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Kevin Poague
National Audubon Society, kpoague@audubon.org

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Birds of Spring Creek Prairie Audubon Center - 1999 - 2004

Kevin Poague, Audubon Nebraska
5000 Central Park Drive, Suite 101 Lincoln, NE 68504
kpoague@audubon.org

INTRODUCTION

In the summer of 1998, Audubon Nebraska, a state office of the National Audubon Society, purchased the 610-acre O'Brien Ranch located three miles south of Denton, Nebraska. The site, now called Spring Creek Prairie Audubon Center (SCPAC), will be devoted to prairie education and restoration. The Center's size expanded to 626 acres in 2000 when the Wachiska Audubon Society bought an adjacent 16-acre property on the northwest corner of the section.

Historically, most of the ranch was never farmed, probably because of its hills and the large number of glacial boulders present in the soil. It is one of the largest native grasslands remaining in Lancaster County, containing nearly 500 acres of unplowed tall grass prairie. Other natural features include Spring Creek and its associated riparian zones, several wetlands, springs, ravines, and a mature bur oak woodland. Six cattle ponds have been constructed on site, two along Spring Creek. There is a 52-acre crop field in the southeast corner, two small (< 5 acres) abandoned alfalfa fields, and disturbed areas north and south of the ranch house.

A century of cattle ranching has impacted the floristic composition of the prairie. Overgrazing on portions of several pastures has encouraged the spread of woody and exotic plant species. Large, resilient stands of excellent prairie, though, remain. A three-year research project catalogued more than 340 plant species (Kottas 2000). Current land management targets the removal of invasive and exotic plants - honey locust, Siberian elms, leafy spurge, and musk thistles being priorities - and the establishment of native flora. Because prairie developed naturally under periodic grazing of bison, elk, and other animals, grazing will continue with cattle, but with lower stocking rates than the previous owner's and a rotation system. All pastures are periodically rested and burned to revitalize vegetation.

SCPAC's large size and diversity of habitats are attractive to a wide variety of birds. Prairie species needing large expanses of grassland for breeding are of particular interest, as modern fragmented landscapes restrict the amount of habitat available for these birds. The 3,000-acre grassland and crop land matrix surrounding the Center could also provide quality habitat. The area's integrity, however, is threatened by encroaching urban development. Preserving the current agricultural setting offers an important opportunity to protect a rare and dwindling resource for grassland birds.

METHODS

Standardized avian surveys were conducted from August 1999 to September 2002. Eight transects of similar length were set up within different habitats (prairie [3], pond [1], riparian [2], shrub/mixed [2]). The author conducted morning surveys for 30 minutes in each transect once or twice a month. Every bird seen or heard was counted, including birds flying overhead. Surveys were not set up to compare bird numbers or diversity among sites scientifically. Rather, the purpose was to record

seasonal bird occurrences, and these baseline data will 1) help determine land management goals for the upcoming years, and 2) indicate future shifts in species composition.

Beginning in 2003, informal counts replaced transect surveys and continue to the present day. These counts have targeted spring and fall migration and a few species of particular interest, Greater Prairie-Chicken, Sprague's Pipit, and Henslow's Sparrow among them.

To document nesting species, breeding bird surveys have been completed each June beginning in 2001. Count points were spaced along four separate survey routes winding through various habitats. At each point, observers recorded every bird seen and heard within a 200-foot radius for five minutes. Evidence of breeding (adults carrying nesting material or food, singing males, juveniles, etc.) was noted.

RESULTS AND DISCUSSION

As of July 2004, 188 bird species have been recorded (see Appendix). The transect surveys alone produced 100 species; the most common (by number) were European Starling, American Robin, Eastern Kingbird, Blue Jay, American Goldfinch, Yellow-rumped Warbler, Barn Swallow, Northern Flicker, Brown-headed Cowbird, Black-capped Chickadee, and Northern Bobwhite. The starling result is misleading, as 95 percent of these were seen on one day in one flock. Abundance was highest in woods and shrub/mixed habitats and the least in prairie transects.

The four yearly breeding bird surveys have documented 70 species (see Appendix). Many juvenile birds were observed, as were nests, including a successful Cooper's Hawk nest in 2004.

The following is a compendium of sightings by various classifications:

Grassland species - A wide variety of grassland birds can be found throughout the year. There have been a few observances of Short-eared Owls, a prized prairie inhabitant. Upland Sandpipers, Dickcissels, Eastern and Western Meadowlarks, and Grasshopper and Field Sparrows have been common summer residents. Bobolinks were rarely seen until the summer of 2003, when as many as five pairs were present. To expand and improve nesting habitat and potentially reduce cowbird parasitism, land management will focus on removing all upland woody vegetation.

One of the most exciting discoveries has been the remarkable regular fall sightings of Sprague's Pipits. Unfamiliar with this particular species, I noticed these birds in the autumns of 2001 and 2002, but did not confirm their identification until September 23, 2003, their initial date of observation that year. The birds were recorded almost every time they were searched for that fall, whether it was morning or afternoon, until they were last seen on October 21. In 2004, spring surveys were for the first time focused on this species, and seven individuals were recorded on April 15.

The recently-published *Birds of Nebraska* notes that Sprague's Pipits are found mostly during migration though central Nebraska in short- to mid-grass areas, particularly in the fall (Sharpe *et al.* 2001). An additional note in this same book about where to look for the species - in shallow ruts made by vehicles crossing grassy fields - can be corroborated by my observations. The pipits were consistently

found along a vehicular path worn down to dirt near the top of a ridge dividing the property. The grass is shorter here than in other areas of the prairie, and the sometimes-used prairie-chicken lek is along this same ridge. It is therefore possible that other similar habitats in southeastern Nebraska - those containing prairie-chicken leks or ones which have the potential for leks, and having vehicle paths or areas of very short grass - could contain Sprague's Pipits during migration.

In late March 2000, the sighting of six Greater Prairie-Chickens, including one male in courtship behavior, was completely unexpected. The activity did not reoccur in 2001, but one male was with two females in April 2002. The following spring, as many as six birds were displaying along a ridge on various mornings through April. In early June 2003, the discovery of a hen and two just-hatched chicks was the first confirmed nesting of this species on the property. Unfortunately, this lek was not active in 2004, but leks were observed on sections of land to the west and northwest of SCPAC.

It is unknown how many Prairie-Chickens are in the vicinity; 17 is the highest number seen at one time, that in October 2002. Annual surveys should be attempted to determine population status, potential breeding areas, and winter territories. These birds may be part of the last viable breeding population in the county.

The presence of Henslow's Sparrows, found initially in May 2000, has been a pleasant surprise. In 2003, at least 5 individuals were present, and there was one reliable yet unconfirmed report of a fledgling being fed by an adult.

Woodland species - Woodlands are restricted to the borders of Spring Creek, limiting the occurrences of forest-dwelling birds. Moreover, the majority of the large honey locust trees have been removed in an effort to curtail their invasion of the prairie uplands. Nonetheless, Red-headed Woodpeckers have successfully nested each summer, and the presence of Eastern Wood-Pewees, Great Crested Flycatchers, and Barred Owls attests to the quality of the riparian zone. The Cooper's Hawk nest found in 2004 is the first evidence of breeding of any raptor species.

Edge species - Transect surveys indicated the most common species (by number) are Eastern Kingbird, Brown Thrasher, Eastern Bluebird, Baltimore Oriole, and Orchard Oriole. Future numbers may be impacted by the planned removal of all upland woody vegetation. Native trees and shrubs will remain along Spring Creek and in ravines. The plan's impact is also uncertain for uncommon species or those needing a mix of open land and trees, such as Bell's Vireo, Loggerhead Shrike, Northern Mockingbird, and both cuckoo species.

All of the other game fowl found in this part of the state occur here as well, making good use of the edge habitat. Flocks of up to 14 Wild Turkeys have been seen, as were nests with eggs in May 2001 and 2004. Northern Bobwhite are common year-round, and broods (one numbering 14 chicks) have been produced over the past three years. Ring-necked Pheasants have not been plentiful and are more often on surrounding crop land.

Purple Finches have appeared at the Center's bird feeding station the past three winters, and Harris's and American Tree Sparrows are very common in plum thickets and woodland edges.

Wetland species - Ducks are common on the ponds during spring migration, but few species of water birds remain for the summer. Canada Geese and Mallards have stayed over but with no nests or young recorded. A scattering of wading birds appear from spring to fall; an amazing sight one day in spring 2000 was 23 Great Egrets roosting in the trees around the lower pond. A Sandhill Crane was seen flying very low over the property in April 2001. Water levels in the two largest ponds are manipulated during migration to create shallow wading areas and to promote the establishment of beneficial wetland plants.

Shorebird species typical of southeast Nebraska have taken advantage of the mudflats on the edges of drying ponds, but numbers have been low. Killdeer and Spotted Sandpiper linger through the summer, although nesting has not been documented.

Endangered/threatened species - No state or federally endangered or threatened species are present.

APPENDIX

Species List:
Pied-billed Grebe, American White Pelican, Double-crested Cormorant, American Bittern, Great Blue Heron, Great Egret, Snowy Egret, Little Blue Heron, Cattle Egret, Green Heron, Black-crowned Night-Heron, White-faced Ibis, Turkey Vulture, Snow Goose, Canada Goose, Wood Duck, Gadwall, American Wigeon, Mallard, Blue-winged Teal, Northern Shoveler, Northern Pintail, Green-winged Teal, Canvasback, Redhead, Ring-necked Duck, Lesser Scaup, Bufflehead, Common Goldeneye, Hooded Merganser, Common Merganser, Osprey, Bald Eagle, Northern Harrier, Sharp-shinned Hawk, Cooper's Hawk, Broad-winged Hawk, Swainson's Hawk, Red-tailed Hawk, Ferruginous Hawk, American Kestrel, Peregrine Falcon, Ring-necked Pheasant, Greater Prairie-Chicken, Wild Turkey, Northern Bobwhite, Sora, American Coot, Sandhill Crane, Killdeer, Greater Yellowlegs, Lesser Yellowlegs, Solitary Sandpiper, Willet, Spotted Sandpiper, Upland Sandpiper, Semipalmated Sandpiper, Least Sandpiper, White-rumped Sandpiper, Baird's Sandpiper, Pectoral Sandpiper, Dunlin, Stilt Sandpiper, Buff-breasted Sandpiper, Long-billed Dowitcher, Wilson's Snipe, American Woodcock, Wilson's Phalarope, Franklin's Gull, Ring-billed Gull, Forster's Tern, Rock Pigeon, Mourning Dove, Black-billed Cuckoo, Yellow-billed Cuckoo, Eastern Screech-Owl, Great Horned Owl, Barred Owl, Short-eared Owl, Common Nighthawk, Chimney Swift, Ruby-throated Hummingbird, Belted Kingfisher, Red-headed Woodpecker, Red-bellied Woodpecker, Yellow-bellied Sapsucker, Downy Woodpecker, Hairy Woodpecker, Northern Flicker, Olive-sided Flycatcher, Eastern Wood-Pewee, Willow Flycatcher, Least Flycatcher, Eastern Phoebe, Great Crested Flycatcher, Western Kingbird, Eastern Kingbird, Loggerhead Shrike, Bell's Vireo, Blue-headed Vireo, Warbling Vireo, Red-eyed Vireo, Blue Jay, Black-billed Magpie, American Crow, Horned Lark, Purple Martin, Tree Swallow, Northern Rough-winged Swallow, Bank Swallow, Cliff Swallow, Barn Swallow, Black-capped Chickadee, Red-breasted Nuthatch, White-breasted Nuthatch, Brown Creeper, Carolina Wren, House Wren, Sedge Wren, Marsh Wren, Golden-crowned Kinglet, Ruby-crowned Kinglet, Blue-gray Gnatcatcher, Eastern Bluebird, Swainson's Thrush, American Robin, Gray Catbird, Northern Mockingbird, Brown Thrasher, European Starling, Sprague's Pipit, Cedar Waxwing, Tennessee Warbler, Orange-crowned Warbler, Nashville Warbler, Yellow Warbler, Magnolia Warbler, Yellow-rumped Warbler, Palm

Warbler, Blackpoll Warbler, Black-and-white Warbler, American Redstart, Ovenbird, Northern Waterthrush, Louisiana Waterthrush, Common Yellowthroat, Summer Tanager, Spotted Towhee, Eastern Towhee, American Tree Sparrow, Chipping Sparrow, Clay-colored Sparrow, Field Sparrow, Vesper Sparrow, Lark Sparrow, Savannah Sparrow, Grasshopper Sparrow, Henslow's Sparrow, Le Conte's Sparrow, Nelson's Sharp-tailed Sparrow, Fox Sparrow, Song Sparrow, Lincoln's Sparrow, Swamp Sparrow, White-throated Sparrow, Harris's Sparrow, White-crowned Sparrow, Dark-eyed Junco, Smith's Longspur, Northern Cardinal, Rose-breasted Grosbeak, Indigo Bunting, Dickcissel, Bobolink, Red-winged Blackbird, Eastern Meadowlark, Western Meadowlark, Yellow-headed Blackbird, Brewer's Blackbird, Common Grackle, Brown-headed Cowbird, Orchard Oriole, Baltimore Oriole, Purple Finch, House Finch, Pine Siskin, American Goldfinch, House Sparrow.

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