



Nutria: Nutrition or Nuisance

Adapted from BTNEP/LSU AgCenter: *Coastal Land Loss and Restoration*

Focus/Overview

Student will learn about nutria, the nutritional value of nutria meat and develop a persuasive argument for eating nutria. An optional activity is to prepare a nutria dish and have a nutria-tasting event at school.

Learning Objectives

The learner will...

- gather information about nutria, including the nutritional value of nutria meat.
- draw a food web for nutria that includes humans as a consumer of nutria meat.
- create a publicity package for the purpose of advertising a nutria food product.
- make a simple dish using nutria meat.

Louisiana Science Grade Level Expectations

4: GLE-71	Describe and explain food chains/webs and the directional flow of energy in various ecosystems (e.g., construct a model, drawing, diagram, graphic organizer) (SE-E-A2).
5: GLE-23	Construct food chains that can be found in ponds, marshes, oceans, forests, or meadows (LS-M-C2).
5: GLE-24	Describe the roles of producers, consumers, and decomposers in a food chain (LS-M-C2).

Materials List

- Pictures of nutria.
- Fresh, deboned nutria meat from a licensed meat processor (optional, see resource section for details)
- Computer and Internet access.

Background Information

Nutria is a non-native nuisance species of rodent that is causing big problems in Louisiana wetlands. Nutria are vegetarians, or **herbivores**, and when they eat wetland grasses, they eat the tender shoots as well as the roots of the grasses. Nutria are an invasive species, diminishing resources for native creatures.

During the past 10 to 15 years, nutria have emerged as serious pests in the coastal wetlands of Barataria-Terrebonne estuary. Scientists at Louisiana State University Coastal Ecology Institute confirmed many people’s suspicions about the nutria’s destructive capabilities in an experiment in which they fenced areas of marsh to exclude nutria and waterfowl. After one year, there was a dramatic difference between the protected and unprotected plots; the experiment showed that both nutria and waterfowl grazing can significantly reduce the vegetation. If nutria and ducks feed together, the results can be devastating, with all except a few species of plants destroyed. When nutria denude an area of vegetation, it is called an “eatout”. Vegetation is essential to hold soil in place and to prevent wave erosion, so the grazing habits of nutria and ducks contribute significantly to coastal land loss.

BTNEP Connection

Changes in Living Resources

Grade Level

4, 5

Duration

2 days

Subject Area

science, health

Setting

classroom

Extension Area

school-wide

Vocabulary

Herbivores, eatout

Original Source

“Nutria: Nutrition or Nuisance” in BTNEP/LSU AgCenter: *Coastal Land Loss and Restoration*, Activity 5.



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Nutria were introduced to Louisiana in the 1930s from South America. The conditions in the Louisiana coastal marshes are ideal for the success of these fast-breeding, plant-eating rodents. In addition, few predators are large enough to tackle a full-grown nutria, so the only factors that can check the growth of the nutria population are cold winters, hurricanes, lack of food, large alligators and human trappers. None is a strong enough force in Louisiana to keep numbers down so the population has continued to increase at an alarming rate. Nutria were once trapped in large numbers for their fur, but today the fur market supports only a small nutria harvest.

Discussions on how to solve the nutria overpopulation problem have continued for years without a satisfactory conclusion. In the early 1990s, the Louisiana Nature Center (Audubon Institute) sponsored several Nutria Fests at which celebrated area chefs cooked delicious nutria dishes. These events raised public awareness to the nutria dilemma and suggested a novel solution: LET'S EAT NUTRIA! In the 1960s the same suggestion was made, mainly as a way to increase the economic benefits realized from nutria harvests. Millions of dollars worth of nutria meat was going to waste when the animals were harvested only for fur. At that time, an LSU study looked at the values of nutria as a source of meat. In all aspects – from taste and nutritional value to appearance – dishes made from nutria scored high.

The prejudice of many about nutria being “dirty rodents” is unfounded according to the report. Nutria have more sanitary habits than most domestic animals and have a purely vegetarian diet. The general public of south Louisiana has not yet accepted nutria burgers as a food choice. Perhaps a greater understanding of this wetland herbivore will help to increase its popularity as a culinary delight.

Sample Recipe

Nutria meat can be used in many standard Cajun recipes, such as Nutria Sauce Piquant, Nutria Sausage, Nutria Gumbo, etc. Nutria can be substituted for chicken or another lean meat in many recipes. Here's a simple recipe requiring few ingredients and little preparation.

Chicken-Fried Nutria

Ingredients

young nutria meat obtained from a licensed meat processor*, cut into thin strips
½ cup milk
flour or corn meal
salt and pepper and/or other Louisiana seasoning product
vegetable oil
salad ingredients

Equipment:

hot plate
iron skillet or frying pan
spatula
slotted spoon
plates
eating utensils
large bowl

1. Mix flour or corn meal and seasoning in a large bowl.
2. Dip nutria meat strips into milk and place in coating mix.
3. Thoroughly coat nutria meat with coating mix
4. Heat ½” deep vegetable oil in iron skillet or frying pan until hot enough for frying.
5. Carefully add coated nutria strips and fry until golden brown on all sides (about 10-15 minutes).
6. Serve with a salad of your choice.

** For current information on nutria meat processing regulations and sources of nutria meat, call the Louisiana Department of Wildlife and Fisheries at (337) 373-0032.*

Procedure

1. Nutrias are an animal that have caused many problems in Louisiana. What are some of the problems that nutria have caused? One of the big problems nutria are responsible for is the loss of vegetation. What is it that nutria eat? (They eat the soft tissues of plants, especially roots. In marsh areas, this means they actually pull the plant up out of the marsh and eat the roots and tender young shoots. In higher areas, such as swamps, nutria eat young cypress and other trees, as well as the bark off of old trees.) Let's draw a food web for the nutria. Begin by drawing what the nutria eat. Now, what eat's nutria? (Alligators, hawks, eagles.) Because nutria are vegetarians (they only eat plants), they are also a good food source for humans. Draw humans into the nutria food web. But getting people to eat nutria meat is often difficult. Why might this be?

2. Our task today is to gather information about nutria so we can put together a publicity package designed to convince people that nutria are a good food source. What can you tell me about nutria? We need to include all kinds of information in our list, including appearance, behavior, life history and what their meat tastes like. (List student knowledge on the board or overhead transparency.)
3. Now we need to arrange all this information into clusters. (Cluster the information into items under headings such as appearance, breeding, diet, behavior, nutritional value, etc.) Looking at this list, what else do we need to know about nutria to put together our publicity package? (Make a list of things that need to be researched.)
4. Assign students to research groups. Have each group report back to the class what their research has uncovered about nutria.
5. Now that we have all the information we need, your job is to create a publicity package for nutria as a food item. Think of all the positive aspects of nutria meat, and also think about the negative things that might keep people from eating nutria meat. Work on persuading them to think differently. Your publicity package should contain a fact sheet about nutria, at least one picture and a recipe using nutria meat. The fact sheet should contain only truthful information and give the positive side of nutria as a food source.
5. After the publicity packages are prepared, hold a nutria cook-off or make one dish in class if resources are limited. This can be coordinated in any practical way for the circumstances at your school.

Blackline Master

1. Nutria Resource Sheet

Assessment

1. Develop a rubric to assess the publicity packages.
2. Have students take their nutria food webs and label each organism as either a producer, consumer or decomposer.

Extensions

Publicize and hold a school-wide event at which teachers, parents and students can sample the nutria dish(es) prepared and read the publicity materials students prepared.

Resources

Orange Tooth is Here to Stay, Audubon: Magazine of National Audubon Society, July 1990, v. 92(4). Glasgow, L.L., and L.A. McCollough. 1963. **Nutria for Home Use**. Louisiana State University **Erosion Increase by Nutria Grazing**, Louisiana Environmentalist, July/August 1994, p. 18

WEBSITES

Faibisch, Jacob. 2002. **Case Studies. Ravenous Rodents: The Case of Nutria (*Myocastor coypus*) in Louisiana**. International Association of Fish and Wildlife Agencies. Accessed 04/15/05 at <http://www.furbearermgmt.org/casestudies3.asp>.

Short informative article on nutria problem in Louisiana. Includes pictures of nutria exclusion experiments.

Roman, Joe. **Eat the Invaders!** in Audubon: Magazine of National Audubon Society, Green Gourmet Section, October 2004, online magazine accessed 4/15/2005, at <http://magazine.audubon.org/features0410/gourmet.html>).

As marauding hordes of invasive species devour heaping helpings of the North American landscape, we offer some recipes that might help turn the tables.

Louisiana Coastal Wetlands Planning, Protection and Restoration News. **Nutria: Destroying Marshes the Old Fashioned Way**. in WaterMarks. June 2000 Number 16 Accessed 04/15/05 at <http://www.lacoast.gov/watermarks/2000b-06/index.htm>.

Nutria biofacts and information on the nutria meat economic development plan. Nutria recipe included.

Louisiana Department of Wildlife and Fisheries, **Nutria**, accessed 07/05/05 at <http://www.nutria.com/site.php>

Nutria information including history, wetland damage and biology, as well as information on fur industry.

Nutria Resources

Faibisch, Jacob. 2002. **Case Studies. Ravenous Rodents: The Case of Nutria (*Myocastor coypus*) in Louisiana.** International Association of Fish and Wildlife Agencies. Accessed 04/15/05 at <http://www.furbearermgmt.org/casestudies3.asp>.

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