



# Myocastor coypus

## Nutria

Ben Johnston



### Background

Nutria are native to Patagonian subregion of South America and exist as an invasive species in Europe, Northern Asia, and north America, Japan, East Africa and in the Middle East.. Nutria are found in a variety of semi-aquatic habitats related to waterways such as rivers, lakes, and marshes. They are used for their meat and fur, and nutria-fur farms were established in the 19<sup>th</sup> and 20<sup>th</sup> century in Europe, North America, Africa, and Asia. Nutria have adaptations for natorial locomotion such as ears and eyes ventrally placed to allow for nutria to be aware of the terrestrial environment while swimming. They also have webbed hind feet and large hind legs to help with efficient swimming. Their lips close behind their ever growing incisors to allow for sub-surface gnawing and chewing Females have four or five mammae are located high on its side (almost on the back) to allow for young to suckle while in the water. Nutria are known to stay submerged on dives for over 10 minutes and can slow their heart rate during dives (called bradycardia) as well as reduce blood flow to skin and appendages to aid in longer dives. Nutria are endotherms and have regular food requirements, often eating over 25% of their body weight per day (nutria average around 12 pounds). Nutria are primarily herbivores and in natural ecosystems focus their feeding on emergent vegetation, stems, leaves, roots, and bark, but in human altered ecosystems nutria are known to feed on crops of all sorts.

### Reproduction

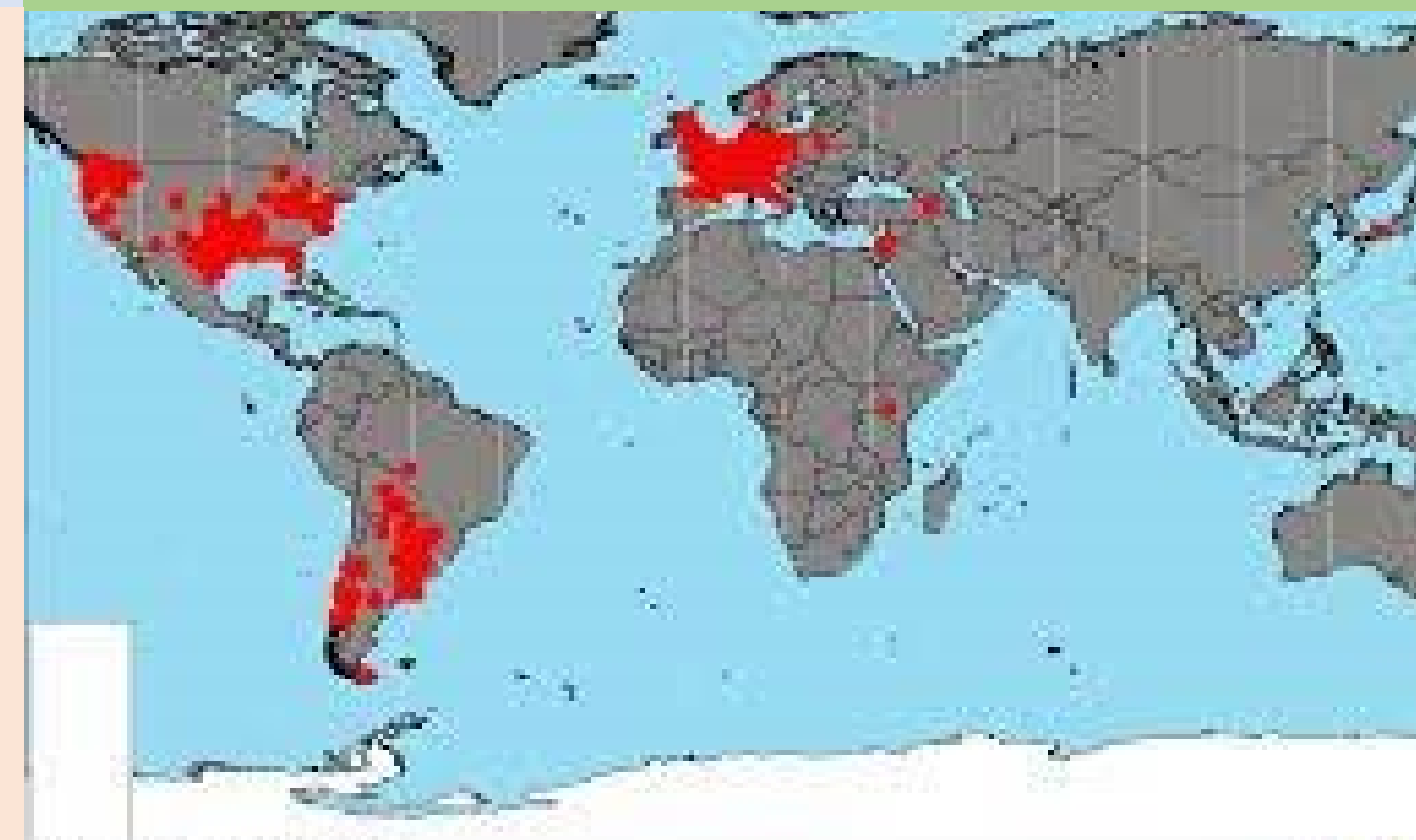
Nutria are polygynous in their mating system with one dominant male mating with all reproductively active females within his group. Nutria reproduce viviparously and give birth to precocial young that are fully furred and active. Litters range in size from 1 to 13 young but average 4 to 5. They can breed in all seasons. Under optimal conditions females can reach sexual maturity in as little as 4 months old. Females are polyestrous. Females produce a mean of 2.7 litters per year averaging 15 young per female per year. Females have a long gestation period ranging between 127 and 139 days. Many nutria litters are aborted during gestation and up to 40% of nutria embryos are resorbed in the uterus. These abortions are in response to adverse environmental conditions.

### Sociality

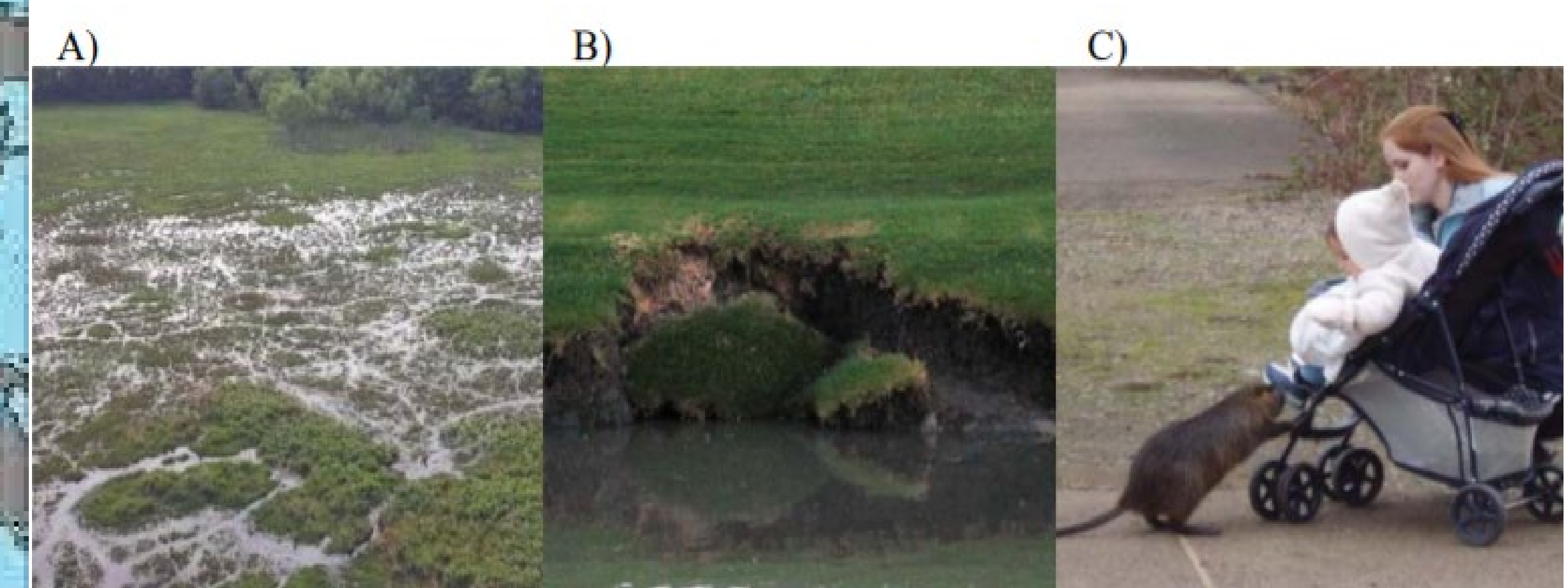
Nutria are known to live in groups ranging in size from 2 to 13 that consist of related adult females and their offspring, with one dominant male. Groups live in a common burrow that can be fairly large with multiple openings constructed on the edge of waterways and steep banks. Groups display cooperative behaviors including nursing in groups, allogrooming, and alarm calls to alert the group of danger Foraging is the unsurprisingly the major activity for nutria that takes up 87% of their time and nutria often vocalize while feeding by grunting or mooing to indicate a feeding time to other nutria, while they are observed swimming or walking 6% of the time, grooming 2% of the time, being vigilant 4% of the time and interacting with others only 1% of the time. Nutria use their group lifestyle to their advantage by huddling together in pre-dawn hours of particularly cold nights and shivering. Intraspecific communication for nutria comes in the form of tactile via body contact while foraging or self- grooming, naso-nasal greetings done by approaching each other nose first and sometimes contacting the noses, and allogrooming.

### Management and Human Conflict

Nutria’s herbivorous diet leads them to consume weeds and overabundant vegetation, but negatively impacts wetlands, crops, and native aquatic vegetation. Nutria create extensive burrows on the edge of waterways that can weaken stream banks, dams, dikes, roadbeds, and can even worsen costal erosion. Due to the potential for damage to human interests’ extensive management programs have been implemented in the US and Europe. The Coastwide Nutria Control Program headed by Louisiana Department of Wildlife and Fisheries (LDWF) offers a \$6 bounty per nutria tail with the hopes of motivating private trappers to target the invasive nutria. The Nutria Eradication and Control Act of 2003 allocates federal funds of \$6,000,000 to be appropriated to Maryland and Louisiana through the 2008 fiscal year and has since been extended to 2025 and now includes allocation of funds to wetlands, costal marshes and agricultural lands. In general, effective nutria eradication projects must take place while nutria populations are still small, so management programs in areas with extensive damage are generally just that, management programs, not eradication projects. Nutria also host several diseases and external parasites that are potentially dangerous to humans and managers aim to minimize human-nutria contact.



Species: Myocastor coypus  
Selected Climate Stations  
Nutria’s distribution shown in Red



Common types of nutria damage. A)Herbivory leading to habitat destruction B) Burrowing leading to bank destabilization and erosion C) Parasite and pathogen transport leading to potential transmission to humans