



Evolutionary ecology of social networks and risk-taking in mammals: from hyenas to ground squirrels

Dr. Jennifer Smith, Friday, December 4, 2020

3:00 – 4:00 PM, Zoom Virtual meeting room

Presentation: Many species aggregate when doing so is beneficial but social animals must balance the costs and benefits of group-living. My research focuses on the ways that animal social structures emerge from repeated interactions over time and the extent to which the rules governing social interactions vary by ecological contexts. In this talk, I draw from two long-term studies on free-living social mammals to addressing three major questions. First, I examine the role of resource limitation in shaping social networks in a social carnivore, the spotted hyenas. Second, I explore the extent does risk-taking vary by social and ecological contexts in the California ground squirrel. Finally, I combined automated sensing technology with ecological monitoring to examine the social worlds of squirrels in two major situations - life above and belowground - to uncover consistent individual differences in sociality across time and ecological contexts. Taken together, this work reveals the general rules governing social interactions across ecological contexts. Whereas we document the dynamic responses of mammalian social networks to changing ecological conditions, individuals possess consistent social preferences and individual differences in sociality that are relatively consistent across time and ecological contexts.

About the speaker: Jennifer Smith is a behavioral ecologist whose research integrates perspectives from evolutionary biology, animal behavior, genetics, physiology and urban ecology in an effort to understand how natural selection and current conditions shape decision-making in mammals. As leader of the Long-term Study on the Behavioral Ecology of California ground squirrels, Smith's team of undergraduates at Mills College, Oakland California, combines naturalistic observations with field experiments, genetic and endocrine analyses, and social network statistics to test evolutionary theory. Smith is also internationally recognized for her comparative research on social lives of mammals, especially those of carnivores. This work reveals the evolutionary and ecological forces favoring leadership and cooperation. Her recent career awards for excellence in teaching and mentoring include those from the Animal Behavior Society and Phi Beta Kappa.



Seminar information: This seminar will be held virtually via Zoom. To log into the seminar please use the following web link:

<https://fresnostate.zoom.us/j/93828128141?pwd=K2NuaEEeTGpLVWwM0N2lvWnpETHMyQT09>

Passcode: 542050