

**Forestry, Wildlife and Fisheries Graduate Seminar**  
"Management of the wildlife rabies epidemic on the eastern seaboard"



Presented by: Ryan Williamson

Wednesday, 16 April 2008



---

---

---

---

---

---

---

---

## Rabies

- I. Symptoms
- II. Management
- III. Monitoring
- IV. Future Plans

---

---

---

---

---

---

---

---

## What is Rabies?

Viral zoonotic invasive disease

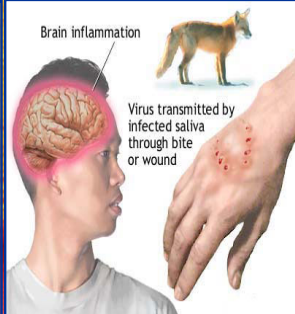
Acute Encephalitis (brain inflammation)

Central Nervous System

Symptoms occur after 20-60 days

- Loss of consciousness
- Fever
- Headache
- Insomnia
- Anxiety
- Foaming of the mouth

Fatal if left untreated



---

---

---

---

---

---

---

---

## Symptoms of the Rabid Animal

- 1st Prodromal, 1-3 days
- 2nd Furious, 3-4 days
- 3rd Paralytic, 4-7 days

Direct  
Fluorescent  
antibody test  
(dFA)

Intact Brain




---

---

---

---

---

---

---


---

---

---

---

---



Past 30 years wildlife replacing domestic dogs as primary host

Cost of living with Rabies ≈\$300 million/yr

Detection, Prevention, and Control

### Management

Cases of Animal Rabies, 1955-2001

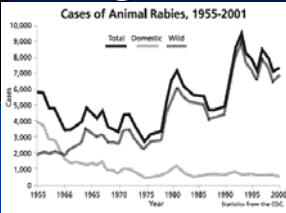


Figure 2.

Rabies in Wild Animals, 1955-2001

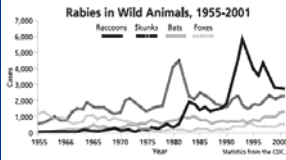


Figure 3.

---

---

---

---

---

---

---

---

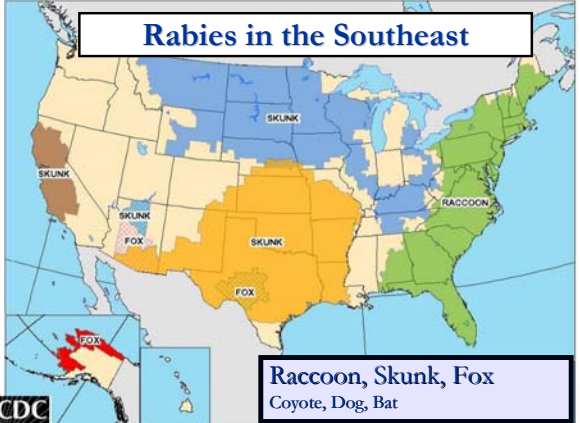
---

---

---

---

### Rabies in the Southeast



Raccoon, Skunk, Fox  
Coyote, Dog, Bat

---

---

---

---

---

---

---

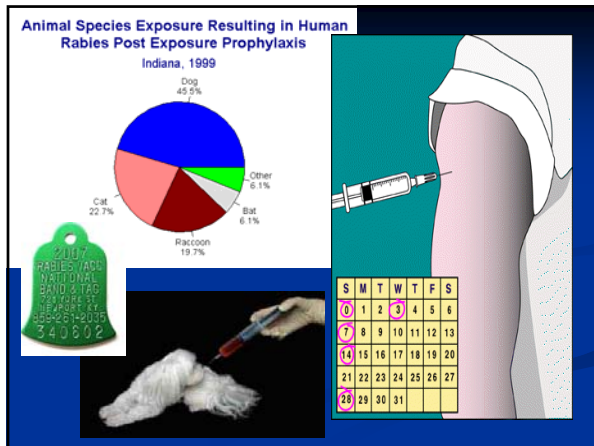
---

---

---

---

---




---

---

---

---

---

---

---

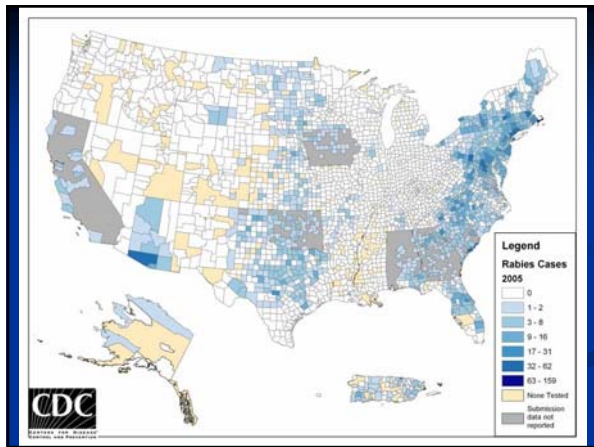
---

---

---

---

---




---

---

---

---

---

---

---

---

---

---

---

---

**Oral Rabies Vaccine (ORV)**

Raboral V-RG®  
Rabies vaccine

---

9 mil : 2005  
15 states



FISHMEAL POLYMER-BASED BAIT CONTAINING VACCINE



COATED SACHET CONTAINING VACCINE

---

---

---

---

---

---

---

---

---

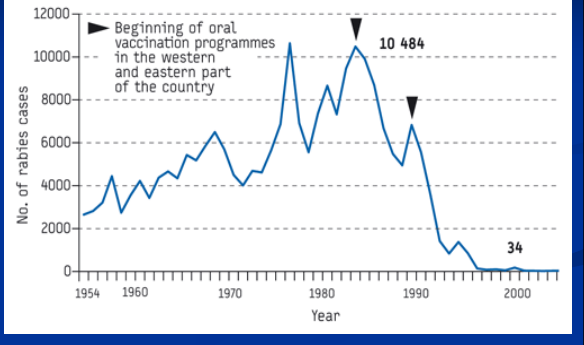
---

---

---

FIGURE 1

Development of sylvatic rabies (fox mediated rabies) in Germany, 1954-2005



---

---

---

---

---

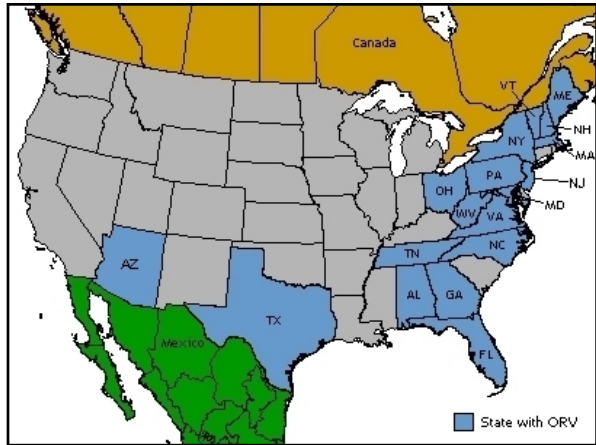
---

---

---

---

---



---

---

---

---

---

---

---

---

---

---

**ORV**

- Safe for 60 species
- Biomarker
- Distribution



---

---

---

---

---

---

---

---

---

---




---



---



---



---



---



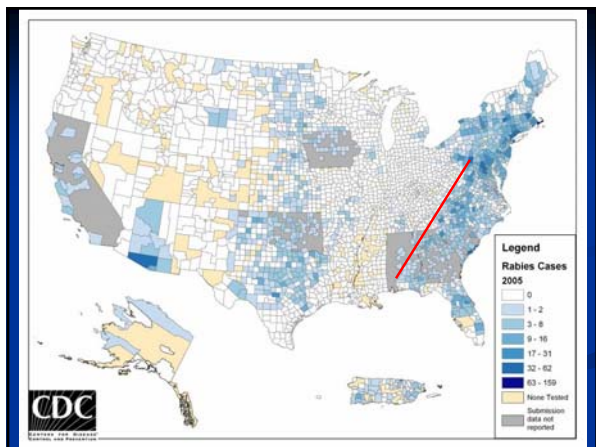
---



---



---




---



---



---



---



---



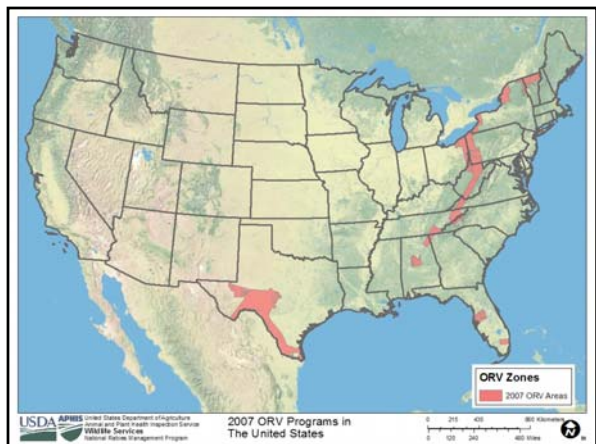
---



---



---




---



---



---



---



---



---

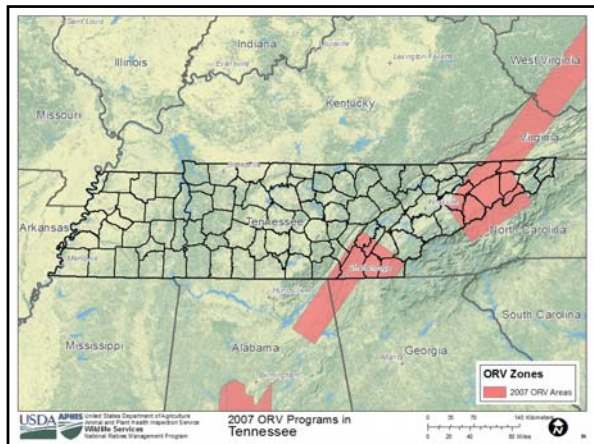


---



---






---

---

---

---

---

---

---

---


---

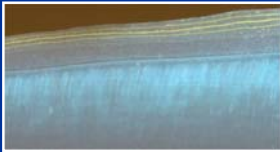
---

---

---

## Monitoring



Trap

Immobilize

Molar extraction

Draw blood

---

---

---

---

---

---

---

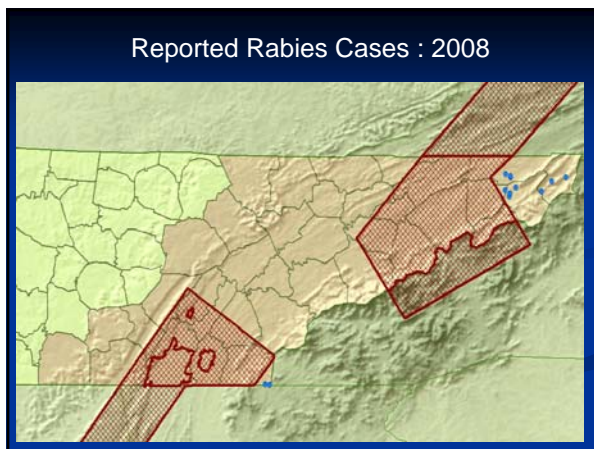
---

---

---

---

---




---

---

---

---

---

---

---

---

---

---

---

---

## Long Term Plans

- Shifting ORV zone 5 miles east on a yearly basis
- Seeking new ways to improve treatment

---

---

---

---

---

---

---

---

## Questions



---

---

---

---

---

---

---

---