

## HISTORY OF TRANSPLANTING MOUNTAIN GOATS AND MOUNTAIN SHEEP – OREGON

VICTOR L. COGGINS, Oregon Department of Fish & Wildlife (ODFW), 65495 Alder Slope Road, Enterprise, OR 97828

PATRICK E. MATTHEWS, Oregon Department of Fish & Wildlife (ODFW), 65495 Alder Slope Road, Enterprise, OR 97828

WALT VAN DYKE, Oregon Department of Fish & Wildlife (ODFW), 3814 Clark Blvd., Ontario, OR 97914

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### ROCKY MOUNTAIN GOATS

Rocky Mountain goats (*Oreamnos americanus*) were apparently extirpated from Oregon prior to European settlement. Some reports of goats in northeast Oregon were found in early reports but the species of big game described was in question (bighorns, antelope or mountain goats). Archeological evidence (Matthews and Coggins 1994) indicates goats were found in Hells Canyon and were indigenous to northeast Oregon. Mountain goats were reintroduced to the Wallowa Mountains in 1950 when 5 animals from the Chopaka Mountains in Washington were released at the base of Joseph Mountain. This transplant increased until 1965 when hunting seasons started. They were hunted through 1968 when low populations resulted in hunting being terminated. Supplemental transplants from Misty Fiord, Alaska and Olympic National Park, Washington from 1985 - 89 resulted in improved kid survival and an increasing population.

Ten transplants from 4 sources have been made to 3 mountain ranges in Oregon. Two transplants (Wallowa and Elkhorn Mountains) successfully established mountain goat herds while the Columbia Gorge attempt failed. Populations are estimated at 80 in the Wallowa Mountain herd and 55 in the Elkhorn Mountain herd or 135 total statewide. A total of 74 mountain goats have been transplanted in the state with transplant size varying from 1 to 17 animals (Table 1).

### ROCKY MOUNTAIN BIGHORN SHEEP

Rocky Mountain bighorn sheep (*Ovis canadensis canadensis*) were reintroduced to northeast Oregon in 1971 after being extirpated from the state by 1945. Twenty-two transplants totaling 328 sheep were made to 15 Oregon locations from 1971 to 1995 (Table 2). Transplants varied from 2 to 30 animals and 10 separate herds totaling 500 bighorns have been successfully established. In addition, 66 bighorns were sent to 4 locations in Idaho and Washington (Table 3).

Oregon Rocky Mountain bighorns originated from 6 sources including: Jasper National Park, Alberta; Cardinal River, Alberta; Salmon River, Idaho; Waterton Park, Alberta; Tarryall, Colorado and Sun River, Montana.

### CALIFORNIA BIGHORN SHEEP

Historically, two subspecies of bighorn sheep were native to Oregon (Bailey 1936). The Rocky Mountain subspecies inhabited the northeastern corner of the state from the John Day-Burnt River divide, north and east to the Snake River and the Oregon-Washington state line. The California subspecies (*O. c. californiana*) ranged over southeast and south-central Oregon and through much of the John Day and Deschutes River drainages in the northcentral part of the state. Indiscriminate hunting, unregulated grazing by domestic livestock, and parasites and diseases carried by domestic livestock all contributed to the eventual demise of Oregon's native bighorns. The last California bighorn disappeared from Steens Mountain in southeast Oregon about 1915.

The first attempt to restore bighorn sheep into southeast Oregon was made at Hart Mountain in 1939, when 23 Rocky Mountain bighorn were obtained from Montana and released on the west slope of Hart Mountain National Wildlife Refuge. The last survivor of the transplant was seen in 1947. No one knows the cause or causes of transplant failure, although the subspecies used may have been a factor. In recent years, Oregon has adopted the policy to restore native subspecies to their native ranges (ODFW 1992).

In November, 1954, 20 California bighorn sheep were trapped near Williams Lake, British Columbia, and released in a 1,000 acre holding pasture on the west face of Hart Mountain. This population thrived and has been the source of most California bighorn transplants in Oregon, starting in 1960.

Through January, 1996, a total of 976 California bighorn sheep in 69 individual releases have been moved within, into, or out of Oregon (Table 4). A total of 70 head have been brought into the state, 138 head have been shipped out-of-state and 768 head have been moved within the state.

The average size of each release has been 14 head (range 1 to 35) and these releases have been made into 26 different herd ranges. As a result, there are currently 25 established California bighorn herds in Oregon (Strawberry Mtn. failed—exact cause unknown). Oregon stock has been provided for five herds in Nevada (10 releases) and one group of sheep was provided to Washington for release into more than one herd range. The total California bighorn sheep population in Oregon is currently estimated at approximately 2,500 head.

Oregon has attempted to increase bighorn sheep numbers as well as broaden the genetic diversity of the California bighorn sheep in the state and throughout its range through cooperative efforts with other states and provinces (Table 4). While the numbers look encouraging, 23 of the current existing herds are direct descendants of the initial population established at Hart Mountain in 1954. Although we have not looked at it directly, we are concerned that there is far less genetic diversity in our populations than we would like to have. The major problem associated with this concern is the relative lack of sources of native stock that could be mixed into established herds to increase the size of the gene pool.

Trapping and transplanting is used to control population size of those herds which have been established the longest or are thought to be large enough in number to allow removal without jeopardizing population health. Controlled hunting is used to maintain the ram to ewe ratio at or below one to one in those herds.

#### LITERATURE CITED

- Bailey, Vernon. 1936. The mammals and life zones of Oregon. U.S. Gov. Printing Office. Washington D.C., N. Amer. Fauna No. 5. 416 pp.
- Matthews, P. E., and V. L. Coggins. 1994. Status and History of Mountain Goats in Oregon. Bienn. Symp. North. Wild sheep and Goat Coun. 9:69-74.
- ODFW. 1992. Oregon's bighorn sheep management plan, 1992-1997. Oreg. Dept. Fish & Wildl. Portland, Oreg. 30pp.

Table 1. Mountain Goat Transplants in Oregon, 1950-1989.

Transplants to Willowa Mountains of Oregon						
	Year	Origin of Stock	Male	Female	Release Site	No. of Animals
1	1950	Chopaka Mt., WA	3	2	Joseph Mt.	5
2	1965	Olympic N.P., WA	2	6	Hurricane	8
3	1988	Misty Fiord, AK	3	5	Hurricane	8
4	1989	Olympic N.P., WA	8	9	Hurricane	17
Total			16	22		38

Transplants to Columbia River Gorge of Oregon						
	Year	Origin of Stock	Male	Female	Release Site	No. of Animals
1	1969-70	Olympic N.P., WA	2	6	Tanner Butte	8
2	1975	Olympic N.P., WA	2	4	Tanner Butte	6
3	1976	Olympic N.P., WA	1	0	Tanner Butte	1
Total			5	10		15

Transplants to Elkhorn Mountains of Oregon						
	Year	Origin of Stock	Male	Female	Release Site	No. of Animals
1	1983	NF Clearwater, ID	3	3	Pine Creek	6
2	1985	Olympic N.P., WA	4	4	Pine Creek	8
3	1986	Misty Fiord, AK	2	5	Pine Creek	7
Total			9	12		21

Table 2. Northeast Oregon Rocky Mountain Bighorn Sheep Transplant History, 1971-1995.

	Date	Source	Origin of Stock	Release Site	No. of Animals
1	1939	Montana	Not Known	Hart Mountain	23
2	4/71	Alberta, Canada	Jasper Park	Upr. Hells Canyon	20
3	11/71	Alberta, Canada	Jasper Park	Lostine River	20
4	1/76	Lostine River	Jasper Park	Bear Creek	17
5	1/77	Lostine River	Jasper Park	Bear Creek	8
6	1/78	Lostine River	Jasper Park	Upr. Hells Canyon (Battle Cr.)	5
7	1/79	Lostine River	Jasper Park	Upr. Hells Canyon (Battle Cr.)	29
8	1/79	Salmon R., ID	Panther Cr., Salmon R.	Lower Imnaha	15
9	1/81	Lostine River	Jasper Park	Hass Ridge	10
10	1/83	Lostine River	Jasper Park	Wenaha Canyon	15
11	1/84	Sullivan L., WA	Waterton PK/ Thompson Falls	Bear Creek	11
12	1/84	Salmon R., ID	Panther Creek	Hass Ridge	11
13	12/84	Salmon R., ID	Cover Creek/Salmon R.	Wenaha Wildlife Area	28
14	12/85	Salmon R., ID	Ebenezer/Salmon R.	Minam River	12
15	1/90	Tarryall, CO	Tarryall, CO	Sheep Mountain	21
16	2/90	Cottonwood Cr., CO	Cottonwood Cr.	Sheep Mountain	9
17	12/93	Wildhorse Is., MT	Sun River, MT	Lower Hells Canyon (Cherry Cr.)	9
18	12/93	Wildhorse Is., MT	Sun River, MT	Fox Creek	12
19	2/94	Wildhorse Is., MT	Sun River, MT	Downey Creek	14
20	2/94	Wildhorse Is., MT	Sun River, MT	Fox Creek	12
21	2/95	Alberta, Canada	Cadomin	Joseph Cr. Drainage (Cottonwood Cr.)	18
22	2/95	Alberta, Canada	Cadomin	Lower Hells Crnyn (Jim Creek)	22
23	2/95	Alberta, Canada	Cadomin	Sheep Mountain	11
			Waterton/Salmon R	Sheep Mountain	2
Total					352

Citation: ODFW Wallowa District Office Files, Enterprise, Oregon.

Table 3. Northeast Oregon Rocky Mountain Bighorn Sheep Transplanted Outside of Oregon.

	Date	Source	Origin of Stock	Release Site	No. of Animals
1	1/80	Lostine River (a)	Jasper Park	Chief Joseph WA, WA	10
2	1/84	Lostine River (b)	Jasper Park	Salmon River, ID	16
3	12/84	Lostine River (b)	Jasper Park/Waterton	Beaverhead Mtns, ID	22
4	1/86	Lostine River (b)	Jasper Park/Waterton	Pahsimeroi Mtns, ID	18
Total					66

Citations: a) Mountain Goats and mountain sheep of Washington, January 1963. Rolf Johnson. Biol. Bulletin No. 18. Wa. State Game Dept., Olympia.

b) ODFW Wallowa District Office files, Enterprise, Oregon.

Table 4. California Bighorn Sheep Transplant History for Oregon, 1954-1996.

Date	Capture Site**	Release Site	No. brought into Oregon from Out-of-State	No. captured in Oregon	
				Released In-State	Released Out-of-State
11/54	BC	Hart Mountain	20		
11/60	HM	Steens Mountain		4	
03/61	HM	Steens Mountain		7	
11/65	HM	Owyhee River (Leslie Gulch)		17	
07/68		Sheldon NWR, NV			4
08/68	HM	Sheldon NWR, NV			4
08/71	HM	Strawberry Mountains		21	
11/75	HM	Abert Rim		3	
12/76	HM	Pueblo Mountains		18	
12/76	HM	Abert Rim		2	
01/77	HM	Abert Rim		5	
02/78	HM	Aldrich Mountain		5	
03/78	HM	Aldrich Mountain		9	
11/80	HM	Pueblo Mountains		7	
11/80	HM	Fish Creek Rim		2	
12/81	HM	Aldrich Mountain		4	
10/83	HM	Owyhee River (Iron Point)		21	
10/83	HM	Owyhee River (Deary Pasture)		14	
10/83	HM	Pueblo Mountains		17	
01/84	HM	Jackson Mountains, NV			13
01/84	HM	Hadley Creek		8	
02/87	LG/OW	Jackson Mountains, NV			17
02/87	LG/OW	Sheldon NWR, NV			15
02/87	HM	Santa Rosa Mountains, NV			5
02/87	LG/OW	Burnt River		15	
02/87	HM	Owyhee River (Painted Canyon)		15	
02/87	HM	Riverside Wildlife Area		8	
10/87	HM	Trout Creek Mtns. (Oregon Canyon)		27	
10/87	HM	Owyhee River (Red Butte)		16	
01/88	SA	McClellan Mountain		15	
01/88	SA	Fish Creek Rim		12	
02/88	LG/OW	Riverside Wildlife Area		9	
02/89	HM	Lower John Day River		14	
02/89	HM	Coglan Buttes		17	
02/89	HM	North Catlow Rim		17	
01/90	AM	Various Herds in Wash.			13
01/90	HM	Trout Creek Mtns. (Cottonwood Cr.)		14	
01/90	HM	Sheepshead Mtns. (Heath Creek)		15	
01/90	AM	Sheepshead Mtns. (Heath Creek)		1	
01/90	HM	Trout Creek Mtns. (Whitehorse Cr.)		19	
12/90	BC	Lower John Day River	15		
01/91	HM	Montana Mountains, NV			15
01/91	SA	Sheldon NWR, NV			14
01/91	HM	Diablo Mountain		15	
01/91	HM	Sheeprock		11	
01/91	HM	Sheepshead Mtns. (Mickey Basin)		17	
01/91	SA	Coleman Rim		15	

01/92	AM	Winter Rim		16	
01/92	HM	Lone Mountain		15	
01/92	HM	McClellan Mountain		7	
01/92	HM	Rattlesnake Creek		19	
01/93	HM	Steens Mountain (Squaw Creek)		17	
01/93	HM	Threemile Creek		18	
01/93	HM	Winter Rim		6	
02/93	SA	Tenmile Rim		15	
02/93	SA	Owyhee River (Sharon Creek)		38	
12/93	ID	Deschutes River (East Side)	35		
01/94	HM	Trout Creek Mtns., NV			20
01/94	HM	Daugherty Rim		20	
01/94	SA	Owyhee River (North Table Mtn.)		20	
01/94	LG/OW	Owyhee R. (Middle Fork Owyhee)		20	
01/95	LG/OW	Devils Garden		16	
01/95	IP/OW	Lower John Day River		21	
01/95	SA	Deschutes River (West Side)		18	
01/95	HM	Mill Creek		18	
01/95	HM	Owyhee R. (North Fork Owyhee)		17	
01/96	HM	Sheldon NWR, NV			18
01/96	JD	Steens Mtn. (Stonehouse Canyon)		18	
01/96	HM	Sheepshead Mtns. (Wildcat Creek)		17	
TOTALS			70	768	138
GRAND TOTAL					976

BC: Williams Lake, British Columbia  
 HM: Hart Mountain National Wildlife Refuge  
 SA: Steens Mountain/Avord Peaks  
 LG/OW: Leslie Gulch on the Owyhee River  
 IP/OW: Iron Point on the Owyhee River  
 JD: Lower John Day River  
 ID: Owyhee River, Idaho

Citation: ODFW Harney District Office files, Hines, Oregon.