

## Bryan Richards - Chronic Wasting Disease (CWD)

- Works at USGS National Wildlife Health Center
- Deer Capstone Class w/ Prof. Van Deelen
- Recommended Reading:
  - Morens, Folkers, and Fauci 2004. Nature
- Most new infectious diseases that affect humans have roots in wildlife
- Wildlife Disease Management
  - Prevention!
  - Minimize spread
  - Monitor for new outbreaks
  - Manage infection rates
  - Support research
- **Chronic Wasting Disease:**
- CWD characteristics
  - Geographic spread
  - Increasing local prevalence
  - Kills deer early in their lifespan
- Consequences (long-term)
  - Population decline
  - Herd demographic shifts
  - Hunter behavior changes
- Characteristics
  - Prion disease
  - Progressive neurological degeneration
  - 100% fatal
  - Contagious
  - Incubation period: 2 years (Carrier)
  - Only post-mortem tests, no vaccinations or genetic resistance present currently
- Outcome
  - Increased susceptibility to other causes of death
- Management tools
  - Surveillance
  - Future...?
    - Vaccines
    - Genetic resistance
    - Disinfectants
    - Better identify & remove CWD positive individuals
- Why are we failing?
  - Wildlife management
    - Habitat, population, and people management

- Issues
  - Misinformation!
- Promote safe hunting & testing for CWD
  - In WI, hunters can kill one buck, even though they are the ones that carry CWD the most
- Males act as disease sinks and spreaders
  
- **Wolves & CWD:**
- More hunting wolf kills this season
- Poor use/lack there of science-based evidence
- Could predators impact CWD demographics?
  - Could possibly actively select for CWD positive deer, because they're easier to hunt

#### Q & A

- Prion diseases typically stay within their one host species; Canids do not develop any prion diseases