



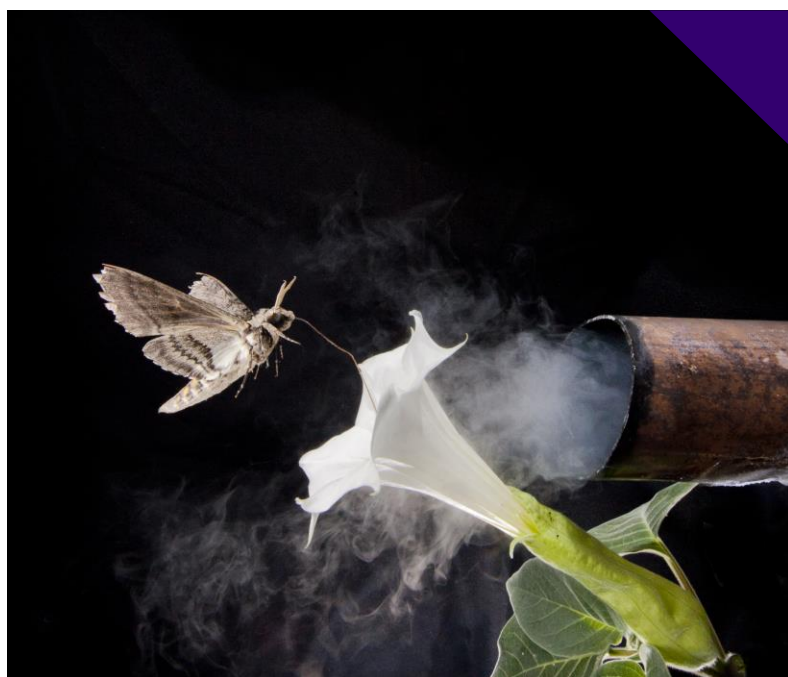
Biology Seminar

By: Dr. Jeff Riffell

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Olfactory pollution in a plant-pollinator system



Monday, November 04, 2019 | 12:00pm
HCK 132 Refreshments at 11:45am

Human actions generate acoustic noise, emanate artificial light and emit chemical substances. All of these pollutants are known to affect animal behaviors, and these pollutants are now thought to have indirect effects on ecological communities. Most studies on anthropogenic pollution address the impact of pollutants affecting visual or auditory sensory systems. For instance, high levels of

anthropogenic noise have been shown to interfere with acoustic signals and cues, and urban light affects migratory animals. However, less is known about how chemical pollutants influence olfactory behaviors. Here in this talk I'll describe some of our work examining how chemical pollutants can degrade and alter olfactory landscapes and how that impacts plant-pollinator interactions. Together, our results suggest that sensory pollution can affect animals in complex ways due to altering of sensory stimuli, neural processing, and behavior.



Biology Seminar

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Intelligence-led forensic science: Combatting the illegal ivory trade amidst a burgeoning world market



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Major transnational organized crimes have grown dramatically over the past decade, coincident with massive increases in legal containerized cargo shipped worldwide. Wildlife traffickers are among those capitalizing on the quantity of shipments to conceal their contraband cargo. This is

depleting targeted non-renewable wildlife populations and their habitat at a frightening pace. Intelligence-led forensic science that capitalizes on genetic divergence between wildlife populations offers a valuable way forward. Genetic divergence can be used to determine the origin of poached material, identify poaching hotspots, and even identify wildlife products derived from the same individual or family group shipped in separate consignments by the same trafficker. This talk describes how our lab uses such genetic tools to track changes in Africa's major ivory poaching hotspots over time, as well as the number, scale and connectivity of the major transnational criminal organizations smuggling ivory out of Africa. These tools enable law enforcement to target the illegal ivory trade before the contraband enters transit where it becomes far more difficult and expensive to trace. They are also empowering financial crime investigations into these criminal networks, which is one of the most powerful tools available to identify, interdict, disrupt and dismantle transnational criminal organizations.

