



MOVING MOUNTAINS: ALDO LEOPOLD &

A Sand County Almanac

His love was for present things, and these things were present somewhere; to find them required only the free sky, and the will to ply his wings. —Aldo Leopold, "On a Monument to the Pigeon" (1949:112).

Literary classics are the mountains of our minds. They shape us, subtly and continually. They cast long shadows. They provide access to higher realms. They make their own intellectual weather. We are prone to take them for granted, yet they so define our view of the world, and of ourselves, that we can hardly imagine the world without them.

The history of American conservation contains its own range of classics: Thoreau's *Walden*, Marsh's *Man and Nature*, Muir's *My First Summer in the Sierra*, Stegner's *Beyond the Hundredth Meridian*, Carson's *Silent Spring*, Abbey's *Desert Solitaire*, Berry's *The Unsettling of America*, to name just a few of the high peaks. But conservation's literary landscape is rich in its variety and abundance, and holds many less prominent but no less durable expressions. We return to their pages again and again, and we always find in them something timeless and something new.

Because mountains seem permanent, we may easily disregard the intense tectonic shifts and internal

pressures that gave rise to them. Behind every story is another story. *A Sand County Almanac* is no exception. The face of this particular mountain is still fresh. The very pebbles seem still to be settling. *A Sand County Almanac* emerged from economic depression, the Dust Bowl, and World War II, in a time of rapid technological change, scientific revolutions, and widespread environmental deterioration. But it was also a time when its author, Aldo Leopold, strove to provide solid foundations for conservation (Meine 1994). His conviction was that conservation had to rest on a base that included not only the integrated natural sciences, but also philosophy, ethics, history, and literature. *A Sand County Almanac*, as it turned out, was the final proof of his conviction.

THE STATE OF THE PROFESSION, CIRCA 1940

Future generations of conservationists would have understood if, by 1940, Aldo Leopold had begun to rest on his laurels—which were many. Building on his early years as an innovative forester in the U.S. Forest Service, Leopold had emerged in the 1930s as one of the preeminent leaders in wildlife ecology and management (Flader 1974, Meine 1988). Those years saw extraordinary changes in the field, and Leopold was involved in most of them (Dunlap 1988, Meine 1988). Under contract with the Sporting Arms and Ammunitions Manufacturers' Institute, he had begun in the late 1920s the field studies whose results appeared in his landmark *Report on a Game Survey of the North Central States* (Leopold 1931). Increasingly attentive to the fundamental relevance of ecology, Leopold argued in print and at the podium that game management had to refocus its efforts: away from the tighter hunting regulations, game farming operations, and

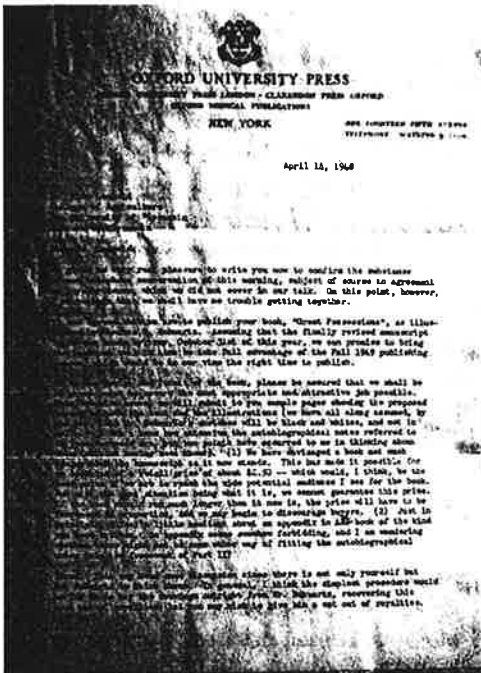
predator-control programs that then dominated game conservation, and towards the protection, enhancement, and restoration of habitat. This essential shift in approach gained the imprimatur of the American Game Association in its "American Game Policy," a document (destined for a long life) prepared by a committee that Leopold chaired (Leopold 1930). With publication of Leopold's *Game Management* in 1933, the field gained its first textbook; with Leopold's appointment that same year to the Chair of Game Management at the University of Wisconsin, it gained its first full-time professor. Leopold's students from the pre-war period provided many of the

profession's early leaders, including Frances Hamerstrom, Frederick Hamerstrom, Arthur Hawkins, Joe Hickey, H. Albert Hochbaum, Robert McCabe, and Lyle Sowls (McCabe 1988). Through the 1930s, Leopold helped to found or to redirect many of the nation's leading conservation agencies and nongovernmental organi-

(1937), and passage and implementation of the Pittman-Robertson Federal Aid in Wildlife Restoration Act of 1937 (Trefethen 1975, Meine 1988). Important as these events were, they were only outward indicators of still deeper changes in wildlife conservation. The field was expanding to encompass not just game species, but nongame animals and (at least for some managers) wild plants. At the same time, concern for threatened species and biotic communities was increasing (Leopold 1936). Wildlife management was securing an academic foothold in both the basic and applied sciences, particularly in field ecology (Leopold 1939). Its practitioners were beginning to explore methods of restoring native species and communities. Its theoreticians were beginning to develop more sophisticated connections with colleagues in education, the agricultural sciences, economics, and public policy.

According to Flader and Callicott (1991:19), "By 1940, Leopold could survey from its pinnacle the profession he had done more than anyone else to create." He served as president of the young Wildlife Society that year and used the opportunity of his presidential address in March 1940 to step back and put the recent advances into perspective. Leopold's message in "The State of the Profession" was at once practical and visionary, sobering and challenging. He began with a disarming admission: "We are attempting to manage wildlife, but it is by no means certain that we shall succeed, or that this will be our most important contribution to the design for living. For example, we may, without knowing it, be helping to write a new definition of what science is for. We are not scientists. We disqualify ourselves at the outset by professing loyalty to and affection for a thing: wildlife. A scientist in the old sense may have no loyalties except to abstractions, no affections except for his own kind" (Leopold 1940:343).

Through the 1940s, and especially with the unfolding of events during and after World War II, Leopold became increasingly disenchanted with the course of the modern scientific enterprise. Although himself a pioneer in a new branch of basic and applied science, he saw the drift toward what he considered misapplied science as a grave danger, for which scientists should not shirk responsibility. Already, by 1940, he was voicing concern over this trend. He told The Wildlife Society audience, "The definitions of science written by, let us say, the National



Oxford University Press acceptance letter.
Photo courtesy the author and University of
Wisconsin archives.

zations, including the U.S. Soil Conservation Service, the U.S. Biological Survey, the U.S. Forest Service, the Society of American Foresters, the Wilderness Society, and the National Wildlife Federation.

Within wildlife management proper, Leopold played a central role in the formative events of the mid- to late-1930s: creation of the American Wildlife Institute (later the Wildlife Management Institute) in 1935, development of the Cooperative Wildlife Research Unit system (1935), establishment of the North American Wildlife Conference (beginning in 1936), the founding of The Wildlife Society and its new *Journal of Wildlife Management*

Academy, deal almost exclusively with the creation and exercise of power. But what about the creation and exercise of wonder or respect for workmanship in nature?" (Leopold 1940:343). To Leopold, this was not merely a peripheral concern for the new wave of "wildlifers"; it lay at the very core of their work. Mincing no words, he warned that "unless we can help rewrite the objectives of science, our job is predestined to failure" (Leopold 1940:344).

Rewriting the "objectives of science" plainly took matters of wildlife conservation beyond the realm of science per se and into the realm of the arts and letters, ethics and philosophy. From his earliest days as a young hunter, aspiring ornithologist, and outdoor adventurer, Leopold tended to take an integrated approach to conservation matters (Meine 1988:1-83). He carried this tendency over into his professional life. As a forester he had helped to push the boundaries of the field outward to include concern over issues of soil erosion, recreation, game protection, and wilderness preservation. In the heady days of the 1930s, as wildlife conservation was metamorphosing, he kept broad intellectual margins, regularly drawing connections to other disciplines in his writing. Now, as one of the profession's respected elders, having seen it through its infancy and preparing it for its adolescence, he reasserted the point:

Our profession began with the job of producing something to shoot. However important this may seem to us, it is not important to the emancipated moderns who no longer feel soil between their toes. We find that we cannot produce much to shoot until the landowner changes his way of using land, and he in turn cannot change his ways until his teachers, bankers, customers, editors, governors, and trespassers change their ideas about what land is for. To change ideas about what land is for is to change ideas about what anything is for. Thus we started to move a straw, and end up with the job of moving mountains (Leopold 1940:346).

How to move a mountain? Not quickly, and not easily. To develop new wildlife management techniques—to document food habits, conduct life history studies, develop census

methods, understand how the pattern of cover types influences populations, and so forth—was the daily work of a rapidly growing number of students and researchers. To develop new modes of perception and a new philosophy of land use was the work of generations and of other domains of the human mind. Having himself defined the technical foundations of the field in *Game Management*, Leopold now challenged his profes-

...we may, without knowing it, be helping to write a new definition of what science is for. We are not scientists. We disqualify ourselves at the outset by professing loyalty to and affection for a thing: wildlife. A scientist in the old sense may have no loyalties except to abstractions, no affections except for his own kind" (Leopold 1940:343).

sional progeny not to neglect this more complex task: "I daresay few wildlife managers have any intent or desire to contribute to art and literature, yet the ecological dramas which we must discover if we are to manage wildlife are inferior only to the human drama as the subject matter for the fine arts" (Leopold 1940:344). Even as wildlife ecology was beginning to grow confident in its expanded role as a science, its chief scientist was advising its adherents to surmount "the senseless barrier between science and art."

Had Leopold himself neglected the humanistic aspects of wildlife conservation, he would still be remembered as a highly effective thinker, leader, activist, and teacher. In his own view, however, the profession would have remained incomplete, its scope restricted. The necessary (and incomplete) task of integrating wildlife management into a still more comprehensive conservation vision would have been further postponed. Leopold understood that the humanities must help to define "the objectives of science." In articulating that need, Leopold established a very high standard for his colleagues. In meeting that standard with *A Sand County Almanac*, he provided an exemplary model for them.

EVOLUTION OF A CLASSIC

The nuanced voice of Aldo Leopold that readers would come to know through *A Sand County Almanac* was late in developing. At the time of his 1940 presidential address, Leopold was 53 years old. He had not yet even begun

to think about the collection of essays that became the Almanac. That his thoughts had been moving in that general direction, however, can be seen in his published works at the time. Leopold's pen had always been sharp, productive, and provocative. His output of scientific papers, professional reports, editorials, policy statements, popular articles, and essays already amounted to some 200 publications. In the late 1930s, however, he began to find new possibilities in his literary voice.

The first outward indication of this came in January 1937, with publication of the essay "The thick-billed parrot in Chihuahua" in *The Condor*. The previous fall, Leopold and a friend had ventured into Mexico's Sierra Madre Occidental for a 2 week, bow-hunting trip. This trip (and another at the end of 1937) would have a lasting impact on Leopold's views of land management (Meine 1988:367-368, Nabhan 1997). It also had an immediate impact on the tone of his public writing. "The thick-billed parrot in Chihuahua" was an unusually evocative account for Leopold and no doubt for the readers of *The Condor*. In it Leopold directly addressed the relationship between scientific understanding and the apprehension of beauty. Seeking to convey the "imponderable essence" of the Sierra Madre, he focused on the riotous calls of the "roistering" parrots. "As a proper ornithologist," he wrote, "I should doubtless try to describe the call. It superficially resembles that of the Piñon Jay, but the music of the piñoneros is soft and nostalgic as the haze hanging in their native canyons, while that of the Guacamaja is louder and full of the salty enthusiasm of high comedy" (Leopold 1937a:10). Leopold later included the essay, in revised form, in *A Sand County Almanac* under the title "Guacamaja" (the native name for the thick-billed parrot [*Rynchopsitta pachyrhyncha*]). It was, in essence, the first installment in the collection of essays to come. (See Table 1; The essay "The Alder Fork" and a portion of "The Land Ethic" had appeared in print in 1932 and 1933, respectively, but were only fitted into the evolving manuscript of *A Sand County Almanac* at a late stage in its development).

Emboldened perhaps by *The Condor's* publication of his rather unorthodox essay, Leopold followed it up with "Marshland Elegy," his haunting ode to cranes and their wetland homes (Leopold 1937b). *American Forests* published it in

October of that year. A few months later, *Bird-Lore*, the periodical of the National Audubon Society, published "Conservation Esthetic," in which Leopold rehearsed the point that he would make later in his presidential address to The Wildlife Society. "Let no man jump to the conclusion that [he] must take his Ph.D. in ecology before he can 'see' his country. On the contrary, the Ph.D. may become as callous as an undertaker to the mysteries at which he officiates" (Leopold 1938:107). Leopold plainly appreciated the need for antidotes to insensitivity. Even as science was improving the capacity of wildlife conservationists to analyze and manage, Leopold suggested that aesthetic awareness would be needed to enhance their capacity to perceive (Callicott 1987). It was as if Leopold, recognizing that wildlife management's scientific underpinnings were finally well set, felt freer now to attend to its cultural and ethical bases.

In November 1938 Leopold produced the first in a series of concise essays on farm wildlife for the *Wisconsin Agriculturist and Farmer*. Over the next 3-4 years, 29 of these informative essays would appear in the widely distributed periodical. (From 1943 to 1945 Leopold would publish a similar series in the *Wisconsin Conservation Bulletin*). Several of these short pieces would later be incorporated, in revised form, into *A Sand County Almanac*. The most significant impact of the series, however, may have been to oblige Leopold to communicate regularly with a general audience. His growing experience as a college instructor during these years also seems to have increased his dedication to this task of raising the general level of ecological literacy. "The citizen-conservationist," Leopold wrote in 1937, "needs an understanding of wildlife ecology not only to enable him to function as a critic of sound policy, but to enable him to derive maximum enjoyment from his contacts with the land" (Leopold 1937c:80). Between 1939 and 1941, this intent was evident not only in Leopold's farm wildlife essays, but in several other publications of the period, including "Song of the Gavilan," "Escudilla," and "Cheat Takes Over" (first published in the *Journal of Wildlife Management*, *American Forests*, and *The Land*, respectively).

By the summer of 1941, Leopold had begun to think about bringing several of his essays together into a volume. In November of that year,

an editor at Alfred A. Knopf wrote to Leopold indicating interest in "a good book on wildlife observation... a personal book recounting adventures in the field." As the editor saw it, this book should appeal to laymen while allowing the author the opportunity to offer "opinions on ecology and conservation" (Ribbens 1987). Leopold, it happened, had already been discussing such a project with his graduate student H. Albert Hochbaum, a talented artist and waterfowl biologist. Hochbaum and Leopold were both heavily burdened with their normal workload, but had agreed to work together as time allowed. Their intense, sometimes rocky, but mutually challenging collaboration over the next several years would prove critical to the ultimate tone of the collection as a whole (Ribbens 1987, Meine 1988:450-461).

Leopold soon found himself with more time to devote to this project. As the United States entered World War II, and students departed from the University of Wisconsin campus, Leopold's teaching and advising load ebbed. Leopold maintained a busy pen through 1942, but it was not until he received a follow-up inquiry from Knopf in April 1943 that he focused his attentions again on the proposed collection. Over the next year, Leopold drafted and redrafted some of his most memorable essays. Among these, importantly, were several that drew upon Leopold's activities with his family at the exhausted piece of farm property that he had acquired in 1935. These essays (in particular "Great Possessions") gave a more personal tone to the evolving collection.

Albert Hochbaum, who was carefully reading and reviewing the draft essays, recognized this as a turning point in Leopold's literary development. In one of many blunt but respectful exchanges between them during this period, Hochbaum encouraged Leopold in this new direction. "This series of sketches brings the man [Leopold] himself into focus....As you round out this collection, take a sidewise glance at this fellow and decide just how much of him you want to put on paper" (Meine 1988:457). Less than a month later, Leopold responded to Hochbaum's prodding with "Thinking Like a Mountain," the famous account of his killing of a wolf during his youthful days as a forester in the American Southwest. Committed to the new course the collection was now taking, Leopold changed its working title to "Thinking

Like a Mountain—And Other Essays."

By June 1944, Leopold's manuscript included 13 essays (Ribbens 1987). He sent these off to Knopf and to an editor at the Macmillan Company who had also expressed interest in Leopold's writing. Both publishers turned down the manuscript. Macmillan, citing wartime paper shortages, rejected it outright. Knopf's editor felt that the essays were simply too varied in tone, length, and subject to hang together. The Knopf review, however, gave Leopold room for hope that, with extensive revision and additional essays, these stylistic and structural problems could be overcome. By the end of 1944, Leopold indicated to Hochbaum that he was playing with "the almanac idea... as a means of giving 'unity' to my scattered essays." The earlier farm wildlife essays seem to have prompted him to consider the almanac format; in any case, this was the first mention of it in the context of the evolving collection (Ribbens 1987).

Other professional obligations absorbed Leopold's time over the following year. Not until the war was over, another rejection letter received (this one from the University of Minnesota Press), and the correspondence with Knopf reestablished did Leopold return to his disparate batch of essays. In correspondence with Knopf in the spring of 1946, Leopold suggested that he might add several of the more "philosophical" essays he had published in professional journals—thus making the unity of the essays even more problematic. Knopf's skeptical but supportive editor pointed out the difficulty in "fitting the pieces together in a way that will not seem haphazard or annoying to the reader" (Ribbens 1987).

Through the remainder of 1946 and into early 1947, this would remain a quandary for Leopold.



*Great Possessions manuscript.
Photo courtesy the author and
University of Wisconsin archives.*

TABLE 1. CHRONOLOGY OF A SAND COUNTY ALMANAC

This chronology of events leading up to the publication of *A Sand County Almanac* draws on information in the Aldo Leopold Papers at the University of Wisconsin-Madison and in publications by Flader (1974), Ribbens (1987), and Meine (1988).

Jan-Feb 1937	<i>The Condor</i> publishes Leopold's "The thick-billed parrot in Chihuahua."
Oct 1937	<i>American Forests</i> publishes Leopold's "Marshland Elegy."
Mar-Apr 1938	<i>Bird-Lore</i> publishes Leopold's "Conservation Esthetic."
Nov 1938	<i>Wisconsin Agriculturist and Farmer</i> publishes the first of Leopold's series of short essays on farm wildlife.
early 1941	Leopold discusses possible collaboration with his friend and student H. Albert Hochbaum.
Nov 1941-Jan 1942	Alfred A. Knopf indicates interest in Leopold's collection of essays in initial exchange of correspondence.
Jan 1943-Jun 1944	Leopold drafts and revises many essays; corresponds regularly with Hochbaum over the nature of the collection and Leopold's narrative stance.
1943	<i>Wisconsin Conservation Bulletin</i> begins publishing short essays by Leopold.
8 Sep 1943	Leopold drafts "Great Possessions."
Jan 1944	Leopold "working steadily" on the essays; working title for the collection is "Marshland Elegy—And Other Essays."
1 Apr 1944	Leopold drafts "Thinking Like a Mountain."
late Apr 1944	Leopold meets Macmillan Company editor at the 9th North American Wildlife Conference.
6 Jun 1944	Leopold sends 13 essays to Macmillan Company, under the title "Thinking Like a Mountain—And Other Essays;" sends the same essays to Knopf 2 days later.
Jul 1944	Rejection letter from Macmillan Company.
24 Jul 1944	Rejection letter from Knopf.
24 Aug 1944	Knopf sends follow-up letter, with reviewers' comments, to Leopold.
Nov 1944	Leopold writes to Hochbaum that he is "flirting with the almanac idea" for the essay collection.
19 Jan 1946	Leopold forwards essays to the University of Minnesota Press; rejected 2 weeks later.
Apr 1946	Leopold's correspondence with Knopf resumes.
Fall 1946	Leopold undertakes extensive drafting and revision of essays.

-
- | | |
|-----------------------|---|
| 31 Oct 1946 | Initial communication between Leopold and Oxford University Press. |
| Feb 1947 | Albert Hochbaum removes himself from the project. |
| Jul 1947 | Leopold overhauls structure of the collection; adopts new title ("Great Possessions"); composes "The Land Ethic"; drafts foreword. |
| 5 Sep 1947 | Leopold sends "new manuscript" to Knopf. |
| 14 Sep 1947 | Leopold meets with Charles Schwartz in St. Louis to discuss the manuscript and illustrations; Schwartz agrees soon thereafter to provide illustrations. |
| Fall 1947–Winter 1948 | Leopold continues to draft and revise essays. |
| 5 Nov 1947 | Knopf rejects manuscript, suggests that the collection as whole be recast. |
| Nov 1947 | Luna Leopold approaches Oxford University Press about publication of the collection; William Vogt simultaneously approaches William Sloane Associates. |
| 5 Dec 1947 | Leopold revises foreword. |
| 19 Dec 1947 | Leopold sends manuscript to Oxford University Press and to William Sloane Associates. |
| 4 Mar 1948 | Leopold again revises foreword. |
| 14 Apr 1948 | Leopold receives telephone call from Oxford University Press accepting his manuscript for publication; Oxford's acceptance letter is sent the same day. |
| 21 Apr 1948 | Leopold dies while fighting fire on a neighbor's property. |
| 22 Apr 1948 | Oxford writes to Leopold's student, Joe Hickey, expressing concern over the publication of the collection. |
| Apr 1948–Dec 1948 | Luna Leopold and Joe Hickey, working with other Leopold family members and students, oversee final editing and preparation of manuscript; after extensive discussions, the title is changed to <i>A Sand County Almanac and Sketches Here and There</i> . |
| fall 1949 | <i>A Sand County Almanac</i> published. |
| 1953 | Oxford University Press publishes <i>Round River: From the Journals of Aldo Leopold</i> . |
| 1966 | Oxford University Press reissues the volume in an enlarged edition as <i>A Sand County Almanac with Other Essays on Conservation from Round River</i> . |
| 1968 | Oxford University Press publishes original volume in paperback. |
| 1970 | Sierra Club/Ballantine Books publishes enlarged edition in paperback. |
-

Once more other responsibilities (and a substantial influx of returning students) prevented him from focusing on his extracurricular writing. What little time he had to spare for the essays usually found him, before dawn, at his desk in his university office, wielding the pencils and yellow legal pads that he typically used in his later years. Leopold rarely wrote at the family's "shack" or elsewhere in the field, and his meticulous journals were filled, not with literary expression, but with detailed phenological records, field observations, and other scientific data. Although Leopold was unable to work on his manuscript with any regularity during this time, he intermittently drafted new essays and revised older ones. And he continued to wrestle with the essential dilemma of the collection: how to meld into a coherent whole his descriptive field sketches, his ecological cautionary tales, and his statements of conservation philosophy.

As of spring 1947, the manuscript hung in limbo. Because of other commitments, Albert Hochbaum had withdrawn as illustrator. Leopold, as the head and sole faculty member of his department, was preoccupied with accommodating the post-war boom in student enrollment. And increasingly he was distracted by the painful facial spasms associated with trigeminal neuralgia (or tic douloureux), with which he had been afflicted since late 1945.

Finally, in the summer of 1947, Leopold found time to devote himself exclusively to the essays. In this crucial period the collection, which Leopold was now calling "Great Possessions," assumed the form that its eventual readers would recognize. Leopold drafted a lengthy foreword that provided autobiographical context for the essays. He divided the manuscript into 3 parts. In the first, he used the almanac format to bring order to the "shack" essays. In the second, he gathered the recollections and ecological interpretations of other landscapes in his experience. In the third section he included 4 of his more conceptual discussions of conservation themes, including his newly synthesized summary statement, "The Land Ethic" (Meine 1987). With renewed hope, Leopold sent the overhauled manuscript back to Knopf in early September. Scheduled to undergo brain surgery later that month at the Mayo Clinic in Minnesota, Leopold had made his summer one

of determined and uninterrupted concentration.

The rejection letter from Knopf arrived in early November. Knopf's editors again found the collection "far from being satisfactorily organized as a book," adding that it was "unlikely to win approval from readers or to be a successful publication as it now stands" (Meine 1988:509). Giving up on Knopf, Leopold allowed his son Luna to assume the role of literary agent. While Luna approached Oxford University Press, Leopold's close colleague William Vogt brought the manuscript to the attention of William Sloane Associates (who would soon publish Vogt's own conservation classic, *Road to Survival*).

Although disappointed and frustrated by Knopf's rejection, Leopold responded quickly. He rewrote the long foreword ("the better to orient the reader on how and why the essays add up to a single idea") and in December 1947 sent the manuscript to the 2 new prospective publishers. The 4 previous rejections might have hobbled Leopold's expectations, but over the winter he continued to draft new essays (including "Good Oak"). Following Luna's recommendation, he secured a new illustrator, Charles Schwartz, then working with the Missouri Conservation Commission.

As Leopold recuperated fitfully from his surgery, he waited for word. Both publishers were reading the manuscript with approval. Oxford responded first. On 14 April 1948, Oxford's editor Philip Vaudrin called Leopold in Madison to inform him that the manuscript had been accepted for publication. They discussed plans for final revisions, with the goal of having the book available in the fall of 1949.

One week later, on 21 April, Leopold suffered a fatal heart attack while fighting a neighbor's grass fire near the shack.

After the profound shock of Leopold's death had eased, Luna Leopold assumed responsibility for seeing the manuscript through to publication. Working with Joe Hickey, Frances and Frederick Hamerstrom, and other close colleagues and students of Leopold, Luna negotiated the final terms of publication with Oxford Press. This team collaborated in making final editorial decisions. Several essays were added, shifted, or renamed,

but most of the alterations to Leopold's manuscript were minor. The team felt that it was better to leave Leopold's work intact than to risk making inappropriate changes.

Luna Leopold did agree, reluctantly, to one significant change. Oxford considered Leopold's title, "Great Possessions," too obscure and too Dickensian. Consultations among Oxford's editors, Luna, and the editorial panel yielded several alternative titles, none of which seemed to capture the book's characteristic tone of concern tempered by gentle irony and understated wonder. In the end, they chose for the title the heading of the manuscript's first section, "A Sand County Almanac." Oxford Press published the book in the fall of 1949 under the full title *A Sand County Almanac and Sketches Here and There* (Meine 1988:523–524).

HUMANIZING CONSERVATION

This condensed narrative cannot convey fully the impact of contemporary events, professional experiences, and private interactions on Leopold's evolving vision for his book (and, more broadly, for the conservation movement). Even this rudimentary account, however, reveals that Leopold was deeply devoted to the project's overarching goal—so much so that he persisted through multiple rejections, continual questioning of its content and style, and a series of difficult personal challenges. The goal was to break down "the senseless barrier between science and art," to unite informed observation of the living world, through the lens of ecology and evolutionary biology, with an enriched appreciation of the world's inherent beauty and drama. "There is no other way," he wrote in the final foreword, "for land to survive the impact of mechanized man, nor for us to reap from it the esthetic harvest it is capable, under science, of contributing to culture" (Leopold 1949:viii).

At the same time, Leopold plainly understood that his was not simply an exercise in ecological aesthetics. Throughout the 1940s, trends in world events, in human relations, and in human interactions with the natural world weighed heavily on Leopold and on many of his like-minded colleagues in the conservation movement. A careful reading of *A Sand County Almanac* provides ample clues that this was deeply a book of its

times. From "Pines Above the Snow": "...the 1941 growth was long in all pines; perhaps they saw the shadow of things to come, and made a special effort to show the world that pines still know where they are going, even though men do not" (Leopold 1949:83). From "Wilderness": "Ability to see the cultural value of wilderness boils down, in the last analysis, to a question of intellectual humility. The shallow-minded modern who has lost his rootage in the land assumes that he has already discovered what is important; it is such who prate of empires, political or economic, that will last a thousand years" (Leopold 1949:200). From "The Land Ethic": "In human history, we have learned (I hope) that the conqueror role is eventually self-defeating" (Leopold 1949:204). The value of this new way of looking at the natural world rested not only in its capacity to enhance human awareness and appreciation, but to improve our chances of achieving "harmony with land"—Leopold's definition of conservation. And it might also have something to offer in our efforts to achieve more decent human relations.

Those chances seemed to be diminishing at the time. Faced with the postwar prospect of unprecedented economic and technological changes, and overwhelmed by the shift away from the field-oriented biology at which he excelled, Leopold spared no words in his critique of the forces driving the scientific agenda. In a 1946 address to the Wisconsin Society for Ornithology he stated, "Science, as now decanted for public consumption, is mainly a race for power. Science has no respect for the land as a community of organisms, no concept of man as a fellow passenger in the odyssey of evolution" (Meine 1988:483).

He was equally forthright in criticizing the various component fields of conservation to which he himself had contributed so importantly. He shared with his students his concern that conservation, too, suffered from the fallacy, "clearly borrowed from modern science, that the human relation to land is only economic. It is, or should be, esthetic as well. In this respect our current culture, and especially our science, is false, ignoble, and self-destructive" (Flader and Callicott 1991:337). Harsh words to cast upon the ears of listening undergraduates. Ecology, he would state in another context, opens one's senses to a "world of wounds" (Leopold 1953:165).

Characteristically, Leopold lightened his message to his students by pointing out the fringe benefits of ecological literacy: "I am trying to teach you that this alphabet of 'natural objects' spells out a story, which he who runs may read—if he knows how. Once you learn to read the land, I have no fear of what you will do to it, or with it. And I know many pleasant things it will do to you" (Flader and Callicott 1991:337).

Through *A Sand County Almanac*, Leopold sought to teach others to read the land, to recognize the wounds, and to savor the pleasures. By his very tone he conveyed his trust in their ability to do so, and to act on what they read, learned, and enjoyed. This was for Leopold the solid foundation upon which conservation had to be built. In his unassuming and idiosyncratic book of essays, Leopold showed that we may move mountains by allowing the mountains—and the skies, the oceans, the freshwaters, the marshes, the forests, the prairies, the deserts, and all the lives, human and otherwise, they contain—to move us.

LITERATURE CITED

- CALLICOTT, J. B. 1987. The land aesthetic. Pages 157–171 in J. B. Callicott, editor. *Companion to A Sand County Almanac: interpretive and critical essays*. University of Wisconsin Press, Madison.
- DUNLAP, T. L. 1988. *Saving America's wildlife*. Princeton University Press, Princeton, New Jersey.
- FLADER, S. L. 1974. Thinking like a mountain: Aldo Leopold and the evolution of an ecological attitude toward deer, wolves, and forests. University of Missouri Press, Columbia.
- FLADER, S. L., AND J. B. CALLICOTT, editors. 1991. *The River of the Mother of God and other essays by Aldo Leopold*. University of Wisconsin Press, Madison.
- LEOPOLD, A. (Chair, Committee on American Game Policy) 1930. Report to the American Game Conference on an American game policy. Pages 284–309 in *Transactions of the Seventeenth Annual American Game Conference*. American Game Association, New York, New York.
- LEOPOLD, A. 1931. Report on a game survey of the north central states. The Democrat Press, for the Sporting Arms and Ammunitions Manufacturers' Institute, Madison, Wisconsin.
- LEOPOLD, A. 1933. *Game management*. Charles Scribner's Sons, New York, New York.
- LEOPOLD, A. 1936. Threatened species. *American Forests* 42(3):116–119.
- LEOPOLD, A. 1937a. The thick-billed parrot in Chihuahua. *Condor* 39(1):9–10.
- LEOPOLD, A. 1937b. Marshland elegy. *American Forests* 43(10):472–474.
- LEOPOLD, A. 1937c. Teaching wildlife conservation in public schools. *Transactions of the Wisconsin Academy of Sciences, Arts, and Letters* 30(1937):77–86.
- LEOPOLD, A. 1938. Conservation Esthetic. *Bird-Lore* 40(2):101–109.
- LEOPOLD, A. 1939. A biotic view of land. *Journal of Forestry* 37(9):727–730.
- LEOPOLD, A. 1940. The state of the profession. *Journal of Wildlife Management* 4:343–346.
- LEOPOLD, A. 1949. *A sand county almanac and sketches here and there*. Oxford University Press, New York, New York.
- LEOPOLD, A. 1953. *Round River: from the journals of Aldo Leopold*. L.B. Leopold, editor. Oxford University Press, New York, New York.
- MCCABE, R. E., editor. 1988. Aldo Leopold: mentor. Department of Wildlife Ecology, University of Wisconsin–Madison, Madison.
- MEINE, C. D. 1987. Building "The Land Ethic." Pages 172–185 in J. B. Callicott, editor. *Companion to A Sand County Almanac: interpretive and critical essays*. University of Wisconsin Press, Madison.
- MEINE, C. D. 1988. Aldo Leopold: his life and work. University of Wisconsin Press, Madison.
- MEINE, C. D. 1994. The oldest task in human history. Pages 7–35 in R. L. Knight and S. F. Bates, editors. *A new century for natural resources management*. Island Press, Washington, D.C.
- NABHAN, G. P. 1997. Sierra Madre upshot: ecological and agricultural health. Pages 43–56 in *Cultures of habitat: on nature, culture, and story*. Counterpoint Press, Washington, D.C.
- RIBBENS, D. 1987. The making of *A Sand County Almanac*. Pages 91–109 in J. B. Callicott, editor. *Companion to A Sand County Almanac: interpretive and critical essays*. University of Wisconsin Press, Madison.
- TREFETHEN, J. B. 1975. *An American crusade for wildlife*. Winchester Press and the Boone and Crockett Club, New York, New York.



CURT MEINE is a research associate with the International Crane Foundation. Curt received a B.A. in English and History from DePaul University and an M.S. and a Ph.D. in Land Resources from the University of Wisconsin–Madison. He has served as a consultant to many

local, national, and international conservation agencies and organizations, and he has taught at the University of Wisconsin–Madison. He is author of the biography *Aldo Leopold: His Life and Work* (1988), co-compiler (with George W. Archibald) of *The Crane: Status Survey and Conservation Action Plan* (1996), editor of *Wallace Stegner and the Continental Vision: Essays on Literature, History, and Landscape* (1997), and co-editor (with Richard L. Knight) of the forthcoming volume *The Essential Aldo Leopold: quotations and commentaries*. He has contributed to a wide variety of periodicals, journals, and books and currently serves on the boards of editors of *Conservation Biology* and *Environmental Ethics*, and on the Board of Governors of the Society for Conservation Biology.