

HUNTING AS A TOOL FOR WILDLIFE CONSERVATION – THE CASE OF SHEEP HUNTING IN MEXICO



Raymond Lee

President/CEO, Wild Sheep Foundation

Abstract. Pre-settlement bighorn sheep numbers in Mexico were large; however, the population did not fare well in the face of human activities. Bighorn sheep numbers decreased to the point that bighorn sheep hunting was closed in 1922. Standardized surveys were started in 1993, and hunting was reopened in two states in 1995.

The Wild Sheep Foundation is the world's primary wild sheep conservation organization. One of the ways that the Foundation raises funds is by auctioning wild sheep hunting permits. The Foundation has developed conservation programs in two states of Mexico. Since 1996, 77 permits have been sold for USD 5,626,175. The local communities also derive jobs, a source of self-respect, from these programs. Wild sheep are now their principal source of income.

As the conservation measures were put into place, the number of bighorn sheep increased. The age and scores of the rams harvested have also increased through time.

Key words: bighorn sheep, hunting, Mexico, permits, wildlife management, wild sheep

1. *El Vizcaino* Biosphere Reserve

The “*El Vizcaino*” Biosphere Reserve straddles the Baja California Peninsula in the Mexican state of Baja California Sur. It is an interesting area that truly is where the desert meets the sea. Within this 10,000 square mile Biosphere are: the extremely rare and endangered peninsular pronghorn antelope; the primary birthing area for the Gray whale; one of the world's largest salt producing facilities; some amazing pre-historic cave murals; volcanoes; geothermal electric plants - and desert bighorn sheep.



A desert bighorn ram (Ovis canadensis weemsi) observed during a survey of the El Vizcaino Biosphere of Baja California Sur. (Photo: Raymond Lee)

2. History of Sheep Hunting In Mexico

Bighorn sheep have existed in Mexico for more than 10,000 years. While pre-settlement numbers were quite large, the population did not fare well in the face of subsistence hunting and diseases contracted from domestic livestock. Bighorn sheep numbers continued to decrease to the point that the hunting of bighorn sheep in the state of Baja California Sur was closed in 1917. This hunt closure was extended nationwide in 1922. This closure was in effect until a series of experimental hunts were conducted in the late 1960s. The first annual hunting season for bighorn sheep was authorized in 1969. These seasons continued, under various regulations, until 1993 in Baja California Sur and Sonora. Hunting in Baja California was closed by presidential decree in 1990 due to a lack of knowledge of bighorn sheep distribution and numbers. In 1993, following Mexico's participation in the Convention in Trade of Endangered Species (CITES), all bighorn sheep hunting in Mexico was suspended because there was not enough technical information to allow the issuance of permits.

To address this issue, and to better determine the bighorn sheep distribution and management opportunities, standardized helicopter surveys were initiated in Mexico in the winter of 1992. Hunting was reopened in Baja California Sur and Sonora in 1995. The Biosphere was first formally surveyed in 1996 and a large number of animals were observed. Through great efforts, the federal government authorized four permits for the Biosphere that year.

3. History of Land and Wildlife Management in Mexico

In Mexico, while a region may be designated as a "protected area", it can also be overlaid by other land ownership restrictions. Land ownership in Mexico is taken extremely seriously, as this was one of the prime causes of the Mexican Revolution (1910–1917).

In 1997, Mexico developed a program for the Conservation of Wildlife and the Diversification of Production in the Rural Sector. This program led to the development of the SUMA – System of units for the conservation, management, and sustainable development of wildlife. The basic unit of this system was the development management unit (UMA). Each UMA must have a resource management plan and a technician to monitor the resources. Hunting permits are authorized under the UMA system to the landowners, thus to the ejido. The UMA for the Ejido Alfredo Bonfil is called the *Bienes Comunales Bonfil*.

4. Special Fundraising Permits

The Foundation for North American Wild Sheep (FNAWS) is the primary wild sheep conservation organization in the world. It was incorporated in 1977 by wild sheep advocates who wanted to reverse the decline in wild sheep populations. It was established to develop the necessary funding and provide the political muscle to do so. FNAWS' efforts have been largely successful, resulting in a 4-fold increase in wild sheep numbers in North America during the following 25 years. One of the ways that FNAWS raises funds for wild sheep conservation efforts is through the auction of wild sheep hunting permits. These permits typically allow a hunter the prime hunting periods for a generous length of time, but in no way guarantees a successful harvest.

FNAWS has a Convention each year where a number of special fundraising permits are offered at auction. In this manner FNAWS helps support wildlife management programs in 17 United States, 5 Mexican States, and 4 Canadian Provinces. A single permit has brought as much as USD 405,000 for an opportunity to hunt a wild sheep in Canada. These auctions give many philanthropists the opportunity to provide funds for wildlife conservation efforts.

A history of the number of permits for the Bienes Comunales Bonfil UMA and their sales values is shown below:

Year	#Permits	Revenue (in USD) (low-high)*	Total (in USD)
1996	4	40,000–50,000	175,000
1997	1	87,690 (raffle)	87,690
1998	1	115,250 (raffle)	
1998	2	51,000–58,000	224,250
1999	1	72,235 (raffle)	
1999	2	50,000–57,000	179,235
2000	2	49,000–82,500	131,500
2001	2	57,500–65,000	122,500
2002	4	50,000–58,000	214,000
2003	4	45,000–64,000	204,000
2004	4	45,000–59,000	199,000
2005	5	40,000–66,000	267,500
2006	5	55,000–70,000	321,000
2007	5	45,000–74,000	306,500
In total	42		2,460,175

*These figures represent the lowest auction bid and the highest auction bid for the permits that year.

In 1997, 1998, and 1999 one permit each year was raffled. This was to allow the “average” hunter the opportunity to be drawn for a desert sheep permit.

In addition, in 1998 and 1999, a total of 5 recreational “show me” trips were also auctioned, producing an additional USD 27,500. While this was additional funding provided by the bighorn sheep program, it also shows that the recreational tourist will not pay nearly as much as the hunter.

5. Use of Funds

The revenue from these permits is placed into a *fideicomiso*, essentially a bank trust. A technical committee was established to review the proposals – for wildlife conservation projects or for social development projects in the local community – and allocate the funds. The committee is comprised of representatives of the State Governor, the Coordinator of Natural Protected Areas, the Ejido Bonfil, the Federal Wildlife Department, the State Wildlife Department, the State Wildlife Enforcement Agency, the Mexican Foundation for Wild Sheep, the State Agriculture Department, the Rural Development District, FNAWS, and the Municipality of Mulege.

The funds were used for a variety of projects and programs. They were used to conduct regular wildlife patrols and establish guard stations. Physical barriers to traffic were built to reduce access to poachers. The wildlife habitat was evaluated and the condition monitored; and some improvements (such as water developments and domestic grazing modifications) were made. Scientific studies of the wildlife were conducted and several rural development projects were completed. These developments included the construction of a base camp for future hunters. Since the hunts occur for only a short period of the year, this base camp serves as a meeting place and a civic center for the community.

In addition, the people who worked in the hunting camp (the cooks, cleaners, guides, outfitters, wranglers, etc.), were all from the local community. “Eco-guardians” were hired to patrol the areas and to help ensure the safety and the food/water resources for the wildlife. Thus the local community derived a number of jobs, a source of self-respect, from the wildlife program.

As the conservation measures were put into place, the number of bighorn sheep in the Biosphere continued to increase. During the helicopter survey in 1996 a total of 99 animals was classified. This number increased to 103 in 1997, and to 131 in 1999. In addition, the number of rams increased from 27 to 32 to 34 for these respective surveys. Subsequent aerial surveys have been conducted, paid by the trust fund, to evaluate the age and sex structure of the population and recommend the number of permits to be authorized. The permit levels have increased to 6. The age and scores of the rams harvested have also increased through time – showing the conservative nature of the harvest strategy – and also resulting in increased value for the permits.

5. Tiburon Island and the Seris

A similar program was developed across the Sea of Cortez. Here, an indigenous people – the Seris – make their living along the coast of Sonora, Mexico. Tiburon Island is located 3 miles off the mainland, separated by a channel called “The Little Hell” due to the extreme currents and shifting bottom. The island, Mexico’s largest, is some 15 miles wide and 30 miles long and approximately 450 square miles, with mountains reaching 4,000 feet.

The physical and natural features of the island made it appear to be an exceptional place to start a nursery for bighorn sheep. Here in 1975, in a cooperative effort between the New Mexico Department of Game and



A desert bighorn ram (Ovis canadensis weemsi) observed during a survey of the El Vizcaino Biosphere of Baja California Sur. (Photo: Raymond Lee)

Fish and the Mexican Wildlife Department, 20 wild sheep were caught on the mainland and released upon the island. The islands in the Sea of Cortez are designated as protected areas by the federal government. In this case, by the Mexican Law of 1975, the natural resources of the island are to benefit the local indigenous peoples in the area, the Seris.

A brief flight over the island was made in 1985 and a population estimate of about 80 animals was made. The first standardized aerial survey was conducted in 1993. The current estimates for the island were “maybe 100 animals”. In just the first 2.5 hours of the survey over 250 animals were observed. Population estimates for the island were increased to 750 animals.

A similar program as that in the Biosphere was implemented upon Tiburon Island by FNAWS. Working with the Autonomous University of Mexico to ensure the proper management of other wildlife and habitat values, on the island, the first hunts were initiated. Subsequent aerial surveys have been conducted. The most recent survey in November 2006 resulted in a record number of wild sheep observations, and a record number of older aged rams, on the island. A history of the permits and their sales values (which average USD 90,457 per permit) is shown below:

Year	#Permits	Revenue (in USD) (low-high)**	Total (in USD)
1998	2	195,000–200,000	395,000
1999	2	97,500–100,000	197,500
2000	2	90,000–91,000	181,000
2001	2	72,500–85,000	157,500
2002	3	70,000–96,000	253,500
2003	4	81,000–99,000	363,000
2004	5	65,000–117,500	458,500
2005	5	65,000–100,000	412,000
2006	5	60,000–85,000	350,000
2007	5	67,500–90,000	398,000
In total	35		3,166,000

**These figures represent the lowest auction bid and the highest auction bid for the permits that year.

The funds from these permits have been used for habitat studies on the island, for development of business amongst the Seris (ie., motors for their fishing boats) and for direct stipends to the Seris.

The wild sheep population on the island has also been used to re-populate other parts of Mexico. Since 1995, 386 sheep (at USD 3,000 per sheep) have been relocated from the island into historic bighorn sheep habitat in Sonora, Chihuahua, and Coahuila, with plans to go into Nuevo Leon. At USD 3,000 per sheep, the Seris have obtained another USD 1,158,000 from “their” wild sheep.

Before these hunting conservation programs were initiated, both the ejiditarios in central Baja and the Seris along the coast were impoverished, and gave little value to wildlife. In the Biosphere, people ran large herds of domestic goats - impacting both the habitat and the native wildlife. Now the wild sheep provide a great deal more revenue than ever conceived.

Historically, the Seris used Tiburon Island primarily as a summer campground and as a place to weather storms while fishing. Now, the island is the principal source of income for the two villages along the sea. Have these programs been successful both in increasing the wildlife numbers in these areas, while increasing the quality of life for the local inhabitants? Just ask them.



*Punta Chueca - the main village of the Seri Indians - located on the Mexican mainland near Tiburon Island.
(Photo: Raymond Lee)*