

TickBot Efficacy in Residential and Wildlife Habitats in Portsmouth, VA – Alexis White

- a. Tick 101
 - i. Acarids
 - ii. Egg-larva-nymph-adult
- b. Study
 - i. Flagged sites
 - ii. Lone star ticks dominate field sites
- c. Tick management
 - i. Vectors
 - ii. Finding effective methods is difficult
 - iii. Attracted to CO₂ and movement
 - iv. TickBot
 - 1. Attract ticks to movement and CO₂
 - 2. Ticks coming into contact with permethrin-treated drag die
 - 3. Rapid reduction of ticks
 - 4. Published study -
<http://www.sciencedirect.com/science/article/pii/S1877959X14002118>
- d. 2016 study
 - i. Different types of CO₂
 - ii. Eight trials
 - iii. 2 field sites
 - iv. Mark-recapture ticks before treatment
 - v. Adjacent control/treatment sites
 - vi. 2 different treatment times
 - vii. Results
 - 1. Treated areas – knocked down to zero for 24 hours
 - 2. Solid CO₂ as effective as gaseous CO₂
 - 3. Based off of lone star ticks
 - viii. Future study – look at *Ixodes scapularis*
- e. *Tick lab at ODU is on Facebook*