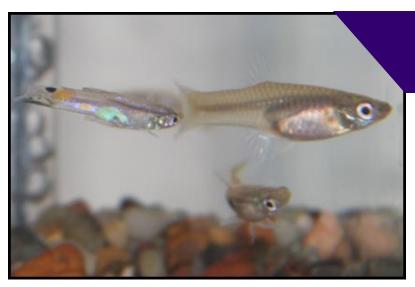


Aubrey Gorbman Endowed Biology Seminar

By: Dr. Kim Hoke

Colorado State University | Associate Professor, Department of Biology http://hokelab.weebly.com/

Mechanistic Flexibility Shapes Behavioral Evolution



Monday, May 02, 2022 HCK 132 | 12:00 PM PST

Genetic, developmental, and physiological mechanisms all impact evolutionary trajectories and hence may shape responses to selection. We examined the extent to which genetic and neural mechanisms limit

behavioral evolution in guppies by leveraging the parallel evolutionary transitions in Trinidadian guppies. Much prior work has characterized the parallel changes in a suite of social and antipredator behaviors that follow independent colonization of low-predation sites by guppies originally from high-predation localities. Genetic, transcriptomic, and functional neuroanatomical studies all indicate that diverse mechanistic changes can mediate parallel behavioral variation, and that this mechanistic flexibility promotes novel phenotypic combinations and rapid behavioral evolution.

Seminar Speaker Host: Sujay Balebail