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UNIT 10 ANTELOPE STATUS

by Tim Pender, Region III Wildlife Manager

Unit 10 is one of Arizona's premier antelope units. The trophy quality of antelope bucks taken from Unit 10 is almost legendary. Nearly 20% of the trophies listed in the latest edition of "Arizona Wildlife Trophies" come from this one unit. The highest scoring buck recorded scored an amazing 94 4/8's Boone and Crockett points. Any hunter drawing a Unit 10 antelope permit has a decent chance of taking home the trophy of a lifetime.

Unit 10 covers approximately 2400 square miles of northwestern Arizona. It is bounded on the south by Interstate 40 and historic Route 66, on the west by the Hualapai Indian Reservation, on the north by the Grand Canyon, and on the east by Cataract Canyon and Highway 64. The towns of Seligman, Ash Fork, Williams and Valle lie on the perimeter of the unit. Parts of the Grand Canyon National Park and the Havasupai Indian Reservation are located at the very northern tip of the unit.

Approximately 1900 of the 2400 square miles of the unit are considered antelope habitat. Antelope can usually be found anywhere there is any open country, and sometimes even in the "thick stuff" where one might expect to see deer or elk instead.

The exact population of any wildlife species is always difficult to determine. With antelope, it may be somewhat easier than most others in that they live mostly in open areas where they can be accurately surveyed with aircraft. The level of survey effort expended in Unit 10 over the past 15 to 20 years has given the Department a good idea of population levels and trends.

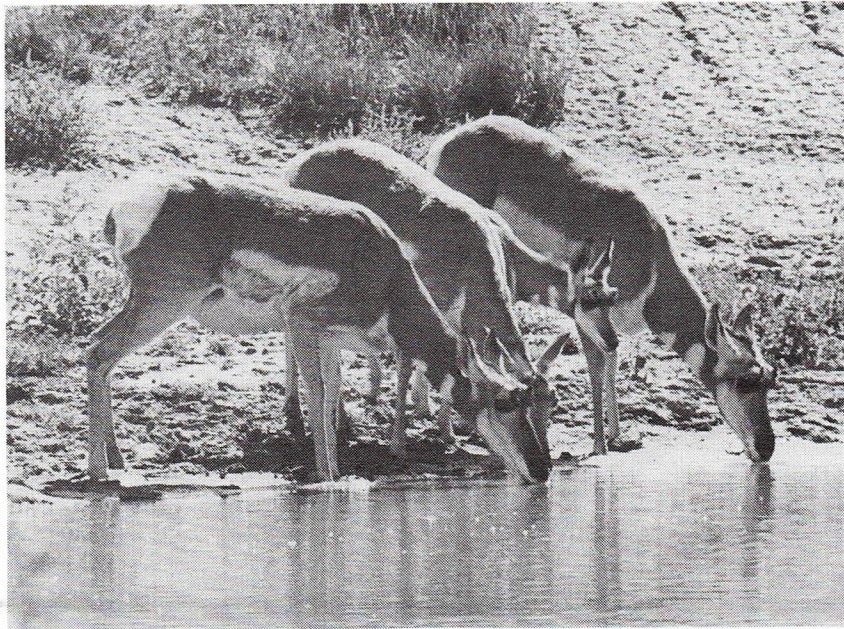


Photo Courtesy of Arizona Game and Fish Department

The present population is estimated at about 1750 animals. Twenty years ago the population may have been considerably higher. Prior to 1974, the fawn survival rate was as much as 70 fawns per 100 does in some years. Then coyote control efforts with compound 1080 was ended by Presidential decree in 1972. Thus ushered in a period of very low antelope fawn survival rates for many years. Fawn survival averaged in the low 20 fawns per 100 does for

the period of 1974 to 1990; barely enough to keep the population viable. Hunting opportunity decreased as the population declined.

In 1991, an abrupt reversal was observed. As a result of limited coyote control efforts in the central part of the unit, the fawn survival rate there increased to 68 fawns per 100 does. The rest of the unit also started to recover with the end of the late 1980's drought. The 1992 survey showed 42 fawns per 100 does unit-wide. The population, at last, appears to be increasing. Hunt success has been up significantly the past two years, and permit numbers continue to rise. The outlook, at this point, appears good for future improvement.

Unit 10 is like many other Arizona antelope units. It appears that the population could be much higher if conditions would allow. Following are several "problems" and, hopefully, solutions that could help pronghorn increase even further.

Unit 10 is located on a limestone Plateau with islands of basaltic intrusion. Natural surface water is always hard to find. There are very few natural waters of any kind. The livestock industry has helped

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ANTELOPE HUNTERS CLINIC

by Henry Aguilar, AAF Programs Chairman

On August 17th, approximately 240 interested parties gathered at the Holiday Inn East in Phoenix to attend the Arizona Antelope Foundation's first annual "hunters clinic." The clinic was designed to provide technical information for those sportsmen who were fortunate enough to draw a pronghorn permit or for any other wildlife enthusiast who might have an interest in this unique animal.

The Master of Ceremonies for the evening was Mike Cupell who outlined the evening for everyone. He then introduced current AAF president Pete Cimellaro. Pete informed those in attendance as to who the Arizona Antelope Foundation is, the goals and objectives, and read the AAF mission statement.

In giving the background about the chemical makeup of the founders of this organization, Pete said that they were nothing more than recycled "Sheep Society" members with a strong desire to help what is looked upon as a "fragile" species, the pronghorn antelope. Arizona has outstanding trophy class antelope, but in recent years the herd numbers have been unstable at best. Encroachment by man resulting in habitat loss and heavy coyote populations are just a few of the problems that have caused a decline in herds. It was simply time for this organization to become a reality rather than just an idea that was discussed around the campfire.

The first speaker of the evening was Mike Cupell who gave a presentation on hunter ethics. Hunting any species of wildlife would be more enjoyable for everyone if they could exercise the advice given during Mike's talk.

The next speaker was Richard Ockenfels, research biologist for the Arizona Game & Fish Dept. His talk revolved around the history of antelope in Arizona, and he also discussed some of the unique characteristics of this animal such as their 8X vision and incredible speed.

Tony Grimmet took the stage next with information on "field judging" trophy antelope. Tony discussed his M.P.H. (mass,

prongs, and hooks) method of judging trophies along with providing information on how antelope are scored for the trophy book.

During the break which followed Tony's presentation, the audience was given the chance to score a trophy class antelope using a Boone & Crockett score sheet. Ed Gammons was the proud winner of an Arizona Wildlife Trophy Book.

Robin Bechtel was the next speaker. He instructed on the use of optical equipment, thoroughly covering binoculars and spotting scopes.

Henry Aguilar discussed trophy care while out in the field from a taxidermist/wildlife artist's point of view. The talk was intended to help the hunter take the proper steps to care for their trophy in the field so that it would arrive safely at the home, meat locker, or taxidermy studio.

The last speaker of the evening was Jim McCasland who shared his several years of experience and intimate knowledge on how to hunt pronghorns. Jim's hard-hitting talk will surely help those who are willing to spend the time and effort to take a quality antelope.

Afterwards, all speakers were available for a short question and answer session.

The AAF was able to secure some items for a raffle that closed the program. A beautiful print of Sonoran Pronghorns and taxidermy gift certificates from Steve Favour, Tony Grimmet, Ken Rowe, and Henry Aguilar were available. A spotting scope was given as a door prize.

Approximately 30 antelope mounts were on display, which, without a doubt, was the most impressive display of trophy antelope ever assembled under one roof. This breathtaking display alone was worth coming to the clinic for. The AAF raised about \$3,000 that evening which will be put to good use on Arizona's antelope. All in all, the first clinic was a great success!

Coyotes And Antelope

by: Terry Jackson

The Anderson Mesa antelope herd once numbered at least 2200 animals. The population is now estimated to be fewer than 400, and if present conditions continue there is little likelihood of improvement.

After several years of investigation by the Department's Research Branch, all evidence continues to point to predation on fawns by coyotes as the major cause of antelope fawn mortality. In fact, it is believed, and a large body of evidence supports the belief, that 80 to 90 percent of all antelope fawns born on Anderson Mesa each year are lost, and in cases where cause of death could be documented coyotes were usually responsible. With that impact, not enough fawns are recruited into the adult population to allow the herd to recover.

While the coyotes cannot precisely be called the culprits, since animals are not capable of culpability, they are the causative agent in a condition that threatens a wildlife population. It is apparent that if antelope are to continue to exist on this 190-square mile area 10-45 miles south-east of Flagstaff, and possibly other portions of the state's antelope range, coyote numbers are going to have to be lowered.

The question certain to arise in the minds of many who are familiar with wildlife population dynamics is "Why are coyotes suddenly wreaking havoc on a species they have been preying on for millions of years?" The answer to that question is not known and can probably never be known. It is known though, that the ratio of coyotes to antelope is presently out of balance.

This could be the long-term result of impacts man has had on the land and the animals populating it. Possibly grazing has altered the vegetation to offer the fawns enough protection, although this does not appear to be the case on Anderson Mesa. Another effect altered vegetative conditions might have is to increase coyote numbers by favoring the rabbits and rodents that are the coyote's main food base.

It could be too, that other large predators that no longer exist in Arizona, such as wolves and grizzly bears were once responsible for keeping coyote populations in check.

There is also the possibility that antelope populations have historically experienced long-term fluctuations, and that if left along for another ten, or 100, or 1000 years Anderson Mesa and other Arizona antelope ranges would again support high populations. It seems just as likely that if nothing is done the Anderson Mesa herd will be lost. At any rate, the Department is committed by its Antelope Strategic Plan to, if possible, increase the state's antelope population for the benefit of both hunters and non-consumptive wildlife interests.

Presently the Department, by contract with the U.S. Fish and Wildlife Service, is carrying out a study which involves removing a number of coyotes from the Anderson Mesa antelope range during a period prior to the annual fawning season. Fish and Wildlife Service (FWS) animal damage control agents shot coyotes from a helicopter on April 14, 15 and 16. Aerial gunning was chosen as the means of removal because, due to weather conditions, trapping has not been possible during most years.

The study will seek to establish whether indeed the removal of a significant number of coyotes during the pre-fawning period will effectively increase the number of fawns that survive their first few weeks of life. It will at the same time test the cost-effectiveness of aerial gunning as a method of coyote control on antelope range.



Photo Courtesy of Arizona Game and Fish Department

The Department is not interested in the elimination of one species for the protection of another. Complete predator removal has more often than not proved to be a detriment to the prey species in the long run. The Kaibab Plateau and the wholesale predator control that once contributed to an over-population of mule deer that resulted in range degradation and die-offs is a good example of over-zealous predator destruction, and the Department has learned from such experiences.

There is no danger of eliminating coyotes, or even reducing their numbers permanently, with the coyote removal program the Department is conducting on Anderson Mesa. Coyotes are known to respond to increased mortality with increased reproduction. When coyotes are trapped, shot or otherwise removed, litter sizes among the remaining coyotes tend to increase. They are far-ranging, nomadic animals that would quickly fill any voids in their habitat.

Coyotes do not live on antelope fawns year-round, though. Except for a few weeks in early summer, coyotes probably do not take a significant number of antelope. But during those few weeks, when the newborn fawns are still too weak to run, coyote predation can be devastating.

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Unit 10 Antelope Status

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out with water developments for ranch operations. The Boquillas (or Diamond A Ranch), which covers about 750,000 acres in the west half of the unit, has installed and maintained between 200 and 300 miles of water pipeline, in addition to constructing numerous dirt tanks. Antelope, deer, elk, and all other wildlife depend on these water sources.

Antelope need more water to make the best use of available habitat. Research conducted in Utah indicated that antelope populations were most dense where waters were no more than three miles apart. In Unit 10 there is a lot of country further than that from water. Water development in the drier parts of the unit should be a priority, but it is very expensive and understandably difficult to get implemented since most of the land involved is either state or private land with no guarantee of future access. Water catchments would be the ideal choice for water developments over most of the unit because no other good options are available.

At the present time, there is not a real problem with forage management except that conditions could be improved for both livestock and wildlife if effective grazing systems could be feasibly implemented. This may become more important in the future. The Game and Fish and State Land Departments need to work together with private landowners to help formulate plans for the future betterment of both livestock and wildlife.

Fences are necessary for livestock management over most rangelands. However, some fences are difficult or impossible for antelope to cross. In some locations old sheep fencing still exists, even though sheep grazing is part of the distant past. Where there is no need for this type of fence, it would be advantageous to replace it with a more "antelope friendly" type of fence. In some locations the lower wire on some fences is so low that antelope cannot crawl under it. In many areas this low strand is not necessary, and fence modification would be a good idea. The basic idea is that livestock fencing and antelope can

co-exist, except in a few special areas where more restrictive fencing is necessary to work livestock.

Predator control, a very controversial subject, is sometimes the very best solution to some antelope problems. When coyote populations are high, and it does happen right here in Arizona, these crafty hunters can take more antelope fawns that are needed to maintain antelope populations. No one wants to see coyotes extirpated from Arizona, and there is no need for this to even be considered. Just as deer are sometimes known to overpopulate their ranges and do long-lasting damage to themselves and the range, coyotes can do the same to their food supply, of which antelope are a major part. Limited coyote control can actually be beneficial to the future coyote population as well as to antelope.

Over 50% of Unit 10 is private land. State land accounts for approximately 35%, while the rest is a mix of U.S. Forest Service lands on the Kaibab National Forest, Grand Canyon National Park, and the Havasupai Indian Reservation as mentioned earlier.

Ranchers control the use of most of Unit 10. Ranch operations can be greatly affected by wildlife and hunters. So far there are actually few "problems" with ranchers. Most wish to just get along and make a decent living, just like anyone else. Most Unit 10 ranchers welcome hunters and don't mind the wildlife populations on their ranches. Many ranchers are also hunters who like to hunt just as anyone else. It is up to us, the Game and Fish Department and all hunters to make a special effort to get along with area ranchers. Our combined efforts of cooperation will benefit us all, and help to perpetuate wildlife and hunting in the future.

(Editor's note - Tim Pender has been the wildlife manager in Unit 10 for nineteen years.)

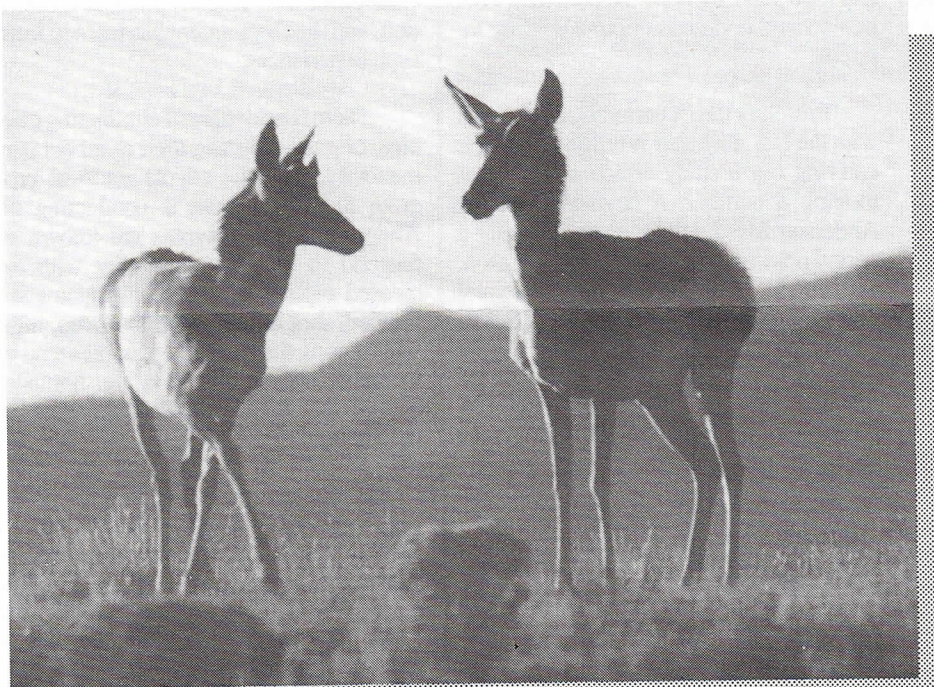


Photo Courtesy of Jim McCasland

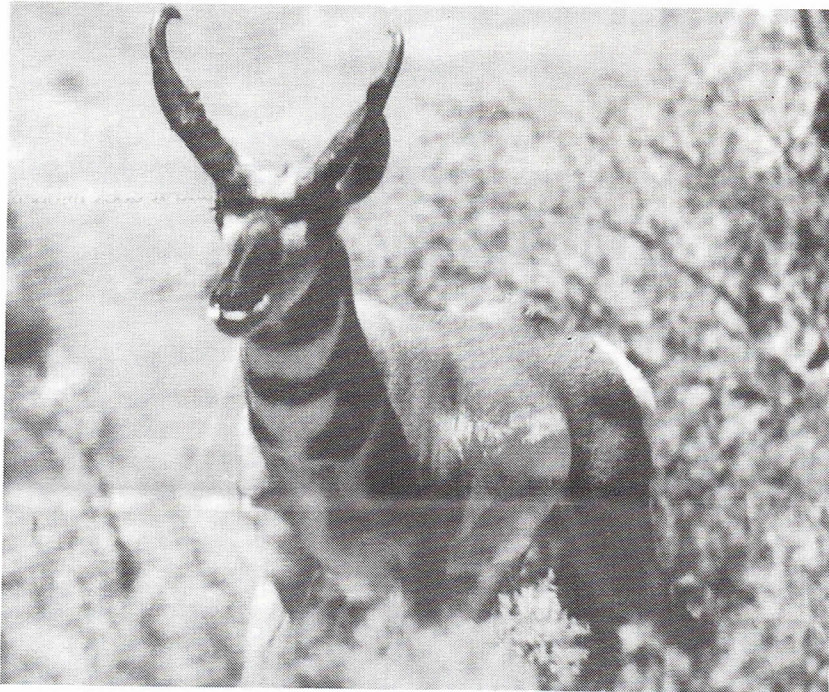


Photo Courtesy of Jim McCasland

Coyotes And Antelope

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It is possible that by reducing the number of coyotes in an area just prior to the fawning season, the newborn antelope will be afforded relief from intense predator pressure until they are big and strong enough to utilize the swift flight from danger that is the antelope's principle defense mechanism. A coyote is no match for even a juvenile antelope in a foot race.

This kind of short-term coyote control will not affect the number of coyotes in the area for more than a few months, but might significantly affect the number of antelope on Anderson Mesa.

It is possible that aerial gunning of coyotes will have no positive effect on antelope reproduction. It is not known how many coyotes can be removed in this way, and it is not known how many need to be removed to make a difference. It may be, too, that there is a benefit, but simply not enough to justify the cost. These unknowns are the targets of the research project.

During the first effort to kill coyotes by aerial gunning on Anderson Mesa, 20 coyotes were killed by FWS agents. While the number taken was surprisingly low, it

may be enough to accomplish the short-range goal of helping to protect this year's antelope fawns. Another operation, similar to the first, will be carried out probably in late May, and it is possible that a larger number of coyotes will be found in the fawning area as it gets nearer the time when the fawns will be dropped.

Since legislation was passed last year allowing aerial gunning as a means of coyote control, it has been used three times for livestock protection. The situations were too unlike the antelope project to be useful for comparison, though.

If aerial gunning proves effective and not prohibitively expensive it could be the salvation of a species that is rapidly disappearing from much of its former range in Arizona.

Editor's Note: The preceding article is reprinted from the May, 1981 issue of "Wildlife Views" by permission of the Arizona Game and Fish Department. It is reproduced here to give a comparison of the coyote-antelope controversy as it was viewed 12 years ago.

LAST WORK PROJECT OF 1993

Fourteen dedicated members of the Arizona Antelope Foundation, along with representatives of the Arizona Game & Fish Department and State Land Department, were on hand August 14th and 15th to take part in the last pronghorn habitat improvement project of 1993.

Approximately two miles of 4-foot high, woven wire sheep fence, located close to Clear Creek in Game Management Unit 5A, was taken down, even to the point of removing the old posts. It was replaced by an "antelope friendly" fence consisting of three strands of electric wire. The lowest strand was positioned 25 inches from the ground to allow for easy pronghorn movement. Habitat and Projects Chairman Jim McCasland noted, "The local rancher who invited the AAF to take part in the improvement indicated that he was extremely pleased with the effort and the results."

The 1994 project season is slated to begin in late spring. They are family-oriented, and present an excellent opportunity to take the family camping for the weekend, experience some of our state's diverse scenic beauty, and, on top of all that, do something positive, beneficial, and long-lasting for Arizona's wildlife.