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Background
- Several species of ticks are native to the state of Connecticut, including *Ixodes scapularis* (also known as deer or blacklegged ticks), which can transmit Lyme disease.
- Over 3,000 cases of Lyme are reported across the state each year (CDC, 2019)
- While ticks are most often encountered doing recreational activities in wooded areas, ticks can also be found in a variety of landscape types on residential properties.
- There is still a need for effective tick mitigation strategies that are both feasible for homeowners and safe for other species in the ecosystem.

Methods
**Landscape / Vegetation Evaluation:**
- 42 residential properties across Guilford & Branford, CT participated.
- Suitable landscape features were identified at each property and sampled at each visit.
- 7 rounds of sampling were done, starting 5/31 and ending 7/10.
- For each property, the identified landscape features were sampled for ticks through a tick drag (see picture at right).
- All ticks collected were counted and speciated, with nymphs taken back to CAES for future pathogen analysis.
- Average tick densities were calculated by dividing the total number of ticks found by the total area dragged (ticks/square meter, later converted to ticks/hectare).

**Mitigation Strategies Evaluation:**
- Of the 42 properties sampled above, 10 were selected to test the efficacy of a woodchip barrier between wooded areas and the property’s grassy lawn.
- Additionally, 7 areas across 5 properties were cleared using a leaf blower in the fall.
- Controls for each intervention at the chosen sites were established in areas similar to the tested areas.
- Tick sampling and calculations were the same as explained above for the vegetation evaluation.

**Outreach to Homeowners (Deliverable 2):**
- Fact and findings sheets were prepared for 10 households that were the most interested in the study (determined by level of participation with me while I was sampling).
- Study findings were presented in simple language, with results from both an individual’s home and the aggregate data presented.
- Tips and suggestions were catered specifically to homeowners’ expressed needs.

**Reflection & Public Health Takeaways:**
- I was surprised by how much I enjoyed the field work element of my job this summer amazing opportunity to see how multidisciplinary disease management can be!
- Getting to interact with homeowners was great practice of my public health communication skills.
- In addition to the project described above, I assisted with studies looking at pathogen prevalence in mice and COVID antibodies in deer.
- Overall, I would highly recommend looking into vector management opportunities for an outside-the-box practicum opportunity.
- Special thanks to my preceptors, coworkers, and CAES for an incredible summer!