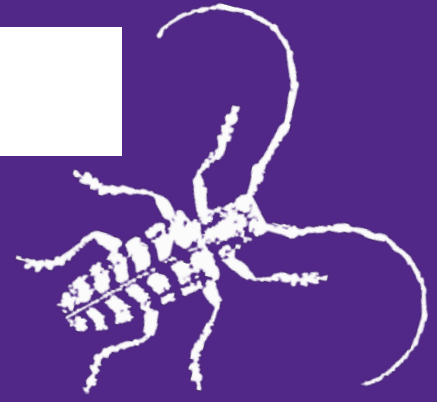


Kansas State University Extension Entomology Newsletter

For Agribusinesses, Applicators, Consultants, Extension Personnel & Homeowners

Department of Entomology
123 West Waters Hall
K-State Research and Extension
Manhattan, Kansas 66506
785-532-5891
<http://blogs.k-state.edu/kansasbugs/>
<http://www.entomology.ksu.edu/extension>



September 15, 2022, No. 19

We Need Your Feedback
Fall brings horse bot flies
Roberts joins the Extension Integrated Pest Management Team

We Need Your Feedback

We would really like to know the value of the Extension Entomology Newsletter to our readership so we are requesting that you provide feedback on what you like, dislike, and what changes we should make to enhance the value of the newsletter to our readership. Please send all comments to Sharon Schroll at sschroll@ksu.edu

Raymond Cloyd – Horticultural Entomologist

[HOME](#)

Fall brings horse bot flies

Horse owners may be noticing the appearance of small yellow eggs laid on the legs of their horses. All four legs can be targeted but higher egg numbers are normally observed on the front legs (Figure 1). These eggs are laid by the horse bot fly, *Gasterophilus intestinalis* (DeGeer) with each female laying between 150 and 1000 eggs! Eggs are glued to the hair shaft and multiple eggs can be laid on a single hair strand (Figure 2).

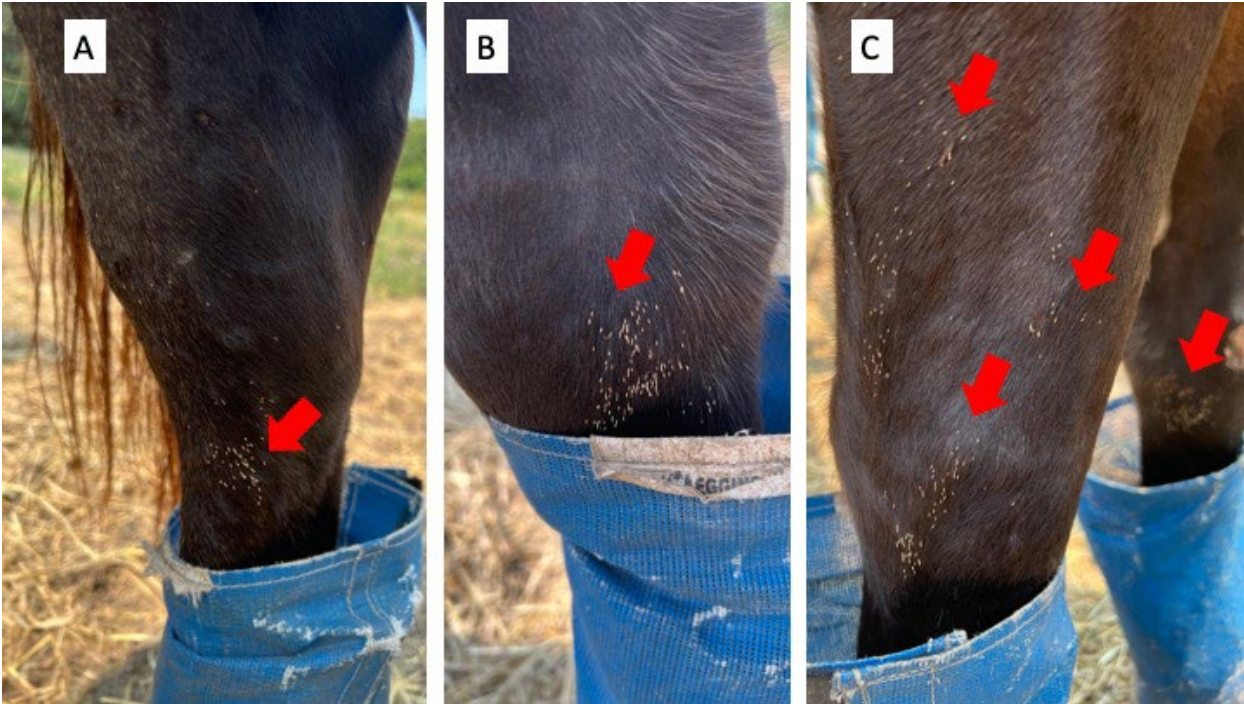


Figure 1: Horse bot fly eggs laid in batches attached to hair on the hind (A) and front (B and C) legs of a horse. This horse had well over 700 eggs in total.



Figure 2: Removed horse bot fly eggs still attached to horse hair. Multiple eggs can be laid on a single hair strand. These eggs were removed prior to hatching as the egg casing remains intact and closed.

Eggs hatch within 10 days, stimulated by horse licking and increased humidity. Larvae enter the horse mouth and imbed in the tissue where they remain for roughly 28 days. After molting, second stage larvae exit mouth tissues and are swallowed, thereby moving the stomach. The larva can remain in the stomach for 9-12 months where it molts into the third and final larval stage. After maturing the third instar detaches from the digestive tract and is passed out in the feces. The larva will burrow into the soil and pupate where it will remain for 1-2 months. As horses tend to create manure piles, the number of flies pupating in an area can become significant. Adult flies can cause significant fly worry, adverse reactions to flies can result in horses injuring themselves trying to escape from attack. Under high numbers, reduced grazing can result in weight loss. Significant mouth irritation can occur when first instar larvae burrow into oral tissue and although horses can tolerate low levels of stomach parasitism, large numbers can cause blockages, colic and reduced nutrient uptake.

Control can be achieved through a combination of sanitation, egg removal and correctly timed oral dewormer. Removing eggs immediately will significantly reduce the risk of a horse consuming larvae and initiating the infestation cycle. A simple and inexpensive (\$3-7) bot egg knife (Figure 3) can be used to physically remove eggs from the legs.



Figure 3: A bot fly knife can be used to remove bot fly eggs from horse hair by scraping downwards with the direction of hair growth.

Deworming one month after eggs were noticed will kill any second instar larvae that may have been consumed and now reside in the stomach. A second round of dewormer can be administered 6 months after the first dose to remove any third instar larvae. Removing manure piles from the site can reduce the number of adult flies emerging.

Cassandra Olds, Livestock and Veterinary Entomology

[HOME](#)

Roberts joins the Extension Integrated Pest Management Team

The Departments of Entomology, Horticulture and Natural Resources, and Plant Pathology would like to welcome Terry Roberts, Training Support Specialist to the Extension Integrated Pest Management Team. She will serve as a vital team member on the Extension Implementation grant and help to us to achieve our project objectives. She will be helping with Extension Master Gardener training, K-State Garden Hour, and Commercial Applicator Training. The team is excited to have her join us!

Terry most recently served as a Program Coordinator for Kansas 4-H Youth Development, where she provided programmatic support for a grant from the Kansas Department of Education. Before this, Roberts managed the Kansas 4-H Online system and provided leadership to various projects within the State 4-H Office. Terry has a passion for serving others, building relationships, and enjoys spending time with her family.



Frannie Miller – Pesticide Safety and IPM Coordinator

Kansas Insect Newsletter

September 15, 2022 No 19

Sincerely,

Raymond A. Cloyd
Professor and Extension Specialist
Horticultural Entomology/Integrated Pest Management
Phone: 785-532-4750
Fax: 785-532-6232
e-mail: rcloyd@ksu.edu

Frannie Miller
Pesticide Safety & IPM Coordinator
Kansas State University
600 W. Woodside
McPherson, KS 67460
Phone: (620) 241-1523
Fax: (620) 241-3407
<http://www.ksre.ksu.edu/pesticides-ipm>

Cassandra Olds
Assistant Professor
Livestock & Veterinary entomology
Phone: (509) 715-7611
e-mail: colds@ksu.edu

KANSAS STATE
UNIVERSITY

Department of Entomology

Kansas State University is committed to making its services, activities and programs accessible to all participants. If you have special requirements due to a physical, vision, or hearing disability, contact *LOCAL NAME, PHONE NUMBER*. (For TDD, contact Michelle White-Godinet, Assistant Director of Affirmative Action, Kansas State University, 785-532-4807.)

Kansas State University Agricultural Experiment Station and Cooperative Extension Service

K-State Research and Extension is an equal opportunity provider and employer. Issued in furtherance of Cooperative Extension Work, Acts of May 8 and June 30, 1914, as amended. Kansas State University, County Extension Councils, Extension Districts, and United States Department of Agriculture Cooperating, , Ernie Minton, Director.