

## ***Does the removal of macroparasites have an effect on the microparasite community in Bighorn sheep?***

Concurrent infections with multiple parasite species is common in both domestic and wild animals. Coinfecting parasites can interact in multiple ways, and how parasites interact within the host can affect parasite transmission, disease severity and alter disease control strategies. It is therefore important to understand how parasites interact within the host as this can help us predict how the removal of one target parasite affects the remaining parasite communities and what effect this may have on host health. We performed a parasite perturbation experiment in a population of Bighorn sheep (*Ovis canadensis*) in Southeast Oregon, by using a long lasting anthelmintic to suppress nematodes and monitoring the effect this had on non-target parasite species. We found an increase in both the abundance and prevalence of coccidia in response to deworming. We also found sex differences, as males had higher oocyst counts than females following treatment. Our results demonstrate an experimental interaction between helminths and coinfecting parasites in a wild ungulate and show the importance of understanding the wider consequences of drug treatments.