Invasive Nutria *Myocastor coypus*

MEES718I

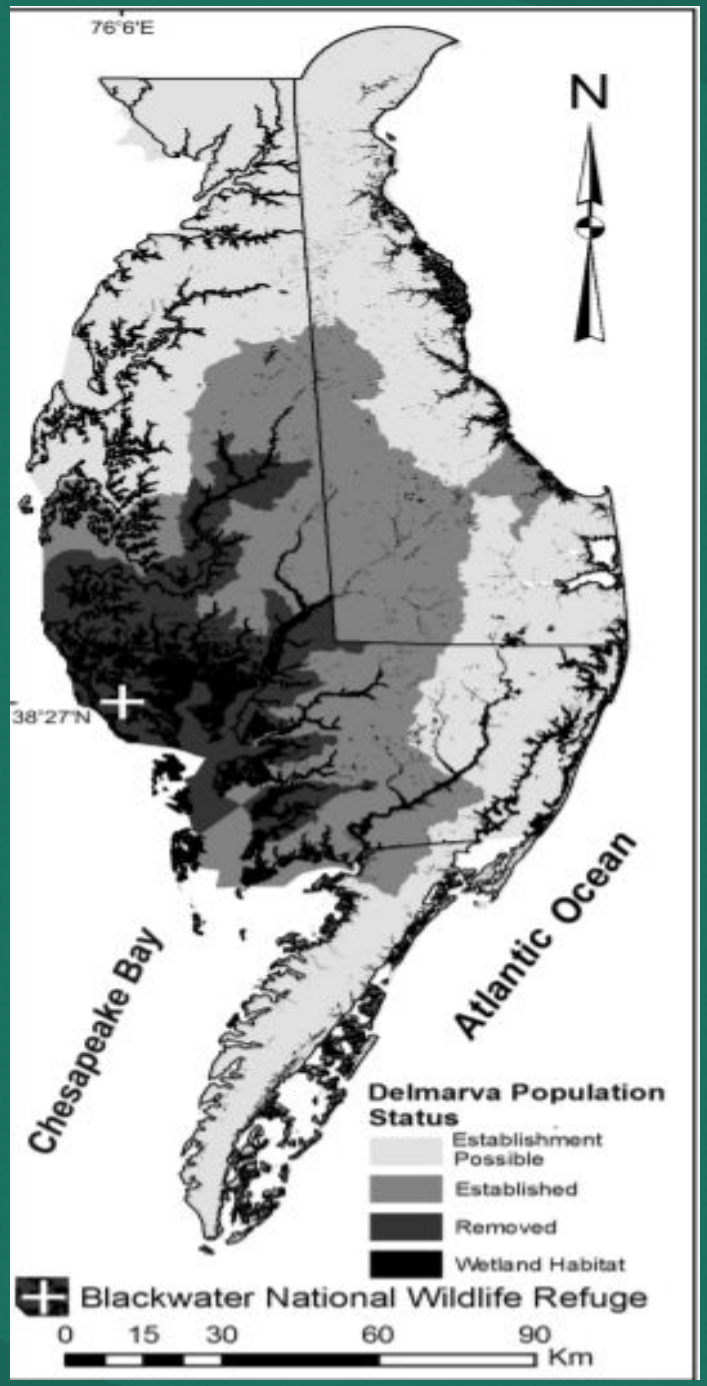
Owen Skirtich

Background

- Scientific name: *Myocastor coypus*
- Native range: South America
- Life history traits (Holm et al. 2011)(Wilner et al. 1929):
  - Sexual maturity between 4-8 months
  - Breeding season is the whole year
  - Number of litters from 3-4
  - Litter size from 1-11
- Diet: Opportunistic herbivores
  - Wasteful feeders (Holm et al. 2011)
- Habitat: Wetlands

Introduction to Maryland

- First introduced in California 1899 (Holm et al 2011)
- Fur farming and weed control
- Introduced to the Delmarva Peninsula 1943 through Dorchester County fur farms (Kendrot 2011)
- Early 2000s, population reached 50,000 (Kendrot 2011)
- Spread to Patuxent and Western Shore Potomac



Becoming Invasive

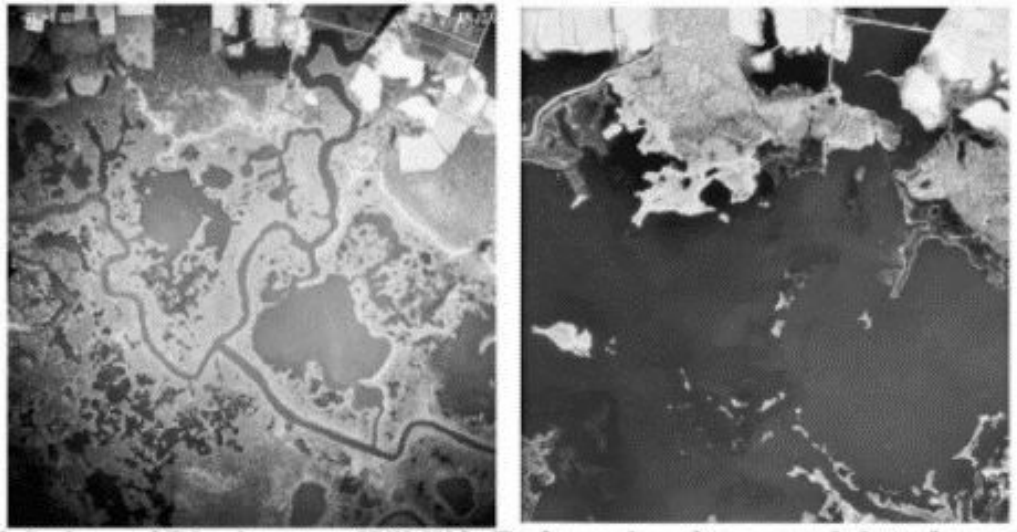


Figure 5.9 Aerial view of Blackwater Wildlife Refuge showing marsh lost from 1939 (left) to 1989 (right). Source: USFWS

- Consume living roots of vegetation
- Reduces anchoring root mat (Pepper et al 2018)
  - Tidal erosion
  - Saltwater intrusion
- Leading to loss of wetland
- Hard recovery of wetland (Jonathan Mcknight)
- Outcompetes native muskrat species (Holm et al. 2011)
- No natural predators
- Blackwater Wildlife Refuge

(SWAP chap 5)

Management Efforts

- Chesapeake Bay Nutria Eradication Project formed in 2002 (Bound Mollet 2000)
- Nutria Control and Eradication Act of 2003 (Pepper et al. 2018)
- 5 step eradication process (Pepper et al. 2018)
  - Survey extent of population
  - "Knock-down" first removal
  - "Mop-up" removal of missed or repopulated
  - Verification, monitoring after removal
  - Surveillance, large scale monitoring
- Judas Project (Tracking devices) (Nolfo & Hammond 2010)

Figure 1. Map of the Delmarva Peninsula with monitoring areas outline and numbered. Each monitoring area was scheduled to be visited at least 3 times during 3 different seasons. If during the saturation monitoring effort nutria were detected, the whole process was reset.

Management Technology

Monitoring

- On foot surveys
- Watercraft surveys
- Monitoring platforms
- Hair snares (Kerr & Dawson 2013)
- Canine (Long et al. 2007)

(Pepper et al 2018)

Removal

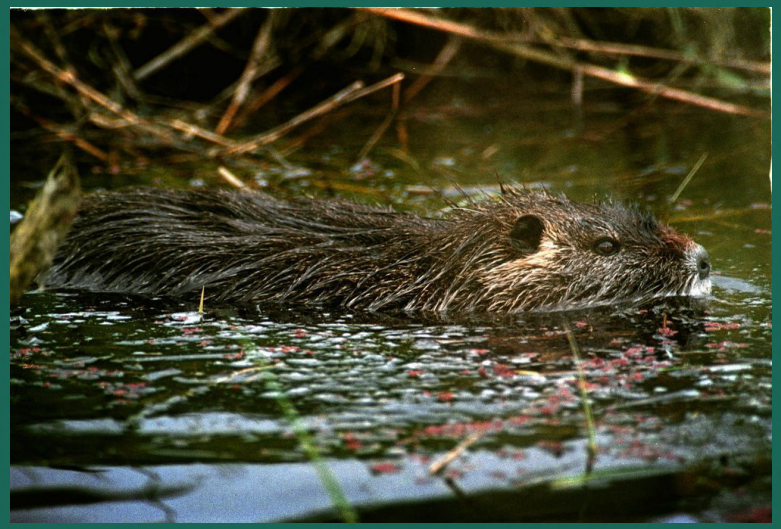
- Traps (Effective in Knock down stage)
  - Cages/boxes
  - Restraints/snares
  - Baits and Lures
- Hunters (Effective in Mop up stage)
  - Canines (Long et al. 2007)

(Pepper et al 2018)

Cheapeake Bay Nutria Eraditcation Project. (2020).

Can you spot the Nutria?

A



B

C

Management Today

- Jonathan McKnight
  - DNR Representative for Nutria Management Team
- Federal Funding mainly
- Low Likelihood of Nutria
- “If you can put 20 people out for 10 years, turns out you can knock out that population completely.”
- Public surveillance
  - “People can’t tell a Nutria from a shoe.”

Next Steps

Evaluate public knowledge of Nutria

Inform public

Environmental DNA for remote detection

"It's hard to detect Nutria if there are 2 or 3, which can still cause major damage."

Relocating to high population areas

Still Nutria issues in Virginia

In the process of relocating to southern Delmarva


Questions?

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