



FRIENDS OF HART MOUNTAIN NEWSLETTER



Published bi-annually by Friends of Hart Mountain National Antelope Refuge

Mailing address: P.O. Box 21 • Plush, OR 97637 • Phone 1-541-947-3315

Fall 2004 Issue

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This newsletter is published bi-annually by the **Friends of Hart Mountain National Antelope Refuge** for the benefit of its members. Copies are also made available to visitors and through various other outlets in Lake County.

Friends of Hart Mountain National Antelope Refuge is an independent, non-profit, 501(c)(3), corporation dedicated to supporting the primary purposes for which the Hart Mountain National Antelope Refuge was established: to provide habitat and breeding ground for pronghorn antelope and other species of wildlife; for the protection of natural resources; and the development of incidental wildlife-oriented recreation where it does not interfere with the primary purposes of the Refuge.

President's Message

It has been a great year for the *Friends of Hart Mountain*. We have accomplished a lot of good things for our group and the Refuge. We have grown to 108 members which is outstanding for the remote location and primitive refuge that Hart Mountain represents. We established a budget, started selling some items for fund raising and have established some long term goals and objectives. Some of the items being sold for fund raisers include note cards, hats, maps of the refuge, refrigerator magnets and firewood for use at the campgrounds.

The *Friends of Hart Mountain* applied for and received a grant in the amount of \$5,000 from the National Fish and Wildlife Foundation. The grant money will be a big boost toward the *Friends* startup costs, as we will be able to use the money for a computer system, printer-scanner, copy machine, office supplies, and to develop a web site. We also plan to purchase a laptop



computer and projection equipment so we can take a conservation awareness program to the school children of Oregon. It is one of our goals to reach the grade school children with a conservation awareness program to teach them that it is, and will be, their responsibility to care for the wildlife and habitat at Hart Mountain National Antelope Refuge wildlife and habitat, along with all the public lands they have access to. We would like to thank the National Fish and Wildlife Foundation for giving us the grant. If you would like more information about their grant program please visit their website at www.nfwf.org

We have adopted several other goals and objectives to support Hart Mountain NAR. We will support the ongoing antelope, sage grouse, big-horn sheep, deer and cougar studies on the refuge with volunteer time and money. We plan to expand our educational program at the local schools with a logo contest. Publicity to increase awareness about our organization is necessary to help increase our membership. We plan to provide complimentary copies of our newsletter at the Refuge Headquarters and at locations in Lake County.

I would like to thank all the service groups and volunteers that donated their time to help Hart Mountain National Antelope Refuge. I estimate approximately 7,000 hours were donated so far this year by individuals like yourself because you have a passion for making this Refuge a better place. THANK YOU, THANK YOU, THANK YOU!!!!

Morrie Chappel

A MAN NAMED GEORGE

by Barbara Davis

Most of us know George Reynolds — we have worked for him as volunteers on the Refuge pulling fences. Some of you, like Paul Harvey, knew there had to be more to the story. It is easier pulling teeth from a bighorn sheep than getting details from George or a scoop on George. But we did get a few to share with you.



GEORGE REYNOLDS

George worked his adult life for the U.S. Forest Service in various stations around Oregon and Washington. He retired in January 1986 while he worked in Recreation and Facilities Management on the Wenatchee National Forest in Washington. During his time with the Forest Service, he was married to Nadine and they raised three children B Jack, Penny and Loren. Nadine was also a Forest Service employee. When George retired he was asked why he was moving to Lakeview. He responded by saying "because his wife wouldn't move to Plush or Adel!" This man is focused, folks!

While he was stationed at the Toketee Ranger Station on the Umpqua National Forest, George began his long love affair with Hart Mountain NAR. He would leave the lush forests of the Umpqua to explore, hunt and fish Hart Mountain area. George even began hunting with a Muzzleloader to be able to hunt more on the Hart Mt. George was able to pass on his love of this land to his children, a couple of whom volunteer periodically by his side during the year for the Fish and Wildlife Service.

George had noticed in his wanderings on Hart Mt. some old fence materials and barbed wire used in the past by the cowboys. A trip to the Lakeview FWS office in 1991 started his volun-

teer career when he asked about volunteering. Since George couldn't hear the birds singing, he decided couldn't help with the counting. George then suggested he could take care of some the old fence materials he had observed and a volunteer was born. After that they had a long list for him!

George had gone on several Sierra Club service work projects. After the cattle grazing was removed from the Refuge, George suggested to the Sierra Club they make Hart Mt. fence removal one of their projects. The FWS service was then contacted by the Sierra Club about taking on Fence Re-

moval as a project. George found out that people who suggest things often get to follow through! George was made head of the Volunteer Fence Removal Project and the rest is history. During the past years 188 miles of fence (out of a total 208 miles) have been removed by different organizations following George's leadership. There are only about 20 miles left to remove. George is living proof that volunteers can make a difference.

When asked about why he does this, George's answer was "I am not altruistic. It is for me. I just want to see Hart Mountain with no livestock and no fences." As a fisherman, George says the no livestock policy is beneficial to the streams and the no fences is beneficial to the pronghorn.

When George is not on Hart Mt., he and Nadine are often found in the Glendale, Oregon area here he has a piece of land where he can putter around, cut firewood and manage the timber on his land.

Way to go George!



Bio-Notes

by Rachelle Huddleston-Lorton, Refuge Biologist

It's hard to believe that it's time for another newsletter but here we are in the fall of 2004 already. It has been a productive season, biologically, on Hart Mountain in many ways. Thanks to our many volunteers, we have accomplished more than I expected this year, including surveying all the known sage grouse leks on Hart Mountain (there are 42 of them!), capturing and monitoring pronghorn fawns to evaluate mortality rates and causes, and participating in the Breeding Bird Surveys. I want to send a big thank you to all of you who came out and made this such a successful season on Hart Mountain.

BIGHORN SHEEP STUDY

The bighorn sheep study, a cooperative project between Hart Mountain and the Oregon Department of Fish and Wildlife and Nevada Bighorns Unlimited, has continued throughout the summer. Our temporary biologist, Glenn Lorton, has taken over the majority of the monitoring of the remaining 36 collared sheep. There have been no mortalities since our last newsletter in May 2004.

SAGE GROUSE LEK SURVEYS

Sage grouse lek surveys are conducted each spring from March 15 through the end of April. The data collected allow us to determine peak male attendance, estimate rooster to hen ratios, and approximate sage grouse population numbers. During the 2004 lek surveys, all known leks on Hart Mountain (n = 42 including satellite leks) were surveyed at least once, and most of them were surveyed three or more times. Peak male attendance was up 62% compared to 2003 (n = 1671 males in 2004, n = 1038 males in 2003). Based on a sex ratio of 4 roosters per 6 hens, the 2004 sage grouse population estimate is 4178. Although the results of these

surveys seem to indicate that the sage grouse population increased significantly compared to last year, it is important to note that in 2004, each lek was visited *weekly* by refuge staff and volunteers. This means that observers were more likely to be at a lek during the actual peak of attendance than in previous years. Thus, increased male attendance in 2004 may be an artifact of increased sampling efforts. Our goal for next year is to have the same level of sampling intensity and then compare those data with this year's numbers.

SAGE GROUSE HEN STUDY

Also in March, we captured 20 sage grouse hens and fitted them with radio collars to enable us to monitor mortality, onset of nesting, nest success, number of eggs laid, re-nesting efforts at failed nests, and brood success. Of the 20 birds with radio collars, 16 were still alive as of 17 August. Four nests were depredated by predators (ravens and coyotes), 4 hens were killed by predators (coyotes) and there were 4 successful nests. None of the hens that lost nests to pre-dators re-nested in 2004.

PRONGHORN FAWN CAPTURE AND MONITORING

So, you may be wondering just how we capture the young of the fasted land mammal in North America. Teams of spotters, people with binoculars and spotting scopes, travel around the Refuge searching for female pronghorn that are ready to drop their fawns any moment.

appearance of getting ready to drop their fawns at any moment. The spotters also search for very small, newly born pronghorn fawns lying down in the sagebrush. These newborns are very cryptic in coloring, lacking the vivid orange and white body color of the adults which enables them to blend into their surroundings very well. Once a fawn is spotted, the spotting team calls in the capture team and the hunt is on. The spotters remain in radio contact with the capture team, guiding them usually to within a few feet of the fawn. The capture team sneaks up on the fawn and gently drops a large salmon net over its head. Fawns are weighed, blood drawn (when possible) for health screening, and the fawns are fitted with an ear tag in each ear, one which has a radio transmitter attached to it. In May, we initiated the 8th year of capturing pronghorn fawns to monitor mortality rates and causes of mortality. A total of 22 fawns were captured. Two of the fawns died within 36 hours of capture and those radios were recovered and put on two additional fawns. Although fewer fawns were captured in 2004 (Table 1) causes of mortality were similar in 2004 to previous years (Table 2).

WYOMING BIG SAGEBRUSH BIOLOGICAL INVENTORY

In the winter of 2003, the Refuge was contacted by Katrina Krakow, an undergraduate student at the University of Dubuque, Iowa who was interested in doing a summer research

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Table 1. Survival rates of pronghorn fawns on Hart Mountain National Antelope Refuge, Oregon. 2000-2004.

Year	No. Fawns Captured	No. Mortalities	Survival Rate (%)
2000	39	28	28
2001	37	18	51
2002	32	16	50
2003	28	22	79
2004	22	9	41

Bio-Notes continued from Page 3

project on Hart Mountain. Working together, Katrina and I developed a project that would allow us to evaluate the biological resources within a proposed prescribed burn unit on the northeastern side of the Refuge. The intent was to have pre-fire data to compare with biological resources after the burn. Katrina arrived in June and worked through the first week of August collecting information on birds, small mammals and vegetation. She set up point count stations and counted birds morning and night for 24 days. She collected predator scats along 8 one kilometer transects, captured small mammals along transect lines which also served as transects for vegetation work. Each transect had 10 trapping stations. She assessed the vegetative community by identifying individual species within a 1-m square frame, 5 meters on either side of the small mammal trapping stations. Small mammals were measured, weighed, and given a unique ear tag for identification. Two of each species were collected and stuffed to be used as voucher specimens to verify identification.

WYOMING BIG SAGEBRUSH FIRE AND FIRE SURROGATE TREATMENTS PROJECT

Cheatgrass is a non-native grass that, once it becomes established, easily out competes natives grasses and forbs. Cheatgrass invasion after fire is a huge concern on rangelands throughout the west. Hart Mountain is not exempt from this threat. Katrina's project was developed in order to monitor the effects of fire within Wyoming big sagebrush communities, especially as it relates to cheatgrass. Working with the US Geological Survey - Biological Resources Division (USGS_BRD), we began to develop a pilot project within Katrina's study area, to evaluate the use of fire, herbicide, and mechanical treatment of sagebrush on those plant and animal communities. This project will examine the effects of prescribed fire, the sagebrush herbicide Spike®, and mowing of sagebrush to reduce the

Table 2. Cause of mortality for radio-tagged pronghorn fawns at Hart Mountain National Antelope Refuge, Oregon. 2000-2004.

Cause of Mortality	2000	2001	2002	2003	2004	Total and Percent of Total Mortality (%)
Coyote	14	8	10	2	4	38 (50.7)
Golden Eagle	5	1	2	1	2	11 (14.6)
Cougar	1	0	1	0	0	2 (2.7)
Bobcat	0	1	1	2	1	5 (6.7)
Disease/Starvation	0	3	0	0	0	3 (4)
Abandonment	0	1	0	0	0	1 (1.3)
Unknown	7	4	1	1	2	15 (20)
Total Predation	20	10	14	5	7	56 (74.6)

canopy cover of Wyoming big sagebrush and increasing forb and native grass production as well as assessing cheatgrass invasion, post treatments. Each treatment area will be approximately 500 acres and we have included a 500 acre control unit where no treatments will be applied. Besides the USGS-BRD, the Oregon Department of Agriculture and Dow AgroSciences have partnered with us on this project. We have submitted a grant proposal to help fund the project and it has been forwarded to the Washington Office for review. We are hopeful that the project will be funded.

BIGHORN SHEEP CENSUS

Each year, Refuge staff and the District Biologist for Oregon Department of Fish and Wildlife survey bighorn sheep on Hart Mountain. This year the survey was conducted on 27 July 2004. Jeff Lindscott Aviation provided pilot and helicopter again this

year and the observers were Glenn Lorton (USFWS), Craig Foster (ODFW), and Rachelle Huddleston-Lorton (USFWS). We counted 301 sheep (Table 3). Although the total is one less than last year, we know that our observability rate is less than 100%. Glenn Lorton located the radio-collared sheep the day before we flew and then we counted the number of collars that we saw during the flight, for an observability rate of 83%. Using that observability rate, we can estimate a total of 353 bighorn sheep on Hart Mountain.

PRONGHORN CENSUS

On 26 July 2004, we conducted the annual summer pronghorn census. This census work involves flying the entire refuge in 1-mile wide transects and counting each pronghorn observed. Jeff Lindscott was the pilot of a Bell Long Ranger helicopter and

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Ewes	Lambs	CI	CII	CIII	CIV	Lamb:Ewe	Ram:Ewe	Total
153	71	5	19	42	11	46:100	50:100	301

Table 4. Pronghorn herd composition on Hart Mountain National Antelope Refuge, 26 July 2004.

Does	Bucks	Fawns	Bucks:Does	Fawns:Does	Fawns:Adults	Total
1310	560	660	46:100	58:100	35:100	2474

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also helped to spot and count pronghorn. Observers this year were Craig Foster (ODFW), Jenny Meisel (USFWS/OSU), and Rachelle Huddleston-Lorton (USFWS). During approximately 5 hours of helicopter time, we observed more than 2400 pronghorn. These are nearly record numbers for Hart Mountain. The fawn to doe ratio has been higher only 10 times since 1957 and the population is at an all time recorded high (Table 4).

OHA WORK DAY

Each year, members of the Oregon Hunter's Association come to Hart Mountain for a weekend of work, fun, and fellowship. This year, the work day fell on June 20 and about 75 people showed up to do good things for wildlife. These projects included juniper abatement near Willow Creek, restoration of the Poker Jim Spring, thinning aspen and willow trees along Bond Creek at Hot Springs Campground, pulling Mediterranean sage at the CCC camp, and helping to lay out campsites at the proposed Hart Campground at the CCC camp. These tireless volunteers return year after year, collectively contribute hundreds of hours of work to the Refuge and then, to top it all off, invite Refuge staff and volunteers to their barbeque and feed us! What a deal! Thanks to all the volunteer workers, the cooks, and the runners! You guys and gals are the best!

PRESCRIBED FIRE PROJECTS

There are a number of proposed fire projects pending for Hart Mountain over the next two or three years. These include the Barnhardi Meadow, Willow Creek meadow, Poker Jim Spring, Big Flat, Guano Creek, and Barnhardi Creek (aspen regeneration). Refuge staff is currently working with the fire staff to plan these burns to achieve maximum benefit for wildlife. Biological objectives and justifications are being prepared, including potential

impacts of each proposed fire. Stay tuned for the next installment in Spring 2005!

GRANTS AND PROJECTS TO COME

We have written a number of grants this year including one for the Wyoming big sagebrush fire and fire surrogate treatments project, one for studying mountain lions on Hart Mountain and how they interact with prey species such as mule deer and bighorn sheep. In addition, we are currently working on a grant to help fund continued weed eradication programs in the Warner Valley to the west of the Refuge. Other grants will be applied for as opportunities become available.

I hope you all have a great fall and winter! If you would like to participate in some of the biological programs on the Refuge as a volunteer please call me at 541-947-2731 or send me an email at Rachelle_Huddleston-Lorton@fws.gov.

Pygmy Rabbit Research on Hart Mountain

Pygmy rabbits are the topic of research being conducted by Jenny Meisel, a graduate student in the Fisheries and Wildlife Department at Oregon State University. Jenny has been on Hart Mountain since April 2004 collecting data for her master's project titled "Development and Application of a Habitat Distribution and Selection Model for Identifying Potential Reintroduction Sites for Pygmy Rabbits". The goals of this project are to

- 1: Locate areas occupied by pygmy rabbits on Hart Mountain NAR
- 2: characterize pygmy rabbit habitat through vegetation and soils surveys
- 3: using data collected at Hart

Mountain NAR, determine if habitat at Hanford Reach National Monument in eastern Washington will be suitable for pygmy rabbit reintroduction.

The Washington state population of pygmy rabbits is listed as endangered, and the Washington Department of Fish and Wildlife is managing a captive breeding program.

April-June were spent surveying areas of tall dense sagebrush habitat where pygmy rabbits are most likely to be found. A total of 18 areas occupied by pygmy rabbits were located during these surveys. June-September were spent collecting vegetation and soils data around the occupied pygmy rabbit habitat.

Pygmy rabbits inhabit areas of tall, dense sagebrush which they depend on for food and cover. They are the only rabbit in North America that digs its own burrow, and therefore need relatively deep, loose soils in which to create burrows. Pygmy rabbits weigh about 1 pound and are 7-12 inches long (smaller than a cottontail). The most distinguishing feature of pygmy rabbits is that they have a brown tail, the same color as the rest of their body, unlike cottontails which have a white tail.

Funding for this project was provided through the US Geological Survey's (USGS) Science Support Program. Thanks to *Friend's* member Lori Chappel for her help with the surveys, vegetation data collection, and for keeping me company in the field!

Information for this story provided by Jenny Meisel.

Campground News

by Liz Cline

This year it was a pleasure to be the host at the Hot Springs Campground. We had very interesting campers from near and far: Belgium, Canada, Norway. Campers have demonstrated a serious commitment to protect and care for the campground. This has made my job a real joy. The Hot Springs bath house walls are finished and beautiful. Camp fires were allowed in the fire pits and enjoyed by all. The deer and antelope roamed the campground every day, early in the morning and late evening. The birds, squirrels, and other rodents were abundant in the campground, too. Fishermen, hunters and bird watchers all enjoyed the abundant wildlife. Enjoy the winter. I'll see you next spring.

THE PRONGHORN STORE

Yes, the friends now have a little store at the Refuge Headquarters. Items for sale are displayed in one of the display cases in the Visitor area.



The following items are available by mail order. All of the proceeds from the sale of these items go to support the activities sponsored by the Friends organization. We are actually on our third order of ball caps!

Ball caps: The ball caps are all done with embroidery. There is an antelope on the front with the words Hart Mountain. On the back above the size adjuster there are the words National Antelope Refuge. Caps are blue with a khaki tan brim. Cost is \$15.00 + \$5.00 shipping.

Color Topo Maps: The maps are approximately 19.5 x 26.5 inches and are color. They are \$7.00 + \$1.00 shipping.

Note Cards: Set of six cards with photos of various wildlife on Hart Mountain and one of the Hot Springs Bridge. \$12.50 + \$1.00 shipping.

Refrigerator Magnets – White with black and white ink drawing of pronghorn. \$1.00 + .50 shipping

Our treasurer, Nadine Reynolds, is hosting the mail order store. You can order your items directly from her at P.O. Box 128, Lakeview, Or 97630.

The Friends are also selling firewood at the Hot Springs campground for \$3.00 a bundle.



Friends 2004 Fence Removal Crew, left to right: NED DAVIS, GEORGE REYNOLDS, LIZ CLINE, MORRIE CHAPPEL and LORI CHAPPEL.

fences. When the project began, there was approximately 208 miles of unnecessary fence on the refuge. During the past 12 years, volunteers and staff have removed about 188 miles of fence, which leaves about 20 miles to take out. This year we had 4 volunteer service groups help with fence removal. Together they removed a total of 15.73 miles of unnecessary fence and hauled 24,280 pounds of wire to the Lakeview landfill.

We would like to thank the Sierra Club, Wilderness Volunteers, **Friends of Hart Mountain NAR**, and Oregon Natural Desert Association for their help with this worth while service project. Hart Mountain staff members Bud Woods and Doug Leehmann, along with Hart Mountain Volunteers George Reynolds, Morrie & Lori Chappel and Ralph Cline provided leadership and support for the project.



Photo by Liz CLINE

HELP WANTED

★ George Reynolds and Morrie Chappel are planning a Fence Removal Project for members of the **Friends of Hart Mountain** to participate in next year. The scheduled dates are June 13, 14, 16, 17, 2005. If you want to do the whole week, the 15th is your play day (or recuperate day). If you are interested contact Morrie at 541-672-4181 this winter,

or here at the Refuge headquarters after April 1st, 2005. 541-947-2731. Morrie will contact everyone with details after they have been finalized.

★ Rachelle Huddleston-Lorton, Refuge biologist, will need volunteers to help with the wildlife studies in 2005. Her report in this issue should give you an idea of what was done this year. Contact her at the Refuge if you are interested at 541-947-2731 or by email at rachelle_huddleston-lorton@fws.gov.

Where is it?

Can you identify where on Hart Mt. this picture (below) was taken? If so, tell us and if you are correct your name will be put into a hat with the names of others who correctly identify this location by

November 15th 2004. We

will draw a name from the hat on that day and the winner will receive a Hart Mt. ball cap. All employees of FWS, Board members of Friends of Hart Mt, and volunteers on per diem are not eligible to participate. Sorry guys, gotta buy your own hat! Send your entry to Friends of Hart Mt., P.O. Box 21, Plush, Oregon 97637.

Volunteers Remove Fence

by Morrie Chappel

This summer volunteers and staff at Hart Mountain NAR continued working on a project to remove all unnecessary fencing from the refuge. Originally the fences were needed for containment of livestock on the refuge. Now, since the livestock no longer grace the refuge, we are working to remove the

MEMBERSHIP

Is your membership up to date? Please check your mailing label to see the expiration date of your membership. If you are "expired" please consider sending in your renewal so that you can support the activities of the ***Friends of Hart Mountain***. There will be a membership form in this newsletter that you can use to send in your renewal. Remember that your membership fees are totally tax deductible.

Please consider sharing your newsletter with your friends and acquaintances to introduce them to the world of Hart Mountain National Antelope Refuge and the ***Friends*** organization. The membership form can be photocopied so that your entire circle of friends can join!

DONATIONS

Some of our ***Friends*** members donate beyond their annual dues or life membership dues. Your donations can be directed to support specific Refuge projects listed below or to just support general activities of the ***Friends***. We appreciate any amount you are willing to donate. Please remember that since you receive no goods in exchange all donations are tax deductible. We wish to thank the members for all that they have generously donated in the past year. Your generosity helps the ***Friends*** pursue the activities in support of the Refuge in fulfilling its mission.

- Antelope studies in 2005. Our dollars are especially needed to help defray the cost of ear tags and radio collars (\$180 apiece/\$3200 total for 2004)
- Sage grouse studies for 2005. Similar expenses.
- Bighorn sheep studies for 2005. Similar expenses.
- Educational and School program expenses.
- Newsletter expenses.

Make your check out to ***Friends of Hart Mountain*** and if you are making a specific project donation be sure to tell us this when you send the donation! Send donations to:

**Treasurer
Friends of Hart Mountain
PO Box 21, Plush OR 97637**

Hart Lake early in the morning, photo by Barbara Davis.



ECHOS FROM THE ARCHIVES

(From the July, August, September, October 1939 Narrative Report for Hart Mountain National Antelope Refuge. This report talked about the restocking of the Mountain Sheep - all spellings and grammar are reproduced as they were in the original report.)

"On September 26 a planting of 23 Mt. Sheep, 3 lambs, 13 ewes and 7 rams was made on this refuge. They were bighorns, brot by truck from the National Bison range in Montana. This release was made in Potter Canyon on the rugged west face of hart Mt.

This area was previously the habitat of numbers of rimrock sheep, now extinct. Potter Canyon and the adjacent areas are well supplied with water and forage, including a variety of browse, grass and other plants.

The two trucks in which the sheep were transported arrived at Camp Hart Mt., BS-4, at 6: AM, on September 26. By 8: AM, they were in position in the narrow mouth of Potter Canyon, and the release was carried out promptly with mishap, all having been liberated by 9: AM. On all of the 20 having horns an inch long bar brand was burned on the outer side of the left horn to make future identification possible.

In the short hour required for the release it was not possible to make as detailed and accurate classification of all the individuals as desired, especially since every effort was made to prevent interuptions, delay or excitement. The observations made at the time were checked, verified or corrected during the immediately ensuing period, which also gave the animals full opportunity to recover from any hardships experienced on the trip. The definite impressions thus gained as to their physical condition were as follows: The rams were on the average very satisfactory animals, in good condition and quite ample as sires for a small herd. Of the 13 ewes, 8 were in good condition, 2 were fair to poor and 3 were very poor. Of the 3 last mentioned considerable concern was felt regarding their survival, for in addition to their being poor in flesh, one was weak, another was extremely stiff and the third was lame. One of the 3 lambs was in good condition and was a promising specimen, while the other 2 were poor and evidently ill, one in particular was afflicted with what appeared to be a near case of pneumonia. One lamb had lost an eye also.

A close watch has been maintained on the area and adjacent sections since the sheep were liberated, and all the observations possible have been made on their movements, food habits, condition and safety, and to prevent their straying from the area. Close observations on the strong and active individuals is very difficult in the rough area of very ample cover and protection. However, all of the 5 poor ewes were easily observed, since they did not go high on the mountain, and two or three of them have at intervals or persistently used the flats and fenced pastures at the base of the mountain, one of the poor ones having

taken up her regular abode in a small green pasture meadow at the Kiely Ranch where she has prospered and improved to a marked degree. This tendency to use the flats at the base of mountain and the fact of their coming down during hours of darkness or unobserved in the sage and rocks made it neccessary and justified to move our line of control from the very base of the mountain to the bare feilds of the old swamp in Warner Valley. All of the rams but one or two have stayed well up in the rims. The strong ewes have done the same. However, one ram in particular wandered all over the North Warner valley, often accompanied by a young ewe. If those that strayed did not return at once of their own accord no difficulty was experienced in bringing them back. The weak ones have not been molested or driven unnecessarily, the main object being to know they were on sufficient food.

Improvement in the condition of nearly all of the better sheep has been noted, with a slight pelage change coming first on the ones showing the best condition. Concern is still felt for the survival of two or three of the ewes. None of the lambs have been seen recently, tracks only being found to indicate their presence.

Preparations are being made to supply supplemental food for any of the sheep that need it. This has not been attempted since there has been a growth of green grass and weeds that has become steadily better on the area used by the sheep, not to mention ample browse and other forage untouched this season. Also, the fall has been so pleasant and free of storms or weather severe on game or any animals that they have been subjected to no hard ship at all, and while the season has been extremely dry there has been sufficient green growth in favored spots to afford ample forage on the sheep range, especially since the first week in October.

A matter that must be considered in relation to the sheep range and the best interest of these animals is the fact that five of the ranches occupied within the refuge and responsible for the major part of the uncontrolled grazing and forage consumption referred to under No. V of this report and are located along the west base of Hart Mt., thus restricting the available low land range and preventing management to insure a return of forage and browse plants."



Pronghorn on Hart Mountain, photo by Liz Cline

EDUCATIONAL OUTREACH

by Anne Woods and Bill Mull

Fall 2003 saw the beginning of our educational opportunities with the schools. Plush School invited Anne Woods, Hart Mountain and **Friends of Hart Mountain Antelope Refuge** Volunteer to walk the trails through the Bureau of Land Management Warner Wetlands to give information about the wetlands and the birds seen on this walk. The day was windy and increased in velocity as time went on. Most of the birds went into cover but a few were seen before they slipped into the grassy cover. Red-winged Blackbirds, American Robins, and Meadowlarks managed to put in appearances as well as a few LBJs as the Audubon groups have called them (Little Brown Jobbies). We accidentally aroused two Sandhill Cranes from their resting area and watched them fly further into the surrounding fields. History and other information about the Sandhill Cranes were discussed as we walked back to the bus. On the way, the smallest of the boys tripped in a badger hole and had to be rescued by his brother from being rolled down the dike by the wind. We continued to the bus while holding onto hats, scarves, and students. Only a few Canada geese were seen to brave the waves on Hart Lake as we returned to the school in Plush.

January 5, 2004 at 6 a.m. began the California Bighorn Sheep capture and radio collaring. This event gave the students from the Plush and Adel schools a chance to see first-hand how the sheep were captured with nets and transported by helicopter downhill to waiting BLM (Bureau of Land Management), ODFW (Oregon Dept. of Fish & Wildlife), and Hart Mountain Antelope Refuge personnel. Veterinarians, Biologists, Researchers and other workers weighed, did blood sampling, and several other tests before setting the sheep free again to return up the mountain. Each child had the chance to name a sheep, know its tag number and periodically receive an update on the health and activity of the sheep from the Refuge. This became a report in their Science curriculum.

2004 Migratory Bird Day was a three day event for Third Grade students from Lake and Klamath counties. The successful series of activities were led by local specialists from the BLM, Forest Service, ODFW, US Fish & Wildlife, **Friends of Hart Mountain**, a large number of volunteers & hosts. The first day of 'hands on' activities were with Lakeview, Plush, Adel and Westside students learning why birds migrate. What the Pacific Flyway is, nesting habitat and bird identification were all topics chosen to enhance the students' backyard observations. They also played Bird Bingo, constructed their own birdhouse (with some assistance) and ended the day with making pine cone feeders.

The second day's activities were held with a different group of students from North Lake School. Held at the River Ranch Barn, Summer Lake Wildlife Area, the students participated in a scavenger hunt for owl pellets, flight feathers, down feathers, Great Basin wild rye and rabbit brush. After other similar activities to the previous day, checking out the museum birds at the Summer Lake Wildlife Area Headquarters brought the day to a close. The last of the three day sessions was held at Sprague River Park

with Bly and Bonanza students. The students as well as the teachers enjoyed the same activities as the previous days.

All students went away with their birdhouse, pine cone feeder, as well as a bag of goodies which included a 2004 International MBD T-shirt, ODFW animal poster, stickers, temporary tattoos and coloring books. Teachers were inquiring if there would be an annual MBD event to be part of. **Friends of Hart Mountain Antelope NAR** supplied the peanut butter and birdseed for the feeders. Leftover birdseed was sent to Hart Mountain for a bird feeding area near the Visitor Center for visitors to view migrant birds, as the roads to usual birding areas were still somewhat impassable. If you are interested in volunteering to help out or plan for next year, contact Darcie Lewis at the Lakeview Interagency office at (541) 947-2177.

In February 2004, refuge biologist Rachele Huddleston-Lorton spent the afternoon with the kids at the Plush School who had participated in the January bighorn sheep capture. She gave them an update on the status of the project, which sheep were still alive and which ones had died. The kids asked *great* questions about mountain lions and the effect they can have on wild sheep populations and other really good questions. Rachele took radio collars for bighorn sheep, pygmy rabbits, sage grouse, and ear tag transmitters used for pronghorn fawns and discussed how these radios were used on Hart Mountain. Then it was out to the play yard for two hours of radio telemetry "training." Rachele hid bighorn sheep radio collars in various locations in the yard and then the kids each had a turn trying to locate the collar. It was fun for all. The kids learned how to isolate and use the signal to find the collars.

In May, Rachele again met with the Plush school kids. This time it was warm enough to meet outdoors and they spent a couple of hours with the radio telemetry equipment and spotting scope looking for sheep on the hills above the CCC Camp. They were able to view the sheep in their natural habitat. After that, Rachele led the group up to the DeGarmo Canyon waterfall. Along the way, she identified plants and birds for the kids and answered questions about the canyon and wildlife that lived there.

The **Friends** are sponsoring a Logo Contest, as part of our Grant education program. This will involve schools in the Lakeview area, Adel, Plush, Paisley, and North Lake. It will be designing a Hart Mountain Logo for use on T-shirts, cups, and possibly hats. All will be sold at the Hart Mountain Visitor Center and on the Web site. The students will be awarded cash awards, a logo T-shirt, or gift certificates from local merchants. Prize amounts and the deadline for judging & awards have yet to be finalized. Current plans are for the contest to begin with the beginning of school and the deadline for entries to coincide with the end of the first quarter grading period. Judging will be done and awards to be given the following week. The final design will be adjusted, if necessary, by the Graphic Arts teacher at the Lakeview High School to fit T-shirts, cups, and hats.

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