

## Range Condition and Vegetative Response to 42 Years Of Grazing Management on the Blackleaf Wildlife Management Area

Ryan Rauscher\*, Wildlife Division, Montana Fish, Wildlife & Parks, Conrad  
Gary Olson, Retired Wildlife Biologist, Great Falls, MT

\*Indicates Presenter

\*\*Indicates Student Presentation

The Blackleaf Wildlife Management Area, originally purchased in 1979 and currently totals approximately 11,000 acres, is managed to provide the best possible winter range for mule deer and elk and quality habitat for other native wildlife species. Range condition and vegetative trend surveys were initiated shortly after purchase of the property to establish baselines and monitor trends. Fourteen permanently marked transects were established and species' cover values and frequencies were recorded every four years from 1979 - 2021. Rough fescue (*Festuca scabrella*), Hood's phlox (*Phlox hoodii*) horizontal juniper (*Juniperus horizontalis*) and shrubby cinquefoil (*Potentilla fruticosa*) were selected as indicator species that reflect overall plant community trend. After a period of rest from grazing, a non-traditional rotational grazing system was initiated in 1990. Pastures are grazed from early June to late August once every 4 years. Vegetative monitoring indicates total vegetative cover remains relatively static varying between 35% - 50% with the lowest values coinciding with severe drought. Comparison of grazed versus ungrazed transects for the period of 1979 to 2001 indicated slightly more total vegetative cover for ungrazed transects, similar increasing trends for grass cover, and similar decreasing trends for forb cover. Relative cover for total grasses shows an increasing trend with rough fescue contributing a significant amount of the increase. Relative cover for total forb cover remains moderately static. Horizontal juniper cover is increasing while shrubby cinquefoil cover is decreasing. Overall range condition has improved from fair to good-excellent condition.