Biology Seminar Series

BIOLOGY GRADUATE STUDENT ASSOCIATION

DEPARTMENT OF BIOLOGICAL SCIENCES

HUMBOLDT STATE UNIVERSITY

New World *Justicia:* A microcosm for understanding covariation of floral traits and pollinators in a phylogenetic context

Friday, November 6th 2020
12:00 p.m. PST
Via **zoom**
Grad student Q&A to follow

Dr. Carrie Kiel

California Botanic Garden

For zoom info, **Please email the B.G.S.A**
BioGrad@humboldt.edu
Q&A exclusive to HSU students

I am fascinated by the rich diversity of flowering plants and the animals that interact with them, and by the idea that these interactions may help explain the remarkable diversity we see today. Flower color, shape, and size can contrast markedly between closely related species, and these traits are often understood to reflect adaptation to pollinators. Micro-structures of flowers, including stamens, stigmas, and pollen, however, have received less attention in the context of plant-pollinator relationships. My work focuses on Neotropical *Justicia* (Acanthaceae: Lamiales) which encompasses extensive variation in flower shape, size, and color, along with remarkable diversity of anther, pollen, and stigma morphology. Morphometric research indicates that, among these plants, micro-structures co-vary in patterns that are correlated with corolla morphology. Importantly, these suites of co-varying traits have evolved multiple times in this lineage, and existing data indicate that distinct corolla shapes are consistent with pollination by particular kinds of animals. My collaborative research takes an integrative, phylogenetic approach that includes quantitative analysis of variation in floral structures (e.g., floral form; anther, pollen, stigma traits) and color, and flower visitor data.