

**Agency**

South Dakota State University

**Location**

South Dakota State University in Brookings, SD and the Badlands

**Job Category**

Graduate Assistantship

**Salary**

Stipend is approximately \$19,600 per year plus full tuition waiver.

**Start Date**

9/01/2022

**Last Date to Apply**

8/15/2022

**Description**

South Dakota State University and South Dakota Department of Game, Fish and Parks, in conjunction with Badlands National Park, and Oglala Sioux Parks and Recreation Authority (OSPRA) are recruiting a motivated M.S. student to explore the role of chronic carriers of *Mycoplasma ovipneumoniae* in respiratory disease persistence and transmission, and annual lamb recruitment in bighorn sheep. The objectives include: 1) Assess the efficacy of obtaining serial samples for classing free-ranging bighorn sheep as chronic carriers, indeterminate carriers, or negatives (non-carriers) in Badlands and OSPRA sheep herds, 2) Determine if bighorn sheep ewes surviving a past respiratory disease epizootic in Badlands and OSPRA sheep herds as pathogen carriers exhibit differences in physical appearance and/or behaviors that are correlated with pathogen shedding status, 3) Determine if removal of individuals that exhibit pathogen shedding patterns improve survival of free-ranging bighorn sheep lambs within the Badlands and OSPRA sheep herds, and 4) assess risk of exposure of sheep herds to disease. This project will develop skills for field, lab, and quantitative components. The field component will include bighorn sheep capture, disease sampling, radiomarking, and telemetry work. The lab component will include PCR analysis and other techniques conducted at Washington State University. The student will develop skills in statistics, mathematical modeling, and writing reports and peer-reviewed journal articles.

**Qualifications**

Qualified applicants will have a Bachelor's degree in a related field, work well both independently and with a field team, aptitude for both fieldwork and quantitative skills, experience working with diverse groups, and demonstrated oral and written communication skills. Preferred qualifications: some experience with R and mathematical

modeling, experience with radio-telemetry fieldwork, experience with immobilizing and sampling large mammals, experience with conducting laboratory analyses. Applicant must meet the South Dakota State University Program admission requirements. Members of groups traditionally underrepresented in wildlife fields are encouraged to apply. The position will begin fall semester 2022 (1 September).

**Contact Person**

Jonathan Jenks

**Contact eMail**

Jonathan.Jenks@SDSTATE.EDU