montana, and resort towns such as Jackson, Wyoming, where unsurprisingly some environmentalists in the region reside.

Few would argue with the statement that the current political landscape in the United States is best characterized by polarization, partisanships, gross generalizations, and stereotypes. Media outlets typically spotlight monolithic perspectives and gloss over the nuances and complexity that comprise the tapestry of values underpinning most people's lived experiences. These false narratives have created artificial barriers and obscured the bipartisan nature of the environmental preservation issue

for wilderness advocates and staunch conservatives alike. Wilderness advocates are trained to employ combative, rather than collaborative, approaches in "red state" communities. Conservatives are taught to shy away from "radical environmental groups," which they perceive as an enemy of local values, even though they often hold a strong environmental ethic and are in favor of preserving wildlands. The vicious cycle continues.

For wilderness advocates, these data point to new opportunities. Catalyzing the voices of these environmentalists in unexpected places may be a more effective strategy for lobbying land management agencies to preserve more wildlands. Land managers in the Intermountain West have become arguably numb to the repetitive messages of national environmental groups, which are often headquartered in cities that tend to vote democratic and hold socially liberal values that often conflict with those held by local political leadership in the region.

Land managers interested in acknowledging the will of the local communities may be more receptive to local environmentalists sharing their preservationist values, as opposed to aligning with external environmental group representatives. It is possible that these local environmentalists, embedded in the fabric of deeply conservative societies, may have a more moderate approach to preservation of wildlands and expansion of protections of public wildlands. Harvesting their perspectives may be an effective strategy for resolving seemingly intractable debates between wilderness activists, who advocate for a "hands-off" approach to management, and land managers in the region, who are predominantly focused on increasing the amount of timber harvested from public lands and implementing restoration projects that actively manipulate natural landscapes.

Most importantly, these data highlight the diversity of environmental values that exist in unexpected places. Land managers charged with stewarding some of the nation's last undeveloped, wild landscapes should take note that support for preservation of wildlands is not simply a liberal, urban progressive position but is also a value that is present, surprisingly, in some of the most conservative counties in the United States.

NOTE: Commentaries reflect the views and analysis of the author and do not necessarily represent the views of the USDA Forest Service, or other federal agencies.

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Rab

Headstand in the alpine of Rocky Mountain National Park. **Photo credit:** Tucker Stapleton

STEWARDSHIP

Constraints to Wilderness Recreation: A Scoping Review of Existing Research

by ELENA R. THOMAS, WILLIAM L. RICE, JACLYN R. RUSHING, JENNIFER M. THOMSEN and CHRISTOPHER A. ARMATAS

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PEER-REVIEWED

ABSTRACT

Considerable research has been conducted on the constraints to recreation that traditionally underrepresented communities in the United States confront; however, there remains a lack of synthesis concerning constraints to visitation to federally designated wilderness areas. This scoping review of the current available literature seeks to reveal what constraints have been identified to visitation to federally designated wilderness in the United States and what groups are experiencing them. Constraints identified include discomfort and safety concerns specific to wilderness settings, cultural expectations, and issues of time, cost, and access. Additionally, constraints are explored with reference to the influence of management actions focused on preserving wilderness character, and directions of future research are discussed.

Outdoor recreation participation in the United States has risen substantially over the last two years; in 2020, 7.1 million more Americans participated in at least one outdoor activity than the previous year, driven in large part by the COVID-19 pandemic (Outdoor Foundation 2021). Despite more participation overall, particular groups remain underrepresented as visitors to parks and protected areas relative to their representation in the U.S. population at large (Outdoor Foundation 2021). These groups include historically marginalized communities such as BIPOC (Black, Indigenous, and People of Color), LGTBQ+ individuals, women, people with disabilities, people of lower socioeconomic status, and/or the elderly (Executive Order 14035, 2021). Concerning visitation to wilderness areas, white visitors are considerably overrepresented (USDA Forest Service 2018). For example, a 2018 US Forest Service visitor report identified that white visitors made up 94.6% of wilderness visitors (USDA Forest Service 2018). The lack of visitation by certain segments of the US population can be considered an environmental justice issue, given the health benefits provisioned through wildland recreation (Floyd and Johnson 2002). Thus, the purpose of this review is to shed light on the constraints underrepresented groups experience related to visitation to federally designated wilderness in the United States.

The study of constraints to leisure participation has received significant attention since the 1980s; constraints can be defined as anything that "inhibit(s) people's ability to participate in leisure activities, to spend more time doing so, to take advantage of leisure services, or to achieve a desired level of satisfaction" (Jackson 1988, p. 203). Although different structures have been used to conceptualize constraints, and some researchers have found it to be limiting (Floyd et al. 1994; Stodolska and Jackson 1998; Stodolska et al. 2019), the tripartite model proposed by Crawford and Godbey (1987) has been the mostly widely used and organizes constraints into intrapersonal, interpersonal, and structural categories (Rushing et al. 2019). Intrapersonal constraints are internal to the individual and psychological, such as fear for personal safety or lack of interest; interpersonal constraints include individuals' interaction with others and can include the lack of a partner; structural constraints arise from environmental factors such as time available for recreation or proximity of leisure facilities (Zanon et al. 2013).

Recreation constraints can be influenced by factors such as age, race, and income (Crawford and Godbey 1987). Walker and Virden (2005) identified race/ethnicity, gender, cultural/national forces, and socioeconomic forces as macro-level factors antecedent to constraints. While researchers have found mixed results on the influence of different demographics on constraints, race and ethnicity are commonly associated with certain constraints such as affordability of recreation, distance to parks, lack of transportation, lack of information about recreational opportunities, and fear of crime (Rushing et al. 2019). Concerning park visitation, specifically, Zanon et al. (2013) conducted a meta-analysis of 22 studies examining constraints in North America. The authors identified 10 commonly perceived park visitation constraints,

including (1) the intrapersonal constraints of lack of interest, poor health, and fear; (2) the interpersonal constraint of lacking a partner to visit with; and (3) the structural constraints of "cost, lack of facilities, knowledge, information, transport, time and location or lack of proximity to a park" (Zanon et al 2013, p. 478). A more recent review by Sánchez et al. (2020) found that outdoor recreation managers most often focus efforts to address constraints within protected area boundaries and that additional effort should be taken to reach out beyond boundaries to underserved communities. While most research in this field has focused on constraints to outdoor recreation in municipal and local park settings, less research has focused on constraints in more remote wildland settings or wilderness areas.

This review focuses specifically on constraints to visitation to federally designated wilderness in the United States, as codified by the 1964 Wilderness Act. This law set aside lands – and created a process for designating new lands – included in the National Wilderness Preservation System (NWPS) to be "administered for the use and enjoyment of the American people" and mandated that managing agencies preserve and protect

Figure 1 - A woman backcountry skier climbs the south face of Mt. Fairchild in Rocky Mountain National Park Wilderness (Tucker Stapleton). Two studies have indicated that BI-POC communities are constrained from wilderness recreation in Rocky Mountain National Park Wilderness due to factors such as cultural expectations, lack of knowledge about opportunities, and fear for one's personal safety.

wilderness character (Hendee et al. 1990). Stewards of federally designated wilderness aim to preserve wilderness character, and NWPS administering agencies generally accept that wilderness character includes the following qualities: untrammeled, natural, undeveloped, solitude or a primitive and unconfined type of recreation, and other features of value including scenic, scientific, or cultural values (Landres et al. 2012). However, it is hypothesized that management practices required to preserve wilderness character may have unintended consequences that constrain certain recreationists. For instance, management actions intended to enhance the undeveloped character of wilderness (e.g., limiting footbridges) may present an unintended consequence for individuals with physical disabilities. Further, management actions intended to enhance solitude (e.g., limiting group sizes) may present the unintended consequences of reducing perceptions of recreationist safety or creating the very feeling of societal oppression that solitude is intended to help us escape. Concerning the latter, Meyer and Borrie (2013) conclude:

> *Perhaps a common underlying premise is that oppression alienates and excludes people from full participation in society and thus we wonder if the search for refuge, connection, and belonging might be common links among how 'Othered' populations can experience wild nature. Saying this, we recognize that understanding wilderness as a refuge from other forms of oppression has limitations, particularly in terms of accessibility, histories of colonization, and assumptions of a singular able-bodied experience. It is important therefore to conceptualize wilderness as a dynamic socio-cultural and racialized space which necessarily recognizes the multiple and shifting meanings of wilderness experiences. (p. 314)*

With this in mind, the unintended consequences resulting from wilderness designation are likely coupled with, or exacerbated by, the colonial origins of the wilderness construct (Erickson et al. 2009; Grebowicz 2015; Johnson et al. 2004). For instance, Hays (2019) proposes that the very concept of the park or protected area enables "the performance of colonial and contemporary whiteness" (p. 142), and "the idea of wilderness should therefore be seen as not simply socially constructed … but as tethered to notions of race" (p. 142). Fletcher et al. (2021) describe the colonial and racial project of wilderness within the larger binary framework colonial powers overlaid on nature and culture (i.e., wild and civilized). As Swing (2011) notes, near the turn of the 20th century in the United States "the colonial desire to conquer the land evolved into the belief that it should be protected and preserved for something beyond its utilitarian use" (pp. 57–58). In some cases, maintaining the binary between nature and culture within protected and preserved wilderness areas meant the removal of Indigenous, non-Indigenous agrarian, or other resource-dependent communities and all signs of their historic presence to ensure the erasure of culture (or certain cultures) from the wilderness landscape (Watt 2002). Thus, considering the unique

management obligations and history of wilderness, this study aims to identify and summarize the available literature on constraints to wilderness visitation and seeks to answer the following research questions for the benefit of wilderness managers and researchers:

1. What is the scope (i.e., breadth and key findings) of the current available literature concerning constraints to recreation in designated wilderness?

2. What constraints have been identified to visitation to federally designated wilderness in the United States?

3. How are the identified constraints related to the mandates for management included in the Wilderness Act of 1964?

Methods

This study was conducted as an empirical scoping review (see Arksey and O'Malley 2005; Levac et al. 2010). Scoping reviews are used to "map the concepts underpinning a research area and the main sources and types of evidence available" (Tricco et al. 2016). This approach differs from that of a systematic literature review in that it does not seek to assess the quality of included studies or engage in meta-analysis but rather is highly efficient in providing a comprehensive overview of literature when there is limited research (Hanneke et al. 2017). A scoping review was chosen to address this study's research questions because of the specificity of the research area and the low number of research items we expected to find. This study follows Arksey and O'Malley's (2005) methodological framework, which introduces a five-step process for conducting scoping reviews, later refined by the detailed recommendations of Levac et al. (2010). This review process proceeds as follows: identify the research question, identify relevant studies, select studies, chart the data, and summarize the results.

Research items were collected from a search of six databases: Aldo Leopold Wilderness Research Institute publication database, Google Scholar, US Forest Service Treesearch, Web of Science, Ebsco Host, and ProQuest's "Multiple Databases." In addition, four journals in the outdoor-related field were targeted and searched including the Journal of Outdoor Recreation and Tourism, the International Journal of Wilderness, the Journal of Park and Recreation Administration, and the Journal of Leisure Research. The searches used the same Boolean-based keyword inquiries (see Table 1). The research items yielded were then screened using predetermined inclusion criteria: the item is published in English, empirical research and not a commentary or essay, focused on visitors to one or multiple US. federally designated wilderness areas, and focused on constraints to visitation. Because of the expected limited number of research items, there was no date range specified for publication of the research items, and dissertations and theses were included.

Each item that met the inclusion criteria was coded for both emergent and theoretically relevant themes as guided by Crawford and Godbey's (1987) tripartite framework and tested for intercoder reliability. Constraints were classified into the following categories: structural, intrapersonal, or interpersonal. The specific types of constraints within each category for each research item were also recorded in a common spreadsheet; these constraint categories and the specific constraints found for each item can be found in Table 2. Additionally, the wilderness area studied, the encompassing state, and the administering agency of the area(s) were recorded, and counts were generated.

Results

Our search identified a total of nine papers that met the inclusion criteria (note: one item is a dissertation associated with an article published by the same author on the same study and was not included in further analysis). Of these items, three were focused on wilderness areas administered by the US Forest Service (USFS), three were focused on National Park Service (NPS) administered wilderness, and two included studies utilizing a national survey, and they therefore did not focus on a single federally administered wilderness area or administering agency. Although the scope of the research items is limited, the geographic locations of the wilderness areas studied are varied and include the encompassing states of Georgia, South Carolina, Colorado, Minnesota, and Nevada. Three research items utilized only quantitative methods for data collection, three items utilized only qualitative methods, and two studies used a mixed-method approach. Three items focused on Black/African American visitors, and one item focused primarily on women. One item – Schneider and colleagues' (2011) paper on structural constraints to visitation of Boundary Waters Canoe Area Wilderness (BWCAW) – focused on the constraints experienced by all visitors to the wilderness area but did not include the demographic information of participants. The remaining research items sampled a variety of traditionally marginalized groups, including women, immigrants, minorities, lower-income and lower-educated groups, and the elderly.

The constraints identified in the research items were charted (see table 2), and common themes – as organized through the chosen theoretical framework – are outlined below.

Table 1 - Defined scoping review keywords

"wilderness"	"constraints" "barriers" "discrimination"	"visitation" "access"

Note: See an example Boolean search phrase: "wilderness" AND ("constraints" OR "barriers" OR "discrimination") AND ("visitation" OR "access")

Intrapersonal Constraints

Five studies reported the perceived danger of the area as a constraint to wilderness visitation. For example, Bond's (2007) study of women wilderness users identified that some of the women interviewed felt significantly constrained by "fear of assault by men" (p. 57), resulting in a general vulnerability and uneasiness about wilderness. Additionally, Davis's (2015) study of African American fishers in Congaree National Park identified that some perceived the wild animals found in the park as "dangerous" (p. 92) and considered the subsequent inability to defend themselves due to the park's restrictions on firearms as a constraint to visitation. More broadly, Green et al. (2007) identified concern for people's "personal safety" (p. 31) as one of the most common constraints experienced by those surveyed as part of the 2001 National Survey on Recreation and the Environment. Two studies explored how historical racism related to this intrapersonal constraint: Erickson et al. (2009) discussed how it influenced their study's Black/African American participants' fear for their physical safety in perceived "White spaces" (p. 538) such as Rocky Mountain National Park, and Roberts and Rodriguez (2008) discussed how perceived racism influenced study participants' reports of feeling unsafe in the presence of certain groups.

Perceived physical abilities and skill level was another intrapersonal constraint identified by two studies. Bond (2007) discussed the physical challenge aspect of wilderness recreation, as well as self-doubt in abilities, as common obstacles experienced by the women interviewed in the study. More broadly, Green and colleagues' (2007) study found the constraints of "hiking and climbing trails [being] difficult and physically tiring activities," "physical disability," and not having "enough hiking, map-reading, or camping skills" (pp. 30–31) as more significant for the elderly, women, Black/African American, Hispanic/Latinx, and lower-income groups.

Finally, three studies identified feelings of general discomfort as a constraint. According to Green and colleagues (2007), the constraint of "feel[ing] uncomfortable in wild, remote, natural areas" (p. 31) was commonly reported among the elderly, women, Blacks/African-Americans, and Hispanics/Latinx. Erickson and colleagues' (2009) study found that many study participants felt uncomfortable occupying traditionally "white spaces" (p. 538) as a result of historical racism and associated negative connotations with natural spaces. Finally, Roberts and Rodriguez's (2008) study participants identified feeling uncomfortable with bugs/wildlife as a constraint to visitation.

Interpersonal Constraints

Five studies identified lack of knowledge as a significant constraint to visitation to wilderness areas, including lack of exposure as a young child. Bond (2007) reported that some women who felt as if they had a lack of experience and knowledge about hiking in wilderness felt constrained, but those constraints were easily negotiated. Similarly, Green's (2007) study identified the lack of awareness of wilderness areas and the knowledge of recreation opportunities as a significant constraint for women, lower-educated people, and Blacks/African Americans. Both Erickson and colleagues' (2009) study and Roberts and

Constraint Categories	Specific constraints identified
Intrapersonal	
Bond, 2007	*Fear of male assault, physical challenge, self-doubt, lack of knowledge*
Davis, 2015	*Sense of danger*
Erickson et al., 2009	*Negative connotations of natural spaces*
Green et al., 2007	*Physical ability, lack of skills, feelings of discomfort, safety concerns*
Roberts and Rodriquez, 2008	*Personal discomfort/safety issues*
Interpersonal	
Bond, 2007	*Family obligations, lack of companions, cultural expectations, doubts of others*
Davis, 2015	*Lack of community outreach, lack of knowledge of park information/regulations*
Erickson et al., 2009	*Lack of exposure as a child, cultural expectations of activities*
Green et al., 2007	*Family and friends don't visit*
Johnson et al., 2004	*Lack of acculturation (time in the US)*
Roberts and Rodriquez, 2008	*Socialization, lack of knowledge of benefits, lack of exposure as a child, need for cultural permission*
Schneider et al., 2011	*Family obligations*
Structural	
Bond, 2007	*Time, cost, proximity*
Davis, 2015	*Traditional use limited, lack of access to fishing sites, lack of preferred facilities*
Erickson et al., 2009	*Cost, historical travel patterns still in place*
Green et al., 2007	*Time, cost, lack of basic services (restrooms)*
Porter, 2001	*Proximity and access (travel time), income*
Roberts and Rodriquez, 2008	*Culture of NPS, lack of representation, insufficient interpretive efforts*
Schneider et al., 2011	*Time, access (permit restrictions, campsite availability)*

Table 2 - Constraints identified in the research items retrieved through the scoping review

Rodriguez's (2008) research mentioned the lack of exposure as a child to wilderness areas as being a significant constraint to Black/African American and Hispanic/Latinx visitation to Rocky Mountain National Park and also discussed the lack of knowledge of the available opportunities as a finding in the study. The question, "How would I benefit?" (p. 54) was common among focus group respondents in Roberts and Rodriguez's study. A key finding of Davis (2015) was the lack of knowledge about Congaree National Park boundaries, designation, and regulations and park staff's insufficient outreach to the community.

Another interpersonal constraint, cultural expectations, was reported in four studies. The women interviewed in Bond's (2007) study discussed how cultural expectations of their role as women imposed by society and family members were constraining to wilderness recreation. Concerning race, Erickson and colleagues' (2009) study discussed how many Black/African American study participants felt that visiting Rocky Mountain National Park was a "white thing" (p. 540) and didn't want to be perceived as rejecting Black/African American culture if they visited. Similarly, Roberts and Rodriguez (2008) reported the importance of "social permission" (p. 54) from the community and peers in the Black/African American study participants' outdoor recreation preferences. Finally, Johnson et al. (2004) discussed how fewer years spent in the United States, or the lack of acculturation of immigrants, was a constraining factor affecting visitation and on-site wilderness use values. The lack of a partner or other companions was identified as an interpersonal constraint in two studies. In Bond's (2007) research, the women study participants reported feeling constrained by not being able to find a compatible backpacking partner.

Figure 2 - A mostly white, male audience watches President Lyndon B. Johnson sign the Wilderness Act of 1964 (Lyndon B. Johnson Presidential Library). Bond (2007) discusses how cultural expectations of women's roles – as imposed by society and family members – were constraining to wilderness recreation.management.

Additionally, Green et al. (2007) identified the lack of family and friends visiting wilderness areas as a significant constraint for higher-income groups.

In addition, family obligations, specifically feeling restricted because of lack of childcare or needing to be present for partners and family, was included as a significant constraint to women in Bond's (2007) study. Similarly, Schneider and colleagues (2011) found that "children and other family commitments were important factors that determined available time" (p. 17) for BWCAW visitors. Participants in this study explained how having young children, particularly infants, limited the amount of free time to get out and enjoy the Boundary Waters (Schneider et al. 2011).

Structural Constraints

Three studies discussed time as a significant structural constraint experienced by study participants. Both Bond (2007) and Schneider and colleagues' (2011) studies mentioned time away from work, both familial/domestic unpaid labor as well as careers, as being difficult to achieve. Similarly, Green et al. (2007) listed the constraints of not having "enough time because of long work hours" (p. 31) as being significant for higher-income groups and groups with a higher education level.

Cost was another structural constraint mentioned in three studies. Both Erickson et al. (2009) and Green et al. (2007) discussed lack of affordability in terms of travel and buying necessary equipment as salient constraints for Blacks/African Americans, Asian-Pacific Islanders, and individuals living in the southeastern United States. Bond's (2007) study mentioned cost as a constraint but not a significant one for highly educated, higher income women study participants. Through a different approach, Porter's (2001) study utilized a GIS-based network analysis to show socioeconomic inequalities related to use and nonuse values of wilderness areas in North Georgia and discussed income as a constraint due to the high cost of necessary equipment to participate in wilderness activities, as well as rising home prices in the areas closest to wilderness due to an influx in higher-income retirees drawn to these areas.

Four studies discussed access issues and proximity to wilderness as being a significant constraint. Porter's (2001) study showed that women and nonwhite groups lived farther away from the Georgia wilderness areas studied, increasing drive time to those areas and restricting access. Similarly, some women in Bond's (2007) study identified lack of proximity to wilderness areas, transportation, and crowding as constraints to visitation. On a more focused scale, Davis's (2015) study in Congaree National Park discussed how the wilderness designation within the park increased the distance Black/African American anglers had to walk to access fishing sites, specifically constraining for the elderly and those with mobility issues. Additionally, not being able to afford a boat and the lack of access to private hunting clubs was constraining for the anglers. In a different context, Schneider et al. (2011) identified permit restrictions and campsite availability to be particularly restraining for visitors of the BWCAW.

In addition to access issues, the lack of preferred facilities and basic services was

Figure 3 - To date, no research has examined the specific constraints those with disabilities face when visiting federally designated wilderness.

mentioned as a structural constraint in two studies. Davis (2015) discussed how Congaree National Park's lack of game and sport facilities, and wilderness restrictions on music, cooking, and large gatherings restricted the preferred activities of the Black/African American community. More broadly, Green and colleagues' (2007) study found that the "lack of basic services" was particularly constraining for the elderly, women, Blacks/African Americans, and Hispanics/Latinx.

Three studies discussed institutional or historical discrimination as a constraint, specifically to Black/African American visitation. Davis (2015) explored how wilderness management at Congaree National Park limits the traditional environmental relationship of consumptive use that Black/African American anglers have with the park. Further, Erickson and colleagues (2009) discussed how racism excluded Blacks/African Americans from certain destinations and formed the basis for historical travel patterns that are still in place today. Finally, in Roberts and Rodriguez's (2008) study, the exclusionary culture of the National Park Service – specifically, hiring practices, lack of representation, lack of outreach, and insufficient interpretive efforts – was identified by many study participants as being rooted in historical racism and a significant constraint to visitation.

Discussion

The purpose of our review was to examine the available literature and explore what constraints are being experienced by visitors to federally designated wilderness areas in the United States. It is evident from the identified constraints that visitors are experiencing a complex variety, and that women, BIPOC groups, immigrants, the elderly, lower-income, and lower-educated groups are disproportionally affected. Elderly people were primarily constrained by ability. Women were constrained by sense of danger, cultural expectations, ability, lack of companions, familial obligations, and time. BIPOC and immigrant participants were more likely to be constrained by sense of danger, discomfort, lack of awareness, cultural expectations, discrimination, facilities, ability, and money. Many of these constraints are due to a feeling of "otherness" or not belonging in a white space (Roberts and Rodriguez 2008). While many of these constraints are like those identified in previous studies on outdoor recreation more generally (Ghimire et al. 2014; Rushing et al. 2019; Zanon et al. 2013), federally designated wilderness in the United States has numerous unique characteristics that may influence the types of constraints experienced by certain visitor groups.

As evidenced through this review, management actions aimed at preserving wilderness character qualities (e.g., untrammeled, natural, undeveloped, solitude, etc.) can create constraints for visitors. Management focus on maximizing opportunities for solitude, coupled with increasing wilderness visitation, has often resulted in implementation of permit systems that inequitably restrict visitation of certain groups (Shelby et al. 1989). In this review, BWCAW visitors were constrained by the inability to obtain a campsite or permit (Schneider et al. 2011). Remoteness is often a unifying characteristic of wilderness areas that can amplify constraining factors identified in this review such as discomfort and sense of danger, which are particularly constraining for BIPOC and women (Bond 2007; Davis 2015; Erickson et al 2009; Green et al. 2007; Roberts and Rodriguez 2008). To further a sense of remoteness, wilderness is managed for minimal development, which this review found particularly constraining for Blacks/African Americans in Congaree National Park Wilderness (Davis 2015). Research shows that other BIPOC and immigrant communities, such as Hispanic/Latinx people, traditionally prefer facilities to provide cooking and camping opportunities for large, intergenerational family groups (Chavez and Olson 2009; Irwin et al. 1990; Larson et al. 2014; Thomas et al. 2022). The centrality of self-reliance, skill, and challenge in the wilderness character quality of primitive and unconfined recreation can be an impediment to individuals who lack experience, expertise, or who have a physical disability (Johnson et al. 2005). The elderly, women, and BIPOC were more likely to feel constrained by ability-related constraints (Bond 2007; Green et al. 2007), which was often due to cultural expectations and lack of exposure to wilderness and necessary skills associated with wilderness recreation (Bond 2007; Erickson et al. 2009; Roberts and Rodriguez 2008).

In addition, as discussed in the introduction, several researchers have argued that the concept of wilderness – as codified in the Wilderness Act – is a social construction that often reinforces

settler colonialism, whiteness, and masculinity – while concealing the historical displacement, violence, and exploitation of nonwhite and Indigenous people (Corliss 2019; DeLuca and Demo 2001). Critics argue that this elitist construction and subsequently the management of wilderness areas reflect the interests of an exclusive, powerful minority of the population and does not consider the disparate relationships other groups have with these spaces (Johnson et al. 2004; Swing 2011). Constraints related to discrimination, negative connotations, and cultural segregation as discussed in this review are largely contingent on the often-tragic history of dispossession and trauma experienced by marginalized groups in wilderness spaces (Grebowicz 2015).

"While understanding specific constraints to wilderness recreation is useful, movement toward more wholistic understanding of historic and cultural factors informing constraints may facilitate targeting root causes and providing a more equitable, accessible, and inclusive NWPS."

It became evident when exploring the research items in this review that many of the presented constraints – such as discrimination, cultural expectations, and feelings of discomfort – are not mutually exclusive, and their nuances cannot always be contextualized through the tripartite framework of constraints proposed by Crawford et al. (1991). This framework was chosen to be used in this review since it has been widely referenced in the literature, and, after examining the articles included in the review, the authors found it was the clearest way to present the findings. Other theoretical models such as the marginality, ethnicity, and discrimination hypotheses have been used to study the interplay of socioeconomic barriers, intergenerational leisure patterns, and historical discrimination that minority groups experience and may be better suited to describe the interrelated nature of constraints and how certain groups negotiate them (Erickson et al. 2009; Floyd et al. 1994; Washburne 1978). The research items in this review present constraints in a variety of ways, which can make it difficult to categorize them for generalizability.

Although no two items use the same approach to categorize constraints, two dominant trends emerged: (1) a wholistic and more constructivist approach to understanding the role of cultural expectations and discrimination on wilderness constraints (e.g., Bond 2007; Johnson et al. 2004; Davis 2015; Erickson et al. 2009; Roberts and Rodriguez 2008), and (2) an approach focused more on specific constraints without a cultural or historic context (e.g., Green et al. 2007; Schnei-

der et al. 2011). Porter (2001) and Roberts and Rodriguez (2008) merged these two approaches by using environmental justice (Porter 2001) and discrimination (Roberts and Rodriguez 2008) frameworks to help explain structural constraints. While understanding specific constraints to wilderness recreation is useful, movement toward more wholistic understanding of historic and cultural factors informing constraints may facilitate targeting root causes and providing a more equitable, accessible, and inclusive NWPS.

Figure 4 - An undated photo from Congaree National Park's archives depicts an angler and their catch. Following wilderness designation in the park, Black/African American anglers had to walk increased distances to access fishing sites.

Management Implications and Conclusions

In light of the studies compiled through this review, it is posited that the wilderness areas set aside for the "use and enjoyment of the American people" (Wilderness Act 1964, p. 1131) present unintended barriers that disproportionately constrain groups such as the elderly, BIPOC, and women from visiting these spaces. These constraints may help explain why these traditionally underserved communities visit wilderness less than white Americans. For land management agencies to increase these areas' relevance to diverse communities, there may be value in seeking to identify the groups who disproportionally experience constraints and provide targeted management interventions (Johnson et al. 2004; Zanon et al. 2013).

There are several ways that managers could address these constraints within the bounds of the Wilderness Act. For instance, although managers do not have the authority to designate new wilderness areas near large population centers, there is an opportunity to address issues of access by working within their authority, such as improving road conditions to trailheads. Similarly, and for good reason, most developed facilities are prohibited in wilderness; however, offering women-led or BIPOC-led trainings to help aspiring wilderness recreationists negotiate this lack of facilities (e.g., lack of restrooms) is an achievable goal to address some of the constraints revealed in this review. Additionally, to help aspiring recreationists negotiate constraints related to lack of experience, discomfort, and perceived danger, managers could focus education efforts and communication strategies to better manage expectations and provide skill-building opportunities. Improving public outreach and engagement with outdoor recreation affinity groups (e.g., Latino Outdoors, Outdoor Afro, Black Folks Camp Too, Fat Girls Hiking, etc.) could also help build community and inclusion within wilderness spaces. Finally, on an agency level, there is value in striving for a federal wilderness workforce that is more representative of the nation it serves.

Given the number of research items included in our analysis, it is clear that more research should be conducted specifically focused on federally designated wilderness in the United States to further explore how its unique mandate affects associated constraints. Conducting research in a wider variety of geographical areas and in wilderness areas administered by different agencies such as the Bureau of Land Management and the US Fish and Wildlife Service would be beneficial given the variation in the way areas are managed. Given the understudied nature of urban-proximate wilderness, future research in those areas could be insightful considering the continued lack of visitation by certain groups given that proximity was a salient constraint (Rice et al. 2021; Erickson et al. 2009; Roberts and Rodriguez 2008). In addition, while many of the research items studied a variety of traditionally marginalized groups, certain groups were not included, and future research efforts should focus on other groups who may be experiencing significant constraints, such as LGBTQ+ individuals and people with disabilities. Finally, while this review focused exclusively on federally designated wilderness in the United States, additional research is merited concerning constraints across wildlands more generally. ijw

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Stopping to appreciate the beauty of Desolation Wilderness near Lake Tahoe, CA. **Photo credit:** Eric Ward on Unsplash.

Urban Proximity and Visitor Numbers of Four Wilderness Areas in 2020 during the COVID Pandemic

by TINA TIN

Tina TIn

In November 2019, the first unconfirmed cases of a new coronavirus appeared in Hubei province, China. Cases of the virus, which was later termed severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) or COVID-19, spread rapidly in and outside China. Governments attempted to control the spread by putting in place various types of travel restrictions (Ryan 2021; Carvalho et al. 2021). These include restrictions of travel distance (e.g., residents of Wuhan, China, were not allowed to leave their residential compounds without authorization during most of January 23–February 23, 2020; Qian and Hanser 2021) and duration (e.g., during March 17–May 11 and October 29–December 14, 2020, the population in France was allowed to go out for up to one hour per day and up to 1 kilometer (0.6 miles) from their home for outdoor recreation; Mironowicz et al. 2021), and border restrictions (e.g., all borders and entry ports of New Zealand were closed to nonresidents during most of the period between March 19, 2020, and February 27, 2022; Jeffries et al. 2020; Immigration New Zealand 2022). The

"In essence, people did not go where externally imposed restraints made it physically impossible to go, but where external restraints allowed people to go, they went, and in larger numbers than usual."

Figure 1-Paradise Harbour, one of the most frequently visited sites in Antarctica. With 20,252 visits, it was the eighth most visited site in 2019–20 (Secretariat of the Antarctic Treaty 2022). Photo by W. Bulach, CC BY-SA 4.0 https:creativecommons.orglicensesby-sa4.0.

global peak of travel restrictions occurred on April 5, 2020, when 4.4 billion or 57% of the world's population were subject to a partial or full lockdown. These and other COVID-related measures have had widespread impacts on humans and the more-than-human world (Ryan 2021; Bates et al. 2021). Studies on outdoor recreation and human–nature relationships report that participation increased for some outdoor recreation activities (e.g., foraging, hiking, and watching wildlife) and decreased for others (e.g., camping and relaxing in the company of other people; Morse et al. 2020), while the distance that recreationists traveled to participate in outdoor recreation and the distance they traveled beyond roads during outdoor recreation decreased in both urban and rural areas in the United States (Rice et al. 2020). In Ireland, usage of recreational walking trails, especially those that are urban-proximate, was 26–47% higher in 2020 than in 2019 (Power et al. in press). A study of three forest areas in Poland reported that the number of visitors to a remote forest and the number of visitors to a suburban regional forest park were both larger in 2020 than in 2019, while for a regional forest park, the difference between visitor numbers in 2020 and 2019 was small (Ciesielski et al. in press). In Sweden, outdoor recreation participation increased rapidly and significantly during the pandemic and provided an opportunity for more people to experience themselves as a part of the Earth's systems and cycles (Beery et al. 2021). Interviews of outdoor recreationists in New Zealand in 2020 also reported that recreationists had renewed

and heightened appreciation for the outdoors (Espiner et al. in press).

Visitor numbers of urban-proximate wilderness areas can be large (Lindley et al. 2018) and can be exacerbated or alleviated by travel restriction measures, such as those that were in place in 2020. In this article, I present the visitor numbers of wilderness areas from four continents – North America, Europe, Australia, and Antarctica – in 2020 and reflect on lessons that can be learned from this global-scale experiment that is being referred to as an anthropause in the midst of the Anthropocene. I chose the study areas for their geographical scope, data availability, and differences in levels of urban proximity. Because of the limited availability of suitable data, I was unable to include only International Union for Conservation of Nature (IUCN) protected area management category 1b wilderness areas. However, for each study area, there is little or no human activity in most of the area and the absence of human intervention or activity is one of the principles that guides management activities.

Antarctica

Antarctica is the least urban-proximate of the study areas. Antarctica's wilderness values are protected under the Protocol on Environmental Protection to the Antarctic Treaty, which is the international agreement that establishes the framework for comprehensive protection of the environment of the Antarctic Treaty Area. The Antarctic Treaty Area is defined as all land and water south of 60 degrees latitude south. It covers approximately 36 million km² (14 million square miles), which includes the Antarctic continent (14 million km² or 5.4 million sq. miles) and the surrounding oceans (Kelkociuk and Wienecke 2017). A study of human activity in Antarctica during 1819–2018 reports that 99.6% of the continent's area remains wilderness, and approximately 32% of the continent has never had any ground-based human activity (4.3 million km² or 1.6 million sq. miles; Leihy et al. 2020).

Most tourists arrive in Antarctica by air or sea via one of the five gateway cities in the southern parts of the closest inhabited continents – Cape Town in South Africa, Christchurch in New Zealand, Hobart in Australia, Punta Arenas in Chile, and Ushuaia, Argentina. Ushuaia, which is approximately 1,000 kilometers (620 miles) from Antarctica, is the closest. Most tourists travel to Antarctica on ship-based cruises to the Antarctic Peninsula. Most Antarctica's tourists are inhabitants of the Northern Hemisphere. Many are nationals of the United States, China, or European countries. Approximately three-quarters of the tourist cruises depart from Ushuaia. Ninety percent of the cruises operate between November and March during the austral summer (IAATO 2021a). Activities that are usually associated with wilderness recreation, such as kayaking, camping, and ski touring, are also offered (Frame et al. 2021).

The 2019–20 Antarctic tourism season concluded early because of the pandemic. By the end of the season, most international commercial flights had been canceled; the remaining Antarctic tourists waited for special repatriation flights on board their cruise ships docked at gateway ports (see e.g., Hart 2020;

Davies 2020). A total of 74,401 tourists visited Antarctica during the 2019–20 season, which was lower than the preseason forecast of 78,520 (IAATO 2021a). For the 2020–21 season, Antarctic tourism companies canceled their offers (Nielsen et al. 2022; Wenger 2020). According to official statistics, only 15 tourists traveled to Antarctica in 2020–21; they traveled by private yacht (IAATO 2021b). The number of visitors in 2020–21 is 0.03% of the average number of visitors from 2016 to 2020 (Figure 2a).

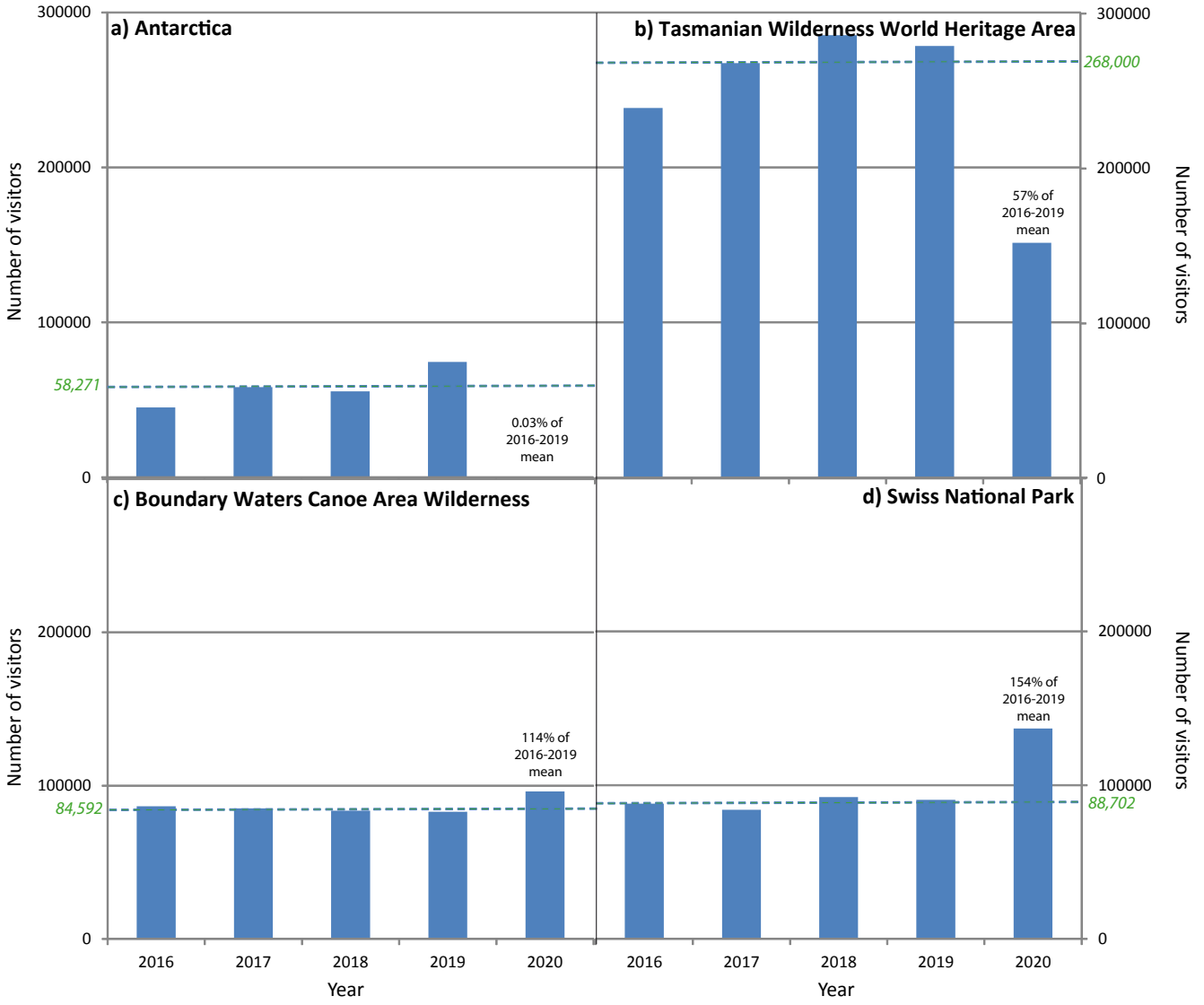

Figure 2 - Number of visitors to (a) Antarctica, (b) Tasmanian Wilderness World Heritage Area, (c) Boundary Waters Canoe Area Wilderness, and (d) Swiss National Park. Dashed line and number in italics indicate 2016–2019 mean. Data sources: IAATO, 2017, 2018, 2019, 2020, 2021b; Tasmania Parks and Wildlife Service, 2021; Superior National Forest 2021; Schweizerischer Nationalpark 2021.

Tasmanian Wilderness World Heritage Area, Australia

The second study area is the Tasmanian Wilderness World Heritage Area (TWWHA) in Australia. It covers 15,800 km² (6,100 sq. miles) or nearly 25% of the island state of Tasmania. Tasmania lies 240 kilometers (150 miles) to the south of the Australian mainland across Bass Strait, and has a population of 550,000. Melbourne is the closest city on the mainland and has a population of 5 million. The TWWHA is composed of several national parks and other reserved lands. Wilderness has been recognized as part of the Outstanding Universal Value of the TWWHA since its inscription on the World Heritage List in 1982. While the majority of the TWWHA is included in the Wilderness Zone, the whole area is considered to have some wilderness value (Dixon 2020; DPIPWE 2016). Parts of the TWWHA are accessible by road. One of the most accessible parts of the TWWHA is Dove Lake in Cradle Mountain–Lake St Clair National Park; it can be accessed by shuttle bus from Cradle Mountain Visitor Centre, which is connected to the rest of Tasmania by road (Figure 3). The number of visitors to Dove Lake in 2020 is 57% of the average number of visitors from 2016 to 2019 (Figure 1b). Further backcountry, the Overland Track is an 80-kilometer (50-mile) maintained hiking trail that runs through the park and has registered approximately 9,000 visitors each year since 2016. The number of visitors to the Overland Track in 2020 was estimated to be 7,000 or 77% of the average number of visitors from 2016 to 2019 (Tasmania Parks and Wildlife Service 2022).

Figure 3 - Dove Lake with Cradle Mountain in the background in Cradle Mountain–Lake St Clair National Park in the Tasmanian Wilderness World Heritage Area.

For most of the period between March 20, 2020 and February 21, 2022, only Australian citizens or residents were allowed to enter the country (Storen and Corrigan 2020; Department of Health 2022). Within Australia, all nonessential travelers arriving in Tasmania between March 19 and October 26, 2020, were required to self-quarantine for two weeks. A stay-at-home order was put in place in Tasmania on March 31, 2020. National parks and reserves in Tasmania were closed for recreational use between March 26 and May 11, 2020. Travel across Tasmania was allowed again after June 5, 2020 (Storen and Corrigan 2020). The number of interstate and international visitors to Tasmania in 2020 was down by 64% relative to 2019 levels (Tourism Tasmania 2021). An increased number of Tasmanians visited parks and reserves over the winter months of June, July, and August. The number of Tasmanians purchasing a one- or two-year parks pass increased by 160% in 2020 relative to 2019. Visitor numbers increased during the traditional busy summer months of December and January but were still well below numbers in previous summers (Tasmania Parks and Wildlife Service 2022).

Boundary Waters Canoe Area Wilderness, Minnesota, USA, North America

The Boundary Waters Canoe Area Wilderness (BWCAW) is more urban-proximate than Antarctica and the TWWHA. The BWCAW is in northeastern Minnesota in the United States. Approximately 10 million people live within a 500-kilometer (310-mile) radius of Ely, where one of the five ranger stations is located (NASA SEDAC Population Estimator 2022). The BWCAW extends nearly 240 kilometers (150 miles) along the international boundary with Canada. It covers over 4,400 km^2 (1,700 sq. miles). The BWCAW, Voyageurs National Park, and Canada's Quetico Provincial Park form a contiguous core of wilderness covering approximately 10,000 km^2 (4,000 sq. miles) in the center of the North American continent (Figure 4). The BWCAW has 67 entry point locations with access to over 2,000 kilometers (1,200 miles) of canoe routes, 12 hiking trails, and nearly 2,000 designated campsites (Tricker et al. 2017; Dvorak et al. 2012).

In 2020, 93% of the visitors to BWCAW visited during the summer season between May 1 and September 30 (Superior National Forest 2021). The number of overnight visitors in summer 2020 is 114% of the average number of overnight visitors in the summers between 2016 and 2019 (Figure 1c). The number of overnight hikers in summer 2020 is 200% of the average number of overnight visitors in the summers between 2016 and 2019 (Superior National Forest 2021).

For different periods between January 31, 2020, and December 31, 2021, travelers from 40 countries were forbidden to enter the United States (NAFSA 2021). In Minnesota, the governor declared a peacetime state of emergency on March 12, 2020. Schools were closed and residents were ordered to stay at home. There were no interstate travel restrictions. Residents were allowed to engage in outdoor activities, including walking, hiking, running, biking, driving for pleasure, hunting, or fishing in public parks and other public recreation lands (State of Minnesota 2020). Lockdown measures began to be lifted on June 1; barbershops and salons reopened, and outdoor dining services resumed in restaurants. Later in the year, social gatherings outside of

Figure 4 - Portages in the Boundary Waters Canoe Area Wilderness, MN. The Boundary Waters Canoe Area Wilderness has been one of the most visited US federal wilderness areas for the past several decades. Photo by Josh Hild on Unsplash.

one's household were suspended for four weeks starting from November 21 (Lopes et al. 2022).

Swiss National Park, Grisons, Switzerland, Europe

With approximately 113 million people living within a 500-kilometer (310-mile) radius of the park visitor center at Zernez (NASA SEDAC Population Estimator 2022), the Swiss National Park is the most urban-proximate of the four study areas. The Swiss National Park is in the eastern corner of Switzerland, on the border with Italy. It covers 170 km^2 (65 sq. miles) of the European Alps and is managed as an IUCN 1a Strict Nature Reserve. The park is accessible by road through one of its 13 official entry points. Accommodation is available inside the park, and camping is forbidden. Visitors can visit the park in the summer between May and October using the 21 hiking trails that extend over 100 kilometers (62 miles; Kupper 2014) (Figure 5).

Between March 16 and May 10, 2020, Switzerland was under a nationwide lockdown (Moser et al. 2021). Schools, restaurants, and public facilities were closed. Public and private gatherings of more than five people were forbidden (Conseil Fédéral Suisse 2020). Travelers from countries considered to be at high risk in terms of COVID were not allowed to enter Switzerland between March 13 and July 5, 2020 (Benhima and Billon 2021).

The number of park visitors in 2020 is 154% of the average number of park visitors between 2016 and 2019 (Figure 1d). Results of a survey study show that 8% of park visitors in 2020 came from outside Switzerland, while visitors from outside Switzerland made up 22% of the park visitors in 2006 and 2012. The number of international visitors in 2012 exceeds that in 2020 by 8,000, while the number of domestic visitors in 2020 exceeds that in 2012 by 60,000. In 2020,

As we move further into an era of rapid change and uncertainty, the axioms of visitor use management will need to evolve to ensure that our cherished wilderness can be preserved for generations to come.

most park visitors continued to be older adults between 41 and 60 years old, while there was a considerable increase in the number of younger adults (between 21 and 40 years old) visiting the park. Many of these younger visitors typically spend their holidays overseas. Approximately 20% of the survey respondents responded that, in the absence of the pandemic, they would not have spent their holidays in the park. There were many first-time visitors in 2020, and a large proportion of them were unfamiliar with park regulations. As a result, interactions between visitors and park volunteers, interns, and rangers, especially those related to park management measures,

were much higher than in previous years (Schweizerischer Nationalpark 2021).

Concluding Reflections

As travel restrictions eased, travel resumed. Global passenger air traffic in 2020 was 50% of that in 2019. By 2022, it has risen to 80% of passenger air traffic in 2019. Comparing domestic with international passenger air traffic, the International Civil Aviation Organization (ICAO 2022) reported that, in 2020, the decrease in domestic traffic was less than that in international traffic, and, after 2020, the recovery in domestic traffic was faster than that in international traffic. Extrapolating from these global trends, one could expect the number of visitors to urban-proximate wilderness to continue to increase with the arrival of local and regional visitors, but the number of international visitors will remain low, and the number of visitors to remote wilderness areas is also likely to remain at lower levels.

For remote wilderness areas – Antarctica and TWWHA – COVID-related travel restrictions made it difficult or nearly impossible to visit; as a result, visitor numbers in 2020 were significantly lower than those of previous years. For the urban-proximate areas – BWCAW and the Swiss National Park – travel to and engagement in outdoor recreation in these areas remained possible under COVID-related restrictions; as a result, visitor numbers in 2020 were significantly higher than those of previous years. In essence, people did not go where externally imposed restraints made it

Figure 5 - Alp Trupchun is the most popular of the 21 marked hiking trails in the Swiss National Park. The automatic counter on the trail registered 28,638 visitors between end of May and end of October in 2020, which is 148% of the number of visitors registered for the same period in 2019 (Schweizerischer Nationalpark 2021).

physically impossible to go, but where external restraints allowed people to go, they went, and in larger numbers than usual.

Yet, wilderness is often associated with an ethic of self-restraint and humility, especially in the United States where preservation of the untrammeled quality of wilderness is considered a cornerstone of wilderness stewardship (Landres et al. 2020). However, it has been suggested that self-restraint is the exception rather than the norm in the relationship between humanity and the rest of the planet (Johns 2020). Global expansion of human activities and the human footprint have encroached upon an additional 3.3 million km² (1.3 million sq. miles) of wild lands in Asia, Europe, Africa, North and South America, and the Australian continent during the three decades between the 1990s and the 2010s (Watson et al. 2016). In Antarctica, human activity has been broadly distributed across the continent, and has progressively fragmented the once inviolate wilderness (Leihy et al. 2020). The number of Antarctic tourists has been growing substantially since the end of the 1980s. During the past four decades, decreases in visitor numbers occurred on two occasions; on both occasions, decreases occurred in response to externally imposed restraints (Figure 6). Numbers decreased between 2008 and 2011 because of the global economic crisis and decreased again in the 2020–21 season because of the pandemic (Netherlands and New Zealand 2019; IAATO

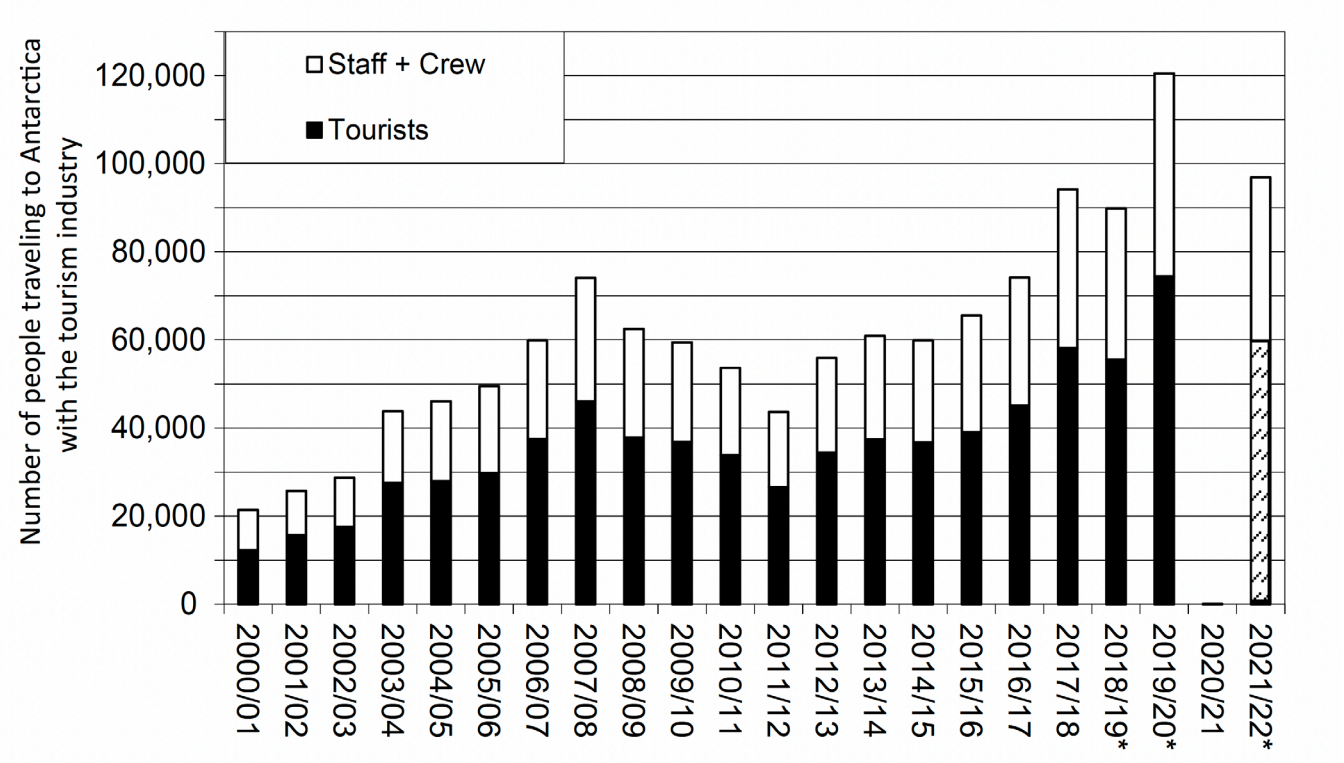

Figure 6 - Number of Antarctic tourists and accompanying staff and crew members. 2020–21 tourist numbers (hatched) are preseason forecasts. * Numbers of accompanying staff and crew members are available from data sources up to and including the 2017–2018 season. Staff and crew numbers after the 2017–2018 season were calculated using tourist numbers for the season and the average ratio between tourists and accompanying staff and crew members derived from 2000–2018 data (1 tourist to 1.6 staff and crew). Data sources: IAATO, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021b.

2021b). After 2011, the number of people traveling to Antarctica with the tourism industry resumed its increase and exceeded 100,000 for the first time in the 2019–20 season (Figure 6). Similarly, preseason forecasts estimate that the number of visitors in the 2021–22 season would return to mean 2016–2020 levels should the majority of travel restrictions be removed (IAATO 2021b). Following Johns (2020), assuming absence of restraint as the norm, Antarctic tourist numbers can be interpreted as a reflection of a general absence of self-restraint, punctuated by occasional externally imposed restraints.

The norm of growth and absence of self-restraint continues to put pressure on wilderness, rendering the perilous task of wilderness stewardship even more challenging in the Anthropocene (see e.g., Allan et al. 2020; Kaye 2021; Tin 2014). As the number of humans on the planet and our collective consumption of energy and resources continue to increase, we push the global climate toward states that are dangerous for humans and the more-than-human world and exceed the safe operating space of the Earth systems that support the conditions for human societies to develop and thrive (Steffen et al. 2015). According to some forecasts, business-as-usual in the absence of self-restraint could lead to energy shortages and even global economic collapse (Moriarty and Honnery 2012; Wiseman and Alexander 2017). Limitations in economic or energy resources or other restraints imposed by geopolitics could significantly limit human mobility, which, as seen in 2020, render certain wilderness areas inaccessible, and de facto reduce the pressure on these areas. Paradoxically, absence of self-restraint may finally, through resource depletion, destabilization of human systems, and limitation of human mobility, strengthen wilderness protection.

Complex systems, such as epidemics, abrupt climate changes, and geopolitics often demonstrate chaotic behavior, which has low predictability, high sensitivity to initial conditions, and a large number of equilibria (Jones and Strigul 2021; Kanat 2021). The COVID pandemic has opened a window into the complexity of the chaotic systems that we are part of. The chaos and complexity continue to invite us to leave behind normalcy and embrace the extraordinary and the hitherto unthinkable in human mobility, human–nature relationships, and wilderness protection. IJW

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Wilderness and Traditional Indigenous Beliefs: Conflicting or Intersecting Perspectives on the Human–Nature Relationship?

by ROGER KAYE, POLLY NAPIRYUK ANDREWS, and BERNADETTE DEMIENTIEFF

Roger Kaye

Polly Napiryuk Andrews
Illustration by Lindsay Carron

Bernadette Demientieff
Illustration by Lindsay Carron

Indigenous people had no word for wilderness. What are the implications of this increasingly noted fact? Is wilderness just a Euro-American cultural construct? Is it somehow neglectful or disrespectful of Indigenous cultures? Let's consider these questions from a historic wilderness perspective and from Indigenous Cu'pik and Gwich'in perspectives.

A Historical Wilderness Perspective – Roger Kaye

There currently exists a disproportionate focus on the differences between traditional Indigenous beliefs and the wilderness concept and inadequate recognition of what they have in common. For example, uniting many traditional

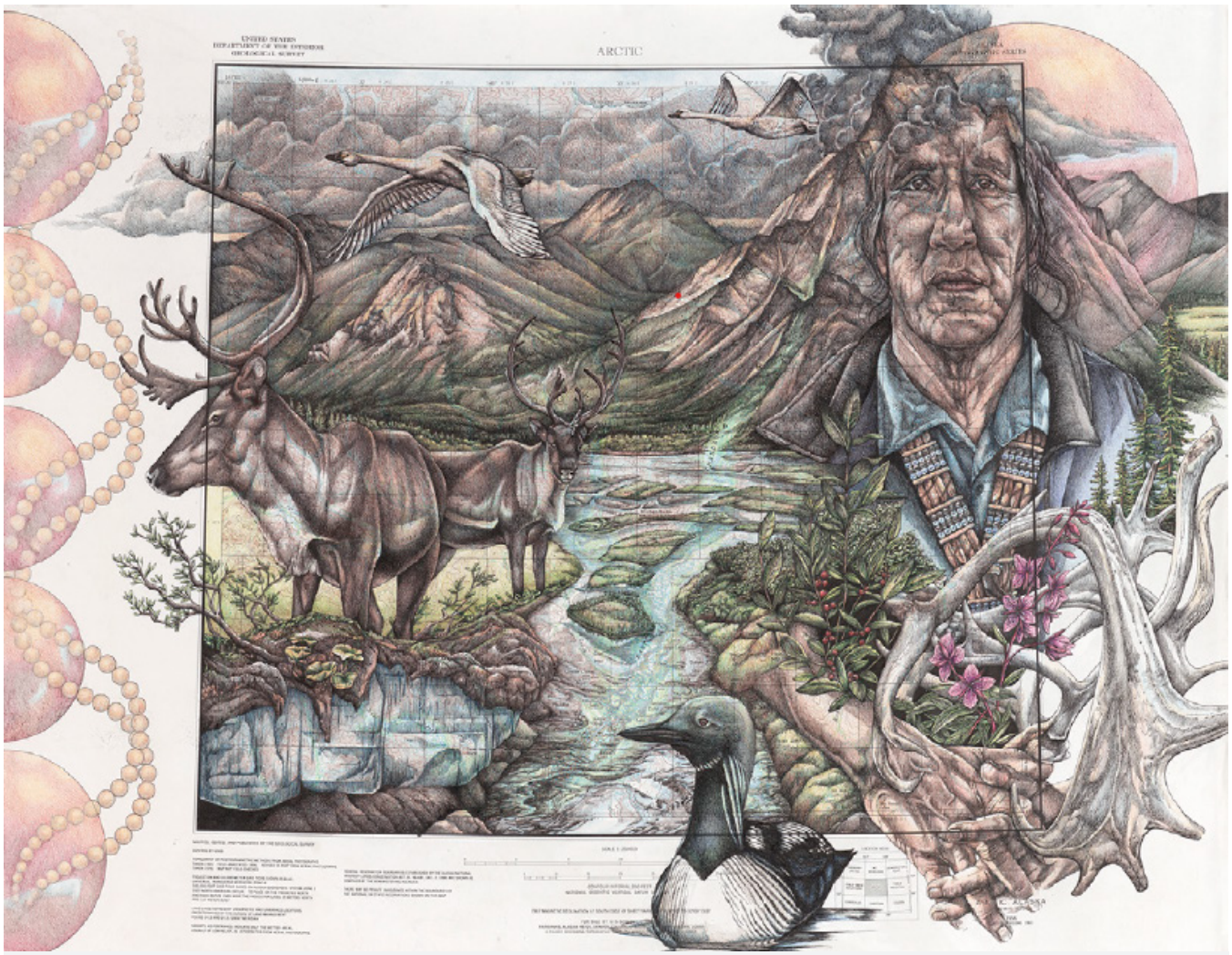

Figure 1 - Lindsay Carron artwork representing Arctic Village, featuring Trimble Gilbert.

Indigenous beliefs and the wilderness concept are fundamental, underlying ideas, values, and guides for behavior relating to:

- *Humans' role in the larger world*
- *The interrelatedness of humans and the larger community of life*
- *The need for humility, respect, and restraint in relating to nature*

These themes comprise what Henry David Thoreau, an early wilderness proponent, summarized as "Indian wisdom." They echo through Indigenous campfire stories, songs, and ceremony, and they resonate through the early wilderness literature. But here is another, growing commonality: we all now face unprecedented global-scale environmental threats that neither founders of the wilderness movement nor Indigenous Elders could have foreseen. Threatening are climate change, pollution, resource sustainability, and loss of biodiversity. Threatened are wildlands, subsistence resources – even the biosphere that all inhabitants of this Earth share. So more and more, wilderness interests and Indigenous people are working together to further our common values and hopes for the future.

So why is the concept of wilderness often considered alien to Indigenous cultures? In

part, it's because some wilderness ideas developed from ethnocentric notions about America as a frontier. And it is also partly because early wilderness writers and advocates had little knowledge of the complementary Indigenous beliefs about humans' place in nature. But while the inappropriateness of the frontier ideology is increasingly recognized and being abandoned, Indigenous visions are finding greater voice among wilderness organizations, agencies, and literature.

It is true that early Indigenous people had no conception of wilderness – but neither did Western people before they were exposed to the environmental degradations that led to development of the wilderness ethic. We should remember that the wilderness idea evolved and continues to evolve, as do all concepts of environmental ethics, in response to new understandings and changes in society and its relationship to the environment.

The idea of wilderness we have today is not an inherent component of Western culture. In fact, it is relatively recent. The wilderness concept arose largely in response to changes wrought by the Industrial Revolution. The wilderness movement began in the late 1920s and accelerated after World War II in response to a new, unprecedented order of environmental threat. It was in reaction to the industrialization; urbanization; the rapid loss of natural areas; destructive logging, mining, and agricultural practices; and the spread of pollution and pesticides. These weren't part of the world precontact people lived in, but they are now part of the world we all share. Before widespread environmental alteration and degradation, there was no need for a concept of areas left free from them. But there is now.

An unfortunate misunderstanding has been that the wilderness idea somehow erases Indigenous people from the landscape. It is true that precontact Indigenous populations and their activities were, until recent years, little understood. But the Wilderness Act's description of Wilderness as a place "where man is [currently] a visitor and does not remain" does not imply that wilderness lands were "pristine" or devoid of any Indigenous history or effect. That is why the act defines an area qualified to become wilderness as "generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable" (Section 2©, emphasis added). In fact, when wilderness movement leader Bob Marshall defined wilderness, he specifically recognized that "trails and temporary shelters, which were common long before the advent of the white race, are entirely permissible." Remember, the idea of wilderness was a reaction against the modern, new order of environmental threat. It was certainly not at variance with the Indigenous people.

A Cup'ik Perspective – Polly Napiryuk Andrews

It is true that my Cup'ik ancestors had no word for wilderness. Nor did we have words for airplanes, computers, or the internet, or for climate change, endangered species, or biodiversity either. But we've adopted these words and concepts for the modern, altered, and changing world we now live in.

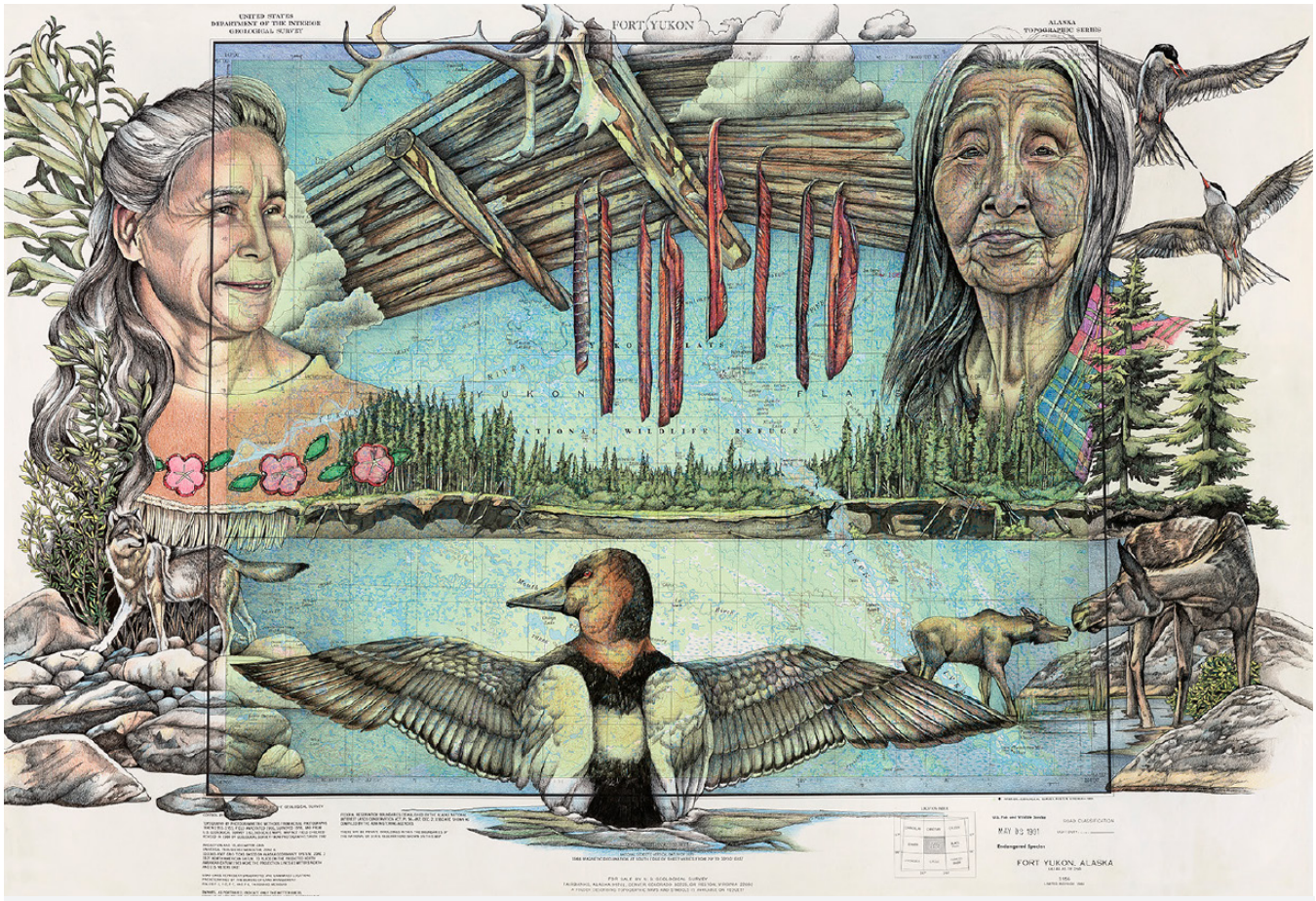

Figure 2 - Lindsay Carron artwork representing Fort Yukon Flats, featuring Julie Mahler and Clara Joseph.

Yes, there are differences between our traditional worldview and the wilderness concept. But too often we focus too much on differences. So, we don't see the more important underlying values and hopes for our descendants that we have in common. And that commonality is what's most important, and not just for these areas of our homelands that Congress made wilderness. It's important, too, because the central message of the wilderness concept as it developed over the last five or six generations, and the beliefs that have guided my Cup'ik ancestors for some 500 or 600 generations, can contribute much toward addressing the new huge-scale environmental threats we now all face.

We have seen on our land the many and worsening effects of climate change. We know our oceans are becoming acidic, our air polluted. These threaten all the Earth's peoples and all creatures and all generations ahead of us. Ultimately, these threats come from humans' increasingly unsustainable behavior, and that's rooted in how we see ourselves in relation to the natural world. I believe that we all need to remember the importance of the ancient idea of living in harmony with – not dominating – this world. That idea is most apprehensible to those who live closest to the land, but if you go back far enough, it's part of everyone's human heritage.

This is what the author of the Wilderness

Figure 3 -Lindsay Carron artwork, featuring Polly Napiryuk Andrews.

Act, Howard Zahniser, described as "a piece of the long ago we still have with us." In explaining "The Need for Wilderness Areas," Zahniser (1956–57) wrote:

In the wilderness it is possible to sense most keenly our membership in the whole community of life on the Earth....We deeply need the humility to know ourselves as the dependent members of a great community of life ... to know the wilderness is to know a profound humility, to recognize one's littleness, to sense dependence and interdependence, indebtedness, and responsibility.

Zahniser wrote this in the 1950s, and it became part of the history of the Wilderness Act. But hardly known is the fact that for thousands of years this sentiment underlying the wilderness concept was part of my Cup'ik people's oral tradition. Let me provide one example: The story of the boy who went to live with the seals.

Long ago, there was a couple who wanted their only son to learn how to become a great hunter, and part of that was knowing the proper and reciprocal relationship between humans and the animals. So they arranged for a shaman to send the boy to live with the

seals for a year. Down through a hole in the ice he went, and the story goes on to tell how over the year the seals taught him to see the world and humans' role in it from the seal's point of view. And what he learned was much like those things Zahniser later wrote about – that animals aren't there just for human exploitation, but they, like us, are members of a larger community of life. We must treat them with respect, and with a sense of humility and kinship because our futures are intertwined. What is good or bad for the seals is the same for us; we are interdependent.

"More than any other modern land category or management system, Wilderness recognizes our way of relating to the land and the Earth. The wilderness idea that humans are part of a larger "community of life" (and should act like it) has been known to my people for millennia."

Imagine ... as stories enable us to do, seeing the human–nature relationship from the point of view of the creatures with whom we share this Earth. There's a message in this and other stories that complement and give multicultural meaning to that message of the wilderness concept. Perhaps we all, like the boy, will wish to learn from others' ways of seeing humans in relation to the natural world, and from other, older ways of expressing the relationship upon which our mutual well-being depends.

A Gwich'in Perspective – Bernadette Dimientieff

At the first Gwich'in gathering in more than 150 years, the Alaskan and Canadian Gwich'in tribes came together for a historic meeting. Oil development was threatening Lizhik Gwats'an Gwandaii Goodlit, known to our people as the "Sacred Place Where Life Begins," and known nationally as the coastal plain of the Arctic National Wildlife Refuge. At that gathering the Elders directed the Gwich'in Nation to go out and tell the world we are here, to work in a good way and not compromise our position, and to fight for the permanent protection of our sacred lands.

We advocate for wilderness because it will provide the strongest protection for the birthing grounds of the Porcupine caribou herd. We are the caribou people; a piece of the caribou heart lies within us and a piece of the Gwich'in heart lies within the caribou, and it has been so since time immemorial. They are a part of who we are as a people, our way of life, our food security, and our identity.

But our concern goes beyond maintaining the numbers of caribou for hunting, nutrition, and continuing traditions. We have a spiritual and cultural connection with the caribou. We treat them with respect and humility because we are related to them. And as science now shows, caribou

Figure 4 - Lindsay Carron artwork representing Yukon Flats, featuring Bernadette Dimientieff.

are central to the healthy ecological function of the environment in which we live and in which our culture developed.

More than any other modern land category or management system, wilderness recognizes our way of relating to the land and the Earth. The wilderness idea that humans are part of a larger "community of life" (and should act like it) has been known to my people for millennia.

We don't only feel attacked by climate change but by our own government too. We fight against both oil development in the Arctic Refuge and climate change, each rooted in today's secular, consumptive, and unsustainable lifestyles. The Gwich'in Steering Committee works with organizations such as the Alaska Wilderness League and The Wilderness Society to address these two related threats.

Gwich'in People provide an example of how we can live as respectful, interdependent, and low-impact members of this Earth's community of life. The wilderness concept helps provide English words for what my ancestors have always intuitively known of this community. We are simple people, we understand if we take care of the land, the land will take care of us. We are interconnected to the land, water, and animals.

Figure 5 - Artist Lindsay Carron (right) sketching Julie Mahler in Fort Yukon, Alaska.

Looking Forward through Art

Lindsay Carron and the US Fish and Wildlife Service "artist-in-residence" project seeks to give visual expression to the ancestral and continuing connection of Indigenous people to Alaska's wildlife refuges. Her works feature Native people and wild animals embedded in the wilderness. "Mystical symbolism" is how one writer described the art because it represents more than the Indigenous people's ongoing subsistence and cultural relationship to these wild landscapes.

The project was stimulated by a Gwich'in spiritual leader the Dr. Reverend Trimble Gilbert of Arctic Village. He told the US Fish and Wildlife Service that when he looks over his homeland, now the Arctic Refuge, he sees "the land that holds the bones of thousands of generations of my ancestors." He explained how every caribou eaten contains some elements of those ancestors' being, thus making the hunt something of a communion with them, a living link, as he described it, between the past and present.

And beyond this organic connection, Trimble reminds us that before his homeland was overlain with the Western refuge-wilderness-conservation ideology, the Gwich'in had a holistic, harmonious worldview of this land and its creatures that prescribed humans' appropriate relationship to them. This traditional worldview, he says, underpins the Gwich'in peoples' strident efforts to protect

the refuge's coastal plain as wilderness, and their expanding advocacy for just and sustainable environmental policies.

Lindsay's art was intended to serve as a background for discussion about how the Refuge System can better incorporate Indigenous history into its philosophy and informational programs. It helps us recognize that the Indigenous belief system is an inherent part of wilderness character, enhancing its meaning and the experience of visitors.

But perhaps most importantly, as we stumble into the Anthropocene era, altering our world and ourselves, precepts of the Indigenous worldview that the art helps illustrate can help lead us, as Trimble says, to a more just and sustainable world. As opposed to the Dominant Western Worldview, premised on human separateness from and the right to dominant Nature, Indigenous beliefs remind us that humans are an interdependent part of and belong within Nature. They lead us to question the belief that the accumulation of stuff and wealth are what brings well-being, as opposed to sharing, reciprocity, and sense of community. As opposed to the assumption that science and technology can solve any problems incidental to "progress," they remind us of the need for humility and skepticism.

Such Indigenous beliefs, like the wilderness ethic, are often at variance with modern Western assumptions, paradigms, and worldviews. But they both remind us that there can be other, more healthful and sustainable ways of relating to the world. ijw

ROGER KAYE is the Alaska wilderness coordinator for the US Fish and Wilderness Service: email: roger_kaye@fws.gov. This article is based on the author's judgment, interpretation, and emphasis, and does not constitute a policy position of the author's agency.

POLLY ANDREWS is Cup'ik from the villages of Chevak and Lower Kalskag, and Fairbanks. She has a master's degree in culturally responsive education. She works as a training specialist for the South Central Native Foundation's Family wellness program, focusing on Native culture and strengths as a means of addressing intergenerational trauma.

BERNADETTE DEMIENTIEFF is Gwitch'in from Fort Yukon and Venetie. She is the executive director of the Gwitch'in Steering Committee and assumes many leadership roles, serving on the boards of the Native Movement, the Care of Creations Task Force, Defend the Sacred, and the Arctic Refuge Defense Council. Bernadette has the soul of an advocate.

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Photo credit: jplenio from Pixabay.

Wilderness Babel

by MARCUS HALL, WILKO GRAF VON HARDENBERG, TINA TIN, and ROBERT DVORAK

Marcus Hall

Wilko Graf Von Hardenberg

Tina Tin

Robert Dvorak

"Wilderness" as a term in the English language denotes a multiplicity of meanings. In its most popular version, English speakers consider wilderness as a place largely devoid of people, nature in the raw, quintessentially uncivilized. Whether as a concept or as a legal definition, wildernesses generally lack roads and buildings, at once the embodiment of a spiritual, more-than-human dimension and an inspiration for the human soul. Yet wilderness, now and in the past, can also include traces of humanity or at least a distinct human presence in the ways that we describe it or circumscribe it. As we look for wilderness in other lands and places, we realize that – in form or function – it can vary quite dramatically according to region or century or language.

Whether wilderness is conceived primarily as a dangerous mountain to be avoided, an immense tundra teeming with migratory birds, or a tropical repository of biological and pharmaceutical wealth, depends on our heritage, and such heritage is intimately linked to the words we use to describe it. Adjectives in English such as "pristine," "primitive," "old-growth," and "untrammeled" describe wilderness but do not replace it.

Figure 1 – In 2013, the Environment and Society Portal published the virtual exhibition Wilderness Babel as a collaboration with the Institute of Evolutionary Biology and Environmental Studies at the University of Zurich.
https://www.environmentandsociety.org/exhibitions/wilderness-babel/wilderness-babel-version-1-pdf.

Wildlife dwells in this place, but sometimes so do wild, semi-human beings, at least in the times or locations where they can be found. Trolls, leprechauns, satyrs, gnomes, and nymphs are all semi-humans nourished by the wild, and placed there by the imaginations of people who do not live in the wilderness. Recent calls for a vitalist politics to mitigate the apparent dichotomy between nature and culture and the separation of the human from its environments – which is seen as one of the roots of our current environmental crises – stress the need to weave new stories of the wild, thereby allowing human, nonhuman, and more-than-human dimensions to coexist (Ghosh 2021).

An Online Virtual Exhibition

Wilderness Babel first started a decade ago as an online virtual exhibition on the Environment and Society Portal of the Rachel Carson Center for Environment and Society, which is a nonprofit joint organization of the University of Munich and Deutsches Museum in Germany. The goal of that exhibit was to offer translations of non-English terms for wilderness and describe how these terms may be similar or dissimilar to their English counterpart.

To date, Wilderness Babel has sampled some 20 non-English wilderness terms. Native speakers of Italian, Icelandic, Chinese, and other languages offered the best counterpart term(s) to "wilderness" in their languages; in addition, they offered extended meanings, and added images, soundtracks, and videos, and even pronunciation guides to corroborate what these wildernesses actually look, feel, and sound like. An early English specialist also offered overviews of "wilderness" meanings during medieval times. Wilderness Babel was initially conceived as a sort of reference tool for cataloging and describing wilderness as it is understood in many of

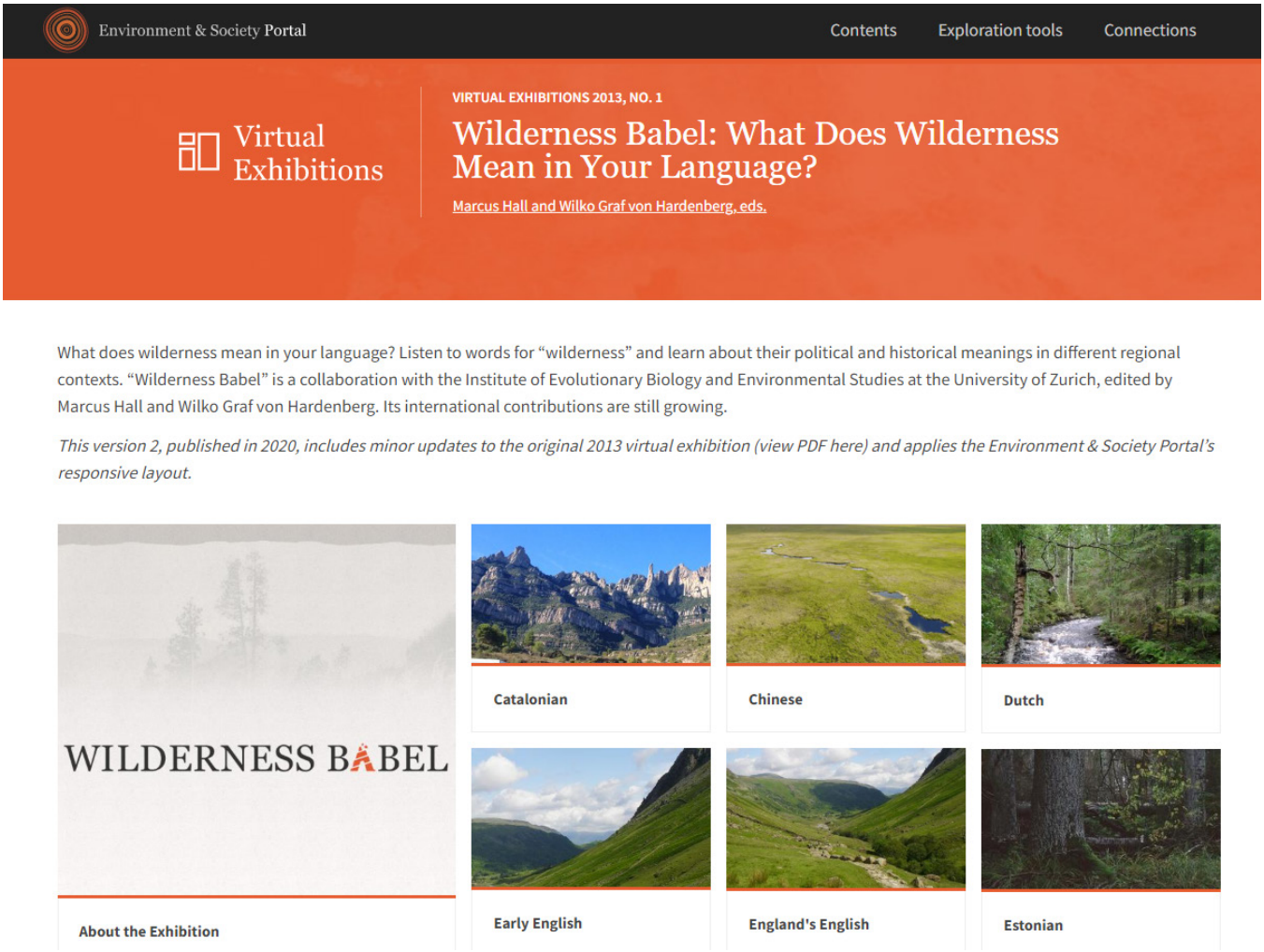

Figure 2 – This version 2, published in 2020, includes minor updates to the original 2013 virtual exhibition (view PDF here) and applies the Environment and Society Portal's responsive layout https://www.environmentandsociety.org/exhibitions/wilderness-babel.

the world's major languages and several of its minor ones. So even as wilderness in its various connotations and permutations has long served as a rich historical subject, motivating such historians as Roderick Nash (1967) and William Cronon (1995) to explore its changing meanings according to period and event, Wilderness Babel was conceived largely as a linguistic project, by acknowledging that beyond the English-speaking world there are a multitude of terms for the "wild," "wildness," and "wilderness," whether as noun or adjective, that can also vary according to period, event, and interpretation.

In its current state, the exhibit hosted by the Rachel Carson Center's Environment and Society Portal subsequently developed into a somewhat Eurocentric project, with just a handful of samplings of the larger global dimension. Wilderness-equivalent terms, from víðerni (Icelandic) to deserto (Italian) to [huāngyě] (Chinese), are translated by bilingual authors in a few short paragraphs, highlighting how these terms may be similar to or different from the wildernesses that native English speakers know and understand.

The subtleties of meanings encompassed by the above terms, say, between human presence

UNNUR KARLSDÓTTIR
Icelandic – Víðerni and Öræfi

The idea of wilderness in Iceland is directed toward landscape and uninhabited areas rather than wildlife, since the wild animals of the island regularly cross the borders between the natural and cultural landscape in finding their habitat. Today, the Icelandic term víðerni, is most often used to embrace the modern meaning of the English word "wilderness." It describes a vast area of wild ("untouched") nature. It refers to natural landscape as a space, as a visual experience, sublime and aesthetic. And it emphasizes how small we are in comparison to nature's creation. In modern Iceland the term víðerni is used to signify the Icelandic central highland. This has to do with the geographical and geological nature of the country. Iceland is a relatively large island, just over 100,000 kilometers2 (3,861 sq. miles) in size. Most of the island is sparsely vegetated, due to volcanic ash and erosion following deforestation and grazing since the country's settlement in the ninth century. Around 75–80% of the island is considered uninhabitable, in particular the central highland. The outlines of Iceland are shaped by mountainous peninsulas, fjords, and bays, and the habitable area is the narrow lowland around the coast and in the valleys. The highland (Icelandic hálendi) rises up in the center: a black desert, lava fields, mountains, glaciers, some vegetated zones, and a few wetland oases. The heavily streaming, murky, milky-white glacial rivers cut through the landscape, having dug their way through rock and soil and created canyons and waterfalls on their way to the sea. The desert-like character of the highland is highlighted in the synonym used to describe it; that is, the Icelandic noun öræfi, which refers to a region of no use and a hostile environment for humans and animals. The word öræfi is a name given to this kind of nature from the perspective of the farmers, who consider regions with no grass for their livestock to be a nature of no use.

Iceland was a wilderness when settled, and since Icelanders have a written narrative of the Nordic/Celtic settlement, we have a description of how the settlers perceived its nature and its resources and distributed it between themselves as a property and commons. In that story the central highland was not an inaccessible world unknown or unnamed. Names were given to its parts, to the mountains and glaciers. From early on people crossed back and forth across the highland while riding from one quarter of the island to the other. Furthermore, the use of the vegetated parts of the highland as a summer grazing area for livestock also brought humans in contact with this wilderness every year through the centuries. In the latter half of the 20th century, mountaineering and nature tourism brought this area into focus in a new way, both in an economical and ideological sense. In recent decades it has been praised for its remote and sublime nature and as an essential arena for outdoor experience and recreation for the modern citizen. Today the central highland is seen as an escape from the noisy and hectic world of techno-industrial modernity, an expression of contemporary wilderness romanticism. Thus, one can say that Icelanders have always had a practical and ideological connection to their country's wilderness.

Unnur Karlsdóttir is director and researcher at the University of Iceland Research Centre in East Iceland.

or absence, or between love and fear for the wild regions, is what the project has come to explore (Hall and Graf von Hardenberg 2020). Even across English-speaking countries, references to wilderness were found to elicit different feelings, images, and sounds; and indeed, some of these wild places evoke entirely different words. In indigenous Australia, "country" or "outback" typically hold precedence to "wilderness" as a way to describe big, uninhabited places; in Canada, "the bush" is a popular alternative for the term (see Fletcher 2021).

Uses of the Exhibit

Wilderness Babel is therefore producing a linguistic map that reveals the complexity of the meanings of wilderness, and how these meanings may overlap across language groups and nation-states, even suggesting new relationships between terms. Independent of the creators' original intentions, the exhibit has begun taking on a life of its own across different fields.

In higher education, Marcus Hall at the University of Zurich routinely asks master's students in a course on environmental humanities to read over the Wilderness Babel for emphasizing the complexity of identifying precise goals in rewilding projects; likewise, Bill Adams at Cambridge's Department of Geography has utilized the exhibit in some of his own courses about conservation and development, with a focus on Africa. In environmental diplomacy, the exhibit has been used to prepare for discussions at Antarctic Treaty Consultative Meetings where 29 nation-states that are Consultative Parties to the Antarctic Treaty negotiate the implementation of the legal obligation to protect Antarctica's wilderness values using the four official languages of English, French, Russian, and Spanish.
In the field of collective trauma integration, Wilderness Babel has been used to provide shared wilderness experiences (online) to connect 50 international participants in a Climate Change and Collective Trauma International Lab process. The process explored how trauma shapes worldviews, which lead to disconnection of humans from the planet and the climate crisis (Pocket Project 2021).
On a personal level, for Tina Tin, writing the Chinese contribution for Wilderness Babel has been instrumental in helping her integrate the worldviews that she was born into with those that she adopted from different cultures. This has allowed her to develop more coherence in her identity, while giving her a greater ability to understand systems and culture with more depth and clarity. The original Wilderness Babel contribution was later expanded into an IJW article (Tina and Yang 2016) and nourished the reflections around the planned 11th World Wilderness Congress in China in 2019.

Wilderness Babel has proven to be a useful tool. In the next phase of the project, we hope to expand the original map into a large and useful collection of ideas for land managers, policy makers, environmental theorists, outdoor recreators, and nature enthusiasts. After all, if we continue to develop global or transnational programs to save wilderness – or even seek to bring parts of it back in rewilding programs – the better we can understand one another's terminologies, the better are chances of success.

Figure 3 – Oræfi Highland. Photograph by Unnur Karlsdóttir, n.d.

Figure 4 – Snæfell mountain. Photograph by Unnur Karlsdóttir, n.d.

Expanding the Wilderness Babel

We realize that to expand this project in the direction of true global coverage would mean to explore the meanings of "wilderness" in some 7,000 languages, depending on how one defines language. The recurring question of what wilderness means in non-English speaking lands goes to the core of wrestling with the many definitions of "nature", that themselves count upwards of 25 separate entries in any good dictionary. Wilderness then becomes those natures that are typically less (or least) humanized, even if acts of human perception are required to single out and identify these wildernesses. We must also ask what these many non-English terms that express concepts encapsulated by wilderness can tell us about relationships between language and nature, individual and expression, society and spirituality. In fact, it seems that wilderness in its many linguistic iterations can become a conduit toward greater understanding of God, self, and world (Benson 2020).

"We plan to go significantly beyond the scope of the original exhibit, welcoming not only articles discussing the terminology chosen to express wilderness as a concept in other languages or the nuances of this word in different English-speaking contexts, but also articles that look at the same issue on completely different planes."

In this next phase of Wilderness Babel, we extend the project from the original online exhibit and develop an ongoing series in IJW. We plan to go significantly beyond the scope of the original exhibit, welcoming not only articles discussing the terminology chosen to express wilderness as a concept in other languages or the nuances of this word in different English-speaking contexts but also articles that look at the same issue on completely different planes. We believe, for instance, that there is space for comparative pieces drawing together different languages, or articles discussing the adoption of the English term "wilderness" in other cultural contexts – as well as other wilderness terms in English, from "outback" to "jungle," and "bush" to "country." We are particularly interested in pieces that drive the globalization of the project toward extra-European languages and cultures or explore how concepts of

Figure 5 – The peaks of the Gran Paradiso massif. Photograph by Luigi Piccioni, n.d.

LUIGI PICCIONI
Italian: A Language without Wilderness

If one sets out to translate the English word "wilderness" into Italian, one's first reaction is to assert simply that there is no such term that reproduces its exact meaning. But pondering the reasons for this inability to translate suggests that there is value in offering some general reflections on the subject. The best-known English-Italian dictionaries offer four possibilities: (1) deserto, landa ("desert"), (2) solitudine ("solitude"), (3) riserva naturale ("natural reserve"), (4) zona naturale incontaminata (incolta o disabitata) ("natural uncontaminated area [unmanaged or uninhabited]"). Those with a passable knowledge of Italian and English realize that none of these translations captures the essence of wilderness, especially as it is used in US literature.

To begin with, deserto and landa are concrete, specific environments, which can be (and usually are) crisscrossed and transformed by humans and carry no sentimental or moral connotations connected to the positive idea of nature itself. On the contrary, solitudine suggests a generic psycho-physical condition, or else an individual moral value that has no specific relation with nature. The term riserva naturale is meant to describe a characteristically human institution that does not necessarily reflect a condition of special purity in the demarcated area, or one that manifests values or morals implied by such a state. The phrase zona naturale incontaminata (o incolta o disabitata) is one that best captures the physical and material aspects of the word "wilderness," which refers to a primeval nature that is neither modified nor influenced by human presence. This sense is rarely used in Italian and is a complicated and awkward substitute for the simple, elegant, and evocative English equivalent; when employed, it usually refers only to a few small-scale situations with few general applications. As if that were not enough, this last phrase completely lacks sentimental and moral connotations that are so striking in the English term, at least in the meaning of the US wilderness debate.

The English meaning contains two elements that are strictly connected and inseparable: a nature that is uncontaminated, primeval, untransformed, selvaggia ("wild"), and one that denotes a sentimental and moral attitude of humans toward nature itself, offering a unique view of nature. All the various possible Italian translations are, on the one hand, unable to transmit this synthesis of natural phenomena and human visions, and on the other hand, are rather poor renditions of each of these elements taken separately.

The challenge before us remains one of explaining the semantic asymmetry between the English-speaking – especially United States – and Italian worlds. At the material, "physical-geographical" level, there is the fact that for many centuries Italy has almost completely lacked any natural areas that can be considered both inspirational places devoid of contamination and places wholly absent of any human traces. There are in effect sites that are largely primeval, but these are extremely rare, almost impossible to access, or are largely devoid of spectacular flora and fauna. It is difficult to imagine, for example, Henry David Thoreau or Aldo Leopold spending a few months or years of their life at the foot of the Grandes Jorasses and being inspired by nature. At the symbolic level, the crucial issue is a national culture that has never experienced, beyond a few very minor and recent exceptions, a relationship with a primeval nature that is intensely emotional and tinged with moral concerns for that nature.

Luigi Piccioni is a research fellow in the Economics, Statistics, and Finance Department of the University of Calabria.

Figure 6 – The Qinghai-Tibet plateau situated in the western part of China has high remoteness, high naturalness, and very low population density. Image by ayu chen from Pixabay.

wilderness have found expression in visual representation in media of different sorts as well as in nonverbal communication.

In fact, the existence of standard nonverbal languages in the form of national sign languages provides a special opportunity to understand wilderness in its many meanings, both with regard to the connections between signing and the respective national spoken language(s) and the similarities between different sign languages, but also in analyzing how signing itself affects the sensory experience of wilderness. In this latter respect, it would be particularly exciting to explore how wilderness is communicated in some of the many sign-language guided tours offered by natural reserves and national parks all over the world. Highlighting the characteristics of an exclusively visual communication about what is, for the hearing world, very much an auditory experience can allow us to better understand the complexity of the interpretative layers of which wilderness is composed. To show the potential for learning new insights from signing, one can visit the platform Signing Savvy to see two wilderness renditions, as well as Spread the Sign, to see how wilderness is signed in several non-English languages:

- https://www.signingsavvy.com/sign/WILDERNESS/7609/1 (wilderness signed)
- https://www.signingsavvy.com/sign/WILDERNESS/7609/2 *(wilderness spelled out)*
- https://www.spreadthesign.com/search/ *(wilderness signed in non-English languages)*

TINA TIN
Chinese – Huāngyě (abridged version)

In the Chinese language, there are no exact equivalents of the word "wilderness." In modern Chinese, "wilderness" is commonly translated as **荒野** *(huāngyě).* **荒** *(huāng) and* **野** *(yě). These can be considered synonyms, indicating places where plants and animals are not cultivated by humans. In modern Chinese, this has been extended to include places that have not been subject to human influence. Since land that has not been tamed by humans may threaten human survival,* **荒野** *has also adopted a connotation of savage, violent, and dangerous.* **荒** *and* **野** *can be separated and paired up with other words, such as* **地** *(dì [land], as in* **荒地** *[huāng dì] or* **野地** *[yě dì]) or* **原** *(yuan [plains or original], as in* **原野** *[yuan yě],* **荒原** *[huāng yuan]) to describe wild land, wasteland, or fields that are original or primitive.* **旷野** *(kuàng yě) and* **蛮荒** *(mán huāng) are also sometimes used to describe wilderness. They convey additional connotations of vastness and spaciousness (***旷** *kuàng) and being savage and uncivilized (***蛮** *mán). With* **自然** *(zìrán) being the standard translation of "nature," the phrase "wild nature" is often translated as* **野性自然** *(yěxìng zìrán) or* **原始自然** *(yuán sh zìrán); the first translation conveys the essence of not being domesticated while the second captures the sense of being original or primitive.*

In Chinese literature, wild nature was often depicted as frightful and treacherous. In poetry dating from around the second century BCE, wild animals and plants, hostile conditions, and barbarians made wild nature highly undesirable compared to the comforts of the city and human civilization. Nearly 2,000 years later, in the 17th century CE, Chinese travelers to the newly annexed island of Taiwan also considered the impenetrable mountains, dense forests, and uncultivated lands to be worthless compared to the comforts of their hometowns. The new island lay far away from the imperial center, in a region of **荒** *(huāng), which was cultureless, savage, and chaotic. Around the same period, the northeastern corner of China was coined the "Great Northern Wilderness" (***北大荒**, *běi dà huāng). Migration into the region from the south was prohibited by imperial rule. The region was preserved as a private royal park, a storehouse of wild game and plants for consumption by the imperial court. Population was kept low, and agriculture was not developed. In the late 19th century, it was still described as an unfortunate land of bleak desolation due to the absence of human settlement.*

*Some scholars from the 21st century consider that ancient Chinese poets expressed their appreciation of wilderness through classical Chinese "mountains and rivers" (***山水** *shan shui) poetry.* **山水** *poetry originated in the third and fourth centuries CE. In such poems, wild nature functioned as much as a symbol as a concrete locality. They conveyed how poets wished to return to their original "wild" roots, where they could express their freely flowing emotions, sense their interdependence with all land and nature, and live their freedom and wildness away from the bondage of society.*

In modern times, Chinese people continue to bring their perceptions of wilderness with them in their engagements with wild nature outside their homeland. To first- and second-generation Chinese immigrants settling in Vancouver, Canada, wilderness is often associated with places that are barren, desolate, hostile, undesirable, and abandoned. Their lack of familiarity with such spaces and lack of skills for wilderness survival make them fearful toward wilderness. Immigrants from rural China associate wilderness with the impoverished countryside in China where they (or their family members) walked, worked, and slept outdoors as a matter of toil and survival and not of spiritual escape or choice. The number of opportunities for Chinese people, especially the affluent, to engage in outdoor recreation and tourism is increasing, and provides space for new perceptions of wilderness to emerge.

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Finally, other forms of nonverbal communication, for example the visual representation of wilderness in objects of popular culture such as video games and TV series, could be the object of fascinating inquiries in the different dimensions of societal translation of nature into the cultural dimensions that would add greatly to the breadth of this project. We would also welcome linguists and ecolinguists interested in doing meta-analyses of wilderness for deepening their own disciplinary angles with respect to how wilderness and its ideas are expressed.

Call for Collaborators

Would you like to help us expand and further develop Wilderness Babel in collaboration with the International Journal of Wilderness? We are actively welcoming contributions in other languages, other cultural contexts, and diverse representations. Our desire is to significantly extend this living project, but that is only possible with broad participation and your assistance! If you would like to collaborate with us, please contact Dr. Bob Dvorak, IJW Editor at dvora1rg@cmich.edu

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Digital Reviews:

Patrick Kelly, Media And Book Review Editor

THE LANDSCAPE PODCAST

Hosted by Aaron Weiss and Kate Groetzinger. Available on Apple Podcasts, Google Podcasts, Spotify, and Stitcher. https://westernpriorities.org/category/podcast/.

The world of podcasting has exploded in the past 15 years, and today there are shows on nearly any topic imaginable. Podcasts are convenient, often free, and offer a great way to learn more about something of interest to listeners. Fortunately, this powerful and relatively new medium is being utilized more and more within the wilderness and conservation community. Continuing a review of some of the more solid options available, this issue of *IJW* looks at *The Landscape*, a podcast hosted by Aaron Weiss and Kate Groetzinger and produced by the Center for Western Priorities.

The Denver-based Center for Western Priorities (CWP) is a "nonpartisan conservation and advocacy organization that serves as a source of accurate information, promotes responsible policies and practices, and ensures accountability at all levels to protect land, water, and communities in the American West." With its often policy-heavy focus, *The Landscape* podcast is a dream come true for public lands nerds, or anyone interested in federal lands management in the American West.

Hosted by veteran journalist Aaron Weiss, and former Utah public radio reporter Kate Groetzinger, *The Landscape* is a tightly produced, well-researched podcast mixing news, interviews, and in-depth reporting on contemporary developments in western public lands conservation. Weiss and Groetzinger bring top-notch interviewing skills to the table, hosting a wide variety of guests. From scientists, advocates, and activists to legal scholars, authors, and even the occasional politician, *The Landscape* offers an impressive array of conservation perspectives and expertise.

Among the many strengths of *The Landscape*, the newscast featured at the beginning of every episode is particularly noteworthy. This brief but richly informative segment is perfect for those who want to stay abreast of the latest developments in public lands conservation. Despite the growing awareness of and interest in western public lands, there are disappointingly few examples of high-quality reporting focused on such an important topic. *The Landscape* does a fine job of filling in this gap, and, being advocates as well as reporters, the hosts offer additional and insightful analysis of the latest news, fitting it into broader efforts to protect the lands and waters of the American West.

Following the news segment are interviews with the experts and advocates working on western public lands conservation. Often centered around ongoing CWP campaigns, these interviews provide listeners with needed background information on work being done to protect these landscapes. After the Biden administration announced its "30x30" initiative, *The Landscape* launched their "Road to 30" campaign, featuring "Postcards": stories of "everyday Americans and the places they want to conserve for future generations." These postcards include stories on places such as the Gila Wilderness featured on a recent episode, where ongoing threats to this "first and wildest" region are detailed, along with efforts to protect the greater Gila for future generations.

Covering topics too numerous to list, *The Landscape* provides not only an important news source for all things public lands, it also offers listeners the chance to learn more about ongoing efforts to protect these landscapes. If these issues concern you, then *The Landscape* is well worth a listen.

REVIEWED BY **Patrick Kelly, IJW media and book review editor; email: Patrick.ram.kelly@gmail.com.**

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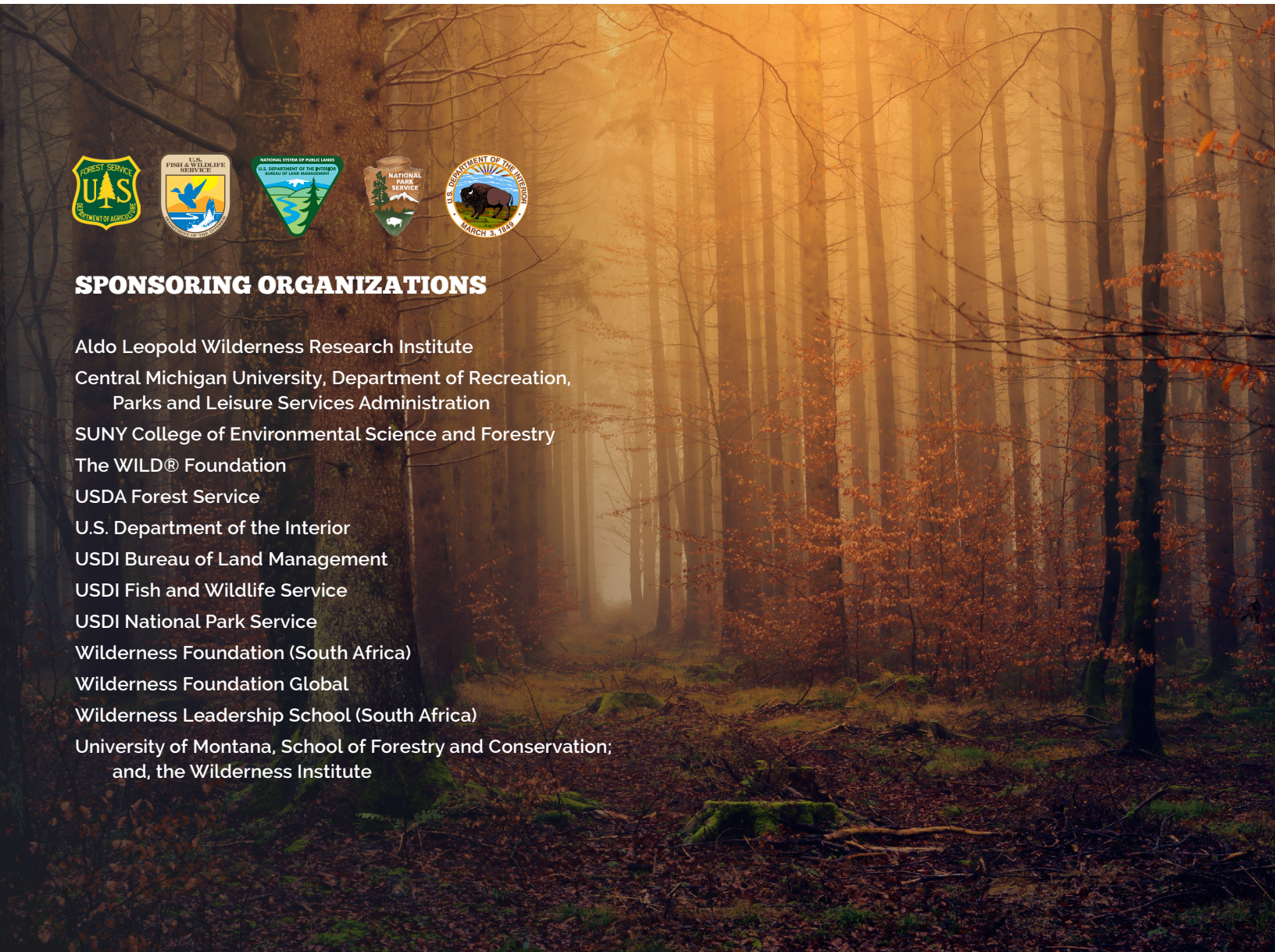

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