UC RIVERSIDE

DEPARTMENT OF ENTOMOLOGY

ENTM250 Seminar Series

Speaker:

Caleb Hubbard
Ph.D. Entomology
University of California, Riverside

Date: Monday, September 26, 2022
Time: 4:00 pm - 4:50 pm
Format: In-Person Seminar & Virtual Access
Location: Genomics Auditorium 1102A

Zoom: 938 1040 4405
Passcode: 833289

Title:

"Bugs and Bovids: Solving Veterinary Entomology Problems Utilizing Behavior"

Abstract:

Dairy and cattle are top commodities in California, accounting for over 20% of California's agricultural commodity value. Dairy and beef cattle operations are known to regularly produce large numbers of filth flies, including house flies (*Musca domestica*), stable flies (*Stomoxys calcitrans*), and horn flies (*Haematobia irritans*), which develop in manure and feedstuffs. These pests negatively impact animal welfare and contribute to considerable production losses, with estimates exceeding $2 billion annually in the United States alone. The management of these filth fly pests has been a research priority of veterinary entomologists for many decades, but research examining insect and animal behavior is lacking.

Animal behavior is notoriously difficult to study due to a multitude of logistical constraints including limitations on the number of animals a single individual can observe over a short period of time and close-proximity observation of animals altering the animals' "normal" behavior, but technology can be used to streamline and improve these studies. Over the past 35+ years, expensive technology for studying behavior has been inaccessible to all researchers, but this technology has become much more affordable in recent years.

I will discuss several studies I recently conducted that examine the mechanisms conferring behavioral resistance to imidacloprid in the house fly. Additionally, I will highlight our recently funded project investigating the use of on animal sensors to monitor cattle fly-repelling behaviors to improve arthropod management and animal welfare.

Refreshments will be served in the Entomology Building Courtyard at 3:00pm