Biennial Symposium Northern Wild Sheep and Goat Council 12:128-137.

THE FOUNDATION FOR NORTH AMERICAN WILD SHEEP – A SHEEP BIOLOGIST'S VIEW FROM THE INSIDE

WAYNE E. HEIMER, Director, FNAWS, 1098 Chena Pump Road, Fairbanks, AK, USA 99709

Abstract: Sheep managers, researchers, and wildlife management agency administrators throughout North America recognize the Foundation for North American Wild Sheep (FNAWS) as the major non-governmental funding source for sheep conservation in North America. Many sheep managers are members of the Foundation, and work closely with the Foundation's staff and Board in coordinating fundraising for projects. Since its inception 25 years ago, the Foundation has raised and spent almost $25 million in pursuit of its directive, "to put more sheep on the mountain." The results have been notable, particularly a reported doubling of bighorn numbers over the last 25 years. Still, few wild sheep managers, and even fewer agency administrators understand how the Foundation actually works. FNAWS is unique among non-government organizations (NGOs) in that it shares a certain tension with management agencies that is more clearly defined than that of the management establishment with other NGOs. Over time, it has become clear to FNAWS that this agonistic relationship is the result of general abdication of management responsibility for mountain sheep, and means FNAWS is definably less likely to "trust the agency" than are other NGOs. The root of this difference lies in the Foundation's growing perception that management agencies don't fail in sheep management for lack of money as much as for lack of commitment to sheep as a priority. As a result, FNAWS is more likely to be involved in management actions than other NGOs. Changes in funding mechanisms over the years, from complete dependence on donated hunts, to "Governor's permit" auctions, and the "New Beginnings" endowment have begun to change the relationship between FNAWS and managing agencies. The change seems certain to continue. These changes will be discussed to stimulate thinking and make managers more fully aware of the new climate in which FNAWS may be expected to operate.

Disclaimer: This account is not to be understood as a review of the Foundation for North American Wild Sheep (FNAWS) history. It represents my observations on the status of the relationship between the Foundation and the profession…from a former professional sheep manager to other wildlife professionals. A detailed history of FNAWS (Schultz et al. 1999) is available from the Foundation. [WEH]

My journey with the Foundation for North American Wild Sheep began with perception and has continually approached reality over the 25 years during which I have been associated with FNAWS. I first heard of FNAWS shortly after it had been formed. Given the tenor of those times, I guessed it was yet another "trophy-crazed bunch of sheep hunters." Still, even as a rookie sheep researcher and manager, I'd developed a deep respect and admiration for sheep hunters because of their dedication to sheep and their interest in, and willingness to support, doing the right things for sheep. In short, I'd come to perceive sheep hunters as important partners. Hence, I embraced FNAWS as a potentially viable source of support for progress in sheep management throughout North America even though I had no idea how they'd actually "put more sheep on the mountain." After a quarter of a century of association with FNAWS, I'm

pleased to report FNAWS is far more than a "trophy-crazed bunch of sheep hunters." FNAWS is for real, and appears to be here to stay.

HOW THE FOUNDATION WORKED: THE EARLY YEARS

The original approach taken by the Foundation's founders was to incorporate as a non-profit organization. Next, the Foundation persuaded guides and outfitters to donate guide services for hunting (generically referred to as "hunts") to the non-profit organization. These hunts were then auctioned to the highest bidder at the Foundation's national convention, thus creating tax benefits (resulting from contributions to the non-profit Foundation) for the buyers. The income from these hunts, minus minimal administrative costs, was then made available as grants to fund sheep management and research projects to "put more sheep on the mountain." Over time, the success of the Foundation has been notable.

EARLY RESULTS

According to Duncan Gilchrist's tabulations (from Trefethen 1974), when the Foundation was organized, the best estimate of bighorn sheep numbers in North America was about 34,000 sheep. Twenty-five years later, the Foundation had been instrumental in raising (and spending) $25 million, and the estimated number of bighorns (Gilchrist's tabulation from the 2nd North American Wild Sheep Conference of 2000) had increased to 74,000. It is logical to suppose that some of this increase resulted from increased counting effort or efficiency. Nevertheless, there has been an apparent increase of approximately 40,000 sheep over 25 years. This 'doubling' of bighorn numbers has been coincidental with expenditure of 25 million FNAWS-generated dollars.

Here it should be emphasized that not all of this money has gone to sheep restoration and management through FNAWS grants. Some "hunt auction proceeds" have been returned to hunt donors to cover their expenses, and some have gone to run the Foundation. The remainder has been disbursed through the FNAWS Grant-In-Aid program. When "Governor's permits" developed (see Erickson 1988 for a short history), huge sums of money were generated which reverted directly to state and provincial management agencies with "gentlemen's agreements" that these dollars would supplement donor state or province agency budgets for sheep management and restoration. Some states and provinces have abided by these agreements more than others have.

Simple calculations based on the amount of FNAWS-generated money, elapsed time, and the reported increase in bighorn numbers yield the following statistics: The increase in bighorn sheep (40,000 over 25 years) averaged approximately 1,700 sheep per year. Also, dividing 40,000 sheep into $25 million indicates an average cost of $625 per sheep. Total monetary costs to produce the reported increase in bighorn numbers were probably somewhat higher because state and provincial management agencies spent some non-FNAWS-generated dollars on sheep along the way. However, the few documented agency sheep budget increases over the last 25 years (see Pybus and Wishart (eds): Status Reports Ninth North. Wild Sheep and Goat Counc. Proceedings, 1994), seem to have followed sheep population increases, they certainly did not pre-date (and hence cannot be considered a cause of) the increases in bighorn sheep numbers. These circumstances raise the question, "Would bighorn sheep numbers have increased without FNAWS?

POSSIBLE CAUSES OF BIGHORN POPULATION INCREASES

Biologists are, of course, interested in identifying whether the correlation between FNAWS fundraising, the resultant increases in agency expenditures, and increases in bighorn populations were causally linked. I suggest they were; here's why:

Obviously, bighorn sheep populations will increase whenever recruitment exceeds mortality. In this case, there is no reason to postulate bighorn populations were already increasing when FNAWS was formed. Review of the Transactions of the Desert Bighorn Council and Northern Wild Sheep and Goat Council Proceedings prior to 1974 indicates few, if any, thriving bighorn populations. The common thread linking papers presented at these meetings was struggling or declining populations threatened by grazing competition, disease problems, and habitat loss.

For bighorn populations to "turn around" in 1974 would have required abrupt decreases in environmental resistance to bighorn population growth coincidental with FNAWS formation. Viable alternate hypotheses would require supporting evidence documenting continent-wide decreases in overall environmental resistance to bighorn population growth. To consider this possibility, overall environmental resistance to bighorn population growth may be divided into its identifiable components.

Overall environmental resistance may be thought of as the sum of human harvests, non-human predation, negative weather effects, and decreases in habitat quality. Three of these components appear more likely to inhibit bighorn population growth at present than in the past. Mortality resulting from increases in human harvests, weather-related increases in environmental resistance, and non-human predation have *apparently increased* during the last quarter century.

Human harvests have increased commensurate with increases in overall bighorn population size (see Thomas and Thomas 2000 status reports). Also, harvest by humans is still traditionally focused on mature rams. This mature ram harvest has minimal effects on productivity and survival. Harvests of ewes designed to limit bighorn population growth have been generally insignificant continent-wide. Hence, it is highly unlikely that decreases in human harvests have contributed to the continent's doubling of bighorn sheep numbers.

Review of the published literature suggests weather has been, if anything, generally less favorable to bighorn population growth over the last 15 years. Activity of *El Nino* and *La Nina* appears to have produced less stable and relatively harsher winters in northern habitats accompanied by drought in southern habitats. Although changes in weather cycles appear to have taken place over the last 25 years, I know of no data suggesting that weather has become *more* favorable to bighorn sheep over that period of time. Also, for what it's worth, climate scholars and advocates of global warming theory have yet to postulate a benefit from this phenomenon.

Mortality resulting from non-human predators has also apparently increased during the last 25 years. Restoration of mountain lion populations, reintroduction of wolves, increased populations of eagles, expanding coyote populations, and protection of predators as a human societal choice have predictably resulted in greater predator abundance. Increasing mortality from non-human predators is being reported by an increasing number of authors, and may be the most compelling management issue in the shorter-term future.

In spite of the fact that actions of these

components of overall environmental resistance should have produced lower, not higher, bighorn numbers, reported bighorn numbers have doubled. By elimination, this leaves improvements in habitat quality or quantity as the most robust hypothesis rationalizing the reported increase in bighorn numbers. The cause of this increase in habitat quantity/quality has been re-introduction of bighorn sheep to former ranges. Hence, it may be logically argued that active management, primarily through transplantation to effect bighorn re-introductions, has been the primary cause of increased bighorn numbers throughout North America during the last 25 years. This active management has created a tension between FNAWS and state/provincial management agencies, which sets FNAWS apart from typical non-governmental organizations (NGOs).

THE UNIQUE FNAWS ORGANIZATIONAL CULTURE (OR CHARACTER)

The organizational culture of FNAWS is unique among NGOs. FNAWS is more likely to be unabashedly pro-hunting than most NGOs. I suggest this is primarily because FNAWS revenue is hunter-driven by design. This specific pro-hunting stance, as well as a specific organizational culture built around "more and better traditional sheep hunting," makes FNAWS more proactive with respect to management and political issues than typical NGOs.

At the basis of the FNAWS organizational culture is the unarguably, fact-based perception that state and provincial management agencies have historically made sheep restoration and management a low priority. As a result, FNAWS has developed a sort of "noble crusader" mentality, which influences FNAWS/agency interactions. I suggest the basic reason sheep management was never afforded a high priority was that sheep populations were virtually nonexistent when traditional wildlife management was evolving and its financial base was being developed. I consider the linkage between these two aspects of management critical to understanding the unique character of FNAWS compared with other NGOs.

Wildlife management requires money. In the United States, availability of money is linked to sales of hunting licenses. Because there were basically no sheep to hunt when the ethos and funding mechanism of wildlife management developed (75 to 50 years ago), early managers reasoned there was "no profit" to states or provinces from sheep management. The investment in restoration before any profit could be realized was considered (if at all) a "long shot" or poor risk. Consequently, revenue-producing species such as deer, elk, moose, caribou, bears, and small game dominated management's thinking, and were established as high priority programs. The result was that sheep were generally ignored. As management philosophy broadened in modern times, trendy programs like non-game management simply leapfrogged sheep management on the priority scale. Sheep management funding continued at the traditional level. FNAWS has noticed the priority of sheep management appears to be more tightly linked to management tradition than available funding.

When FNAWS, an organization zealous for sheep, emerged with the willingness and money to "put sheep on the mountain," it was shocked by the prevailing management attitude. Rather than adopt the existing management philosophy, FNAWS aggressively undertook sheep management and restoration, often in spite of resistance by, or with the grudging consent of, upper level state and provincial wildlife officials. This administrative resistance was also

noted by the Foundation. The administrative attitude was in marked contrast to the enthusiasm of field biologists and managers who were already deeply committed to sheep restoration and management. Within this fairly tense organizational climate, FNAWS began to provide funding for sheep restoration and management projects in a less-than-systematic fashion. The term "shotgunning" has been a reasonably accurate descriptor articulated by some biologists. FNAWS also funded a great deal of what many call research, but because of my bias that meaningful research is a part of management, I have not separated the 2 here.

The low average cost per sheep ($625) produced over the last 25 years suggests that the agencies based their traditional low prioritization of sheep programs on flawed thinking. While sheep management might not, as yet, put a management agency deeply in the black, other programs, which offer even lower prospects for generating revenue, have received higher priority than sheep. Still, many sheep programs have reached the point where they, with FNAWS-generated funding, typically pay their own way in terms of operational budgets.

Nevertheless, the historic low agency priority for sheep management based on questionable justifications has created and maintained a tension between FNAWS and state and provincial management agencies which is atypical for NGOs. Typically, NGOs have very high confidence in the decisions of state and provincial management agencies, and are satisfied to simply provide supplemental funding for use according to priorities established by the management agency. In contrast to this norm, FNAWS has developed a tradition of questioning agency motives and priorities, as well as a certain suspicion that agencies would prefer to use FNAWS-generated money for traditional priorities. This suspicion is not without foundation, and agency leaders would do well to re-examine their traditional priorities.

The unique FNAWS character also arises from differences in approach compared to those of other NGOs, which have defined the "agency comfort level" for relationships with non-governmental funding sources. The more successful NGOs are heavily habitat-oriented. That is, typical NGOs operate on the basic assumption that if existing habitat can be preserved or enhanced, all will be well with their species of special interest. I can identify only 2 NGOs that focus on transplant or re-introduction of favored species to new habitats, FNAWS and the National Wild Turkey Foundation. State management agencies have been greatly more inclined to re-introduce or establish transplanted populations of turkeys because the revenue-generating potential is higher, realized in a shorter time, and turkeys are more easily managed. For this reason, turkeys thrive in areas where they are introduced fauna, while significant amounts of historic bighorn sheep habitat have yet to see a sheep in modern times.

Compounding the adaptive agency preference for revenue-producing species is the complexity of wild sheep management. While North American wild sheep do have hooves on the ends of their feet and are by definition ungulates, their suite of adaptations to climax habitats appears to be basically different from those of seral-adapted species (e.g., deer) which drive classic ungulate management (Heimer 1999*a*). In addition to a differing set of adaptations (particularly among thinhorns), wild sheep have an associated liability resulting from failure to adapt in the short-term.

Susceptibility to diseases endemic to domestic sheep must be considered in wild sheep management. Successful bighorn

restoration and profitable management of bighorn (and thinhorn) populations require management of this disease liability. At present the only promising technique for maintaining viable wild mountain sheep populations is exclusion of domestic sheep from their habitats. This means a bighorn manager must face the down and dirty work associated with negotiating, establishing, and maintaining separation of bighorns from domestic sheep. The most successful approach to reclaiming bighorn habitats from domestic sheep involves negotiating and funding retirement of domestic sheep grazing allotments on bighorn ranges. This is hard administrative work, and not a particularly preferred activity for field biologists or administrators in states with traditions of domestic sheep ranching. Nevertheless, cooperation between federal agencies, most notably the US Forest Service and Bureau of Land Management, FNAWS, state wildlife management agencies, and progressive ranchers has produced significant progress in this area. This progress, of course, results in increased availability of habitat where bighorn sheep can be reintroduced with a reasonable probability of eventually producing revenue for the states involved. These efforts have contributed to the "habitat bonanza" responsible for the doubling of bighorn numbers over the last 25 years. This has been a very expensive process in terms of both effort and money.

RECENT FNAWS FAILURES: PERCEPTION AND REALITY

In recent years FNAWS has had virtually no money to allocate through the traditional Grant-In-Aid mechanism. Many biologists have been puzzled by this situation, wondering how FNAWS can report apparently huge convention "profits," but still not have money available for Grants-In-Aid. Basically, the reason is: *FNAWS really doesn't get to administer most of the money it raises.*

Prior to the advent of "Governor's permits," FNAWS money for support of sheep management (Grant-In-Aid money) was generated at the annual FNAWS convention through the sale of donated hunts. This is still the case, but that's not where the "big money" FNAWS reports from a successful convention is generated. The big money comes from auction of Governor's permits.

Many state and provincial Governor's permits bring tremendous prices at auction, and FNAWS rightfully enjoys taking credit for maximizing the funds raised through auction of these permits. When FNAWS includes these permit sales in the "annual dollars raised" figure reported from a successful convention, the number is high! However, as a condition of Governor's permit donations, typically 90% of this money goes directly back to the states or provinces that donated the permits to FNAWS for auction. The FNAWS function here is not administration or distribution of Governor's permit money, but acting as a broker to maximize return to the states and provinces for their permits based on the network of bidders FNAWS has created over the years.

When it comes to maximizing revenue for donated permits, FNAWS is the best in the business. Supporting data for this statement come as the result of a dispute over allocating revenues from the Alberta permit in recent years. Disagreements with the recipient of the Alberta permit money (in Canada it must be an NGO) resulted in FNAWS not merchandising the Alberta permit at their 1999 convention. The Alberta sheep permit was auctioned at another major NGO fund-raiser, but the yield was only about 2/3 of the value the permit had been bringing at the FNAWS auction. This meant the anticipated potential, an additional

revenue of $100,000 (US), was not realized for conservation.

The money FNAWS raises for Grant-In-Aid projects still comes primarily from donated hunts and other items (exclusive of the big-money Governor's permits), and is a considerably smaller amount. In addition to funding projects through the Grant-In-Aid program, a portion of this money goes to operate the Foundation. In this aspect of its operation, FNAWS is again the exception among typical NGOs. FNAWS has the lowest operating costs of any successful major NGO. Expenses are minimized by maintaining a Foundation staff consisting of an executive director and 6 full and part-time staff members at Foundation headquarters in Cody, Wyoming. The Cody staff takes care of everything from convention planning and management (i.e. fundraising), to membership services, coordinating political and legislative liaison with other NGOs and governmental agencies, and sales of FNAWS merchandise such as hats and shirts. All other Foundation officials volunteer their services.

What all this means is the Foundation's Grant-In-Aid program literally lives or dies by the annual convention fund-raiser (exclusive of Governor's permits). Over the last 3 years, there have been minimal funds available for Grant-In-Aid funding because the Foundation "died" at several relatively recent conventions. Specifically, because of bad fiscal decisions regarding conventions in Philadelphia, Nashville, Hawaii, and San Antonio, more money was lost than was raised. As a non-profit organization, FNAWS did not have a huge cash reserve. The Internal Revenue Service does not like to see large bank accounts held by non-profit corporations, and past FNAWS Boards have consistently decided funding sheep projects is more important than accumulating a cash reserve for the Foundation. What cash reserve existed was spent paying off the debts resulting from these failed conventions, and some debt remained.

Adding to the cash flow problem is the fact that it is extremely difficult for some Board members (all of whom believe passionately in more and better sheep hunting) to refuse a funding request if there is any way it can be met. My impression from sitting on the Board is that biologists and managers fail to appreciate how painful it is for the Board to say "No" to any request, no matter how strange it may be. If we've got it, we'll spend it on sheep. Building a large cash cushion had never been an objective for FNAWS before this fiscal crisis.

In summary, decisions by past FNAWS leaders put the Foundation at the brink of bankruptcy by failing to have consistently successful conventions. Recent conventions appear to have been highly successful, but much of the money raised has been spent in making and keeping the Foundation financially solvent. As a rule of thumb, when the FNAWS convention is in Reno, the Foundation makes money. When the convention is moved to another city, which seems to suit the membership occasionally, the Foundation is likely to lose money. The wonder of the system is that, through increases in fundraising by Chapters and Affiliates in addition to the "Governor's permit money," expenditures by states and provinces have been generally maintained or increased even though the Grant-In-Aid funding from the National organization has been low.

THE FNAWS ENDOWMENT FUND

Not having money to fund Grant-In-Aid projects was simply unacceptable to the FNAWS Board. Consequently, forward-thinking members of the Board conceived the notion of establishing an investment account to provide stable future funding.

The idea was to generate a huge pot of money (the final goal was $10 million) which would earn interest that could provide money for future Grant-In-Aid funding. Once this project was undertaken by the Boards that have shepherded its conception and development, another decision was made which further decreased traditional Grant-In-Aid funding.

The Board decided to minimize Grant-In-Aid funding to capitalize the investment fund as quickly as possible. Eventually, probably in half-a-dozen years, this "New Beginnings Trust" will provide a steady income sufficient to allow shotgunning of proposals as in the early days of the Foundation.

I'm still not comfortable with the "shotgun" or "blackmail" approaches to funding Grant-In-Aid projects (which I'll discuss later), but it is impossible to argue with the overall past success of the Foundation. Still, I think we, as a Foundation, and as professionals, can certainly do better than we have in the past. As professionals, we have a major responsibility in this regard. We have to think better, and offer more responsible proposals than we have in the past.

GETTING GRANT-IN-AID REQUESTS FUNDED

In the past, when Grant-In-Aid money was relatively abundant, many projects were approved simply because somebody said they would "put more sheep on the mountain;" and there was money available. This is no longer the case, but many professionals seem not to have caught on to the fact that times have changed. There is less money and much more stringent review of grant requests than in the past. At least some of this increased review rigor is my fault.

As a working sheep biologist, I'd written my share of Grant-In-Aid proposals and collaborated on even more. Hence, it is my conceit that I pretty well knew the grantsmanship game from the professional side. Once retired from active field biology, and prior to running for the FNAWS board, I began to review Grant-In-Aid proposals for FNAWS. I did this for 3 years.

During those years, the mechanism for proposal review was that proposals (usually about 50 per year) were sent to a panel of reviewers, upon which I served. These reviewers were to rate the proposal on a numerical scale based on their judgment of whether the proposal would "put more sheep on the mountain." The numerical ratings from the review panels were then forwarded to the Board to assist it in funding the most promising projects.

As a reviewer, I was frequently appalled by the casual approach to, and the low quality of, proposals for the limited Grant-In-Aid funds. Taking my responsibilities as a reviewer seriously, I typically wrote pages of comments for consideration of the FNAWS Board of Directors relating to the biological, political, and management soundness of these grant requests.

After being encouraged to run for the Board and winning election, I began to sit in Board meetings where Grant-In-Aid requests were evaluated, and the minimal available funds disbursed. As a professional, I was shocked to discover the difficulty the Board had in rejecting any proposals, even very weak ones. I was also surprised to learn that criteria other than biological soundness and management effectiveness figured prominently in whether a grant request was funded. I soon learned that part of "putting sheep on the mountain" is continuing to have success in raising funds to do so. This was assumed to require the occasional politically expedient funding of grants that held low potential to actually put any "sheep on the mountain" just to keep the money flowing into the Foundation through the

traditional donated hunt mechanism.

As noble as the Foundation's goal is, and as much as it has accomplished through generating and disbursing money, it turns out that donors (as well as purchasers) are not completely altruistic. That is, many donors "invest" rather than "donate." *Certainly, there are many altruistic donors who actually sacrifice their best economic interests for the overall improvement of wild sheep, and I would not impugn their motives for an instant.* However, typical donors are humans who want something good to happen for them as a result of their donation. Artists want to become known, guides want clients in the future, guide/outfitter organizations want money spent in their region or province so their businesses will thrive, and even the most altruistic of FNAWS donors basically wants more and better sheep hunting. This is entirely appropriate. As stated above, this unabashed allegiance to the classic wildlife management ethos, providing human benefits through hunting, contributes to the unique character of FNAWS as a non-governmental organization. This fundamental value has, after all, been the foundation for the most effective conservation program the world has ever seen (Heimer 1999*b*).

Recognizing this tendency to maximize one's inclusive fitness explains what I half-seriously refer to as the "blackmail" component of project funding. As detailed above, donated hunts are still the life-blood of the FNAWS Grant-In-Aid program. Understanding that most humans involved in providing revenue for FNAWS are logically more interested in investing than in altruism helps understand why proposals which hold little promise of "putting sheep on the mountain" are occasionally funded, while biologically better proposals are rejected. Guide/outfitter umbrella organizations, as well as more than a few individual guides, will occasionally let it be known that if some FNAWS Grant money doesn't get spent to enhance sheep populations in their areas, donated hunts will "dry up."

Our responsibility as professionals (where FNAWS Grant-In-Aid funding is concerned) is to think better, write better proposals, and rely progressively less on "blackmail" and "schmoozing the Board at conventions" to get proposals funded. Our responsibility to the publics we serve as agency employees is to recognize our legislative and constitutional mandates with respect to wild sheep resources, and our responsibility to our agencies is to help them re-examine the assumptions upon which program priorities are established. If we discharge these responsibilities, we will have done well.

SUMMARY

The Foundation for North American Wild Sheep has proven, over the last quarter century, that it is certainly more than a group of "trophy-crazed sheep hunters." It has been intimately associated with, if not primarily responsible for the most striking wildlife conservation/ restoration success in the last quarter of the 20th century, the doubling of bighorn numbers in North America. The FNAWS role in this success has been considerably more than providing money. The unique FNAWS character has challenged, with variable success, the established paradigms of wildlife management priority, and may have established a beachhead for eventual recognition of sheep management as an important agency responsibility. One personal goal I have for the Foundation is to raise the status of wild sheep management in the corporate cultures of state and provincial management agencies so FNAWS can become a complete cooperator, in addition to a friendly adversary, and be respected as such by the agencies and their professional

employees. FNAWS funding mechanisms have evolved from exclusive reliance on donated hunts to raise money for funding specific FNAWS projects, through the Governor's permit process which provides money for state and provincial discretionary funding for sheep programs, and future funding is anticipated from the "New Beginnings" trust account. There have been triumphs and failures, but for a small NGO (approximately 6,000 paid national memberships and up to about 15,000 more affiliate members in total), the overall performance of FNAWS over the last 25 years has been amazing.

LITERATURE CITED

ERICKSON, G. 1988. Permit auction: The good, the bad, and the ugly. Proceedings of the Biennial Symposium of the Northern Wild Sheep and Goat Council 6:47-54.

HEIMER, W. E. 2000*a*. A working hypothesis for thinhorn sheep management. Pages 25-46 *in* A. E. Thomas and H.L. Thomas, editors. Transactions of the 2nd North American Wild Sheep Conference April 6-9, 1999, Reno, Nevada, USA.

_____. 2000*b*. Federal assumption of fish and wildlife management in Alaska. Pages 169-186 *in* A. E. Thomas and H.L. Thomas, editors. Transactions of the 2nd North American Wild Sheep Conference April 6-9, 1999, Reno, Nevada, USA.

PYBUS, M., AND W. WISHART, editors. 1994. Status reports. Biennial Symposium of the Northern Wild Sheep and Goat Council 9:174-212.

SCHULTZ, R. A., D. A. PEDROTTI, AND S. C. RENEAU, editors. 1999. Putting sheep on the mountain. The Foundation for North American Wild Sheep, Cody, Wyoming, USA.

THOMAS, A. E., AND H. L. THOMAS, editors. 2000. Wild sheep status questionnaires. Pages 373-458 *in* Transactions of the 2nd North American Wild Sheep Conference April 6-9, 1999, Reno, Nevada, USA.

TREFETHEN, J. B., editor. 1974. The wild sheep in modern North America. Boone and Crockett Club, Missoula, Montana, USA.