Evolutionary genetics of wild and domesticated plants

My research is focused on understanding the evolutionary genetics of wild and domesticated plants, in particular their responses to natural and artificial selective pressures. Artificial selection is the driver of plant domestication, and the resulting crops have historically provided excellent study systems for understanding plant evolutionary genetics. In this talk, I will discuss the genomic evidence for parallel domestication in Asian and African rice and its implications for our understanding of the domestication process, and also how patterns of genetic diversity in domesticated apples differ from the standard model for plant domestication developed in annual plants. In a natural setting, I will also describe my genomic work on wild populations of the arctic relict species Euphrasia hudsoniana and implications for its conservation in the face of secondary contact with an invasive congener. Overall, this talk will demonstrate the breadth of my lab's research in plant evolutionary genetics and its contribution to the field, as well as giving audience members a view of my plans for future work in this area.