Mites

- 250 species that cause med/vet problems
- Four orders
  - Mesostigmata
  - Prostigmata
  - Astigmata
  - Oribatida
- Ectoparasites of skin, scales, feathers, fur, body cavities, respiratory passages

Adult Mite Morphology

Gnathosoma

Palps

Gonital plate

Idiosoma

Mite Life History
Med/Vet Importance

- Dermatitis
- Skin Invasion
- Allergies
- Fear

Mite-Induced Dermatitis

Chicken or red poultry mite

- Associated with poultry houses, nesting birds around dwellings
- All stages, except larvae, feed on blood
- Chronic infestations cause skin irritation, loss of vigor, reduced egg production
- Dusts and sprays for birds, bedding and buildings

Mite-Induced Dermatitis

Trombiculid mites – chiggers

- Normal hosts: amphibians, birds, mammals, humans incidental hosts
- Attach and feed on skin cells, lymph
- Lesions persist for days
- Repellents, bathing, lotions to relieve itching
Skin-Invading mites
Mange mites
- Skin parasites, live in hair follicles and glands of domestic and wild animals.
- Demodectic mange
  - Dog follicle mite, Demodex canis
  - Infestations around eyes, hair loss
  - Dogs < 1 year old, rarely in cats
  - Most cases are self-limiting, generally life-long immunity
  - Mitaban (amitraz), ivermectin, milbemycin
    - Prescribe only

Skin-Invading Mites
- Human follicle mite Demodex follicularum
  - Occur in hair follicles and sebaceous glands
  - 90-100% of us have follicle mites
  - Occur in regions of forehead, eyelids, nose
  - Rarely cause clinical symptoms

Skin-Invading Mites
Sarcoptic mange – Sarcoptes scabiei
- 9 mites burrow into epidermis
- Host response occurs ~3 weeks after infestation; spreads quickly
- Dermatitis, hair loss, lesions, crusting
Skin-Invading Mites

Psoroptic mange - scab mites

- Domestic livestock, wildlife, companion animals
- Feed on lymph, blood, serous fluids
- Heavy crusting, scab formation, hair/wool loss in cattle and sheep

Skin-Invading Mites

Chorioptic scab mites, *Choriopotes bovis*

- Foot or leg mange
- Domestic livestock – cattle, sheep, horses, goats
- Infested animals usually asymptomatic

Mite-Induced Allergies

House-dust mites

- Primary source of house-dust allergies
- Thrive where RH >65-70%; <50% survive 6-11 days; desiccation-resistant protonymph
- Populations increase in summer, remain constant during winter
- Feed on skin flakes, hair, detritus
- Greatest in humid living quarters wherever dust accumulates
- 5000 mites/g of mattress dust; 10,000 per pillow
House-dust Mite