Wolf-Prey Interactions in Yellowstone National Park[TWS]

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Wolf-prey interactions were studied in Yellowstone National Park from 1995-2000. We intensively tracked wolves for 30 days in early (Nov-Dec) and late (Mar) winter from the ground and fixed-wing aircraft. Our objectives were to determine wolf killing rate (kills/wolf/30 days) and prey selection. The primary prey of wolves was elk (91%) but bison (3%), moose (2%), and deer (2%) were also killed (2% unknown). The proportion of elk calves, cows, and bulls killed was 43, 36, and 21 percent, respectively. Wolves selected for calves, against cows, and proportional to availability for bulls. Average age of cow elk killed by wolves was 14 years compared to 6 years for hunter-killed cows. Seasonally, calves were selected in early winter and bulls in late. Two distinct wolf-prey systems exist in Yellowstone: 1) the northern area with a large elk population, and 2) interior park with low elk but more bison and moose. Wolves killed a greater variety of prey (elk, bison, moose) in the interior area compared to the northern area (elk). Wolf killing rate increased from early (1.6 elk/wolf/30 days) to late (2.2 elk/wolf/30 days) winter. Averaging early and late winter data and correcting for scavenger removal, consumable biomass was 3.3 kg/wolf/day.