

## SUMMARY

Studies on eight sample areas of small impoundments, swamps, and creeks in Lee County, Alabama between October, 1953 and January, 1955, indicated a relative abundance of the more important waterfowl as follows: (1) ring-necked duck, (2) mallard, (3) wood duck, (4) coot, (5) scaup. The ducks in general showed a fall migration peak during the first half of November in 1953 and in the latter part of the month in 1954.

Several species of ducks exhibited a definite habitat preference. On small impoundments ring-necked ducks predominated, on creeks mallards were most abundant and on a beaver swamp wood ducks outnumbered all others.

Although 19 species of waterfowl were observed on the areas, only the wood duck was a summer resident. Five broods, four of which probably hatched between April 1 and May 7 were observed.

It was concluded that the first and most important step in future waterfowl management in central Alabama would be improving the quality of existing wetlands.

The present as well as the future role of creeks, small impoundments, and beaver swamps in waterfowl management is discussed.

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## THE ECONOMIC STATUS OF NUTRIA IN LOUISIANA

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### INTRODUCTION

Nutria have been present in the coastal marshes of Louisiana since 1937, when they escaped from confinement on the late E. A. McIlhenny Estate at Avery Island, Louisiana.

The animals which found the Louisiana marshes a very favorable habitat reproduced prolifically and are at the present time our leading fur producer. Since the nutria was new and the price of pelts rather high following World War II, many of the animals were introduced to marshes, lakes, and farm ponds from Mississippi to Texas and other states.

As the population continued to increase, the nutria extended their range to the north and are now common in the rice and sugar cane belt of the State. It is in this area where the greatest damage has been caused by nutria.

I would like to take this opportunity to thank the Fur and Refuge Division of the Louisiana Wildlife and Fisheries Commission for backing this work and also the Louisiana State University School of Forestry for their assistance in the project.

#### GENERAL

Nutria were first introduced into Louisiana during the late thirties and early forties by E. A. McIlhenny.

The original stock was imported from Argentina to Avery Island which is located in the marsh in south central Louisiana. Within two years after nutria escaped from a pen at Avery Island, they had populated the marsh from Mississippi to southeastern Texas, but are most common in south central Louisiana where they are trapped extensively. They have pushed north in Louisiana above the Red River. It is likely that in a few years they will be found throughout Arkansas. Extensive hardwood swamps have a low carrying capacity for nutria and it is unlikely the population will increase appreciably in these areas.

Dispersment of nutria has been hastened in many areas by man. Animals have been imported to sections of the south where it is likely that nutria would not have been present for several years.

For those of you who may not be familiar with nutria a short description of the animal may be helpful in realizing his qualifications for the job he has done in Louisiana. A male nutria will attain a weight of 20-25 pounds while the average female weighs 18-22 pounds. The nutria being a rodent, is equipped with four large incisors about the size of those of a beaver. If one of the incisors is broken off, it will be replaced within 15-20 days.

Nutria has long guard hair on the back thus giving the animal a rough coarse appearance. Since mammary glands and coarse fur are on the back, the choice fur is on the stomach. Its density is used to some extent in grading the pelts, however, the most common system of grading is by pelt length. Pelts under 23 inches are considered culs or rejects and are worth very little. Number "1" pelts run from 28 inches up and demand the higher prices.

#### AGRICULTURAL DAMAGE

*Rice.* It is easy to understand why rice is the most drastically effected of the agricultural crops utilized by nutria as food. The nutria being a semi-aquatic animal spends much of its life in or near water. Fields of rice flooded with water will naturally attract nutria as they furnish a ready food supply and plenty of water in which to swim. The most pronounced damage to rice production is the burrowing into and cutting of large irrigation canal levees. In most cases, the nutria that burrow into a levee are following and enlarging a burrow made by muskrats which are common in all of the canal systems in south Louisiana. Since the nutria is several times the size of a muskrat they naturally require a much larger tunnel to rest in. As the burrow is enlarged the chances of it becoming a break in the levee is much greater. Running water seems to attract nutria and quite a lot of digging activity is found about the pumping installations in rice fields. Constant vigilance is required of the farmer to detect burrows, dig them out and repair them.

The small water control levees throughout the rice fields which provide excellent resting sites for the nutria are often cut by the animals during the night allowing an entire rice field to wash out. When machines are used to repair levees quite a lot of rice is mashed down and lost; however, most of this type of damage can be averted by having a laborer check all of the small levees and repairing them manually each morning.

Young rice does not provide sufficient cover for daytime feeding, therefore, most nutria activity is at night and concentrated along the large irrigation canals. As the rice crop develops, the nutria move out into the fields and remain there until the rice is harvested. Often several nutria are killed by the harvest crew as a field is being cut. Nutria utilize the stems of rice for about 5 inches above the ground. It appears that an animal will cut in one place until a small opening of 10-15 feet is made. Any rice stems that are cut off below the water level usually die, while those cut off above the water will

stool out and produce another top, however, this growth will not mature a seed head in time to be harvested when the field is cut.

*Sugar Cane.* The greatest damage to sugar cane occurs on the few cane plantations located along the northern rim of the marsh. Some of these fields have protection levees around them to keep high water in the marsh from flooding the sugar cane. Nutria have burrowed into and cut several of these levees allowing large fields to be flooded for a few days. This flooding causes a reduction in the cane yield.

Nutria will feed on the stalks of sugar cane and in some cases have cut the cane along the outer edge of a field in large enough spots to reduce the field's production for the season.

*Corn.* The marshes of southwest Louisiana are broken by shell ridges that were once the beach of the Gulf. Corn is the principal crop on some of these inhabited ridges.

Nutria move out of the surrounding marsh at night and feed on the corn crop. Some damage has been caused to corn in areas outside of the marsh where nutria have moved inland along the larger streams of the state.

A few garden plants such as cabbage, lettuce, and peas are cut by nutria.

*Sweet Potatoes.* Some minor damage has been caused by nutria in the area around Opelousas where sweet potatoes are a major crop. Damage has been restricted to fields lying adjacent to the inhabited bayous.

*Miscellaneous Damage.* In a few cases nutria have burrowed and dug around highway bridges and culverts causing considerable damage to the structures.

Another activity of the nutria which may become an important factor in Louisiana is the cutting of small hardwood trees. This condition is especially important where trees are planted around a camp site in the marsh.

#### RELATIONSHIP OF NUTRIA TO

*Muskrat Management.* Much of the criticism of nutria in marshes where muskrats were being produced may not be justified. No doubt nutria and muskrat do compete for some food plants but the muskrat is more of an underground feeder, rarely feeding on vegetation above the ground surface, whereas nutria feed mainly on the stems of vegetation above the ground surface. As the vegetation grows, only the basal part of the plant is used. Eat-outs, a condition quite common in our marshes, caused by nutria are unlike those of muskrat, where the root stock is completely destroyed. An eat-out caused by nutria may be revegetated in one season whereas a muskrat eat-out may take 8-10 years, therefore, it is easily seen that a nutria eat-out is only a temporary opening up of the marsh vegetation.

At first it was believed that nutria would fight with muskrats but this appears to be untrue, as abundant nutria and muskrat sign can be found in areas where the two animals are found together. It seems to be unlikely that there is any social conflict between nutria and muskrat. Possibly the greatest damage caused in muskrat marshes by nutria is the hastening of eat-outs and the increased trouble during the trapping season. Many small nutria are taken by the trapper which would make undersized pelts and are subsequently discarded. A number 2 trap is needed to satisfactorily trap nutria, whereas a number 1 is used for muskrat. Nutria pelts require several times as much care and attention as muskrat. After the animal is skinned the pelt then has to be fleshed or scraped. This process requires about 5-10 minutes depending on the trappers ability. Nutria pelts are stretched on a metaal mold to dry. Two days are required to properly dry the pelts. It is probable that most of the criticism of nutria was due to increased labor in trapping. With new methods for fleshing and drying, most trappers became satisfied with trapping nutria.

*Waterfowl Management.* In several marshes being managed for waterfowl production, nutria have been found to be of value in opening up stands of dense vegetation, thus making natural ponds throughout the marsh, and permitting duck food plants to become established. Millet is one of our best duck foods which will invade a marsh opened up by nutria.

*Cattle Grazing.* The grazing of cattle in the marsh has become increasingly important in the last few years. There is some direct competition for food

between cattle and nutria but the main damage caused by nutria to cattle marshes is the opening up of the marsh and making it difficult and in some cases impossible to burn off the old dead vegetation. As fire is the principal management tool in marsh management, this condition can be very bad for the proper management of a marsh regardless of the manager's aim.

*Farm Pond Management.* Since the introduction of nutria into Louisiana there has been a lot of stocking of nutria into farm ponds and lakes over the state and into east Texas for the purpose of removing undesirable aquatic vegetation and weeds. Improper construction with shallow water areas is usually responsible for the presence of weeds, therefore nutria at best are only a temporary respite from the trouble. Very little has been gained from stocking nutria in ponds and lakes other than the satisfaction of seeing a few cattail and cut grass clumps removed from the pond margin.

#### FUR PRODUCTION OF NUTRIA

It was not until the 1945-1946 trapping season that nutria became a recognized fur bearer in Louisiana. Since then a minimum of approximately 900,000 nutria have been harvested for their pelts. The prices have run from a high of \$5.00 to a low of \$2.00. This price and the number of animals harvested are from out state severance tax records. A copy of this record is available to those of you that are interested in the fur take in Louisiana. It is believed that the market price for nutria will hold steady at about \$2.75 for top pelts.

It is believed by biologists who work in the marsh that there is an upward of one million nutria in the Louisiana marshes today.

#### NUTRIA A POTENTIAL FOOD SOURCE

Nutria are being used to some extent in Louisiana for food. This market for nutria flesh is principally to the colored people in and around New Orleans, however, nutria are being eaten throughout the marsh area.

A cooking experiment has just been concluded at Louisiana State University by the Louisiana State University Agriculture Experiment Station, and a paper is to be released in the near future. It is felt that nutria are one of the cleanest animals in the state and the meat has a very good flavor.

## THE FLORIDA DUCK IN THE VICINITY OF LAKE OKEECHOBEE, GLADES COUNTY, FLORIDA

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### INTRODUCTION

To sportsmen of South Florida an important component of waterfowl hunter's bags is the bird known as the Florida duck (*Anas fulvigula fulvigula* Ridgway). This is a non-migratory species that occurs in peninsular Florida from the latitude of Gainesville (Alachua County) southward, reaching its greatest abundance in the vicinity of Lake Okeechobee. Its value as a game bird is indicated by the fact that in areas where it occurs it comprises about 10 percent of the total waterfowl kill. Such a kill has been estimated by Jennings (personal interview) to be as high as 50-60 percent of its total population, but in spite of such excessive hunting pressure the Florida duck populations are remaining steady or even slightly increasing in numbers (Chamberlain, 1951; Jennings, 1952).

The present study was initiated by the Florida Game and Fresh Water Fish Commission in 1948 as part of Federal Aid Project 19-R. Its objectives were to obtain information on the numbers and distribution of Florida ducks, and to study in detail, the life history and ecology of this species. Beginning with the spring of 1953, H. Jay Hosford, a graduate assistant at the School of