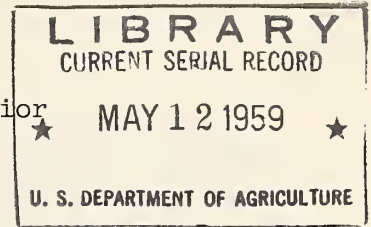


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United States Department of the Interior
Fish and Wildlife Service
Washington 25, D. C.



Wildlife Leaflet 389

NUTRIAS IN THE UNITED STATES

Prepared in Section of Wild Fur Animal Investigations
Branch of Wildlife Research
Bureau of Sport Fisheries and Wildlife

Contents

	Page		Page
Introduction.	1	Breeding and reproduction.	7
Nutrias in captivity.	2	Trapping, preparing pelts.	8
Imports, releases, and escapes in United States.	3	Nutria fur market.	9
Description, characteristics.	5	Acknowledgment	9
Feeding habits.	6	Literature cited	10
		Additional references.	10

INTRODUCTION

The occurrence of nutria (Myocastor coypus, sometimes known as swamp beaver, South American beaver, and coypu) in the catches of Louisiana trappers in recent years has been a source of great interest to managers of fur and game animals, fur tradesmen, and conservationists generally.

It is paradoxical that this fur-animal development was brought about by defeated and discouraged nutria breeders who released or permitted escape of the animals from captivity into the wild.

In 1849, nutrias were so abundant in all the rivers, estuaries, lagoons, and marshlands of Argentina that Governor Rosas, in his address before the Twenty-seventh Legislature of the Province of Buenos Aires, referred to them as "constituting great wealth destined to reward the troops after the war."

The nutria did reward the troops and many others so well for the following 60 years that those who lived by hunting and trapping this fur animal had virtually exterminated it and were forced into other pursuits for a livelihood.

This leaflet is a revision of Wildlife Leaflet 319 (May 1949), Nutrias Grow in the United States, by Frank G. Ashbrook, who retired from Government service in February 1957.

Protective laws were enacted, but this legislation was only partly effective. The annual take of nutria pelts in Argentina decreased to the extent that the demand was one hundred times that of the supply. When wild nutria pelt exports declined to an annual average of 175,600 for the 5-year period 1924-28, breeding nutrias in captivity began.

NUTRIAS IN CAPTIVITY

Raising nutrias in captivity in South America started in 1922 when prices paid for nutria pelts took a sharply upward trend. A nutria pelt brought \$6.00 in 1923 and soared to \$12.00 in 1924. By 1929 the price quoted on the Canadian raw fur market for extra-large skins was \$13.50 each.

Nutria farms became numerous throughout Argentina, and animals captured in the wild for breeding stock brought high prices. A hundred dollars a pair was not an unusual price. Early operations were small, followed by a "boom" with promises of large fortunes as usual.

As early as 1882, a few nutrias were raised in France, and later (1890-92) the production of these animals became a private enterprise of amateurs. Nutria raising in France practically disappeared after the beginning of World War I, and it was not until 1925 and especially after 1927-28 that these fur animals were again raised extensively in captivity. Great hopes for financial success were unhappily ended as a result of the world economic crisis during the 1930's. Released or escaped nutrias occurred in several regions of France, and in 1939 they benefited in the wild state by protection applying to other game (Bourdelle, 1939).

Germany and Switzerland entered the industry, importing nutrias from Argentina. Later the United States and Canada, followed by Russia, Sweden, Norway, and other European countries, took up nutria raising. All had a measure of success in raising breeding stock and selling the animals to others who desired to engage in the same enterprise. By 1928 Germany had a nutria population of about 3,000 on some 200 farms. The "boom" in Europe stimulated breeders in the United States and Canada, but it did not last long and not many nutria farms were established, despite the big play in United States fur-farming periodicals and the press. The first nutrias known to be born in North America were those on the La Forrest Fur Farm, Quebec, Canada, in 1931.

In South America, the first nutria farms were large enclosures which included as much natural habitat as possible. Later on, larger and more pretentious areas were fenced and partitioned into smaller areas for breeding and whelping, retaining pens, and feeding ranges where corn, clover, and alfalfa were planted. When the crops were ready, the nutrias were turned in to do their own harvesting. The next development was to house the nutrias in small pens where they were under control similar to silver foxes.

When the first shipments of pelts from nutrias raised in captivity arrived in the raw fur markets, nutria farming began to decline. The size and quality of these skins were so inferior to those taken in the wild, and the prices received for the fur were so disappointing, that many breeders abandoned the venture immediately and others followed gradually. So ardent and persistent had been the pursuit of the animal for the monetary value of its fur that little or no time was devoted to a study of its life history or habits. Breeders soon began to realize that much serious study and experimental work were necessary before a profitable business could be developed. Very few had the courage to undertake the task.

Some nutria farms continued but they were conducted mainly as centers of redistribution, and the principal business of these so-called nutria farms was to hold animals taken in the wild for exportation as breeding stock.

Experimental nutria farming in Argentina extended over a period of 15 years and proved a costly undertaking to those who set out to raise nutria in captivity. They learned reluctantly that more money was spent in equipment, feed, and labor than could be realized from the sale of the fur.

By 1940, practically all the nutria farms in South America, Europe, and the United States had discontinued business, but a few continued on a shoestring basis. Some of the breeders in the United States became so disgusted that they turned the nutrias loose or allowed them to escape into the wild so as to preclude feeding and caring for them.

IMPORTS, RELEASES, AND ESCAPES IN UNITED STATES

The earliest record of nutrias imported into the United States was in 1899. Will Frakes brought from South America one mature male and three young female nutrias to Elizabeth Lake, California. Frakes kept them in small pens for two years but no young were produced and there is no datum available reporting his experiences with these fur animals. As a matter of record Frakes did send a specimen to the National Museum, Washington, D. C., in 1900.

A nutria farm was established in the Green River area of Washington about 1932. An unprecedented flood swept this area in 1935; floating logs punctured the woven wire fences enclosing the nutrias, and they escaped into the wild. A pair of nutrias from the Green River farm was given to another enthusiast who desired to raise these fur animals in this same period, but having no success, he liberated them. Still another farmer, located on the south end of Lake Washington near the town of Renton, had nutrias in captivity and tried for 7 years to raise them. After Pearl Harbor he was drafted, but before he joined the armed forces he tried to sell them. He failed and in desperation turned them out into the marsh areas adjoining his farm.

From these escapes and releases, the nutria became established not only in the Lake Washington region but in areas drained by the Snohomish and Skykomish Rivers and their tributaries. It has traveled up the Cascade range to the headwaters of the Snoqualmie River about 60 miles from the town of Renton. Larrison (1943) reports colonies of nutrias near Garrison Lake, Nestucca River, and Portland, Oregon; also near the Sammamish River in the vicinity of Seattle and the La Conner and Fine Lakes areas in Washington. The earliest trapping record for nutria in Oregon appears to be 1938, and in Washington 1941.

In 1938, E. A. McIlhenny established a nutria farm on Avery Island, Iberia Parish, Louisiana. The animals were kept in an area fenced by driving boards side by side into the marsh. About 1939, some of the animals escaped into the marsh areas surrounding the Island. Many more escaped into the marshland during a hurricane in 1940. Lowery (1943, p. 248) states McIlhenny reported that trappers took nutrias in Iberia Parish and that he heard of others being captured at Morgan City, Marsh Islands, Chenier au Tigre, Pecan Island, Lake Arthur, and in the marsh along the Sabine River near Toomy. Atwood (unpublished) reports that during September 1940 he found the first nutria in the Lake Arthur area, 65 miles by water from Avery Island. In Louisiana, where the waterways are a network of rivers, lakes, bayous, and marshes, traversed in part by an intercoastal canal, the nutria had no difficulty in extending its range.

Nutrias were first trapped on the Sabine National Wildlife Refuge during the season 1941-42 and on Laccasine in the winter of 1943; both Federal refuges are located in Cameron Parish.

In 1939, nutrias were discovered on the Bitter Lakes National Wildlife Refuge, New Mexico. Prior to the acquisition of this land by the Federal Government, a nutria farm was established in the region near the Pecos River. Later a flood swept the nutrias down the river and those that survived established colonies on the Refuge. The existing habitat is patchy and limited, and the food and cover are not the types particularly attractive to nutrias.

By the close of the 1945-46 trapping season, according to Earl Atwood (unpublished ms.), nutrias had extended their range westward as far as White Ranch, 15 miles west of Port Arthur, Texas, and eastward as far as the west bank of the Mississippi River. By 1947 this exotic had traveled east and south as far as the delta at the mouth of the Mississippi; in January 1947, colonies of nutrias were found on the Delta National Wildlife Refuge. Westward, they had migrated to the Texas border and across the State line into the marsh areas along the Gulf of Mexico.

Petrides and Leedy (1948) report that the first nutria taken in Ohio was killed in a barn at Whitehouse in Lucas County. It was eating corn with the pigs. Dr. William H. Burt, of the University of Michigan, received several sight records of nutrias in Michigan. Harlan (1943) states that two young muskrat trappers in Iowa captured a strange animal later identified as a nutria. Presumably this animal escaped from a fur farm.

Releases and escapes of nutrias were undoubtedly made in other states and in western Canada, for there are unconfirmed reports which so indicate. At first, trappers did not know what they were. They said the animal looked like a cross between a muskrat and a beaver but grunted like a hog. After much speculation and investigation, all these appeared to be nutrias. How many were released and later trapped, is not known. Nor are there data available on the number now at large. Nutrias are established in the Pacific Northwest, and they range along the Gulf Coast from Galveston Bay, Texas, into Florida, and northward into eastern Texas, northwestern Louisiana, and southwestern Arkansas. In Louisiana, nutrias are most abundant in St. Mary, Iberia, Vermilion, and eastern Cameron Parishes.

During the 1955-56 season, trappers took 418,772 nutrias in Louisiana for the value of the pelts. However, the actual catch was much higher, for many nutrias are discarded in the marsh and many are killed to protect rice fields.

DESCRIPTION AND CHARACTERISTICS

Because the early Spaniards believed this fur animal to be a form of European otter, they gave it the name "nutria." The word nutria is Spanish for otter. In more recent years the animal has come to be known as the South American beaver. Both terms, however, are misnomers.

According to Osgood (1943) the coypu has five recognized geographical races which together have an extensive natural range in southern South America. The species occurs in coastal areas and in larger rivers from approximately 15° South latitude in southern Brazil, Paraguay, and Bolivia to the Pacific coast of Tierra del Fuego. The coypu subspecies in Louisiana and Texas is probably *M. c. bonariensis*, the form from north Argentina, Uruguay, Paraguay, and south Brazil (Lowery, op. cit.).

On first sight a nutria on land looks like a stunted beaver, with a long, round tail, clumsy, and possessing an unsightly fur covering. The head is typical of a rodent and resembles a guinea pig or an agouti.

It possesses four powerful incisors, orange in color and deeply set. The color of the incisors become deeper red-orange with age, giving the animal an odd characteristic appearance. It has powerful cheek muscles like the beaver. The nutria can inflict serious wounds with these teeth and can cut off a handler's thumb or finger in one snap of the powerful jaws. The only safe way to lift a specimen is by the tail, holding it a safe distance from the body.

The short, round ears and the long whiskers around the mouth make the head look broad, heavy, and coarse. The neck is short and the body broad with heavy covering of fur. The front legs are small and short, and have strong claws. The hind legs are longer and well muscled, and the feet are webbed for swimming. The nutria's legs are scarcely long enough to keep the proportionately large body off the ground, giving it a clumsy appearance when in motion. When disturbed or excited it moves rapidly in short

hops. The tail is black, long, perfectly round, and thinly covered with flat-lying bristles. The tail serves as a rudder when the nutria is swimming.

A full-grown ranch-raised male weighs from 20 to 25 pounds and a female from 15 to 20 pounds. The body is about 24 inches long and the tail 12 to 16 inches. The male can generally be distinguished from the female because he is larger and stronger in body, and the head and neck are coarser than those of the female. In the female the mammary glands are well developed but they are located along the side of the back. The first of these is located at the height of the elbow of the foreleg where the back begins to flatten down to the sides. The last mammary gland is located on the height of the hip bone. It seems to be generally accepted that this arrangement gives the young an opportunity to suckle while the mother is in the water. The irregular position of the mammary glands in the Rodentia is, however, not unusual. The guinea pig and some species of Capromys have mammary glands on the inside of the hind legs. The porcupine has them above the arm pits, and other rodents have them located similarly to the nutria.

The common color of the nutria is dark amber in appearance, but this varies with the type, season, and locality. The guard hairs are finer and not so long on the belly and sides as on the back, and the underfur is also finer and denser.

The areas in South America inhabited by nutrias lie within a mild temperate zone where the winters last only 3 to 4 months, although hard freezes are not uncommon. The climate in these areas is similar to that in the United States but it is a marine climate and less fluctuating. The nutria takes readily to icy water and apparently experiences no ill effect other than losing part of its tail. This is not common in all parts of South America, and since the animals so affected recover rapidly, the loss is considered inconsequential. Nutrias in South America have been observed running over the ice of frozen rivers and lakes in search of a water opening into which to plunge and swim about. The young nutria a few days old is said to follow the mother into the same icy waters.

When nutrias were kept in captivity out of doors in Canada and in the northern United States, the tails and feet froze; the condition was serious and a handicap to production.

FEEDING HABITS

The nutria is strictly herbivorous and feeds on a wide variety of succulent green plants, rushes, seeds, sour grasses, and aquatic plant roots. It is not too particular in selecting a menu. In the marsh areas of Louisiana it feeds extensively on the coarser vegetation--cattails, reeds, delta duck potato, chufa roots, and other sedges. Wherever rice, corn, sweet potatoes, and other agricultural crops are grown close to waterways, the nutria causes severe damage. In captivity, it shows a

marked preference for alfalfa, clover, cabbage, and carrots, and is fond of practically all root crops except white or Irish potatoes.

Being a vegetarian, the nutria is in direct competition with migratory waterfowl and muskrats for the natural feed in the marshes, and methods looking toward control of the nutria on national wildlife refuges are now being studied.

The natural habitat of the nutria is along banks of fresh water streams, ponds, and lakes, also marsh areas having an abundance of aquatic plants. They may burrow into banks close to the water level. Each pair makes its own burrow. They work in and up until well above the water level, clear a space and deposit grasses. As the family grows the burrow is enlarged since the offspring from one pair continue to live in the same burrow. If such a site is left undisturbed, in time it becomes the home of a large colony. As long as the water supply is sufficient and the feed plentiful the colony of nutrias will remain in the same locality for a long time.

A colony of nutrias may select a site in a marsh that has an abundance of weeds and rushes but which lacks banks. Here floating nests will be constructed of aquatic plants much after the same manner as the muskrats employ. Where natural conditions are favorable, part of the colony may make burrows in the ground and the other part will live in nests built in the marsh.

BREEDING AND REPRODUCTION

The breeding habits of the nutria are not so well known as those of the muskrat and some other rodents. The age at which a female will accept the male seems to be about 8 months, but very few females become pregnant at this age. The heat period lasts from 2 to 4 days. Females bred at the age of 15 months are more likely to produce young successfully. At the U. S. Fur Animal Field Station, Cambridge, Maryland, the gestation period was found to be 130 to 135 days. In the case of young females that give birth to young for the first time the period of gestation seems to be less (100 to 125 days) than for those that are suckling a litter and developing another at the same time.

The young seem to be born through all the seasons and it is estimated that two or three litters are possible during the year. The number in a litter varies from two to eight. Young females seem to produce smaller litters than older ones. The general average seems to be about 5. The young are born with a good coat of fur and at birth are in an advanced state of development. In a few hours they are able to get about, and after a few days they move around quite rapidly. They will leave the nest for short periods and scurry about with the mother. The young also begin to eat small quantities of solid food the first and second week after birth. They are weaned at the age of 7 or 8 weeks.

TRAPPING AND PREPARING PELTS

Nutrias are trapped similarly to muskrats and the same types of steel traps are used. A trap set for a nutria must, however, be staked out more securely than one for a muskrat because the nutria, being much stronger, will pull the stake and drag off the trap. Larger traps designed for other fur animals, such as numbers 1-1/2, 2, or 3, are not suitable for catching and holding nutria because the jaws and spread are too large, the spring tension is too strong, and the weight required to spring these traps is too great.

The pelt of the nutria is taken "cased" and dried fur side in, similarly to the otter and muskrat. A slit is made along the hind legs to the anus just as in the muskrat, and the skin is pulled off in the same manner. The pelt is then drawn on a stretching board or frame, the average size of which is 35 inches long. It is tapered from the bottom, which is 5 to 6 inches wide, to 4 inches wide at a distance 4-1/2 inches from the top. The balance of the board should be tapered to a rounded tip. The skin is then drawn gently over the board, fur side in, and stretched lengthwise by tacking skin to a movable block on the stretcher. From then on it is handled the same as the pelt of an otter or muskrat.

The pelt must be handled properly to meet the approval of the fur trade. Two nutria pelts may be exactly alike in quality and size, yet the one handled the right way may bring the trapper two or three times as much as one handled the wrong way.

The fur trade knows the pelt of the coypu as "nutria" and the fur is judged by the condition, quality, and color of the underfur the same as beaver, otter, and muskrat. The color and density of the guard hairs mean little to the fur tradesman for they are removed when the skins are dressed. Nutria pelts are the only skins which are slit open along the back during the processing. The reason is that the fur on the belly and sides is denser and of better quality than on the back.

The underfur should be dark with a bluish-gray cast. The best pelts are called "blue" by the trade as some natural muskrats are called "black," but these designations should not be taken literally. Reddish or rusty underfur is undesirable. Density of the underfur is extremely important, and silkiness and lustre are most important.

The prevailing prices now being paid for South American nutria pelts taken in the wild are from \$5.00 to \$6.00 each for top-quality skins 30 to 35 inches and longer. During the season 1955-56, the best nutria furs trapped in Louisiana brought \$2.50 a pelt, but the average was \$1.00. The assortment of nutrias trapped in Louisiana varies greatly in size, shape, and general appearance. Trappers have not yet learned the proper method of pelting, stretching, and preparing nutria skins for the raw fur market. There are too many small skins measuring 22 inches and less

from the eye hole to the bottom of the skin. Such nutria pelts have practically no commercial value, and it is unprofitable to pelt and market such skins. The same is true of cut or punctured skins because this damage multiplies many times in processing the pelt.

THE NUTRIA FUR MARKET

Large quantities of wild-caught nutria skins reach the fur trade market. These skins come from the Gulf Coast marshes of the United States and the swamp and lake areas in South America. But today, 80 to 90 percent of these raw furs (domestic and imported) are being exported to the European fur markets. The few nutria furs being consumed in the United States are low-grade skins used principally for linings in cloth coats.

Few ranch-raised nutria pelts produced in the United States have reached the fur market. In April 1957, approximately 500 ranch-raised processed nutria pelts were examined in New York City. There were also 500 or more raw nutria pelts available for inspection. The color, an important feature, was far from uniform. Generally speaking, these ranch-raised nutria pelts were not superior in any outstanding way to the regular run of the best grades of South American or Louisiana wild nutrias.

The present situation is not caused by the raw fur prices, but is due primarily to the processing and manufacturing costs which make a nutria fur coat a luxury. Until these costs are reduced, there is little possibility of an increase in the prices paid for raw nutria pelts and an increase in the volume of nutria fur business in this country.

ACKNOWLEDGMENT

The author is especially grateful to American Consuls stationed in South America who reported to the State Department on nutria production and markets for the fur. Particular thanks are due South American Government officials stationed in Washington, D. C. who gave first-hand information and written reports on nutria developments; to Herbert L. Dozier, whose reports on nutria production, U. S. Animal Field Station, Cambridge, Maryland, have been most helpful; to managers of Federal Refuges where nutrias are established, for their information; to Armand P. Daspit, former Director, Division of Fur and Refuges, Department of Wild Life and Fisheries, Louisiana, and B. T. McCauley, former Director of Game, Washington State Game Commission, for their information on nutria production and developments in Louisiana and Washington. Sincere thanks are due Colin C. Sanborn, of the Chicago Museum of Natural History, for his advice on species.

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