Men and Varmints in the Gila Wilderness, 1909–1936: The Wilderness Ethics and Attitudes of Aldo Leopold, Ben Lilly, J. Stokley Ligon, and Albert Pickens towards Predators

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Only the mountain has lived long enough to listen objectively to the howl of a wolf. . . . Only the ineducable tyro can fail to sense the presence or absence of wolves, or the fact that mountains have a secret opinion about them.

Aldo Leopold, “Thinking Like a Mountain”

“If you follow a lion four or five days and don’t get some education,” Ben Lilly said, “you had better go back to plowing.”

J. Frank Dobie, The Ben Lilly Legend

By 1909, there was very little wilderness left in the lower forty-eight states, and New Mexico’s Gila Wilderness represented one of the last sizeable pieces of undeveloped country in the American Southwest. The Gila attracted diverse people for a wide variety of reasons and became a meeting point and proving ground for three distinct wilderness ethics: the colonial...
Judeo-Christian ethic, conservation, and the modern ecology-based wilderness ethic. This article discusses the experiences, attitudes, and careers of four men who individually symbolize each of those three wilderness ethics and who personify changing attitudes about wilderness and predators in the early twentieth century. In particular, I focus on the men’s attitudes towards large predators, for there is a direct correlation between wilderness ethics and attitudes towards predators. This correlation is as apparent in today’s land-use disputes as it was eighty years ago.

The four men in this study were employees of the U.S. Department of Agriculture at various times between 1909 and 1936. Three worked for the U.S. Biological Survey and one for the Forest Service. Aldo Leopold (1887–1948) and J. Stokley Ligon (1879–1961) were trained natural scientists in forestry and biology, respectively. Ben Lilly (1856–1936) and Albert Pickens (1885–1965) were professional predator hunters. The group includes a famous philosopher and writer (Leopold), a legendary mountain man and character of folklore (Ben Lilly), as well as two little-known government functionaries who achieved only regional recognition (Ligon and Pickens).

The convergence of ideas in the Gila was unlike other meetings of the minds familiar to environmental historians (such as the John Muir–Theodore Roosevelt encounter in Yosemite in 1903). Leopold, Lilly, Ligon, and Pickens were government employees in the same region over a period of several years. All four were engaged in predator control, either as developers of policy or as its enforcers. The level of personal interaction among the four men ranged from frequent (between Ligon and all of the others) to none (between Leopold and the two hunters). Each left behind evidence of his attitudes towards wilderness and predators. More significantly, in an environment of wildly divergent attitudes these men grew ethically and intellectually and managed to preserve much wildlife and wilderness habitat. Men born of a culture dominated by the traditional colonial Judeo-Christian wilderness ethic made a dramatic paradigm shift to the modernist conservation ethic. Some of the men, such as Leopold and Pickens, evolved still further, embracing preservationism and even the ecology-based wilderness ethic. This was a significant meeting of three influential wilderness ethics, represented by four fascinating individuals employed by the same branch of government in and about the Gila Wilderness. With the controversial program for reintroduction of the Mexican Wolf now underway, New Mexico’s Gila Wilderness continues to be a focal point for the American land-use debate.
This article attempts to understand adherents of pre-ecology wilderness ethics within the context of the times and environments in which they lived. In recognizing the impressive intellectual and ethical courage that people displayed when making the change from the colonial Judeo-Christian ethic to more progressive attitudes, I depart from the condescending and critical treatments that those people often receive at the hands of environmental historians. In addition, many of the healthy wildlife populations and, more importantly, much of the wilderness habitat intact today was preserved through the efforts of people with decidedly pre-ecological attitudes. Environmental historians have barely acknowledged their accomplishments.2

By the early twentieth century, most wild lands in the United States had disappeared in the face of population growth and economic development. Wildlife populations were lower than they had or have been at any time before or since.3 During the Euro-American conquest of the frontier the "colonial Judeo-Christian" wilderness ethic emphasized the unceasing struggle of man against wilderness. The use of the term Judeo-Christian to describe attitudes toward nature and wilderness is controversial and not wholly satisfactory, but is an established practice in the field of environmental history. Since Lynn White's "Historical Roots of Our Ecological Crisis" appeared in 1967, the term has been employed, if not well explained, by Lewis Moncrief, Roderick Nash, and many other scientists and historians. However, to downplay the murky religious implications and to stress the clear economic aspects, I have attached the word colonial to the term. Thus colonial Judeo-Christian wilderness ethic (or land-use ethic) refers to the early Euro-American tendency to consume seemingly inexhaustible resources without consideration for preservation through natural replenishment.4 The ultimate objective of the colonial Judeo-Christian ethic was to bring all wild lands under the ax and plow. Although man might revel in nature once it was in a tame, bucolic state, untamed wilderness represented an obstacle to overcome and, ultimately, to vanquish. Indeed, the obligation to subdue wilderness took on the force of a moral imperative. Wild animals, especially large predators, were symbols of the wilderness against which man struggled. Game animals such as elk, deer, or turkeys were relentlessly hunted with little regard to preservation or conservation. Large predators such as wolves, bears, and mountain lions were systematically eradicated.5

By the late nineteenth century, some Americans challenged older ideas about nature in a dramatic intellectual and ethical change, from which the conservation movement emerged.6 Several developments precipitated this
shift: the subjugation of Native Americans, the closing of the frontier, and the rapid disappearance of America's wilderness and wildlife. According to this new land ethic, the value of mineral, plant, or animal resources was to be assessed and efforts were to be made to conserve those things considered of most value to the nation. Conservationists considered game animals of great value, for they and their habitat provided the ennobling challenge of sport hunting. At the same time, conservationists saw predators that competed with man for game animals and that posed a threat to commercial livestock as vermin (or "varmints" in the vernacular of the day) that needed to be eradicated.

Conservation had become the fashionable land ethic among learned people in the early twentieth century, around the time that the federal government had largely taken over management of western public lands. The stewardship of much of the choicest public domain became the responsibility of the U.S. Department of Agriculture's Forest Service, whose primary mission was timber management, a responsibility soon extended to wildlife issues. The Bureau of the Biological Survey ("the Survey") was founded to study and count all types of American wildlife but, by 1914, devoted much of its budget and manpower to predator control. An ecology-based wilderness ethic would not develop until 1936.
In the Southwest, one of the choicest blocks of undeveloped land was the mountainous country at the headwaters of the Gila River. Ranging from arid, lowland valleys, rising through steep Ponderosa pine-covered mountainsides and climbing up into alpine high country, the Gila was one of the last refuges of the Mimbres and Chiricahua Apaches during the nineteenth century. Consisting of almost one million acres in western New Mexico and eastern Arizona, the rugged terrain continues to provide excellent wildlife habitat, but only limited pasture for livestock. The lumber resources boasted solid commercial value, but the topography made logging difficult. However, by the time of the establishment of the Gila National Forest and the adjoining Apache National Forest in 1908, two decades of intensive, unregulated livestock grazing and hunting had inflicted a marked environmental degradation on the region. In some areas unregulated livestock grazing brought on severe erosion. Also, a relentless campaign against predatory animals was underway.

Ranchers in the remote Gila country tended to reflect their frontier heritage and the colonial Judeo-Christian wilderness ethic. Few were aware of conservationism, although many later came to embrace its values. Early settlers practicing a subsistence lifestyle consumed game animals as a matter of necessity. Market hunters provided local settlements with inexpensive meat to the point that the elk had been eradicated from the region and deer were becoming rare by the 1880s. Meanwhile, herds of domestic livestock had largely taken these ungulates’ place in the ecosystem. Cattle and sheep (and to a much lesser extent hogs, goats, and horses) provided a ready source of food to the Gila’s wolves, bears, coyotes, and mountain lions. For small-scale ranchers, most of whom were already economically distressed, this predatory threat to their livelihood was intolerable. Ranchers had no more qualms about killing large predators than the modern urbanite has about killing a rat. Predators were just one more wilderness challenge, but unlike weather and terrain, predators were an obstacle that seemed surmountable. Trapping was an art that every rural man was familiar with, and predators were shot on sight with ubiquitous lever-action rifles.

Ranchers tended to view animals anthropomorphically, judging them in terms of human values and morality. One southwestern cowboy reflected:

I’ve often wondered why such things as buzzards was put here. When animals was down and helpless, buzzards’d pick their eyes out; or a lion’d come along and kill the pretty, clean baby calves or cute little colts. Why was the green blowfly put here to lay eggs in a newborn
calf's navel and the hatchin maggots'd eat its belly out? Across each ridge and canyon old wolves jerked down calves, killin for fun and to teach their pups. Seemed like good things like cattle, deer, sheep and horses had an unequal fite [sic].

Ranchers had little if any affection for the bears, wolves, and mountain lions that preyed on their herds, but they sometimes demonstrated a grudging respect for particularly persistent and hard-to-kill individuals. Some stock killers were even bestowed with names, such as "Big Foot," the famed Escudilla bear. Respect for a given predator only reinforced stockmen's determination to see it caught, and often professional bounty hunters were hired to eliminate particularly troublesome "varmints."11

The most famous and admired of the predator bounty hunters was the legendary Ben Lilly. His reputation as the greatest "hound dog man" of all time and the quintessential "last of the mountain men" was largely deserved. However, since his death, Lilly has come to symbolize the colonial Judeo-Christian wilderness ethic, and he has been portrayed as the embodiment of that tradition's passionate hatred for predators. Lilly was a well-known and widely respected hunter even before he entered the Gila Wilderness in early 1911. Ten years earlier, at the age of forty-five, he transferred his property to his wife and took to the Louisiana woods, living a primitive existence and devoting all of his attention to hunting. When bears and lions grew scarce in the South, he walked across Texas and hunted his way into Mexico. Ben Lilly traveled with only his weapons, a sack of flour or cornmeal, a metal can for cooking, and a battered Bible. According to reports, he never carried a tent or any other shelter, seeking cover in caves during winter. He complained that the air inside buildings was "rancid" and unhealthy, and he camped in the wilderness nearly every night for the last thirty-five years of his life.12 He made a living by catching predators and turning in their hides for the bounties offered by individual ranchers and by stockmen's associations.

"Mr. Lilly," as he was invariably known to his contemporaries, was born to a southern family of substantial means, grew to adulthood on his unmarried uncle's farm in Morehouse Parish, Louisiana, and later inherited the property. Most nineteenth-century southern men enjoyed hunting, but Lilly's hunger for the chase was unbounded. Neglecting his farm work, Lilly spent most of his time afield, hunting bears and "panthers" (mountain lions) in the nearby swamps and woods. He raised and trained long-eared hounds that
were usually his only hunting companions. He began sleeping uncovered on
the damp ground, eating very little, and "doggedly" pursuing his quarry.15

Oral and written history contends that no man could match Lilly in hunt­
ing skill, determination, and endurance and that few men could equal his
piety. On Sundays, he neither worked nor hunted. When President Theodore
Roosevelt's bear-hunting party arrived at the Tensas Bayou in northern Lou­
risiana in October 1907, Lilly was one of several hunters summoned to act as
guides. Roosevelt's letter to his daughter Ethel contains one of the most vivid
descriptions of Ben Lilly:

There is a white hunter, Ben Lily [sic], who has just joined us, who is a
really remarkable character. He literally lives in the woods. He joined
us early this morning, with one dog. He had tramped for twenty-four
hours through the woods, without food or water, and had slept a
couple of hours in a crooked tree, like a wild turkey.

He has a mild, gentle face, blue eyes, and full beard; he is a
religious fanatic, and is as hardy as a bear or elk, literally caring
nothing for fatigue and exposure, which we couldn't stand at all. He
doesn't seem to consider the 24 hours' trip he has just made, any more
than I should a half hour's walk before breakfast. He quotes the
preacher Talmage continually.16

A well-known Presbyterian clergyman, Thomas Dewitt Talmage (1832–1902)
preached rest, prayer, and abstinence from alcohol on the Sabbath, and the
practice of moral discipline in daily life. Lilly adhered to these beliefs his
entire adult life, but although he was a very pious man, there is no record of
Lilly's attending formal church services later in life. Roosevelt's comments
are the only known case of him expressing his beliefs to others. However, after
his death, writers have portrayed Lilly as an ascetic wandering in the wilder­
ness wastelands to destroy the evil bears and mountain lions. In the 1950s
Frank C. Hibben of the University of New Mexico wrote several largely fic­
tionalized accounts that describe Lilly in terms reminiscent of Old Testa­
ment prophets.17

However, Lilly's own letters and published articles reveal his concern with
practical and worldly matters.18 He complained about ranchers failing to pay
promised bounties, made long, analytical (but nonscientific) observations
about bear and mountain lion behavior, and awkwardly re-established com­
munication with his daughters left behind in Louisiana decades earlier. But
no trace of religious fanaticism appears in his writing. Whether the actual
Ben Lilly was something less than the personification of colonial Judeo-
Christian hatred of wilderness, his legend continues to serve as a symbol of
hostility towards wilderness and its most impressive denizens, large preda-
tors. The pious, dedicated Lilly undoubtedly lived by the traditional idea
that man's duty is to subdue the wild. He expressed a calm, detached curi-
osity about bears and mountain lions, but Lilly left no record of an aesthetic
appreciation for the beautiful animals that he hunted or the magnificent
country where he pursued them.

The Gila Wilderness attracted people who were committed to older, per-
haps outmoded philosophies and others who embraced the most modern,
progressive land-use ethics. Of the many conservationists working in the
Gila, Aldo Leopold articulated the most modern wilderness philosophy in
the United States—even by today's standards. The author of A Sand County
Almanac, he became the most influential and revered figure in the develop-
ment of modern American wilderness ethics. Leopold's years in and about
the Gila Wilderness were his formative experience. When he stepped off the
stagecoach onto the dusty streets of Springerville, Arizona Territory, in July
1909, Leopold was a twenty-two-year-old Yale graduate. He had accepted a
position as a forest assistant in the new Apache National Forest. Leopold
wasted no time in shedding his eastern clothing and outfitting himself with
western duds, a pair of revolvers, and a cow pony. Despite his new image as
a western man of action, he retained his keen analytical ability and his fer-
vent commitment to conservation science, both forged in Yale's School of
Forestry. Over the next two years timber surveys and management plans dom-
inated Leopold's duties, but his personal interest gravitated towards wildlife
and habitat issues. Leopold was an eastern-educated midwesterner, and the
vastness and freedom that he experienced in the Gila, the first genuine wil-
derness he had ever known, had an immeasurable impact on him. The
mountains were tall, the canyons were deep, and the sky was deep blue—but
even in this wilderness something was missing. Wildlife populations, already
thin, seemed to be decreasing, and Leopold, with a hunter's heart, knew that
without wildlife there was no wilderness.

According to conservationist theory, the task of the forest administrator was
to conserve and manage desirable wildlife to produce the maximum yield of
game animals. Conservationists considered deer and turkeys the most impor-
tant of the Gila's wildlife. They supported efforts to increase the numbers of
game animals to provide sport for urban hunters and to garner the economic
benefits that hunting brought to rural economies and state coffers. According to conservationists, three factors combined to diminish game animal populations beyond their ability to replenish themselves naturally: unregulated hunting, habitat degradation, and predatory animals. In the early twentieth century the Forest Service began to assist state enforcement of recently passed fish and game regulations. Overgrazing and clearcutting had caused severe soil erosion, compelling the Forest Service to begin regulating, albeit slowly, the livestock and timber industries in the West. Although other responsibilities took precedent, the Forest Service also spent resources on predator eradication, but in 1915 Congress approved funding for a new agency dedicated exclusively to this mission, the Predatory Animal and Rodent Control (PARC) branch of the U.S. Biological Survey. Leopold was in favor of this and any other new predator eradication programs. He wrote in 1915, “It is well known that predatory animals are continuing to eat the cream off the stock grower’s profits, and it hardly needs to be argued that, with our game
supply as low as it is, a reduction in the predatory animal population is bound to help the situation.”

During his two years in the Apache National Forest, two events had an enduring, although not immediate, impact on Leopold’s attitude towards predators. Escudilla Mountain rises above the Mogollon Rim country of eastern Arizona, the westernmost outpost of the greater Gila Wilderness. In 1910 the “outlaw” bear “Big Foot” lived on the slopes of Escudilla Mountain, and his presence flavored the ranch culture around Springerville. The grizzly up there symbolized the endurance of the wild frontier in the area. However, in the spring of 1911 bounty hunter C. H. Shinn decided to track and kill the bear. He used a “set-gun,” a rifle set in a tree with a trip wire attached to the trigger. Although few if any local people would have disparaged Shinn’s act aloud at the time, Escudilla lost an important aspect of its character. With the killing of Big Foot, presumably the last grizzly in the vicinity, the area was no longer truly wild and the human inhabitants were no longer frontierspeople. Thirty years later, Leopold wrote, “It’s only a mountain now.”

Two summers earlier, Leopold had led a timber survey into the Blue River drainage along the Arizona–New Mexico border. That expedition witnessed an incident as famous as any in the annals of U.S. environmental history. One afternoon while the crew was having lunch on high rimrock, a female wolf and her pups came out of the trees and began crossing the river far below. The men scrambled for their rifles and the shooting began. When the rifles were empty the female and one of her pups lay mortally wounded, and the men grimly (or triumphantly) examined their kills. As with Big Foot, Leopold experienced no epiphany when he saw “the fierce green fire dying in her eyes.” He would not write his self-critical essay “Thinking Like a Mountain” for another three decades, and he would continue to stump for predator control, if not outright predator eradication, for the next twenty years. The death of Bigfoot and the shooting of the wolf on the Blue River, however, planted seeds of ambivalence that sprouted and grew in Leopold and influenced his intellectual development. The Gila Wilderness itself deeply affected him. The place began to change him as dramatically as his writings have helped to change American wilderness ethics. In 1911 a Forest Service promotion transferred Leopold to northern New Mexico, but the Gila, which he revisited physically and otherwise in subsequent years, continued to serve as an inspiration for the rest of his life.

Conservation, the progressive philosophy that guided Leopold and so many biologists of his generation, was itself changing in the early twentieth century.
The practice of assigning economic value to a resource remained central to conservationist doctrine, but conservationists began to rethink the concept of “highest use.” For the first time Forest Service land managers considered recreation a suitable “higher use” and recognized its increasing economic value. Conservationists had long emphasized the moral and practical value of “hardy out-of-door sports of the wilderness,” but little effort had been made to preserve wilderness areas in which to practice those sports. By 1921, Leopold began to work for the preservation of one representative wilderness. He wrote:

By “wilderness” I mean a continuous stretch of country preserved in its natural state, open to lawful hunting and fishing, big enough to absorb a two weeks’ pack trip, and kept devoid of roads, artificial trails, cottages, or other works of man. . . . [A] good big sample of [Southwestern wilderness] should be preserved. This could easily be done by selecting such an area as the headwaters of the Gila River on the Gila National Forest. . . . So also must we recognize that any number of small patches of uninhabited wood or mountains are no answer to the real sportsman’s need for wilderness, and the day will come when we must admit that his special needs likewise must be taken care of in proportion to his numbers and importance. And as in forestry, it will be much easier and cheaper to preserve, by forethought, what he needs, than to create it after it is gone.

Leopold used conservationist idiom and logic while becoming a spokesman for the strong preservationist current that came to influence western land policy. His interest in wildlife management and habitat preservation dominated his climb up the Forest Service’s bureaucratic ladder, but his attitude towards predators remained harsh. As late as 1920 he called for the eradication of all wolves and mountain lions in the West. Paradoxically, Leopold became committed to wild lands and in 1922 he and Gila National Forest supervisor Fred Winn submitted a proposal for establishing the Gila Wilderness Area. The Forest Service approved the proposal on 3 June 1924, making the Gila the first officially recognized wilderness in the national forest system. By working for wilderness preservation, Leopold evolved a step beyond the conservationist thought that dominated his profession, but the intellectual revolution of his ecology-based wilderness ethic still lay ahead.
The eradication of predators from the Gila that Leopold called for was rapidly being accomplished by the U.S. Biological Survey, under young conservationist J. Stokley Ligon. Ligon was the fourth of ten children born on a West Texas sheep ranch in 1879. He managed to attend two small colleges, including Trinity University in Waxahachie, where he studied biology. He became interested in ornithology at an early age and learned to identify various species using the "bird cards" packaged with Arm and Hammer baking soda boxes. His knowledge of predator trapping was a natural part of his ranch upbringing. These two interests determined his life's work. While working as an itinerant laborer in New Mexico, the Biological Survey hired Ligon to study New Mexico's birds. The quality of his work earned him a permanent job with the Survey. He was a knowledgeable wolf and coyote trapper, a skill that made him the natural choice to head the PARC branch in the Southwest. Ligon was intelligent, highly observant, and committed to the conservationist ethic of game management through predator control. He kept meticulous notes and took thousands of photographs recording the habits of wildlife. Despite his modest physical stature, Ligon was well-known for his endurance and for his skills as an outdoorsman. He won the respect of all who knew him, including the rugged hunters and trappers he hired for predator control work.

Ligon served as an interlocutor between the educated, scientifically trained biologists and the down-to-earth, rustic predator hunters and trappers. Although Ligon was primarily a "field man," he was a respected wildlife scientist and Aldo Leopold repeatedly tapped his expertise on matters concerning wildlife behaviors and populations. Ligon and Leopold were friends and carried on a lifelong personal correspondence and professional collaboration. The biologist instructed his hunters to gather data on each animal they killed. Every hunter recorded dimensions, stomach contents, and other information in field journals. Whenever possible, they captured immature animals alive and sent them to zoos. Survey hunters led a spartan, primitive existence for low pay. This lifestyle attracted a unique person, one who preferred working alone in wild country to following a more conventional life among other people and the comforts of civilization. Ligon also spent much time afield with Survey hunter Ben Lilly, considered "the dean of the hunters," following the hounds through deep snow or summer heat across rugged New Mexican terrain. Their shared field experiences generated mutual respect between Ligon and Lilly.

Ligon won the respect of the younger hunters as well, one of the most capable of whom was Albert Pickens. Pickens was born in Hunt County,
Texas, during the twilight of the frontier. Unlike biologist Ligon, Pickens possessed only a rudimentary education. J. E. Hawley, his camp assistant from 1924 to 1929 and his lifelong friend, describes Pickens as a clever man, who never smoked or drank liquor, and never married. His mother died when he was six, and Pickens was raised by his father and grandparents. Some of his earliest memories were of picking cotton and of trapping mink, raccoon, and skunks and selling the hides for spending money. When Pickens was twenty-five, an agricultural machinery accident broke both of his shoulders, leaving him unable to lift his arms above his head. Pickens refused to let this handicap interfere with his active physical life. As he drifted westward from job to job, he started to lead a more primitive lifestyle, one more common to the nineteenth century than to the twentieth. While in New Mexico's Black Range (in the southeast corner of the Gila Wilderness), he learned the art of wolf trapping from Charles Moberley, a well-known older trapper. In April 1919, J. Stokley Ligon hired Pickens as a full-time hunter and trapper for the PARC branch of the Survey. Pickens kept the job for the next ten years and in many ways this experience was the high point of his life.
At some point, Pickens acquired several hounds from the Evans brothers, a renowned pair of cattlemen and predator hunters who owned the Slash Ranch on the northern fringes of the Gila Wilderness. The selectively bred and highly trained dogs enabled Pickens to engage in lion hunting in addition to wolf and coyote trapping. He knew and probably "studied" under Lilly and, like most people who knew the older hunter, greatly admired Lilly. While Lilly specialized in hunting bear and mountain lion with hounds, Pickens became an expert lion hunter and wolf trapper. Taking his job very seriously, he believed he was doing important work. J. E. Hawley later recalled:

> To my knowledge [Pickens] never hunted for fun, as many do. He hunted for the Survey for two reasons—it was a way to make a living and he thought that removing predators was a way of improving life in the mountains. Both of us grew up in depression-type circumstances. Anything that threatened your livestock was a detriment. I am certain that this was the attitude among all farmers and ranchers. 39

Pickens's commitment to predator eradication was simply part of the western ranch culture of which he was a product. Rural westerners were deeply
imbued with the colonial Judeo-Christian wilderness ethic. Hawley explained, “Most people believed the biblical statement that man had dominion over the earth and the fullness thereof.”

Although he retained traditional attitudes towards predators, Pickens loved other elements of the Gila Wilderness. At a time of rapid industrialization and urbanization, Pickens turned away from the modern world and sought the
peace and simplicity of the natural world. During his years with the Survey he had no permanent home. Pickens, his hounds, and his horses traveled the open spaces of New Mexico, camping every night and awakening before dawn to start the day's hunt. Hawley wrote, "Albert loved the outdoors and mountain scenery. One of his most common statements was 'Hot durn, I'd sure like to see what's on the other side of that mountain.'"\(^4\) Pickens insisted on leaving a clean campsite when he moved on to another assignment. Even during legal hunting season, he would not shoot game animals to complement his meager daily camp fare of beans, dried fruit, and sourdough biscuits.\(^5\)

Albert Pickens's aesthetic appreciation for natural beauty and his commitment to the propagation of game animals embodied conservationist doctrine. Although he came to embrace many values of the conservation-minded Biological Survey, he was unaware of the conservationist social movement and its philosophy. On a strictly practical level, his colonial Judeo-Christian wilderness ethic clearly absorbed the influence of modern conservationism. Hawley explained how he and Pickens perceived conservationist thought:

In regard to Conservation, [in those days] I never heard the word, nor did I ever hear Albert use the word. It is a recent word in my vocabulary. . . . I know now that there were some Conservationists extant, but they had no nationwide forum or way of spreading their message. Also, none of my friends had any notion of the rapid spread of transportation that has engulfed the great outdoors.\(^6\)

Pickens, J. E. Hawley, and others like them were unfamiliar with the terminology of conservation science and the landmark books by the great conservationists, but in their work they embraced the values and realized the objectives of the conservationist ethic. Albert Pickens's wilderness ethic had clearly evolved from a colonial Judeo-Christian ethic typical of frontier people, into the modern conservation ethic, and would continue to evolve.\(^7\)

Aldo Leopold moved away from the Southwest in 1924 when he accepted a position as associate director of the Forest Service's Forest Products Laboratory in Madison, Wisconsin. His interest in wildlife science had little utility at a time when the federal government was gradually turning the responsibilities of game management over to the states. He left the Forest Service in 1928. After several years as a private game-management consultant, "becoming probably the first person in history to be so employed,"\(^8\) Leopold
entered academia as the head of the newly created Department of Game Management at the University of Wisconsin, Madison. Leopold separated himself from the daily bureaucratic concerns of the Forest Service, the enduring frontier attitudes of southwestern rural culture, and the physical reality of the Gila Wilderness itself. From his remote perspective in a comfortable university professorship, Leopold was free to evolve intellectually and to express his new ecology-based wilderness ethic. For Leopold, ecology was a rational, scientific world view that saw the earth as a complex organism (biosphere in modern parlance) functioning through the interaction of its
No single component was unimportant, and each contributed to the health of the whole. In more concrete terms, every species had a purpose, and even wolves and other large predators were critical to the integrity of an ecosystem. This reasoning was fundamentally different from conservation, which established economic criteria for the value of a species. Leopold addressed this divergence in his essay “The Land Ethic”:

A system of conservation based solely on economic self-interest is hopelessly lopsided. It tends to ignore, and thus eventually to eliminate, many elements in the land that lack commercial value, but that are (as far as we know) essential to its healthy functioning. It assumes, falsely, I think, that the economic parts of the biotic clock will function without the uneconomic parts.47

This fundamental change in thinking would have a critical impact on modern wilderness philosophy.

In 1933, the year that Leopold entered academia, he published Game Management, a comprehensive treatment of the new science that he pioneered. Originally the book was a collaboration with Ligon, but the vast distance between Wisconsin and New Mexico hindered communication. Although Game Management continues to be an extremely influential work, it is not an expression of Leopold’s ecology-based wilderness ethic. In fact Leopold’s visit to the Río Gavilán wilderness in Mexico’s Sierra Madre Occidental in 1936 transformed his views on predators and wilderness ecology. While deer hunting in this ungrazed, unmanaged southwestern wilderness, “a shocked Leopold realized that heretofore he had seen only sick land” and that “land health is a function of few roads and sparse population, not of management and manipulation.”48 The Río Gavilán country was a temperate wilderness that in many ways resembled the Gila. Leopold’s visit triggered a retrospective analysis in which the Río Gavilán wilderness served as an example of what the Gila would have been if it were governed by natural forces rather than managed by man.

Leopold’s observation of irruptions in deer population in Arizona’s Kaibab National Forest, in various midwestern states, and in his beloved Gila Wilderness during the 1920s also helped change his attitude toward predators. In these areas, deer became so numerous that they denuded their habitat of browse. In the wake of starvation and disease, their populations eventually plummeted. Leopold hypothesized that the elimination of large predators
was one contributing factor common to each of these cases. In his view wolves and mountain lions had historically acted as natural levelers, preventing local deer herds from swelling out of proportion to their habitat's carrying capacity. Therefore, he saw decades of predator eradication as counterproductive. A healthy population of wolves, mountain lions, and bears was as integral to a healthy ecosystem as deer, elk, or timber.49

Although Leopold may have been one of the first to emphasize the ecological value of predators, his old colleague Ligon preceded his call for the preservation of all predator species. Interestingly, Ligon stated, "Not many advocate extermination of any species, no matter how predacious it might be."50 Like Leopold, he began to question conservationist philosophy and its criterion of economic value, and by the late 1920s Ligon's writings reflected a decidedly preservationist, even ecological, attitude.

Bears, with obvious value as game animals, were the first predators to win protection from the New Mexico legislature in 1927.51 Arizona followed suit two years later. Ligon argued to regulate the hunting of bears, "the most interesting and attractive dwellers of our forests and mountain fastnesses."52 He noted that bears are largely vegetarians but that because of their scavenging they are often unjustly blamed for livestock depredation. Although Ligon recognized their economic value as game animals, he stressed that bears had another less tangible, more symbolic value as dwellers of the wilderness. Surprisingly, Ligon favored immediate protection of the dreaded grizzly bear, whose numbers were perilously low:

Furthermore, if conservation policies projecting [sic] are carried out, a few grizzly bears in the highest and most inaccessible mountains—in which retreats they are now found—will help to perpetuate the wild places and serve as a magnet to draw adventurous spirits to their haunts. Many are the sportsmen and conservationists who fondly hope that a few of the majestic Silver-tips will manage to escape the ravages of commercial supremacy until such time as they will receive more consideration at the hands of man. [emphasis added]53

Like Leopold, Ligon continued to argue the economic rationale, but he began to reject conservationist economic criteria as the sole measure of a species' value.54 Although Ligon never became the outspoken champion of ecology, he apparently embraced some of its tenets earlier than did his friend Leopold, the icon of modern ecology.
Ligon advocated the preservation of grizzly bears, but his attitude towards wolves was more ambivalent. Wolves were not a game animal and lacked the economic potential of grizzlies. Ligon considered wolves inveterate outlaws who posed a serious threat to livestock, but by the late 1920s he no longer saw the wolf population to be “a menace,” given that they were “practically eliminated from New Mexico.” Arizona biologist Seymour Levy, who knew Ligon in the 1950s, recalled his feelings about wolves:

While Stokley was rather proud of his efforts regarding predator control, he nonetheless had great respect for wolves, stressing more than once that the wolf was indeed one of the most intelligent of animals and a worthy adversary. Unfortunately at that time and place the conflict between the wolf and the pioneer would resolve in favor of the latter. My brother Jim recalls Stokley as expressing the view that “there aren’t a thousand cowboys worth one wolf.” From my many conversations with Stokley I judge that in his later years he did indeed have a more balanced and sympathetic view towards “varmints” and in particular the wolf.

Although Ligon never surrendered his belief in predator control through trapping, he advocated the complete eradication of no predator species—bear, wolf, or lion.

Ligon, an early advocate for the preservation of the Gila Wilderness, moved away from the orthodox conservationist doctrine to evaluate a species. He eventually recognized that all species have a scientific as well as practical value and that extermination of any species, even predacious ones, is undesirable. Ligon’s wilderness ethic remained ambiguous, but irrelevant to his Gila Wilderness legacy is whether he was a conservationist with strong preservationist leanings or an ecologist with an enduring commitment to wildlife management at the end of his life. Whatever his wilderness philosophy, Ligon spent his life working to preserve New Mexico’s wildlife, including some predators, and advocated the preservation of the Gila Wilderness, possibly the most significant chunk of wildlife habitat in the Southwest.

However, Ligon departed from predator eradication belatedly, for he ably and enthusiastically administered the PARC branch of the Survey in the Southwest from 1914 to 1923. During that period local grizzly bear and wolf
numbers fell to levels below viable breeding populations. Both animals were easily eradicated during the following decade. Ligon materially contributed to the disappearance of the wolf and grizzly from the Southwest.

Hunter Albert Pickens never evolved into an ecologist. He believed that there were valuable species of animals and that the world was better off without others. His views on predators were not solely based on economic considerations. For example, he liked mountain lions for their clean, solitary nature and tendency to kill only for food. Hawley remembered, however, that other predators fared worse in Pickens’s view:

Albert disliked bears and wolves. Bears were dirty and a pest and dog killers. Wolves were wanton killers in his mind. His whole life was associated with ranching and farming and wolves killed livestock, a major part of their livelihood. Besides, Albert at different times had to shoot cattle which had been hamstrung by wolves that ate not one bite of the animal. Wolves kill for the sake of killing, in many cases. Albert’s view of grizzlies was this—they are not compatible with human beings. . . . If you want bears then man must stay out of their domain or assume great risks.

Pickens certainly loved the wild country in which these animals lived, sharing the mountains with the last grizzly bears and native wolves to roam the Gila Wilderness. Hawley later remembered, “The first [official] Wilderness Area was the Gila, and I know he was happy about it because both of us thought that it would preserve a way of life that we knew and practiced.” Although Pickens did little to effect the preservation of the Gila Wilderness, he was in favor of its preservation and his attitude reflected changes in southwestern ranch culture, which embraced a moderate measure of wilderness to preserve frontier traditions and pastimes.

Ben Lilly, symbol of the colonial Judeo-Christian wilderness ethic, certainly never embraced ecology. His biographer J. Frank Dobie maintains that he never even developed into a conservationist. Lilly hailed from an earlier generation than that of Leopold, Ligon, and Pickens. Lilly’s strong religious convictions made unlikely any paradigm shift towards a modernist philosophy like conservation. He followed the trail of large predators from the Deep South, across Texas, and into the United States’ last temperate wilderness. In a way he never hunted for fun, either, but he certainly hunted for his own self-interest.
In 1935 Survey hunter Dick Miller shot the Gila’s last documented grizzly bear in Strayhorse Canyon, Arizona. Later, Miller said that had he known the bear was a grizzly, he never would have killed it. By that time Lilly was living on the Grant County poor farm located at the edge of the Gila Wilderness about fifty miles northwest of Silver City, New Mexico. All accounts indicate he was suffering from the effects of severe senility. He spoke to nonexistent people, called his imaginary hounds together, and hunted phantom animals. Perhaps Lilly’s sanity evaporated along with the essence of primeval wilderness that had disappeared from the Gila. With no grizzlies and only the occasional transient wolf from Mexico, the primeval wilderness that Lilly had gravitated towards no longer existed in the American Southwest.

Although much of symbolic significance and ecological value had been lost with the disappearance of wolves and grizzlies from the Gila Wilderness, much more had been saved through the wildlife management and wilderness preservation efforts of Leopold, Ligon, and men like them. Today, the Gila represents an impressive piece of moderately pristine wildlife habitat. There are many more deer in the region than there were in the era of Leopold, Lilly, Ligon, and Pickens. Elk number in the thousands, remarkable growth beyond the paltry few hundred animals reintroduced to the Gila in 1927 when Ligon wrote his *Wild Life of New Mexico*. There are at least 2,000 black bears in the Gila as opposed to the 750 Ligon estimated years ago. Mountain lion numbers are high and the New Mexico Department of Game and Fish has set the annual harvest quota in the Gila to two adult lions per hunter each calendar year. State wildlife officials indicate that “mountain lions in Arizona are at capacity in all optimum habitat and most of the marginal habitat.” Anecdotal evidence indicates that there are more big cats throughout the West today than at any time in the previous century.

Roads now penetrate some of the original Gila Wilderness that existed when Aldo Leopold moved to the region in 1909. In the most generous appraisal the greater wilderness now includes the official Gila Wilderness in New Mexico, the Blue Range Primitive Area and Wilderness Area in eastern Arizona and western New Mexico, and the Aldo Leopold Wilderness Area in the Gila’s Black Range. Some of these chunks of wilderness are separated from the others by two-lane highways. Various National Forest dirt roads diverge from these main arteries like capillaries. Although fragmented and partially degraded by those roads, much of the habitat remains essentially intact.
A conservationist might describe the Gila of today as a significant piece of wild land, rich and productive in wildlife and other recreational resources. The federal government has carefully managed the area to ensure sustainable yields of lumber and livestock pasturage. An ecologist would see the same region as a relatively pristine wilderness, with largely intact wildlife populations, but lacking two critical predator components—wolves and grizzly bears. Admittedly, there is a fundamental philosophical difference between the conservation- and ecology-based ethics, which will result in continued debate over land-use and wildlife policy. But between 1909 and 1936 men representative of these philosophies met in New Mexico’s Gila Wilderness and succeeded in preserving most critical wildlife and habitat. That habitat today is the focus of America’s most high-profile and symbolic wildlife controversy, the Mexican Wolf reintroduction program. In this controversy the conservationist- and ecology-based wilderness ethics are very much alive, highly vocal, and profoundly influential.

The greater Gila Wilderness is the product of the dramatic ethical and intellectual growth in the region between 1909 and 1936. An impressive paradigm shift transported forest management from the dominant colonial Judeo-Christian wilderness ethic towards conservation, from which grew preservationism and eventually the ecology-based wilderness ethic. Men symbolizing each of the three significant wilderness ethics—colonial Judeo-Christian, conservation, and ecology—lived in the region while working for the U.S. Department of Agriculture. These four men demonstrated the ability of the three ethics to coexist. Despite their philosophical incompatibility, conservationists and ecologists collaborated to preserve wildlife and vital habitat areas. Even Ben Lilly, representative of the colonial Judeo-Christian wilderness ethic, contributed to the romance and mystique of the Gila, thereby enhancing its cultural value in the minds of modern Americans.

In 1947 J. Stokley Ligon, Fred Winn, J. Frank Dobie, and others honored hunter Ben Lilly with a monument that overlooks the main southern entrance to the Gila Wilderness Area. The stone monument, with its brass figures depicting Lilly, a bear, and a mountain lion, is a fitting commemoration both of the hunter’s attraction to the Gila and of his colonial Judeo-Christian attitude towards predators. In contrast, thirty miles to the east sits the closest boundary of the Aldo Leopold Wilderness Area named in honor of the man most responsible for its preservation. The two monuments befit the men they celebrate and are indicative of the diversity of wilderness ethics that thrived in the region—and whose legacies are influential to this day.
Notes

1. For the purpose of this paper the Gila Wilderness includes the modern Gila Wilderness Area, the Aldo Leopold Wilderness Area in the Black Range, and the Blue Range Primitive Area in eastern Arizona and western New Mexico as well as contiguous lands that remained undeveloped in 1909.


5. Several predators—bears, wolves, and mountain lions—dominate this discussion. According to David E. Brown, The Wolf in the Southwest: The Making of an Endangered Species (Tucson: University of Arizona Press, 1983), southwestern wolves were of a single species, *Canis lupus*, although scientists have debated the regional subspecies or races that existed. The Mexican wolf (*Canis lupus baileyi*), which ranged from subtropical Mexico to southern New Mexico and Arizona probably bred with the subspecies *Canis lupis mogollonis* that inhabited the Gila Wilderness. Any distinction between the two was largely academic, based on minor differences in pelage and skull size. See also Stanley P. Young, Puma: Mysterious American Cat (New York: Dover Publishers, 1946). For the purpose of this article, the term bears refers to both the black bear (*Ursus americanus*) and the larger, more dangerous species, *Ursus arctos* or grizzly bear. Each species existed in the Gila Wilderness prior to 1935. When distinguishing between the two species, I will refer to them as “black bears” or “grizzly bears,” respectively. *Felis concolor* is known by many names including puma, cougar, panther, and, inaccurately, catamount. I have chosen to use mountain lion, the term most commonly employed in the southwestern United States. Among people who have the most contact with the *Felis concolor* (biologists and hunters) the term is commonly shortened to simply *lion*.

6. The landmark event often cited as marking the start of the conservation movement is the establishment of the Boone and Crockett Club in 1888. Founded by Theodore
Roosevelt, the organization boasted such American notables as Elihu Root, Henry Cabot Lodge, and George Bird Grinnell. See Nash, *Wilderness and the American Mind*, 152–53.


10. Brown, *The Wolf in the Southwest* and *The Grizzly in the Southwest* are excellent analyses of humankind’s difficult relationship with these animals in the region.


18. Most of Ben Lilly's surviving writings have been published in Neil B. Carmony, *Ben Lilly's Tales of Bears, Lions, and Hounds* (Silver City, N.Mex.: High Lonesome Books, 1998). Carmony's thorough annotations offer many insightful, but sometimes arguable, glimpses into the mind and world of Ben Lilly. The bulk of Lilly's original manuscripts are housed in the J. Frank Dobie Collection, Harry Ransom Humanities Research Center, University of Texas, Austin.


31. Ligon worked for the U.S. Biological Survey from 1914 to 1923, when he left to work for the New Mexico Department of Game and Fish. He and his wife Rose owned and operated a game-bird farm from 1930 until near the end of his life. Ligon returned to work for the federal government's new Fish and Wildlife Service from 1938 to 1943, when he retired. Most of my biographical information on Ligon comes from David G. Jackson, "Requiem for a Pioneer: The Story of J. Stokley Ligon," *New Mexico Wildlife*, May-June 1961, 4-6.

32. Ligon's notebooks, photos, and several published and unpublished manuscripts are in the J. Stokley Ligon Collection, CONS 92, Special Collections, Denver Public Library, Denver, Colorado (hereafter Ligon Collection).


35. Ligon stated that in 1916 the highest paid Survey hunters made $125 per month, but when Survey officials hired Ben Lilly, they agreed to pay the famous hunter $200 per month. McFarland, *Wilderness of the Gila*, 43.


38. Pickens, autobiographical manuscript, and Hawley, interview. Albert Pickens was representative of numerous hunters who followed him in later years, including his younger half-brother Homer Pickens (whom Albert trained) and Elliott Barker. Unlike Albert, Homer and Barker—besides being master hunters and trappers—went on to high-level positions with the New Mexico Game and Fish Department. But Albert was the first of his kind to make the transition from frontiersman to conservationist. For more on these lion hunters turned bureaucrats, see Homer C. Pickens, *Tracks Across New Mexico* (Portales, N.Mex.: Bishop Publishing, 1980); Elliott S. Barker, *When the Dogs Bark "Treed"* (Albuquerque: University of New Mexico Press, 1946); and Elliot S. Barker, *Western Life and Adventures: 1889 to 1970* (Albuquerque: Calvin Horn, 1970).


40. Ibid.

41. Ibid.

42. Hawley, interview.

43. Hawley, letter to author.

44. Interestingly, Hawley recalls that Pickens read "a book by [William T.] Hornaday" and subscribed to *Field and Stream* magazine, evidence that his ignorance...
of conservationist thought may not have been as complete as his old friend believed. J. E. Hawley, e-mail to author, 20 May 1999.


46. Nash, *Wilderness and the American Mind*, 195. I have found little convincing evidence that Jainism or any other Eastern religion influenced Leopold's concept of ecology. As a scientist, he constructed arguments that are primarily rational and always grounded in scientific method. I find misleading Nash's assertion that Jainism was at the root of life-long hunter Leopold's version of ecology. In *Thinking Like a Mountain*, Susan Flader delved into the intricacies of Leopold's intellectual evolution. She followed Leopold's scientific and philosophical changes, starting with his final great work *A Sand County Almanac*. Next leaping backwards to his time in the Gila and elsewhere in the Southwest, she slowly traced his work forward to his death. Despite the complexity of Flader's scholarship, at one point she simply stated, "It was through observation, experience and reflection that Aldo Leopold evolved his mature philosophy." The bulk of the formative observations and experiences in Leopold's career had come from his years in or around the Gila Wilderness. Flader's is a thoughtful, meticulously researched work that attempts to trace the growth of one of the most important scientific and ethical innovations of the century—the ecology-based wilderness ethic.


49. Flader, *Thinking Like a Mountain*. The extent to which Leopold believed that predators had a moral right to exist beyond their merely ecological value to an ecosystem is discussed in Worster, *Nature's Economy*, 281–90.


51. In this case, *protection* meant the establishment of regulated hunting seasons based on game-management principles.

52. J. Stokley Ligon, "Bears in New Mexico and Why They Should be Protected," undated manuscript, Ligon Collection, p. 1.


54. See J. Stokley Ligon, "Monetary and Other Values of Wild Life," in *Wild Life of New Mexico, Its Conservation and Management; Being a Report on the Game Survey of the State, 1926 and 1927* (Santa Fe: New Mexico State Game Commission, Department of Game and Fish, 1927), 33–34.


59. Hawley, letter to author.

60. Ibid.


63. Although estimating wildlife populations remains an inexact science, Ligon based his estimates on the best information available at the time, and no one in the Southwest was better able to interpret that data. In the absence of more complete data, Ligon's figures in *Wild Life of New Mexico* stand as the best available estimates of southwestern wildlife in the 1920s.


66. The Aldo Leopold Wilderness, however, is only divided from the Gila by an unpaved Forest Service road.