Impacts of Predation on Greater Sage-grouse in Strawberry Valley, Utah

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Introduction

In March 1998, we began to study a population of greater sage-grouse in Strawberry Valley of northcentral Utah. This population decreased from between 3,000 and 4,000 birds in 1939 (Griner 1939) to an estimated 150 birds in 2000. The goal of our research was to identify factors limiting the population and to recommend measures to mitigate or eliminate those factors. Initial work with radio-collared sage-grouse showed predation by red fox (*Vulpes vulpes*), a nonnative predator, as one of the major limiting factors contributing to decreased survival and nest success.

Kamler and Ballard (2002) documented the expansion of native and nonnative red foxes across North America in the 1900s. Their estimates of the arrival of the nonnative red fox to Utah are consistent with information from on-the-ground wildlife professionals. Kendall Nelson and Alden Thomas, former Utah Division of Wildlife Resources (UDWR) employees, spent extensive time in Strawberry Valley between 1966 and 1980 and never encountered a red fox (K. D. Bunnell, personal communication 2000). During personal interviews,