



# Biology Seminar

Speaker: **Claire Hemingway Ph.D.**

University of Texas at Austin | Postdoctoral Researcher, Department of Integrative Biology

<https://www.thebatsandthebees.com/>

## Decision making in complex environments: Insights from bats and bees



**Monday March 27, 2023**

**12:00PM PST | HCK 132**

Animals are constantly faced with decisions about what to eat, where to live, and whom to mate with. While most models of decision making assume that individuals assign absolute values to options encountered, animals often assess value relative to other options available or to options recently encountered. Such decisions can be complex, often requiring individuals to compare multiple features associated with each option and their reward payoffs. Such decisions can also produce

different outcomes depending on the context of the choice. A consideration of the cognitive mechanisms that produce these biases can help us to understand how and why animals make certain decision in more ecologically realistic scenarios. I study how both internal and external variables jointly influence animal behavior in order to understand the causes and consequences of decision-making biases in animals. To do this, I ask questions across a range of levels and using two systems: bats and bees. I will present recent work exploring the role that internal factors within the animals play in influencing how animals evaluate and choose between options. I will then discuss how decisions play out in more complex, ecologically realistic contexts in which animals actually operate within. My findings shed insight on general processes of reward perception and decision-making in animals.

