



Please Join Us For This Year's First

# Graduate Speaker Series



**When:** Friday, September 18th 2020, 12:15pm-1:15pm EST

**Where:** Zoom!

<https://wesleyan.zoom.us/j/92457819883>

Open to the entire Wesleyan community!

**With speaker:** Zachary Drum

PhD candidate in Biology

## *The forbidden fruit: How *Drosophila sechellia* came to love *Morinda citrifolia**



The fruit fly *Drosophila sechellia* is found only on the Seychelles islands off the coast of Africa in the Indian Ocean, and unlike closely related *Drosophila* species has specialized to feed on a single host plant called *Morinda citrifolia*, also known as noni. Ripe noni fruit contains the fatty acid volatiles octanoic acid and hexanoic acid, which are poisonous to other *Drosophila* species. Previous work has found that several genes in the mysterious *Osiris* gene family are involved in the resistance of *D. sechellia* to its toxic host, but how these genes are involved in resistance to these fatty acids is unclear. The Coolon lab uses genetic and genomic tools to better understand this ecological interaction as it serves as a model for how insect crop pests evolve resistance to pesticides and may provide insight on how to combat this economically important problem.