



PLAY HOOKY RAM

WE CONTINUED TO STUDY HIM IN SILENCE. HE WOULD MOVE HIS HEAD A LITTLE ONE WAY AND THEN ANOTHER, BUT WE WERE NEVER SURE WHETHER THOSE BIG HORNS CROSSED THE BRIDGE OF HIS NOSE OR NOT. HE WAS ABOUT 200 METERS AWAY, WELL WITHIN SHOOTING RANGE. IT WAS UP TO ROSS TO MAKE THE CALL ON HIS HORNS.

Finally, Ross said, "He's legal." I was pretty certain that he was, but I knew I had to defer to Ross on that call. "Slip down to that sheep bed when I tell you to," Ross whispered, as he continued to watch the ram. "Wait!" I had moved a bit. "If I whistle, stop. Now go!" I inched down on my back, rifle resting on my chest, hugging the ground. I finally slid into a solid prone shooting position.

Ross whistled, a bit too loud I thought, so I froze. The ram had turned its head slightly towards us, but hadn't moved anything else. Then Ross whispered as the ram looked away, and I settled in to a solid rest, slipped off the safety of my rifle, and

began to view the ram through the telescope sight.

I know that shooting downhill means different trajectories than if one

THE CONCLUSION TO DR. PEEK'S QUEST FOR A STONE'S SHEEP

is shooting across level ground. But I did not know how much to aim low and had to guess. I aimed what seemed to be appropriately low. The rifle was dead still—I was concentrating on squeezing the trigger. At the shot, the ram got up and ran over the crest of the spur ridge above him.

"You shot in front of him!" I snapped off another shot but knew it had missed too.

Hunting, like any sport, is a series of highs and lows. The anticipation, the exhilaration of just being in sheep country, the first look at the rams this morning, all are part of the highs. But the absolute low is missing a shot you should not miss or wounding an animal. This had to be the lowest point in 45 years of hunting experiences for me. "Well, let's go down and look, you may have knicked him." I was overcome with disgust at myself. I couldn't figure out what went wrong. I had compensated for the steep angle, but began to think I hadn't compensated enough. I had consciously squeezed the trigger. I knew better than to blame the rifle. I could have canted the crosshairs unwittingly at the last minute, that's all I could think of. We'd have to go to the bed and try to figure out where the bullet hit.

But I was also thinking about what to do next. I was asking my friend to ex-

BY JAMES M. PEEK, PH.D.
Professional Member
BOONE & CROCKETT CLUB
Photos by Author



pend a considerable amount of precious time and energy on my behalf, and he had certainly done more than I could have expected. Even if I was paying, he was first my friend, and just how much do you ask of a person? I was about as depressed as I have ever been, knowing this little experience would be relived in nightmares time and again.

But for now it was left for us to be sure I had not hit him. So we dropped down the hill to scout out his tracks for any telltale signs, and examine the bed. But in the back of my mind somehow, I kept wondering why we didn't hear the ram clattering across the slide rock, thinking that he couldn't have run off without us hearing him, could he? "There he goes, right beneath us! Get down here! Get down here!" Ross was obviously disgusted with the events and his voice showed it. But the ram hadn't run out, it had gone below some low ledges on the ridge and stopped. I saw him running and headed directly to the ridge line for a shot. "Get down here, dammit!"

I was concentrating on the ram and my footing. I finally got to a spot where I could get into a solid sitting position, and

the first two shots missed. The ram was scuttling along the far side of the draw, and there would be one more shot. Take a deep breath, Jim, lead him a little. Squeeze the trigger you stupid idiot! Squeeze that trigger... At the shot, the ram was down.

I wasn't really very pleased about my marksmanship. I don't like to shoot running animals at long distances, as it represents a failure in stalking and in marksmanship when it happens, and the risk of wounding an animal is high. On the other hand, taking the ram at over 300 meters did represent a little bit of recompense for the earlier blunder. Hunting has its ups and downs, and I wasn't sure whether this experience was more up or more down, since I had just gone from extreme disappointment to a feeling of some redemption if not satisfaction with myself. The fact that I missed that first shot that I should have not missed would haunt me, I knew. What sort of unconscious kind of buck fever came over me that left at the last moment? At least I hadn't put Ross through all of this effort to come up blank, and I now had a Stone ram.

Ross said he'd go up for the packs and I looked around for the spent cartridge

cases, being an inveterate reloader and not wishing to lose once-fired brass. But there was no luck, and I started to walk on down to the ram. It was about a ten minute walk for me, what had been a 20 second run for him. As I got there I saw that his right horn had been hit by one of my bullets, no doubt the first. I hadn't canted the rifle, I had shot too high even as I had tried to compensate. The ram was in winter pelage, with almost a completely black body, with a splotched white head, a magnificently colored animal. And he was carrying more horn than we, or at least I, thought.

I eviscerated him on the steep slope, cut off one hind leg and lay it on the grass. Ross would have to do the caping and the skinning on the head and front shoulders, I didn't trust myself to do it right. Ross got the cape off, and we removed the bones from the hind quarters, front quarters, back straps and tenderloins. The sun was disappearing behind the high ridge and I finally took a moment to glance around before it got dark. The outline of the high ridge tops, sharp against the sky, contrasted with the purple hues of the spruce and the orange of the sphagnum of the ridges below. The

haze gave the whole setting an aura of high mountain twilight a certain softness that caught my imagination and prodded me to other thoughts. When it was all said and done, I had truly earned that ram, it was going to provide me with memories forever, and there was at last some satisfaction. The ram band across the canyon was still there.

"Well, do you want to pack up the head and cape or the meat?" Ross asked. "The head. Absolutely." I had a breakdown pack frame in my backpack and was screwing it together. We were down in a deep hole, and the ridge top was a long ways up. I knew this was going to take a long time for me to carry that much weight out of there, but I had been ready for that part. The horns and cape would be lighter than the boned meat, which Ross would readily carry out in his frameless backpack. I decided to put the ram on my back and the lighter backpack on my chest, carry my rifle, and we started out. I knew it would be pitch black before we got to the top.

It wasn't very many steps before I decided that the front pack would best be tied onto the pack frame. But having done that, it was then a matter of watching each step so I didn't lose my footing, and just plodding up the slope. I knew I was going to be able to make it all right, since the old knee wasn't aching at all. I had the cartilage removed from it a year back, after my irregular exercise schedule of jogging was coupled with too much meeting and office time, and I tore the meniscus. Ross found a game trail that angled up to the first ridge. We got to it, and then walked the grassy side, opposite of the rocks and shrubby side we had gone down that morning. Then I slowly plodded up the game trail on the ridge line, watching my step and resting as I needed to, with Ross walking easily ahead. The high ridge line was getting closer, but it was also disappearing in the dark as well. At the steepest set of cliffs just below the top ridge, Ross appeared above me. I was studying the rocks, trying to figure out where to lay my rifle, testing the ledges for solid handholds and footholds. "Why don't you let me take that ram from here to the top?" "Naw, I'll be just fine, I have to go slow in this stuff is all," I really didn't feel Ross had to come back down and offer. "Well, you'll be here longer getting up if you have to carry that ram on your back. Lift it up to me, and we'll get to the top and start down before all the lights go out up here." I relented, "Well, since you put it that way, okay." After all, I was holding him back. We were about 100 meters from

the top, and I knew Ross was a bit satisfied that I wanted to carry the ram out, and that helped him be a little bit more patient with me.

It was much easier going down the other side, but probably more dangerous since the snow was slippery. It was simply a matter of paying attention, however. I realized my arches weren't aching—the heavy load hadn't worked on my feet or my knees as I had been concerned about. Good boots with high arches were once again saving my feet. Ross' outline was what I guided on. He would pause occasionally for me to catch up, and then gradually disappear into the shadows. But it was a matter of staying on the crest of the ridge, and when the scrubby spruce started to appear, I knew we were close to the horses. A white object in the trees, a nicker, and we were there. I was a very tired Jimbo, but my spirits were finally beginning to soar.

The horses were more than ready to leave this place, and there was a flurry of cussing and activity as we tightened their cinches and tied on our gear. We started down the rudimentary trail, and my horse jumped the first deadfall. There was just no way that I was going to stay on a horse that was going to jump a meter-high deadfall on a steep slope with an overbalanced pack on my back, so I had to get off. At the base of the steepest part, Ross yelled, "Why didn't you say something?" Ross had ridden his horse off. I got back on, and then it was a matter of dodging the snags with your head, and keeping your toes turned in as the horses quickened their pace through the forest towards camp. We were more thirsty than hungry, so after the horses were taken care of, we ate a few canned peaches, a slice of bread, drank some scalding tea, and fell into our bags. A bull elk bugled before we fell asleep.

Ross was stirring the fire into flames just as dawn began, and I realized I wasn't as achey as I might have been. Maybe this old boy still had a modicum of physical conditioning in him from last year. Breakfast consisted of scrambled eggs and tenderloin of Stone ram. Mountain sheep meat is known to be among the finest meats, if not the finest, and this lived up to all advance billings. All the guff about sheep hunters not taking out meat is pretty much bunk, I thought. First of all, it is illegal to leave the meat, and secondly sheep meat is a coveted, rare, and top-of-the-line delicacy.

After breakfast and horse tending, the cape and head of the ram drew our attention. I left it to Ross to skin the cape

from the skull, still not trusting myself to do it right. The right horn with the bullet hole could be mended by a taxidermist. We agreed that I had misjudged the angle of the first shot, and should have held still lower. The way the sheep lay, a bit crosswise to me, the tip of the horns were over its body where I had aimed, rather than its head. "This isn't the first time I have shot over an animal. I really must have some kind of unconscious buck fever which causes me to shoot high on a duck soup shot," I said.

There was a wound between the jaws of the ram which I at first thought was from the bullet that hit the horn. However, it smelled of infection long in the making. As we skinned away the hide, I noticed the dentary bone, part of the lower jaw, was infected. The ram had incurred an injury, possibly in a fight with another ram, and the resulting necrosis was slowly eroding away the bone.

The teeth of the ram further revealed idiosyncrasies. Mountain sheep are born with one permanent tooth that protrudes through the gum line of the lower jaw, shortly after parturition, a molar. The "milk" premolars that erupt shortly afterward are gradually replaced in a predictable sequence until the full set of permanent dentition is present at about three years of age. The original molar is gradually ground down and the rough enamel on the grinding surface produces different patterns as it wears to a smooth relatively flat surface. This ram had been chewing its cud on this first molar for nine years in such a way that the adjacent premolars were still sharp, but the opposing molars on the maxillary bones of the lower skull were virtually gone. Chewing habits, exact timing of tooth replacement, perhaps differences in tooth hardness, interact to cause variation in tooth wear. The siliceous grass and sedge forage that the ram fed on remained in the orifices and crevices of the teeth, eventually to erode away the gums and abrade the tissues so pathogens could intrude and begin the process that eventually would cause the demise of the beast.

A ram weakened during a severe winter may succumb to the elements directly and become a malnutrition-induced casualty. Or it may be sensed by the omnipresent wolf as being vulnerable. A 12 year old ram is very old and not likely to survive much longer. My 9 year old ram might have been a candidate for an earlier demise, barring my appearance.

Ecology is called a subversive science because it ostensibly ignores human conventions and focuses on the natural

ANTLERS COLLECTED FROM WOLF KILLS IN THE TUCHODI AREA ADORN ROSS'S SHED.

dynamic processes that govern nature. Wildlife biologists deal in population processes that lump individuals into age classes, categorize them into mortality classes, assign life expectancies of groups, but do not pay much notice to the individual except as a contribution to a category. The individual ram, its value, is measured in terms of its contribution as a member of the population.

Contrast this to the training of a medical doctor, and to most of us who are conditioned to being concerned for the welfare of the individual, human or otherwise. The ram that is confined to a zoological garden is the focus of special treatment and care, while the wild ram is not. In my mind, this dichotomy of view is the ultimate conflict facing humanity as we seek to define our role in this planet viz a viz other living things. You may argue that the population is the sum of its parts, and each part is important. The wildlife biologist might counter that the ecosystem is comprised of many parts all of which contribute something to the whole, which is somehow greater than its sum, and there is a measure of substitutability among the parts. Other biologists may interject the caveat that certain keystone species have more influence on their habitats than others and therefore may be considered to be more important to focus on than those species which are not able to alter the landscape. Regardless, all living entities go through a life cycle which inevitably ends, and it remains for man to understand and deal in a rational way with this.

I am not justifying the taking of the ram's life with this argument. Hunting is primarily a sport that challenges me to test a wide variety of skills, entails physical and emotional risks, done in a setting that I enjoy. But as a wildlife biologist, I have no problem being involved in the death of an animal because I know it will die one way or another, and I believe that as long as I do no harm to population processes, I am not unduly intruding upon the ability of the sheep to sustain themselves over time. The ram, if it dies naturally, will likely be the victim of malnutrition. The slightly less likely probability is that it will be crippled from behind by a wolf, which will proceed to tear at its entrails while it watches helplessly. Neither malnutrition nor predation is less or more "humane" than a bullet. It has been said that "Mother Nature is a bitch", and if you need to castigate "Mother Nature" in some anthropocentric context, so be it, but I am definitely conditioned not to judge natural processes as good or bad. I stand for their

perpetuation in some parts of this world, at least.

In the "lower 48", as the Alaskans often derisively put it, there are few places where we have opportunities to restore natural processes, and even fewer where we just need to maintain them. Perhaps if they let the Boundary Waters in northern Minnesota and the adjacent Quetico in Ontario burn naturally, that would be one place. Perhaps if we get the wolf back into the Glacier National Park-Bob Marshall Wilderness complex in northern Montana in some sort of viable, sustaining situation, we can assign that system as having most of the natural processes intact. Maybe if we accomplish the restoration of wolves and grizzly bears into the central Idaho wilderness systems and keep the wildfires burning, we'll be able to say those are relatively well restored. If you think of

...they (wolves)
have been an integral
component of this complex
ecosystem for
time immemorial.

wilderness as being a place where natural dynamic processes, and especially those involving predation and fire, are intact, then efforts to designate piddling little chunks of unroaded ground as wilderness seem rather irrelevant. But this is of course why the northern Rockies of British Columbia and their extensions into the Yukon and the Northwest Territories are so special.

And yet, the individual does indeed count. "This ram carries a lot of weight out onto his horns," Ross stated when we sized up the head. "The rams in this drainage seem to have heavy horns. I think this ram is over 40", he continued, referring to the length of the horns across the outside curl. "Well, this is one deaf, blind, sheep hunter who can't walk or ride, who is entirely happy with a good representative ram," I responded, trying to suppress a bit of surprise. "My policy is to provide every hunter opportunities in keeping with their abilities, not on the basis of whether they pay top price or not. It's a matter of the

luck of the draw." Ross' standards of conduct are high. We packed out our cans and garbage, his camps are bear-proofed, and he expects his hunters to abide by the rules and be legal. An outfitter with standards may not be as consistently successful in one sense as the outfitter who occasionally resorts to quasi legal subterfuge in an effort to keep hunters happy. No matter how well you know the game, hunting conditions and hunters vary, and you can't guarantee a ram for everyone who has the cash to buy the hunt. But if you enjoy wilderness without garbage and torn-up camps, and appreciate the hunt when it is truly conducted under rules of fair chase that the quarry deserves, those standards become very important.

Access. "A jet boat," Deb said at lunch the day we left for the sheep camp. We could hear its motor droning along the nearby river. We got back to the horse camp, a guide reported an elk carcass on the river bar near camp. The antlers and back straps were gone, and the tracks of a small grizzly bear in the sand gave away who was now in charge of the carcass. "Those jet boaters probably got him while we were gone. I can't figure out why we wouldn't hear the gun shots, though." There was a lot of talk about that, and then towards other events involving people shooting game that was either not legal (antlers or horns too small), or that was left to decay with only the head gear taken. It is difficult work to haul the meat from a 300 kg elk or a 400 kg moose over the muskeg, and a few people decide not to. But now there was a young grizzly bear traveling around Ross' base camp, thanks to the illegally taken elk. "I'm not necessarily opposed to the residents coming up the river to hunt and fish", Ross finally pointed out, "After all, its crown land. But I wish they'd be courteous enough to camp somewhere else than on our back door."

One hunter, with his son, had traveled by horse from the Alaska highway into the area, an arduous three day ride at best, and then camped within a few hundred meters of the horse camp. They were asked to move their camp further away, but then one elk was shot at a lick nearby. The hunter came in to camp, told Debbie that Ross had said it was okay to have the meat flown out from his airstrip, and would she radio for a plane. The antlers and hind quarters were taken out. When Ross came back and found out, he was a bit distraught over the deviousness of the hunter, a passing acquaintance. When the fellow sent in \$50 for use of the strip, Ross sent the money, along with all the cans and gar-

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BER, GUY COHELEACH.

bage left at the campsite, on out to him. "Probably lost a friend."

Along with the people comes the garbage and abuse of the land, and then the officials. A wilderness guard comes in to check campsites at the lakes. "You want to watch those wilderness guards," I say, thinking about my checkered experiences with them in Idaho. "They tend to be zealous protectionists, they want to zip up the door to the wilderness after they're in it." "Well, this guy seems rational, and we're trying to show him our situation in hopes he'll have some better understanding." I pressed the negative, "Well, good luck, but in my experience, these people might be good for kicking rocks away from cold campsites, but they have no more understanding of ecosystem processes than the man in the moon." No bias on my part.

There are a lot of people involved as spokespersons for the agencies who, unless the rule book spells it out for them, simply resort to pure protectionism, as if that was going to save the natural world. Folks not trained to understand concepts like fundamental plant succession, nutrient cycling, and compensatory population responses very often are able to pursue policies that my grandmother, God rest her soul, could have set forth with her sixth grade education. It's very easy to sit back and smile, say we're going to save it by letting it be. It's much more realistic to recognize that we can't save living things, even the giant sequoias die, and we must understand and work with the processes that continually renew them.

Of course, when we have overdone

it, as we have in many places with our forests, then we may have no choice but to resort to simply protection in the short run. Certainly the major game reserves of East Africa will find support even from people who believe in active participatory management. When the economic demands over-ride and politico- socio processes prevail, then options decrease and reservations of lands and restrictions in use are virtually mandatory. But ultimately in this world, we can have grizzly bears and elephants in places besides reserves and parks. We can have owls in managed forests. We can graze the ranges and maintain the prairie chickens. And we'll have to because there will never be enough land set aside merely for the protection of wildlife to sustain the resource.

"We've seen sheep beginning to occupy new areas in recent years, after we burned. And I think I notice a bit heavier ram with faster horn growth near the burns," Ross was speculating a bit. It was over 50 years ago that a trapper or two traveling out with furs in the spring would toss a match onto the dry aspen slopes and watch them burn. Subsequently outfitters like Ross' father Don sought to provide pasture for horses by burning areas to promote green growth and establishment of grasses. But the burned lands also produced resprouting willow and poplars which provided food for elk, moose, mule deer, and Stone's sheep. A program of spring burning carried out by the outfitters over a 30 year period created horse pasture and a burgeoning elk population.

In 1977, about 20 miles of the

Muskwa River was torched and the airport at Fort Nelson was temporarily closed because of the smoke. Provincial forestry officials, who had been discussing the program with the outfitters but hadn't become involved, had to get into the action. Co-operative arrangements with forestry and wildlife officials and the outfitters were arrived at and the burning program was formalized in the early 1980s. Some investigative work revealed that elk and sheep, at least, did indeed make heavy use of burns. However, whether shifts in distribution to the more abundant and temporarily more nutritious forage on the burns, or whether populations increased because of the burns couldn't be conclusively demonstrated. Nevertheless, there's a huge elk population that preferentially grazes on vegetation that was burned three years previously, work Ross himself carried out. "We'll need a triple replicated, double blind experiment, to prove it", I said. Ross replied, "Wouldn't it be just as easy to recognize the obvious and save the dollars? You can ride through literally thousands of acres of willow and aspen sprouts and they are all grazed, and the elk herd has increased to around 10,000 head, you know". Ross' patience with the "perfesser" was wearing a bit thin.

Realistically, we don't need to address the issue of whether animals respond to provisioning of more forage through burning programs. However, we do need to understand more about the timing, how much should be burned, how often, and what sort of population responses to different sizes and frequencies of burns can



THE AUTHOR, JAMES M. PEEK,
WITH HIS STONE'S SHEEP.

be expected. And if the outfitter thinks there may be larger horns on rams using burned areas, the task of the professional wildlife biologist is to try to put a quantitative measure to the observation in an effort to confirm it. And some experimentation, adaptive management, is indicated.

Unfortunately, questions of consequence facing wildlife management are ones of scale. How much habitat does a grizzly bear population need to sustain itself? Do elk populations naturally graze their ranges in a manner which alters them, or do they arrange themselves in space and time so the forage base is unaffected? Can we log the west coast forests in such a way as to extract some wood and still retain the owl and the salmon? How do you manage a large tract of land in space and time so the multiple values are accommodated and sustained without deterioration? Most certainly experimentation can help, but we are consigned to learn as we manage. We need to be flexible, monitor as much as possible as we go along, adapt and adjust our management promptly when needed, and be certain we know the weak spots in the system, the ones most vulnerable to deterioration do to our activities. And we will not be able to manage for the status quo in wild systems which exist in an ever-changing condition. You don't protect living entities, you protect processes in nature.

This is just as much wolf country as it is sheep and elk country. Wolves are themselves classified as a big game species, and they have been an integral component of this complex ecosystem for time immemorial. There is no doubt, in retrospect, that the old wolf control campaigns allowed their prey to increase on the burned areas. These early campaigns involved poison, traps, hunting, denning, and were persistent. However this country is big enough that wolves were always able to hang on somewhere in it. The campaigns subsided in the late 1960s and wolves became more prevalent, responding to the enhanced prey base. BC Wildlife Branch people and others realized by the mid-1970s that wolf populations had become high enough to cause reductions in caribou and elk calf survival and perhaps also for moose. People were beginning to worry about recruitment of animals into the breeding populations, especially bulls that hunters were concerned with. Amid much controversy, BC Wildlife Branch implemented an aerial gunning program to reduce the wolf population. An environmental group came up from Vancouver to protest, and camped outside of Fort Nelson in a swamp and made it look

like things were really tough. They were going to march into the winter ranges along the foothills for unspecified purposes, but mainly to create attention to the control effort. The march would have been over 40 miles of tundra and muskeg in mid-winter, which wasn't very practical if it was to be accomplished on foot. One group did fly into one of the guide-outfitters camps to discuss the control campaign. The helicopter being used to conduct the control effort had just taken some wolves, so those aboard dropped the carcasses off where they could be readily found and flew on to the meeting. While the wolf control program was stopped after considerable protest and controversy, it did have the intended effect of reducing wolves and calf survival increased. There was especial concern for the moun-

The Play Hooky Ram was working his magic, and he would, on me, again and again.



tain caribou, which seemed to be particularly vulnerable to the wolves, and they increased as well as did the elk. But now there is concern that wolves may be getting numerous enough to begin having a depressive effect on their prey again. Obviously, there is a need for a management program that monitors wolf numbers, distributions, and the effect on the prey base. But there is extensive support for no wolf control in the urbanized portions of the province, even as in the less populated portions where the wolves are at, there is general support for wolf control. The "Branch" is caught in the middle, and a stalemate means that the vocal urbanites temporarily have prevailed. "You people trying to restore wolves in Idaho are biting off more than you can chew," Ross states. "The environmentalists will never let you manage them." Of course, that is indeed the fear, that people think that simply restoring wolves to the wilderness and providing them protection will suffice. But when it comes to large predators like wolves, folks have a way of taking care of things according to their views when the public agencies are emasculated and do not act. Such has

happened in the southern parts of the province, and across the range of the species. Wolves are illegally taken from the sparse population starting to colonize northwestern Montana. Illegal gunning in Alaska makes the headlines when participants are occasionally caught. So there is real reason to manage the predator as well as the prey. For me, knowing wolves are around adds immeasurably to the experience of hunting in a big wilderness. Ross and other guide-outfitters realize this attitude is not unusual and are willing to accept wolves as part of the situation they deal with, preferring to see them managed at acceptable levels.

But probably a more compelling argument for managing wolves is that we certainly manage their prey. There are a few places, Isle Royale, Denali, and Jasper, that have relatively intact ecosystems where ecological processes have primacy and management is basically protection without any more intervention than absolutely necessary. But there are many opportunities to have wolves in areas where we do hunt their prey if we will try to manage the system with sensitivity and retain a measure of tolerance for the big predator. The best protection for wolves outside of the national parks is effective and sensitive management. But then, I've been preaching, pardon, teaching that management concept for nearly 30 years, and readily admit my bias.

We slowly wound our way down the hill from our spike camp. Ross surmised that he might use the site again in four or five years, and he set the several poles we cut aside so they might be solid enough to use in the future. We each lead one packhorse and let one travel loose between us. By the time we got to the steep slopes above the horse camp, I was ready to walk down.

A bull elk ran out below us, probably a three year old, with a small set of 5-point antlers. "Legal in Idaho," I said, referring obliquely to the efforts to recover bull populations in the states. Restrictions on bull harvests are the first step towards improving the life expectancy of the male segment of the population. We know that a bull elk will grow its maximum size antlers at age 9 or 10, but the initial steps towards addressing the situation are pretty tentative. Wildlife managers have just as many pressures to exploit the resources in high demand beyond their capabilities as do other resource managers.

Elk hunting is a growth sport in the west, with populations at all-time highs, perhaps in some states with more elk than

when Lewis and Clark first traveled across the continent. But the bull segments of many populations have been shot down for many years, and yearling bulls become responsible for much of the breeding. Only after biologists began to detect double peaks in calving which suggested that there were insufficient bulls around to serve cows during the first estrus period which normally occurs the last week of September, did the problem begin to receive attention. In many areas hunters were accustomed to the spike bull hunts and there were literally generations of hunters who never saw a branch-antlered bull three years old or more in the hunting regions.

These antlered and horned animals pass on their inheritance through a very rigorous process of natural selection that involves fighting other bulls and guarding the female, breeding as many as possible. Size of antlers or horns and body is a major criterion by which breeding success is determined. In deer populations in which bucks have been chronically over harvested, antler size is known to decline. We don't know that this has occurred with other species, but there is reason to believe that we have interfered significantly in the process of natural selection which has created these species, by our heavy hunting. I wonder if we have also interfered by removing the wolf.

Antlers are "social organs", and as such will be lower on the physiological priority list than other organs which dictate basic survival of the animals. A bull or buck which produces magnificent antlers one year following a mild winter may produce mediocre antlers the following year if conditions are poor for antler growth. Horned game such as mountain sheep retain their ornamentation, but differences in growth are apparent from one year to the next, reflecting different environmental conditions. The elk-producing states and provinces may be enjoying extraordinarily high elk populations just now, but populations in which sex ratios are reduced to 5 or 10 bulls per 100 cows, and life expectancies of bulls are two or three years at best, and a six-year-old bull is a rarity, do not reflect successful wildlife management. Eventually we will have to take more cows and fewer bulls as we adjust our management to be more sensitive to the natural processes internal to the species.

But this means more cooperation from the hunter, perhaps reduced hunting opportunity. Financial constraints delay opportunities for management to adapt. Efforts to manage moose populations in parts of Ontario, British Columbia, and oc-



asionally Alaska to lengthen the life expectancy of bulls and to keep sex ratios more equitable enjoy some success. But the western states have difficulty with adapting to a more equitable style of elk management: Primarily, they need the hunter's dollars and support, and they don't need controversy. So far, you can't sell the value of ensuring that the natural selection process be retained to the hunter. But then, do we really try?

We finally arrived at the hitching racks at the horse camp, and the Indian horse wrangler and Debbie greeted us. I got off my horse, tied up the packhorse and was taking the saddle off my horse when Debbie walked up. "Well, how was the hunt?" I looked towards the distant ridge with its sharply sculpted outline, and things just sort of came to a head. "Did you have a good hunt?" she inquired again, a little perplexed at my unusual silence. My throat had tightened up, and I couldn't respond. "Did you have a good time? Did you get a ram?" I nodded, but these old eyes were moist as I finally realized I had just finished an experience backed by over 45 years of anticipation, in an extraordinarily beautiful and wild country. The Play Hooky Ram was working his magic, and he would, on me, again and again. I realize now that I will look at him at least 250 days of every year for my duration on this earth.

We got the camp stowed, the horses grained and released, and I headed for the shower and the first change of shorts in five days, whether they needed to be changed or not. The bathhouse was a new and welcome addition to the horse camp.

The two hunters from Austria were in camp after taking a moose and a goat at other camps, and their conversation was in German to each other and good English to us. There is little alcohol in Ross' camps, so we were drinking strong tea and getting to know each other a little. I was interested as always in their rifles—both used Austrian-made Mannlicher-Steyr rifles and the best variable-power telescopic sights, with the best RWS brand ammunition. Each weapon was at least a \$3000 piece, superbly crafted in the fine tradition of Austrian and German sporting weapons. Then Ross came in, "The ram's short horn is 41." He eyed me quickly and went back out.

Outfitters' camps often treat their hunter guests to wild game, and we dined on moose and elk back straps that night. High bush cranberry shortcake topped off the meal. I fell in to bed, listening to the woodwind elk band, waking only when the lights of the generator went on at a quarter to six. We were on the tail end of the trip, and I was as relaxed as I ever get.

The clouds brought snow, delaying my flight to Fort Nelson a few days. But the woodwind band played each night, and I had time to examine the ones which fed on the whitened slopes around the camp. I took the stolen time to visit, write, wander, and reflect. And then the last night, I heard them on the slopes, probably examining the woodwinds just in case one might be vulnerable. The unmistakable "ooowh ooowh" of the gray wolf floated across the ridges in the night air, then another and another. Hunts are really for memories, and I've got my share of the best.