

Mammal Management and Diseases In Delaware



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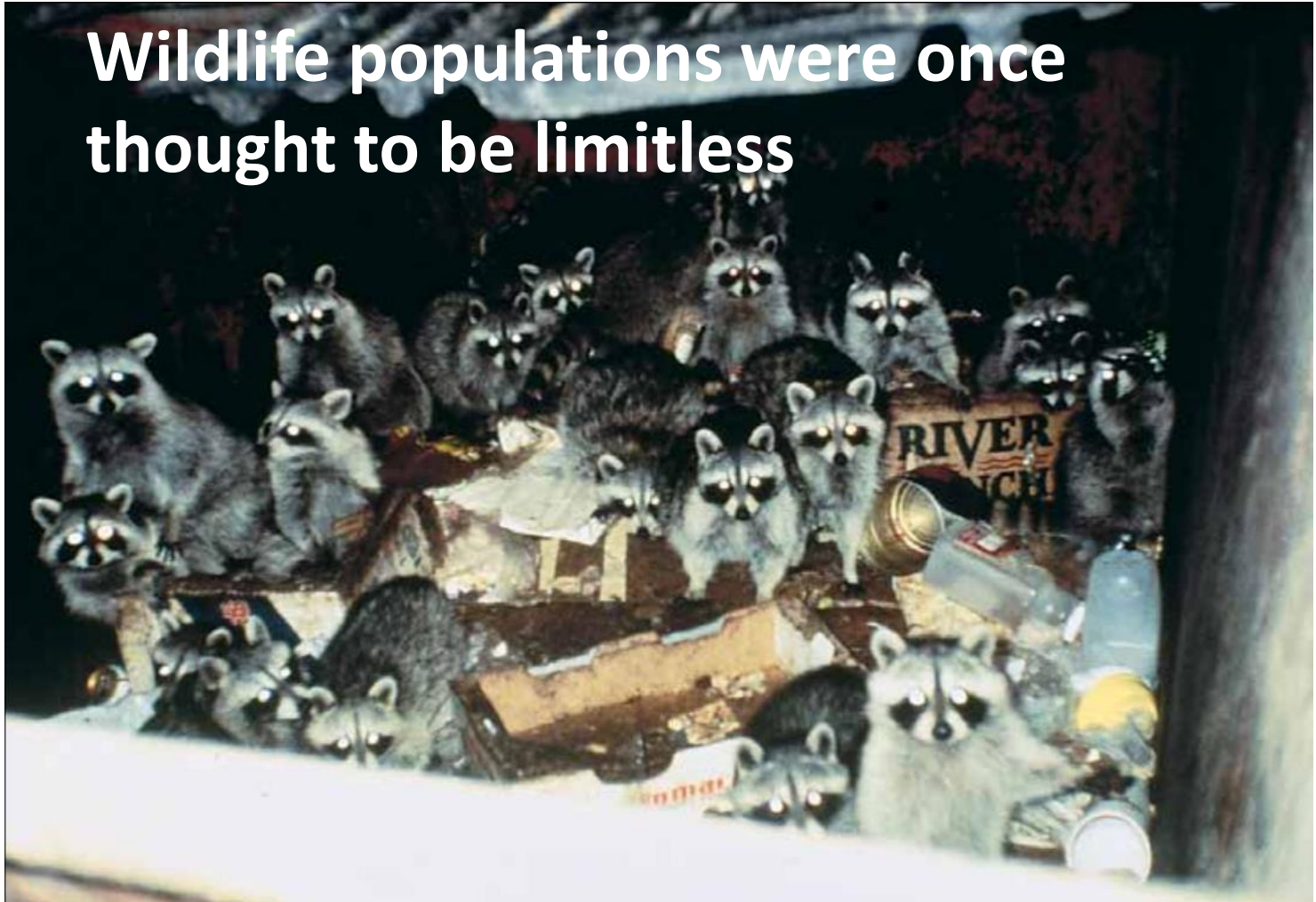
Delaware Division of Fish & Wildlife

We Bring you Delaware's Great Outdoors Through science and Service



Era of Abundance (1600-1849)

Wildlife populations were once thought to be limitless



Era of Exploitation (1850-1899)

Market hunting and uncontrolled harvest drove some wildlife populations to extinction and others to near extinction.



Era of Protection & Game Management (1900-1965)



The federal government initiated laws and regulations to help protect and manage wildlife.

What is Wildlife Management?

The wise use and manipulation of renewable wildlife resources based on scientific fact.

Typically managed according to Game or Non-Game designation.



Game animals

Term refers to animals that are traditionally trapped or hunted for population management purposes and/or recreation.

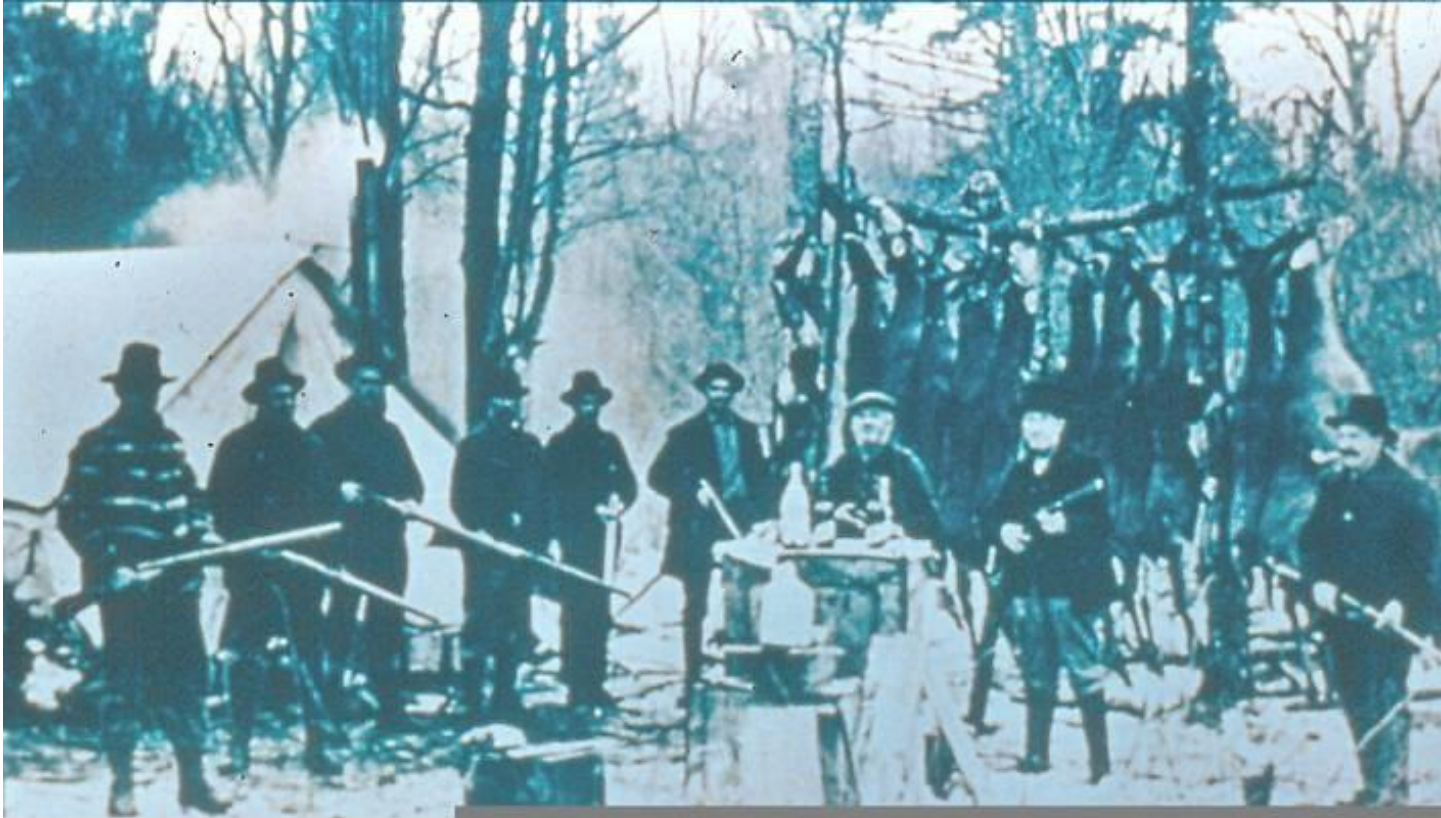


Benefits of hunting/trapping

Harvested game provides biological data for wildlife managers.



Why do we need wildlife management?



Hunting, fishing & trapping must be regulated.

Why do we need wildlife management?

To reduce impacts from habitat loss and degradation on remaining habitat.



Why do we need wildlife management?



To resolve human/wildlife conflicts.

Why do we need wildlife management?

Diseases

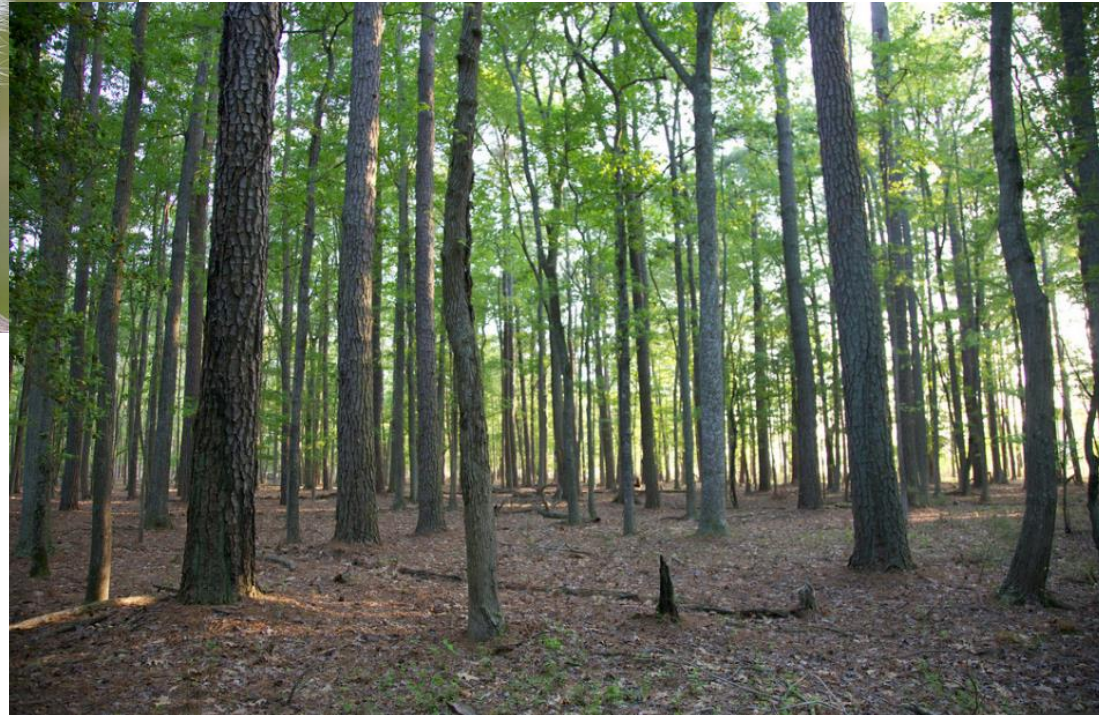


Habitat Management

Creating or enhancing habitats.



Gray Squirrel



Eastern Cottontail



Population Management

Hunting, trapping, handling, etc.



Some wildlife populations need to be enhanced.



Others need to be controlled.



Biological Carrying Capacity - the number of animals a habitat can support.



Cultural Carrying Capacity – the number of individuals that society will tolerate.



The most effective population management tool is regulated hunting/trapping.



Regulated hunting and trapping has never led to the extinction of any species of wildlife in North America



Hunters spend more time, money, and effort on wildlife conservation than any other conservation group....

Benefits of hunting

Harvest surplus animals to maintain populations at healthy levels in balance with habitat and people.



White-Tailed Deer



IMPROVEMENT OF DEER HABITAT

(FRAGMENTATION & DEVELOPMENT = “EDGE”)

PRESERVATION OF GREEN SPACE (PARKS, GREENWAYS)

PROTECTIONISM (REFUGES)

LACK OF PREDATORS (INCLUDING MAN)

RESULTING IN

IMPROVED DEER SURVIVAL

INCREASED DEER LONGEVITY

IMPROVED DEER REPRODUCTIVE SUCCESS

AND

MORE DEER-HUMAN CONFLICTS!

Conflicts With Deer:

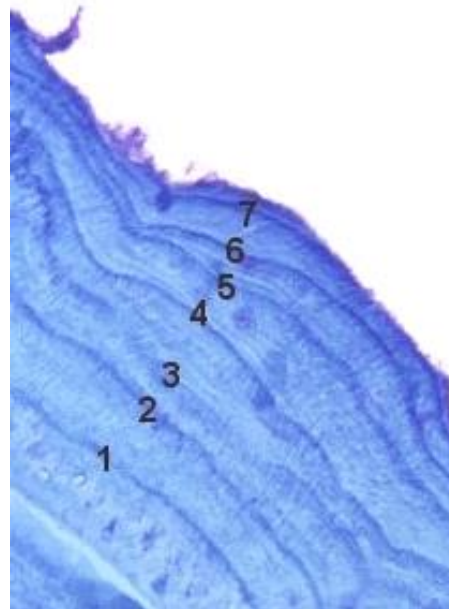
- Damage to Personal Property
 - Deer - Vehicle Collisions
- Disease Transmission to Humans (Lyme)
 - Environmental Damage (Forest Health)

Research

- <https://youtu.be/YWyou8twysE>

White-tailed Deer Hunting

- How can we age deer before after after they are harvested?
 - Tooth wear and replacement
 - Cementum annuli
 - Body characteristics



Furbearers

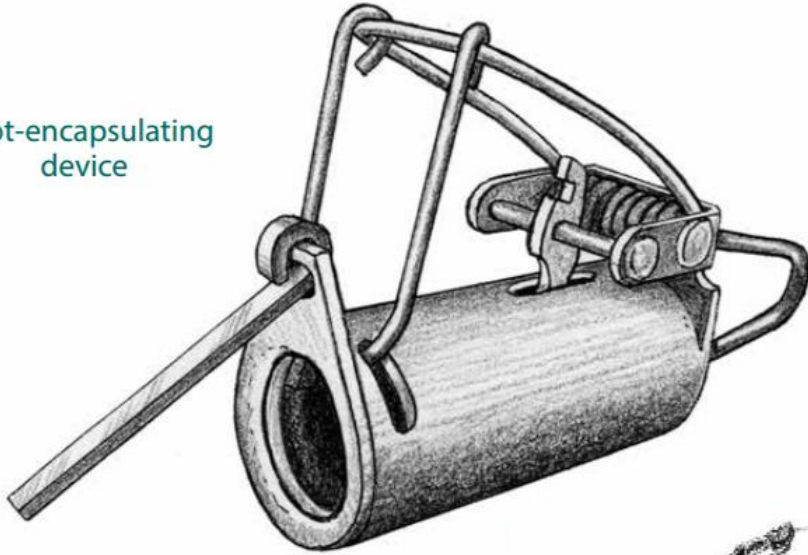


Uses for Furbearers



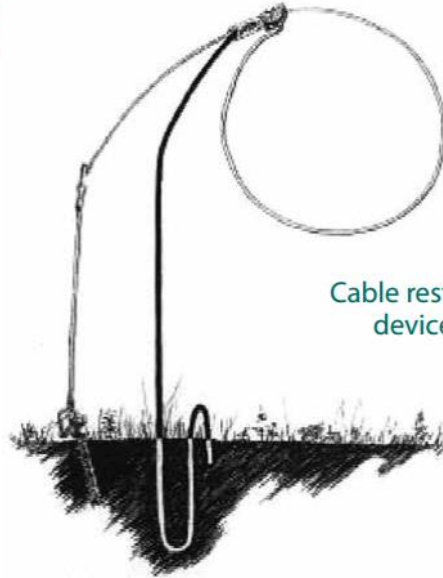
Types of Traps

Foot-encapsulating device



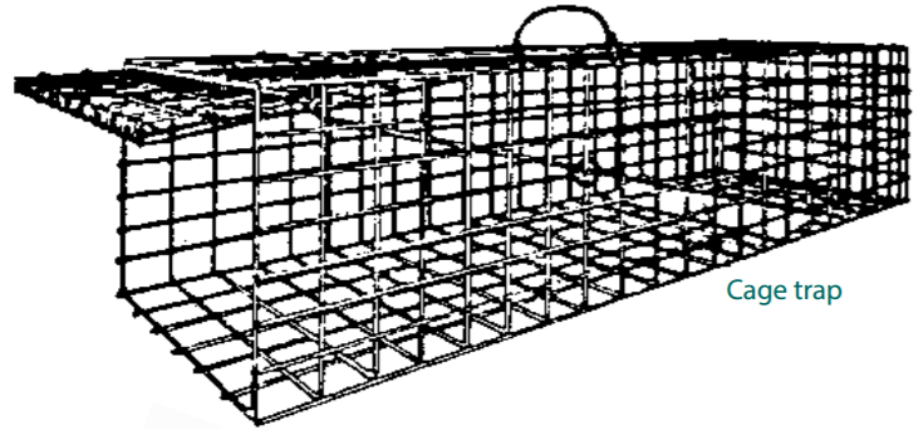
Foothold traps

Cable restraint devices

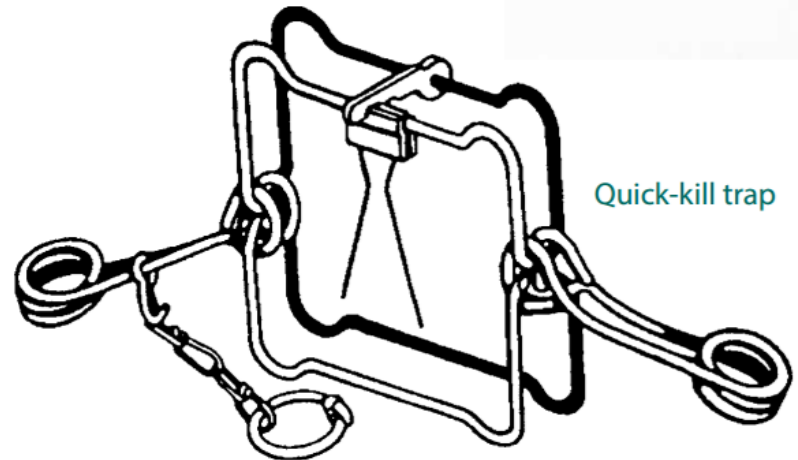


Trap Types

- Used for specific species, situations, and habitats
- **Best Management Practices (BMPs)**
 - Research goes into trap design
- Capture only target animals and hold them humanely or kill them quickly



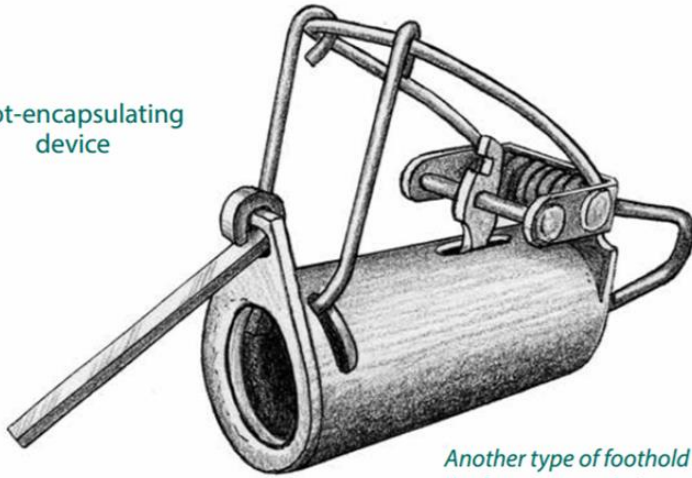
Cage trap



Quick-kill trap

Example

Foot-encapsulating
device



*Another type of foothold design
the foot-encapsulating trap. The:*



Protecting Other Species

Red Fox



Coyote



Mink



Woodchuck/Groundhog



Beaver



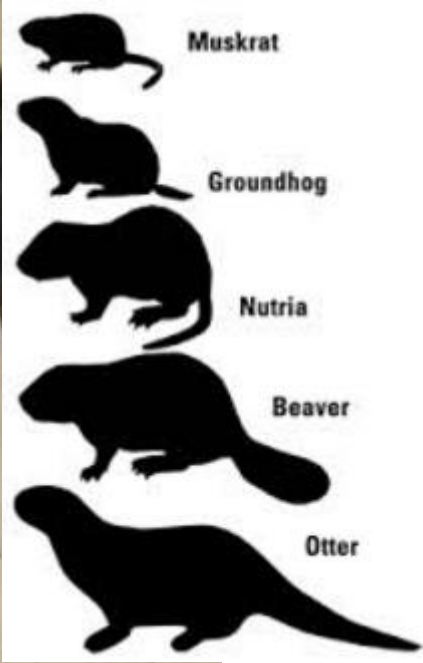
Muskrat



- Lives in marsh habitat
- Important role in Delaware's economic history
 - fur trade and food
- Population seemed endless to early settlers

Nutria





Diseases



Deer Diseases

Epizootic Hemorrhagic Disease – EHD

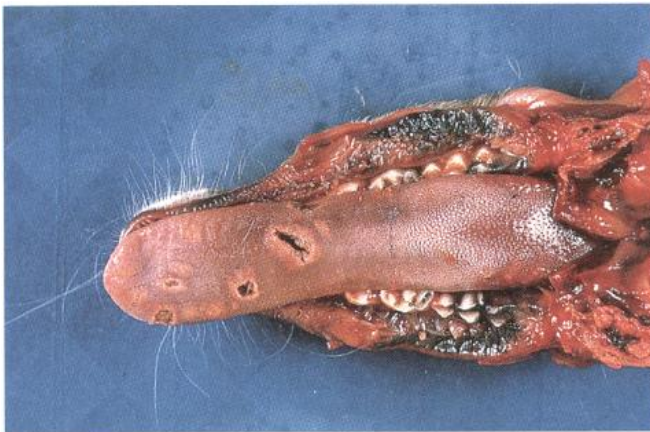
- What is EHD?
 - EHD is an acute, infectious, often fatal, viral disease contracted by some wild ruminants.
 - Characterized by extensive hemorrhages
 - Common throughout the SE U.S. but has been documented throughout the East Coast and much of the Midwest.
 - Spread by midges
 - Most often found near water



Deer Diseases

Epizootic Hemorrhagic Disease – EHD

- Deer population concerns
- Does not infect humans
- Safe to consume meat
- Little concern for livestock



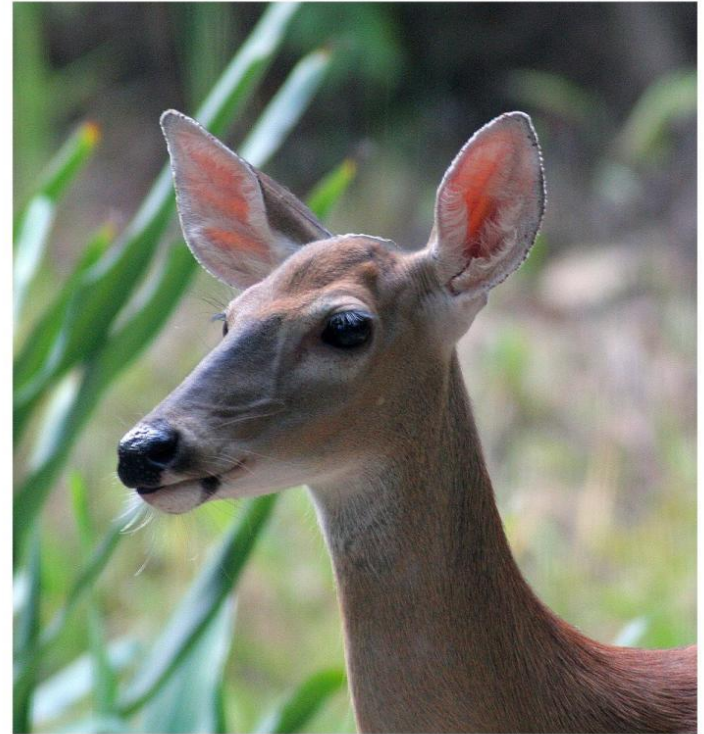
What is CWD?

- CWD is a Transmissible Spongiform Encephalopathy (TSE)
- Caused by prions (abnormal, proteinaceous, infectious particles)
- Body is unable to breakdown these prions.
- Therefore, they collect in nervous tissue, creating small holes, and **ultimately causing death.**



Who Can Contract CWD?

- **NOT Humans**
- Members of the family Cervidae (Deer)
 - White-tailed Deer
 - Mule Deer
 - Elk
 - Moose



CWD Symptoms

- Droopy Ears
- Emaciated
- Slumped Head
- Lack of Coordination
- Excessive Drinking
- Excessive Urination

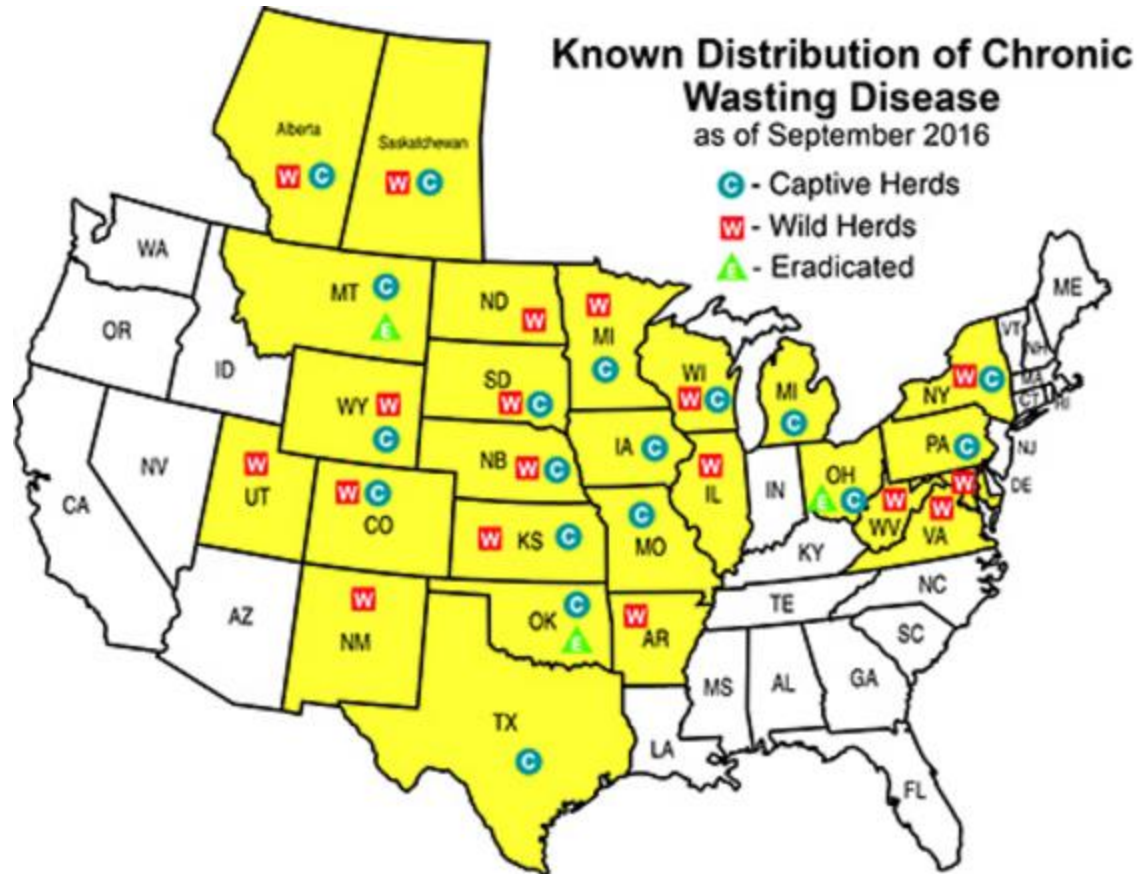


How is it Spread?

- Prions are very resilient
- Excreted through bodily fluid (blood, urine, saliva)
- Both Direct (animal to animal) and Indirect (contaminated environment) transmission are possible.



Distribution of CWD



Bullwinkle

- Swelling of the soft tissue of upper lip
- Cause unknown
- Rare, but has been detected in Delaware



Mange

- Hair loss caused by mites
- Often hairless areas are scabbed over
- Limited treatment options
- Severe cases cause mortality

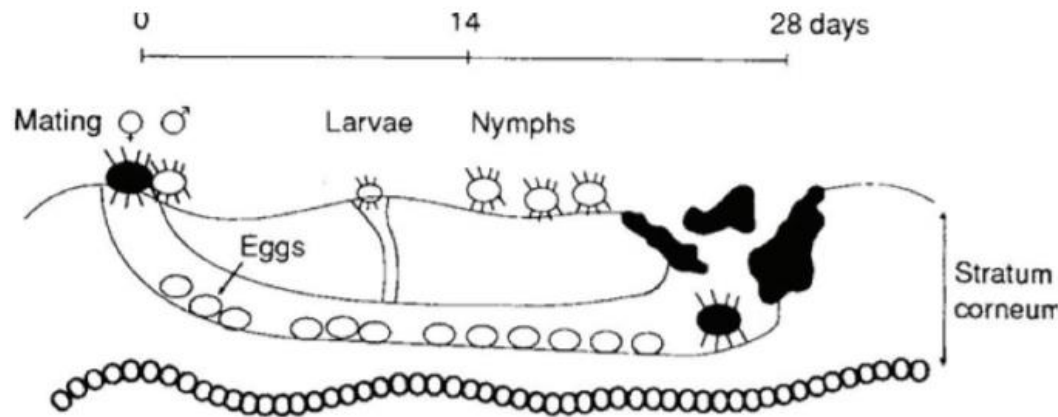


FIG. 5.2—Life cycle of *Sarcoptes scabiei*. (Illustration by R. Isaksson.)

Fibromas

- Wart-like growths caused by virus
- Affects many mammal species including humans
- Only severe cases fatal



Rabies

- Fatal virus that affects the central nervous system
- Effects mammals
 - Most common rabies carriers in the U.S. are raccoons, bats, skunks and foxes
 - In DE, most common species **tested** are bats.
- Spread through saliva. Typically by a bite
- No live test to determine if an animal has the disease
- Found throughout Delaware

Canine Distemper

- Significant virus affecting domestic and wild carnivores
 - Concern for threatened/endangered species
- Vaccine available for domestic dogs
- Virus spreads quickly through densely populated areas



Questions?

