

**Speaker:**

Iris Chien

Graduate Student Researcher

Department of Entomology

University of California, Riverside

Date: Monday, Oct. 18, 2021**Time:** 4:00 pm - 4:50 pm**Zoom:** 948 0131 1028**Passcode:** 347039**Title:**“The intricate relationship of the *Euwallacea fornicatus* species complex”**Abstract:**

Cryptic species have always been a complex subject when it comes to identifying species based on morphology. With any attempt to revise the names associated with cryptic taxa, one will have to revisit any synonym related to the complex. Based on variation in DNA sequences, the *Euwallacea fornicatus* (Eichhoff) (Coleoptera: Scolytidae) species complex consists of at least four cryptic species for which six junior synonyms exist. Members of this species complex have shown to be problematic worldwide pests in native landscapes and on valuable crops such as tea and avocados. Their accurate identification is critical to management efforts. A couple of papers have recently been published claiming to solve the issues associated with morphological species delineation in this complex, and assigning names to four of the DNA-based taxa; *E. fornicatus*, *E. fornicator*, *E. perbrevis*, and *E. koroshio*. These papers claim that 80 percent of specimens can be identified using a handful of morphometric measurements, most notably the length of the pronotum and elytra, which are both measured laterally. Two of the species have established populations in California and after noticing that DNA-identified specimens of these Californian populations often failed to meet the morphometric criteria that would yield a corroborating morphological assignment, we reexamined several of the characters using specimens collected from a variety of hosts in Taiwan (part of the native range). We find that plant host and developmental temperature have significant influence on the morphology of these species and lead us to reject morphometric identification methods and as a consequence, also question the validity of the names that have been associated with the taxa.