# "Untrammeled," "Wilderness Character," and the Challenges of Wilderness Preservation

by Douglas W. Scott

Imprecision in the meaning of the word *wilderness* plagued the wilderness movement during its early decades. Efforts to define wilderness in a practical way—usable in land management—began in the 1920s as the first formal wilderness preservation policies were formulated by Aldo Leopold and the Forest Service, and continued in the 1930s, notably in the work of Bob Marshall, the Forest Service, and a New Deal interagency task force. Wilderness Society and Sierra Club leaders and wilderness conference participants struggled with definitional complexities in the 1940s and 1950s. High-level government panels—a Library of Congress study in 1949 and a major federal commission in 1962—also probed these questions.[1]

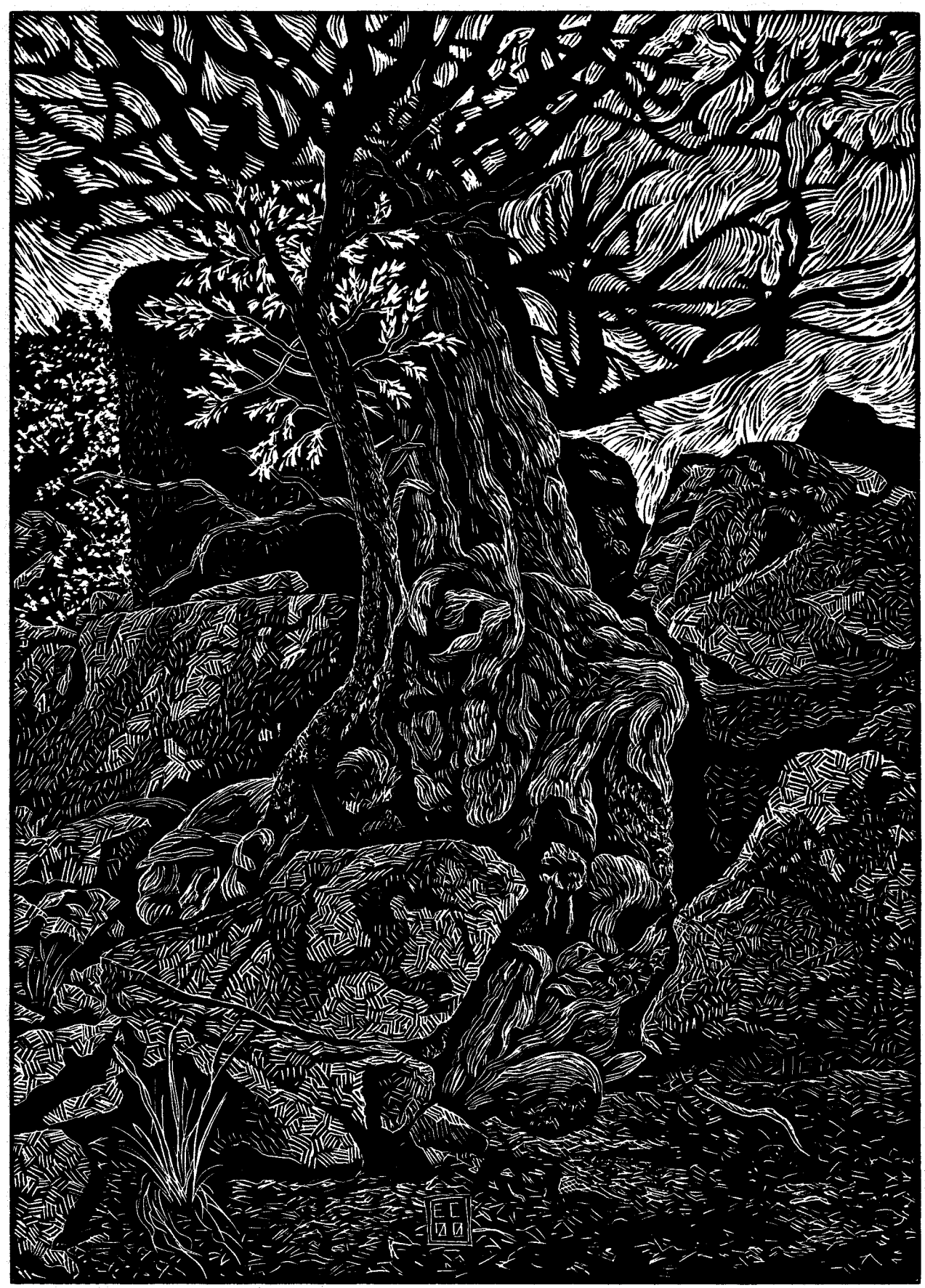
The culmination of all this effort was the Wilderness Act itself. As Howard Zahniser, executive director of The Wilderness Society, drafted the bill in the spring of 1956 that became the Wilderness Act of 1964, he was well aware of the complexities in usage of the word *wilderness* in post–World War II America. He had spelled out the problems in a masterful memorandum submitted to the Library of Congress as a contribution to its 1949 study of wilderness preservation issues:

> It is not surprising that the use of the same word "wilderness" both as a description and as a designation should result in some confusion, when it is realized that cultural values have only comparatively recently been placed on the quality of wilderness and that attempts to apply this sense of values to practical land management is much more recent. The terminology of both the philosophy and the land-management technic [sic] is still formative. It is still necessary to be aware of context in using precisely the vocabulary of the movement. It is not yet feasible to insist on limited usage of the term "wilderness," nor is it expedient to restrict one's own use of the word.[2]

Zahniser himself led the way in resolving this long-standing confusion about the word's definition: it was successful advocacy of the Wilderness Act that finally made it "feasible to insist on limited usage of the term" *wilderness*, because the act established a statutory definition and mandated its use by the four federal agencies that administer wilderness areas.

## Designation and stewardship of wilderness

The Wilderness Act definition is an important guide as citizens, agencies, and Congress consider which lands to designate as wilderness. Yet even an act of Congress is not immune



bristlecone pine, Lost Creek Wilderness Area, Colorado, scratchboard by Evan Cantor

from misinterpretations by federal agencies that can lead to application of the word in ways informed neither by ecology nor by the original intent of the statute itself. Thus, it remains important for wilderness advocates and Congress to step in, as has often been necessary over the 37 years since the enactment of the law, to correct the agencies when they stray into misinterpretations. These misinterpretations—still too often voiced by local spokespeople of the agencies—can mislead the public into believing that the definition sets criteria stricter and more limiting than the act actually allows. As Congress has repeatedly asserted in a long line of precedents, the act's definition accommodates protection for significant expanses of wild land with various histories of past use.[3]

The definition in the Wilderness Act, correctly understood, also guides the stewardship of wilderness areas once designated. Whatever the differences in the other statutory mandates of the four federal land management agencies, once wilderness areas are designated the overriding mandate in the Wilderness Act is that each shall preserve the "wilderness character" of the areas. This command appears in both the declaration of congressional purpose in subsection 2(a) of the act, and in the management direction in subsection 4(b). In 1983 the Committee on Interior and Insular Affairs[4] of the House of Representatives reemphasized this mandate, noting that: "The overriding principle guiding management of all wilderness areas, regardless of which agency administers them, is the Wilderness Act (section 4(b)) mandate to preserve their wilderness character."[5] In issues of wilderness management, too, Congress and wilderness advocates must remain vigilant against misinterpretations that would frustrate the goal of preserving an enduring resource of wilderness.

But what is the essence of the wilderness character the agencies "shall" protect? Where in the act do managers look to understand the goal for their stewardship?

The framers of the Wilderness Act intended that the first sentence of subsection 2(c) establish the meaning of "wilderness character":

> A wilderness, in contrast with those areas where man and his works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain.[6]

These words animate the act's wilderness concept. Without this definition, the subsection 4(b) mandate to preserve "the wilderness character of the area" would be cast adrift, left floating without clear and practical meaning on which administrators can base stewardship decisions.

At the heart of this goal for wilderness stewardship is the word *untrammeled*. No other word in the Wilderness Act is as misunderstood, both as to its meaning and its function in the law. The Oxford English Dictionary traces *trammel* to Latin and eleventh-century Old French roots meaning a kind of net used to catch fish or birds. Current dictionary descriptions of the word *untrammeled* include "unrestrained," "unrestricted," "unimpeded," "unencumbered," "unconfined," "unlimited."[7] At the command of the Wilderness Act, we preserve wilderness character—by definition—by leaving "the earth and its community of life untrammeled by man."

Too often, this word has been misread as *untrampled*, or misinterpreted as some synonymous variation of untrampled, with the erroneous connotation that it describes the present physical or ecological condition of the land or its past land-use history. The word was frequently misused in this way in disputes over designation of particular lands as wilderness in the years immediately after the Wilderness Act became law.

In the most blatant case, in the late 1960s, the Forest Service fostered a "purity" concept that distorted the intent of the Wilderness Act, perverted its definition, and threatened—had it become accepted—to circumscribe the extent of lands deemed qualified for designation.

The Forest Service's fundamental misunderstanding—intentional or not—began at the highest levels, exemplified in 1968 Senate testimony of Chief Edward P. Cliff on the proposed Mount Jefferson Wilderness in Oregon. Citizen groups advocated that Congress override the agency's recommendation to exclude Marion Lake and its surroundings, which would have left a deep indentation in the western boundary of the narrow wilderness area. Chief Cliff resisted, pointing to growing public use of the area:

> It is not an untrammeled area. It is being heavily trammeled, and we need to get in there and provide sanitation facilities, and water and fire grills, and other recreational improvements, to accommodate the use that is already being made there, and to protect the resources of the area.[8]

Contrary to Cliff's statement, an "area" cannot be "trammeled" in the sense he sought to convey. The act applies the word untrammeled not to an "area" or its present condition, but to "the earth and its community of life," that is, to the forces of Nature. Both the formal legislative history of the Wilderness Act (in the limited sense a judge or legal scholar

would use) and the history of Zahniser's word choices as its draftsman provide clear guidance on the intended meaning of the word *untrammeled* and its function in the act's carefully designed structure. The congressional champions of the act, abetted virtually every step of the way by Zahniser, went to great pains through eight years of hearings, debates, and committee reports to make their intent clear. Looking back, the leading Senate opponent of the act, Senator Gordon Allott (R-CO) confirmed: "…there is not a word in the Wilderness Act which [was] not scanned, perused, studied and discussed by the committee. Perhaps there is no other act that was scanned and perused and discussed as thoroughly as every sentence in the Wilderness Act."[9]

### The ideal of wilderness for the future of wilderness

As the draftsman, Zahniser was careful to avoid having the ideal definition of wilderness focus on the present physical or ecological condition of an area of land, or its land-use history. He chose *untrammeled* as the uniquely best word to express a forward-looking perspective about the *future* of land and ecosystems: once designated, wilderness is to be allowed to express its own will—with the forces of Nature untrammeled into the future.[10]

This is just how Congress has applied the definition. For example, during the controversy in the early 1970s over whether once-disturbed areas on national forests in the East could be designated under the Wilderness Act definition, then-Senator James L. Buckley (R-NY), a member of the Senate Interior Committee, expressed a view consistent with Zahniser's:

> Of course, we begin from the ideal, just as the Wilderness Act does. But, if we are to have a national system of wilderness areas, as the drafters of the Wilderness Act obviously intended, less than pristine standards would be necessary for practical application. As a basis for public policy I believe it would be a mistake to assume that the Wilderness Act can have no application to once-disturbed areas.[11]

Zahniser's precision in choosing the word *untrammeled* is well documented. As he worked with congressional staff to refine the Wilderness Bill for reintroduction in 1959, several conservation colleagues urged him to drop the word. One asserted that this word was "hackneyed, relatively meaningless."[12] Another commented that *untrammeled* was a "remnant negative now never used in its positive sense," and that a word in current usage should be substituted—he suggested the word *undisturbed*.[13]

To these entreaties, Zahniser replied that he had chosen the word *untrammeled*, when drafting the bill in the spring of 1956, only after "dissatisfaction with almost every other word that had been suggested," and that he selected it as "a word that fitted our need both as to denotation and connotation."[14] He explained why the word *undisturbed* did not express his intent:

> The problem with the word "Disturbed" (that is, "Undisturbed") is that most of these areas can be considered as disturbed by the human usages for which many of them are being preserved; that is, temporarily disturbed. *The idea within the word "Untrammeled" of their not being subjected to human controls and manipulations that hamper the free play of natural forces is the distinctive one that seems to make this word the most suitable one for its purpose within the Wilderness Bill.*[15]

A close confidant of Zahniser's on these questions was Harvey Broome, a founder of The Wilderness Society and an attorney. In a 1966 letter, Broome recalled that:

> Zahnie and I had this matter up about five years ago when the Forest Service was proposing a heavily [logged-over and] burned-over area in North Carolina as part of the Shining Rock wilderness area. We concluded that under the definition in the Bill, as then drafted, there was no conflict provided roads and mechanical and other uses were prohibited. Congress apparently accepted the same understanding since the Shining Rock Wild Area was incorporated in the wilderness system.…[16]

### Distinguishing the ideal and practical definitions

The context in which *untrammeled* is used in the Wilderness Act is all-important, for it circumscribes how Congress intended the word (and the entire sentence) to function in the structure of the act. The word appears in the first of two sentences in subsection 2(c) of the act. Congress (and Zahniser) intended each sentence to have a distinct definitional purpose—the first states the *ideal* while the second is the more *practical* characterization. Yet, intentionally or not, the Forest Service initially acted as if there were no such distinction.

In its written response to questions raised during the 1967 Senate hearing on the proposed San Rafael Wilderness—the first area added to the wilderness system after enactment of the Wilderness Act—the Forest Service asserted that:

> the law describes wilderness, in part, as "…an area where the earth and its community of life are untrammeled by man…" which is "…managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature.…"[17] [ellipses in original]

Compare this assertion of how the law describes wilderness with the actual words and punctuation of subsection 2(c) of the act and the sleight of hand becomes obvious; they mashed into one the two distinct sentences Congress deliberately separated in order to serve two different functions.

Commenting on the two-part structure of the definitions during the final Senate hearing in 1963, Zahniser noted that:

> In this definition the first sentence is definitive of the meaning of the concept of wilderness, its essence, its essential nature—*a definition that makes plain the character of lands with which the bill deals, the ideal.* The second sentence is descriptive of the areas to which this definition applies—a listing of the specifications of wilderness areas; it sets forth the distinguishing features of areas that have the character of wilderness.…*The first sentence defines the character of wilderness,* the second describes the characteristics of an area of wilderness.[18]

We need not rely solely on Zahniser's expression of intent, for the formal legislative history repeatedly emphasizes Congress's intention to distinguish between two very distinct functions for the two sentences in subsection 2(c).

The first of these sentences originated in the Wilderness Bill introduced in the Senate on June 7, 1956.[19] Slight word changes were made elsewhere in that sentence, but the clause embracing the word *untrammeled* did not change over the ensuing eight years. However, changes were made to the structure of the subsection around it, and these further clarified the function Zahniser and the sponsors intended from the outset.

### What Congress intended in the definition of wilderness

When he introduced the original Wilderness Bill, Senator Hubert Humphrey (D-MN) included a detailed section-by-section interpretation of the bill in his introductory speech. He stated: "The opening section defines the term 'wilderness' both in the abstract and as used specifically in this bill.…"[20]

In 1960 Senator James Murray (D-MT) reintroduced a refined version of the Wilderness Bill intended "to clarify and revise the measure" on the basis of earlier hearings, agency comments, and committee discussions.[21] As the new lead sponsor and as chairman of the Senate committee handling the bill, his explanation is the authoritative expression of legislative intent, includ-

Whatever level of ecological "purity" characterizes portions of an area when it is designated, each is to be managed thenceforth toward the wilderness ideal.

ing why he added what became the second sentence in the subsection enacted four years later. Murray explained to the Senate: "The added detail in the definition of wilderness is in response to requests for additional and more concrete details in defining areas of wilderness."[22] The new second sentence Murray added was:

> An area of wilderness is further defined to mean in this Act 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, archeological, or other features of scientific, educational, scenic, or historical value.[23]

As distinct from the abstract, ideal definition, this second sentence defines what Jay Hughes called "institutional wilderness"—specific areas of land that "society has called 'wilderness' in terms of definitely bounded, named, managed, and legally identifiable tracts of public land."[24] The bill's congressional sponsors repeatedly emphasized that the two sentences serve two distinct functions.

In 1961, Senator Clinton P. Anderson (D-NM) succeeded Murray as chairman of the Senate committee and lead sponsor of the Wilderness Bill. In opening hearings that year, he explained his interpretation in a detailed section-by-section analysis:

> Section 2(b) contains two definitions of wilderness.[25] The first sentence is a definition of pure wilderness areas, where "the earth and its community of life are untrammeled by man.…" It states the ideal.
>
> The second sentence defines the meaning or nature of an area of wilderness as used in the proposed act: A substantial area retaining its primeval character, without permanent improvements, which is to be protected and managed so man's works are "substantially unnoticeable."
>
> *The second of these definitions of the term, giving the meaning used in the act, is somewhat less "severe" or "pure" than the first.*[26]

The Senate passed the Wilderness Bill twice, in 1961 and in the following Congress, in 1963. On both occasions, the formal reports of the Committee on Interior and Insular Affairs[27] included a section-by-section analysis, which noted the nature of the two-part definition:

> Section 2(b) defines wilderness in two ways: First, in an ideal concept of wilderness areas where the natural community of life is untrammeled by man, who visits but does not remain, and second, as it is to be considered for the purposes of the act: areas where man's work is substantially unnoticeable, where there is outstanding opportunity for solitude or a primitive or unconfined type of recreation, which are of adequate size to make practicable preservation as wilderness, and which may have ecological, geological, or other scientific, educational, scenic, and historical values.[28]

Representative John P. Saylor (R-PA) was the original sponsor and leading champion of the Wilderness Act in the House of Representatives. He explained the distinction between the two definitional sentences in his analysis as he introduced a refined version of the Wilderness Bill on November 7, 1963:

> Section 2(b) defines wilderness in three sentences.[29] The first states the nature of wilderness in an ideal concept of areas where the natural community of life is untrammeled by man, who visits but does not remain. The second sentence describes an area of wilderness as it is to be considered for the purposes of the act—areas where man's works are substantially unnoticeable.…[30]

As traced here, *every one* of the lead sponsors of the Wilderness Act explicitly intended the first sentence of subsection 2(c) to express the "abstract" (Humphrey) or "ideal" (Anderson, Saylor), distinct from the "more concrete details in defining areas of wilderness" (Murray) which are spelled out in the second sentence.

As Zahniser had noted in 1949, it was important to recognize that the same word "wilderness" is used both as a description and as a designation. The two-part definition in the Wilderness Act follows that distinction. Of course, the distinction between an ideal definition and a less-than-ideal set of details for practical implementation was and is common.[31]

### The non-degradation principle in wilderness stewardship

Given the precise word choices and the care taken in structuring the two-sentence definition in the Wilderness Act, it is beyond dispute that:

- Designation questions of whether a specific area of land meets the definition of wilderness in the act are *not* about whether that land is "untrammeled" (or untrampled). The word *untrammeled*, which applies once an area is des-

ignated, appears only in the "pure," "ideal" definition that serves a quite different function in the act. For its part, the Forest Service correctly defines untrammeled in the current version of the Forest Service Manual.[32]

- The *only* criteria for designation of an area is the "somewhat less 'severe' or 'pure'" (Anderson) defining details set forth in the second, non-ideal definition "for the purposes of the act." A number of very clear qualifiers—"*generally* appears to have been affected *primarily* by the forces of nature, with the imprint of man's work *substantially* unnoticeable"—provide practical, workable criteria for entry of areas into the National Wilderness Preservation System. This is how Congress intended and has consistently applied the Wilderness Act, and it is how a federal judge read it as well, in one of the few cases where these issues arose.[33]
- The ideal definition has an equally important, but different function; it is not mere congressional poetry, for the canons of statutory interpretation forbid such an interpretation.[34] The function of this sentence—with its careful use of the word *untrammeled*—is to define the "ideal" (Anderson), the "essence" (Zahniser) of the wilderness character it is the duty of conservationists and land managers to protect.

There is a supreme logic to this careful structure of the two definitions. Applying the practical criteria of the second sentence in subsection 2(c), the 1964 act itself designated numerous areas with a fading history of the "imprint of man's work," and many others have been designated in subsequent acts of Congress. But, however less-than-pure such areas may have been when designated, once designated, the command of the act is to preserve the "wilderness character" of each area, restraining human influences in order that the earth and its community of life are untrammeled by man.

This is, at its heart, a non-degradation principle. Just as the non-degradation principle in the Clean Air Act does not allow polluting purer air down to minimum-level, health-based air quality standards, but requires that areas of pristine air quality be protected, so the acceptance of past human imprints and disturbances in some lands being designated as wilderness does not mean such imprints and disturbances may therefore be allowed to invade other, wilder wilderness lands already designated.[35] Whatever level of ecological "purity" characterizes portions of an area when it is designated, each is to be managed thenceforth toward the wilderness ideal.

Zahniser was adamant that "management" of the ecosystem in each wilderness area should occur almost entirely by restraint on human influences from its boundaries, rather than by manipulation within. He gave us his admonition about wilderness management in the epigrammatic title he chose for an editorial in *The Living Wilderness* in 1963: "Guardians Not Gardeners." The guardian philosophy, he wrote, is one of "protecting areas at their boundaries and trying to let natural forces operate within the wilderness untrammeled by man."[36] A federal judge, writing in 1975, echoed Zahniser's analogy: "Nature may not always be as beautiful as a garden but producing gardens is not the aim of the Wilderness Act."[37]

By stating the ideal of "pure wilderness," its "essential nature," Zahniser's ringing first sentence of subsection 2(c) breathes ecological life into the phrase "wilderness character." He and the Congress thus set the goal toward which our stewardship of wilderness areas is to strive: To free Nature within these special places, as best we can, from the fetters and trammels of man's influence, so that wilderness may be—through our own self-restraint—areas "where the earth and its community of life are untrammeled by man." ☾

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**NOTES**

1. The broad history of this evolution in wilderness concepts and policy is traced in my recent Pew Wilderness Center Briefing Paper: Douglas W. Scott, 2001, A wilderness-forever future: A short history of the National Wilderness Preservation System (Washington, D.C.), which is available at www.pewwildernesscenter.org. See also: Aldo Leopold, 1921, The wilderness and its place in forest recreational policy, *Journal of Forestry* 19(7): 720; Robert Marshall, 1930, The problem of the wilderness, *The Scientific Monthly* (February): 148; Marshall (undated), Preliminary statement on terminology, suggested definitions of outdoor recreational areas, attached to Minutes of the Second Meeting of Recreation Committee, February 11, 1936, Natural Resources Committee, copy in author's files; C. Frank Keyser, 1949, The preservation of wilderness areas: An analysis of opinion on the problem, Subcommittee on Wildlife and Fisheries Conservation, Committee on Merchant Marine and Fisheries, U.S. House of Representatives, Committee Print 19, August 24; and Wildland Research Center, 1962, Wilderness and recreation: A report on resources, values, and problems, a report to the Outdoor Recreation Resources Review Commission (Washington, D.C.: Government Printing Office): esp. 25–26.
2. Zahniser, 1949, A statement on wilderness preservation in reply to a questionnaire, March 1. Reprinted in *National Wilderness Preservation Act,* hearings before the Senate Committee on Interior and Insular Affairs (85th Congress, 1st session) on S. 1176, Washington, D.C., June 19 and 20,

1957: 169. Zahniser returned to this point during discussions at the Sierra Club's 2nd Biennial Wilderness Conference in 1951: "Howard Zahniser thought the use of the same word, 'wilderness,' for both recreational and land-management problems (which are not the same) must be confusing; but even if we are not yet ready to restrict ourselves with too strict a definition, we must not lose sight of the necessity of preserving primeval environment, freedom from mechanization, a sense of remoteness, and those characteristics that impress visitors with their relationship to nature." Sierra Club, 1964, Summaries of the "Proceedings of the First Five Biennial Wilderness Conferences," in *Wildlands in our Civilization* (San Francisco: Sierra Club), 144.

3. The legislative history and precedents relating to designation criteria for wilderness are reviewed in my article, 2001, Congress's practical criteria for designating wilderness, *Wild Earth* 11(1): 28–32. A series of Pew Wilderness Center Briefing Papers provides detail on legislative history and precedents for many topics involved in wilderness designation and management; see www.pewwildernesscenter.org. I welcome inquiries about issues and precedents not yet covered in this series, as well as suggestions of precedents I may have missed.
4. Now renamed the Committee on Resources.
5. U.S. House, 1983, *California Wilderness Act of 1983*, H. Rept. 98-40 (98th Congress, 1st session), March 18: 43.
6. Wilderness Act, 1964, *U.S. Code* Vol. 16, sec. 1132(c).
7. Webster's 1913 unabridged dictionary defines *untrammeled* as "Not hampered or impeded; free." The transitive verb form derives from the noun antonym, "trammel." The online dictionary Wordsmyth provides considerable additional detail. Here is a condensation of the full Wordsmyth entry found at www.wordsmyth.net:

   TRAMMEL Part of Speech noun Definition 1. (usu. pl.) a restraint or impediment to free movement. Definition 2. a restraint used on a horse's feet to teach it to amble; fetter. Definition 3. a device used to gauge and adjust the alignment of machinery parts; tram. Definition 4. a net for catching fish or wild birds.
   Part of Speech transitive verb Inflected Forms *trammeled, trammeling, trammels.* Definition 1. to impede, restrict, or confine; hobble. Definition 2. to ensnare with, or as if with, a net. Related Words *encumber, enthrall, confine, circumscribe, shackle, enslave, limit.*

8. Statement of Edward P. Cliff, 1968, Chief, Forest Service, *San Gabriel, Washakie, and Mount Jefferson Wilderness Areas*, hearing before the Senate Subcommittee on Public Lands, Committee on Interior and Insular Affairs (90th Congress, 2d session) on S. 2751, February 19: 11. Congress did designate Marion Lake as part of the wilderness established in 1968.
9. U.S. Senate, 1972, Committee on Interior and Insular Affairs, hearings on designation of wilderness areas, S. 2453 and related wilderness bills (92nd Congress, 2d session) May 5: 64.
10. A contrary view was expressed eight years after the enactment of the Wilderness Act by one of Zahniser's coworkers on the Wilderness Bill, Joe Penfold, conservation director of the Izaak Walton League of America: "A crucial point is that every effort made by conservationists in the half century leading to the Wilderness Act was premised on obtaining recognition and acceptance of wilderness as a natural ecosystem, untrammeled by man *in the past* and permitted to continue untrammeled and undisturbed by man's activities *in the future*." J. W. Penfold, 1972, Wilderness east—A dilemma, *American Forests* 78(4): 24 (emphasis in the original). This idea of statutory wilderness being limited to natural ecosystems "untrammeled by man *in the past*" was not, contrary to Penfold's after-the-fact assertion, ever used by Zahniser, who disclaimed exactly that idea, as documented here.
11. *Congressional Record*, 1973, January 11: 757. Buckley is now a senior judge on the Federal Court of Appeals for the D.C. Circuit. The history of the eastern wilderness controversy is told by James Morton Turner, 2001, Wilderness east: Reclaiming history, *Wild Earth* 11(1): 19–27.
12. C. Edward (Ned) Graves, 1959, letter to Howard Zahniser, February 13, quoting Philip Hyde. Wilderness Society files and author's files.
13. Weldon F. Heald, 1959, letter to C. Edward Graves, February 12. Wilderness Society files and author's files.
14. Howard Zahniser, 1959, letter to C. Edwards Graves, April 25. Wilderness Society files and author's files.
15. Howard Zahniser, 1959, letter to C. Edwards Graves, April 25 (emphasis added).
16. Harvey Broome, 1966, letter to Robert W. Jasperson, September 10. Papers of The Wilderness Society, 7: 173 (Tennessee: Great Smoky Mountains National Park), Denver Public Library. I am grateful to James Morton Turner who found this correspondence and called it to my attention. It supplements the history of Broome's role in on-the-ground assessing of the qualification of the Shining Rock Wilderness provided in my article, 2001, Congress's practical criteria for designating wilderness, *Wild Earth* 11(1): 28–32.
17. Unsigned letter, 1967, from the Forest Service to Hon. Frank Church, April 26, reprinted in *San Rafael Wilderness*, hearings before the Senate Subcommittee on Public Lands, Committee on Interior and Insular Affairs (90th Congress, 1st session) on S. 889, April 11: 81.
18. Howard Zahniser, 1963, Executive Director of the Wilderness Society, supplementary statement in *National Wilderness Preservation Act*, hearings before the Committee on Interior and Insular Affairs, United States Senate (88th Congress, 1st session), on S. 4, February 28 and March 1: 68 (emphasis added).
19. U.S. Senate, 1956, Subsection 1(c) of S. 4013, 84th Congress, 2nd Session.
20. Sen. Hubert Humphrey, 1956, Wilderness preservation, *Congressional Record*, June 7. The cited version is from page four of a booklet reprint of Senator Humphrey's speech and the text of the bill, which was printed for widespread distribution by Humphrey and The Wilderness Society.
21. Sen. James Murray, 1960, *Congressional Record*, July 2: 14453.
22. Murray, 1960, 14454.
23. This is the second sentence of subsection 1(d) of Murray's bill, S. 3809; it became subsection 2(c) of the final act. This wording was somewhat modified between 1960 and enactment of the act in 1964, but not in any material way. *Congressional Record*, 1960, July 2: 14455.
24. Jay Melvin Hughes, 1964, Abstract of wilderness land allocation in a multiple use forest management framework in the Pacific Northwest, unpublished Ph.D. dissertation (East Lansing: Michigan State University), quoted in Ronald Lee Stewart, 1968, The Wilderness Preservation Act, unpublished master's thesis (Eastern New Mexico University): 48.
25. This became subsection 2(c) of the act.
26. Sen. Clinton P. Anderson, 1961, in *Wilderness Act*, hearing before the Senate Committee on Interior and Insular Affairs (87th Congress, 1st session) on S. 174, February 27–28: 2, emphasis added.
27. Now renamed Committee on Energy and Natural Resources.
28. U.S. Senate, 1963, S. Rept. No. 88-109, April 3: 7–8. Subsection 2(b) referred to here became subsection 2(c) in the act.
29. This subsection, which became 2(c) of the act, ended up comprised of only two sentences.
30. Rep. John P. Saylor, 1963, *Congressional Record*, November 7: 20354. Saylor's remarks came as he introduced H.R. 9070, the version of the Wilderness Bill that became the vehicle for House passage of the act the following summer.
31. For example, "all men are created equal," says the ideal in our Declaration of Independence, leaving the less-than-ideal details—no equality for women, no equality for slaves—to our pre-amendment U.S. Constitution.
32. The Forest Service Manual provisions on wilderness management define *untrammeled*: "In the context of the Wilderness Act, an untrammeled area is where human influence does not impede the free play of natural forces or interfere with natural processes in the ecosystem." Forest Service Manual 2320.5(2). For this and the entire manual chapter concerning wilderness management, see www.wilderness.net/nwps/policy/fs_manual_policy.cfm.
33. *Parker v. United States*, 1970, 309 F.Supp. 593, U.S. District Court for the District of Colorado, Memorandum Opinion and Order, February 27. This is the "East Meadow Creek" decision that assured protection of roadless lands contiguous to national forest "primitive areas" until Congress completed the review of each of those areas as required by the Wilderness Act.
34. "It is, of course, a cardinal rule of statutory construction that effect should be given to every provision of a statute." Court of Appeals for the 10thCircuit, 448 F.2d 797.
35. The "prevention of significant deterioration of air quality" (PSD) provisions of the Clean Air Act prevent clean air areas from being polluted to the worst levels allowed by the health-based National Ambient Air Quality Standards. *U.S. Code*, Vol. 42, secs. 7470–7492 (Part C, Title I).
36. Howard Zahniser, 1963, Guardians Not Gardeners, *The Living Wilderness* 83: 2.
37. *Minnesota Public Interest Research Group v. Butz*, 1975, 401 F.Supp. 1276, esp. 1331, U.S. District Court for the District of Minnesota, Memorandum and Order, August 13. This is one of serveral court opinions concerning logging in the Boundary Waters Canoe Area.