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**In This Issue of **

WILD11 India | Historical Meaning of Solitude  
The English Lake District | Nature Needs Half at Work

# International Journal of Wilderness

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## FEATURES

EDITORIAL PERSPECTIVES

**WILD11 India: Nature-Based Solutions for Life, Livelihoods, and Love** 4

VANCE G. MARTIN

## SOUL OF THE WILDERNESS

**The Historical Meaning of "Outstanding Opportunities for Solitude or a Primitive and Unconfined Type of Recreation" in the Wilderness Act of 1964** 10

JESSE M. ENGBRETSON and TROY E. HALL

## STEWARDSHIP

**Jhalana: The Abode of the Urban Leopards** 32

DHIRAJ KAPOOR

## SCIENCE & RESEARCH

**Informing Planning and Management Through Visitor Experiences in Grand Staircase-Escalante National Monument** 44

B. DERRICK TAFF, JEREMY WIMPEY, JEFFREY L. MARION, JOHANNA ARREDONDO, FLETCHER MEADEMA, FORREST SCHWARTZ, BEN LAWHON, and CODY DEMS

## COMMUNICATION & EDUCATION

**Perspectives of US National Park Service Employees on University-National Park Field-Station Partnerships** 60

MICHAEL T. STEVENS

## INTERNATIONAL PERSPECTIVES

**The English Lake District: A Culturally Wild Landscape** 74

BASAK TANULKU

**Nature Needs Half at Work** 86  
*Indian Villagers Working Through "COCOON"*

PARVISH PANDYA

## WILDERNESS DIGEST

**Book Reviews** 96-99

*Rethinking Wilderness*

MARK WOODS

reviewed by TOBIAS NICKEL

*Environmental Activism on the Ground: Small Green and Indigenous Organizing*

JONATHON CLAPPERTON AND LIZA PIPER

reviewed by JOHN SHULTIS

## On the Cover

Pictured with her 8-month old cubs in June 2018, Maya (T-12) is one of the most famous tigers in Tadoba Andhari Tiger Reserve, which is located in the Chandrapur district of the Maharashtra state of India.

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IJW Editor-in-Chief Emeritus



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# International Journal of Wilderness

The International Journal of Wilderness links wilderness professionals, scientists, educators, environmentalists, and interested citizens worldwide with a forum for reporting and discussing wilderness ideas and events; inspirational ideas; planning, management, and allocation strategies; education; and research and policy aspects of wilderness stewardship.

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# **WILD11 India:**

## **Nature-Based Solutions for Life, Livelihoods, and Love**

### **by VANCE G. MARTIN**

We are pleased to tell you that the 11th World Wilderness Congress (WWC WILD11) will convene in Jaipur, India, in March 2020. The official co-hosts are the State Government of Rajasthan, Sanctuary Nature Foundation, and Wilderness Foundation Global (represented by the WILD Foundation). Planning started in May 2019 and is advancing quickly...the time frame is short, focused, very productive, and exciting!

What a difference a year makes! The editorial in the August 2018 issue of IJW announced that the 11th World Wilderness Congress would convene in China in late 2019. The organizers within and outside China had been asked to establish a formal Organizing Committee, and an official media launch was held at the People's Daily (the world's largest media company, the voice of the Chinese Communist Party). We also reported the following in that editorial:

*“Political permission” is required in China for such a process and gathering that involves many foreign organizations, governments, and interests. The WWC is an independent entity and not a formal part of the United Nations, therefore obtaining such permission is unusual, complicated, and not assured... negotiations [are] well underway with the appropriate ministries.*



**Wild11**

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**“The agenda for WILD11 is half global, half India. Globally, we will be pushing for expanded, more ambitious, interconnected, protected-area targets that safeguard human health and well being...”**

Over the succeeding months, that “political permission” eventually transformed into a “request” to us that WILD11 be considered for an unspecified date in the future, certainly after the Convention on Biodiversity meeting in Kunming in late 2020. After consulting with partners on the Organizing Committee, our decision was not to indefinitely postpone WILD11. It is crucially important to keep wilderness clearly on the global agenda as we move into 2020, the globally historic year for the environment. WILD11’s mission is to be an effective part of that global process, hopefully with an Asia venue.

So, by agreement with our partners we suspended activities of the Organizing Committee until further notice. We then focused our China work on projects already underway, without it being aimed toward a WILD11 China. This meant continuing our work with China colleagues to develop a wilderness policy framework for the new national park system and advocating for China as a Nature Needs Half country (see Yue et al. in the August 2018 issue of *IJW*). Meanwhile, we reached out to our global wilderness community.

Pivot from East Asia to South Asia! As soon as our colleagues in India learned of the change, they asked to be considered as a venue. Fevered negotiations ensued, and within the remarkably short period of two months the State of Rajasthan issued an official agreement to co-host and to support some basic operations of WILD11 if it were held in Jaipur, our originally requested venue. It has been a blitz to see such a rapid uptake by a formal (and Indian) bureaucracy of the global and regional mission of WILD11. The level of commitment and enthusiasm, and the pace of planning, is the highest of any other Congress in 45 years.

Rajasthan is India’s second largest state. Its arid deserts and grasslands in the far west are home to the great Indian bustard (the endangered GIB, the largest flighted bird) and to the nature-worshipping Bishnoi peoples. In the east is the globally famous Ranthambore Tiger Reserve. In the center is Jaipur, the “Pink City,” with Moghul forts and palaces on every hilltop, one of the world’s oldest and most successful urban water harvesting programs, and more.


One of Jaipur’s urban jewels is featured in this issue. The Jahlana Leopard Reserve is within the city, just a 20-minute drive from the WILD11 venue, with a thriving population of breeding leopards, wild boars, hyenas, jackals, deer, and more. It is likely the only urban nature reserve created and named specifically for a major predator.

The agenda for WILD11 is half global, half India. Globally, we will be pushing for expanded, more ambitious, interconnected, protected-area targets that safeguard human health and well-being and for uniting the work for climate and nature. We are dangerously close to “tipping points” in each, so we must unite our efforts and work directly toward the processes later in 2020 of the Convention on Biodiversity, and United Nations Framework Convention on Climate Change.

For India, we will present the models of community, connectivity, commitment, and compassion that allow conservation to work in what will soon be the most populated country in the world. Despite its myriad challenges, India has populations of major wildlife living with and

among human communities and is finding many solutions. One of those is also profiled in this issue. COCOON is one model of transforming community well-being and biodiversity by rewilding...and in the process "transforming the tiger from a predator into a producer."

Also in this issue of IJW, Jesse Engebretson and Troy Hall explore the historical meaning of solitude and primitive recreation in the Wilderness Act of 1964. Basak Tanulku examines the English Lake District as a culturally wild landscape. We would also like to thank Dr. John Shultis, our outstanding book editor of IJW, for his long-standing contributions and service to the journal and conservation. This issue represents John's final issue as book review editor, and we wish to express our great thanks for his tireless efforts and collaboration. Best wishes, John, for your future endeavors and adventures!

Join us in Jaipur to explore, celebrate, and produce conservation solutions for wilderness and people. There will be many and diverse science and policy sessions, training for wilderness and wild and scenic rivers managers, and many opportunities for volunteering and participation. Through CoalitionWild (<https://coalitionwild.org/>), there is an emphasis on young people and young professionals and Women in Conservation is an important track at this Congress. Sessions will also be recorded and posted for viewing after the Congress. 

**For more information about the Congress, visit <https://wild11.org/the-congress/>**

**For the Call for Abstracts and Proposals, visit <https://wild11.org/call-for-abstracts/>**

**VANCE G. MARTIN** is an associate editor of IJW, president of the WILD Foundation, and president of Wilderness Foundation Global; email: [vance@wild.org](mailto:vance@wild.org).







A forest guard flees from a protective rhino and her calf inside the Bagori Range of Kaziranga National Park, a protected area in the northeast Indian state of Assam. **Photo credit:** Jugal Bharali / Sanctuary Nature Foundation

# **The Historical Meaning of “Outstanding Opportunities for Solitude or a Primitive and Unconfined Type of Recreation” in the Wilderness Act of 1964**

**by JESSE M. ENGEBRETSON  
and TROY E. HALL**

The federal land management agencies responsible for wilderness stewardship in the United States play a critical role in fulfilling the Wilderness Act's mandate to preserve wilderness character. Wilderness character, as currently understood (Landres et al. 2015), is composed of distinct and interrelated “qualities” that are meant to connect the statutory language of the law to stewardship activities and on-the-ground conditions (Dvorak 2015). One quality encompasses the type of experiences wilderness should provide: “outstanding opportunities for solitude or a primitive and unconfined type of recreation” (hereafter, “outstanding opportunities”) (Landres et al. 2015; Wilderness Act 1964). However, this phrase was not explicitly defined in the law; in fact, there has been and continues to be a lack of clarity about the meaning of the entire phrase (Dawson and Hendee 2009; Hendee, Stankey, and Lucas 1978; USDA Forest Service 2005). In a 2010 report, the United States Forest Service's (USFS's) Wilderness Advisory Group (Carlson et al. 2010, p. 2) wrote that



**Jesse M. Engebretson**



**Troy E. Hall**

*Regulations and policy require the Forest Service to provide outstanding opportunities but provide no further direction. There are no definitions of key terms and no guidance regarding indicators or desired conditions. There is little or no policy that identifies when management action is needed, and no guidance on how to achieve the management objectives.*

Various scholars have provided rich insight about wilderness as a cultural and legal construct (e.g., Cronon 1996; Nash 2014; Sutter 2002); however, this scholarship has generally not addressed questions of congressional intent. Further, although some scholars have profitably addressed the meaning and nature of wilderness experiences – including solitude and primitive and unconfined types of recreation – their analyses did not include many primary materials related directly to the legislative history of the act. For instance, Hollenhorst and Jones (2001) explored historical ideas about solitude, but primarily used secondary materials unrelated to the legislative history of the act. Borrie and Roggenbuck (2001) also investigated historical perspectives on the wilderness experience, but their focus was on materials unrelated to the legislative process associated with the law. Borrie (2004) addressed the primitive aspect of the wilderness experience but did not delve into materials written by individuals directly responsible for crafting the language of the law. In exploring the meaning of “unconfined recreation,” McCool (2004) provided a contemporary perspective rather than using historical materials. So, although these efforts productively explored the conceptual meanings of the different aspects of “outstanding opportunities,” they did not utilize legislative materials that would be useful for establishing congressional intent. Thus, a rigorous analysis is needed of primary source materials pertaining to “outstanding opportunities for solitude or a primitive and unconfined type of recreation.”

Statutory decrees, such as the Wilderness Act, mandate that federal land management agencies manage and regulate natural resources for particular ends as established by Congress. The Public Land Law Review Commission (PLLRC), which was established in 1964 to review federal public land laws, argued that agencies should be required to provide “administrative interpretation of statutory language” to ensure that policies are being carried out in accordance with congressional intent (PLLRC 1970, p. 251). Unfortunately, congressional intent is not typically clear from the language of statutes alone. According to Mortimer (2002, p. 910), Congress enacts “broad, vague legislation” to meet “various and oft conflicting goals,” which leaves federal land managers “saddled with the unenviable task of interpreting amorphous statutes.” The phrase “outstanding opportunities for solitude or a primitive and unconfined type of recreation” exemplifies this issue. Fortunately, congressional documents are useful resources for discerning

congressional intent (McKinney 2002).

We present an analysis of historical materials associated directly with the legislative process involved in the passage of the Wilderness Act to explore how “outstanding opportunities” and its parts were historically understood. We examined how a variety of people, such as prominent wilderness advocates and members of Congress and the public, described or used these terms in more than 6,000 pages of the 18 congressional hearings conducted prior to the passage of the law in 1964. Specifically, we dissect the parts of the phrase “outstanding opportunities for solitude or a primitive and unconfined type of recreation” (from Section 2(c) of the Wilderness Act) through an examination of how the terms “solitude,” “rugged,” “primitive,” and “unconfined” were represented and likely understood by participants in the wilderness bill hearings. Based on our review, we will argue that (1) “solitude” and “primitive and unconfined” were considered conceptually distinct prior to the passage of the law, and (2) “solitude” in particular was envisioned as a multifaceted concept. Further, we describe the ways that contemporary management and monitoring could reflect the complexity of solitude to better align agency stewardship efforts with the congressional intent behind the Wilderness Act.

## **The Emergence of “Outstanding Opportunities for Solitude”**

The phrase “outstanding opportunities for solitude or a primitive and unconfined type of recreation” was not in the text of the original bill presented to Congress, and “wilderness” was more broadly defined than what was ultimately included in the Wilderness Act of 1964. The first version of the wilderness bill only contained a brief definition of wilderness: “An area where the earth and its community of life are untrammelled by man, where man himself is a member of the natural community who visits but does not remain and whose travels leave only trails” (S. 4013 1956, p. 3). Senator James E. Murray introduced an important revision of the bill, S. 3809, on July 2, 1960, and Representative John P. Saylor presented a companion bill, H.R. 12951, to the House of Representatives the same day. These included nearly 30 changes from the previous bill (Allin 1982). Among those changes was a clarification of the definition of “wilderness” that had not previously been articulated; it was now additionally defined as an area of undeveloped Federal land without permanent improvements or human habitation which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man’s work substantially unnoticeable; (2) has outstanding opportunities for solitude or a rugged, primitive, and unconfined type of outdoor recreation; (3) is

of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, archaeological, or other features of scientific, educational, scenic, or historical value. (S. 3809, 1960; emphasis added) By 1964, the language of the experiential mandate had changed to exclude the words "rugged" and "outdoor," but the remainder of the phrase was retained in the Wilderness Act.

In the days preceding the completion of S. 3809 and H.R. 12951, Howard Zahniser, the chief architect of the Wilderness Act and executive director of the Wilderness Society at the time, wrote perhaps the clearest version of "outstanding opportunities" in a draft amendment of the bills. In the margins of the previous bill, H.R. 10621, he wrote, "An area of wilderness... (2) has outstanding opportunities for those who seek solitude or wish to enjoy a rugged, primitive, and unconfined type of outdoor recreation" (Zahniser 1960) (Figures 1 and 2). This text could be interpreted to suggest that "solitude" and "rugged, primitive, and unconfined"

**Figure 1** – A close-up of the first known appearance of "outstanding opportunities" in the wilderness bill drafted on H.R. 10621 (Zahniser 1960). From the Conservation Collection in the Genealogy, African American and Western History Library at the Denver Public Library.

protected and managed for the preservation and enjoyment of natural conditions in an undisturbed state, which:

(1) generally appears to have been affected primarily by the forces of nature with the imprint of man's works substantially unnoticeable;

(2) has outstanding opportunities for those who seek solitude or wish to enjoy a rugged, primitive, and unconfined type of outdoor recreation;

(3) is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.

1 recognized as an area where the earth and its community of  
 2 life are untrammelled by man, where man himself is a visitor  
 3 who does not remain. For the purposes of this Act the  
 4 term "wilderness" shall include the areas provided for in  
 5 section 2 of this Act and such other areas as shall be desig-  
 6 nated for inclusion in the National Wilderness Preservation  
 7 System in accordance with the provisions of this Act.

8 NATIONAL WILDERNESS PRESERVATION SYSTEM

9 SEC. 2. The National Wilderness Preservation System  
 10 (hereafter referred to in this Act as the Wilderness System)  
 11 shall comprise (subject to existing private rights, if any)  
 12 the federally owned areas provided for in this section.

13 NATIONAL FOREST AREAS

14 (a) The Wilderness System shall include as wilderness  
 15 areas the areas within the national forests so classified on  
 16 the effective date of this Act by the Secretary of Agricul-  
 17 ture or the Forest Service as wilderness, wild, primitive, or  
 18 canoe; which areas shall be subject to review as hereinafter  
 19 provided:

20 Following enactment of this Act, the Secretary of  
 21 Agriculture shall, within fifteen years, review, in accordance  
 22 with paragraph C, section 251.20, of the Code of Federal  
 23 Regulations, title 36, effective January 1, 1959, the suita-  
 24 bility of each primitive area in the national forests for pres-  
 25 ervation as wilderness. Before the convening of Congress

**Figure 2** – The first known appearance of "outstanding opportunities" in the wilderness bill drafted on H.R. 10621 (Zahniser 1960). From the Conservation Collection in the Genealogy, African American and Western History Library at the Denver Public Library.

were distinct. The use of the plural pronoun “those” seems to speak to two distinct user groups who valued two unique aspects of wilderness environments: (1) solitude and (2) a rugged, primitive, and unconfined type of outdoor recreation. More importantly, however, the purposeful usage of two different verbs (i.e., “seek” and “wish”) prefacing these experiential aspects of wilderness suggested Zahniser felt these attributes of the wilderness experience – “solitude” and “rugged, primitive, and unconfined” – were conceptually distinct.

Despite the apparent distinction between “solitude” and “primitive and unconfined” within this first known written definition of “outstanding opportunities,” the phrase was changed slightly before it ever reached the House or Senate floors for a vote. In the margins of H.R. 10621, later changes were made in which “those who seek” and “wish to enjoy” were distinctly crossed out (Zahniser 1960). It is unclear why these edits were made; however, the wilderness management community has lived with their ambiguity ever since. Some have argued that the word “or” in the phrase meant that wilderness managers may provide for either “solitude” or “a primitive and unconfined type of recreation” in wilderness areas (Clark 1976; DeFelice 1975). Others have argued that “primitive and unconfined” was an attempt to clarify or provide richer meaning to the preceding “solitude” (Hendee et al. 1978; Hendee and Dawson 2002; Hendee, Stankey, and Lucas 1990; Worf 2001; Worf et al. 1972).

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**“...has outstanding opportunities for those who seek solitude or wish to enjoy a rugged, primitive, and unconfined type of outdoor recreation”**

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In this featured manuscript we present an analysis of historical materials associated directly with the legislative process involved in the passage of the Wilderness Act to explore how “outstanding opportunities” and its parts were historically understood. We did this by exploring and categorizing how a variety of people, such as prominent wilderness advocates and members of Congress and the public, described or used “solitude,” “rugged,” “primitive,” and “unconfined” during the congressional hearings prior to the passage of the law. For instance, if a hearing participant said that they “sought the solitude of quiet places,” we interpreted that to mean sound was an important aspect of solitude for that participant. Based on our review, we will argue that (1) “solitude” and “primitive

and unconfined" were considered to be conceptually distinct prior to the passage of the law and (2) that "solitude" in particular was envisioned as a multifaceted concept. We conclude with our thoughts on the ways that contemporary management and monitoring could reflect the complexity of solitude to better align agency stewardship efforts with congressional intent.

## **Sensory Escape from the City**

For wilderness advocates prior to the passage of the Wilderness Act, wilderness solitude was multifaceted. It was also integral to wilderness itself. In fact, Zahniser responded to an open-ended question in a survey conducted by the Library of Congress's Legislative Reference Service (hereafter, the LRS survey) about the Wilderness Society's support for wilderness by including the first point of the fledgling organization's platform from the inaugural issue of *The Living Wilderness* (Wilderness Society 1935, p. 2): "The wilderness (the environment of solitude) is a natural mental resource having the same basic relation to man's ultimate thought and culture as coal, timber, and other physical resources have to his material needs" (National Wilderness Preservation Act [NWPA] Hearings 1957e, p. 167). Zahniser felt his responses to this survey would be valuable to people reviewing the hearings in interpreting the meaning of the bill and thus submitted his full responses as his first item to be included in the record of the hearings (NWPA Hearings 1957e). Solitude was also prominent in others' descriptions of wilderness and the wilderness experience and was understood to be facilitated in a particular type of wild landscape – one that was away from the sights and sounds of civilization, that was generally large in size, and that felt remote and natural. In testimony in support of the act, descriptions of an increasingly mechanized civilization were often used as a foil to elucidate the meaning of wilderness solitude. Sensory references to sight, sounds, and smells were commonly used to represent civilization and cities as chaotic, confusing, and unnatural. Wilderness advocates argued for the necessity of "solitude" in wilderness to escape the unnatural sensory overload of modernity and the "stress and strain and the tension of city life" (NWPA Hearings 1961a, p. 635).

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**“The wilderness (the environment of solitude) is a natural mental resource having the same basic relation to man’s ultimate thought and culture as coal, timber, and other physical resources have to his material needs”**

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Advocates lamented the artificial noise that dominated urban life, and the country's remaining wild places were thought to be threatened by the auditory encroachment of civilization. Wilderness proponents sought to escape the keynote sounds in the city: the horns, radios, and motors. For example, Representative Saylor described civilization as "raucously noisy" and asserted that humans have a "deep need for areas of solitude and quiet" that could be found in wilderness (NWPA Hearings 1957b, p. 71). In another example, a wilderness advocate stated at the 1964 hearings in Las Vegas that wilderness was "essential... to enjoy nature's beauty and solitude – a place to get away from the pressure and noise of our modern city living" (NWPA Hearings 1964d, p. 1028). Further, at the 1964 hearings in Denver, an advocate said that Americans need "areas of peace and solitude away from the noisy, mechanized, and humdrum existence of the industrial conurbations" (NWPA Hearings 1964a, p. 339). Thus, the possibility of physical escape from the city was important, and anxiety about artificial noise in the city fueled support for a wilderness bill.

Artificial noise in wilderness, not just in the city, was detrimental to solitude. Motorized vehicles, such as automobiles and aircraft, were commonly used as examples of artificial noise that degraded solitude in wild places. For instance, Olaus Murie lamented that "jeeps are nosing into the back country. Aircraft is breaking the peace and solitude of charming mountain valleys and secluded lakes" (Murie 1953, as cited in NWPA Hearings 1957c, p. 139). Zahniser submitted evidence stating that "the airplane by its noise destroys for man in the canoe the intangible, almost indescribable quality of the wilderness, a quality compounded of silence and solitude and a brooding sense of peace that sinks into the spirit" (Martin 1948, p. 150, as cited in NWPA Hearings 1957e, pp. 180–181). In discussing the impact of Mission 66, a development program that sought to modernize the US National Parks, a hearing participant argued that backpacking was threatened as a "means of finding solitude and serenity" because "it is often interrupted by the noises of jeeps and tote-gotes [off-road motorcycles]" (NWPA Hearings 1964b, p. 493). Thus, escape from the sensory overload of the city and a disdain for its sensory encroachment into wild places were intertwined in wilderness advocates' representations of solitude. Sound mattered to solitude.

Wilderness did more than provide a refuge to escape the sensory overload of the city; participants testified that it offered unique sensory experiences of its own that heightened one's sense of solitude. For example, Wilderness Society member Pauline Dyer described some keynote sounds of the wilderness that facilitated solitude:

*[Wilderness's] impact is greatest when they [visitors] are absorbing in peaceful solitude, the voices of wind rustling the needles or leaves in a forest or whipping it during a storm, or listening to the symphonies composed by rivers and creeks, birds or frogs, with the added possibility of a note from a bugling elk. These are the sounds of wilderness' aliveness. (NWPA Hearings 1962b, p. 1384)*

Other senses, such as sight, were also evoked in testimonies about wilderness solitude. For instance, one wilderness proponent said that the "re-creation of urban man" occurs when he gets into "solitude to have unspoiled views and to hear the original music of nature, and to see the natural providences of life that made America great" (NWPA Hearings 1961b, p. 797). Solitude, used in these types of contexts, was related to a multisensory experience of sound and vision.

The spiritual benefits of wilderness solitude were often connected to the sensory experience of wilderness. Zahniser's most lengthy response to the LRS survey about the values of wilderness was his description of wilderness's spiritual values. He framed this response with a discussion of the Reverend William H. H. Murray's *Adventures in the Wilderness, or, Camp Life in the Adirondacks* (1869). While discussing "real wilderness travel," Zahniser used Murray's words:

*In its vast solitude is a total absence of sights and sounds of duties, which keep the clergyman's brain and heart strung up, the long year through, to an intense, unnatural, and often fatal tension. There, from a thousand sources of invigoration, flow into the exhausted mind and enfeebled body currents of strength and life. (NWPA Hearings 1957e, p. 188)*

In his response, Zahniser noted that Murray was writing in the 19th century and pondered the "comparative quiet" – another evocation of the senses – of that time relative to postwar industrial America. Later in Zahniser's section on the spiritual benefits of wilderness – which were deeply connected to solitude – he used an excerpt from Robert Marshall's (1930) "The Problem of the Wilderness," which conveyed the salience of the senses in the spiritual experience of wilderness. For Zahniser and Marshall, wilderness was a multisensorial experience:

*Another singular aspect of the wilderness is that it gratifies every one of the senses. There is unanimity in venerating the sights and sounds of the forest. But what are generally esteemed to be the minor senses should not be slighted. No one who has ever strolled in springtime through seas of blooming violets, or lain at night on boughs of fresh balsam, or walked across dank holms in early morning can omit odor from the joys of the primordial environment. No one who has felt the stiff wind of mountaintops or the softness of untrodden sphagnum will forget the exhilaration experienced through touch. Nothing ever tastes as good as when it's cooked in the woods is a trite tribute to another sense. Even equilibrium causes a blithe exultation during many a river crossing on tenuous foot-log and many a perilous conquest of precipice. (NWPA Hearings 1957e, p. 190 quoted from Marshall [1930, p. 145])*

Thus, for Zahniser, the senses mattered a great deal to wilderness solitude and the spiritual benefits it could cultivate.

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**“Another singular aspect of the wilderness is that it gratifies every one of the senses.”**

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## **The Importance of Large, Remote, Natural Areas to Solitude**

Beyond the sensory experience, the wilderness landscape itself affected one's ability to experience solitude. Specifically, advocates thought that (1) solitude was facilitated by “natural” landscapes, (2) visitors' experience of solitude was dependent on large wilderness areas, and (3) wilderness users' feelings of remoteness from other users and human development facilitated solitude.

To experience wilderness solitude, advocates argued that they had to recreate in a particular type of landscape with characteristics they felt were unique to wilderness. For them, city parks, open spaces, or other undeveloped land were inadequate. For example, Zahniser submitted that “outing areas in which people may enjoy the nonprimitive forest are highly desirable for many pentup [sic] city people who have no desire for solitude, but such areas should not be confused in mental conception or administration with those reserved for the wilderness” (The Wilderness Society 1935, p. 2, as cited in NWPA Hearings 1957e, p. 167).

A commonly used adjective to describe wilderness as a place to experience solitude was “primeval.” According to the Oxford English Dictionary, primeval was understood at the time as “primal, original, primitive” (“Primeval,” 2017). When discussing motivations for wilderness recreation, Sigurd Olson stated people would visit wild places to “catch a hint of the primeval, a sense of the old majesty and mystery of the unknown. A mere glimpse of the wild set in motion dormant reactions long associated with solitude” (NWPA Hearings 1957a, p. 50-54). In another example, Michael Nadel, later president of The Wilderness Society, submitted an article to a hearing written by the journalist John B. Oakes that captured the “intangible” aspects of the wilderness. In the article, Oakes (1956, p. 341) alluded to the primeval when he stated, “By ‘intangible,’ we mean scenery and solitude, open country and quiet places, expanses of mountain, plain, forest, and seashore, where some of the spiritual quality of primeval America may be retained for this and future generations” (NWPA Hearings 1957f, pp. 389-390).

Hearing participants also referred to places that facilitated solitude as “natural,” “unspoiled” or “untouched.” C. B. Morse, the manager of the National Forest Recreation Association in California, stated that “the over-mounting pressures

of modern life make it necessary for people to 'get away from it all' and have solitude in natural and inspiring surroundings" (NWPA Hearings 1958a, p. 524). Another felt that visitors could find "solitude and peace of mind" in the "precious, dwindling storehouse of unspoiled, untouched nature" of wilderness areas (NWPA Hearings 1962a, p. 1306). Thus, solitude was a multifaceted experience partially dependent on the natural quality or characteristics of the landscape itself.

In addition to the characteristics of landscapes, wilderness acreage also mattered to solitude. Referencing the size of wilderness, Zahniser submitted the following text from Edwin Way Teale's (1957, p. 108) essay "Land Forever Wild" at a wilderness bill hearing in 1957: "The wilderness, by its nature, demands solitude. It requires as much remoteness from man and his works as possible. Only in comparatively large areas can a wilderness continue to maintain its wilderness character" (NWPA Hearings 1957e, p. 233). Relevant to this, Keyser's (1949) LRS report – which is based on findings from the aforementioned LRS survey of a variety of groups in the United States – suggested that, although there was no consensus among the respondents on an exact amount of acreage needed for a place to be considered wilderness, "the size most often mentioned" was more than 100,000 acres (400,468 ha) (NWPA Hearings 1957e, p. 46). One respondent felt that wilderness areas should be "large enough so that one may travel perhaps for several days without coming into contact with any evidence of civilization" and went on to finalize the point by stating that "isolation is a major requirement" (Keyser 1949, p. 47).

The feeling of remoteness – not just the acreage – was another important aspect of solitude. For instance, overcrowding of wilderness was a concern of some wilderness advocates. In an example related to the impact of crowds, an advocate noted the increasing rareness of "tranquility and solitude" and said that "thousands of people can't enjoy solitude together" (NWPA Hearings 1964e, p. 1377). Another person stated, "It should be thoroughly understood that wilderness-type recreation, by its very nature, is only to be enjoyed by a limited few persons at any one time or place. A crowded wilderness area quickly loses its qualities of peace and solitude" (NWPA Hearings 1964c, p. 942).

Feelings of remoteness were also impacted by the physical presence of modern developments on the landscape, such as roads. Olaus Murie said that wilderness areas with "no roads whatsoever" were places where "one can find solitude and true wilderness recreation" (Murie 1953, as cited in NWPA Hearings 1957c, p. 129). Regarding roads, Zahniser, used text from The Wilderness Society's platform (1935, p. 2) as part of his testimony: "Scenery and solitude are intrinsically

separate things; the motorist is entitled to his full share of scenery, but motorways and solitude together constitute a contradiction" (NWPA Hearings 1957e, p. 167). Thus, roads – given their simple presence and because they were conduits for the sights and sounds of civilization – were seen to degrade solitude, which is unsurprising given the general antiroad ethos of wilderness advocates (Sutter 2002).

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**“Scenery and solitude are intrinsically separate things; the motorist is entitled to his full share of scenery, but motorways and solitude together constitute a contradiction.”**

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### **“A Primitive and Unconfined Type of Recreation”**

Compared to “solitude,” the terms “rugged,” “primitive,” and “unconfined” were less prevalent in descriptions of the wilderness experience during the hearings. Nevertheless, there is enough material to show that these terms were not used to clarify the meaning of “solitude” but were in fact conceptually distinct from it.

In the NWPA hearings, “rugged” or its variations (e.g., “ruggedness”) typically referred to the physical strength of individuals. For example, J. W. Penfold, the conservation director of the Izaak Walton League of America, said that he could not “enjoy or participate in the ruggedness of some wilderness experience, but we certainly think that my sons should have full opportunity for it, and not be limited by my own weaknesses, shortcomings, and so on” (NWPA Hearings 1957d, p. 153). For him, “ruggedness” was tied to physical strength. Olaus Murie believed that a life of wilderness experiences was “not to be ashamed of, a life of rugged endeavor and high spiritual reward, not to be lightly discarded in the modern reach for ease and gadgets” (NWPA Hearings 1957c, p. 147). In addition, Cecil C. Clarke of the Washington State Reclamation Association – an opponent of the bill – argued that limiting the use of wilderness areas to horsepacking and hiking meant “that only a comparatively few persons, those who are physically rugged enough to stand hiking or those wealthy enough to hire pack strings, would ever have the use of these public lands which should be available to all persons” (NWPA Hearings 1959a, p. 163). Another critic of the bill simply stated that “older people have not the stamina for such rugged outdoor activity” (NWPA Hearings 1959b, p. 281).

While “rugged” typically referred to the physical difficulty of wilderness rec-

recreation, “primitive” referred to other facets of the wilderness experience. For instance, Sigurd Olson felt that the wilderness experience was needed for people to enact their primitive nature when he stated in testimony that

*modern man, in spite of his seeming urbanity and sophistication, is still a primitive roaming the forests of this range, killing his meat, scratching the earth with a stick, gathering nuts and fruits and harvesting grain between the stumps of burned out trees, that [sic] the old fears as well as the basic satisfactions are still very much a part of him. (NWPA Hearings 1957a, pp. 50–52)*

Congressman Saylor also evoked the primitive when he said that “in our preservation of wilderness and our encouragement of the hardy recreation that puts a man or a woman or a red-blooded child on his own in the face of primitive hardships we can help meet this need for maintaining a nation of strong, healthy citizens” (NWPA Hearings 1957b, p. 71).

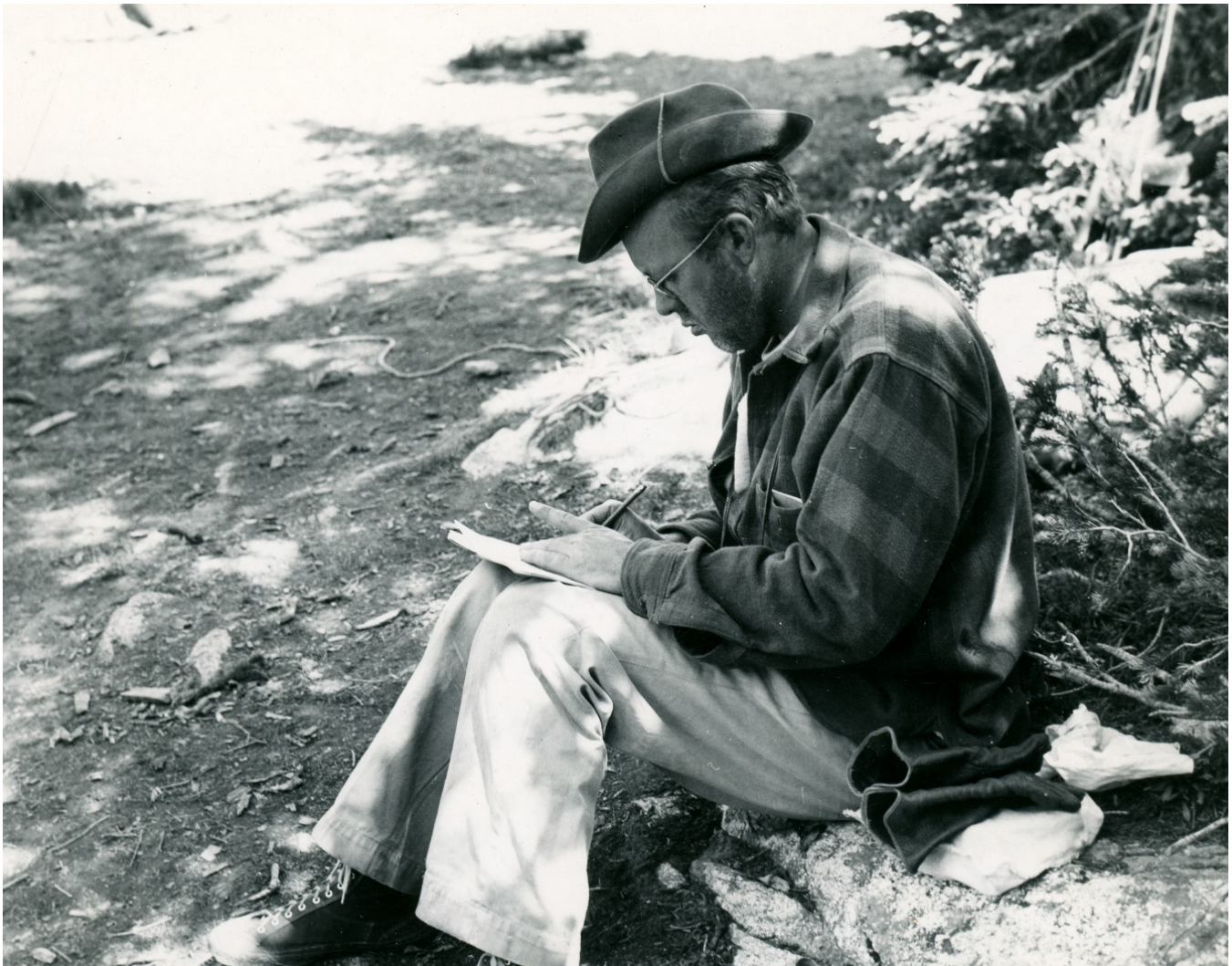
Primitive recreation also referred to permissible types of travel in the wilderness. C. B. Morse stated that the objective of the L-20 wilderness areas managed by the USFS was “to preserve in primitive condition, for primitive modes of travel, sufficient areas for people of succeeding generations, for all time, to have examples of how the pioneers had to travel in the exploration and settlement of this country” (NWPA Hearings 1958a, p. 524). In Zahniser’s (1957e, p. 170) response to the LRS survey, he quoted Robert Marshall (1930, p. 141), stating that wilderness “preserves as nearly as possible the primitive environment. This means that all roads, power transportation, and settlements are barred. But trails and temporary shelters, which were common long before the advent of the white race, are entirely permissible.” Zahniser (NWPA Hearings 1957e, p. 192) also provided a detailed list of permissible uses of wilderness areas in his response to the LRS survey:

*Hiking (with or without pack animals), canoeing and boating with paddle or oar, horseback travel, mountain climbing, skiing (especially ski-touring) and such other activities which may be part of the outdoor living when one is dependent on equipment he carries on his own back or on pack animals and is unaided by motorized transportation. Ecological recreation, nature study in all its phases, and photographing are common and appropriate. Fishing is permissible, according to present regulations, in national parks as well as in national forest wilderness areas, while hunting is prohibited in the parks and permitted in the national forest areas.*

Thus, for Zahniser, an activity that was permissible in wilderness areas would be one that enabled visitors to “relive the lives of ancestors” and that “perpetuates not only the scene of the pioneering activities of the first white men in this hemisphere, but also a still more ancient scene [i.e., Native Americans]” (NWPA Hearings, 1957e, p. 183). Given this, it was important for Zahniser that the activities allowed in wilderness were ones in which a person was unaided by motorized

transportation and that facilitated the re-creation of the past.

Based on our review, the term “unconfined” was not used illustratively in the hearings; it typically appeared only in references to the specific text of the proposed bills. However, Zahniser provided some material as evidence in the hearings from which his thinking may potentially be inferred. Specifically, he included a discussion of the potential need to ration use in wilderness areas in his response to the LRS survey. He wrote that it was paramount to “give the maximum number of individuals a true wilderness experience, with emphasis on the authenticity of the wilderness” (NWP Hearings 1957e, p. 193). To him, a “true wilderness experience” was threatened by excessive numbers of people. Related to how “unconfined” is understood today as a lack of visitor restrictions (e.g., Griffin 2017; Landres et al. 2015; McCool 2004), he described a manager’s dilemma of limiting the number of users in wilderness or imposing strict rules on visitor



**Figure 3** - Howard Zahniser. From the Conservation Collection in the Genealogy, African American and Western History Library at the Denver Public Library.

behavior. His response aligned with Hendee and Lucas's (1973) later argument that mandatory permits are sometimes needed as a management tool to protect the wilderness resource. Specifically, Zahniser felt that

*Eventually it may be that wilderness use will have to be rationed. This would seem to be the alternative to administering the wilderness for the accommodations of large numbers of people at a time, which would jeopardize the wilderness itself and the wilderness "atmosphere" and at the same time would require regulation or regimentation of the visitors in such a way as to destroy the "freedom of the wilderness" and to nullify the escape from restrictions that is so important a part of the wilderness experience. (NWPA Hearings 1957e, p. 193)*

Thus, he felt that "the true wilderness choice seems certain to be the limitation of numbers of users of such an area at a time, on the basis of preserving not only the wilderness but also the authenticity of the wilderness experience" (NWPA Hearings 1957e, p. 194). He argued that reservation systems that limit use in wilderness, "although appalling at first thought," would preserve a "true wilderness experience" more than the imposition of strict regulations on visitor behavior (NWPA Hearings 1957e, p. 194).

## **Conclusion and Implications**

We have tried to provide some clarity about the meaning of "outstanding opportunities for solitude or a primitive and unconfined type of recreation" from Section 2(c) of the Wilderness Act of 1964 by using testimony from legislative hearings. We were motivated to engage in this research primarily because the federal land management agencies responsible for wilderness stewardship lack clear guidance on how to preserve "outstanding opportunities." Our investigation supports the interpretation that "solitude" and "primitive and unconfined" were understood as conceptually distinct. Zahniser's original definition of wilderness as having "outstanding opportunities for those who seek solitude or wish to enjoy a rugged, primitive, and unconfined type of outdoor recreation," combined with the disparate ways these concepts were historically represented in the wilderness bill hearings, suggests that "primitive and unconfined" were likely not understood as synonymous with "solitude." (Figure 3).


Our investigation did not yield definitive answers about the intended meaning of "or" in Section 2(c). The original phrase can be interpreted in at least two ways. First, it could have meant that a wilderness area should simultaneously serve two user groups: (1) those who seek solitude and (2) those who wish to enjoy a rugged, primitive, and unconfined type of outdoor recreation. Alternatively, it could have meant that a wilderness area should provide either (1) solitude or (2) a rugged, primitive, and unconfined type of outdoor recreation. Because of the ambiguity

of the intended usage of “or,” the debate about what wilderness areas should provide cannot be definitively settled without further investigation. However, we suggest that “solitude” and a “primitive and unconfined” type of recreation are both essential to retain the character of every wilderness area. “Solitude” was so predominately discussed in the context of wilderness experience – and even as a defining feature of wilderness itself – that we would find it surprising if wilderness proponents would have felt that an area of wilderness without opportunities for solitude would retain its wilderness character. Yet because of the historical importance of “primitive and unconfined” recreation – and because of the relatively clear guidance from Zahniser himself on the permissible uses of wilderness – we would find it equally surprising if proponents of the bill thought areas allowing impermissible uses of wilderness would still retain their wilderness character. Thus, we believe, as Zahniser’s original phrasing suggests, that wilderness areas ought to have outstanding opportunities for both types of people: those who seek solitude and those who wish to enjoy a rugged, primitive, and unconfined type of outdoor recreation.

Our analysis also suggests that there was consistency with how “solitude” was represented and understood by wilderness advocates prior to the passage of the Wilderness Act. In particular, escape from the artificial noise of the city and immersion in the natural soundscapes of wilderness were central, although sight, and to a lesser extent smell and touch, were also salient. However, the multisensorial experience was not the sole characteristic, as remoteness, large acreage, natural landscapes, a lack of crowds, and the absence of roads were all paramount to wilderness solitude.

In general, solitude is monitored and managed in relatively unidimensional ways today. Although the wilderness character monitoring framework captures the complexity of solitude in meaningful ways by documenting various factors that impact it both within and outside wilderness boundaries (Landres et al. 2015), many wilderness management plans only track opportunities for solitude by monitoring social encounters (i.e., the number of people or groups that recreationists see or hear in wilderness). Although the number of users did have an impact on solitude for wilderness advocates and should continue to be emphasized in contemporary stewardship, encounters alone inadequately operationalize solitude because they only capture a sliver of the concept, neglecting other facets that are in line with congressional intent. Thus, as wilderness management plans are updated and the federal agencies integrate the wilderness character framework into planning and monitoring, contemporary wilderness stewards could manage and monitor wilderness solitude in ways that are more aligned

with congressional intent. For instance, natural soundscape monitoring, which measures anthropogenic versus natural sounds, and night sky monitoring, which measures the amount of artificial light in the night sky, both capture parts of the sensory experience and remoteness of wilderness and could be important tools for stewards to prioritize to better reflect the intended meaning of solitude.

Beyond describing the richness of solitude, evidence from the hearings support the contention that the five qualities of wilderness character are deeply intermingled and interrelated (Landres et al. 2015). For example, natural and undeveloped environments were described as deeply intertwined with the congressional intent behind “outstanding opportunities for solitude.” Therefore, we believe that wilderness managers should, when appropriate, make local determinations about whether to include measures related to the natural or built environment to assess the state and trends of solitude to better ensure they reflect the multifaceted concept of solitude as understood by architects of the Wilderness Act. Although such improvements do not quantify unobservable, intangible, or ineffable aspects of solitude, they would nevertheless better align agency efforts with the congressional intent behind the “outstanding opportunities” quality of wilderness character and, because wilderness was explicitly defined by some of its earliest advocates as “an environment of solitude,” elevate the evident importance of the wilderness experience in contemporary stewardship. 

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Habitat improvement efforts have reaped results in Jhalana, India. Here, a mother leopard can be seen roaming with her offspring. **photo credit** © Abhinav Garg.

# Jhalana: The Abode of the Urban Leopards

by **DHIRAJ KAPOOR**

Imagine living in a crowded city of 3.1 million people and learning that amidst this human world, the huge buildings, the maddening crowd, and the deafening sounds lies a small, happy, and peaceful refuge where wild leopards rule. Urban dwellers who have heard of leopards but have rarely come across one would find it difficult to believe that such a place exists within a city's precincts.

Surprisingly, such a place does exist right within Jaipur, the capital city of the state of Rajasthan in Western India. Spread over 7.7 square miles (19.94 sq. km), the Jhalana Leopard Reserve is home to varied flora and fauna. However, its most famous denizens are its leopards. Over the years, the forest, the leopards, and other biodiversity have withstood the pressure of rapid urbanization and population growth, and excitingly, have thrived here. Having a forest such as this within such a populated city is truly a marvel and a great conservation story (Figure 1).

## History of Jhalana

Historically, tigers and leopards were common in the hill ranges of Rajasthan, including the Aravali range that is spread across Jaipur known as Jhalana. In the early 19th century, Jhalana was a popular hunting ground with eminent state officials being frequent visitors. The old Shikar Audhi (Hunting Palace)



Dhiraj Kapoor

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**Bringing about change to age-old routines and practices is never easy, but with able leadership, guidance, support, and coordinated teamwork, nothing is impossible.**



**Figure 1** – A leopard roaming in Jhalana with Jaipur City in the background. Photo courtesy of the Rajasthan Forest Department.

stands as a testament to its popularity (Figure 2). The last tiger was shot in 1948, and its cubs were relocated to the Jaipur Zoo. Since then, leopards have been the apex predator here.

Jhalana extends across the southeastern part of Jaipur. The Aravali ranges run from north to the south of the forest. North of Jhalana is the Amagarh Reserve Forest, which is separated from Jhalana by a busy National Highway (Figure 3). The western and the southern boundary of the Jhalana forest adjoin heavily populated suburbs of Jaipur City, and the eastern boundary has villages and new settlements.

### **Flora**

Jhalana is a dry deciduous forest. The trees mostly shed their leaves in the dry season and are a lush emerald during the monsoons. The valley floor's predominant vegetation is juliflora (*Prosopis juliflora*) and khejri (*Prosopis cineraria*). The hardy and rapidly growing juliflora was initially planted to provide firewood for locals. However, this tree does not support the growth of other trees and grasslands. The hill slopes have more native floral variety such as dhonk (*Anogeissus pendula*), salar (*Boswellia serrata*), kumta (*Acacia senegal*), and dhak (*Butea monosperma*).



**Figure 2** - Shikhar Audhi was the hunting palace of royalty and eminent guests. Since the ban on hunting, it has become part of the leopard habitat. Photo courtesy of the Rajasthan Forest Department.



**Figure 3** - The Jhalana Forest Reserve with respect to the city of Jaipur. Photo by Dhiraj Kapoor via Google Maps.

## ***Animals and Birds of Jhalana***

Even though Jhalana is an isolated and fragmented forest in an urban environment, a variety of faunal life can be found here. The leopard is at the top of the food chain and is an opportunistic predator. Striped hyenas also call Jhalana home (Figure 4). Ungulates such as blue bulls, spotted deer, and some sambar deer are also present. Also seen here are desert foxes, jackals, Indian civets, desert cats, and jungle cats, as are porcupines, jungle rats, monitor lizards, mongooses, and a variety of snakes.

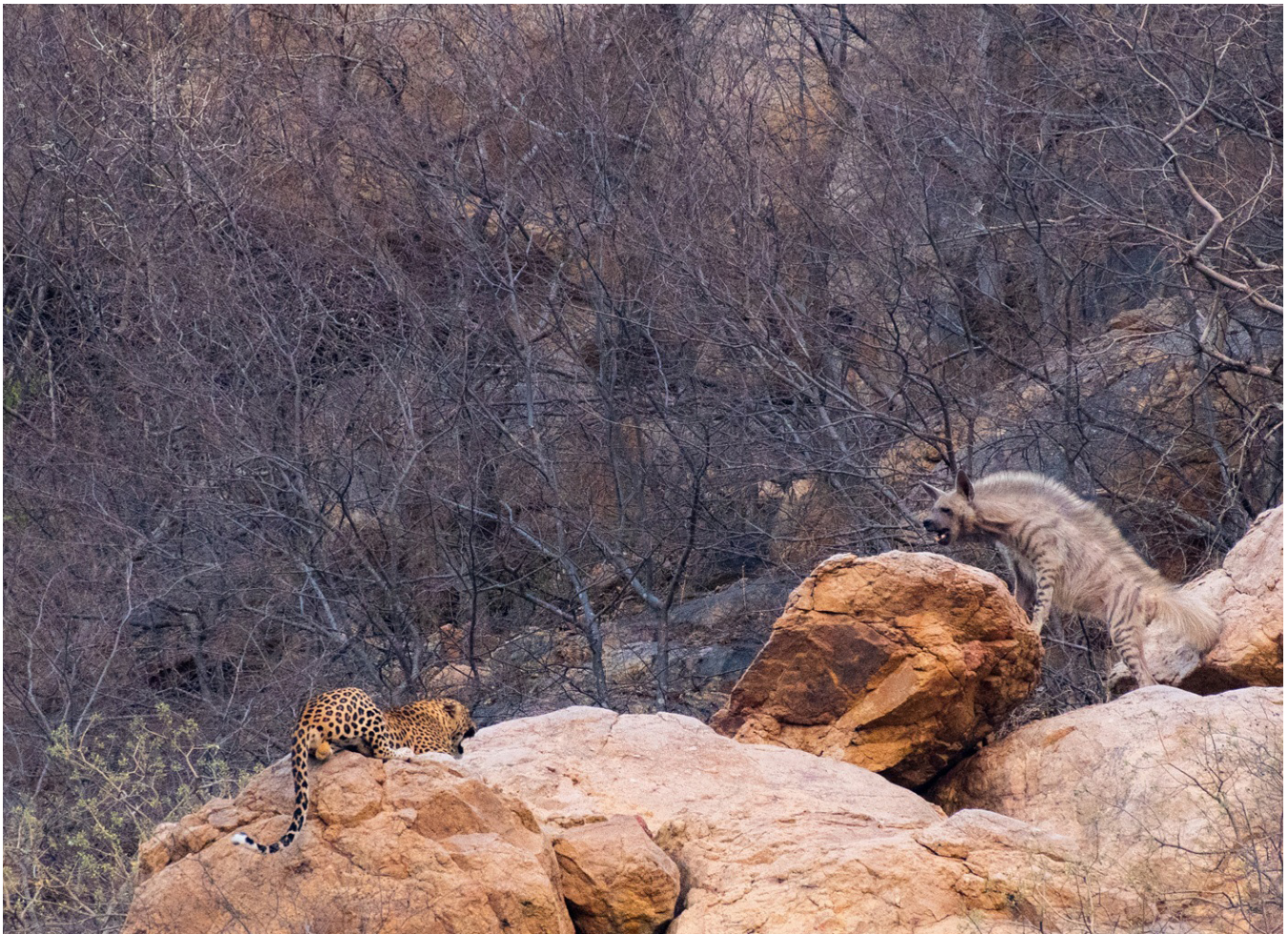
## ***Popular Birding Destination***

Jhalana's improving ecosystem health has been a boon for its resident and migratory avian life. Visitors include the Indian pitta, Asian paradise flycatcher, Eurasian and Indian rollers as well as raptors such as the serpent eagle, sparrow hawk, honey buzzard, and short-toed eagle. Jhalana's resident birdlife includes owls such as the spotted, scops, and rock-eagle as well as woodpeckers, doves, pigeons, robins, buntings, peacocks, and partridges. The latter two form a major part of the leopards' diet.

## **The Advent of Tourism**

I began visiting the Jhalana forests in 2004. Until then, like most city dwellers, I had only heard about the elusive leopard – I had never seen one. The visits were occasional and were more about getting away from the chaos of the big city to enjoy the peace and tranquility of the jungle. It was only in 2011, that I had the good fortune of having a brief sighting of the spotted cat. Every visit since then was focused on sighting leopards.

For the next three years, a small group of individuals formed, all of whom shared an obsession about Jhalana and its leopards. The forest too was gaining in popularity, with images of Jhalana and its leopards appearing frequently on social media platforms. Leopards being nocturnal, elusive, shy, and masters at camouflage generally hide on seeing humans and are not easy to



**Figure 4** – Although leopards are apex predators at Jhalana, space constraints lead to conflicts with striped hyenas. Photo courtesy of Dharendra K. Godha.

photograph. However, the large number of images being shared by skilled photographers from Jhalana attracted the attention of wildlife enthusiasts, and soon visitor numbers increased dramatically. Tourism is a beneficial tool for conservation if profits are channeled into conservation and carried out in a sustainable manner. Visitors also serve to keep an eye on the management of a park and help to deter potential unsavory elements. However, unregulated tourism can have adverse impacts. In a forest such as Jhalana, located in the midst of an urban area, any disturbance to the wildlife will result in them moving out of their territory and closer to human habitation, which in turn could lead to human-animal conflict. The steady influx of tourists by 2016 caught the attention of the Forest Department of Rajasthan, who had until then simply considered this piece of forestland as part of their inventory. Tourism policies were drafted and rules and regulations established, and for the first time, in March 2016, the Forest Department initiated official safaris in Jhalana. With the advent of regulated tourism, Jhalana became the first and the only forest reserve in India conducting official leopard safaris.

# Time for Change

In India, it being a true democracy, nothing changes without the will of the people. In 2017, Gajendra Singh Khimsar, the people's representative heading the Ministry of Forest in Rajasthan and an avid wildlife enthusiast, expressed keen interest in Jhalana. Apart from forming a committee of dedicated forest officials to undertake the work, he also invited three wildlife enthusiasts, Sunil Mehta, Dharendra K. Godha, and myself to the committee (Figure 5). Mr. Khimsar deemed that our experience with visiting Jhalana over several years and our knowledge of this unique forest, its flora, and its fauna would be beneficial to Jhalana.

Bringing about change to age-old routines and practices is never easy, but with able leadership, guidance, support, and coordinated teamwork, nothing is impossible. Beginning in 2017, for more than 15 months much effort was taken to get Jhalana on the world wildlife tourism map. Rajasthan by then had become the first state in the country to launch a project to protect

leopards by improving their prey base and habitat, thus helping to mitigate human-animal conflict. Jhalana was chosen to be the pilot project and adequate funds were allocated toward various projects to encourage greater wildlife protection.

The first step taken was to encourage sustainable tourism in Jhalana. The line between ethical wildlife tourism and uncontrolled, poorly managed tourism is a thin one. Leopards, as mentioned earlier, are shy, and if disturbed they are prone to stray outside their territory. Hence, sustainable tourism initiatives beneficial both for tourists and the wildlife in Jhalana were vital. Toward this end, a set number of symmetrical safari vehicles, especially customized for wildlife tourism, were contracted by the Forest Department, and the maximum number of safari vehicles going inside the park per safari was capped at a maximum of 10 during the morning shift and 10 during the evening shift. The locals were given priority to run these safaris to generate employment, thus making it beneficial for the local economy. Drivers/guides have been trained so that they can provide the best safari



Figure 5 - Dhiraj Kapoor, Sunil Mehta, and Dharendra K. Godha on safari at Jhalana.



Figure 6 - The Nature Interpretation Centre at Jhalana visually showcases photographs by local wildlife photographers. Photo by Dhiraj Kapoor.

experience to guests. The booking process for these safari vehicles was also streamlined by letting guests book 50% of the available seats online. This made it easier for them to plan their visit in advance. Tourist infrastructure that was nonexistent until then was also developed. Waiting rooms, bathrooms, and a café for tourists were constructed. The entry gates were designed in such a way that would allow tourists to truly feel they were escaping the cacophony of the urban world and entering into a wilderness. Our team also helped the Forest Department design and build a Nature Interpretation Centre where guests could learn about the forest and enjoy wildlife photographs taken by regular visitors to the forest (Figure 6). About 25 photographers from Jaipur agreed to display their photographs from Jhalana.

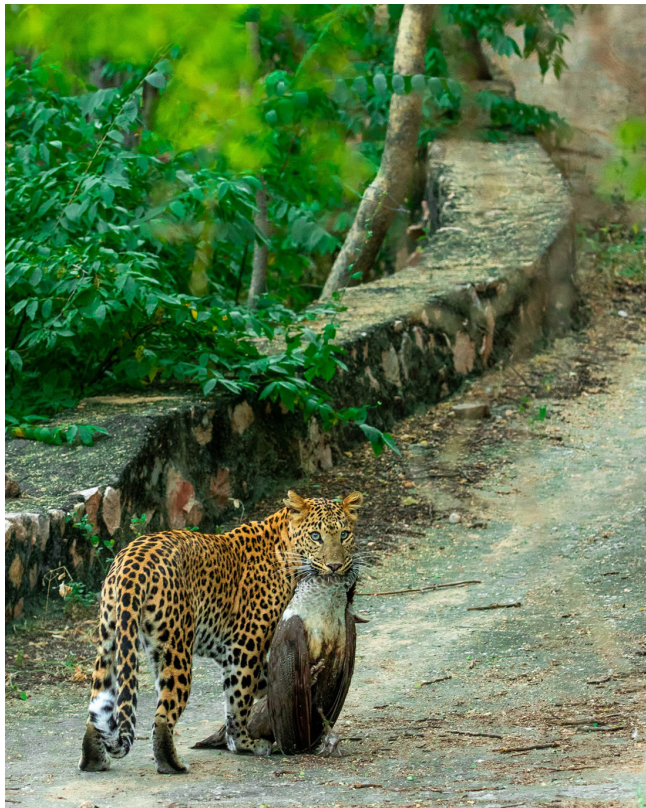
## Other Developments

The Jhalana Leopard Reserve's main challenge has always been the increasing pressures of a growing human population. Over the years, unauthorized constructions and illegal occupation has been slowly eating into the already limited forest area, adding stress to wildlife. Hence it was important to clearly demarcate the boundaries of the reserve to stop any further encroachment and stop all illegal human activities. This herculean task involved the construction of a continuous 8-foot (2.44 m) wall around the 19-mile (30.6 km) periphery of the reserve. The wall acts as the only buffer between the animals and humans and prevents potential human-animal conflicts. It also helps to safeguard the forest from illegal grazing and woodcutting, allowing habitat regeneration.

Wild animals do not need much except for a safe habitat and sufficient prey and water. Although the peripheral wall will go a long way toward providing a safe habitat, much work needs to be done to secure a healthy prey base and water sources. Rajasthan being a dry state has negligible rain, and water is scarce. Hence work on water management has been one of the top priorities. Ponds were dug to harvest and store rainwater for the dry months. This, in turn, also helps in recharging groundwater. During peak summer months when these ponds go dry, a network of pipes lifts water remotely from solar bore wells and fills them up. Water tankers are also used to supply and refill water in the smaller watering holes.

Regular plantation drives are being carried out to plant fruit-bearing and shade-giving trees. Thousands of trees that are native to the region are carefully chosen, planted, and nurtured. Although the survival is low for reasons such as limited water and soil nutrients, the effort is worth it for the few hundred trees that do survive.

A healthy prey base that has adequate food availability is a vital cog in the wheel for a forest. The Jhalana leopard has a small build compared to leopards in other parts of the country, and is perhaps the reason why adult blue bulls, or nilgai (antelope), abundant in the forest are not its preferred prey. Without this natural check, antelopes overgraze, thus diminishing food resources for other herbivores such as chital, also known as spotted deer. Since the chital population is on the decline in Jhalana, leopards have adapted to kill and survive on smaller prey such as



**Figure 7a, b and c** - In Jhalana, leopards have adapted to a varied diet. Photos by Surendra Chauhan (a, c), and Rahul Jain (b).

peacocks, monkeys, partridges, and squirrels. They have also been recorded eating peahen eggs, monitor lizards, and occasionally making dog and pig kills in the forest peripheries (Figures 7a, b, and c).

Due to this skewed predator-prey ratio, the Forest Department has undertaken the huge task of clearing areas infested with the invasive Juliflora trees and instead developing grasslands to increase the spotted deer population here. Once the habitat is improved, the Forest Department can also consider introducing chital.

Effective monitoring is essential for the success of any conservation effort. To ensure that Jhalana is on the world tourism map, it was also imperative to introduce the best scientific monitoring practices. Camera traps were introduced to remotely study the animals. State-of-the-art high-definition as well as thermal cameras were installed to cover the entire 7.7 sq. miles (19.94 sq. km) of Jhalana forest. This was the best way to red-flag any unauthorized movement. New patrolling routes were also opened to ensure better patrolling of the forest on foot. Other significant steps included removing high-tension electricity cables, using solar power to draw water, introducing battery-operated safari vehicles, opening new safari routes, and dismantling human-made structures.

## Identification of Leopards

It is difficult to distinguish individual leopards simply on the basis of their size and area of movement. To get an approximate count of leopards in the forest it was necessary to scrutinize photographs and identify individual leopards on the basis of their rosettes. Rosette patterns on each leopard are like the fingerprint patterns of humans. No two leopards have the same rosette pattern. I had been photographing Jhalana's leopards since 2014. Along with another avid wildlife enthusiast and brilliant photographer Abhinav Mudgal, who has also been visiting Jhalana for several years, we began the overwhelming task of analyzing the thousands of leopard images that we had in our data to segregate them on the basis of rosette patterns.

After several months of close scrutiny, 16 individual leopards were identified. These leopards were given individual identification numbers and names according to their unique features or on the basis of the territory they roamed. This research was presented to the Forest Department in 2016 and was the first document prepared on the leopards of Jhalana. The identifica-

tion has helped the Forest Department better monitor the movement of these leopards (Figure 8). By 2019, the list was further updated and confirmed the presence of 47 leopards in Jhalana.

By 2019, an extensive report was produced on the flora and fauna of Jhalana and its leopard movements. Unique leopard behavior typical to Jhalana was observed during the study. Leopards are deemed to be solitary animals, but in Jhalana, due to space and resource constraints, leopards were witnessed forming prides. For example, an adult female was seen with young cubs from her current litter along with adult cubs from her previous litter, contrasting with the typical solitary nature of the species.



**Figure 8** - The first published identification of the leopards of Jhalana by Abhinav Mudgal and Dhiraj Kapoor.

The report and observations were presented to the provincial Forest Department. Also presented were the challenges that Jhalana faces, and recommendations to further improve and protect the habitat. Several recommendations were

1. *Developing grasslands and planting trees (other than Juliflora) has to be carried out on a permanent basis. Grasslands are essential if the prey density is to be increased.*
2. *Radio collaring of two leopards, one dominant male and one subadult male to track and study their movement and also to determine the pressures they are facing in Jhalana.*
3. *Developing safe and secure migration routes with the adjoining Amagarh Forest.*
4. *With the increase in the leopard population, paying special attention to increasing prey density.*

## Future and Challenges

In just over a year, under Project Leopard, Jhalana has transformed from a nondescript piece of forestland into a leopard tourism reserve. Despite the many challenges of being located in an urban area, several positive initiatives have allowed the flora and fauna of this reserve to improve. One challenge that still needs to be overcome is the lack of secure connectivity to other forest pockets in the vicinity. The Amagarh forest is separated from Jhalana by a six-lane National Highway, which is a death trap for migrating animals. Leopard fatalities due to road accidents have been reported. It's essential for a secure corridor to be established between these two forests both to prevent such deaths and to help in diversifying the already diminishing gene pool that has resulted from inbreeding.

Although efforts are being made to increase the prey base, more needs to be done. Given the thriving leopard population and the lack of sufficient pastures for herbivore prey, the overall prey

base seems to be on the downward trend. This may eventually help in the weakest being eliminated, but it also leads to leopards moving out of the jungle and into human habitation in search of food (Figure 9).


Jhalana was under the Territorial Wing of the Rajasthan Forest Department until it was identified as a Leopard Reserve in 2017 and transferred to the department's Wildlife Wing. Under this process, senior forest officials such as DCF Sudarshan Sharma and Range Officer Janeshwar Singh, who had years of



**Figure 9** - Instances occur where leopards move into adjoining colonies. While not very common, this phenomenon will only increase if the natural habitat of Jhalana is not protected. Photo courtesy of Dinesh Dabi.

experience in managing wildlife parks in Rajasthan, were transferred to Jhalana. This has brought in much-needed expertise at the top level. However, more expertise and training is required for staff who undertake foot patrolling and monitoring. A team of dedicated and trained forest guards must be deployed in Jhalana as soon as possible.

Ultimately, forests cannot survive unless there is local support. Greater awareness must be created about the benefits of undisturbed green spaces and sustainable tourism. Periphery dwellers in particular must be involved in the conservation process and be sensitized toward wild animals. Proper procedures should also be in place in case of wild-animal straying incidents, including evacuations to avoid human-animal conflict.

The Jhalana Leopard Reserve is the only reserve in the country dedicated to leopards. It is today a jewel in the crown of the erstwhile princely state of Jaipur. This forest reserve is one of the finest examples of successful human-animal cohabitation stories in the world. 

**DHIRAJ KAPOOR** has been visiting Jhalana since 2004. Along with his team and the Forest Department, he has been working on several projects focused on habitat improvement in Jhalana. The author was one of the pioneers in identifying the individual leopards of Jhalana; email: [dhirajkapoor@yahoo.com](mailto:dhirajkapoor@yahoo.com).





Grand Staircase-Escalante National Monument, Utah. **photo credit** © Jeff Marion.

# Informing Planning and Management Through Visitor Experiences in Grand Staircase-Escalante National Monument

by B. DERRICK TAFF, JEREMY WIMPEY, JEFFREY L. MARION, JOHANNA ARREDONDO, FLETCHER MEADEMA, FORREST SCHWARTZ, BEN LAWHON, and CODY DEMS

**ABSTRACT** Policies mandate that managers at Grand Staircase-Escalante National Monument must balance recreational opportunities with a variety of resource management and utilization activities across a vast and diverse landscape containing numerous Wilderness Study Areas and other lands containing spectacular resources. This balancing act is stressed by increasing levels of use and recent changes in management direction and policy. An understanding of visitor preferences and current social conditions is an essential component of recreation management; however, scant social science data exist for the Monument. This study used semistructured qualitative interviews to describe Monument visitors' motivations, experiences, and perceptions to determine existing social conditions. Results can help inform possible indicators of quality that can be used for long-term monitoring and adaptive management of the Monument's unique wilderness resource.

PEER REVIEWED

Managing recreational opportunities and resource use while simultaneously working to conserve unique ecosystems for future use is particularly challenging in a vast and varied landscape such as Grand Staircase-Escalante National Monument (GSENM), a federal protected area in south-central Utah managed by the Bureau of Land Management (BLM). This challenge is confounded by increased recreational use within



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the state of Utah and the protected areas that surround GSENM, which is thought to be correlated with a marked increase in state tourism promotional strategies (e.g., "The Mighty Five"; "Utah – Life Elevated"; Smith, Wilkins, Gayle, and Lamborn 2018). The increased use may be amplified in GSENM specifically due to recent federal policy directives that reduced the size of the original proclamation establishing the Monument (Presidential Proclamation 9682) (BLM 2000). Inevitably, recreational use leads to varying levels of resource impacts (Hammit, Cole, and Monz 2015). The limited social science research that has been conducted by external focus groups in GSENM suggests that visitors seek naturalness and tranquility in the remote and rugged landscape, which promotes self-reliance and discovery (Casey 2014). However, these characteristics are in jeopardy due to the increased use of the area, and the associated impacts to the resources, such as vandalism, trash, vegetation trampling, and crowding (Casey 2014).

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**Policies mandate that managers at Grand Staircase-Escalante National Monument must balance recreational opportunities with a variety of resource management and utilization activities across a vast and diverse landscape containing numerous Wilderness Study Areas and other lands containing spectacular resources.**

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At a national and state level, the BLM has developed strategic plans to inform management approaches that intend to mitigate ecological and social impacts (e.g., BLM 2007; 2011; 2014). These plans describe how GSENM is charged with providing "sustainable recreation" opportunities, and those that "provide for environmental sustainability while fulfilling the social and economic needs of present and future generations" (BLM 2011, p. 23). Furthermore, the 15-year strategy, as

prescribed in the BLM's "Geography of Hope" (2011), states that the agency must use science to aid in managing for conservation, providing for compatible uses that protect the resources and values of GSENM. Finally, GSENM must "identify research needs and incorporate physical, biological, and social science(s)" to inform adaptive management, interpretation and outreach (Theme 1; Goal 1c, p. 9, BLM [2011]). This strategy specifically suggests that the agency "conduct periodic visitor surveys" to examine the experiential qualities of their needs (Theme 2; Goal 2d, p. 14) through the application of science to inform interpretive strategies and support programs such as "Leave No Trace to foster outdoor ethics and stewardship" (Theme 3; Goal 3d, p. 17).

These planning documents point to the need for appropriate monitoring protocols, which require understanding of suitable social and ecological indicators that can be reviewed and adaptively managed using frameworks such as those proposed by the Interagency Visitor Use Management Framework (see: <https://visitorusemanagement.nps.gov/VUM/Framework>, accessed May 2, 2019). Despite these robust management directives, science regarding the human dimensions of use and experience in GSENM is scant. Without adequate data, managers cannot make informed management decisions, nor appropriately monitor conditions for changes over time.

## Study Purpose

The purpose of this study was to collect information from GSENM visitors about their recreational experiences and perceptions of social and ecological conditions to inform management of desired visitor experiences and current conditions. An associated outcome of this research was to develop potential indicators of quality regarding desired visitor experiences (Cahill, Collins, McPartland, Pitt, and Verbos 2018; Carlson, Cole, Finnan, Hood, and Weis, 2010; Manning 2012; Verbos, Vdala, Mali, and Cahill 2017) that could be monitored and adaptively managed.

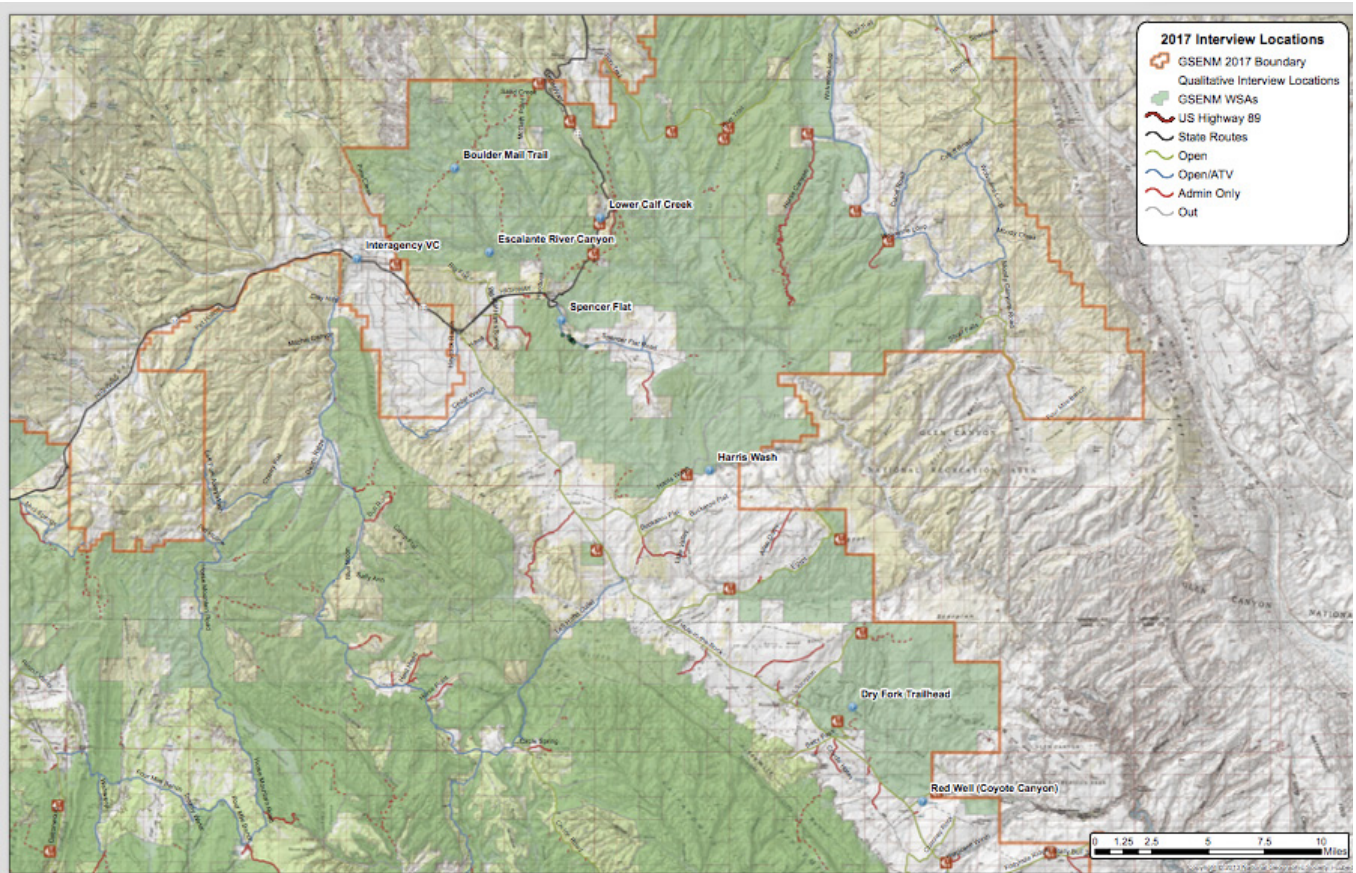
Location	Setting Description
<b>Lower Calf Creek Recreation Area</b>	Developed campground and trailhead at the only designated trail within GSENM; WSA adjacent
<b>Spencer Flat</b>	Relatively popular dispersed camping location, with road access; WSA adjacent
<b>Harris Wash</b>	WSA access trailhead off the Hole-in-the-Rock Road
<b>Dry Fork Trailhead</b>	WSA trailhead location for popular canyoneering day hikes and overnight trips; trailhead off the Hole-in-the-Rock Road
<b>Red Well</b>	Trailhead providing backcountry access to Coyote Canyon in WSA; off the Hole-in-the-Rock Road
<b>Interagency Visitor Center</b>	A federal information center (for Park Service, Forest Service, and BLM-managed lands located in Escalante, UT)
<b>Escalante River Canyon and Boulder Mail Trail</b>	Backcountry hiking routes in WSA adjacent to Escalante, UT

**Table 1** -Sampling locations and descriptions

## Methods

Given the limited understanding of visitor use and in-situ visitor experiences in GSENM (Casey 2014), a qualitative, on-site semi-structured interview approach was used to assess visitor perceptions and experiences of GSENM. To represent the variety of user-groups across the vast and varied GSENM landscape, potential study participants were intercepted at multiple locations in the Monument during September and October 2017 (Table 1 and Figure 1). In consultation with GSENM, these locations were selected to include the unique landscape features that attract varied types of users (e.g., Wilderness Study Areas [WSA], backcountry, frontcountry/roadside) in areas of moderate to high volumes of use.

To help inform management of desired visitor experiences, current conditions, and possible visitor experience indicators, the semistructured interview focused on visitor demographics, travel patterns, motivations and expectations, perceptions of their experiences as related to current social and ecological conditions within GSENM, and self-reported awareness and attitudes toward wilderness and low impact practices. Some interviews were conducted with more than one visitor. All interviews were digitally recorded, and the methodology and associated semi-structured interview script were evaluated and approved by the Federal Office of Management and Budget as well as the researchers' Institutional Review Board.



**Figure 1** – GSENM interview intercept locations

Inductive open coding was used to gain an understanding of patterns and salient topical areas (Saldaña 2016). All interviews were transcribed and coded in accordance with the developed code book, and coding checks were completed by two additional researchers. Ultimately, salient themes emerged (Lincoln and Guba 1985) and key quotes were selected to highlight the constructs that were revealed. Coded interview responses informed development of visitor experience themes and potential indicators of quality for visitor use and experience. In total, 58 respondents provided their input through 40 interviews in GSENM with a response rate of 91%. Interviews ranged from approximately 8 to 25 minutes.

## Results

### ***Respondent Characteristics***

The age of respondents ranged from 22–76, with an average age of 54. Most respondents noted that this was their first trip to GSENM, while others had visited the area numerous times. Length of stay varied considerably by respondent; several respondents had been in GSENM for three or more days, while others were only there for the day. When respondents were asked to describe their primary destination within GSENM, responses were mixed, with some seeking specific locations within the Monument and others seeking to experience GSENM as a whole. Common locations were the Hole-in-the-Rock Road, Peekaboo, Spooky and Zebra slot canyons, Calf Creek, Death Hollow, and Coyote Gulch.

### ***Primary Activities***

The primary activities mentioned by respondents varied by the location where respondents were intercepted, and ranged from car camping to day hiking to backpacking. Hiking, mentioned by all respondents, was the most prevalent activity. The other frequently mentioned activity was scenic driving in GSENM and the surrounding areas. Less frequently mentioned activities included mountain biking and hunting.

### ***Pleasant Discovery and Displacement from Other Protected Areas***

Most respondents were not solely visiting GSENM, often mentioning their visits to Zion and Bryce Canyon, popular national parks within two hour's drive of GSENM. For several respondents, their visit to GSENM was not necessarily intended but rather a pleasant surprise while touring other protected areas in the region. Some respondents indicated that their visit was motivated by recent modifications of GSENM boundaries, while others sought refuge in GSENM to escape crowding in the more popular national parks in the region.

*“The stop at the campsite was completely accidental. We were supposed to just drive through, but we stopped.” #2*

*“We didn't really have any expectations... We were going to go a different way to get to Moab and then I saw this hike... So we re-routed our car.” #5*

*"I was like 'Wait, Grand Staircase looks really cool, let's stop there.'" #23*

*"We thought about going to Bryce and Zion, but with everything politically that's happening, we decided we wanted to come here." #4*

*"It [GSENM] might be going away. That was part of it." #39*

*"We're avoiding Bryce and Zion." #1*

### **Potential Displacement within the Monument**

Respondents were asked if there were any specific reasons why they were unable to visit areas they had planned or hoped to experience in GSENM. To reduce bias, the question purposely avoided asking about crowding or other social conditions. Responses varied considerably, from lacking a proper vehicle and related weather conditions, to aspects related to temporal planning and displacement associated with perceptions of crowding. In general, respondents mentioned the remote and occasionally challenging resource conditions, and they noted the number of other visitors encountered was acceptable and manageable if planned for in advance.

*"I think that's something we've kind of missed out a little bit. Not having the ability to go on those 4x4 road routes." #1*

*"Conditions haven't really allowed me to go to everything I was hoping to go to... the rain filled this canyon with water." #11*

*"We get in early.... If you get in early enough... you get in and fight the crowds on the way back out." #21*

*"You just can't do mainstream stuff anymore at mainstream times." #33*

### **Crowding Compared to Other Protected Areas**

Many respondents noted the lack of other visitors compared to other parks and protected areas they had experienced, and all perceived this as a benefit for their experience.

*"We saw very few people, even here you see people [Lower Calf Creek] but it's not crowded. It's not like a year and a half ago when we went to Arches." #4*

*"Staircase is not overcrowded. Zion in the afternoon got overcrowded. Bryce tended to get there also. But down here? No, we haven't experienced any of that." #12*

*"For me it's just about.... Being out in nature without a ton of people around. Like, Arches is beautiful but there are so many people around." #26*

*“What I have noticed is that you don’t have huge crowds out here and it’s just beautiful out here.... Something that we enjoy about Escalante.... Zion is beautiful but there’s a million people and that gets kind of boring. #24*

*“[Lack of crowds] in staircase? Yeah. There were some hikes up in Bryce and Canyonlands that were just crazy.... Just tons of people.... You’re not alone, you’re just surrounded by tons of people.” #25*

*“You know, you see people, but it’s not overcrowded.... And so, if you want to take the time you can really just get away and be by yourself.” #27*

## **Wilderness Experiences**

Given the abundant opportunities to experience WSAs within GSENM, respondents were specifically asked to describe how experiencing a sense of wilderness fit into their reasons for visiting. The majority of respondents noted that they were able to experience their personal definition of a wilderness experience while in GSENM. Several respondents described their experience using words that align with specific wilderness character qualities including “natural features” and “opportunities for solitude and/or primitive and unconfined recreation” (Cordell, Bergstrom and Bowker 2005; Landres 2013; Landres, Vagias, and Stutzman 2012). However, respondents were largely unaware of whether they had specifically been in a designated wilderness area or WSA.

*“I think we live in a beautiful area, but like she said, it’s just so full of people on the weekends. Wilderness, for me, is about going somewhere where there aren’t very many people. And this is an easy place to do that.... And you’re the first people we’ve seen. It’s been great. I think there’s definitely an appreciation for the land.... But some of that has been lost that I think has been preserved here.” #7*

*[Wilderness experience....] “It’s why we came out here.” #23*

*“That’s what I’m looking for. We need to get out there and it’s just peaceful. I mean, it’s just spiritual for us to get out here. Trying to find some solitude is big for us. I love to just be out here, where you just feel like you’re just out here by yourselves.” #28*

*“I like the remoteness of it... It looks like there is nothing out here when there is everything out here.” #32*

*“Oh, yeah, it’s the whole reason that I come out here. I’ve been able to experience low usage trails and that’s very important to me.” #34*

*“Obviously, coming from the UK, we don’t really have much wilderness anymore. There’s so many of us that we don’t have many of these amazing vistas and soft sheer.... You have to really engage in it and be aware. To experience that is a lot of fun.” #2*



**Figure 2** – Example of scenery and opportunity to experience solitude in GSENM. Photo by Jeff Marion.

A number of notable aspects of the GSENM experience emerged regarding common motivations and experiences sought by respondents in this study. Respondents expressed concepts commonly noted when recreating in wilderness (Cole 2012; Hall 2001; Taff, Weinzimmer, and Newman 2015; Watson et al. 2007) and included seeking, experiencing and enjoying nature, natural quiet, and escape through solitude.

*“We decided this was the most beautiful hike we’ve been on.” #5*

*“Great natural features...” #6*

*“To see the landscape that is unusually beautiful and preserved, and that is what I am finding.... “The areas where there [are] no sights of people, sounds of people, just at times pure quiet. You don’t get that very often.” #9*

*“The mountains – the colors just... we don’t see that in Washington.” #14*

*“[This is a] nice place to camp where you don’t have people running generators.” #27*

*“It’s so quiet here.” #29*

*“Quiet, natural quiet is a big deal.” #33*

*“Just getting away. Beautiful spot and going to a spot where people are not likely to be.” #6*

*“Beautiful place and a lot calmer than where we live.” #7*

*“We’re always looking for places to go. You know, just be out in nature, be away from it all.” #21*

*“When you go to the wilderness, it refreshes you completely.” #26*

*“I love the solitude here. Like I say, you can see cars drive by, but with a little effort you can be alone here.... It’s nice being here, getting up in the morning and being pretty much the only guy in at least a half mile, and you get to sit and watch the sun hit the hills. It’s a pretty good life.” #27*

### **Features That Negatively Impacted Visitor Experiences**

While the majority of respondents noted being extremely pleased with their experiences in GSENM, we asked about a number of potentially negative aspects that may have impacted visitor experiences. For example, respondents were asked about the behaviors of other visitors, and the conditions of the natural resources in GSENM. Regarding the behaviors of other visitors, respondents described the following:

*“I got a little irritated a little bit last night when I smelled smoke from my neighbor’s fire [while backpacking in the Death Hollow area, where fires were banned].” #3*

*“We definitely got lost because of some stupid cairns... I mean, these cairn freaks are everywhere, building rock piles and misleading people.” #23*



**Figure 3** – Example of avoidable impacts caused by depreciative behaviors in GSENM. Photo by Jeff Marion.

*“I saw someone with a dog off the leash and I love dogs, and I wish I had my dog with me, but I was like ‘that’s not supposed to...’ you know? It’s just frustrating when you have to abide by the rules and other people don’t. #36*

*“Graffiti, which is disappointing.” #4*

*“There was one firepit.” #7*

*“I found some trash on the trail.... I saw a tire and a plastic tarp.” #9*

*“It’s just the trash thing. Really, that pisses me off. And the graffiti. They are vandalizing the petroglyphs and that kind of stuff.... Everybody has chosen these walls to scratch their names into and everything. And that’s kind of a bummer.” #29*

### **Perceptions of Low Impact Practices**

Given the BLM’s commitment to promoting Leave No Trace practices (BLM 2011), researchers specifically asked respondents to describe their awareness and general attitudes toward low impact practices. Responses varied considerably, but most respondents appropriately described specific behaviors related to minimizing impacts.

*“That stuff is like take your trash out with you, try to stay on the trails. Impacts to ecology around the trails and that sort of stuff. Don’t deface the monuments.” #13*

*“I’m a certified Leave No Trace trainer.” #14*

*“Of course, pack it in, pack it out.” #16*

*“Step on rock or sand, don’t step on vegetation.” #37*

*“Don’t remove anything from artifacts or anything. And also, don’t leave garbage.” #48*

### **Discussion and Implications**

Several notable findings emerged that can be used to inform management of desired visitor experiences, conditions respondents experienced, and possible visitor experience indicators of quality. It is notable that for many visitors, GSENM may not be their primary destination but rather a pleasant surprise (due to the natural beauty and opportunities for solitude) during explorations of adjacent popular protected areas in the region. The majority of respondents noted the benefits of experiencing the less crowded environment of GSENM compared to other protected areas they had experienced. A few respondents noted the high density of other visitors in certain GSENM areas, such as Lower Calf Creek, Peek-A-Boo, and Spooky Gulch canyons. However, if mentioned, many respondents indicated that they expected to experience higher levels of

crowding in those areas, and that planning ahead to visit during less popular times of the day might have mitigated this issue.

Respondents were largely unaware of whether they had specifically been in a wilderness area or WSA during their visit to GSENM, despite the fact that many of the respondents were intercepted and interviewed while in designated WSAs. The majority of respondents noted that they were able to experience their personal definition of a wilderness experience while in GSENM. Resulting statements often described concepts that align with character qualities including "outstanding natural features," and "opportunities for solitude and/or primitive and unconfined recreation" (Cordell et al. 2005; Landres 2013; Landres et al. 2012), and these were important reasons visitors sought or unexpectedly enjoyed experiences in GSENM. For those who specifically sought desired experiences in GSENM, common motivations also aligned with wilderness character qualities, and included seeking, experiencing and enjoying nature, natural quiet, and escape through solitude.

Overall, very few respondents noted elements that negatively impacted their visitor experience. The majority of respondents indicated that they were extremely pleased with their experiences in GSENM. However, the behaviors of other visitors, such as illegal fires in the backcountry, excessive and misleading cairns, dogs off leash, and crowding in some areas were mentioned by a few respondents. Furthermore, the condition of natural resources in GSENM, as it related to depreciative behaviors of other visitors was often mentioned. For example, several respondents noted their experience in GSENM was negatively affected by avoidable impacts caused by others, such as litter, graffiti, and damage to petroglyphs (Blenderman, Taff, Wimpey, Marion, and Schwartz 2018).

## Conclusions and Suggestions

Results indicate that many of the visitors to GSENM may not have substantive expectations for the area. Thus, management has the opportunity to shape visitor expectations and associated behaviors in a manner that aligns with management objectives for the area (Cole 2004; McCool 2006; Verbos et al. 2017). For example, if management wants to promote certain areas and decrease use in other more heavily trafficked locations, they might consider proactively working with state and local tourism entities to develop appropriate messaging. Awareness of and attitudes toward low impact practices largely aligned with recommended Leave No Trace practices, but if use continues to increase, GSENM staff could enhance their promotion of low impact behaviors through a variety of dissemination strategies (Marion and Reid 2007). Specific messaging around the importance of low impact practices for maintaining wilderness character could be beneficial, and it may also aid in creating understanding and awareness of the designated WSAs within GSENM (Taff et al. 2015; Vagias and Powell 2010).


The results of these interviews suggest that some people are motivated to experience GSENM for the wilderness character qualities they can find in this vast and unique landscape, despite not

readily recognizing that they might be in or have traveled through wilderness. Possible indicators for future monitoring include perceived level of crowding and use densities, levels of anthropogenic sounds, and the level of human-caused impacts to natural and cultural resources (Cahill et al. 2018; Verbos et al. 2017; Watson et al. 2007)

## Limitations and Future Research

This study used qualitative methodologies and sampled a limited number of visitors over a relatively short period of time in several key areas within the vast landscape encompassed within GSENM. Future research may consider quantifying suggested indicators of quality in these and other areas of the Monument, and potentially consider sampling during other times of year that might experience different visitor use patterns. Further quantifying these potential indicators and defining possible thresholds would aid long-term monitoring efforts and related adaptive management. Finally, pairing visitor perceptions with actual resource conditions (e.g., trail, campsite, etc.) would improve understanding of the association between the social and ecological system and provide an empirical basis for managers to adaptively manage GSENM.

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# Perspectives of US National Park Service Employees on University-National Park Field-Station Partnerships

by MICHAEL T. STEVENS

PEER REVIEWED

Field stations have provided opportunities for place-based learning in protected areas for well over a century (Lohr and Stanford 1996). Today, they continue to allow for the study of current biological problems including climate change and the loss of biodiversity (Baker 2015). Much can be learned from studying organisms in their natural settings that cannot be ascertained in a laboratory (Wilson 1982). In fact, field stations are places where unexpected discoveries are more likely to occur as they attract generations of scientists to a protected area with legacy data sets and the scientific facilities needed to foster discovery (Michener et al. 2009).

Because of their educational and research-oriented missions, field stations are often associated with universities (National Association of Marine Laboratories and Organization of Biological Field Stations 2013) but tend to operate independently (Lohr and Stanford 1996; National Research Council [NRC] 2014). Field stations can expand their capacities for education, research, and outreach through the formation of partnerships (Lohr and Stanford 1996; National Research Council [NRC] 2014).



Michael T. Stevens

Photo by Sarah Ashby

**NPS employees involved with U-NP field stations recognize the value of collaborating with university faculty and students to accomplish the park's research agenda as well as the logistical support that field stations offer.**

In particular, the NRC (2014) highlighted the benefits of field-station partnerships involving national parks. Furthermore, the Organic Act of 1916 that established the US National Park Service (NPS) specifically mentioned the NPS cooperating with other organizations (Kulhanek et al. 2017). One specific type of field-station partnership involves university-operated field stations located inside US National Park System units (U-NP field stations), described by Stevens and Gilson (2016a). These U-NP field stations are managed by a university or universities and located on national park land. In most cases, the NPS retains ownership of both the land and the buildings associated with the field station (Stevens and Gilson 2016a).

The number of U-NP field stations has nearly quadrupled in the last two decades. Currently, there are U-NP field stations located in 11 US National Park System units, whereas there were only three prior to 2000. U-NP field stations are located in Buffalo National River, Capitol Reef National Park, Channel Islands National Park, Grand Teton National Park, Lassen Volcanic National Park, Mojave National Preserve, Point Reyes National Seashore, Santa Monica Mountains National Recreation Area, Sequoia & Kings Canyon National Parks, Virgin Islands National Park, and Yosemite National Park (Figure 1).

Although the number of U-NP field stations has been increasing, this expansion has only been examined from the perspectives of



**Figure 1** – There are university-operated field stations located inside eleven US National Park System units including: 1) Point Reyes National Seashore, 2) Channel Islands National Park, 3) Santa Monica Mountains National Recreation Area, 4) Lassen Volcanic National Park, 5) Yosemite National Park, 6) Sequoia & Kings Canyon National Parks, 7) Mojave National Preserve, 8) Capitol Reef National Park, 9) Grand Teton National Park, 10) Buffalo National River, and 11) Virgin Islands National Park.

university employees (Stevens and Gilson 2016a). The purpose of this article is to discuss the opportunities and challenges associated with field-station partnerships and what strategies are used to manage and improve them. It utilizes data collected from NPS employees (from November 2017 to May 2018) who are involved in these partnerships to help understand the nature of field stations in US national parks. Results are then compared to university-employee perspectives previously investigated by Stevens and Gilson (2016a). Functional partnerships can improve the ability of field stations to serve as centers for education and research inside protected areas. Communication emerged as an effective strategy to both maximize opportunities and minimize challenges associated with U-NP field stations.

## Opportunities and Effective Strategies

NPS employees shared the greatest opportunities associated with their field-station partnership (Table 1). The most prevalent responses were that field stations offer a venue for undergraduate/graduate education (Figure 2) and provide an excellent location for research. The next most common responses included the prospects for networking with university faculty and possibilities for outreach to local communities (Table 1).

It is not surprising that education is seen as an opportunity for NPS employees given their organization's mission-level focus on education (NPS Interpretation, Education, and Volunteers Program [NPS IEVP] 2014). Similarly, research is a key interest of NPS employees involved with field-station management. Because national parks are often understaffed in terms of research personnel (NRC 2014), NPS employees involved with U-NP field stations recognize the value of collaborating with university faculty and students to accomplish the park's research agenda as well as the logistical support that field stations offer researchers. Opportunities for education and research were also the top two categories listed by university employees involved with field stations in the prior study by Stevens and Gilson (2016a).

Category	Sample opportunities
<b>Offers a venue for undergraduate/graduate education</b>	"Education, interpretation, and engendering appreciation of... ecology."
<b>Provides an excellent location for research</b>	"Expanded research on park resources to assist with management and conservation."
<b>Prospects for networking with university faculty</b>	"Access to knowledge and expertise that the park does not have, through interaction with faculty and researchers."
<b>Possibilities for outreach to local communities</b>	"Ability to engage multiple partners with wide-ranging interests: e.g., long-term research, Christmas bird counts, invasive species projects, environmental education, Leave-No-Trace programming, etc."

**Table 1** - What are the greatest opportunities associated with your university-national park field-station partnership?

The two opportunities not mentioned by NPS employees that were on the list for university employees were that field stations give access to national parks and allow for the sharing of resources. These omissions make sense given that a field station is only one of many ways in which the NPS provides access to a national park. Field-station buildings and surrounding lands are typically owned by the national park and shared with their university through a general or cooperative agreement.

NPS employees were asked how to maximize these potential opportunities. Strategies included communicating effectively and relationship building (Figure 3), facilitating research and permitting, attracting a variety of disciplines and user groups, and supporting programs for the public and local communities (Table 2). NPS field-station liaisons need to communicate both with their park superintendents and with university field-station directors. NPS employees were much more likely to mention communication as an effective strategy than were university employees (Stevens and Gilson 2016a). Perhaps the culture of the NPS places



**Figure 2** - National Park Service employees (Leah McGinnis and Scott Brown) interacting with students at Capitol Reef Field Station. Credit: Gina Gilson



**Figure 3** - Superintendent Sue Fritzke (Capitol Reef National Park) and President Astrid Tuminez (Utah Valley University) celebrating the 10th anniversary of Capitol Reef Field Station. Credit: August Miller, UVU Marketing and Communications

Category	Sample strategies
<b>Communicating effectively and relationship building</b>	"Communication with field station director and staff, and site visits to the field station and university."
<b>Facilitating research and permitting</b>	"Provide information on research needs and areas in which the park could use additional help, such as field surveys/monitoring."
<b>Attracting a variety of disciplines and user groups</b>	"Working with and through our primary cooperator, letting various institutions, schools, and organizations [know] that the opportunity exists and how to access us."
<b>Supporting programs for the public and local communities</b>	"Cooperating with the park Friends group to bring in local youth to participate in classroom and field activities."

**Table 2** - What are the most effective strategies you employ to maximize these opportunities?

a greater emphasis on communication than does academia. Although fewer than half of NPS employees responded positively to the statement that their managers promote communication (US Office of Personnel Management [US OPM] 2015), Massy, Wilger, and Colbeck (1994) reported especially fragmented communication among university faculty as well.

NPS employees were unlikely to mention maintaining and improving facilities as a strategy to maximize the opportunities of their field-station partnership. The fact that maintaining and improving facilities was unlikely to be mentioned by NPS employees could be due to the fact that the majority of field-station agreements require the university to provide maintenance for the park-owned field station buildings that they use. Additionally, helping groups with scheduling and garnering financial support were two categories highlighted by university employees (Stevens and Gilson 2016a) but not mentioned by NPS employees. These activities may tend to fall more under the purview of universities involved in these partnerships.

## Challenges and Mitigation Efforts

Category	Sample challenges
<b>Providing adequate facilities and space</b>	"Small size of facility and episodic heavy use strains infrastructure and maintenance personnel."
<b>Obtaining necessary funding</b>	"Funding, both from federal and university sources is in short supply."
<b>Being under the jurisdiction of two different organizations (National Park Service and the university) instead of just one</b>	"Different organizational structures, goals, language and values. Large bureaucracies interfacing is complicated."
<b>Finding the time for National Park Service employees to be as involved as they would like to be</b>	"Everyone is very busy so getting joint efforts to be a priority is a challenge."
<b>Accepting the limitations associated with a particular type of university</b>	"Lack of graduate and postgraduate research that can directly benefit the park and science."
<b>Dealing with policies and timelines of the federal government</b>	"Permitting and navigating the restrictions that come with a unit of the National Park Service."
<b>Maintaining effective communication</b>	"There is a significant need to more clearly define the roles of the NPS and the university in determining how the field station can be most effective."

**Table 3** - What are the greatest challenges associated with your university-national park field-station partnership?

The greatest challenges of these types of partnerships listed by NPS employees were varied and included providing adequate facilities and space, obtaining necessary funding, being under the jurisdiction of two different organizations instead of just one, finding the time to be as involved as they would like to be, accepting the limitations associated with a particular type of university, dealing with policies and timelines of the federal government, and maintaining effective communication (Table 3).

NPS employees were most likely to highlight the challenge of providing adequate facilities and space at their field stations. Perhaps they view their field station in the context of parkwide inadequacies in facilities and the human resources necessary to maintain them. For instance, only 29% of NPS employees surveyed by the US OPM (US OPM 2015) responded positively that they have sufficient resources to get their job done. This perception of lack of resources in the NPS could explain why so few NPS employees indicated maintaining and improving facilities as a strategy to maximize the opportunities of their field-station partnership. Compared to NPS employees, university employees were much less likely to highlight the challenge of providing adequate facilities (Stevens and Gilson 2016a) and may be more willing to accept the limitations of their field station's facilities because of its off-campus location inside a national park. NPS and university employees were similarly concerned about obtaining necessary funding – an ever-present challenge for many field stations (Hodder 2009) – and being under the jurisdiction of two different organizations (the NPS and the university) instead of just one. One NPS employee noted that “large bureaucracies interfacing is complicated” (Table 3).

NPS employees brought up two unique categories of field-station management challenges that were not mentioned by university employees: finding the time to be as involved as they would like to be in their field-station partnership and accepting the limitations associated with their particular type of university partner. Regarding finding the time to be involved, it is possible that NPS staffing is too thin to easily devote the time required to foster their field-station partnership. This supposition is supported by a survey conducted by the US OPM in which they reported that 91% of NPS employees responded positively that the work they do is important, but that only 38% indicated that their workload was reasonable (US OPM 2015). This challenge could be mitigated if park superintendents were able to designate one NPS employee as the field-station liaison and provide the time and resources necessary to accomplish this task. The fact that the majority of U-NP field-station liaisons were chiefs of their respective divisions is evidence that NPS superintendents are placing a high degree of importance on their field-station partnerships. In reality, however, this additional assignment generally doesn't come with additional time or resources and could contribute to NPS employees feeling overworked (US OPM 2015).

With respect to accepting the limitations of their associated university, NPS employees indicated wanting to be partnered with a university with a greater focus on research or with a greater diversity of students. Accessing field-station locations was a challenge category listed by university employees (Stevens and Gilson 2016a), but not shared by NPS employees. Since

U-NP field stations are located in national parks, it makes sense that they are more accessible to NPS employees. University employees typically work on campuses that are long distances away from their field stations, which can be in remote parts of national parks such as on islands or along unpaved roads.

The top challenge mentioned by university employees, dealing with policies and timelines of the federal government (Stevens and Gilson 2016a), was much less likely to be shared by NPS employees. Perhaps NPS employees are less concerned with this challenge because of their experience negotiating the complexities of the federal government. One federal policy/timeline issue that is particularly vexing for university employees is the NPS's practice of managing field stations under a five-year agreement. The short-term nature of these agreements makes it difficult for universities to commit resources to their field station and to secure support from university donors. One U-NP field station, the University of Wyoming-National Park Service Research Station in Grand Teton National Park has negotiated a longer (20-year) agreement. Of note, the Organic Act of 1916 that established the NPS allows for longer partnerships, up to 30 years in duration (NPS Organic Act 1916).

When asked about the most effective strategies to minimize these challenges, responses converged on communicating with interested parties. Looking for outside funding was mentioned by a few of the respondents. Fewer still shared three other strategies, including working with the university on joint projects, actively pursuing the renewal of the general agreement (that describes the terms of their field-station partnership), and building professional relationships with university employees (Table 4).

Communicating with interested parties was the top way to manage challenges associated with U-NP field stations championed by NPS employees. The success of communication as a strategy to minimize challenges is corroborated by the fact that maintaining effective communication was listed as a challenge by only a few NPS employees in Table 3. Communication was also shared by university employees as way to minimize challenges, but half of them also listed maintaining effective communication as a potential challenge (Stevens and Gilson 2016a), perhaps for reasons discussed in Massy, Wilger, and Colbeck (1994). The other four categories (Table 4) were less likely to be mentioned by NPS employees than by university employees. Of note, NPS employees were less likely than university employees to consider renewing the five-year agreement as a challenge. It appears that the onus for pursuing such an agreement falls primarily on university employees. Perhaps NPS field-station liaisons can take a more active role in renewing their agreements with their partnering university, and also encourage their park to offer its associated university a longer-term agreement of 10, 20, or even 30 years.

Category	Sample strategies
<b>Communicating with interested parties</b>	"Strive for good responsive and open communication, both distance and in person."
<b>Looking for outside funding</b>	"Resourcefulness and creativity with respect to funding opportunities."
<b>Working with the university on joint projects</b>	"Working with as many folks in both the university and the parks as possible to spread the workload and get creative ideas."
<b>Actively pursuing the renewal of the general agreement</b>	"Working to develop new instruments (MOUs [Memoranda of Understanding], Agreements, etc.) to help define roles."
<b>Building professional relationships with university employees</b>	"Develop deep liaison relationships and networks to overcome organizational differences."

**Table 4** - What are the most effective strategies you employ to minimize these challenges?

## Field Stations: Fulfilling Missions and Realizing Benefits

NPS employees shared four main ways in which their field station helped the NPS fulfill its mission. The vast majority of respondents said that their field station supported research that informs park management. A smaller majority mentioned offering educational opportunities to a variety of students. Others indicated that their field station promoted the park and the mission of the NPS and highlighted that their field station provided a facility and staff that can be utilized by the park (Table 5). With regard to how U-NP field stations benefited their associated university and helped fulfill the university's mission, NPS employees mentioned presenting opportunities for curriculum enrichment, offering research opportunities, and providing access and facilities off campus in a unique environment (Table 6).

The fact that supporting research that informs park management topped the list of ways in which U-NP field stations benefit the NPS is not surprising given the NPS's increasing desire to foster research within park boundaries (Kaiser 2000; Parsons 2004). In fact, with increasing environmental changes brought about by humans, national parks become increasingly valuable places for research assessing the effects of climate change and land management practices in comparatively intact ecosystems (Turner et al. 2017). The next most commonly mentioned benefit of field stations, offering educational opportunities to a variety of students, was also expected given the emphasis the NPS places on education and interpretation (NPS IEVP 2014). Furthermore, connecting students with natural ecosystems is an excellent way to foster science education and get students thinking about careers in both the natural and social sciences (Wilson 2017). Many field stations help educate their visitors about the mission of the NPS, and this benefit was noted by multiple NPS employees. In particular, one NPS employee highlighted the ability of a U-NP

field station to bring in people who wouldn't typically visit a national park and connect them with the NPS's mission of conservation (Table 5).

With regard to how U-NP field stations benefited their associated university and helped fulfill the university's mission, NPS employees listed connecting "undergraduate students to [the national park]," serving "as an anchor for field research," and offering "an excellent change in venue for off-campus learning experiences" (Table 6). Similar ideas were also shared by university employees associated with U-NP field stations (Stevens and Gilson 2016a). The fact that there is such a high degree of alignment between how NPS employees and university employees view the benefits of U-NP fields stations could reflect the effective communication that occurs between each of these groups.

Improved management practices can also stem from opportunities for networking and learning from each other in person such as those made available at National Science Foundation-funded conferences (Stevens and Gilson 2016b), at George Wright Society Biennial Conferences (Wakelee et al. 2015), and at the Organization of Biological Field Stations annual meetings (Kelly and Stevens 2017; Brown et al. 2018).

Category	Sample benefits to NPS
<b>Supporting research that informs park management</b>	"It brings much-needed research to the park, addressing topics from the scientifically esoteric to management-related. It also shows the laboratory that the park can be for scientific inquiry at all levels and ages, moving towards involvement and stewardship."
<b>Offering educational opportunities to a variety of students</b>	"Provides for educational opportunities for a variety of students, particularly local youth."
<b>Promoting the park and the mission of the NPS</b>	"The field station enhances the knowledge of faculty and students who use the station that would not ordinarily visit the park or spend much, if any, time in the natural environment of the [region]. This benefits the park and serves the NPS mission by having an impact on people we may not ordinarily meet, and engaging them in the importance of the natural world and how they may be a part of it."
<b>Providing a facility and staff that can be utilized by the park</b>	"Research station provides inexpensive housing for researchers working on park priorities."

**Table 5** - How does your field station benefit the National Park System unit in which it is located or help the NPS fulfill its mission?

Category	Sample benefits to university
<b>Presenting opportunities for curriculum enrichment</b>	"Connects undergraduate students to [the national park] through the use of facilities for field-based, co-curricular, sense-of-place-components. It has strongly supported the [university] in its educational and outreach goals."
<b>Offering research opportunities</b>	"The field station serves as an anchor for field research, providing opportunities for faculty and students to do meaningful research and often serving as a reference area for other, more disturbed sites."
<b>Providing access and facilities off campus in a unique environment</b>	"The field station brings many people to the park who would not otherwise experience it. This broadens their horizons and introduces them to potential new academic topics, research interests, or career interests. The station also offers an excellent change in venue for off-campus learning experiences that cannot be replicated elsewhere."

**Table 6** - How does your field station benefit your associated university or help it fulfill its mission?


## Conclusions

Field stations inside protected areas have a rich history and ongoing relevance (Lohr and Stanford 1996; Baker 2015). This analysis of the educational and research-oriented benefits of U-NP field stations from the perspective of NPS employees, and the importance of communication in such partnerships, can be used to improve the management of these particular facilities. Additionally, because interactions between the NPS and a university can be complex, the study of these interactions can provide insights for other types of protected-area management partnerships including those with local, state, or other federal agencies in the United States as well as internationally. The fact that the number of U-NP field stations continues to grow is evidence that the benefits of these partnerships outweigh the drawbacks for both the NPS and its associated universities.

Interestingly, the increase in the number of U-NP field stations appears to be driven by relationships between universities and individual national parks rather than by regional or Washington, D.C.-based NPS offices. Individual NPS managers may be seeking partnerships with universities as an alternative way to accomplish the mission of the NPS under conditions where many NPS employees perceive a lack of resources to get their jobs done (US OPM 2015). Perhaps national recognition of the U-NP field station phenomenon could lead to more consistent agreements between individual NPS units and their associated universities.

In sum, U-NP field stations fit well within the mission of the NPS. They are successfully being used by park managers to expand their research capacity by attracting university faculty and student researchers. The undergraduate students that faculty bring are younger and more diverse than are typical national park visitors (Gramann 2003). Working with these students at field stations is an efficient form of outreach for the NPS because the populations of interest come to the park instead of the other way around (McCown et al. 2011). While in the park, students can experience in situ opportunities for education, research, and career exploration (Gladfelter 2002; Michener et al. 2009; Fleischner et al. 2017) that "cannot be replicated elsewhere" (Table 6).

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Fell ponies of Cumbria. **Photo credit:** the Fell Ponies Heritage Centre.

# The English Lake District: A Culturally Wild Landscape

by **BASAK TANULKU**

From the reintroduction of lynx and ospreys to taxing the tourists, the English Lake District is at the center of various debates on the protection of natural and cultural heritage and wildlife. It is a precious landscape, which became a UNESCO World Heritage Site in 2017 under the category of cultural landscape. It is also a very popular national park and destination for millions of tourists, putting pressure on its wildlife and cultural heritage. Contrary to this, there are initiatives to rewild the region through the introduction of native species and returning some of the valleys to their natural condition, including the famous case of the Wild Ennerdale project, which aims to return the Ennerdale Valley to its natural and wilder state by leaving the area free from humans control and intervention (Wild Ennerdale Stewardship Plan 2006).

The region's cultural heritage and the rewilding efforts seem to oppose each other: the first is the symbol of an iconic farming industry whereas the second aims at saving the region's primeval and original inhabitants – its wildlife. This article will search for an answer to the dilemma of the English Lake District by asking whether a cultural landscape can be at the same time a wild one. Or to put it more simply: Can cultural elements be part of a landscape's wildness?



**Basak Tanulku**

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**the relationship between cultural and physical wildness... is not a zero-sum game in which one loses while the other one wins. Instead, culture and wildlife are parts of the same landscape.**

## The English Lake District: From Picturesque to Tourist Landscape

The English Lake District is considered one of the most beautiful and popular regions of the United Kingdom. It is visited by approximately 20 million tourists annually and inhabited by 41,000 permanent residents (Lake District National Park 2018). At first glance, it looks like a sublime, timeless, and unchanging landscape (Anderson 2008; Whyte 2002). However, as shown by previous research, the area is a contested landscape that contains hidden tensions between diverse actors, such as the farming and tourism sectors, the insiders and outsiders, and the conservationists and profit seekers (Whyte 2002). Also, the Lake District is more than a tourist destination or a beautiful place for recreation. It is historically, culturally, and naturally a hybrid landscape where diverse histories, cultures, and geographies meet. As explained by Urry, it does not have a static meaning. Its meaning has changed over centuries as different groups of people have seen it differently (Urry 1995).

Since the 18th century, the Lake District's meaning started form around a beautiful concept as a result of the Picturesque and then Romantic movements that made it home to many poets, novelists, and painters. Due to the increasing attention of artists and the upper classes seeking refuge and holiday destinations, the area became a tourist hub in the early 19th century. However, it is also where conservation and protection of the natural and cultural landscape began with the efforts of people such as Canon Hardwicke Rawnsley and Beatrix Potter. Their efforts were transformed into a broader protection movement, and in 1951, it became England's second and largest national park. In 2017, it was declared a World Heritage Site by UNESCO under the category of cultural landscape, bringing debates on the protection of this vulnerable landscape, and finding the balance between the local culture, heritage, and the tourist industry.

## The Dilemma: Wildness versus Culture

The Lake District is not a landscape primarily regarded as wild, since its wildness looks like something introduced and promoted for outsiders – mainly the tourists. For example, the Predator Experience located in the South Lakes offers people with the opportunity of walking with wolf hybrids (Predator Experience 2019)(<http://www.predatorexperience.co.uk/>). Also, as its UNESCO status of cultural landscape demonstrates, the Lake District is one that has been shaped by hill farming for millennia. In this context, it seems easier to compare the Lake District with other cultural landscapes (historical, industrial, etc.), which are known for their human-made features (towns, historic buildings, or particular industries).

This situation also creates a dilemma: on the one hand, the area is appraised for its beauty and local industries, the things that make it a cultural landscape. On the other hand, these cultural aspects and industries are regarded as having made the region a sheep-wrecked landscape without wildlife or wilderness (Monbiot 2013; 2017). As a result, the area experiences growing tensions between hill farming, which damages the local wildlife, and those trying to rewild the region through introduction of wilder species (Glover 2014; Sawyer 2017).



**Figure 1** – The map of the Lake District within the county of Cumbria, located between England and Scotland. ©2018 Google LLC, used with permission. Google and the Google logo are registered trademarks of Google LLC.

## From Measurable to Perceived, from Physical to Cultural: Different Forms of Wildness

Wilderness usually refers to a pristine landscape unchanged by people. According to the Oxford Advanced Learners' Dictionary, "wild" (scenery/land) means "in its natural state, not changed by people," while "wilderness" is "a large area of land that has never been developed or used for growing crops because it is difficult to live there" (2000, 1541). However, from the Arctic to the urban habitat, all places across the world are changed by people to a certain degree, and in the United Kingdom, human influence has led to the absence of "true" wilderness (Carver, Evans, and Fritz 2002; Adams 2003; Mansfield 2014; Pheasant and Watts 2015). The lack of true wilderness led to the separation of "wilderness" and "wildness" (Carver, Comer, McMorran, and Nutter 2012; Adams 2003). Whereas wilderness refers to a landscape unaltered by humans, wildness

corresponds to a softer version of it, referring to the degrees or nuances of wilderness. As an example, in their research on mapping wilderness, Carver and Fritz (1998) argue that the UK does not have absolute wilderness areas such as Greenland, Antarctica, or North America, and its remaining wilderness is subject to commodification due to tourist industry as seen, for example, in the Scottish Highlands.

However, wilderness or wildness are not only defined or measured by objective approaches. Instead, wilderness (or wildness) is also a socially constructed realm that can be defined or measured by subjective approaches (Grossberg 1999; Jepson and Sharpley 2014). For social constructivists, wilderness depends on the perception of the observer (Grossberg 1999, p. 1). The definition of wilderness has changed over time or according to context, culture, or individuals (Grossberg 1999, p. 2). Also, the value given to the wilderness changed over time. As an example, Romanticism was a turning point in assessing landscapes, and the Lake District, known as a "wild and desolate" landscape, was considered to have scenic value beginning with the Romantic movement (Jepson 2013).

Wilderness and wildness are mainly assessed by the physical characteristics of a landscape, including its geography, wildlife, ruggedness, remoteness, and so forth, and how these characteristics affect human perception. Most of the research in the areas of human geography, environmental psychology, and tourism studies analyze the human perception of a landscape and measure the degree of wildness (Carver and Fritz 1998; Carver, Comer, McMorran, and Nutter 2012). As an example, Carver and

Fritz argue that wilderness also depends on personal experience and perception, not only on measurable standards. They propose a more flexible approach to map and monitor wilderness that contains both quantifiable and individual measures. Based on Nash's "wilderness continuum" concept, which seeks to measure the degree of wilderness from the paved to the primeval, they used GIS techniques to measure the wilderness based on people's perception of the landscape (Carver and Fritz 1998).

This article proposes a more comprehensive understanding of "wild" in discussing the symbolic-cultural elements of the Lake District and argues that wildness is not something entirely physical; instead, wildness consists of physical and cultural/ symbolic elements that can be measured through both objective and subjective approaches. First, wild does not only correspond to a physical landscape but also to the specific local culture and people, autonomous from any political, religious, or economic constraints of the current period. "Local people" refers to people who have had connections to that particular geography for at least several generations, and even if they do not live there permanently, they still keep their connections there. Wild also refers to a hidden symbolic landscape consisting of haunted sites and buildings, local lore, and legends that create an aura of mystery around that particular landscape segregating it from the rest. Second, cultural wildness is also a positive concept that does not mean a culture of wildness or a wild culture, such as when evaluating foreign cultures (or "social other") as backward, illiterate, uncivilized, and so on. It does not refer to the hierarchy and inequality between the "civilized" and "uncivilized" or a negative understanding of "wild" (criminals, illiterate, backward, etc.). Instead, cultural wildness corresponds to specific cultural practices and relative autonomy from a broader social, political, and economic framework. By defining it in this way, this article proposes a lens through which to assess the wildness of a landscape – mainly cultural landscapes such as the Lake District, which can be included in future research.

## **Describing Cultural Wildness**

Historically, Cumbria, the county where the Lake District is located, was known as a wild part of England (Carruthers 1979). Its people were considered to be outlaws. The region also became a refuge for those who sought a safe and secret place to hide from the army, the state, or religious authorities (Bates 1907; Carruthers 1979; Marshall 1981). The local inhabitants were called "Men of the North" (or Northern Welsh), and were isolated from the rest of the country (Carruthers 1979). The region was relatively autonomous from religious and political authorities, mainly London, so there weren't many landed aristocracy (Wordsworth 2004; Marshall 1981; Urry 1995). Instead, small-scale independent farmers (yeomen) shaped its famous landscape. Politically, it was a liminal landscape that experienced turmoil resulting from disputes between England and Scotland; the area near the borders between the two sides was once called "debatable lands." These provided the area with an outlaw, deviant, and even irreligious identity (Marshall 1981). The area's segregation from the rest of the country is mentioned in earlier studies, including Parker, who describes



**Figure 2** – The Kirkstone Pass Inn, famous for its ghosts, is located in the haunted Lake District. ©2018 Google LLC, used with permission. Google and the Google logo are registered trademarks of Google LLC.

Cumbria as a country in itself (Parker 1977).

At present, the Lake District can be regarded culturally wild based on several factors. First, its landscape has been shaped by hill farming making the region a quasi-semi-autonomous realm separate from England. As argued by Olwig, the area can be regarded as a “body politic” formed by local farmers and communities around hill farming, which historically provided it with a strong identity tied to the North Atlantic Archipelago, rather than to England (Olwig 2018). The Lake District also has the largest amount of commons, which separates the region from the rest of the country. Olwig argues that hefting and other farming practices created a strong place identity as well as a Christian pastoral community ideal, which still survive against the private property-bound culture of England (Olwig 2018). The Lake Districts hill farming does not only create “cultural wildness” with its relatively autonomous culture and specific local practices. Hill farming also, as explained by Mansfield, might have had an indirect impact on the provision and protection of

wildlife in the area's uplands (Mansfield 2014).

Second, the Lake District is culturally wild because of its haunted landscape shaped by local lore and stories about the ghosts, fairies, elves, and other supernatural creatures, standing in stark contrast to its beautiful and manufactured surface. The haunted landscape consists of two elements. First, there are haunted sites that are supposed to be ghostly (hosting ghosts of the people who lived or worked and died there). Second, there are sites that are supposed to be inhabited by supernatural beings such as fairies or elves hiding from humans. They live in a hidden landscape and show themselves only to the lucky few. The district has various sites associated with elves or ghosts, such as Kirkstone Pass Inn located between Ambleside and Ullswater (Kirkup 2011) (Figure 2). All these make the Lake District a culturally wild landscape, full of mysterious and dangerous sites which help survive the local culture, myths, and heritage. They also make the area a mysterious site which cannot be discovered by modern science and people. These stories and ghostly beings push people to search more, an experience like the exploration of the wild (or unknown).



**Figures 3 and 4** – Fell ponies bring together wildness and culture. They also demonstrate the difference between perceived and measurable wildness: while people might not perceive them as wild (as a result of their small bodies or cuteness), scientists regard them semiferal or feral animals that are under threat. Thanks to Mrs. Robinson from Fell Ponies Heritage Centre for providing in-depth information on the fell ponies of Cumbria.

## Fell Ponies: Where Wildlife Meets Culture

Some of the Lake District's species have a dual role: On the one hand, they are regarded as parts of the area's wildlife. On the other hand, they may have had essential roles in creating cultural heritage. Of these species, fell ponies deserve particular attention, as they are under threat of extinction. There are approximately 500 to 900 fell ponies in Cumbria considered "under threat" (Rare Breeds Survival Trust 2011) and are regarded as wild or semiwild (they are raised and bred by local farmers, but live on their own). There are various efforts to preserve fell ponies in Cumbria. According to independent researcher David Murray, they are not only essential parts of Cumbria's biodiversity but also its cultural and historical heritage (Murray 2011). He argues that the ancestors of contemporary fell ponies worked in the construction of the Hadrian's Wall, and since then, they worked in farming and agriculture, coal mines, and transportation. However, by the introduction of newer vehicles, the use of hill ponies has been reduced. From the mid-20th century onward, they have been used in outdoor activities and sports such as riding and trekking (Murray 2011). The case of fell ponies demonstrates how wildlife intermingles with the cultural heritage of a landscape. In the Lake District, wildlife and culture do not oppose each other. Instead, they complete and contribute to the survival of each other.

## English Lake District: A Positively Wild Landscape

The Lake District is an iconic cultural landscape built around hill farming. However, as demonstrated here, it is also a culturally wild landscape as a result of its relative political, religious, and cultural autonomy from the rest of the country. As discussed, the Lake District is rich in local lore and sites haunted by ghosts and supernatural beings. In this landscape, wildlife looks more like tamed animals and may not be regarded as wild as the wolf, bear, bison, or lion. Still, the Lake District's wildlife intermingles with this harsh landscape. Its fell ponies are not only part of its wildlife but also its cultural heritage.

Cultural wildness as proposed here for the Lake District demonstrates three things. First, "wildness" is a flexible term that includes both physical and cultural elements. In the case of the Lake District, cultural wildness refers to relative autonomy from religious, political, and economic contexts as well as a heritage formed around hill farming and associated built environment and culture. And, of course, cultural wildness also consists of haunted sites and local legends. Second, this cultural wildness does not suggest that the region is in a subordinate position to the rest of the country. Its rural culture, local people, and mystery are not the symbols of underdevelopment, poverty, conservatism, or superstition. They do not stand in contrast to science, innovation, or modernism that usually is associated with urban landscapes and culture. Instead, the Lake District, with its culture and local people, can be considered wild in a positive sense, reflecting a relatively unspoiled landscape autonomous from capitalism and its intrusive logic. This wildness demonstrates the power of being and living on its own, and going "wild" not only in nature but also in the self.

Finally, this cultural wildness is not in opposition to the physical wildness. Instead, as demonstrated by the case of fell ponies, wildlife of the Lake District intermingles with the local culture and historic heritage. This demonstrates the relationship between cultural and physical wildness, which is not a zero-sum game in which one loses while the other wins. Instead, culture and wildlife are parts of the same landscape. This illustrates that in the future, cultural elements should also be included in research on wildness. As shown in research conducted in Portugal, Germano and others argue that unused mines can also create suitable habitats for birds and lead to an overall increase in the avifauna diversity of the region (Germano et al. 2016). The same can be applied to the Lake District: human-made elements such as quarries, unused mines, or other abandoned sites can increase the overall amount of wildlife, demonstrating an indirect impact of cultural elements on physical wildness. In this context, unused quarries and mines in the Lake District, particularly those located in the fells, should be investigated regarding their overall impact on the number and diversity of the wildlife.

The conceptualization of wildness proposed here extends the notion of protected landscapes such as the Lake District. It can address the various threats to these landscapes that led to tensions between multiple actors. Sometimes the reliance upon one characterization of wildness (physical) might lead to the neglect of other essential features. However, when one considers

multiple conceptualizations of wildness, landscapes such as the Lake District can be better protected.

The Lake District is a mix of physical and cultural wildness that creates a sense of wonder with its fells, lakes, wildlife, and harsh weather. It is rich in legends, haunted sites, and a local culture, unspoiled for many millennia. While the concept of wildness proposed here is different from the one promoted in the region by tourism industry, it is an important and necessary progression. If we accept multiple conceptualizations of a wild landscape, we have the opportunity to represent and protect diverse and unique cultural landscapes across the globe. 

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The backwaters of the Gosekhurd Dam project have good fish populations and the community has exclusive rights for fishing here. **photo credit** © Dr. Parvish Pandya/Sanctuary Nature Foundation.

# Nature Needs Half at Work: Indian Villagers Working through “COCOON”

by **PARVISH PANDYA**

When considering nature conservation across the globe from my lifetime of experience working with nature and people in India, I wonder why we Indians have failed to export our attitudes, including a reverence for life, to the West. Why did we instead import developmental attitudes that treat nature as a resource rather than as a source? In my opinion, changing this one “attitude” could be a catalyst for the success of the ambitious and necessary vision and practice called Nature Needs Half (Sylvén 2011; Locke 2018). The Nature Needs Half movement calls for protecting 50% of the planet by 2030, in order to turn the tide in favor of Earth’s life support systems and to transform society’s relationship with nature, one ecoregion and country at a time.

Adopting the philosophy of Nature Needs Half and realizing its imperatives is easier said than done, but it can and must be done. Perhaps the very first step needed is to build bridges of collaboration between the different sectors and perspectives working to improve human life and/or to protect wild nature that previously and currently have been siloed from one another. Take the case of the government, corporate, and social sectors. All three, irrespective of country or culture, at some point find themselves at loggerheads with possibly the least supported of all sectors – biodiversity and nature conservation. This certainly is India’s reality, and



Parvish Pandya

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**Acutely aware that solutions to alleviate farmer stress and improve the relationship between people and parks was floundering, the Sanctuary Nature Foundation decided to demonstrate that it was possible to rewild abandoned and failed farms located right next to sanctuaries and national parks.**

into this reality now comes climate change and its destabilization of virtually all human endeavors in its path.

But all is not lost.

Nature is self-repairing, and Planet Earth has not yet reached a point of no return. We still have time to pull away from the environmental precipice toward which Homo sapiens are so resolutely headed. This problem is not unique to India, but it affects India deeply because 1.3 billion people on the Indian subcontinent have virtually run out of time, while the climate clock ticks away relentlessly.

A major gap in the collective efforts of the people of the Indian subcontinent has been missing the biodiversity-conservation imperative in human rights, climate change, and economic circles. With the exploitation of resources being equated with "development," most conservation and ecosystem management attempts have been predominantly corralled into the confines of formal Protected Areas (PAs) declared by the government under statutory provisions. When these areas are properly managed, nature often can and does flourish. In India, tiger populations have increased and water sources that once ran dry soon after the monsoon have become perennial. But, outside of such "nurseries of biodiversity," lands continue to be stripped bare, leaving the soil impoverished and the biodiversity minimal.

In a densely populated country such as India, where people depend heavily on the bounty of nature, the extirpation of biodiversity across almost 90% of the subcontinent has left people with little option but to look toward the PAs for resources such as firewood, fodder, wild fruit, edible flowers, and even marginal farming. This has led to conflicts between local communities and park managers. And when this occurs, ecosystems vanish, as do the ecosystem services and species upon which the quality of human life depends.

Despite centuries of destruction, India continues to harbor some of the world's finest biodiversity hot spots. But these are now largely disconnected pencil dots on the Indian subcontinent. If we are to have any hope of restoring half of India's landmass to biodiverse status, the pencil dots must be converted into biodiverse "ink-blots."

## **Sanctuary Nature Foundation and COCOON**

This is where the Sanctuary Nature Foundation's Community Owned Community Operated Nature (COCOON) Conservancies come into play. The central tenet of a COCOON conservancy is that it is designed as a social upliftment program that creates sustainable, dignified livelihoods, with enhanced biodiversity being a measurable, collateral benefit.

Acutely aware that solutions to alleviate farmer stress and improve the relationship between people and parks was floundering, the Sanctuary Nature Foundation decided to demonstrate that it was possible to rewild abandoned and failed farms located right next to sanctuaries and national parks. The pilot project at Gothangaon village, next to the tiger forests of the Umred Pauni-Karhandla Wildlife Sanctuary, has turned out to be a success. Here, 37 families have

stopped farming and allowed the forest to regenerate on their own land holdings. For four years, the sanctuary found the resources to compensate the farmers equal to what they would have earned had they farmed. Soon nature did what nature does best... repair itself. Palatable grasses and bushes and then trees began to colonize their land. Birds, herbivores, and carnivores followed suit. A way was worked out to gift families homestays with titles in their names, which they in turn would entrust to the management care of BFSL for 30 years. Everyone came out winning. The tigers got the space they needed.

Locals whose farms were in a dire state got compensated for not farming, and as health returned to their holdings, their land values rose. In the process, carbon was sequestered from the atmosphere and to a great extent the seeds of human-animal conflict resolution were sown. From a Yamdoot (Grim Reaper), the tiger turned into their Annadata (Horn of Cornucopia). The Sanctuary Nature Foundation is now looking to scale this model and take it to diverse ecosystems, similar to the way as Project Tiger did in 1973, but with people being the primary beneficiaries of rewilding. A huge collateral benefit of the COCOON Conservancy initiative is the enhanced security of cores, buffers, and corridors of biodiverse landscapes. Other benefits, such as clean air, improved water regimes, climate control, and enhanced farm productivity of surrounding farm holdings have not even begun to be calculated.

In the words of Sunil Mehta, conservationist and one of India's most successful wildlife lodge owners, "Sanctuary Nature Foundation's

COCOON Conservancy concept is set to disrupt the existing wildlife tourism model in India by turning it from one that keeps people out into one that sees people welcome wildlife as a source of income and pride. What is more, the visitor experience is going to be dramatically improved."

## The Rewilding Strategy

Inspired by the blueprint set out in 1971-72 by the first director of Project Tiger, Kailash Sankhala, Sanctuary Nature Foundation chose to follow a rewilding selection strategy based on resurrecting different biogeographic zones. Our pilot project in the Gothangaon village in the Nagpur District of Maharashtra, India, is expected to be open to the public by the end of 2019. It has taken five long years to identify issues and create the best solutions, but today we have a successful model. What formerly were distressed farming communities living immediately adjacent to tigers in the tropical, dry deciduous forests of the larger Tadoba landscape are now far better off and more secure, even as plants, insects, birds, carnivores, and herbivores have reoccupied lands that had been stripped of almost all biodiversity.

But it was only after scrutinizing the results of an extensive social survey involving 1,000 farming families, undertaken jointly in 2014 by the Bombay Natural History Society and the Tata Institute of Social Sciences, that the Sanctuary Nature Foundation honed in on the Gothangaon village in Maharashtra.

Three selection criteria are examined in the creation of a COCOON Conservancy:

- 1. COCOON Conservancies must be**

**located on marginal or failed landholdings on the edges of high biodiversity areas.**

These areas attract a fair number of visitors in search of nature experiences (crucial to creating revenue streams without biodiversity loss).

**2. Communities must retain ownership of their lands.** But their small, contiguous holdings must remain unfenced and be aggregated through cooperatives to form rewilded land parcels of 100 acres (40.5 ha) or more, with the goal of expanding the rewilding process onto much larger contiguous areas.

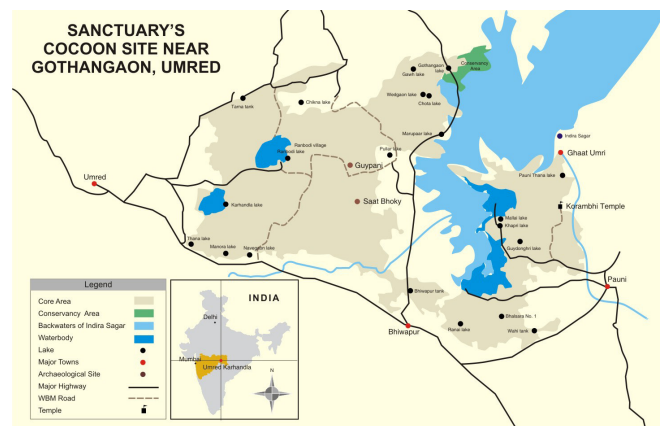
**3. Sanctuary Nature Foundation's primary role involves locating potential sites, orienting, and then linking communities with trustworthy lodge and hospitality professionals.**

These professionals must be willing to invest, build, operate and transfer, and accept terms that favor the community,

While communities retain ownership of their own lands and the newly constructed homestays, in return they would offer management agreements to professionally run the homestays for periods ranging from 20 to 30 years, which would allow the capital invested in setting them to be recovered. The Sanctuary Nature Foundation would be jointly appointed as Ecological Auditors by the community and the homestay professional to ensure that neither drifts away from the original rewilding objective.

The first pilot project is located in Vidarbha, which has the dubious distinction of being the "farmer suicide capital" of India. Here, abutting the large reservoir of the Ghosikurd Dam and the 189 sq. km (73 sq. miles) Umred-Pauni-Karhandla Wildlife Sanctuary (UPKWS), is a parcel of land that local farmers have rewilded under the guidance of the sanctuary during the past five years (Sanctuary Asia 2016a). We now propose to involve the villages of Rajoli and Pandhargota, abutting Gothangaon. By all indications, this initiative should fructify within the next 18 months or so to create a contiguous COCOON Conservancy of roughly 500 acres (202 ha) next to the biodiverse UPKWS hinterland.

Where wildlife was once driven away from their marginal farms, today tigers, deer, monkeys, wild pigs, and birds are welcomed as "magnets" that attract paying ecotour-



**Figure 1** - A notional map showing the location of water impoundment from Gosekhurd dam, the backwaters, and the adjoining COCOON Conservancy site. Photo courtesy of Sanctuary Nature Foundation.



**Figure 2** - Farmers' cooperative assemblies at talks in January 2015, with Sanctuary's Bitu Sahgal (in green), during the setting up of COCOON. Photo courtesy of Sanctuary Nature Foundation.



**Figure 3** – The wetlands of Navegaon Reservoir to the northwest of the COCOON area attract thousands of migratory waterbirds. Photo by Dr. Parvish Pandya/Sanctuary Nature Foundation.

ists in search of real nature experiences. The Sanctuary Nature Foundation and the COCOON Conservancy form a key part of a wildlife corridor that acts as a staging ground for tigers moving across a landscape that extends over 3,000 sq. km (1,158 The sq. miles). The COCOON pilot itself comprises privately owned land outside the buffer zone of the protected UPKWS forest, which is managed by the Maharashtra State Forest Department.

Based on our initial success, and having now won social, biological, and financial proof of concept, we are poised to carry the COCOON Conservancy Project to other biogeographic zones including alpine and subalpine Himalayan habitats in Kashmir, brackish water wetlands north of Odisha's Chilika Lake, moist deciduous forests in the Central Indian highlands around the Pench-Kanha tiger corridor, tall-grass swamplands alongside the Brahmaputra river in Assam, and the world's largest mangrove forest – the Sundarban in the 24 Parganas, West Bengal.

## **Building Capacity Through Collaboration**

Credit for the financial proof of concept came from tourism professional and wildlife conservationist Sunil Mehta (Sanctuary Asia 2018), an entrepreneur responsible for creating and running some of India's most successful wildlife tourism enterprises including Nature Farms and the iconic Tree House Resort (<http://www.treehouserestort.in/>) on the outskirts of Jaipur City, and the Bamboo Forest Safari Lodge, just outside the Tadoba-Andhari Tiger Reserve. While the Sanctuary Nature Foundation gave birth to the idea of Community Nature Conservancies, it was Mehta's foresight that gave shape and form to the formula that enabled the sanctuary's

idea to plot a course through the complicated land laws and emotive issues surrounding collective land ownership in India. Critical help also came from Praveen Pardeshi, a high-ranking Indian Administrative Services Officer who convinced forest officials and the chief minister of Maharashtra that the potential for rewilding failed and marginal farms (agricultural farms that were marginal and had failed to yield crops) were a solution to chronic unemployment and water shortages. Government Regulations and Homestay Tourism Rules that enabled villagers to benefit if they rewilded their unproductive farmlands emerged. A talented Nagur-based lawyer-conservationist, Kartik Shukul (Sanctuary Asia 2016b), counsel for the Maharashtra government, worked closely with Sahgal and Mehta to chart a legal pathway to enable local farmers and their heirs to securely retain land ownership. Mehta provided the initial investment capital to construct and manage the high-end homestays so critical to offering villagers a financial option to the near-impossible task of eking out a living from farming on water-starved, biodiversity-depleted soils in an era of climate change.

A staunch supporter of communities, Mehta worked doggedly for more than three years with the originator of the concept, Bittu Sahgal of the Sanctuary Nature Foundation; home-grown conservationist Roheet Karoo, honorary wildlife warden of UPKWS (Sanctuary Asia 2014); and Kailas Hudme, the then Gram Pradhan (village head) of Gothangaon. Together they convinced the local community to register themselves as a cooperative titled the Gothangaon Nisarga Paryatan Sevabhai

Sahakari Sansthan in the State of Maharashtra, the first forest conservation-based collective to make rewilding its purpose of existence.

## A Real Green New Deal

As a teacher and conservationist for more than four decades, I have introduced hundreds of young people to the magical world of zoology, natural history, and conservation. My personal involvement with the youth of the Gothangaon COCOON Conservancy began from day one but became considerably more cemented when Roheet Karoo introduced me to his team of young men and women in Gothangaon, whom I trained in the theory and practice of natural history.

Roheet Karoo is truly a gift to tomorrow's tigers, particularly in the Umred-Karhandla Wildlife Sanctuary area. He is currently working to get unproductive farms to forest status by channeling resources to communities whose livelihoods he believes must come from the restored biodiversity on their own lands. The surveys and studies he has undertaken have resulted in better protection strategies. Roheet is the founding secretary of the Wildlife Conservation and Development Centre and honorary wildlife warden of



**Figure 4** – Dr. Parvish Pandya points at waterbirds, helping youngsters during the naturalist training program. Far right, Roheet Karoo. Photo by Rahul Maske/Sanctuary Nature Foundation.



**Figure 5** – The 189-sq.-km (73 sq. mile) expanse of Umred Pauni Karhandla Wildlife Sanctuary offers fairly good opportunities to see tigers and other mammals. Photo by Amrut Naik/Sanctuary NatFoundation.



**Figure 6** – Human-animal conflicts will soon be a thing of past, as COCOON offers additional spaces for biodiversity to flourish and disperse. Photo by Nikhil Tambekar/Sanctuary Nature Foundation.


Nagpur district. He has only one dream – to protect tigers and their habitats. His drive, purpose, and single-minded devotion will certainly give the tigers of Umred-Karhandla and Tadoba an extra edge on life.

Quick to learn, and even quicker to teach me about their home, history, and way of life, Roheet's team of young people are destined to become some of India's finest nature conservation guides and ethical hospitality professionals. Even more importantly, they are the pioneers who will demonstrate to the people of one of the world's most densely populated landmasses in the world, that flowing with nature's tide is not merely an ethical badge of honor but also a survival imperative in an era of climate change. Before my eyes, I see individuals such as Roheet Karoo demonstrating to planners, politicians, and village youth that the quality of life of the Indian subcontinent's people has everything to do with restoring health to the biodiversity of its ecosystems without which no human aspirations have any hope of success.

The bottom line is that nature has gifted our biosphere the ability to self-repair. Given this truth and given the reality that our planet is in the grip of adverse climate impacts, Sanctuary Nature Foundation's COCOON Conservancy initiative shines a light on solutions that are both ecologically and economically practical.

What is more, the strategy ties in with the advice of those advocating a real global "Green New Deal" that envelops the conjoined issues of equitable justice and the umbilicus, which connects the dots between climate change, biodiversity, and economics. The Green New Deal is a US congressional resolution that lays out a plan for tackling climate change. Introduced by Representative Alexandria Ocasio-Cortez of New York and Senator Edward J. Markey of Massachusetts, it puts forth a big, bold transformation of the economy to tackle the twin crises of inequality and climate change. In the United States, "from coast to coast, broad local conditions are leading the way in pushing state-level Green New Deal policies that create good jobs, cut climate and local pollution, and counteract racial and economic inequity" (Beachy 2018).

Ultimately, we must find a way to transition from economies built on exploitation and fossil

fuels to those driven by sustainable work ethics and clean energy. As Lord Nicholas Stern, chairman of the Grantham Research Institute on Climate Change and the Environment, London School of Economics, and member of the Governing Board of Sanctuary Nature Foundation, often reminds us: "The economy is a wholly owned subsidiary of the environment." 

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An Indian Elephant crosses the road in Nagarhole National Park, also known as Rajiv Gandhi National Park, located in the Indian state of Karnataka. **Photo credit** © Neel Tandel

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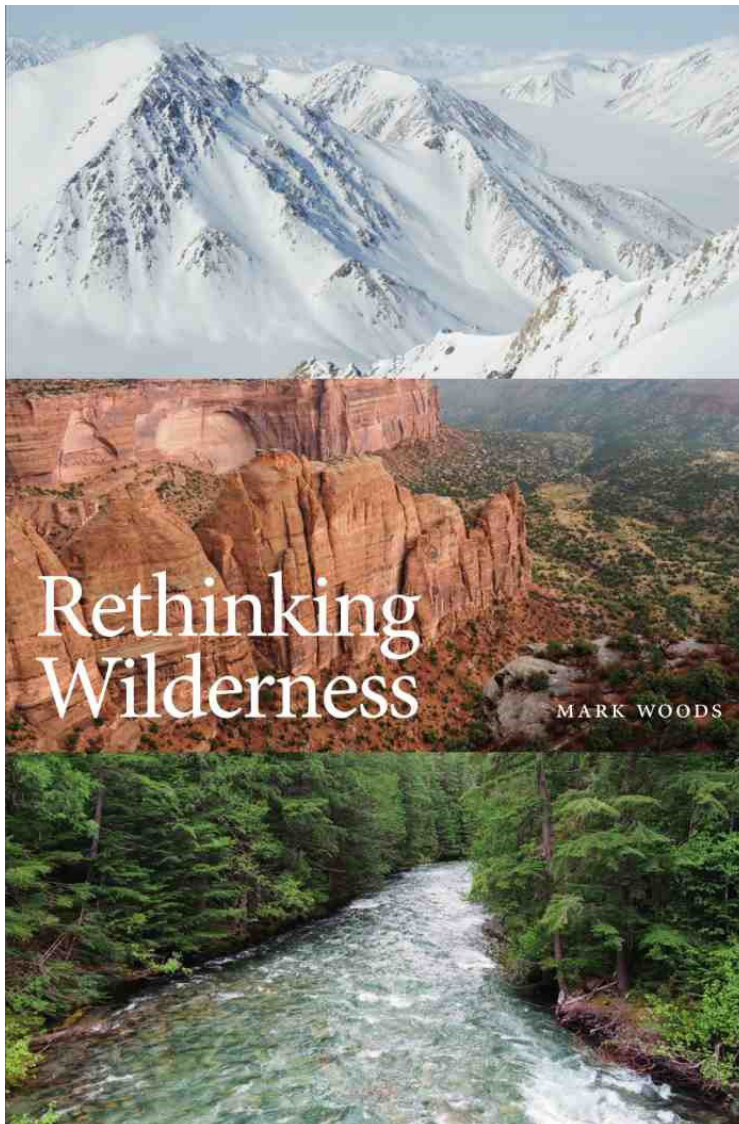
WILDERNESS DIGEST

# Book Review:

**John Shultis, Book Review Editor**

RETHINKING WILDERNESS

by Mark Woods. 2017. Broadview Press, Peterborough, Ontario. 312 pp. \$34.95 CDN (pb).




For the last several decades, a debate has raged over whether the practice of wilderness preservation is meaningful, worthwhile, or even morally defensible in the contemporary world. In this so-called great new wilderness debate, the voices criticizing the conceptual, moral, historical, and ecological underpinnings of wilderness preservation have dominated the conversation. While this has been especially true in academic circles, antiwilderness positions have entered the mainstream discourse, and wilderness is increasingly denounced as elitist, colonial, ethnocentric, androcentric, socially constructed, or as dangerously entrenching a false human-nature dichotomy.

In *Rethinking Wilderness*, Mark Woods revisits the debate by carefully examining the many criticisms that have been directed at the concept of wilderness and the practice of wilderness preservation. Woods organizes the existing host of critiques into seven antiwilderness arguments: the naturalist, social constructivist, no-wilderness, imperial, ecological, environmental justice, and management arguments. Woods embarks on a premise-by-premise examination of these antiwilderness arguments, dedicating one chapter to each criticism.

Those familiar with the anthologies *The Great New Wilderness Debate* (1998) and *The Wilderness Debate Rages On* (2008), both edited by J. Baird Callicott and Michael P. Nelson, will find that Woods has done an excellent job distilling and clearly outlining the arguments put forth by wilderness critics. For those new to the debate, Woods may very well have provided the best review of this content. Moreover, Woods puts the "debate" back into a conversation that has primarily been occupied with the attack on – and far less with the defense of – wilderness. Woods presents a critique of the critique of wilderness, holding each premise under a magnifying glass. By carefully dissecting each argument, Woods exposes the "either-or" reasoning, sweeping generalizations, and overstated evidence that lie at the heart of many negative claims made about wilderness.

While Woods finds all antiwilderness arguments to be wanting, he does not dismiss them as baseless or valueless. On the contrary, Woods repeatedly argues that these arguments raise important issues that need to be addressed for wilderness to remain relevant. At their best, critiques of wilderness are constructive, inviting us to rethink how wilderness should be defined, valued, and preserved.

Throughout the book, Woods identifies one underlying problem that motivates a number of these criticisms, which is that "wilderness has been defined primarily in negative terms as the absence of people" (p. 2). To remedy this, Woods calls on wilderness advocates to develop (and promote) a more positive and robust account of wilderness. In the final chapter, he sets out to do exactly that by sketching a new wilderness ethic grounded in the value-adding properties of naturalness, wildness, and freedom.

In summary, *Rethinking Wilderness* is a crucial contribution to the sometimes one-sided great new wilderness debate. Critics and defenders of wilderness alike will appreciate Woods's analytical and interdisciplinary approach, as well as the clarity with which he has outlined and responded to the arguments advanced against wilderness. Mark Woods challenges us to see wilderness for the nuanced concept that it is – one that may not be perfect, but one that is well worth defending and building upon. In this book, Woods elevates the debate about the future of wilderness. 

Reviewed by **TOBIAS NICKEL**, master's student in the Master in Environmental Management program at Western Colorado University; email: [tobias.nickel@western.edu](mailto:tobias.nickel@western.edu).

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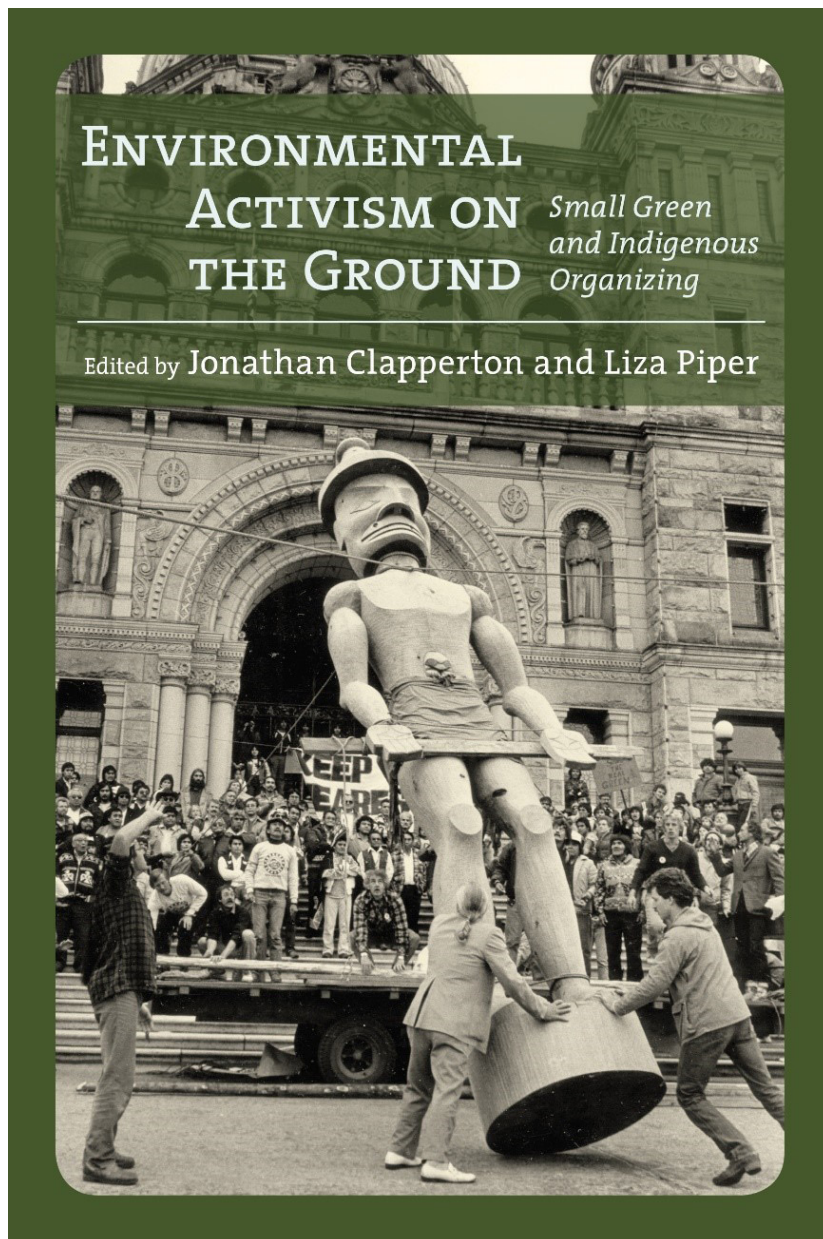
WILDERNESS DIGEST

# Book Review:

**John Shultis, Book Review Editor**

**ENVIRONMENTAL ACTIVISM ON THE GROUND: SMALL GREEN AND INDIGENOUS ORGANIZING**

edited by Jonathon Clapperton and Liza Piper. 2019. University of Calgary Press. 376 pp. \$39.99 CAD/USD (pb).




The history of wilderness activism, like the broader history of conservation movements, has tended to focus on the impacts of the elite, "big" names such as John Muir, Aldo Leopold, etc. Moreover, it is the major successes and events that are most carefully documented in previous historical analyses. In *Environmental Activism on the Ground*, the editors and multiple authors focus "on the experiences of small-scale, localized environmental activists, from the late 20th century into the 21st century, to emphasize the contributions and significance of these forms of small green activism within the larger [environmental] movement as a whole" (p. 3). Particular focus is placed on the experiences of North American Indigenous peoples in the environmental and conservation movements.

As noted in the previous book reviewed in this issue (*Rethinking Wilderness*), one of the major criticisms of the wilderness movement has been with the relationship between wilderness conservation and Indigenous peoples. Cooperation between Indigenous peoples and wilderness activists has been frustratingly inconsistent, with examples of both successful and failed partnerships. Major stumbling blocks have always been linked to the inherent meaning of wilderness that includes the absence of inhabitants, including aboriginal peoples, in wilderness areas and the belief that human activity destroys wilderness. As Clapperton notes, "Environmentalism depends upon colonialism because its ultimate goal is to remove permanent settlement from 'wild' spaces" (p. 182).

Thus, this book provides two worthwhile messages for wilderness activists and practitioners. First, it encourages researchers to not only study the major contributors and events relating to wilderness preservation; it also suggests that we consider that the environmental and wilderness movements are as much locally driven, small-scale activities pursued by ordinary citizens from a range of socioeconomic and cultural backgrounds as they are elite-driven, large-scale activities. Second, it helps assess the strained relationship between Indigenous peoples and the historical and contemporary wilderness movement by examining this relationship in a new light.

Chapter 1 of this book provides an encouraging start to this latter issue. The author uses two case studies to question the value and meaning of environmentalism from an Indigenous perspective. Willow suggests that Indigenous individuals and groups who choose to work with environmentalists do so "as strategic choices made by astute leaders seeking to retain or regain control of customary lands and thereby promote their peoples' physical, cultural, and political survival" (p. 26). That is, while environmentalism may or may not be a shared (though largely Western) value, the main driver for Indigenous groups to engage with environmentalists is normally "to ensure the continuance of the land-based sustenance on which their survival as culturally distinct and politically autonomous peoples depends" (p. 26). While many of the other chapters provide similar conclusions, none do so with the clarity and strength of this chapter.

Given the many difficult issues between wilderness advocates and Indigenous peoples, the perspectives provided by this edited book contain several findings that wilderness activists and practitioners will find both challenging and illuminating. As the authors of this book have done, wilderness activists should react to these new perspectives with empathy and humility. 

Reviewed by **JOHN SHULTIS**, IJW book review editor and associate professor at the University of Northern British Columbia; email: [john.shultis@unbc.ca](mailto:john.shultis@unbc.ca).

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