Ectoparasite of White-tailed Deer

Andrew N. Cartoceti DVM
Southeastern Cooperative Wildlife Disease Study

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History/Signalment

- White-tailed deer
  \((Odocoileus\ virginianus)\)
- Southern TN in late December/early January
- Reports of Cheetos staining on face
- Otherwise healthy
- Ears and skin of the face submitted
Gross Lesions

- Fine, orange, granular material
- Skin roughened and crusting
- Alopecia
- Around muzzle, eyes and ears most affected
Gross Lesions

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Gross Lesions
Gross Lesions
A Closer Look...

- Orange
- Round-bodied
- Six legs (larval stage)
- Piercing mouthparts

[Images of Neotrombicula microti and Neotrombicula sp.]
Histopathology

Many mites attached to surface of epidermis by mouthparts
Mite Morphology

- Thin exoskeleton
- Piercing mouthparts (chelicerae)
- GI tract
- Striated skeletal muscle
- Linear feeding tracts
Histopathology

► Tissue reaction

- Acanthosis and epidermal necrosis
- Eosinophils, lymphocytes, plasma cells, macrophages and others in dermis
- Dermal necrosis around feeding tracts
Trombiculidae

- Larvae feed < 1 week
- Nymph and adults are soil micropredators
Feeding

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Likely Genera

- **Eutrombicula spp.**
  - Common in Southeast
  - Light infestation
  - No clinical signs or lesions
  - Pruritis and grossly apparent dermatitis
  - Year-round incidence

- **Neotrombicula spp.**
  - Less common
  - Heavy infestation
  - Pruritis and grossly apparent dermatitis
  - Winter predilection

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Neotrombicula autumnalis

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Disease Impacts

- Typically none
- Heavy infestation may produce crusting, alopecia and pruritis
- Debilitation uncommon
- Rare death in young sheep and albatross chicks
- Vector for scrub typhus in East Asia and South Pacific
References


Little SE, Carmichael KP, Rakich PM: Trombidiosis-induced dermatitis in white-tailed deer (*Odocoileus virginianus*). Vet Pathol 34: 350-352, 1997


Questions

Trombidium holosericeum

Luc Viatour

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