

RAM'S HORN

OFFICIAL PUBLICATION OF THE ARIZONA DESERT BIGHORN SHEEP SOCIETY, INC.
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#3



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CALENDAR OF EVENTS

OCTOBER 6

Hunters Clinic and
Ram Recognition Banquet
ANNUAL MEETING

The Bighorns of Aravaipa

By Rodney J. Mouton, Arizona Game & Fish Department

It was 105 degrees in the shade that day, June 20, 1990. This I was told later. Where I was, perched above the contorted rock formations and ridges that overlook Hell Hole, a tributary to Aravaipa from the north, there was no shade. One-oh-five was definitely an understatement. The sun had broiled the south canyon wall, widening the fissures between it and a house-sized chunk of rock that had been bonded there for millions of years. I was witness to its release when the crack opened past that point that allowed gravity to take over. I nervously wondered about the small crack two steps behind me from where I sat almost one thousand vertical feet above the creek below. Reasoning that there was nobody around to call me "chicken," I moved three steps backwards to be safe.

Just as the ecoes died away, I focused my attentions to a new sound. There was no mistaking the hollow ringing of a head clash. Scanning the canyon wall opposite from where I was positioned, it took me about five seconds to locate the two rams involved. They were young — one a class I and the other a class II. Backtracking their trail with my binoculars, I found four more sheep: A lamb, two adult ewes and a yearling ewe. I watched them a good half hour until I was satisfied they were all healthy.

I had found a dead lamb in the bottom of Deer Creek, directly below, the day before. As far as I could tell, it had been there four to five weeks. The skeleton was fully intact, its hide about fifty percent gone and its entrails completely missing. I had hiked this point in the canyon bottom five weeks earlier so I knew the approximate date of death. On this day, I was looking to narrow down a possible cause of death.

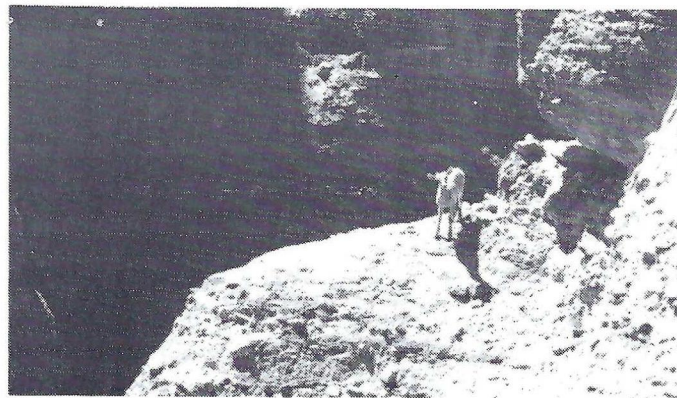
Because the skeleton was whole, I assume the death was not predator related. The small herd of sheep on top looked healthy enough to discount possibilities of a contagious disease. My conclusion is that this lamb was the probable victim of an accidental fall.

My two-mile walk back to the truck led me near an overlook where five weeks earlier I watched a group of 35 to 40 sheep. Again, they were all ewes, lambs, yearlings and a few young rams. They had all looked healthy. A single ewe and lamb of about four months were the only sheep present here on this day.

Back in the truck and about a half mile towards my next destination, the engine overheated, forcing me to stop three times allowing it to cool before I could resume. Reluctantly, I altered my plans to return to camp at Turkey Creek. I spent almost four hours driving without the luxury of the air conditioner and taking the transfer case out of four wheel drive to reduce the drag. One-oh-five in the shade equates to one hundred thirty or more in a truck.

The sheep at Aravaipa are the descendants of sixteen original animals transplanted from the Kofas, Saucedas, Plomosas, Craters and the Sand Tank Mountains between 1958 and 1972. The twenty-two desert bighorn sheep inhabiting this area in 1973 proliferated to an estimated 165 in 1988. Re-establishment of a permanent herd of bighorn Aravaipa was an overwhelming success not only in population numbers, but also in animal quality. A new state record desert bighorn (Boone and Crockett score) was harvested there in 1982. In 1988, the new world record desert bighorn was taken, followed the next year by new archery and muzzleloader trophy records. 1989 was to be a year of "good news — bad news."

For reasons not yet known, sheep numbers at Aravaipa have



apparently taken a sudden dip. The Arizona Game and Fish Department's (AGFD) aerial survey conducted in the fall of 1989 indicated that total population numbers dropped to approximately 100 sheep. Hoping that a higher than normal number of animals simply went unobserved, another helicopter census was scheduled for the first week in April 1990. Producing almost identical results, coupled with the reports of a higher than expected number of mortalities, there was cause for concern.

The Arizona Desert Bighorn Sheep Society (ADBSS) financed yet another survey conducted in mid-April. This flight covered the fringe areas to determine if the sheep had moved into the marginal habitats. This five hour flight revealed no additional bighorn sightings. The Foundation for North American Wild Sheep is funding investigations to examine the following possible reasons why such a large segment of the population may have gone unobserved:

Non-mortality hypotheses:

1. Sheep have moved from the area due to the social stress associated with high sheep densities.
2. Sheep remain in the Aravaipa area but went unobserved.
3. Sheep have been displaced by other species (predators, humans, livestock)

Mortality related reasons:

1. Increased predator-related deaths
2. Increase in contagious diseases
3. Poaching
4. Starvation (or dehydration)
5. Lethal toxemia

MOVEMENT

The bands of rams that form after the rut tend to occupy areas separate from the key lambing areas. There is the possibility that ewe densities have reached a saturation point, compelling the post-rut ram bands into more distant marginal areas not normally occupied. Although there have been reports of ram groups twenty miles north and northeast of Aravaipa, these reports cannot be verified until current sightings can be acted upon. The AGFD will remain in contact with the San Carlos Apache Indian Reservation to determine if the desert bighorns have in fact moved into that area.

UNOBSERVED

The hypothesis that more than half of the bighorn population at Aravaipa were present but unobserved can probably be discounted due to the repeated survey flights and ground investigations. While there are signs of sheep use at a large spring in the bottom of Hell Hole, there hasn't been any indication that they have visited the lower, unobservable elevations of Aravaipa Creek itself.

DISPLACEMENT

Displacement by human activities is unlikely. Using a permit system, the Bureau of Land Management allows a maximum of fifty visitors to Aravaipa per day. Visitors rarely venture into the primary bighorn areas located 600 to 900 feet up the vertical cliffs.

Heavy livestock grazing in the area of Horse Camp Canyon may have been the impetus for an apparent shift in key lambing areas. While still utilized to some extent, Horse camp seems now to be less favored than the canyons to the east.

continued

THE BIGHORNS OF ARAVAIPA Continued

While mountain lion numbers have increased to the south of Aravaipa Canyon, there were no indications that predation on sheep by lions has increased. Bobcats are common, but would more likely be cause for low lamb survival rates.

DISEASE

Scabies, bluetongue virus, contagious ecthyma, leptospirosis, chronic sinusitis and epizootic hemorrhagic disease are the most prevalent disease-related causes of mortality among desert bighorn sheep. Blood serum samples from sheep taken at Aravaipa in 1980, 1983 and 1990 revealed that all of the adult sheep sampled have at least been exposed to one or more of these domestic livestock diseases. The ram sampled in 1990 had epizootic hemorrhagic disease titers present at a level that indicated a previous infection from the disease. Of all the sub-adults tested, none tested seropositive for disease titers.

Additional serologic testing on the 1990 samples showed a possible vitamin E deficiency in the ram when compared to vitamin requirements for domestic cattle. At what level the vitamin actually becomes deficient in wild sheep is not known.

While these tests reveal that sheep possess some degree of immunity to livestock introduced diseases, it also shows that these contagious lethal diseases are readily transmitted to wild bighorn sheep populations.

STARVATION/DEHYDRATION

The drought conditions that prevailed at Aravaipa Canyon during 1989 no doubt affected forage availability to the desert bighorns living there. The actual consequences to the resident sheep herd can only be speculative at this point. Possible repercussions may involve:

1. Sheep moving away from familiar areas in search of more readily available forage or water supplies.
2. Death by starvation/dehydration.
3. Deviation from normal diet to less palatable but more readily available forage.

Any or all of these consequences may be suspected.

POACHING

Although the record-sized trophies harvested at Aravaipa may be an impetus for illegal hunting activities, poaching could not account for the dramatic decline in sheep numbers. A higher than normal number of ram's skull have been incidentally discovered at Aravaipa by hikers and ranchers, possibly reflecting an increase in natural mortality and further discounting the likelihood of poaching.

TOXEMIA

A likely source of toxins introduced into the bighorn sheep diet is from the vegetation. Many of the most common vegetational species at Aravaipa are toxic, or become toxic under certain circumstances such as time of year, drought conditions or when browsed on extensively. When preferred browse becomes unavailable during droughts, sheep may be forced to utilize plants not normally palatable, including those which may be toxic.

Of the twenty-six most common plant species found in the Horse Camp Canyon area, nine are, or may be toxic. These nine comprise over sixty percent of the available browse.

Droughts may also force sheep to seek Aravaipa Creek as a water source, thus introducing additional alternate browse, much of which is toxic.

In summary, the cause of the decline in desert bighorn sheep numbers at Aravaipa is speculative, although a combination of non-mortality and mortality-related factors are suspected. Drought conditions prevailed during 1989, possibly compelling some sheep to move out of the area due to a lack of available forage. Social stress could also compel bighorns — especially rams — to move from their preferred habitat. These sheep will likely return when rut activities commence in July.

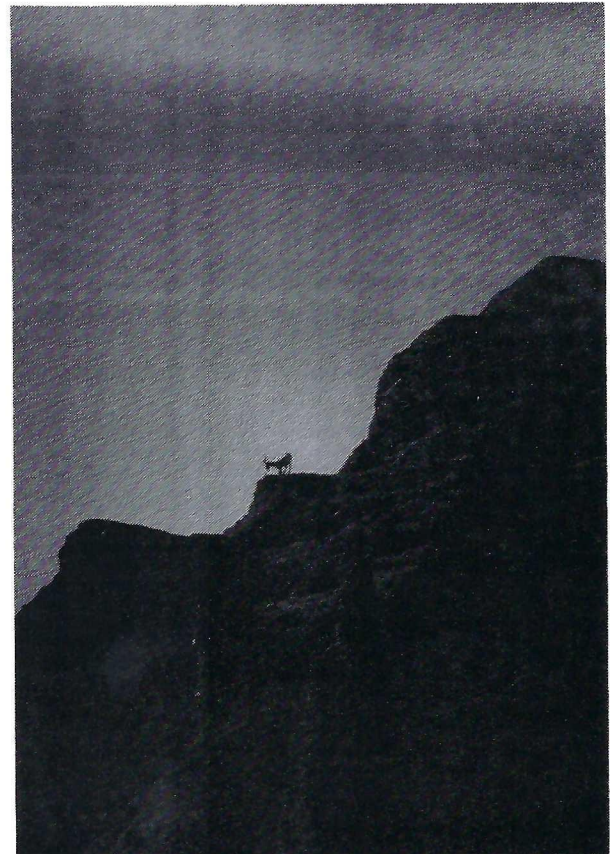
Toxemia from chemical changes in preferred browse and from alternate forage plants may also be suspect for a partial decline in sheep numbers. Disease from domestic livestock is also plausible. These possibilities become more likely when coupled with the weakened conditions of the bighorns, particularly the rams, when adverse climatic conditions occur during and after the rut.

Discounted, though not excluded, possibilities for the depressed population include poaching, learned behavior (sheep went into hiding at the sound of the approaching aircraft during aerial surveys) and displacement by human activity or predators. Mortality from predation seems an unlikely cause for the low 1989-90 observations.

Research (funded by the Foundation for North American Wild Sheep and the Arizona Desert Bighorn Sheep Society) will be aimed at not only actively searching for the cause of the population decline, but also disqualifying some of the aforementioned possibilities. Water, forage and fecal samples will be analyzed at the first signs of renewed problems if they occur. If an unhealthy animal is located serum and swab sample analyzez will be conducted. If recent mortalities are discovered, complete necropsies will be performed.

We may never reach a definite conclusion as to why the sheep at Aravaipa weren't observed during the surveys. While the number of mortalities was higher than normal, there was not a sufficient number of carcasses discovered to assume the occurrence of a major die-off. The dramatic decline in the number of desert bighorns that was determined by the multiple surveys has, however, created concern enough to suspend sheep hunting at Aravaipa for the 1990 season. Our intentions are to closely monitor the existing population for clinical signs of impending problems.

The Arizona Game and Fish Department gratefully acknowledges the interest and support of the Arizona Desert Bighorn Sheep Society and the Foundation for North American Wild Sheep.



Foundation for North American Wild Sheep

The Foundation for North American Wild sheep and the Arizona Desert Bighorn Sheep Society have had a long and productive relationship. FNAWS has had a role of supporting sheep management program through-out North America by providing monetary assistance. In Arizona the foundation has given \$155,608.42 in direct funding for projects that include transplants, disease research, and waterhole development. FNAWS has also assisted ADBSS with the marketing of the Arizona Desert Sheep Permit. The auctioning of this permit at the annual FNAWS convention has brought in \$342,500. This money coupled with the direct funding has provided just short of a half a million dollars for sheep management programs since 1984.

While a lot of work has been accomplished neither ADBSS or FNAWS can sit back and look at the past. Both organizations need to continue the close working relationship that currently exists. FNAWS has all ready committed \$8000 to Arizona's for next years waterhole and they currently are providing funding for research in Aravaipa Canyon. All our members need to continue to support the efforts of ADBSS and if they want to work for all the sheep of North America we encourage them to join FNAWS. Only through the continued commitment of time, energy and funds by you, the member, can these organizations be successful in the future.

PROJECT	PROJECT TITLE	AMOUNT	PERMIT
9	Arizona Desert Bighorn Transplant	\$24,00.00	1984-\$64,000.00 Dan Pocapalia
10	Waterhold Project-Arizona	\$ 4,244.00	1985-\$42,000.00 Dennis Hankerson
21	Free Release Transplant	\$ 6,500.00	1986-\$27,000.00 Dennis Hankerson
83-33	Arizona Waterhole	\$12,806.00	1987-\$39,000.00 Jack Hayes
83-34	Video taping waterhole project	\$ 5,756.00	1988-\$47,500.00 Art Dubs
70	Desert Sheep transplant-Lake Mead	\$10,000.00	1988-\$22,000.00 Hualapai permit Pete Papac
85-34	White Mountain Apache Tribe Request for technical advice	\$ 9,300.00	1989-\$53,000.00 Jim Ryan
85	Arizona Sheep Society	\$10,000.00	1990-\$48,000.00 Stan Boots
85-60	Mesa Desert Bighorn Sheep reintroduction program	\$ 8,554.00	
89-27,28,29	Bureau of Land Management Water Project	\$12,000.00	
89-70	Bob Gray Tank, and Bunyon Peak Tank	\$ 9,878.98	
30-67	South Needles Pothole		
90-53	Arizona Aravaipa Canyon	\$25,000.00	
90-45	Arizona Water Project	\$ 8,000.00	
TOTAL \$498,108.42		GIA \$155,608.42	PERMITS \$342,500.00

ADBSS MEMBER NOMINATED FOR FNAWS BOARD OF DIRECTORS

A very active member and Past President of ADBSS, Pete Cimellaro, was nominated for election to the Board of Directors for The Foundation for North American Wild Sheep, by the President of FNAWS John Harris. If elected to the Board, Pete will actively continue his work for Wild Sheep with the Foundation and as a representative of the Society.

America's Wild Sheep. It has given tremendous support to the ADBSS for many of our waterhole development projects. FNAWS has continually been involved in all issues regarding North American Wild Sheep: including habitat protection and enchancement, predator control, and political and management issues.

The Foundation of North American Wild Sheep is dedicated to the conservation, expansion, and utilization of North

We encourage all of you to become members of FNAWS, and join in on the tremendous work that this organization does. Use the membership form provided below:

FOUNDATION FOR NORTH AMERICAN WILD SHEEP

720 Allen Ave., Cody, WY 82414 (307) 527-6261

- Membership, 1 Year: \$40.00
- Sustaining Membership (Individual), 1 Year: \$200.00
- Corp. Supporting Membership, 1 Year: \$1,000.00
- International membership (non-North American): \$100.00

- Lifetime Membership: \$1,000.00**
- Family Membership, 1 Year: \$75.00
- Company Membership, 1 Year: \$200.00

(All memberships payable in U.S. Funds only.)

Name _____ Address _____

City _____ State/Prov. _____

Zip _____

Telephone (Home) _____ (Office) _____

Check here if you are an Outfitter

Bill my Master Card

Bill my VISA Card

Charge Card No. _____ Valid Through _____

Signature _____

FERAL BURROS IN ARIZONA

by Art Fuller

As time progresses, values change. In recent years the Desert Bighorn Sheep has become one of the most prized species in North America for both hunters and photographers. Hikers and sightseers will say that a glimpse of these animals is one of their more thrilling experiences. In response to this value, hundreds of thousands of dollars have been spent on habitat improvements and transplant programs to restore bighorn populations to many mountain ranges in Arizona.

Miners in past years placed a great value upon the burro, for it provided transport for their basic needs and tools for their livelihood. Often it provided a companionship very similar to that of man and dog. Burros were also often used for food by local residents and were rounded up and sold for income by landowners or ranchers. Today, miners no longer use or need the burro, and the Wild Horse and Burro Act has prohibited other traditional uses.

Now other people value the burro for completely different reasons. The sightseer, when he comes upon a burro, sees a symbol of the miner and his pioneer spirit. To others it provides an attraction which may cause tourists to stop and purchase mementos, allowing the proprietors of nearby shops to make a profit. Still others are contracted to study burros or have been employed to remove burros from public range. Many thousands of others have taken advantage of the BLM adoption program to have a burro delivered to their home for a fee of 75 dollars.

The major problem in Arizona is the fact that desert bighorn and the feral burro live in the same habitat and use many of the same foods. Because habitat is finite, unlimited burro, horse, bighorn or livestock populations are not possible. Instead a balance is necessary which provides for a thriving natural ecological balance as required in the wild horse and burro act (Public Law 92-195).

Ideally burro habitat and bighorn habitat would not overlap, but in Arizona burros and bighorn often compete for the same food, water, and space. Bighorn and burro studies have shown burros to be more versatile and hearty than native bighorn sheep. Where burro numbers are not controlled, bighorn populations often suffer.

The Arizona Game and Fish Department recognized a possible conflict between wildlife and feral burros as early as January 1962 when the Department requested the burro be declared an illegal trespass animal to facilitate removal of excess burros (The State Livestock Sanitary board was the state agency responsible for feral animals prior to 1971). Also in 1966 the Arizona Game and Fish Department requested the assistance of the Bureau of Land Management for burro removal on Public Lands in Arizona. Both of these attempts to control burro populations failed due to lack of funding to study, inventory and remove feral burros.

In December 1971 the Wild Horse and Burro Act (Public Law 92-195) was passed and signed into law. This act gave jurisdiction to manage burros on Bureau of Land Management Land to the BLM. The Act authorized research, inventory, monitoring and removal of excess burros. These activities were to be carried out in a manner designed to achieve and maintain a thriving natural ecological balance. Excess burros were also to be removed immediately.

After 1971, landowner or rancher sponsored burro roundups for sale ended, and authorized burro harvest for food ended. Feral burro populations quickly began to increase. Studies were completed to determine characteristics of various burro populations, and their degree of competition which other native wildlife.

By January 1977, the Bureau of Land Management was scheduled to make their first capture of feral burros from Public Lands. On 25, March 1977, the Arizona Governor's Commission on Arizona Environment passed a resolution to remove burros from lands surrounding

Alamo Lake. Later in 1977 the BLM was able to capture and remove 670 burros from the Alamo Lake area and other locations in Arizona. The following is a brief listing of burros and horses removed by the BLM in Arizona from 1977 through 1990.

1977 - 670	1982 - 711	1985 - 841	1988 - 526
1979 - 755	1983 - 646	1986 - 991	1989 - 482
1981 - 991	1984 - 633	1987 - 584	1990 - 346
Total 7,827			

My estimate of costs for the horse and burro removal program in Arizona from 1977 through 1990 is over 4 million dollars. As burro densities were reduced, burro removal by live capture became more expensive and more difficult.

BLACK MOUNTAINS

Burro densities have been reduced significantly in the Black Mountains since 1982 (Units 15C and 15D, Hoover Dam to Warm Springs). The most recent estimate of burro numbers in this area by the Kingman BLM office is 450 (July 1990). Burro count/recount inventories have been completed in 1981 and 1986. Another inventory is scheduled for the spring or summer of 1991.

The 1981 inventory estimated a population of 1,958 burros in the Black Mountains. Using a 13% recruitment rate, by 1982 an estimated population of 2,213 burros existed in this area. During the summer of 1982 the BLM removed 623, leaving an estimated 1,590 burros. In the fall of 1982 a Game and Fish aerial survey recorded 195 incidental sightings of burros in bighorn sheep habitat, averaging 8.1 burros per flight hour (Table 1).

A history of burros observed during fall bighorn surveys in 15C and 15D from 1982 - 1989 is listed in Table 1, and a history of burros removed during the same time by the BLM is listed in Table 2. In addition, 51 additional burros were found shot over a 12 square mile area near Cool Springs in Unit 15D in May 1990.

Since bighorn survey hours vary each year, burros observed per helicopter flight hour are the best estimate of burro densities, but because only a small portion of the total burro habitat is covered during surveys, this data cannot be used to determine burro numbers. This data can only be used as an index of burro densities in bighorn habitat in the fall.

The cooperatively written Arizona Game and Fish Department/Bureau of Land Management Black Mountain Habitat Management Plan was drafted in 1981 and represented a joint agreement on future management of habitat in the Black Mountains south of Hoover Dam. Many water development projects (23) were planned and all of them were constructed by cooperative funding between the Game and Fish Department, the Bureau of Land Management and The Arizona Desert Bighorn Sheep Society. An agreement on a target level for burros was also included in the document. This number was 100 burros in 15D and 100 burros in 15C, for a total of 200. No burros were to be retained east of Hoover Dam.

In 1989, bighorn sheep populations were estimated to be at record high levels in 15D, at optimum levels in 15C-South, and at significantly reduced levels in units 15C-North and 15B.

Since January 1990 precipitation amounts in the black Mountains have returned to normal. An aerial survey of bighorn sheep populations is scheduled for October 1990. We will be able to determine at that time if the 1989 drought had any significant effect on bighorn numbers in the Black Mountains. We will also receive data on burro densities in bighorn habitat during a normal rainfall year, and compare this with the 1989 figure of 7.5 burros seen per hour of survey time.

Continued

1 Million FOR SHEEP CONSERVATION

The society has raised in excess of 1 Million dollars for desert bighorn sheep management projects. The society lunched it's first fund raising project in 1981 with the publication of the Sheldon Journal. In 1982 the AZ Game & Fish Dept. requested the society finance a transplant. This fund raiser was different than most you see today. A special request was sent to all members asking for money. To everyones surprise we received

\$26,640. The Department requested \$30,000 but was overwhelmed with the money raised.

Since then there has been a consistent fund raising program. In 1984 the first sheep permit was auctioned at the FNAWS convention and the society held the first sheep raffle. That year we also had our first fund raising banquet. We were off and raising!

MAJOR FUND RAISING EFFORTS 1981-1990

SHELDON BOOK	\$16,500.00	
SHEEP TRANSPLANT FUND RAISER	\$25,640.00	
		\$42,140.00
1984 FUND RAISER DINNER (NET)	\$32,234.00	
1985 FUND RAISER DINNER (NET)	\$34,419.00	
1986 FUND RAISER DINNER (NET)	\$55,988.00	
1987 FUND RAISER DINNER (NET)	\$47,130.00	
1988 FUND RAISER DINNER (NET)	\$41,200.00	
1989 FUND RAISER DINNER (NET)	\$50,400.00	
1990 FUND RAISER DINNER (NET)	\$30,000.00	\$291,371.00
1984 HUNT PERMIT AUCTION	\$64,000.00	
1985 HUNT PERMIT AUCTION	\$42,000.00	
1986 HUNT PERMIT AUCTION	\$27,000.00	
1987 HUNT PERMIT AUCTION	\$39,000.00	
1988 HUNT PERMIT AUCTION	\$47,500.00	
1989 HUNT PERMIT AUCTION	\$53,000.00	
1990 HUNT PERMIT AUCTION	\$48,000.00	\$320,500.00
1984 HUNT PERMIT RAFFLE	\$82,350.00	
1985 HUNT PERMIT RAFFLE	\$60,500.00	
1986 HUNT PERMIT RAFFLE	\$62,050.00	
1987 HUNT PERMIT RAFFLE	\$84,030.00	
1988 HUNT PERMIT RAFFLE	\$87,930.00	
1989 HUNT PERMIT RAFFLE	\$75,160.00	
		\$452,020.00
TOTALS 1981-1990		\$1,106,031.00

*** SOCIETY TO PUBLISH MEMBERSHIP DIRECTORY ***

The Society is in the process of publishing an updated membership directory. Many members have found previous editions to be very helpful in communicating with fellow members about hunts and work project trips.

The directory is scheduled for printing and mailing to all paid members by NOVEMBER 1st.

If you do **NOT** want your name, address, and/or telephone number(s) listed in the directory, notify the Society of your desire by **OCTOBER 1st, 1990**, at P.O. BOX 7545, PHOENIX, AZ 85011

Limited advertising space is still available. Business card ads are welcome. Send business card and \$45 check to the Society at the above address. The back cover is also available for \$350.

Send artwork and payment to the Society.

For additional information, contact Don Johnson (602) 278-3010 or Pauline Wampler (602) 957-0773

Region 3 Bighorn Status Report For 1989

A dry winter in 1988/89 followed by the driest summer on record may have an affect on our deer and bighorn populations in Region 3.

Water sources away from the lakes, such as springs and seeps, dried up on Mt. Wilson in 15B-West and on Mt. Perkins in 15C-North. This forced sheep to remain close to the lakes throughout the summer and early fall.

Bighorn were forced to feed on cheeseweed and catclaw in wash bottoms far from escape cover. Yearling and lamb survival in 15B-West and 15C-North has been poor with ratios of 24 lambs and 7 yearlings per 100 ewes in 15B-West, and 18 lambs and 4 yearlings per 100 ewes in 15C-North. These 2 units are the most heavily hit by drought.

Region 3 helicopter surveys were flown from 25 September through 9 October 1989. Transplant areas in Unit 13B and 16A were not flown due to a decrease in available flight time. All flight were confined to Unit 15 this year, and a total of 52.6 survey hours were expended. The ADBSS funded 10.2 of these hours in 15C-North.

A record number of feral burros were also observed during surveys in 1989. Drought has forced bighorn and burros to share the same habitat, use the same water and the same cover.

Results of fall 1989 surveys are listed below for your information with 1988 data for comparison purposes.

UNIT	YEAR	BIGHORN OBSERVED	SHEEP HR.	BURROS	BURRO HS.	RATIOS:			YRL
						RAMS	EWES	LAMBS	
15A,B-East	1988	131	16.0			44:	100:	21:	9
	1989	95	11.6			32:	100:	45:	26
15B-West	1988	353	27.6			36:	100:	34:	22
	1989	208	16.4			50:	100:	24:	7
15C-North	1988	433	34.1	75	5.9	47:	100:	54:	29
	1989	197	15.4	25	2.0	43:	100:	18:	4
15C-South	1988	134	19.7	28	4.1	80:	100:	65:	29
	1989	136	18.1	60	8.0	63:	100:	28:	22
15D	1988	189	16.4	69	6.0	64:	100:	63:	6
	1989	283	24.8	153	13.4	52:	100:	35:	24

A significant part of the reduced bighorn observation rate in 15B-West and 15C-North is due to sheep reacting to the drought by feeding in small groups in unusual locations. This made finding these sheep difficult. Hopefully normal winter and summer precipitation will occur in 1990 and improve range conditions in Region 3.

The Bureau of Land Management Kingman Office is responsible for burro population control in Region 3. This summer

they took burros from 15C-North in response to Az G & F Department and National Park Service requests. This action reduced burro observations in this area. Unfortunately burro observation rates increased in 15C-South and 15D as the dry range condition concentrated this species around water.

The long drought had no apparent effect on the December 1989 sheep hunt. Large numbers of Class 3 & 4 rams were observed in bachelor pastures in normal locations.

HUNTERS CLINIC AND RAM RECOGNITION BANQUET

OCTOBER 6th, 1990

At The

EMBASSEY SUITES HOTEL

5001 N. Scottsdale Road, Scottsdale, (602) 949-1414

HUNTERS CLINIC

7:30 AM for Coffee & Refreshments

8:00 AM Clinic Starts

1:30 PM - 2PM Clinic Over

The Clinic is FREE to all interested parties

RAM RECOGNITION BANQUET

Embassy Suites Hotel

6:00 PM - Waterhole

7:00 PM - Prime Rib Dinner

Joe Foss - Speaker

\$22.50 per person

If your interested in a room, contact the hotel directly. Mention the ADBSS for room discount (602) 949-1414

ADOPT A WATER UPDATE

By John Gunn Arizona Game & Fish Department

The first effort at monitoring our many water developments has been a great success. We were able to translate the information from being just that, information, to an action plan. For the first (and hopefully the last) time, we initiated a water-hauling operation to seven sheep water's. The seven development's were selected due to their conformance with our criteria for "critical water" designation. The monitoring effort then, probably saved some sheep from an ugly death.

Three existing development's were identified during the monitoring, as needing significant work/re-development. They are; Black tank in the Crater's, Dripping springs in the Gila's, South needles in the Needle's. Plan's have, or are, being made to deal with these situation's.

As of the end of April, most tinajas and catchments were in desperate shape. Only the 40A country looked really good. Winter rains were spotty, they often lack the intensity to initiate arroyo runoff. None of our spring projects had collected

substantial water. Several Society members returned to Gray tank but alas the more we looked, the drier she got! We took the hint and quit peeking!

Now in July, things are looking pretty good, statewide. The "moonsoon" arrived early and with abundant moisture. Even Yuma managed to dampen the dust! Organ Pipe Cactu Natl. Mon. reports approximately 2.5" in the month of July. Unfortunately, not all area's were so lucky. Borrego tinaja in the south west corner of the state was dry as of July 3. The mojave desert area's appear to have received abundant summer storms. The Black Mountain's are in good shape. Hopefully, all development's are now slowly trickling water over the dam (Are you listening, Gray tank?). The next monitoring period is October, so we'll know the results of our rain dancing then.

One area currently needing Adopt-A-Water attention is the Silverbell/Ragged Top country. Interested person's should call John Gunn for specifics. The Area Captain's will soon be making plan's for the October effort. If you can assist, please contact them soon to avoid duplication/ommissions in monitoring.

A number of Wildlife Manager's have expressed their gratitude to me for the volunteer effort in their district's. They really appreciate the help. Thank-you for making this endeavor succeed.

NAME	REGION	UNIT	PERCENT OF WATER IN TANK	WILDLIFE USE	NAME	REGION	UNIT	PERCENT OF WATER IN TANK	WILDLIFE USE
Wildhorse spring	3	15b	n/a	light	Sand tank pothole	4	40a	60%	little
Golden door	3	15c	50%	light	Thanksgiving day	4	40a	65%	little
Lambing tank	3	15c	50%	low	Thanksgiving day	4	40a	90%	light
Lost cabin spring	3	15c	see comm	significant sheep	Betty lee ciste	4	40b	75%	abundant (old) sheep
Pass tank	3	15c			Betty lee ciste	4	40b	40%	little
Van Deerman tank	3	15c			Black tank	4	40b	5%	light
Battleship spring	3	15d			Borrego tank	4	40b	100	significant sheep
Columbine spring	3	15d	100	light	cipriano pass	4	40b	see comm	abundant old sheep
Cross seep	3	15d			Coyote peak tank	4	40b	dry	light old sheep
Drill hole	3	15d			Dominy pothole	4	40b	see comm	low sheep
Lazy boy	3	15d			Don diego tank	4	40b		low sheep/coyotes
Mcheffy spring	3	15d			Dripping spring	4	40b	see comm	little
Ram spring	3	15d			Major tank	4	40b	10%	some sheep
Sheep spring	3	15d	100	light	Major tank	4	40b	12%	sheep, dove, snake!
Tipperary tank	3	15d	0	none	Mohawk mtn #1	4	40b	50%	
Trough spring	3	15d	50	light	Anvil tank	4	41		0
Upper twin tank	3	15d			Bucket tank	4	41	0	0
Aubrey peak pot	3	16a	85%	light	Dead deer tank	4	41	75%	Heavy deer & small game
Aubrey peak -1	3	16a	5%	none	Dead deer tank	4	41	75%	Heavy deer/sheep???
Bill williams c	3	16a	0%	none	Gravel pit	4	41		
Bill williams c	3	16a	0%	none	Gray tank	4	41	0	0
Bill williams c	3	16a	0%	none	Harquar tank	4	41		
Castaneda peak	3	16a	38%	moderate	Jeff seivers tank	4	41	see comm	little use
Little black mt	3	16a	75%	lots	Seegmueller tank	4	41	see comm	litte
Little black mt.	3	16a	0%	lots	Socket tank	4	41		
Little black mt.	3	16a	33% cyl.	lots	Triple eye	4	41	25%&45%	Heavy deer
Little black mt.	3	16a	see comm	lots of sheep	Arch tank	4	42		
Little black mt.	3	16a	0	0	Recluse tank	4	43a		
Little black mt.	3	16a	0%	lots sheep pellets(??)	Ten sheep tank	4	43a		
masada	3	16a	7"/cylnd	light	Hummingbird tank	4	43b	50%	Heavy sheep
Ram mtn	3	16a	0	0	Mojave tanks	4	43b	24" low	Moderate sheep
Rawhide mtn cat	3	16a	none	none	Mojave tanks	4	43b	70%	abundant sheep (old)
Rawhide mtn cat	3	16a	0	0	Trigo death tra	4	43b		
Skull mtn catch	3	16a	0	0	Plant peak tin	4	44a		
Tinajas dos pec	3	16a	33% cyl.	no data	Betty lou potho	4	44b		
Catail cove	4	16b	66%	ungulate pellets	Betty lou potho	4	44b	10%	Heavy sheep
Catail cove	4	16b	0	0	Black mesa pothole	4	44b	0%	Heavy sheep
Mega tank	4	16b	see comm.	no data	Black mesa poth	4	44b		
South needles p	4	16b	0	low	Cayuga tank	4	44b	90%	moderate
Bermuda/moody	4	39	100%	light	Dannys' tank	4	44b		
Bermuda/moody	4	39	100%	moderate	Lazarus tank/ca	4	44b	25%	light
Picacho clanton	4	39	100%	mod. sheep	Lazarus tanks	4	44b		
Signal peak	4	39	75%	moderate	Little bones	4	44b	see comm	light
Signal peak	4	39	see comm	moderate	little bones tank	4	44b		
Woolsey peak	4	39	low	low	Nugget tank	4	44b		
Woolsey peak	4	39	100%	low	Nugget tank	4	44b	60%	light
Woolsey peak	4	39	100%	little	Nugget tank	4	44b		
Black bottom tank	4	40a			Agua dulce tina	4	46a	0	no/data
Black tank	4	40a	60%	"heavy"	Ragged Top	5	37a		
Dragons tooth	4	40a	see comm	none	Silverbell peak	5	37c		
Holt tank	4	40a			Butterfly	6	24b	10%	none
Holt tanks	4	40a			Butterfly tank	6	24b	3%	low sheep
Juniper tank	4	40a	0	light	Montezuma	6	24b	5%	none
Juniper tank	4	40a	50%	moderate	Montezuma tank	6	24b	5%	low sheep
Juniper tank	4	40a	100%	mod. sheep, whitetail??					

Water Development Project MONTEZUMA TANK

The third project of the 1990 season was held February 2, 3, 4 in the Estrella Mountains, southwest of Phoenix.

The purpose of this project was to increase the water storage, and build a shade and gabion. The original Montezuma Tank was constructed by the Sheep Society in 1977. All the materials and tools were carried on members' backs to the job site — a tremendous effort!

Fortunately, times have changed. With the availability of funds, the helicopter can now be put to use, allowing us to build dams, shades, and gabions which would be otherwise impossible.

The original dam height was increased by 4 feet, and the dam was extended around the south side to provide over 20,000 gallons of water storage. This should now be a permanent water supply.

Materials were air-lifted to site on Thursday, with some preliminary work being accomplished on Friday. The shade, gabion, and pothole were completed late Saturday evening. Organization and planning were accomplished by the Game & Fish Department, and we thank them for a job well done.

By making this water source permanent, as we did at Butterfly Tank, it will insure that sheep will have water at critical times of the year. The sheep herd should improve.

Funding for this project was provided by the Minnesota/Wisconsin Chapter of the Foundation for North American Wild Sheep. In addition to providing the necessary monies, several Chapter members flew out from Wisconsin to help with the project.

We sincerely appreciate the help of the Minnesota/Wisconsin Chapter, and thank them for their dedication and contributions. It is participation or organizations like this that make such projects possible. Their involvement has been very important to the desert bighorn sheep in Arizona. We hope they will continue to be involved in supporting our efforts.

We also wish to thank all the workers. Without the individuals who show up to work, the projects could not be accomplished. Each one of you is important, and we thank you.

Once again the cooks did an outstanding job. These guys toil all day Saturday, preparing the excellent meal for workers who come off the mountain, tired, dirty, and hungry! Thanks, cooks — you are doing a great job!

Arizona Voters Will Have Opportunity To Vote On Environmental Initiative

Supporters of the Arizona Heritage Fund Initiative, a non-partisan alliance of 90 organizations statewide, were notified by the Arizona Secretary of State's Office today (Thursday, August 2, 1990) that the 130,000 signatures submitted in June have officially qualified this grassroots effort for the November 6, 1990 General Election ballot. The statewide initiative will now be known as Proposition 200.

If approved by the voters, the Initiative will establish a \$20 million Arizona Heritage Fund. Monies would come annually from the undersigned portion of the Arizona Lottery and would be administered by the Arizona Game & Fish Commission and the Arizona State Parks Board.

The purpose of the Arizona Heritage Fund Initiative is to allocate funds specifically for state park restoration and acquisition, wildlife protection, environmental education, cultural and historic preservation, and trails.

Supporters note that over 130,000 signatures backing this initiative were collected - 43,000 more than necessary to qualify for the ballot.

Interested individuals and organizations should contact Joan Welty at 256-6712 for further information.

Feral Burros *Continued*

Recently the Animal Protection Institute appealed a decision to remove additional horses from BLM lands in Nevada. The Interior Board of Land Appeals (IBLA) issued a decision which may change the way the BLM handles excess burro removal in Arizona.

All parties interested in achieving a natural ecological balance in the Black Mountains need to work together to accomplish this goal.

The Arizona Game and Fish Department is cooperatively working with the Bureau of Land Management to insure burro impacts to all wildlife species in the Black Mountains are minimized.

TABLE 1. Burros observed during fall bighorn surveys in Unit 15C and 15D, 1982 - 1989.

YEAR	AREA	HOURS	BURROS	BURROS/ HR.	TOTAL BURROS	OVERALL BURROS/HR.
1982	15C-N	9.4	6	0.6	195	8.1
	15C-S	3.9	69	17.7		
	15D	10.8	120	11.1		
1983	15C-N	11.7	25	2.1	198	7.7
	15C-S	4.4	57	13.0		
	15D	9.6	116	12.1		
1984	15C-N	3.5	13	3.7	85	9.6
	15C-S	2.0	21	10.5		
	15D	3.4	51	15.0		
1985	15C-N	10.2	40	3.9	210	7.9
	15C-S	7.5	54	7.2		
	15D	8.8	116	13.2		
1986	15C-N	12.1	37	3.1	189	6.5
	15C-S	7.2	59	8.2		
	15D	10.0	93	9.3		
1987	15C-N	12.9	24	1.9	231	7.5
	15C-S	6.8	110	16.2		
	15D	11.2	97	8.7		
1988	15C-N	12.7	75	5.9	172	5.5
	15C-S	6.8	28	4.1		
	15D	11.5	69	6.0		
1989	15C-N	12.8	25	2.0	238	7.5
	15C-S	7.5	60	8.0		
	15D	11.4	153	13.4		

TABLE 2. Total burros removed from Units 15C and 15D by the Bureau of Land Management, 1982-1990.

YEAR	AREA	AREA TOTAL	ANNUAL TOTAL
1982	15C-North	0	623
	15C-South	140	
	15D	483	
1983	15C-North	0	441
	15C-South	9	
	15D	432	
1984	15C-North	0	418
	15C-South	218	
	15D	200	
1985	15C-North	0	441
	15C-South	173	
	15D	268	
1986	15C-North	67	216
	15C-South	0	
	15D	149	
1987	15C-North	0	176
	15C-South	48	
	15D	128	
1988	15C-North	62	350
	15C-South	137	
	15D	151	
1989	15C-North	69	144
	15C-South	36	
	15D	39	
1990	15C-North	8	157
	15C-South	101	
	*15D	48	
TOTAL			2,966

*Does not include 51 burros shot and left in the field.

ANOTHER POINT OF VIEW

BY GEORGE WELSH, WILDLIFE PERCEPTIONS

Far from being a "Symbol of the Old West" burros are the legacy of the miners who, after they had served their use fullness, turned loose the burros to infest the fragile ecosystems of the mountainous areas of the arid southwest.

In searching the literature I could find no references of the compatibility of burros and desert bighorn sheep. To the Contrary, the literature speaks only to conflicts between the two species.

There are a few pictures showing the burros and bighorns together or bighorns grazing along roadsides, but these are the exceptions that prove the rule. If you believe that it shows compatibility - you have just arrived at the wrong conclusion! Roads are not good for bighorn sheep. Domestic sheep and cattle are not good for bighorns, and burros are not good for bighorns.

We have seen what immense and costly problems can be created by the unauthorized release of noxious plants and animals into the wild - English sparrows, Starlings, the European Hare in Australia, walking catfish, water hyacinths, Saltcedars, Russian Thistle, flocks of domestic pigeons, and in our western desert mountain ranges, the ubiquitous feral burro.

Burros are the "animal weeds" of our desert ranges. Public Law 92-195 was ill conceived and implemented and based on emotion rather than biology. Decisions must be made based on biological facts, taking a holistic view of the whole ecosystem.

There is no room for sentimentality and emotionalism in Wildlife. See what the Bambi syndrome has done! Nothing goes to waste in nature. Everything is recycled. Death is as real as life and has been going on long before man interfered. It is death that gives life meaning.

Mistakes have been made in the past, but can we not correct those errors? We now have laws against introducing foreign plants and animals into Arizona without prior approval.

What is the justification for allowing a feral exotic species (that can out breed, out reproduce and out compete) to replace an indigenous one?

I can see no justification, either economic, political, ethical, religious or biological, for allowing the continued existence of the feral burro in desert bighorn habitat.

All burros should be removed from Desert Bighorn Sheep ranges.

"GIFT OF LIFE"



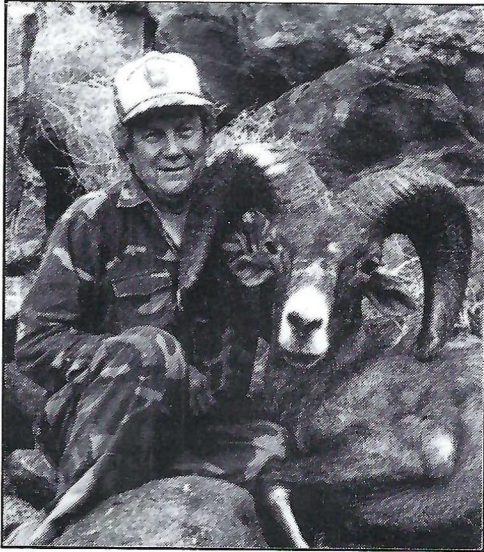
In celebration of our upcoming 25th Anniversary the Arizona Desert Bighorn Sheep Society has commissioned artist Snell Johnson to a join project entitled "Gift of Life".

"Gift of Life" is a bronze sculpture depicting a waterhole and a group of desert sheep. It is our plan to donate a life size sculpture of this project to the AZ Game and Fish, to be placed at the entrance of the new office being built on Greenway Road.

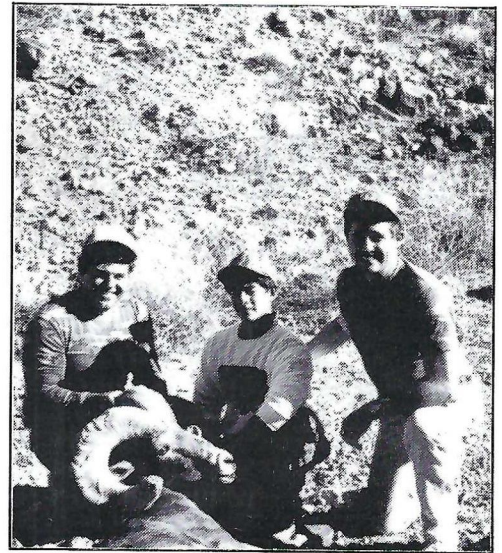
To fund this project Snell Johnson has sculptured a 20"x24" replica in a numbered, limited addition series. A bronze plaque will be placed on the base of the life size monument with the names of the individual who have purchased the replicas.

If you have any questions or would like to participate in this project please call Michael Bond American Art (602) 569-6509, Harry Hussey (602) 942-8104 or Pete Cimellaro (602) 275-5198.

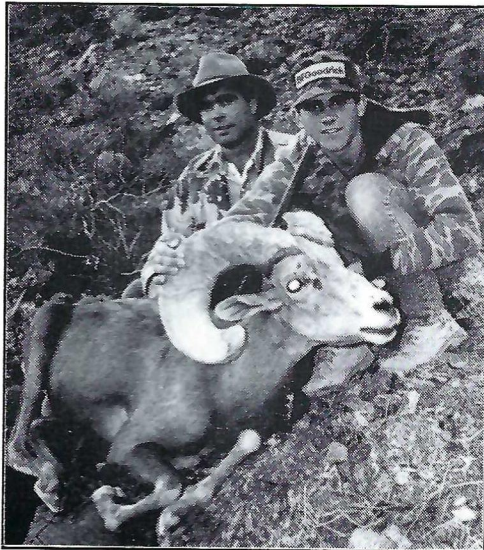
1989 ARIZONA SHEEP HUNTS



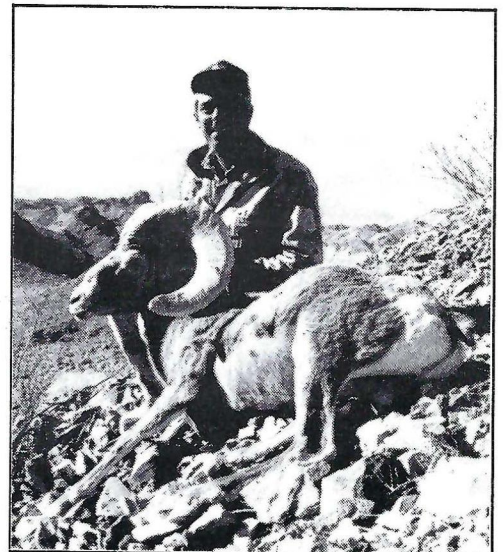
MILES R. BROWN
and his 11 year old ram
taken on the 10th day in
the Tule Mnts., in unit 46B.
The Ram scored 171 5/8 points.
Miles was guided by Mike Mell.



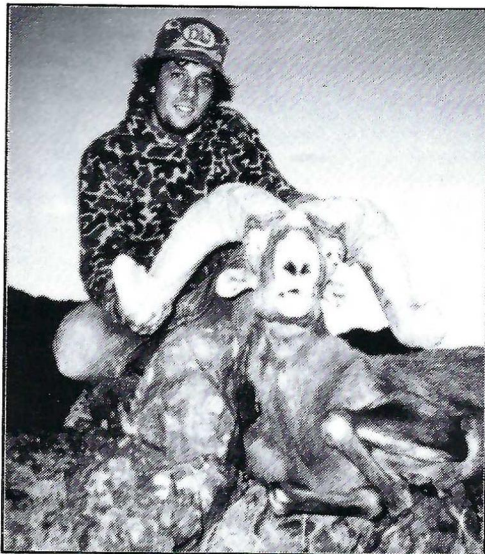
TODD FLORES
and his 172 7/8 point ram
taken during the 1988 hunt
in unit 15C. Pictured with Todd
are L & R Dean Pederson and
guide Bill Achason



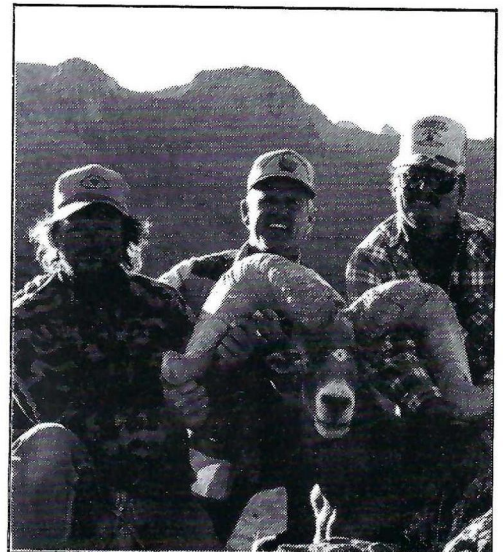
11 Year old ram taken by
JASON BECK in unit 15C.
Pictured with Jason is guide
Dean Priest



REGINALD SMITH



JOEY DARNER
and his ram he took in unit 15C
north. Joey was guided by
Dan and Dean Priest and
Tom Boggess.



DENSEL STRANG
with his 172 4/8 B/C ram taken
in unit 15D. Densel hunted 10 days.
Pictured with Densel is L to R
guide Dale Weinhold, Hub Grounds
and Densel

THE RAM'S HORN

P.O. Drawer 7545
Phoenix, Arizona 85011



001444 12-90
Matthew Dominy
2244 N. Hunt Circle
Mesa, AZ 85203

ADDRESS CORRECTION REQUESTED

MEMBERSHIP APPLICATION

I hereby make application for membership in the Arizona Desert Bighorn Sheep Society, Inc., and enclose my membership donation. DONATIONS ARE TAX DEDUCTIBLE.

New membership prices are as follow:

Regular membership.....	\$25.00/yr.	Senior membership.....	\$15.00/yr.
Youth membership.....	\$15.00/yr.	Lifetime membership.....	\$500.00
Sustaining membership.....	\$100.00/yr.		

RENEWAL NEW MEMBERS DATE _____

NAME _____

ADDRESS _____

CITY _____

STATE _____ ZIP _____

TELEPHONE NO. _____

Make checks payable to ARIZONA DESERT BIGHORN SHEEP SOCIETY, INC.
P.O. DRAWER 7545 • PHOENIX ARIZONA 85011

SEND PICTURES!

Had a successful hunt???



Send us an article, along with pictures, and we will print them in the Rams Horn.

★ REWARD ★ REPORT WILDLIFE VIOLATIONS

The ADBSS offers a \$1,000 Reward for information leading to the arrest and conviction of anyone poaching bighorn sheep in Arizona, or vandalizing an ADBSS waterhole.

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1-800-352-0700

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