A Brief History of Elk Introduction in the Adirondacks

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One of the more controversial issues affecting the environment of the Adirondack region is the introduction of species that either have actually lived here in the past or could potentially inhabit our area. The focus has been on charismatic megafauna, mirroring the emphasis in other places. The most notable might be the greater ecosystem of Yellowstone, where a small pack of wolves was released in 1995. In our region, a project to introduce lynx was initiated by the State University of New York College of Environmental Science and Forestry (SUNY ESF), starting in 1989 (Halpern, 1989). A proposal to accelerate natural immigration of moose was withdrawn in 1993, after negative response from citizens concerned about issues of traffic safety, program funding, and the ethics of eventually hunting these animals (Hicks, 1993). Recently, a group named Wolves Unlimited floated the idea of a 10,000 acre preserve for the introduction of wolves in either Franklin or Lewis Counties, just outside the park border (Taylor, 1996), and Defenders of Wildlife has called for the introduction of wolves inside the park itself (Savage, 1996).

Speculation about wolf introduction was the subject of a panel at the twenty-sixth annual conference on the Adirondacks sponsored by the Environmental Studies Program at St. Lawrence University (15 June 1996). The panel addressed the history of wolves in northern New York, as well as the biological and social conditions of any restocking effort. During his remarks, Al Hicks of the Wildlife Resources Center at the New York State Department of Environmental Conservation reported that a group from Montana had approached his office about the possibility of releasing elk into the Adirondacks. This organization, the Rocky Mountain Elk Foundation, subsequently agreed to fund research necessary to answer two questions before any introduction can be undertaken. The first question, under investigation by SUNY ESF, concerns the prospect for a successful introduction based on ecological conditions, specifically the suitability of regional habitat. The second question, under study by the School of Natural Resources at Cornell University, pertains to political acceptability and public receptivity. As illustrated by the proposal for augmenting moose, citizen perception and response are significant issues. Answers to both questions will hopefully be available sometime soon after the completion of these research projects later in 1997.

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In the meantime, it might be instructive to examine previous efforts to introduce elk in the Adirondack region and to see what lessons prior projects might teach us about the prospects for a successful introduction in the future. The history lesson is not a particularly rich one. Only two previous efforts have been attempted, and limited information is available about both of them. The first project, conducted through the early years of this century, has been summarized by Phil Terrie in his book, *Wildlife and Wilderness: A History of Adirondack Mammals* (1993). The second project, undertaken in the 1930s at the DeBar Mountain Game Refuge, has not been adequately summarized in the literature to date.

Were Elk Ever Part of the Adirondack Ecosystem?

It should be stressed at the onset that the question of whether elk were ever part of the greater Adirondack ecosystem is an unresolved one, according to the historical record compiled by Terrie. The first attempt to conduct a comprehensive survey of wildlife was undertaken by state zoologist James E. DeKay in the early 1840s. Based on his own observations and conversations with local residents, one of whom claimed to have killed an elk on the Saranac River in 1836, DeKay believed elk were indeed part of early Adirondack fauna. However, this claim was disputed a half century later by C. Hart Merriam, who undertook a study similar to De Kay's and found no evidence supporting the presence of elk in the Adirondacks, either then or at any time in the past (Terrie, 1993, pp. 58-9). Given that the first pioneers had penetrated the Adirondacks several generations before Merriam's work in the 1880s, and that parties of Iroquois had pene-

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trated the region on hunting trips for centuries prior to European influence, it is entirely possible that Merriam's discussions with hunters turned up no evidence supporting the existence of elk simply because elk had been extirpated before the memory of his informants.

Despite the inconsistency that is clearly evident in the historical record, popular guidebooks state rather unambiguously that elk inhabited the Adirondacks during the past. In a recently revised trailguide, first published ten years ago by the Adirondack Mountain Club (ADK), Peter O'Shea wrote about an area that "was once the scene of an initially successful attempt to return elk to the fauna of the Adirondacks" (O'Shea, 1994, p. 94). Likewise, Barbara McMartin and her co-workers, in one volume of their popular "Discover the Adirondacks" series, described this same area as "once the site of an enclosed elk herd that was to be the nucleus for restoring this imposing cervid to its rightful place among the fauna of the park" (McMartin, *et al.*, 1988, p. 137).

Although an argument can be made for the existence of elk in the Adirondacks at one time, the issue is far from settled. The historical record certainly provides a possible basis for believing they were not present. While it is perhaps understandable that guidebooks might simplify the nuances of complex history, one can't help but wonder about the implications of the language cited above. One of the questions to be answered about elk introduction at present concerns public acceptability. The perception of the average person is more apt to be informed by guidebooks written for them than by monographs and journal articles having more appeal to specialists in policy-making and academia.

Elk Introduction during the early 1900s

In any event, there were certainly no elk in the Adirondacks at the time of the first effort to introduce them from elsewhere. As chronicled by Terrie, this effort was initiated at the turn of the century by affluent individuals. The first, William C. Whitney, relocated 20 elk in 1901 from his estate at Lenox, Massachusetts to Forked Lake Carry, first by rail to the Raquette Lake railroad station, and then by freight boat across the lake. This herd was supplemented by additional donations from Whitney and other individuals, who sponsored releases at several locations, including Raquette Lake, Paul Smiths, and Little Tupper Lake (Terrie, 1993, p. 124). By the end of 1903, the State of New York Forest, Fish and Game Commission reported that 155 elk had been "liberated," a term used liberally by the Commission to describe the project in its annual reports throughout the early years of this century. Terrie apparently relied heavily on these reports, each of which contained a page or two concerning elk.

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A feeling of success was much in evidence by the tone of the report published in 1907. This report first described the liberation of 26 elk during the previous year, a private gift to the State of New York from Austin Corbin, the owner of Blue Mountain Forest Park in Newport, New Hampshire. The release itself, on state lands in the vicinity of Newcomb and Lake George, was funded by local guides' associations and fish and game clubs. The report noted that "most of the cow elk were pregnant when liberated," and that these herds had "already considerably increased" (*State of New York Forest, Fish and Game Commission Twelfth Annual Report*, 1907, p. 167). Optimistic assessments were further reflected in such statements as "the elk in all sections of the Adirondacks have increased satisfactorily," as well as in a report tracing three elk for nearly 100 miles, "which will give an idea of the wide area over which the Adirondack elk are ranging" (*ibid.*). The total herd throughout the Adirondacks was estimated to have reached approximately 350 individuals at this time. Sportsmen "of means" were invited to make donations for additional releases on public land in the future.

A change in the fate of introduced elk occurred soon afterward, as the 1910 report described the population as "steadily decreasing." It was believed that the decline was due to hunting, an activity undertaken either mistakenly or illegally. The killing of elk was a misdemeanor punishable by fines and/or imprisonment, and rewards were offered by the Forest, Fish and Game Commission for information leading to arrests, for example, "a reward of $100 for the detection of the culprit" who shot an elk after its release near Newcomb (*State of New York Forest, Fish and Game Commission Twelfth Annual Report*, 1907, p. 167). In 1915-16, the Benevolent and Protective Order of Elks attempted to revitalize the project with elk relocated from Yellowstone National Park (Mahoney, 1947). According to Terrie (1993), the sponsorship was perhaps a response to guilt over the mass slaughter of elk elsewhere; elk were killed solely for eye teeth worn on watch fobs by members of this fraternal organization. However, "(a)fter 1917, there is scant further mention of elk in official publications . . . although the 1942 report of the Conservation Department contains a cryptic reference to an experiment with feeding 'deer cakes' to both deer and elk at the state's DeBar Mountain Game Refuge" (op cit., p. 128).

Elk Introduction during the 1930s

In fact, the DeBar Mountain Game Refuge was the scene of the most active effort directly undertaken by

the State of New York to maintain elk that had been introduced into the Adirondacks. Bits and pieces about this effort can be obtained from the annual reports of the Conservation Department, starting in 1932, as well as in a 1953 article by the late Greenleaf Chase, long-time Game Manager of the Adirondack District. Additional information might have been available from the offices of the Department of Environmental Conservation in Delmar (Chase, 1994), but most archival material in the library there was discarded in 1995 due to lack of budgetary resources for proper maintenance (Hicks, 1996).

The DeBar Mountain Refuge was created within the forest preserve upon petition by the Franklin County Board of Supervisors in 1928 (Chase, 1994). The purpose of the refuge, one of many established by the Conservation Department throughout the state at the time, was to provide protection and food supply so wildlife important for hunting and fishing in the area could propagate successfully. The refuge was clearly demarcated with a wire fence. The borders were heavily posted. Boundaries were maintained by one or two full-time caretakers employed by the Conservation Department. Their efforts were supplemented in summer by work crews from the Civilian Conservation Corps, during the 1930s, and by seasonal employees, who developed access roads and water supply projects. Among their responsibilities, state employees trapped and destroyed so-called "vermin" that might have preyed on wildlife of concern, such as hawks, owls, fox, and weasels feeding on rabbits, grouse, and trout. The likelihood of creating ecological imbalances was not considered or anticipated. Such imbalances did occur, the most notable being an overpopulation of deer, and the name was changed in 1945 from Game Refuge to Game Management Area in order to "permit harvesting by sportsmen" (Chase, 1994). Ecological disturbances were doubtless exacerbated by feeding preferred wildlife various grains raised on portions of the refuge specifically set aside for that purpose.

The written record of history is often beset with conflicting accounts of events. Fortunately, such discrepancies are minor in the history of the DeBar Refuge. We know, for example, that the first herd of elk numbered six, but this herd was reported by Chase (1953, p. 202) as being released in 1929, while the records of the Conservation Department indicate a date of 1932 (*State of New York Conservation Department Twenty-second Annual Report*, 1933, p. 340). As with the earlier round of liberations, this one was made with a donation. According to the Conservation Department Twenty-second Annual Report, the gift of five cows and one bull was made by the owners of the Blue Mountain Game Preserve, formerly the Blue Mountain Forest Park. Elk had been shipped from this same preserve both for release in the vicinity of Newcomb and Lake George in 1906, as noted above, and for liberation at Thirteenth Pond in 1907 ("Adirondack Elk," 1907).

The ADK trailguide, cited previously in connection to the question of whether or not elk were ever present in the Adirondacks, provided a different account of the origin for the first six elk at the DeBar Refuge. It attributed the donation to "the gift of the governor of a western state to the governor of New York" (O'Shea, 1994, p. 94). Given the way guidebooks tend to simplify the complexity of history, as seen earlier, and the probability Conservation Department reports are more reliable as primary sources of information, prepared at the time events were actually unfolding, official documents from the State of New York are preferred for a more accurate portrayal of events.

During September of the first year (1932), elk were observed grazing on twenty acres of buckwheat, sown the previous spring in an area that had been badly burned. Oats, corn, and winter wheat were also planted in the DeBar Refuge, and it can be reasonably assumed that elk ate at least some of these grains, either in fall, when animals were allowed to graze on planted fields, or in winter, when animals were fed harvested crops. In 1935, "elk were fed alfalfa in a feeding shed during the winter" (*State of New York Conservation Department Twenty-fifth Annual Report*, 1936, p. 377). In addition to alfalfa, soybeans and molasses were fed to wildlife during severe winter conditions. The availability of such alternatives to natural browse raises questions about how dependent elk became on them and how well elk prospered once they ranged away from feeding areas managed by the State.

The initial herd of six elk had grown to eight by the end of their first year in 1932, and according to the Conservation Department report for 1934, "16 elk were carried through one of the severest winters the region has ever known" (*State of New York Conservation Department Twenty-fourth Annual Report*, 1935, p. 320). The report for 1936 noted that elk from the refuge "have rambled and some have been seen in the vicinities of Tupper Lake, Mountain View and Partridge Park. It is difficult to estimate how many are now on the refuge. However, their tracks are numerous. . ." (*State of New York Conservation Department Twenty-sixth Annual Report*, 1937, p. 348). Although Chase (1953, p. 202) stated that the "last elk track was seen at DeBar in 1941," the presence of elk at the DeBar Refuge was noted in the 1942 report of the Conservation Department. Sulphurized salt as well as deer cakes were fed to elk during that winter, and

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elk on the refuge numbered seven at the time (*State of New York Conservation Department Thirty-second Annual Report*, 1943, p. 202).

The size of the elk population had clearly declined by the early 1940s. No further mention of elk was made in the official records of the Conservation Department after 1942. It would be safe to conclude that elk disappeared from the DeBar Refuge, and perhaps the remainder of the Adirondacks, over the next few years. The last evidence of elk in the Adirondack Mountains was a report of one killed by a William Vandivert in Essex County during the fall of 1946 (Mahoney, 1947).

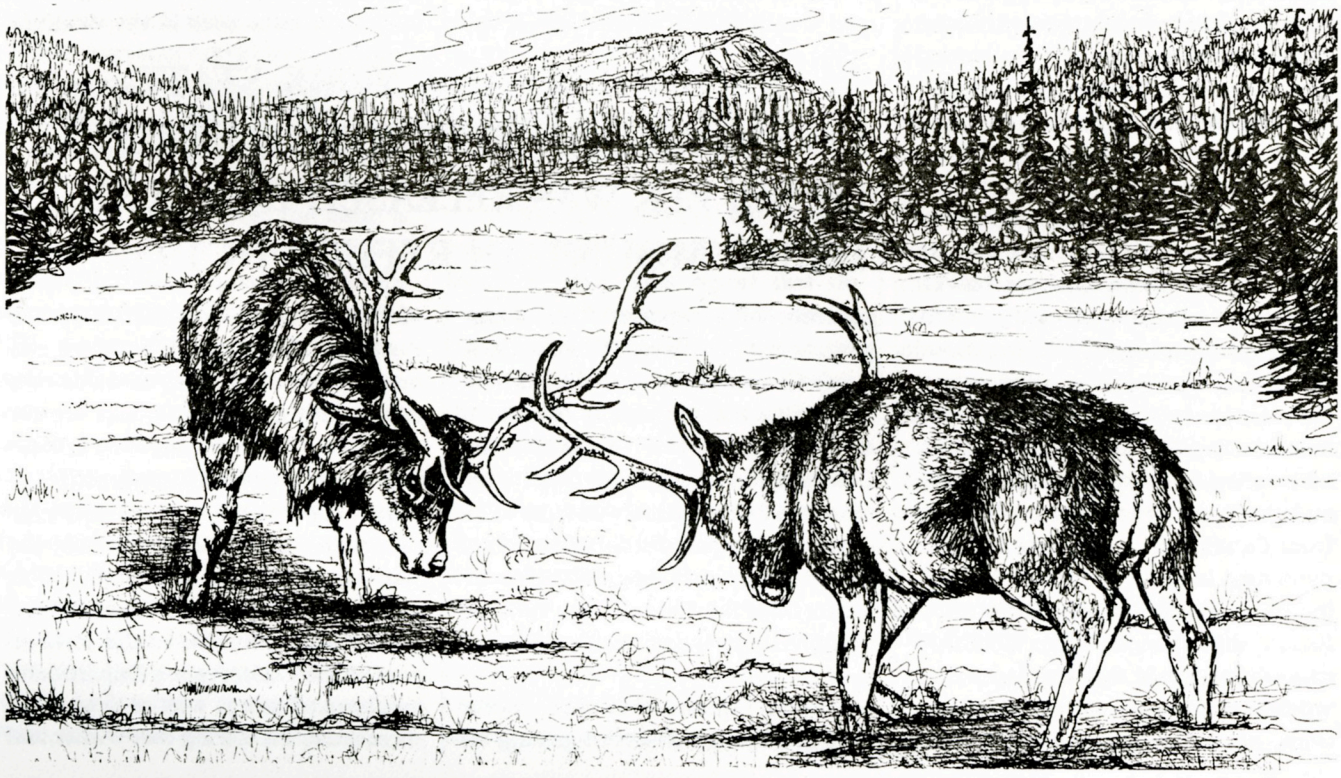
Why Did Introductions Fail?

Historical information would seem to support an explanation pinning the blame for the decline and disappearance of elk on illegal hunting. The early literature contains numerous reports of elk killed by hunters during the first episode of introductions. For example, a front-page story of *Forest and Stream* described how an elk was killed because it was mistaken for a deer or a domesticated cow, leading to a proposal that would ban completely the killing of all game in certain sections of the Adirondacks ("The Adirondack Elk," 1903). The urge to shoot elk or any other animals illegally was dismissed by the writer of the article as a matter of human nature. "Some woods visitors might be trusted to carry weapons through a preserve, but persons so to be trusted are not very numerous among the rich, the poor, the ignorant, or the learned. Most of us need a good strong law and a game warden within earshot" (ibid., p. 216). Fines and imprisonment were thought to be insufficient deterrents.

Certainly the curiosity of hunters everywhere would have been piqued by articles in various magazines for sportsmen. Plum's *Adirondack Bibliography* (1958, p. 112) lists ten different pieces on elk in the Adirondacks during the fifteen month period from February 1906 to April 1907 alone. Articles, editorials, and letters appeared in *Shooting and Fishing, Sportsmen's Review,* and *Arms and the Man*, as well as *Forest and Stream*. One article in *Shooting and Fishing* described a release of nine elk in Warren County under the title "Adirondack Game" (1906). Such publicity would certainly have alerted individuals with dubious propensities that elk were available for the taking, albeit illegally. So, it is not surprising to find evidence of poaching in the published literature. One account is provided in a letter to the editor of *Forest and Stream*. "A Mr. Aldrich, who is building a state hatchery in the Adirondacks, says that he has seen two carcasses of elk lying in the woods that had been shot in pure wantonness by some one unworthy the name of man and left to rot" (K., 1905).

Terrie (1993) does not dispute these reports of illegal hunting. In his view, however, it would be erroneous to attribute the decline of elk to mistaken or uncontrollable hunters. His explanation is based on the suitability of Adirondack habitat. "Elk naturally inhabit prairies, prairie-like marshes, and sandy pine-and-oak stands" (op cit., p. 124). Although a few such areas are present on the periphery of the Adirondacks, these habitats are not present in the central Adirondacks where elk introductions were made. "(W)e know now that the project could never have succeeded: the central Adirondack region is not good elk habitat" (op cit., p. 21).

It is more difficult to pinpoint a reason for the decline of elk in the vicinity of DeBar Mountain Game Refuge. This refuge was located in a part of the Adirondacks under intense



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pressure from hunters at the time. Annual reports of the Conservation Department directed attention toward the considerable effort to maintain borders, starting in 1937. The report for 1938, for example, noted that "(e)mphasis again was placed on keeping the boundary of the refuge well maintained to warn hunters from trespass in this heavily hunted section. Seventeen and one-half miles of boundary line were repaired with new posts and posters and 10 miles of the boundary mowed" (*State of New York Conservation Department Twenty-eighth Annual Report,* 1939, p.260). Similar statements were made in reference to the DeBar Refuge for each of the next three years, as well.

A plausible argument could be made that the habitat of Franklin County was not conducive to elk at the time. The herd might simply have perished without crops grown on the refuge and feed supplements distributed by the Conservation Department during the winter months. Given the information available, it is not possible to answer the questions raised earlier, i.e. how dependent had elk become on crops and feed supplements, and how well did elk prosper on natural vegetation in the region.

Many activities associated with various refuges throughout the state were suspended during the war years. Individuals working for the Conservation Department enlisted or were drafted into military service. Younger personnel were particularly affected, and it was these persons who were directly involved in actual fieldwork, including maintenance of the game refuges. "It thus fell to the limited remaining personnel to carry on essential activities with something less than a skeleton force" (*State of New York Conservation Department Thirty-fourth and Thirty-fifth Annual Reports*, 1946, p.164). Although some attempt was made to patrol boundaries, game refuges were not as well protected from illegal hunting during American involvement in the war as they had been during the 1930s. In addition, certain items fed to wildlife at DeBar in winters, such as soybeans and molasses, were not available, having been classified as "war essentials" (*State of New York Conservation Department Thirty-second Annual Report,* 1943, p. 203). It might also be reasonably inferred that the growing of grains and other crops on the DeBar Refuge was curtailed at this time.

ELK WERE INTRODUCED INTO THE ADIRONDACK REGION ON TWO OCCASIONS, BOTH IN THIS CENTURY.

It is therefore possible to weave together the two explanations of poaching and habitat suitability into a single scenario. If natural browse was inadequate to support them, elk would have become more or less dependent on feeding programs conducted by the State. When these programs were scaled back, elk would have wandered in search of food, travelling with greater frequency and for farther distances from a refuge boundary that was less well patrolled. In a somewhat weakened condition, often outside whatever protection was provided by the refuge, elk would then have become easy targets for hunters acting maliciously or in error.

Summary

The question of whether elk were ever part of the Adirondack ecosystem is an open one. The first comprehensive study of statewide fauna reached a positive conclusion based on a single anecdotal report of an elk on the Saranac River in 1836. A subsequent survey using similar methods reached a negative conclusion. However, it is possible that this second survey yielded nothing simply because elk had been extirpated for a sufficiently long time by the time of this survey in the 1880s. At the present time, the possibility that elk had at one time lived in the Adirondacks cannot be unambiguously resolved.

Elk were introduced into the Adirondack region on two occasions, both in this century. The first round of introductions was made with animals donated by wealthy individuals, starting in 1901 and continuing throughout the early 1900s. The population increased to about 350, before declining in the 1910s. The second attempt to introduce elk was again made with a private gift, but this effort was sustained for several years by a program of regular feeding and protection supported solely and completely by the State of New York. Taking place at the DeBar Mountain Game Refuge, this herd grew to an undetermined but far-ranging population throughout the 1930s, starting from an initial group of six in 1932. The last evidence of elk in the Adirondacks was a report of one shot in Essex County in 1946.

The historical record attributes declines of introduced elk to illegal hunting, although questions have also been raised about the suitability of Adirondack habitat. Whether the Adirondack ecosystem, as presently configured, is appropriate for another introduction in the near future remains an important issue to be addressed by the research under way at SUNY ESF. The social acceptability of another elk release, to be studied by the School of Natural Resources at Cornell, is an equally important concern. In this regard, it is interesting to note the simplified and sometimes inaccurate accounts of prior introductions contained in popular trailguides for the general public. The average citizen is apt to have a somewhat erroneous view on the history of this subject.

Several scholars have pointed out that wilderness and nature are social constructs (e.g. Cronin, 1996). From this theoretical viewpoint, the questions of whether elk have been and should be part of an Adirondack ecosystem reflect individual perception, personal motivation, and cultural predispositions. Disagreement might exist even among persons who agree about the fundamental value of biodiversity and the importance of fully functioning ecosystems. The issue of elk in the Adirondacks cannot be sep-

arated, in my view, from the basic reasons for global loss of biodiversity. I agree with the analysis of recent environmental problems articulated by David Ehrenfeld, founding editor of the journal *Conservation Biology*; we often don't have sufficient knowledge to manage ecological processes without creating unanticipated consequences (1978, pp. 57-129). I also agree with Terrie's comments about Eurocentric attitudes toward wildlife; a deep anthropocentrism is embedded in the religious and cultural institutions of Europeans who settled North America (1993, pp. 36-8, 124).

Although species introductions might create more biologically "complete" ecosystems, such ecological manipulations might alternatively prove problematic. The historical record of many local places is inadequate for fully informed decision-making. If we are uncertain, for example, whether or not elk ever inhabited the Adirondacks, couldn't we cause inadvertent repercussions with a successful introduction? Shouldn't our approach in relation to the natural world be a cautious one? Moreover, at what point in the geologic past do we wish to return biological systems through restoration? I cannot answer this question without feeling somewhat arbitrary. Functioning ecosystems change over time, and change is a natural ecological process (Botkin, 1990). We may not be able to avoid completely the anthropocentric desire to control nature, but we are more likely to live sustainably on a healthy planet if we recognize and minimize this destructive tendency. ■

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