



Building a Science of the Sociome: Tracking how individual interactions scale to complex societies

Nov. 9th (Tuesday): 11am ET

Prof. Meg Crofoot



For many animals, ecological and evolutionary success depends not only on the characteristics or decisions of lone individuals, but also on what happens when groups of individuals come together and interact.

These collective behaviors and traits can transform the social landscape, giving rise to novel selective pressures that drive the evolution of social complexity. To understand how structured animal societies emerge and function, we need a common framework for quantifying the interactions—from dyad to group to population—that comprise the “sociome”. Technological innovations—from satellite-based tracking and proximity loggers to drones and computer vision—can generate vast quantities of detailed, noisy data about individual behavior in social contexts, creating new opportunities to map the relationships that structure animal societies. However, our ability to collect data is quickly outstripping our ability to extract biological insight. In this talk, I will discuss the analytical, experimental and technological methods we are developing to harness these tools of our digital age, and illustrate how we are using these approaches to monitor, measure and experimentally manipulate wild animal societies in ecologically and evolutionarily relevant field settings.

Dr. Margaret Crofoot is a behavioral ecologist and evolutionary anthropologist studying the evolution of social complexity through a combination of observational methods and field-based experiments with emerging remote sensing technology. She studied Human Biology at Stanford University (1997-2001) and received her Masters (2003) and PhD (2008) in Anthropology from Harvard University. Following a postdoctoral fellowship at the Smithsonian Tropical Research Institute and the Max Planck Institute for Ornithology (2008-2013), Dr. Crofoot moved to the University of California, Davis as an Assistant Professor (2013-2017) and then Associate Professor (2017-2019). She became a Director at the Max Planck Institute of Animal Behavior and Full Professor at the University of Konstanz in 2019. In recognition of her scientific accomplishments, Dr. Crofoot has been honored with a number of awards including the Packard Fellowship in Science and Engineering (2016) and the Alexander von Humboldt Professorship (2018).

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