

SURVEILLANCE FOR PATHOGENS IN FIELD-COLLECTED TICKS

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Why Conduct Fieldwork for Tick-borne Disease?

- Document expanding tick distribution
- Estimate entomologic risk in different geographical areas
- Predict emerging areas of disease risk
- Target areas for educational efforts

Considerations for Tick Surveillance

- **Site selection**
- **Sampling methods**
- **Laboratory methods**
- **Interpretation and dissemination of results**

Site Selection

- **Known or suspected region of tick-borne disease risk**
- **Accessibility**
(e.g., proximity to road, public-owned land)
- **Suitable habitat for ticks**

Site Selection:

Ixodes scapularis Habitat

- **Forest or forest edge (ecotone)**
 - Full canopy
 - Herb and shrub layer
 - Ample leaf litter
 - Well-drained soil
- **Sufficient host abundance**

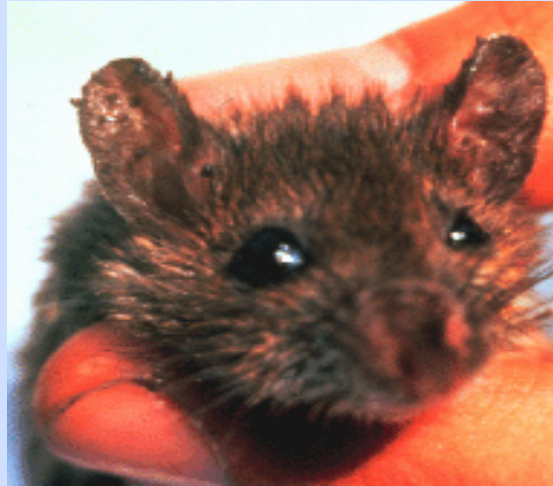


Sampling Host-Seeking Ticks



Sampling Tick Hosts

- **Small mammals**
 - Live trapping



- **Deer**
 - Hunting season



Laboratory Testing of Ticks

- Pools versus individuals
- Detection methods
- Laboratory
 - State health department
 - University or research institution

Discussing Results

- **When presented to the public or physicians, results should be simplified, but with caveats.**
- **Note that tick abundance and infection prevalence can differ among sites and through time.**
- **Share data from public land in ways that do not discourage land managers from permitting research access in the future.**

Challenges

- **Funding**
- **Laboratory capacity**
- **Field staffing and scheduling**
 - **seasonality, travel, weather, training, safety**
- **Communication of results**