



RIVERSIDE

DEPARTMENT OF ENTOMOLOGY
Entomology Seminar Series



Speaker:

Fernando Amin Fleites Ayil, Ph. D.
University of California, Riverside

Date: Monday, April 14, 2025

Time: 4:00 pm - 4:50 pm

Format: In-Person Seminar & Virtual Access

Location: Genomics Auditorium, Room 1102A

Zoom: 925 1024 6439

Passcode: 807129

Title:

“Pathogen spillover is a threat for native stingless bees”

Abstract:

Pathogen spillover is a major threat to biodiversity. Insect pollinators, important providers of the ecosystem service of pollination that are in global decline, are no exception to this threat, with mounting evidence of pathogen spillover from managed into wild bee species in temperate regions. The phenomenon is likely global in scope, though poorly documented, and its consequences for recipient species are largely unknown. To address these knowledge gaps, we investigated viral spillover in the neotropics from the honey bee (*Apis mellifera*), where it is a managed and invasive species, into native stingless bees, a biodiverse taxon of pollinators. We furthermore exposed stingless bees to honey bee viruses to test for their impact on host survival. High viral prevalence in honey bees and low prevalence of identical viral haplotypes in stingless bees supports ongoing spillover from managed to native species. The survival of native stingless bees was reduced when inoculated with virus by feeding, a plausible route of natural infection. We conclude that viral spillover from managed to wild insect pollinators is likely a global phenomenon and poses a serious threat worldwide to native insect species.

<https://ucr.zoom.us/j/92510246439?pwd=iHpSNyuGfcwpTDajIS7ObhDNqbRxA6.1>

Refreshments will be served in the Entomology Building at 3:30 pm