

Response to the letter regarding “Guardians *and* gardeners: Managing wilderness for the twenty-first century”

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A philosophy responding to diminishing naturalness in federal wilderness areas

Human actions, whether deliberate (e.g., fire suppression) or indeliberate (e.g., anthropogenic climate change), have and will continue to detrimentally impact wilderness ecosystems. These human-induced stressors are significantly degrading and even imperil the natural qualities of many wilderness areas (see Shive et al. 2026). Yet contemporary wilderness management philosophies, which arose in an era that predated rapid and ubiquitous environmental stressors such as climate change, may limit our ability to protect the natural conditions of these places.

The 1964 Wilderness Act is not prescriptive other than to prohibit activities such as commercial enterprise, development of roads, building of structures and installations, landing of aircraft and use of motorized equipment and mechanical transport unless “necessary to meet minimum requirements for the administration of the area for the purpose of this Act” (16. U.S.C 1131–1136 § 4(c)). Rather, the Act grants significant room for managers’ interpretation of and discretion in the preservation of wilderness character (16. U.S.C 1131–1136; Long and Biber 2014). For decades, discussions about

how to preserve wilderness character have centered on the tension between the Act’s definition of wilderness as “untrammeled by man” and its mandate that a wilderness area be “protected and managed so as to preserve its natural conditions” (16. U.S.C 1131–1136 § 2(c); Cole 1996). A hands-off or “guardians not gardeners” philosophy has long been central to these debates, both internal and external to the administering agencies (Alpert 2004, Kelly and Landres 2023). Our recent contribution to BioScience considers the value of a “guardians *and* gardeners” approach to wilderness management—a philosophy that accounts for human influences on protected wilderness areas and supports managers in responding to unintended and unforeseen impacts to wilderness qualities.

Responding to Landres and colleagues (2026)

Landres and colleagues (2026) do not contest the major points of our paper: firstly, federal wilderness areas are ancestral homelands for Indigenous peoples, and some of these lands were shaped by human stewardship; secondly, anthropogenic climate change and other stres-

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sors linked to human causes (e.g., fire exclusion) are and will continue to impact wilderness landscapes, in many cases quite severely; and thirdly, new voices and approaches are needed in wilderness management discussions. However, they charge that we have misinterpreted the Wilderness Act, misrepresented literature and ignored previous scholarship. Let's examine these claims.

Claim 1: Landres and colleagues (2026) claim the untrammeled quality should receive special status over other wilderness qualities.

There is no support for this interpretation in the language of the Act itself. Rather, the Act mandates that wilderness areas should be managed for “the preservation of their wilderness character” (16 U.S.C 1131–1136 § 2 (a)), but does not specify what exactly is meant by “wilderness character” (Nagle 2015).

Landres and colleagues are inconsistent in how they have presented this claim over time. In *Keeping It Wild 2*, an informally refereed interagency wilderness monitoring strategy, Landres and colleagues (2015) clearly acknowledge the equal value of the five wilderness qualities. They write: “because the Wilderness Act does not state that one sentence or one portion of the text in Section 2(c) is more important than another, all five [wilderness] qualities are of equal importance for the purpose of this monitoring strategy” (p. 12; emphasis ours). Yet, Landres and colleagues (2015) go on to assert in *Keeping It Wild 2* that the untrammeled quality should be considered “first among equals” when measuring trends in wilderness character (p. 27). They argue for this exception by citing wilderness literature and their interpretation of the Act (see Landres et al. 2015, p. 27). In their rebuttal to our BioScience paper, Landres and colleagues (2026) make a similar argument for the elevation of untrammeled by citing “the canons of statutory interpretation and the Act’s legislative history.” But here again we note inconsistency. In Landres and colleagues (2020), the authors critique reliance on legislative history as “problematic” and note that some legal scholars and judges have questioned its validity in interpreting statutory language (p. 6). In sum, there is no statutory basis for the claim made by Landres and colleagues (2026) that the untrammeled quality should receive special status. In fact, Landres and colleagues have at times contradicted themselves on this point (e.g., Landres et al. 2020, p. 6).

We do not dispute the importance of the untrammeled quality. However, we do consider the profound impact that elevating it may have on other qualities that constitute wilderness character, such as the natural quality. As stated in one of the first sentences of the Wilderness Act, the goal of this legislation is the “preservation and protection [of lands] in their natural condition” (16 U.S.C 1131–1136 § 2 (a)). In its definition of wilderness, the Act states that a wilderness area should be “land retaining its primeval character and influence... which is *protected* and *managed* so as to preserve its natural conditions” (16 U.S.C 1131–1136 § 2 (c); emphasis ours). Again, although Landres and colleagues (2026) claim that the untrammeled quality warrants special status, Kelly and Landres (2023) have previously asserted that preserving and restoring natural wilderness ecosystems is “equally important” to sustaining untrammeled wilderness (p. 6). As they write: “Demoting naturalness... would undermine one of the primary motivations for wilderness designation” (p. 6).

As the Wilderness Act is largely not prescriptive, wilderness management has always been a balancing act informed by interpretations, worldviews, values, and biases (Rushing et al. in press, Lotan et al. 1983, Preston et al. 2026). Ultimately, Landres and colleagues (2026)

offer interpretations of the Wilderness Act, which should not be conflated with the Act itself.

Claim 2: Landres and colleagues (2026) assert that “nothing in the extensive literature on the meaning of the Wilderness Act states that wilderness ‘should not be managed’ or is ‘free from human influence.’”

Although we agree with Landres and colleagues (2026) that the Wilderness Act does not mandate leave-it-alone, hands-off, or guardians not gardeners philosophies, there are broader wilderness narratives that hold that wilderness should be managed as hands-off, with as little human influence as possible (Yung, 2008, Preston et al. 2026). See, for example, Howard Zahniser’s influential 1963 article “Guardians Not Gardeners,” in which he states that wilderness “should be managed so as to be left unmanaged.” Consequently, emerging research indicates that some managers associate the untrammeled quality with a hands-off approach (e.g., CPL and ALWRI 2023, Preston et al. 2026). For example, although prescribed fire is not prohibited by the Wilderness Act and is permitted by wilderness policies (Alnes 2017), some continue to see it as an inappropriate intervention at odds with wilderness character (CPL and ALWRI 2023, see response to Claim 3). As one manager told Worsham and colleagues (2025): “Prescribed fire would be inappropriate in wilderness.... I think it’s a pretty large trammeling effect on wilderness” (p. 6).

Claim 3: Landres and colleagues (2026) assert that we misrepresent literature, in particular the outcomes of a wilderness and fire management workshop held in 2022. They claim the results of this workshop *do not* support our assertion that the labeling of prescribed fire as a trammeling action may be a barrier to its use in wilderness.

As several of us were organizers of this workshop and participated in the resulting white paper (CPL and ALWRI 2023), we are aware of its contents. Consistent with our assertion that there is a widespread misperception that prescribed fire is contrary to wilderness character, including the untrammeled quality, the white paper agreed to by all workshop organizers and participants in fact states: “In their deliberations, the group identified a perception among land managers and the informed public that the use of prescribed fire may be antithetical to maintaining wilderness character, which in turn has limited the implementation of prescribed fire in wilderness and deterred the establishment of agency policies and priorities that support its use” (CPL and ALWRI 2023, p. 5). Consequently, workshop participants agreed that “clarification that prescribed fire is legal and permissible in wilderness where it is the minimum action necessary for preserving wilderness character could increase acceptance of prescribed fire as a management option” (e.g., CPL and ALWRI 2023, p. 6).

Claim 4: Landres and colleagues (2026) assert that we ignore previous scholarship and do not meaningfully contribute to discussions regarding wilderness management.

We believe our extensive citations speak for themselves. Furthermore, our paper intentionally and meaningfully engages with wilderness scholarship by Indigenous authors, rooted in Indigenous worldviews and concerned with Indigenous perspectives. These critical voices are frequently unrecognized within the Western-centric wilderness canon (Merchant 2003, Hays, 2019, Thomas et al. 2023).

In our paper, we draw on a variety of examples that illustrate the ways in which wildlands, including some today designated as federal wilderness, were influenced by Indigenous stewardship (Deur et al. 2020, Larson et al. 2021, Armstrong et al. 2023, Hodgson et al. 2023). We draw on management examples from reservations and tribally owned lands, recognizing them as valuable models of stewardship (Stumpff 2000, CSKT 2017, Carroll 2014). We include examples that show how some federal wilderness areas are working toward greater inclusion of Tribes and traditional stewardship practices (Lindholm 2023, Silversmith 2025). Lastly, we consider the potential for a guardians and gardeners approach to provide greater support for Tribes seeking to revitalize Indigenous traditional practices (e.g., cultural burning) within wilderness landscapes influenced by such practices (Marks-Block et al. 2021, Stumpff 2003, Hankins et al. 2025). In sum, we intentionally cited a diverse body of literature and, by doing so, aimed to meaningfully advance discussions and intellectual pluralism around wilderness management.

Wilderness moving forward

The Wilderness Act is a document to be celebrated. It's also one whose ambiguities have invited interpretation and debate over decades. Our paper considers different voices, perspectives, interpretations, and pathways that, at times, break with the status quo. As our federal wilderness areas face the immense challenges of the twenty-first century, they would benefit from the ideas and voices of all.

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