

Nutria in Louisiana

Historic Perspective on Nutria Control

The history of the nutria's introduction and proliferation in coastal Louisiana includes attempts to stem the growing population through regulation and through market incentives.

Imported from fur farms, nutria were released in the Louisiana marshes in the 1930s. Though accidental or intentional, feral populations were established near the Gulf Coast. Nutria continued to expand their range from there when they were trapped and transplanted into marshes from Port Arthur, Texas to the Mississippi River in 1941. Later that year a hurricane further dispersed nutria populations in southeast Texas and southwest Louisiana.

In 1958, nutria were taken off the list of protected wildlife in response to the damage they were causing to sugarcane and rice fields. From 1963–1967, the Denver Wildlife Research Center (DWRC) began a nutria damage control research program that looked at existing damage management techniques and developed new methods.

Though the DWRC program had some success in identifying and developing damage control methods, the pest status of nutria was at odds with the state fur industry efforts to promote the nutria as a wildlife resource. With the increasing economic benefits of trapping nutria, the annual harvest climbed steadily during the 1960s and complaints of nutria damage to crops diminished.

In 1987-88, the international fur market crashed, making trapping a less profitable activity. As a result, nutria populations rose again and reports of significant damage to wetlands were coming from coastal land managers. Aerial surveys conducted by the Louisiana Department of Wildlife and Fisheries confirmed evidence of marsh damage as nutria continued to feast on vegetation.

In an effort to restore the demand for nutria to its previous levels, nutria fur was promoted in the global marketplace through the state-funded Louisiana Fur and Alligator Advisory Council. Nutria meat was also marketed through the Nutria Harvest and Wetlands Demonstration Project, which was funded by the Coastal Wetlands Planning, Protection, & Restoration Act. Thus far, these marketing efforts have not been able to reestablish the demand for nutria. In addition to these marketing efforts, trapping seasons were extended and promoted by the Department of Wildlife and Fisheries in an attempt to increase the number of nutria trapped. Unfortunately, low prices for nutria and other wild fur pelts made trapping less attractive and so the number of trappers declined.

By the close of the decade, the nutria was added to the U.S. Council on Invasive Species' list. In addition, nutria was also listed by the Invasive Species Specialist Group of the International Union for the Conservation of Nature as being one of the top 100 worst invasive species in the world.

"The chance of restoring or even slowing the degradation of coastal marshes in Louisiana will be hampered considerably without sustained reduction in nutria impacts. The probable impacts of continued marsh habitat modification and loss include decreases in sport and commercial fisheries production, decreased acreage available to treat pollution inputs to the Mississippi delta and the Gulf of Mexico, decreased levels of plant-life, decreased capacity to buffer storm surge, and decreased habitat for other species."

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by Genesis Laboratories, Inc.,
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A Solution

After analyzing a number of programs, one rose to the top as having the best potential to reduce nutria populations and the resulting degradation of the coastal marshes. An incentive program designed to encourage trappers to trap nutria will increase the harvest of these rodents to a level that will decrease the population and damage to marshes and crops.

Recently, federal funding for a nutria control plan was provided under the Coastal Wetland Planning Protection and Restoration Act, sometimes referred to as the Breaux Act. In the first phase of this program a plan was devised, and during the second phase an incentive payment program was implemented by the Louisiana Department of Wildlife and Fisheries. The program will pay trappers up to \$4 per nutria harvested. Trappers will be required to provide evidence of the take by producing a nutria tail in order to receive the incentive payment. An additional payment for the fur and meat is possible if sold to a local processor or buy buyer.

A complete economic analysis of the incentive payment was done to determine the amount needed to entice people to return to trapping and whether enough nutria could be taken to make the control program a success. It was estimated that with an effective price of \$4 per nutria tail, nearly 400,000 animals might be harvested.

The Louisiana Department of Wildlife and Fisheries will use its regulatory authority to ensure the harvested nutria are taken from the approved program area and to assure that carcasses not sold are properly handled in the trapping/hunting area. The program regulations also will prevent trappers and hunters from trespassing.

In addition to the incentive program, other programs were also analyzed, but there were problems associated with these alternatives that made them too costly, inefficient, hazardous or ineffective. They included:



Chemical Control

Zinc phosphide is the only rodenticide currently registered for the control of nutria, however, it is limited for use only by certified pesticide applicators. One drawback is the need to pre-bait potential treatment sites using floating rafts. The expenses associated with constructing rafts, distributing them, pre-baiting and monitoring them is very high because of the size and remote nature of the coastal wetlands that the nutria inhabit. Ground baiting is also a possibility, but care must be taken not to endanger other wildlife.

Heavy rains and high humidity can render the bait ineffective within weeks after exposure to the elements. Conversely, zinc phosphide bait can remain toxic in the field for many months. It can also poison birds and rabbits. Predators or scavengers may die if undigested zinc phosphide bait is consumed. Widespread use of the bait may require further research to determine its effects on white-tailed deer, American alligator, crayfish and shrimp since it is not known how these species may be affected. These animals are an important part of the ecosystem and Louisiana culture and represent a significant market for hunting, pelts and food that must not be threatened with a large-scale baiting program

Unregistered Rodenticides

Many other poisons are being used to control other rodent species throughout the world. These include other acute toxicants (strychnine, bromethalin), anticoagulants (warfarin, diphacinone, chlorophacinone, bromadiolone, brodifacoum, flocoumafen, difethialone), and fumigants (aluminum phosphide, gas cartridges). Many of these active ingredients could be used for effective control, but each must be evaluated for their possible detrimental effects. If considered, these products should be tested in labs, field pens or field studies. After initial data is supplied, a Section 18 (Emergency Exemption) would be filed by the State of Louisiana to the U.S. Environmental Protection Agency. Development of such a product may range in the area of \$300,000 for laboratory, chemistry, and field studies; and \$500,000 for an Environmental Impact Statement. The testing, costs, and regulatory requirements of using poisons would be extremely time-consuming and may not, in the end, be considered safe or effective.

Incentive-Bonus Program

An incentive-bonus program was successful in eradicating nutria in Great Britain in the late 1980s. However, it is not possible to compare its success with a program in Louisiana because the environments are totally different and Louisiana's infested area is about 10 times larger than the affected area in Great Britain. Currently in Louisiana, there is no known method that will completely eradicate nutria, nor is it a viable option. Eradication can only be an effective technique for controlling nutria in a limited area. The incentive-bonus program that was used for this program in Great Britain provided the trappers and hunters with a salary for their work and with a substantial bonus when they locally eradicated nutria.

Because of limited funding, the program, if implemented, would only engage approximately 10 trappers and two leased supply barges. For this program to succeed, complete cooperation with all landowners would be required, up to \$2 million would be necessary, and complete isolation of nutria populations by physical means, like fencing, would be required.

Induced Infertility

For this program to be successful, the birth rate must be manipulated to a level lower than the death rate for the population to decrease. Many compounds have been investigated and proven to inhibit fertility in males and/or females, yet many logistical problems exist. To be effective,



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some contraceptives must be repeated and regularly applied. To maintain non-reproductive nutria with current technology, repeated and regular air drops of bait to nutria would be required. Costs of such applications and the bait needed to cover the required acreage would be approximately \$6 million annually. Formulation, development, and testing costs would be about \$10 million and take about five to eight years until FDA approval is sought. Even then, FDA approval cannot be guaranteed. A detailed environmental assessment would have to be conducted to determine the impact not only on other rodents and smaller marsh species like birds, but also the very important shrimp industry in south Louisiana. Most contraceptive devices are most useful for closed or finite populations where the influx of non-sterile males or females is unlikely.

Trapping

The fur market for nutria that developed in the early 1960s has never returned to the previous high pelt prices of \$23.23 (2002 dollars). Pelt prices today are less than 10 percent of what they were at their highest point. As a result, the harvest has been limited to fewer than 30,000 nutria in the 2001-2002 trapping season, and less than 1,000 trappers were licensed. Attempts to develop the nutria fur and meat market globally to ensure value and market stability continue, but have yet to yield a sustainable increase in demand.

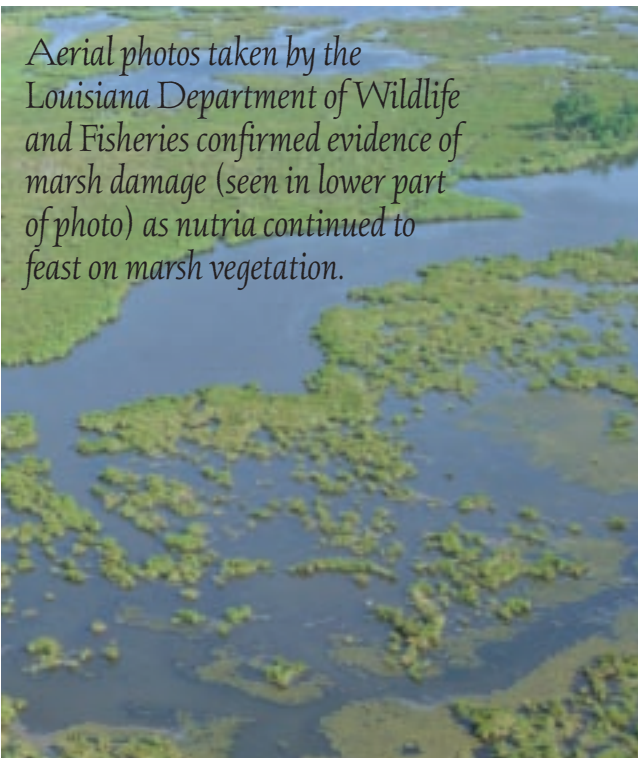
Trapping can be used as a method in the harvest incentive program, but using trapping driven by fur prices alone has had little effect on the nutria population in recent years.

Controlled Hunting

Hunting could be used to decrease the nutria population, but it is unlikely that it would actually have an impact on the populations as a whole or help to decrease the marsh damage. There is no real incentive for hunters to hunt nutria when other species, such as white-tailed deer, rabbits or waterfowl provide hunting opportunities and are also a source of meat. Though hunting as a means of control is not realistic, it may be used as another method to harvest nutria in an incentive payment program.

Chemical Repellents

No chemical repellents are registered for nutria, nor are there any effective repellents available for rodents. For the most part, repellents available on the U.S. market are for birds, such as geese and ducks. In addition, the use of repellents without state and federal regulations is illegal. Even if an effective nutria repellent is developed (which would be very costly), the method of delivery will be of utmost importance. Since nutria inhabit a vast area of south Louisiana, applying the product to vegetation to curb damage would be costly and impractical.



Aerial photos taken by the Louisiana Department of Wildlife and Fisheries confirmed evidence of marsh damage (seen in lower part of photo) as nutria continued to feast on marsh vegetation.

For more information about this study or the incentive program, please contact:

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