SOCIETY FOR THE CONSERVATION OF BIGHORN SHEEP

The Sheepherder

office
401 North Garfield
Alhambra, California 91801
213 284-5113

editor
LEWIS E. CARPENTER
815 W. Gettysburg
Fresno, Ca. 93705
(209) 227-9140

MAY - JUNE 1978

THE BARBARY SHEEP: A THREAT TO DESERT BIGHORN SURVIVAL

This is the title of a challengeing report given before the Desert Bighorn Council on April 5, 1978 at Kingman, Arizona, by Dr. C. David Simpson of the Department of Range and Wildlife management, Texas Tech University, Lubbock, Texas.

The topic of the suitabillity of the Oudad on desert bighorn ranges has been a recurring topic on DBC agendas ever since 1967. At that time there was insufficient information concerning this exotic specie to answer the questions of the wisdom of introducing barbary sheep into areas of historic bighorn habitat. Many had misgiviings about it at that time. However there are and were numerous areas in both New Mexico and Texas that were not occupied by any desert bighorns. Both Texas and New Mexico do now have thriving herds of the Oudad or as commonly known--barbary sheep. These were in what was considered isolated areas.

Simpson reported thatthe releases in Texas occurred in 1957 at which time there had been 44 barbary released in the Palo Duro Canyon at a distance of over 100 miles from the nearest desert bighorn ranges. The population census in 1964 estimated there were 450 animals. The census of 1977 indicated that the population was between 1200 and 1500. However, using the techniques developed by Bob McQuivey in Nevada using marked sheep it is thought that the actual population is probably near 2,500 barbarys. Since the year 1963 there have been 14 barbary sheep hunts in Texas. 2,496 permits have been issued and about 800 sheep have been harvested, for a success ratio of 33%. This is in very rough canyon country. During the 20 years that barbary sheep have been loose in Texas they have expanded their range over 8,000 square miles and along some 90 miles of the rough Palo Duro Canyon.

A recent survey of the Hondo-Guadalupe population in southeastern New Mexico showed a similar situation. The exact number of sheep that escaped from the McKnight Ranch in the 1950's is unknown, but it is thought to have been 30-40 animals. Information of December 1977 indicated a total population of about 550 Barbary sheep between the Hondo Valley and the Texas state line. This population is apparantly still in the active dispersal stage as there are many isolated reports of one to five animals all through the Guadalupe Mountains. However, at least three established sub-populations have been located south of the Hondo Valley on ranch lands and in the rough country of the Lincoln National Forest.

There is only one known free roaming herd of Barbary sheep in California. The original herd had been introduced onto the Hearst Ranch near San Simeon. It has been reported that rams have been seen as far as 40 miles from that release site, and that ewes had not moved more than 10 miles.

Home ranges of the rams does exist up to 19 miles but that of the ewes is much less. Research in Texas on wild-caught, radio collared animals has indicated two distinct home ranges during the year, a small winter range and a large summer range--as much as three to 19 times as great in area....Early fall dispersal showed animals moving out in different directions, up to a distance of 17 miles from the centers of winter range. While some animals returned to their winter ranges shortly after dispersal period, others remained beyond the limits of their previous seasonal ranges and appeared to have established a new winter range. This change in range was also more noticeable in rams than ewes. It is thought to be the method of colonization of new ranges by rams taking ewes with them and thus establishing a new herd range .

In order to obtain a clearer picture of conflicts that may well arise a study was made of the food utilizations of the Barbary sheep. Both rumen and fecal analysis have been utilized to identify the food species utilized. Indications are that Barbary sheep will utilize whatever vegetation is available . The concern here is food competition with desert bighorn sheep for whatever vegetation may be available. Of 49 desert bighorn food plants evaluated, 37 have so far been recorded as eaten by Barbary sheep. In New Mexico a survey

indicated that 21 of 49 used by bighorns were used by the Barbary. In the Palo Duro Canyon there is a list of 27 plant species utilized, several of which are not reported on other bighorn ranges. Ten plants reported to be important in desert bighorn diets in southeastern New Mexico all had significant use by the Barbary sheep and 6 of these species are listed as important components of the Barbary sheep diet. An overview of the food intake of Barbary sheep showed a definite predominance of browse throughout the year; the high incidence of grass in the diet of the New Mexicoanimals probably reflects lack of available browse rather than a preference for grass during this season. The Barbary sheep diet as reported in New Mexico in 1965 probably represents a more realistic utilization of vegetation in typical desert bighorn habitat. Comparison of seasonal composition of diets between Barbary sheep and desert bighorns shows that bighorn eat a high proportion of grass througout the year, whereas the Barbary sheep utilize more browse in Spring, Summer and Fall. Both species rely heavily on grass in their winter diets in New Mexico and the high use of grass by Barbary sheep shows the ability of this exotic to adapt its diet to available food resources. These studies show that, in terms of food supply, the main period of competetition would be during the winter. As this is also a period of cold stress on both species, the interactive effects at this time would be compounded, to the detriment of the desert bighorn.

Barbary sheep are remarkably disease-free according to Ogren and Allen who made studies between 1956 and 1965. They reported low infestations of 13 different types of intestinal worms but did not consider any to be pathologically significant. In desert bighorn, such parasites as ticks, tapewormsm pinworms, flukes, etc. have been reported from New Mexico so it seems unlikely that there would be any detrimental transmission between the two sheep. viral disease that could be a limiting factor to desert bighorn populations is bluetongue.
NOTE: Bluetongue is suspected as being the cause of the death of yearling population of desert bighorn sheep in the Santa Rosa Mts. of Southern California this past year.
There have been found four suspect and one positive Bluetongu concentrations obtained from Barbary sheep blood samples. R.M. Robinson and others have suggested that probably the desert bighorn contract Bluetongue principally through contact with infected sheep at water sources, so this may also apply in the event of a Barbary sheep---desert bighorn sheep if occupying the same ranges.
NOTE: Bluetongue that struck the flock at the Lava Beds a few years ago was thought to have been carried to the sheep by wind-born gnats coming from domestic livestock that were 'carriers'.

Comparison of the success of various desert bighorn introductions to successes with Barbary sheep in the states of New Mexico and Texas leaves little doubt as to which which will become the numerically dominant species in the event that the two animals should occupy the same range(s). Data obtained shows a productivity of the Barbary sheep to be many times greater than that of the desert bighorn. Desert bighorn movements are infrequently of long range, for the most part being limited by the availablity of suitable wild habitat. On the other hand, the rapid dispersal and less selective colonization of virtually any rough terrain by Barbary sheep clearly points to an ecologically more aggressive species. This, and the fact that the Barbary sheep is either already present or rapidly approaching desert bighorn habitat holds a certainty that these two species will soon, if not at present, be sharing the same range. It is known that the Barbary sheep originally freed more than 100 miles away from desert bighorn ranges in the Palo Duro Canyon have been observed within five miles of the bighorn habitat.

These recent findings on population growth and dispersal, home range and individual movements, feeding habits, parasites and disease do then lead to a conclusion that the threat of the Barbary sheep to desert bighorns can become a real threat to the existence of desert bighorn sheep populations should Barbary sheep be released into the wild in any desert bighorn habitat now occupied by them or into which the desert bighorns might be re-introduced in the future. Once the Barbary sheep do become established in a range it will be virtually impossible to remove them from that range.

The Desert Bighorn Council did decide to keep the further studies of Barbary sheep an on-going item of importance and a committee was assigned to further such studies.

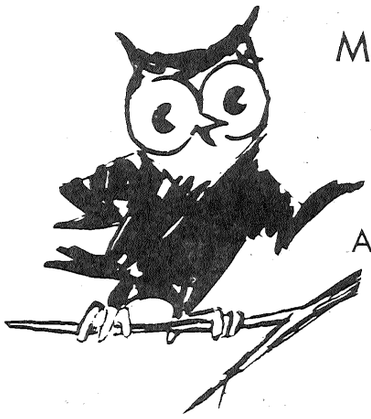
ARIZONA STRIP BIGHORN TRANSPLANT GIVEN GO-AHEAD

The Arizona G. & F. Department "Wildlife Newsletter" March 3, 1978 reports that "Desert bighorn sheep will be re-introduced into the Virgin Mountains area of the Arizona Strip, possibly in the winter of 1978. The sheep died out of the Strip because of human activities about 70 years ago.

The Department and the Bureau of Land Management will be cooperating on the project; the Bureau will construct a large fenced enclosure, and the Department will provide the bighorns(possibly two or three rams and eight or ten ewes to be taken somewhere around next November in order to avoid the lambing season and the bad winter weather which can hit the Strip".

NOTE: The Virgin Mountains lie in the northwestern corner of Arizona along the Virgin River that flows out of the Zion National Park.

Issue of April 7th reports that the Department will check about 100 remote, man-made waterholes the latter part of April. These checks to be made by use of helicopter. Gerald Hammett, habitat maintenance supervisor says that the checks can be made in about 25 hours of flying time, covering about 1,000 land miles which would require from two to three weeks of on-the-ground effort. Using choppers, Hammett said frees personnel for other important efforts and provides much better coverage.



MOVED? WE NEED YOUR NEW ADDRESS

WE DO MAKE EVERY EFFORT TO KEEP OUR MEMBERS ADDRESSES AS CURRENT AS POSSIBLE. YOU CAN HELP BY PUTTING THE Society for the Conservation of Bighorn Sheep on your list of people to notify when you move--or before you move. This will assure that you will receive your bi-monthly issue of THE SHEEPHERDER, and other pertinant information on time and schedule to the best we can do. Each copy returned costs the Society not less than 25¢ PLUS then sending it on to you by FIRST CLASS MAIL PROVIDED the Postal Department has a forwarding address and then sends it to this office of the Editor.

WOULD SOMEONE--OUT-THERE LIKE TO TAKE OVER THIS TASK? LEW.

SPORTSMEN'S COUNCIL OF CENTRAL CALIFORNIA

COUNTIES OF
FRESNO, KERN, KINGS, MADERA, MARIPOSA, MERCED, MONTEREY, SAN BENITO, STANISLAUS, SAN LUIS OBISPO, SANTA BARBARA, SANTA CRUZ AND TULARE

LEGISLATION AND PUBLIC LANDS

The Sportsmen's Council of Central California is one of the leading organizationsin the endeavors to obtain some relief for some of our beleaguered wildlife species, whose habitat, its water, food, livingspace and escape cover, has been and continues to be usurped by the present and past actions of people.

1. The National Park System is still sitting, and apparantly, motionless,on the Environmental Impact Reports that have been prepared in the Grand Canyon National Park and in the Death Valley National Monument. The E.I.R's or E.I.S's are concerned with the management and the removal of the feral burros from lands under administration of the N.P.S. At last report these reports were in the San Francisco Office of the NPS and having internal-revue. No report has been obtained concerning when the Public will have an opportunity to view these EIR' or EIS's.

2. The House of Representatives assigned HR 7121 (authored by Hon. G. William Whitehurst) to the Subcommittee on Indian Affairs and Public Lands, chaired by Hon. Teno Roncalio and also to the Subcommmittee on Fisheries and Wildlife chaired by Hon. Robert Leggett. This bill is in the doldrums---not scheduled for any committee hearings before summer, at the earliest. However----

3. HR 10587 authored by the Hon. Teno Roncalio, Wyoming---chairman of above Subcommittee and which is known as the Public Grazing Lands Improvement Act of 1978 does have a strong section related to burro management and control or removal has had four hearings before the public. Three have been in Washington, D.C. and the fourth in Salt Lake City. The bill does have strong support of the livestock industry.

It is my belief that section 2(h)(1) concerning "nonenvironmental impact improvements", that fence construction,vegetative manipulation,water developments with storage capacities under 25 acre-feet, stock ponds, water lines, springs and wells should be included in the Sec. 2 (g) as "environment impact improvements". Both the Sierra Club and the National Wildlife Federation concur in this opinion. Hopefully this change will take place during the 'mark-up process'. Some 30 letters have been written making this request.

The Subcommittee on Indian Affairs and Public Lands did meet on April11th for the 'mark-up' of HR 10587 and Hr 10589. What changes were made in either of the bills at that time I do not know. However, the bills were then reported out of the Subcommittee favorably and sent to whole House Committee on Interior and Insular Affairs. Their 'mark-up was to begin on April 19th. There is presently no action on the Senate's companion bill S. 2475. The Defenders of Wildlife continued their opposition to the transfer of title of the feral horses and burros from Federal to private ownership, even though the bill specifies that such transfer of title would be only after a one year of humane custodial care for such animals.

4. The reason for the postion taken in #3 above lies in the controversy that has taken place during the past two years between theSouthern Council of Conservation Club's Walter B. Powell and the Bureau of Land Management concerning the usurping of the water of Lower Dad Spring, also known as Willow Spring, by a livestock permittee at the southern end of the Granite Mts. in eastern San Bernardino County. The Sportsmen's Council of Central California has directed a lot of letters to the various branches of the BLM on this matter. On 5 May, 1978 a response was obtained from Mr. Ed Hastey, State Director of the BLM. Any decision by the State office will be held in abeyance until after Hastey has conferrred with Mr. Gerald Hillier, Riverside District Manager.

Bountiful rains during the past two summers in the desert areas may have carried some of the wildlife of that affected area over for another year. OUTCOME IS UNCERTAIN.

Lew. Carpenter, Legislative Secretary.

GOOD NEWS ABOUT DESERT WATERS

Glenn Sudmeier, Chairman for the Committee of the Society for the Conservation of Bighorn Sheep has a glowing report concerning the water storage projects of the Society.

The Desert Water For Wildlife Project had its beginning with the Society about 1970. The Volunteers who have worked with this project through the years can now look with pride to the fact that twenty-two (22) of the twenty-eight (28) of these projects are now at present operating. The others only lack a rainstorm in their areas to put them into production.

During these past several years there have been frustrations---such as at the Cady Mt. Project where some 80 people worked for one week-end and another 40 worked another weekend to complete the project only to be followed by a four year period before there was a rainstorm in the area of the project, so that the project might show it's potential. There have been other storms that created damages to the installation. This did occur this past December with the hurricane force winds that swept the desert regions and did up-root one of the storage tanks of the Clark Mountain project completed last May; or the vandalizing of the Sheep Camp Spring Project by some very incosiderate mining prospectors; or the flash flood that occurred in the Chuckwalla Project area.

Glenn reported that all five of the repair projects to these storage projects have been completed by the volunteers this spring.

For benefits to some members who may not be acquainted with the procedures involved in this Voluteers for Desert WAters for Wildlife program you should know that all of the project sites are on the National Resource Lands or in a few cases Public Lands that are property of the State of California. Project sites are recommended, with one exception, by either the Biologists of the Department of Fish and Game, or by Society members who are or have been, team Captains of certain specified areas, usually a certain mountain chain. Some of these are rather extensive areas. The DFG and the Bureau of Land Management have then furnished these members with locations of known waters as were recorded perhaps 30 to 40 years ago. These are then searched for, and if found to be still in existence a study is made to determine a proper course of action for improvement of water source or the storage of the waters that do flow. Some of these are very meager. The Statue Spring in the Old Woman Mts, found by Lew Carpenter and Marvin Wood had a measured flow of two(2) drops per minute. Yet this water when stored does furnish needed water for wildlife in that area. In some areas spring of 50 years ago no longer exist. In these areas a site is searched for which will have a sizable catchment watershed and a project is devised which will include a small dam- perhaps five feet high and have a crest length of perhaps not over ten feet. A perforated screen about five inches in diameter and three feet in length is placed on the up-stream side of the dam; this is connected to storage tanks, usually three-1500 gallan tanks by a two inch galvanized pipe, and usually100 to 300 feet distant--depending on the terrain of the area. From the tanks the water is carried to a float -valved drinking basin by another three-fourths inch galvanized steel pipe. Maintenance is required on each of these projects on a yearly basis. As noted before, storms that occur in the desert regions during summer and fall are frequently of a very violent nature. These can cause the movement of a lot of debris down the ravines and create damage to projects. The storms of the wintertime are more generally gentle, and are the ones which are beneficial to the vegetation that furnishes the food for the wildlife species.

Sudmeier further reported(over the phone) that he has conferred with Les Coombes of the DFG, Region 5, Long Beach concernig future projects. Coombes has scheduled eight (8) new horizontal well projects. Four of these are near springs which at present are producing a very scant supply of water.

Ron Vickery together with some real hardy Volunteers has completed the water storage project in the Panamint Buttes area to the western side of the Death Valley National Monument---this was on April 15 and 16th. It is now ready for a rainstorm. The Bert Spring in the Clipper Mts. is again ready for rainwater run-off.

Glenn Sudmeier is making plans to have each and every one of the water storage projects observed for the three day period during this coming summer. Some areas such as the Old Woman Mountain which has several storage and spring improvement sites will be needed to be 'counted' during the same three day period, in order to get a valid use picture. The importance of these waterhole counts cannot be overemphasized. There is a very strong reason for this statement:

It is important to actually know how effective this water storage program is being. This we can determine only by observation. It cannot be assumed.

As previously noted: these projects are upon either State or Federal Lands. Therefore, before any project can be carried out it must have the approval of the Manager , either Federal or State, of that land. These people rightfully must consider what effects such a project will have or may have upon other uses to which these lands or this area may be put. Will the proposed project have any adverse effect(s) on these other users of these lands? This frequently does involve domestic livestock grazing upon these public lands. Therefore, project sites are carefully chosen to avoid any possible conflicting uses. It will be noted elsewhere in this issue that this does sometimes appear to be a one-way street (of Use). Also, the Department of Fish and Game must know the effectiveness of the projects. Each of the projects does involve a great many man-days of DFG personnel in plannin as well as construction. Also involved in each of these 28 projects so-far completed an average cash-outlay of about $4.500.00 These moneys are derived from two main sources: the Pittman-Robertson Funds derived from the 11% excise that all sportsmen pay on thier firearms and ammunition. These P-R Funds come to the States on a 75% -Federal and 25% State funds of the DFG. These DFG funds have all in the past been derived from money received from fishing and hunting

licenses bought by the public; Also, project funds are derived from the Propogation Funds, these are commonly known as County Fine Money. These P-F funds are derived from a 50% allocation of money received from the Courts from those people found guilty of having violated sections of the Fish and Game Code of California. Another worth-while source during the project year of 1977 was approximately $14,000.00 that was allocated to the Desert Water For Wildlife Program by the Non-Game Wildlife Fund---KNOWN AS THE DECAL PROGRAM. Each person or organization that sends in at least $5.00 to this fund receives a certificate of appreciation and a sticker to put on a window of his or her vehicle. All funds so derived are used for Non-Game Wildlife projects.

Send your checks to : WILDLIFE
BOX DFG
SACRAMENTO
CALIFORNIA 95801

Glenn says that while the present and past projects are pretty well in hand that there is, of course, a great deal that still needs to be done for wildlife benefits in the desert regions. Therefore, both he and Les Coombes of the DFG do want you--the reader-- to get involved. If you haveany suggestion for further projects give us or them a location site of where you deem it would be or may be advisable to have such a project or projects. Coombes address is DFG, Region 5, Long Beach, California 90802. Sudmeire address listed under Coming Events.

Bureau of Land Management it was reported in the January-February issue of T.S. that the BLM was making plans for uses of the MCCain Valley Area and that in these plans the BLM was making definite plans for the betterment of bighorn sheep habitat and the protection of that habitat from some of the deletrious uses that have occurred from ORV uses or abuses in the recent past. Sudmeier now reports that the BLM has made plans for a water storage project for wildlife benefits in that McCain Valley Area. It is indead gratifying to learn that the BLM is taking the lead in this project.

MT. SAN GABRRIEL SHEEP COUNT REPORT

James DeForge, A Society Director, who is presently doing his Doctoraial Study concerning the bighorns of the San Gabriel Mts. area has reported about the sheep count that was finally conducted March 19th. This had been originally scheduled for March 5th. However, the tropical storms occurring early in the month had forced a postponement of date. This delay also reduced the number of participants from an expected 170 to only 111 volunteers. These observers did, however, observe and classify 294 sheep on that date. Of these there were 159 ewes, 109 rams and 26 yearlings.

The storms previosly noted, also had forced the sheep into what DeForge called 'comfort' zones, ie., areas in which the sheep could avoid some of the effects of the violent storms that did take place this spring. Many of the sheep were found in canyon areas, where winds were not so strong and cold. De Forge saw a ewe band in the Chilen o Canyon to the east of the Cogswell Reservoir. 12 of the 26 yearlings were observed in the Cattle Canyon. There were more dead sheep found on this day than had been found during any other of the previous counts. Undoutedly these were results of the very severe storms to hit Southern California. DeForge found four dead sheep in one canyon alone.

De Forge found during his work in the Cattle Canyon area, the scene of a wildfire during 1976, that here the vegetation was far superior to like vegetative species in nearby areas that had not been covered by this fire of 1976. This was to be expected as it has been shown on a good many occassions that the use of fire does have beneficial effects for wildlife. Many species of vegetation do not start new plants growing until after their seeds have been subjected to a degree of heat. Other species will also sprout from the root crowns after a fire and produce browse that is succulent to the herbivores, and which is in reach of their abilities to browse.

The ratio of yearlings to ewes of 16.3:100 is low. There may well have been a number of yearlings that were lost to the storms and their carcasses not found during the count.

The San Gabriel Mt. area is one of the areas that will be againstudied for wilderness status under the Roadless Area Review and Evaluation (RARE II) process. The area had been in the S74 proposed by Senator Cranston in 1975. The Society has contended that the around San Anonio Falls should have been included within the boundaries of this area as it is a prime lambing area of the bighorns of the Mt. Baldy area and is presently used by the Sierra Club as a staging area for their hiking travels.

****

SAWMILL CANYON TRAPPING POSTPONED

Dick Weaver, Department of Fish and Game Research Biologist of Sacramento has reported by phone to the editor that the plans to trap some of the California bighorns sheep out of the herd in the area of Sawmill Canyon--westerly of Lone Pine have had to be cancelled for this year. The sheep have used the fermented apple pulp to some extent. However, they have been very wary of coming near the trap. As a result after a five day period of watching the trap from a distance of nearly a mile, and none of the sheep entering the trap it must be abandoned for this spring. Efforts will be made at a later time to again capture and then transplant some of the members out of this herd. A different method of capture may be used.

As has been reported in previous issues the method above has been used with great success in Colorado with the same type of trap and the same bait.

A few years ago Dr. Charles Hansen, while at Death Valley made a study of the emotional differences between sheep. In his study he found that the sheep with 'pink tongues' were much higher stung, more nervous and more fearful of coming near a man-made structure that were members of the sheep that had 'black' tongues. SO----a question for conjecture: Do the sheep of Sawmill Canyon have Black or Pink tongues?

****

May 27 -28, 1978 Smith Spring construction project in the Sacramento Mts. Southwest of Needles. All needed manpower is already signed up for this job. IN THE EVENT some participants do not know how to get to campsite----In Needles take the 'K' St. undercrossing of I-40, go right the first street even though it is signed as 'dead end'. go over a high levee and down into a wash; drive to the southwest through an area where the people of Needles throw their rubbish; up a slight hill and into a once graded road; continue on this road toward Eagle Pass a distance of approximately seven miles; cross a flood diversion levee, and then a second and smaller levee. Camp site will be in this vicinity. Two wheel drive will get you to this area. Beyond this point in any direction is strictly 4-Wheel drive. The Project Site will be an approximate 2½ mile walk from nearest approach by 4 - wheeel drive. Las Coombes of the DFG will have all tools and supplies at the project site. This project does not, at present, have any storage tanks for water. I am convinced that storage tanks should have been included in planning. Sudmeier and Coombesalso believe this.

June 17-18-&19 Waterhole count---San Jacinto Mts.------Call Dr. Lutz- for more info.

June 24. Board of Directors will meet at Bob Johnson's Arrowhead chalet. Send any suggestions for future Society projects to Dr. Lutz. Also send in your opinions concerning positions that you believe the Society should take on Legislation dealing with wildlife and Public Lands.

July 4th weekend make an effort to make your waterhole census at that time and then SEND IN YOUR REPORTS TO GLENN SUDMEIER at 1728 Hillside, Norco, California 92760.Ph. 714-735-4387 If you cannot make the count at this time--then do it some time during the heat of summer.

Labor Day Weekend -September 2-3-4---Waterhole count in the Death Valley National Monument. Particulars later.

October 7th---Annual Dinner Meeting of the Society for the Southern California area will be at Michael's ---in Los Angeles----specifics on this later.

WHAT YOU NEEED TO TAKE WITH YOU TO HAVE A SUCCESSFUL-SAFE COUNT

WATER is the primary need. Have enough for more than the three days spent on the count site.---Figure a minimum of two gallons per person per day. You will need some also for washing and bathing, cooking, etc.,

2. You will have to have shade during those three days of your count. If nature has not provided shade, then you must create some by use of a tarp, together with whatever needed poles, and ropes for guying--stakes---usuall ya rock or bush will do. I have found a large beach umbrella painted with FLAT NEUTRAL BLOBS OF COLOR to be handy,
3. Have a cot if possible to sleep off the ground. It is cooler and avoids some of the creepy crawly critters.
4. A light weight sleeping bag--nights do frequently get cool--largely dependent upon the altitude of your camp,
5. Reading material for use in your blind--otherwise you may go to sleep and miss the sight of watering wildlife,
6. Sunscreen ointment--and use it. You can get burned by the ultra-violet rays even while in complete shade,
7. First aid kit.--including a snake bite kit. Snakes like all other desert wildlife do look for shade in the desert;
8. Take no chances of any nature---walk the safe way---take no short-cuts they are frequently the direct causes of accidents;
9. Have a good companion---the days are long. Husband and wife teams are excellent;
10. Have good optics--a 20 power spotting scope should be in the blind, also each person should have a pair of binoculars in the blind with you;
11. You will want a good camera and film---keep them in the shade and as cool as possible. Take your telephoto lenses USE A TRIPOD. Your editor will appreciate any photos that you can send him. We can use Black & White, Color, or slides or negatives. I will return any that you want back.
12. Your watch station should be 100 to 200 yards from the waterhole--may be closer if a lot higher and well hidden. Sometimes even 50 yards is ample, if you keep quiet and have a good screen between you and the water source.
13. When you leave--take all of your debris with you--leave no evidence of your having been in the area, except your footprints made while going and coming.
14. Be in your blind from sun-up until sundown each day. HAVE A GOOD COUNT. Send in reports.

SOUTHERN SIERRA TULE ELK HABITAT--UPDATE

The Society for the Conservation of Bighorn Sheep and the California Society for the Protection and Care of Wildlife are moving ahead with their fund raising efforts to purchase the 34,000 Hansen Wilderness Ranch to the northwest of Mojave.

The Dinner at the White Cafe in Mojave in early April netted $1,500. This together with other funds already at hand have been placed in a special trust fund titled: TRUST TO PURCHASE THE HANSEN WILDERNESS RANCH. The Society for the Conservation of Bighorn Sheep is the Trustee of this account. This is the same procedure that the sheep Society has used during the past 8 years in the purchase of other properties for the benefits of wildlife species. Neither of these two Societies is a hunting organization. It is true, of course, that those who are hunters do put an exceptional value on the many wildlife species and do appreciate the paramount importance that adequate and proper habitat has on wildlife health and numbers. The Calif. Soc. has been incorporated under the laws of the State of California. The Society has applied to the Internal Revenue Service for a 501(c)(3) tax-exempt status. There is always a long delay in time waiting for action by the I.R.S. on matters of this nature. In the meantime the funds so earmarked are well protected.

The tule elk that were transferred to the enclosure in March have nearly all escaped into the ranch proper. This is not considered any type of a problem. The reason for the enclosure was so that the elk might get adjusted to their new surroundings prior to having the gates opened so that they might be free to roam. The mature cow elk are presently in the process of their spring calving, according to Dr. Lutz. He was on the property two weeks ago and reports that the vegetation is absolutely fabulous. The elk should be butter fat in no time.

As noted in a previous issue of THE SHEEPHERDER the upper ranges of the ranch are excellent sheep habitat. Dr. Lutz and Bill Roper, together with other interested members have hiked in the area, and while on that trip they saw no bighorns, they report that there were many beds andsigns of sheep resident in the area. This protion of the ranch encompasses about half of the total acreage.

In order to accomplish this goal it is going to be necessary to raise about $3 to $4 Million for purchase, fencing of some areas, and other improvements. SO-----let's put our collective shoulders to the wheel WITH SOME OF OUR FUNDS and get this habitat secured for the benefits that will accrue to wildlife species of the area and the variety of species is many. SEND DONATIONS TO DR. LUTZ. ADDRESS PAGE ONE. DRAW CHECKS TO "TRUST FOR THE PURCHASE OF THE HANSEN WILDERNESS RANCH.

****

BIGHORN SHEEP COLLARED FOR STUDY

The November-December 1977 issue of T.S. carried an article concerning a bighorn study to be made in Arizona and having to do with the building of an electrical transmission line from Palo Verde to near Palm Springs in California. To continue----
The Arizona G.&.F Department's Wildlife Newsletter, Dec., 2, 1977 states:

"Twenty bighorn sheep in southwestern Arizona have been collared with radio-tracking devices as a part of an attempt to determine patterns of the herds in the Plomosa, New Water and Dome Rock Mountains. Department biologists worked in cooperation with E. Linwood Smith and Associates, the environmental consulting firm which is conducting the bighorn research project financed by Southern California Edison and Arizona Public Service Companies.

A helicopter was used to transport biologists to the sheep, which were then shot with a dart filled with an immobilizing drug. Much measuring and sampling was done to the sheep which were captured, and a reversal drug was administered to get teach sheep on his feet after the collar was fitted. The collaring was done at this time because it is in between the hot weather season and the lambing period. The helicopter method of capture was used because it allows workers to select the exact sheep they want."

NOTE: These sheep-- eight ewes and seven rams, were collared in the Plomosa and New Water Mountains and three ewes and two rams in the Dome Rock Mts. After being immobised by department personnel under Bob Weaver, body measurements, blood samples, fecal samples and examination for parasites or other infections, a reversal drug was administered in order to get the sheep back on their feet. This project has also been assist to the Arizona G & F. Department in the training of two other biologist in the techniques used in capturing wildlife with the aid of helicopters and drugs.

****

SUMMARY OF THE 1977 DESERT BIGHORN CENSUS AT DEATH VALLEY

by Peter G. Sanchez

The annual bighorn waterhole census was held 3 - 5 September 1977 with 37 observers covering 25 springs. Only 10 bighorn were seen at five springs in the Grapevine and Cottonwood Mountains. Springs on BLM Lands in the Hunter Mountain area were included.

The census repeated the area covered in 1976, which in that year was rained out. Heavy rains fell on Death Valley 16-18 August (1.14 inches) and probably affected bighorn activities, (during this Labor-Day Weekend 1977).

Dozens of observations before and after the census period are being assembled and will be included in our 1977 report (now in preparation), a cooperative effort by Tom Blankenship

California Department of Fish and Game, Joe Cappodice, Bureau of Land Management and by myself. (P.G.S.)

Fifty-nine bighorn have been seen: 33 in the Grapevine Mts. amd 26 in the Cottonwood Mountains.

Only seven lambs were seen. It appears that the number of lambs is dangerously low. One sick ewe was seen (coughing, mucous from nose); all others appeared healthy.

The 1978 cooperative Labor Day census is planned for the Panamint Mountains.

NOTE: Peter G. Sanchez, is the Resource Management Specialist of the Death Valley National Monument. Pete (at the left) has been making every effort to protect the bighorn sheep, not only of the D.V.N.M., but in all of the western states. He is the Secretary-Treasurer of the Desert Bighorn Council. Pete has been busy the past several months writing the Environmental Impact Statement concerning the impact of the feral burros on the desert ecology of the D.V.N.M. The facts of which he writes also apply to all of the desert mountain areas that now have feral burro populations. Pete states in a recent letter:

"Death Valley Resources Management PLan and Environmental Impact Statement

A full EIS on Death Valley's resource management plan was ordered following a threatened law suit against the Gran Canyon National Park. The controversy arose over burro management. A manuscript of Death Valley's EIS was prepared by September 1977. The draft is in San Francisco undergoing regional office review and editing. Burro management takes up a major part of the EIS and discusses 20 alternatives including complete to partial removal of herds, trapping, shooting, sterilization, relocation, and carcass disposal. Complete removal of burros is proposed in the plan. Public distribution of the EIS is anticipated in 1978.

****

NOTE: It is thought very probable at this time that the Environmental Impact Statement of the Grand Canyon National Park will be released for public comment prior to that of the Death Valley National Monument.

****

NEVADA RECEIVES ADDITIONAL TRANSPLANTS

BY

Warren Kelley

On Thursday March 23, 1978 George Tsukamoto and a co-worker of the Nevada Department of Fish and Game, Gregg Tanner, drove nearly non-stop from Penticton in British Columbia, Canada to release another group of California bighorn sheep in Nevada.

The twelve bighorns, two rams, seven ewes and three lambs were released in the 8-mile Canyon of the Santa Rosa Ranger District of the Humbolt National Forest. This area lies about 70 miles to the north of Winnemucca, Nevada.

One ewe appeared to be in poor condition and was probably injured during the trapping operations. This animal plus four others were radio collared. Later follow-up studies have showed that all sheep are doing well, even the injured one.

These sheep had all been obtained from the Okanagen Game Farm. The Manager is Mr. Ed Lacey. He has appeared before the Desert Bighorn Council in previous Annual Meetings and has spoken of the breeding programs and experimentations that have been conducted from time to time on the Okanagen Game Farm.

There has been another transplant of California bighorns into Nevada at the Charles Sheldon National Antelope Range in northwestern Nevada. The sheep for this transplant had been obtained from the Hart Mountain Area of Oregon. NOTE: All California bighorns now resident in Oregon have come from stock obtained originally from the British Columbia area near Williams Lake and the Frasier River. The Williams Lake area has also been the place from which the increasing herds of sheep now resident in North Dakota, South Dakota, Washington, Oregon and also the Lava Beds National Monument of northeastern California.

Three years ago the Department brought Rocky Mountain bighorn back to the state of Nevada. These animals were also released on the Humbolt National Forest. Another release of Rocky Mountain bighorns is slated for the Snake Range in eastern Nevada during the later part of April 1978. The Humbolt National Forest is the only forest in the National Forest System with three subspecies of bighorn sheep: Desert, Rocky Mountain and California.

NOTE: The Editor of T.S. beleives that a great deal of credit should be given to Warren Kelly, Biologist on the Humbolt National Forest for these transplants having been accomplished. Warren is one of the interested men who were the founders of the Desert Bighorn Council. He has served in all capacities for the DBC---Chairman, program Chairman, Secretary and all the rest. He has served on the San Bernardino and Lassen National Forests in California prior to being transferred to the Humbolt. Warren and his wife Ruth have been active in fund raising efforts for the DBC with wood carvings, bolo-ties, pendants, necklaces, and other types of jewelry that they have made during the time between Annual Meetings of the DBC and then made available to those attending the annual sessions.