E&B Seminar Series

SCHOOL OF BIOLOGICAL SCIENCES THE UNIVERSITY OF HONG KONG 香港大學生物科學學院 | SHKU Science | ECOLOGY & BIODIVERSITY

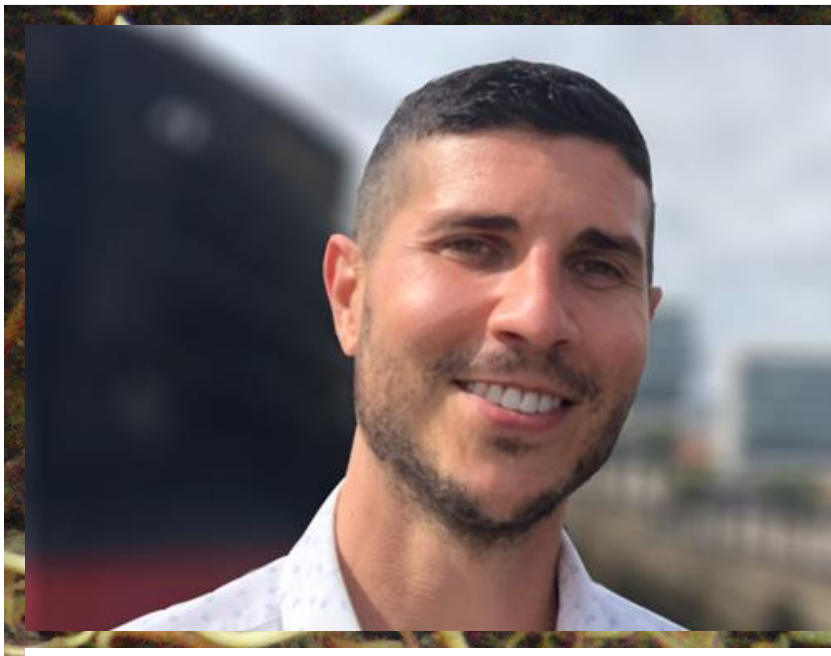
Toxic relationships: The evolution of animal poisons and coevolutionary dynamics

Date	**10th Feb. (Fri.)**
Time	**16:00 (UTC+8)**
Venue	**3N01 & Zoom**

You can also email us to require the Zoom link (check SBS website→NEWS & EVENTS)

All taxa are capable of producing different phenotypes in response to environmental cues. Such plasticity is an adaptive strategy, which can result in the production of induced morphological, behavioral, or chemical traits, thus reducing prey vulnerability. Newts of the genus *Taricha* possess a potent neurotoxin, tetrodotoxin (TTX) that is known to vary at multiple geographic scales. TTX, which is both a defense toxin and alarm cue to conspecifics and prey species, sits at the interface of a generally accepted and unquestioned parallel arms race between newts of the genus *Taricha* and predatory garter snakes of the genus *Thamnophis*. However, it is unclear if *Taricha* produce TTX *de novo* or via symbionts, and what drives observed variation in TTX concentrations between individuals within and between populations. In this talk, Dr. Bucciarelli will discuss arms race coevolution, share results from experimental lab and field work, and present alternative evolutionary models to explain plasticity of animal poison phenotypes.

All are welcome!



Dr. Gary Bucciarelli is associate adjunct professor at the University of California (UC) Davis in the department of wildlife, fish, and conservation biology. He also serves as the director of research at the UC Natural Reserve System (UC NRS) Lassen Volcanic Park Field Station and the director of strategic partnerships for the NRS. Previously, he held an associate adjunct position at UCLA in the department of ecology and evolutionary biology and was director of research for the UCLA Santa Monica Mountains Field Station. Gary earned his PhD at UCLA studying the evolution and ecology of amphibian poisons. His postdoc was a collaboration with the National Park Service and the UC La Kretz Center for California Conservation Science to complete a genomics-based conservation management plan for Los Angeles amphibians living in the worlds largest urban national Park.

Organized by The Biology Graduate Student Association (BGSA)