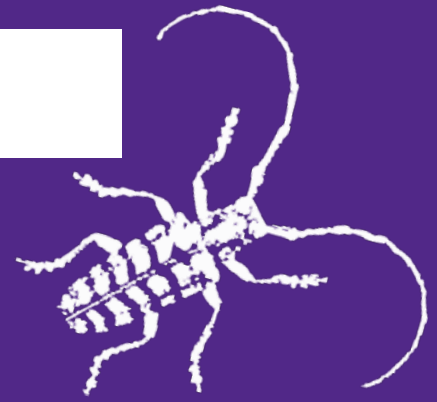


Kansas State University Extension Entomology Newsletter

For Agribusinesses, Applicators, Consultants, Extension Personnel & Homeowners

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April 5, 2024, No. 3

News Corner

- Spring prescribed burning for ectoparasite control

Diagnostic Corner: Kansas Insect ID and Pest Solutions

- Specimen Photography Tips: Specimen Quality and Size
-

NEWS CORNER

Spring prescribed burning for ectoparasite control

Ticks and biting flies are a common problem faced by livestock producers. Since the advent of commercial insecticides and acaricides (compounds designed to kill ticks and mites) production, most pest control programs have focused on controlling pest numbers through on-animal pesticide application. Unfortunately, decades of use are resulting in widescale insecticide resistance and as a result, pest management programs should try and incorporate non-insecticide management strategies wherever possible.

Prescribed burning, also known as controlled burning is the intentional setting of fire to the plants in an ecosystem to improve overall ecosystem health. Burning is traditionally carried out in the spring or late summer/fall depending on the overall goal of burning. Burning will reduce tick and fly numbers however, recent studies carried out at the Kansas State Beef Stocker unit have shown that spring burned pastures contained significantly fewer ticks and in addition, cattle grazed on spring



burned pastures had lower numbers of horn flies throughout the grazing season. Burning in the spring before insects and ticks emerge after overwintering targets them at their most vulnerable stage, before an animal host is found. Although burning alone will not eliminate ectoparasite problems, it decrease populations allowing for a delay or reduction in insecticide use. Tick populations will rebound quickly, and as a result, sustained annual burning will impact populations most significantly. Complete burning of the area is essential, paying particular attention to areas with dense vegetation. Ticks are protected by leaf litter and microclimate produced by trees and shrubs.

For more on this topic: <https://enewsletters.k-state.edu/beeftips/2024/02/28/reducing-tick-populations-through-prescribed-burning/#more-3225>

Cassandra Olds – Veterinary and Medical Entomology

HOME

DIAGNOSTICS CORNER: KANSAS INSECT ID AND PEST SOLUTIONS

Specimen Photography Tips: Specimen Quality and Size

The advancement of cameras on cellphones and other mobile devices has made it possible to capture high quality images of insects and other arthropods quickly and with ease. However, as we've all likely experienced, it is also possible to get poor quality images using these devices as well. When photographing a specimen to submit to our digital diagnostics program, there are several helpful tips that can increase the odds of getting your subject properly and quickly identified. In this issue, we are going to highlight specimen quality and the importance of size.

Specimen Quality

Whenever possible, photographing live subjects is recommended. After death, some arthropods' colors can change, body shape and size can become abnormal and sometimes rapid decay of soft body subjects, like caterpillars (Figure 1), can make identification impossible. Additionally, photographs of crushed specimens or just leftover parts are not likely to be identified.



(c) Kathy Keatley Garvey

Figure 1. Example of a dead caterpillar. Colors and markings are no longer visible. Photo Kathy Keatley Garvey UC ANR.

Specimen Size

While the cameras on mobile devices can have powerful zoom capabilities, they are often no match for specimens $\frac{1}{4}$ of an inch or smaller. Without the use of some magnification device, tiny specimens are not likely to be identified with certainty from most digital photos. It is important to understand that zooming in reduces image quality later when someone tries to enlarge the photo in an attempt to provide an ID (Figure 2).



Figure 2. Photo of a tiny fly taken with maxed out zoom. It is not possible to identify this specimen accurately based on this photo (Photo courtesy KS Insect Diagnostics).

Finally, when possible, try to include something for a size reference such as a coin or small ruler. Many groups of insects can have very similar looking species and often size can help narrow down the identification even better. Reporting that a spider was “large” and hairy can result in a large pool of potential identifications. Instead, comparing the spider to an item of known size (Figure 3) can greatly narrow down the ID.



Figure 3. Photo of a spider taken with and without a size reference. (Photo courtesy KS Insect Diagnostics).

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