

Wildlife and VBDs – Dr. Cindy Driscoll

- a) One Health and disease interfaces
 - i) Environment and Wildlife EID
 - ii) Domestic Animal EID
 - iii) Human EID
- b) Routes of transmission
 - i) Water
 - ii) Touch
 - iii) Vectors
- c) EIDs
 - i) 60% are zoonotic
 - ii) 72% have wildlife origins
 - iii) Threats to biodiversity and human health
 - iv) Hotspots for emerging diseases
 - (1) USGS
 - (2) CDC
 - v) Potential for disease is due to changes
 - vi) Climate changes is a part of this
- d) Climate change
 - i) Environmental and Energy Study Institute
 - ii) USGS
 - iii) NFWS
- e) Impacts
 - i) Changing habitat
 - ii) Changing migration patterns
 - iii) Changes in range and distribution
 - iv) Increases in numbers of vectors
- f) Wildlife VBDs
 - i) WNV is still here
 - ii) EEE has had an impact on some of the endangered species and can be highly virulent in exotic birds
 - (1) Neurotropic
 - (2) Viscerotropic
 - iii) EHD (Epizootic Hemorrhagic Disease)
 - (1) Vector - biting midges
 - (2) Host - deer and cattle
 - (3) New serotypes being found
 - iv) Deer fibroma
 - (1) Transmitted by insect bites and trauma
 - (2) Growths on deer
 - v) Tularemia
 - (1) Transmitted by a variety of vectors and by direct contact
 - (2) Affects rabbits
 - (3) Human pathogen (select agent)
 - (4) Incidence has gone down

- (5) 2013 - outbreak at the Maryland beagle club
 - (a) No human or dog cases
 - (b) Lots of rabbits dead
 - (c) Outbreak stopped with onset of cold weather
- vi) Pox virus
 - (1) Lesions on birds
 - (2) Transmitted by mosquitoes and midges
- vii) Vesicular stomatitis
- viii) Heartworm - wild animals are not considered a reservoir
- g) Resources
 - i) One Health Bulletin - Maryland (<http://mda.maryland.gov/animalHealth/Pages/md-one-health.aspx>)
 - ii) Field Manual of Wildlife Diseases - USGS
 - iii) Field Manual for Wildlife Disease of the Southeastern US - SCWDS website