

B&C CONSER

PROFILE: ALDO LEOPOLD (1887-1948)

BY LEONARD H. WURMAN
B&C REGULAR MEMBER

As the last North American glaciers melted 20,000 years ago, a shallow lake, 60 miles long, developed in central Wisconsin. Gravel that had been carried along for eons by the two-mile thick, moving ice sheet was now deposited into the lake and settled to the bottom. The lake eventually drained and this flat terrain would later be nicknamed the “sand counties.” In 1935, an obscure (except within his own field) University of Wisconsin professor constructed here, out of an old chicken coop, a get-away “shack” on land he had just purchased. “Sand county” and “the

shack” were destined to become household terms for three generations of wildlife managers and conservationists.

The man was Aldo Leopold. To study him is to study an evolution, not of humans, nor of wildlife, but rather of the refined thoughts of a genius as he sought and critically analyzed new information. His legacy was

not just the conclusions he drew, nor the scientific methods of research and evaluation he demanded. It was the

emerging philosophy of ecological responsibility that has directed the conservation and environmental movements for much of the twentieth century.

Rand Aldo Leopold was born in Burlington, Iowa, in 1887, the same year Theodore Roosevelt founded the Boone and Crockett Club. His grandmothers were sisters, an unexpected example of genetic engineering. Aldo’s father, Carl, was an avid hunter in an era when unregulated hunting was exterminating North America’s remaining game. Carl set up his own private code of ethics: no shooting before sunrise or after sunset, daily bag limits, and no spring waterfowl hunting. He advocated an early ban on the legal sale of game. Carl took his boys along and instilled in them more than just hunting skills. Young Aldo loved the outdoors, and even developed into an accomplished ornithologist.

Forestry management as an occupation in America was in its infancy. In 1898, Gifford Pinchot (next issue’s subject in this series about Boone and Crockett conservationists) became the chief of the Division of Forestry in the Department of Interior and transformed it into the U. S. Forest Service within the Department of Agriculture. He divided the country’s forest reserves, forerunner of the National Forests, into six districts. Yale (Pinchot’s family had endowed Yale’s School of Forestry) was at the time the only major university that offered a quality forestry degree. Pinchot’s ideas of forestry were, however, very utilitarian. Forests were to be managed for their timber. His

“wise use” philosophy clashed with the preservationists, led

by John Muir, who favored preserving unaltered the beauty and spiritual values of the woods. It was in this setting that Aldo Leopold in 1905 entered Yale’s School of Forestry, receiving a Masters degree five years later.

LEOPOLD IN NEW MEXICO

Young Leopold joined the Forest Service in 1909 and was sent to the Third District in the Territory of New Mexico. Due to manpower shortages, he was assigned as a crew chief of a reconnaissance party, for which he was ill prepared, and didn’t listen to the experienced lumbermen in his crew. The party’s pace slowed, their costs increased, and surveying errors occurred. Nearly released for lack of leadership, he was given a second chance the next year, reversed his poor showing, and was promoted to Deputy Supervisor of the Carson National Forest north of Santa Fe. The Carson was the heart of the western sheep country and was in poor shape from overgrazing. The soil was heavily eroded, gullies marred the landscape, and the natural grasses, unable to regenerate, were replaced by fire-prone brush.

He met and married Estella Bergere, who traced her New Mexican ancestry to Coronado’s second-in-command in 1530. Her Catholic family was unsure of a marriage to a man of German Lutheran background; his family was worried that she may have had Jewish blood. Neither family need have feared for the marriage’s success. But six months later, on a solo, backcountry, horseback trip, Aldo developed kidney failure and nearly didn’t make it out. He was put on unpaid leave and didn’t return to work for another 16 months.

During that time, under doctors’ orders to avoid activity, Leopold read incessantly. It may have been William T. Hornaday’s *Our Vanishing Wildlife* which started Leopold away from Pinchot’s view that forests are solely managed for the trees, and toward the concept of game protection. Aldo helped found the annual American



PHOTOGRAPH BY TOM COLEMAN

LEOPOLD DURING A TRIP TO MEXICO’S RIO GAVILAN IN 1938



PHOTOGRAPH BY A. STARKER LEOPOLD

RVATIONISTS

Game Conference, forerunner of the North American Wildlife and Natural Resources Conference, the yearly convention of today's wildlife managers and biologists. But health dictated that his forest ranger days were over, and he was assigned to the district headquarters with a new responsibility: game management.

Throughout the nation, community sportsmen's clubs were forming to protect game. States would pass laws but they were poorly enforced. In 1916, Leopold traveled New Mexico and Arizona forming local Game Protective Associations, or GPAs, and subsequently organized them into the New Mexico Game Protective Association (NMGPA). He preferred to shun overt politics, but the NMGPA became active politically and campaigned strongly for the right to approve the appointment of the state's chief warden. To protect game, it strongly favored the eradication of predators, namely wolves and mountain lions, a position Leopold later came to regret.

Leopold was an avid hunter and joined a hunt club on the Rio Grande. During the First World War, he took a temporary job as Secretary of the Albuquerque Chamber of Commerce and began to publish nationally on conservation and wildlife issues. He was also elected head of the NMGPA.

Following the war, Leopold rejoined the Forest Service as the Assistant District Forester. He had become a popular public, and scientific, writer and speaker, and was one of the first to urge the creation of roadless, wilderness areas, an idea foreign to the Forest Service's initial utilitarian approach to National Forest management.

Aldo also began to discuss "land" or "soil" as nature's common denominator, considering it the primary resource for vegetation, wildlife, and agriculture. Arguing against overgrazing, he considered restoring natural prairie grasses to lessen erosion and the danger of fires. Even his attitude towards fires and predators was shifting as he considered the evolu-

tion and maintenance of ecosystems. The conservation ethic was expanded to include, not just the relationship of the hunter to wildlife, but also the landowner to the land itself. Yet he remained dubious that the answers to conservation would rest primarily with the government and favored individual responsibility.

During the fall of 1922, Leopold and his brother spent three weeks hunting and canoeing the Colorado River delta in Mexico. This was his first introduction to land that had felt only the lightest touch of humans. Over the next two years, he continued to refine his ideas on erosion, wilderness, and outdoor values well beyond those of forestry and the management of grazing. He completed the *Watershed Handbook*, emphasizing management techniques based not only on the available forage for livestock, but vested in the conservation of the whole watershed system.

Then, to everyone's surprise, Aldo accepted the position, still within the Forest Service, of Assistant Director of the Forest Products Laboratory in Madison, Wisconsin. The director was expected to resign within a year, and Aldo was to be his successor. As he left New Mexico, his efforts on the behalf of wilderness paid off. The Gila Wilderness Area, our nation's first territory so designated, was established. Leopold would return numerous times over the years to hunt there. But his attention now shifted back to the upper Midwest.

He had entered the Southwest 15 years earlier as an educated but inexperienced forester. He left as an accomplished writer, speaker, administrator, and highly skilled observer with a developing expertise in grazing, erosion, wilderness, and game management as well as forestry.

THE WISCONSIN YEARS

Leopold was a fish-out-of-water at the laboratory. Although competent in the scientific approach to experimentation, he was neither a chemist nor a technician. To top it all off, he did so well as the assistant director that

the director felt no need to retire. But Aldo used his time well, both by taking advantage of recreational opportunities and by entering into the budding field of conservation on private land. He canoed the Minnesota-Canada border lakes, which he would later assist in becoming the Boundary Waters Canoe Area. Fall hunting for game birds continued to be a major interest. He developed a life-long romance with archery, experimenting with and building his own longbows and arrows. The family hunted and competed with their homemade equipment. Estella was the Wisconsin women's champion five years in a row.

During his five-year stay at the laboratory, Leopold became even more immersed in conservation issues at a time when the movement was blossoming in Wisconsin. The state's early farming practices had damaged the soil, nineteenth century lumberjacks had rapidly logged the forests, paper mills were dumping pollutants into the waters, and deer mismanagement led to a 60% die-off in Wisconsin during the winter of 1925-1926. The Izaak Walton League, founded in Chicago in 1922, alone had recruited 100,000 Wisconsin members within a few years, and Leopold had become a state director for the Ikes. He continued to publish nationally, his articles popular not just because of their content, but because he had developed a beautiful, almost poetic style of writing.

With urging by Leopold and numerous others, the state of Wisconsin established a six-person Conservation Commission, giving it the authority to appoint the director of the Conservation Department. However, the governor still appointed the commissioners who, being political appointees, were beholden to the governor. The conservation movement wanted the commission to appoint Leopold as the director of the department. But the governor and his commissioners would not acquiesce to those demands.

In 1928, Leopold left the Forest Service for good. The Sporting

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ALDO LEOPOLD
BOONE AND
CROCKETT CLUB
PROFESSIONAL
MEMBER
1923-1948

Arms and Ammunition Manufacturers Association (SAAMI), realizing that an adequate supply of game was essential for their economic future, hired Leopold to do game surveys of the northern Midwestern states. At the time, drought, habitat loss, and over hunting had taken a devastating toll of the duck populations. Leopold published his results in 1931. That same year he completed *Game Management*, the first significant textbook on that subject, which was released two years later. He also gave lectures at the University of Wisconsin on game management, a field considered with skepticism by academic scientists.

The depression was in full swing. By 1932, SAAMI could no longer afford to pay for the game study. In 1933, Leopold went to work for the Civilian Conservation Corps (CCC) on erosion control in the Southwest, an experience that confirmed his belief that big government alone could not make conservation work. While there, he gave a speech on *The Conservation Ethic*, emphasizing that civilization is based on the interdependence of man, wildlife, soils, and plants. The seeds for the future of ecology had been planted. Leopold had many friends and supporters, and through them he was appointed the University of Wisconsin's first Professor of Game Management. He was, and continued to be for years, a one-man department.

Still, he remained active in the national conservation arena. He served as a consultant to FDR's Soil Erosion Service. Although the federal Migratory Bird Conservation Act of 1926 established refuges, none were funded. Leopold, along with "Ding" Darling (the third subject in this series), was appointed to the three-man committee that produced, after much turmoil, the "National Plan for Wildlife Restoration" in 1934. That same year Bob Marshall, Aldo Leopold, and eight others founded The Wilderness Society. Leopold introduced the term "land ethic" to promote the idea that society and the land are parts of the same organism, and the organism is ill if the land is sick.

Seeking a place to personally practice this preaching, the family purchased 80 acres of an abandoned farm along the Wisconsin River 50 miles north of Madison, at the southern extreme of the "sand counties." The only standing structure was the chicken coop, which was renovated into a livable "shack." For the rest of Aldo's life, almost every available weekend, weather permitting, he and his wife, and often the children, went there. One to two thousand trees or bushes were planted yearly. The first year, nearly all died. With experience, and as the nation's drought moderated, the plantings took. A total of 30,000 were eventually planted. The "shack" became a gathering site for his students, a source of inspiration for the professor, and the location of some of his deepest writings.

Leopold's thinking was gravitating from game management to land management to land ecology. In 1936, he formed the Society of Wildlife Researchers, later known as The Wildlife Society, and was its president three years later. Along with Darling, in an attempt to unify all the various conservation groups under one umbrella, he helped start the General Wildlife Federation, which soon became the National Wildlife Federation. In time, however, both he and Darling were disappointed with the result of the federation. The Wisconsin chapter of the NWF was faltering, and the national organization had lost site of its original goal. Leopold was also instrumental in establishing the famous Delta Marsh Research Station outside of Winnipeg.

At the University, he emphasized to his graduate students the value of observation, an open mind, and hard research. Every two weeks, he would host a session at his Madison home for them; apples and beer were the norm, and woe to the student who could not defend his ideas with a background of facts. Game management was considered by many of the time a bastard science, but Leopold's emphasis on fact-gathering and well-disciplined research helped take the field into an arena of respect.

Beginning in 1936, he went on the first of several two-week archery hunts for deer in northern Mexico. This area had not been heavily grazed

by domestic stock, fires occurred naturally, and predators were present, yet the vegetation was good, there was no erosion, and the deer were abundant. Leopold began to think more in terms of "land health" as opposed to "land sickness." He consulted nationally, suggesting that perhaps controlled burning was better than no burning, and emphasized research before instituting environmental action.

Leopold was becoming more philosophical. He defined conservation as a state of harmony between man and the land. He began taking what he called a "biotic view" of land, where "biotic" referred to everything living. Man was simply a fellow traveler. Conservation, to him, was not just an outdoor activity; it was a state of mind. Each individual must assume a share of the responsibility; the government should not be solely accountable. To him, it was obvious that a society rooted in the soil was more stable than one rooted in the pavement. It was at this point, in 1942, that he first tried to put together a book of his musings and essays, but was rejected by several publishers.

In 1943, Leopold was appointed to Wisconsin's Conservation Commission (forerunner of today's Natural Resources Board), which had jurisdiction over the Conservation Department (the present day Department of Natural Resources). A third player in the equation was, and still is, the Conservation Congress, a carryover from the sportsmen's club days. Every Wisconsin county annually elected representatives to sit on the Conservation Congress, which then functioned in an advisory capacity to both the Department and the Commission. During the 1940s, a vigorous and emotional tug-of-war existed within and between these three groups. The deer herd, reacting to predator control, closed or bucks-only seasons, and woodland protection from fire, had exploded. However, in the 1940s, as the second growth forests matured, massive deer starvations, with subsequent range damage, had occurred. Leopold urged the unthinkable—a doe season—and pushed the idea through for the 1943 season.

Although the concept of a doe season was good, the implementation was poorly executed. Heavy snows blanketed the north, keeping most hunters to the south. As a result, some southern counties lost 90 percent of their herd while others were hardly affected. Poaching and venison sales made matters worse. The public was outraged; the season was called the "crime of '43." Leopold argued for further doe seasons, but his reputation was tarnished, and although he remained on the Commission, he never again had the same influence among the state's hunters. Still, the professor wouldn't quit; he pleaded that all resources should be simultaneously managed and not just for one component—the deer. With the benefit of hindsight, it can be said that he was several generations ahead of his time.

Leopold's years following World War II were good in the scholastic sense but bad from the standpoint of his personal health. Returning servicemen were anxious and committed to learn. Under the professor's guidance, they initiated studies in wildlife behavior, physiology, endocrinology, nutrition, population ecology, and refuge management. But his overall health was deteriorating, and it showed physically. He was troubled by facial pain which, when finally treated by an intracranial nerve division, left him with a numb and partially paralyzed face, and with some degree of memory loss. Nevertheless he was elected vice president of the American Forestry Association and president of the Ecology Society of America. He also resigned from Ducks Unlimited because it had, in his and Darling's opinion, repeatedly falsified duck population numbers.

Leopold continued to rewrite and modify his book of essays. Perhaps the most famous essay, "The Land Ethic," contains his best, and poetic, definition of what is conservation. Within that essay are these words: "Examine each question in terms of what is ethically and esthetically right, as well as what is economically expedient. A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong if it tends otherwise." Oxford press finally

agreed to publish it as *A Sand County Almanac and Sketches Here and There*.

Six days after the book's acceptance, on April 21, 1948, while at the "Shack," the family noted smoke on an adjacent farm. They split up to prevent a grass fire from igniting the neighbor's barn. Aldo did not return. When he was found, he was lying on his back with his arms folded on his chest, the victim of an apparent heart attack. The fire had passed by him, but most prophetically, had barely singed his clothing. Fire, one of the earliest accomplishments of man's evolutionary progress, had paid its last respect.

Interestingly, *Sand County Almanac* did not evoke much of a response when first released in 1949. It was reprinted in 1966 in paperback form, about the same time as Rachel Carlson's *Silent Spring*. The timing was perfect. The conservation crusade had spawned the environmental movement. Leopold became its high priest. The book's sales took off. He probably didn't realize it, but the professor was writing for a time and an audience, and a state of scientific understanding, that was yet to come.

Attempting to summarize Leopold is akin to summarizing Theodore Roosevelt. There were many similarities. Both were energetic, multifaceted, complex and accomplished geniuses. As children, they gravitated toward nature and were knowledgeable ornithologists. They became extremely good writers. Both hunted avidly. They died early, one at age 60, the other just past his 61st birthday. Roosevelt was

For an extremely thorough, enjoyable, and well-written biography, the interested reader is referred to Curt Meine's *Aldo Leopold, University of Wisconsin Press, 1988*. *A Sand County Almanac and Sketches Here and There*, better known simply as *Sand County Almanac*, was first published by Oxford University Press in 1949. It has since been reprinted in various forms by other publishers.

Photos courtesy of the Aldo Leopold Foundation, E12919 Levee Road., Baraboo, WI 53913 (Phone: 608/355-0279). The Foundation preserves the shack, the adjacent 1,600 acre Leopold Memorial Preserve, and the Leopold legacy. It depends solely on private contributions.

a founder of the Boone and Crockett Club; Leopold's accomplishments achieved his membership. Both men will go down as two of conservation's major players during the early convulsive years of that effort.

But the differences were huge. Roosevelt loved the politics of controversy; Leopold distrusted professional politicians and believed that to be successful, the conservationists' agenda must transcend politics. One functioned as a commander, from atop the bully pulpit, initiating policy from above, but largely depended on others, such as Pinchot, Muir, and George Bird Grinnell, for ideas. The other, the professor, although not afraid of political conflict, preferred to do it his way, more quietly, through his research, his teachings, his numerous administrative positions, his writing, his speeches, and his philosophy. Roosevelt's accomplishments have been toasted by generations of conservationists, but their guiding light, their directing beacon, remains Leopold. ▲▲▲

LEOPOLD AT THE FAMILY "SHACK" ALONG THE WISCONSIN RIVER.

