**Long-Term Impacts of Elk Browsing on Aspen Recruitment in the Greater Yellowstone Ecosystem (Poster)

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Quaking aspen (*Populus tremuloides*) stands are vital to ecosystem health and have a diversity of age and structural classes to provide wildlife habitat and natural fuel breaks. Rocky Mountainelk (*Cervus canadensis*) are the primary species that browse aspen suckers in the winter because they are palatable and available above the snow. The Northern Yellowstone Winter Range, hereafter referred to as the northern range, is the wintering ground for the largest elk herd in Yellowstone National Park (YNP) and extends outside YNP onto the Custer Gallatin National Forest (CGNF). The northern range elk population held approximately 19,000 individuals in 1994. During this time, aspen coverage on the northern range was reduced to 1% due to elk browsing and other environmental factors. As of 2024, the northern range elk herd has been reduced to approximately 6,000 individuals. St. John (1995) surveyed 341 aspen plots on the northern range outside YNP in 1990 to determine the relationship between elk browsingand aspen stand recruitment. In 2005, Kimble et al. (2011) surveyed 315 of the same aspen plots to determine if aspen recruitment had changed since 1990. St. John (1995) and Kimble et al. (2011) found that aspen stem recruitment was decreasing on a landscape scale. The objective of this study is to resurvey those 303 aspen plots to challenge earlier interpretations about aspen stand survival over time on the northern range. Using this information, we can identify aspen plots that would benefit from Forest Service management to insure aspen presence long-term in the GYE.