Ornithological Monographs
Volume (2007), No. 64, 1–46
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Printed in USA.

CONSERVATION OF GRASSLAND BIRDS IN NORTH AMERICA: UNDERSTANDING ECOLOGICAL PROCESSES IN DIFFERENT REGIONS

Report of the AOU Committee on Conservation

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Abstract.—Many species of birds that depend on grassland or savanna habitats have shown substantial overall population declines in North America. To understand the causes of these declines, we examined the habitat requirements of birds in six types of grassland in different regions of the continent. Open habitats were originally maintained by ecological drivers (continual and pervasive ecological processes) such as drought, grazing, and fire in tallgrass prairie, mixed-grass prairie, shortgrass prairie, desert grassland, and longleaf pine savanna. By contrast, grasslands were created by occasional disturbances (e.g., fires or beaver [*Castor canadensis*] activity) in much of northeastern North America. The relative importance of particular drivers or disturbances differed among regions. Keystone mammal species—grazers such as prairie-dogs (*Cynomys* spp.) and bison (*Bison bison*) in western prairies, and dam-building beavers in eastern deciduous forests—played a crucial, and frequently unappreciated, role in maintaining many grassland systems. Although fire was important in preventing invasion of woody plants in the tallgrass and moist mixed prairies, grazing played a more important role in maintaining the typical grassland vegetation of shortgrass prairies and desert grasslands. Heavy grazing by prairie-dogs or bison created a low "grazing lawn" that is the preferred habitat for many grassland bird species that are restricted to the shortgrass prairie and desert grasslands.

Ultimately, many species of grassland birds are vulnerable because people destroyed their breeding, migratory, and wintering habitat, either directly by converting it to farmland and building lots, or indirectly by modifying grazing patterns, suppressing fires, or interfering with other ecological processes that originally sustained open grassland. Understanding the ecological processes that originally maintained grassland systems is critically important for efforts to improve, restore, or create habitat for grassland birds and other grassland organisms. Consequently, preservation of large areas of natural or seminatural grassland, where these processes can be studied and core populations of grassland birds can flourish, should be a high priority. However, some grassland birds now primarily depend on artificial habitats that are managed to maximize production of livestock, timber, or other products. With a sound understanding of the habitat requirements of grassland birds and the processes that originally shaped their habitats, it should be possible to manage populations sustainably on "working land" such as cattle ranches, farms, and pine plantations. Proper management of private land will be critical for preserving adequate breeding, migratory, and winter habitat for grassland and savanna species. *Received 12 December 2006, accepted 24 April 2007.*

Resumen.—Muchas especies de aves que dependen de habitats de pastizal o savana han mostrado disminuciones significativas en sus poblaciones en Norte America. Para poder entender las causas de estas disminuciones examinamos los requerimientos de habitat de aves

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