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BREEDING STATUS OF SELECTED BIRD SPECIES IN THE NIOBRARA VALLEY PRESERVE AREA, NEBRASKA

by Michael J. Mossman and Mark A. Brogie

INTRODUCTION

The Niobrara Valley Preserve is located in north-central Nebraska and includes a variety of relatively undisturbed grassland, woodland, and wetland habitats. The diversity of habitats, in conjunction with the area's central geographic location near the 100th meridian, results in a diverse avifauna with many species and subspecies occurring at or near the western, eastern, southern, or northern edge of their breeding ranges. Several pairs of sibling species and subspecies are found here within their narrow band of sympatry. The breeding list of the Preserve and environs includes at least 105 species (Brogie and Mossman 1983), several of which are rare or declining in Nebraska or nationwide.

This paper describes the evidence of breeding for those species and subspecies considered significant on the basis of their rarity, critical population status, or marginal geographic occurrence. A few other species are discussed that are conspicuous in their absence or scarcity.

Unless otherwise indicated, information on statewide and regional distribution and abundance is from Johnsgard (1979a, 1979b, 1980). The designations of statewide endangered, threatened, or special concern status are from the Nebraska Game and Parks Commission (1977) and Ross Lock (Neb. Game and Parks Comm., pers. comm. 1982). Additional information on national and regional status is indicated by reference to the *American Birds Blue List* for 1982 (Tate and Tate 1982).

STUDY AREA AND METHODS

The study area includes the 22,000 ha Niobrara Valley Preserve, owned by The Nature Conservancy, and an additional 20,000 ha of adjacent, privately owned land. The area extends 50 km along the Niobrara River in Cherry, Brown, and Keya Paha counties. Study area boundaries are described in Brogie and Mossman (1983). The river valley contains exposed sandbars, floodplain forest dominated by cottonwood (*Populus deltoides*) and green ash (*Fraxinus pennsylvanica*), scattered oxbow marshes with species such as cattail (*Typha latifolia*), bulrush (*Scirpus actus*), and sandbar willow (*Salix discolor*), and eastern deciduous forest dominated by bur oak (*Quercus macrocarpa*), basswood (*Tilia americana*), green ash, and ironwood (*Ostrya virginiana*). White birch (*Betula papyrifera*) occurs in several springbranch canyons and north-facing slopes. Grazed sandhill prairie covers the flat to hilly uplands south of the river. The Crookston Table lies north of the river and supports grazed mixed grass prairie and cropland. Uplands on both sides of the river are dissected by canyons containing ponderosa pine (*Pinus ponderosa*) - bur oak woodland and eastern deciduous forest.

We surveyed for birds almost daily by foot, truck, and canoe during the period 4 April-10 July 1982, and less frequently during the remainder of the summer. Records were also collected from other Preserve personnel and local residents. A complete summary of breeding records for all species is maintained at the Preserve headquarters.

Common names of birds follow the recent supplement to the AOU checklist (American Ornithologists' Union 1982).

RESULTS AND DISCUSSION

Eastern species

Positive evidence of breeding was secured for the Wood Duck, Bobwhite, Eastern Phoebe, White-breasted Nuthatch, Eastern Bluebird, Red-eyed Vireo, and Scarlet Tanager. Other eastern species that were present during the breeding season and which almost certainly nested are the Green-backed Heron, Whip-poor-will, Red-bellied Woodpecker, Eastern Wood Pewee, Wood Thrush, Black-and-white Warbler, Ovenbird, American Redstart, and Northern Cardinal.

Green-backed Herons were seen as far west as Little Cedar Creek, Cherry County. The westernmost **Wood Duck** brood was in T33N R23W Sec. 31, Brown County. Three **Whip-poor-wills** were heard singing during the summer at different sites: on 14 June in Plum Creek Canyon (Brown County); on 13 July in Turkey Creek Canyon (Keya Paha County); the westernmost, on 3 and 4 June in T34N R25W Sec. 28 (Cherry County) — these are considerably

farther west than previous summer records, except for observations made around the turn of the century in Cherry and Brown Counties (Brunner 1896, Bates 1900). **Red-bellied Woodpeckers** occurred at 6 sites, as far west as T33N R25W Sec. 12, Cherry County. Adults were seen repeatedly at 2 sites; at one of these we watched a female enter a tree cavity while an adult male called from the same tree. This species evidently occurred here rarely a half century ago (Youngworth 1955).

Singing male **Eastern Wood-Pewees** were recorded at many sites all along the river and in several canyons, and on 4 June a bird was carrying nest material along McGill Creek, Keya Paha County. The **Eastern Phoebe** nested in most abandoned buildings and wooden bridges in the river valley and canyons. **White-breasted Nuthatches** occurred along the entire stretch of the river valley. In Cherry County we saw adults feeding nestlings in tree cavities on 2 occasions: on 10 May in a bur oak in T33N R25W Sec. 11, and on 4 June in a cottonwood in T34N R25W Sec. 29.

The **Eastern Bluebird** is on the Blue List and Nebraska's special concern list. We recorded over 30 territorial males in oak savanna habitat along the river in Brown and Keya Paha counties, and saw one active nest, a family group, and various examples of nesting behavior. We found single singing **Wood Thrushes** at 3 localities in hardwoods along the river, all in T33N R23W Sec. 32 and 33, Brown County. Singing was heard frequently from 14 May into August. Short (1966) found Wood Thrushes in this vicinity in 1964, and Youngworth (1955) reported them previously.

The following 4 species of the eastern deciduous forest were fairly common along the entire stretch of the valley and in some canyons. Youngworth (1955) found all 4 species here during previous summers. **Red-eyed Vireos** were building a nest on 12 June in T33N R23W Sec. 26, Keya Paha County, and a pair of adults were feeding 2 fledglings in T33N R23W Sec. 33, Brown County, on 21 August. **Black-and-white Warblers** obviously nested here, although positive evidence is lacking. We saw 2 birds, evidently a pair, scold and chase a Robin on 13 May, and saw another presumed pair making repeated visits to one spot on the litter-covered ground on 23 May. Breeding records are also lacking for the **Ovenbird**, although on 3 and 23 June in Cherry County we encountered agitated birds that behaved as though a nest or young were nearby; on the latter date, one bird carried food in its bill. Short (1961) found Ovenbird nests in the study area in 1955, and several nests were found previously by Youngworth (1955). A **Scarlet Tanager** nest containing 4 nestlings was found by Ed M. Brogie on 22 June, in a 12 m bur oak at a height of 9 m, in T33N R24W Sec. 18 NE, Brown County. This species was also recorded in the study area by Short (1961).

The **Northern Cardinal** occurred uncommonly in riparian areas and we encountered territorial individuals and pairs on several occasions.

The absence of several eastern species was noteworthy. **Barred Owls** were not recorded even though we spent many nights in the field and played taped calls in riverbottom woods. This was an uncommon resident in our area at one time (Youngworth 1955). **Ruby-throated Hummingbirds** and **Purple Martins** were apparently absent, although Hummingbirds have been seen in previous years by local residents, and Martins evidently nest in nearby Ainsworth (Short 1965) and occurred previously along the river (Youngworth 1955). Although we are familiar with vocalizations of the **Yellow-throated Vireo**, we found none in the study area. Short (1965) recorded 3 singing males and a female here in late May and June of 1964, and it may be that breeding populations are unstable this far west. We found no **Northern Parulas** nor **Cerulean Warblers**, and consider those collected along the Niobrara by Short (1965) to be summer wanderers. The **Rose-breasted Grosbeak** occurred only in migration. **Eastern Meadowlarks** were absent, probably owing to the scarcity of lowland prairies and meadows.

Western species and subspecies

Thirty years ago Youngworth (1955) noted that our vicinity was "fast becoming the eastern limit for many prairie forms which formerly blanketed eastern Nebraska and much of Iowa and Minnesota," including the **Long-billed Curlew**. This species is on the Blue List and it evidently no longer breeds east of the sandhills. We could account for only 2 breeding pairs on the study area, both in relatively flat sandhill prairie: Deborah Paulson found an adult on a nest with 2 eggs on 5 May in T32N R23W Sec. 11, Brown County, and it was also observed on subsequent dates; the second pair was very defensive on 2 June, diving at us and exhibiting distraction behavior, in Cherry County.

Common Poor wills were heard singing throughout the study area, as far east as Plum Creek Canyon in Brown County. On 3 July we flushed an adult from a nest containing 2 young. The nest was at the base of a clump of little bluestem (*Andropogon scoparius*) and 0.3 m tall sumac (*Rhus glabra*) in rolling sandhill prairie, in T32N R23W Sec. 7, Brown County.

The **Northern Flicker** was represented by both yellow- and red-shafted forms, the latter being outnumbered by a ratio of approximately 20:1. We found 4 nests of the yellow-shafted form and one nest attended by a red-shafted adult. Hybridization evidently occurs, for we saw birds of intermediate shaft color.

We located 10 active **Black-billed Magpie** nests in the sandhills — 9 in Brown and 1 in Cherry County. Three nests were in chokecherry (*Prunus virginiana*), 2 in hackberry (*Celtis occidentalis*), 2 in red cedar (*Juniperus virginiana*), 2 in green ash, and 1 in ponderosa pine, at heights of 2.1-7 m.

Prior to the present study, only one Nebraska breeding record had been secured for the **Red-breasted Nuthatch** (Johnsgard 1980). Short (1965) found 2 pairs of Red-breasted Nuthatches within the study area in June 1964, and assumed they probably nested here. Youngworth (1955) failed to note them here previously. We found this to be a common breeding species on the study area, in ponderosa pine woods. We saw an adult (accompanied by a second bird, presumably its mate) excavating a cavity in a dead pine stump on 15 June in Brown County. On 12 June we watched for 15 minutes as an adult fed 2 fledglings in oak-pine woodland in Turkey Creek Canyon, T33N R23W Sec. 26 SW, Keya Paha County. The fledglings displayed yellowish gape flanges; they were silent and stationary, perched in a bur oak. The adult foraged within 10 m of the young birds, bringing food to them every 1-5 minutes. On 15 June an adult fed a fledgling in a pine in Moore Creek Canyon, T32N R22W Sec. 22, Brown County. The young bird was actively creeping on the trunk and limbs, and its bill had yellowish edges. On 22 June, 2 fledglings were food-begging and being fed by adults, in T33N R23W Sec. 16 SW, Keya Paha County.

The **Black-headed Grosbeak** was common on the study area along the entire river valley and in most canyons. Females were building nests on 28 May near East Middle Creek, Keya Paha County, on 4 June in T34N R25W Sec. 29, Cherry County, and on 12 June in Turkey Creek Canyon, Keya Paha County. On 17 June a female was on a nest in a green ash in Quinn Canyon, Brown County. We found no evidence of hybridization with the Rose-breasted Grosbeak, which evidently did not nest here. In contrast, the Rose-breasted Grosbeak nested here commonly 30-50 years ago, whereas the Black-headed Grosbeak occurred only rarely (Youngworth 1955).

Lazuli Buntings certainly nested in the study area, and they were found at scattered sites as far east as Quinn and Hurlbut Canyons in Brown County. We do not know if any individuals bred with the cogenetic Indigo Bunting, which outnumbered the Lazuli by a factor of approximately 40:1.

Hybridization of the 2 **Northern Oriole** subspecies also appears to occur, although we recognized only one bird that displayed obvious hybrid characters: an adult male with a half-black head and wide wing patch, attending a nest near East Middle Creek in Keya Paha County. All other Northern Orioles seen closely were of the Baltimore form. Youngworth (1955) made similar observations 30-50 years ago.

Several western species did not nest here, although they might be expected. We were surprised to find only one **Ferruginous Hawk**, apparently a vagrant, on 5 June. This species is on the Nebraska special concern list. We saw **Golden Eagles** on 14 April and 6 May; these were evidently wandering individuals, and one was an immature. A **Prairie Falcon** was seen on several occasions during summer 1981 (Ben Brown, pers. comm. 1982), and again several times in summer 1982. All sightings were near Plum Creek Canyon and the Niobrara River, Brown County. We scanned almost all cliffs in this area and found no evidence of nesting. No **Western Wood Peewees** were observed. Two **Say's Phoebes** and one **Rock Wren** were found near abandoned buildings in April and May but none stayed to nest. Youngworth (1955) found both species apparently nesting in our area previously.

Northern species

Six species of northern distribution apparently nested here, and one species that might be expected — the **Song Sparrow** — occurred commonly during migration but was not found during the breeding season although seemingly suitable habitat was available.

The **Common Snipe** is considered a "very rare or highly local breeder" in Nebraska (Johnsgard 1979a), and Wood (Nebr. Bird Rev. 38:17. 1970) recorded an adult with young

several kilometers southeast of the study area in Rock County. Although wetland habitat was not extensive on the study area, this species probably nested in some small marshes along the Niobrara. The most likely site is in T33N R25W Sec. 12 NE, Cherry County, where a bird was winnowing¹ on 4 and 5 June. In T33N R23W Sec. 33, birds were heard winnowing and up to 6 were seen at one time, from 12-23 April. We found no Snipe at the latter site on several subsequent visits, including an afternoon spent dragging the marsh with a rope to flush birds. Three were flushed in T32N R22W Sec. 8 on 27 April. One winnowed over Sunnybrook Swamp, T33N R24W Sec. 18, on 13 May. Another bird was seen just south of the study area, flying over Hwy. 20, 1.5 km east of Johnstown, Brown County, on 25 June.

The **Least Flycatcher** is considered a very rare breeder in Nebraska. Two pairs were previously found during the breeding season in the study area in Brown County (Short 1965), and Youngworth (1955) considered that "apparently a few remain to breed" along this section of the Niobrara. We found 9 singing males in 7 sites between 20 May and 5 June in Keya Paha and Brown Counties. It probably nested in at least some of these sites but further observations are needed.

Tree Swallows probably nested at a few sites in wetlands along the river valley and Plum Creek. On 4 May, 4 were inspecting cavities 3-5 m up in a dead snag over standing water, in a marsh along the river in Cherry County. On 13 May we saw 2 at Sunnybrook Swamp in Brown County, and we saw 1 here again on 5 June. On 10 July 1 was recorded in an open marshy site with dead standing trees along Plum Creek. Short (1961) noted Tree Swallows along the river near Valentine in June 1955.

The **Brown Creeper** evidently breeds in the Pine Ridge area and rarely along the Missouri River, where Aughey (in Bent 1948:50) found several nests in the 1800's. The only recent records are from Sarpy County, where a nest was found beneath a slab of hardwood bark in 1975 (Cortelyou 1975), and nests were found in 1977 (Bennett 1978). Only one pair of Creepers was recorded in our study area. We found these birds on 9 July in T32N R22W Sec. 10 NW, Brown County, on the Niobrara floodplain among American elm (*Ulmus americana*), cottonwood, red cedar, green ash, and ponderosa pine. Many of the elms, cottonwoods and pines were dead, with the bark peeling. On this day we saw an adult carry food to a rotten, 15 m tall ponderosa pine while a male sang nearby. The nest was found beneath a slab of peeling bark at a height of 6 m. It contained 2 nestlings.

Although singing **Clay-colored Sparrows** were common in the sandhills during 3-14 May, we found only 2 during the breeding season, both in Brown County sandhills. One was singing on 25 May in a strip of planted red cedar and ponderosa pine 2-4 m tall, and the other was in shrubby sandhills prairie on 1 June. Youngworth (1955) considered this a rare breeder in the area.

Swamp Sparrows were found singing in 2 willow-choked marshes along the Niobrara, and they almost certainly nested at both sites. Five birds were seen and heard singing in T33N R23W Sec. 32 on 1 June and later dates. Five were singing in T33N R23W Sec. 2 on 25 July.

Southern species

Johnsgard (1979a) mentions that the **Northern Mockingbird** breeds occasionally as far north as Thomas and Greeley Counties in the sandhills. This species evidently nested on the study area and we found it in 5 sandhills sites in T32N, R23-24 W, Brown County. A territorial pair was seen at one site on 24 May and again on 14 June. We found another territorial pair on 27 May, and recorded 3 singing males in a third area on 3 July.

Significant non-peripheral species

Although the **Great Blue Heron** nests in many locations in Nebraska, it is included on the special concern lists of Nebraska and *American Birds*, largely because rookeries are sensitive to human disturbance. Most nests in the Great Plains are in riparian sites, lakes, or reservoirs. We have records of 3 nesting areas, all in uplands.

Great Blue Herons are uncommon along this stretch of the Niobrara during the breeding season, although according to local residents they were more abundant 10 years ago before canoeing became popular here. They nested previously at 2 sites in the sandhills of Brown County, although both sites were inactive in 1982 and no old nest structures were found. One site was active until at least ca. 1976 and consisted of several nests in a group of ponderosa pines near the Cherry County line in T33N R24W, probably in Sec. 18, 1-4 km south of the river (Alfred Conner, pers. comm. 1982). The other site was evidently a single nest in a pine, active for many

1. See footnote, *NBR* 51:46

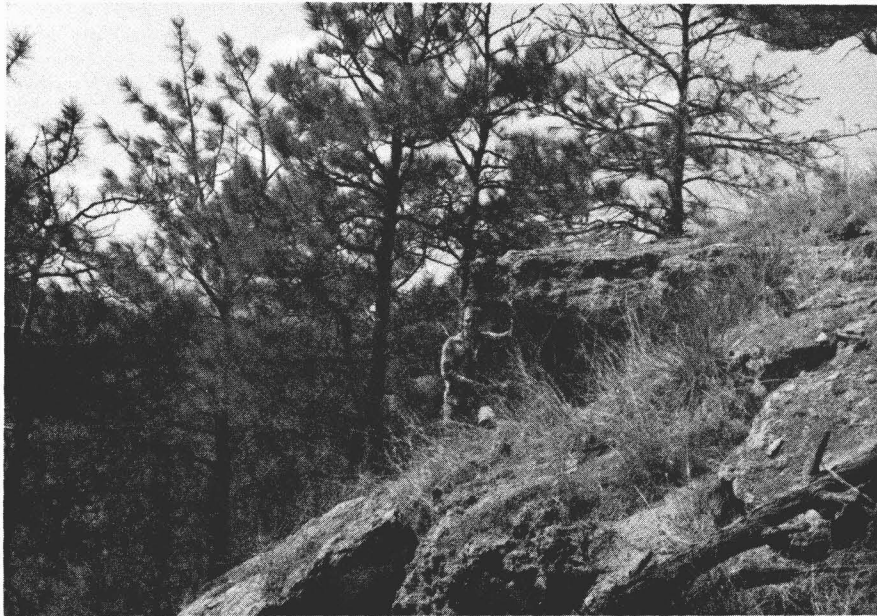
years, ca. 2 km south of the river in T32N R23W Sec. 4 (Nilo Kuhre, pers. comm. to Ben Brown 1982).

We suspected nesting by a pair in Fairfield Creek Canyon. One or 2 Herons were often seen in the canyon or near its mouth and one was seen flying up the canyon with something, evidently nesting material, in its bill. We found Great Blue Herons in substantial numbers at the fish hatchery ponds in T34N R26W Sec. 21-22; 12 were counted here on 2 June.

At least some of the Great Blue Herons seen on the eastern section of the study area came from the rookery located 20 km north of the river in T34N R22W Sec. 10 NENE, Keya Paha County. Birds were seen flying to and from the direction of the rookery on several occasions. This rookery occurs in a 8 ha. grove of mature cottonwoods surrounded by hay, pasture, and corn, and it has been active for at least 5 years (Mrs. Ben Weston, pers. comm. 1982). On 21 July we counted 56 active nests in a total of 25 trees near the center of this grove, and some young birds were able to fly a short distance.

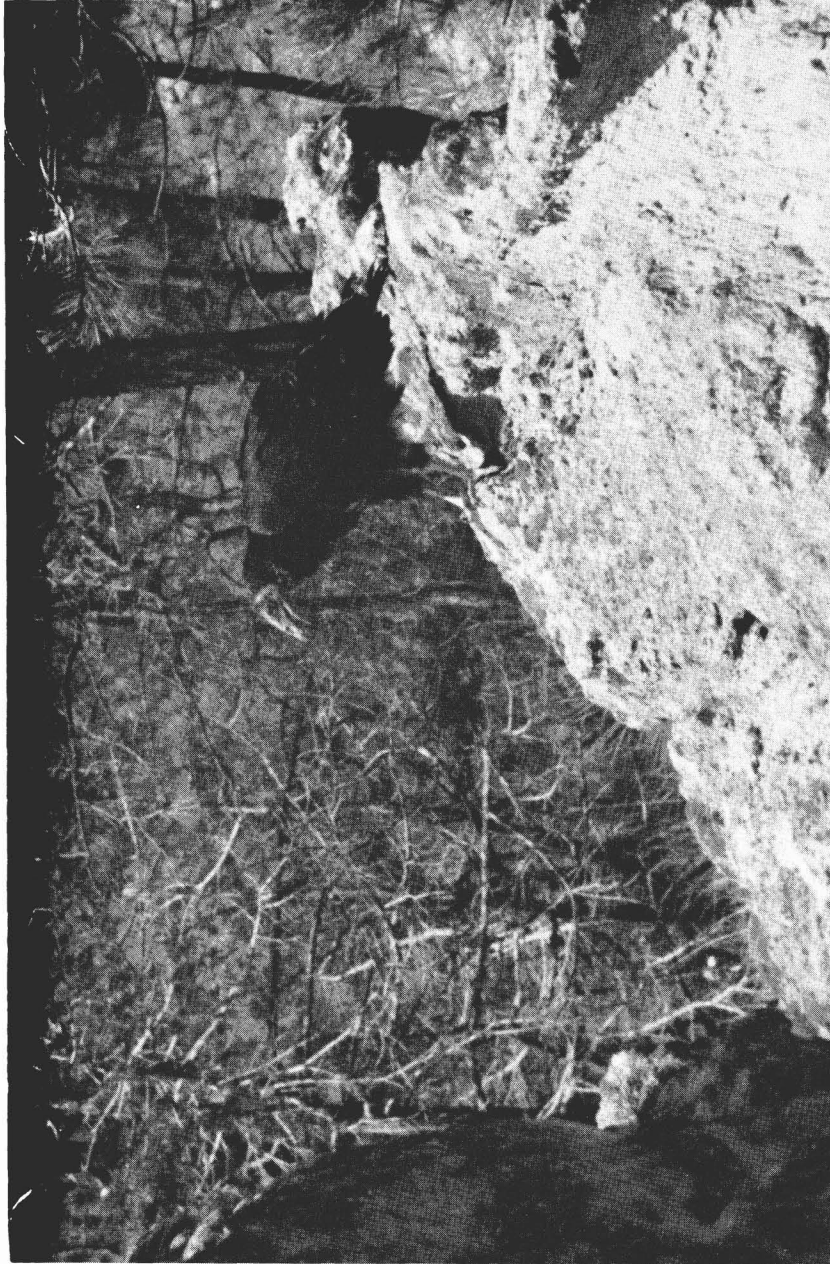
The **Turkey Vulture** evidently breeds locally throughout most of the state, although few nests or roosts have been recorded. Only 2 nests have been reported since 1904 (Lionberger 1944, Hatch and Garrels 1971). It was considered a breeder in Cherry County near the turn of the century (Brunner 1896) and Youngworth (1955) considered it a regular summer resident along this stretch of the Niobrara, but nesting was not documented.

This is a common spring and summer resident on the Preserve, and up to 15 birds were found on various occasion, roosting or sunning in trees on the north-facing slope and adjacent floodplain of the river. Two nests were recorded in past years in the study area, and 3 new nests were located in 1982. All but the Brown site were on the upper edges of steep, south-facing bluffs at the edge of the Crookston Table, in ponderosa pine woodland with other species such as red cedar, yucca (*Yucca glauca*), poison ivy (*Toxicodendron radicans*), and aromatic sumac (*Rhus aromatica*).



"Egelhoff" Turkey Vulture nest site, April 1982.

EGELHOFF SITE. One nestling was found ca. 1960 by Richard Egelhoff (pers. comm. 1982) in a cave atop a bluff between Middle and East Middle Creeks, T33N R23W Sec. 20, center of S½, Keya Paha County. The cave is ca. 6.5 m deep, 3 m wide, and 1 m high at its mouth, narrowing to ca. 1 × 0.3 m at the back. We checked this site several times between 12 April and 12 August 1982 and found no evidence of attempted nesting. The floor of the cave was covered with porcupine



Turkey Vulture nestling about to fledge. "Vulture Point" nest site, 12 August 1982.

(*Erethizon dorsatum*) scats, as it was when the nestling was discovered previously.

BROWN SITE. In the summer of 1981, Ben Brown (pers. comm. 1982) flushed an adult Turkey Vulture from a thicket of red cedar and chokecherry in sandhills pasture ca. 6 km southwest of the Preserve headquarters, in T32N R23W, Brown County. He found 2 nestlings on the ground beneath shrubs. This site was not visited in 1982.

VULTURE POINT SITE. We found 2 eggs here on 18 May and again on 28 May, in a chamber 1 × 1 × 3 m long, formed beneath 2 large tumbled boulders that had fallen from an adjacent 6 m tall cliff. On 13 June an adult was scared from the nest; the nest contained 2 downy nestlings which stood unsteadily and were less than a week old. On 12 August a nestling was removed from the nest, photographed, and released. After standing for a minute on a rock, it flew off. The second bird ran from a small opening at the back of the nest chamber and also flew. It appeared that this was the first extended flight for both birds. Two other immatures flew about the area also. The nest is located in T33N R23W Sec. 17 SE, Keya Paha County.

SPARKS SITE. This nest contained one nestling when discovered by David Kizirian on 26 June 1982. The nest cavity is ca 0.3 m high and 1 m in diameter, probably dug or enlarged by a mammal, at the base of a rockshelter-like cliff, 3 m tall. On 17 August the nestling was extricated from the cavity but did not fly when released. It was fully feathered and its downy cap was nearly gone — it probably fledged during the following week. The site is in a large canyon south of the village of Sparks, in T34N R25W Sec. 28 NW, Cherry County.

EAST MIDDLE CREEK SITE. This nest is in a small canyon that empties into East Middle Creek, in T33N R23W Sec. 21 SW, Keya Paha County. It is 2.9 km from the Vulture Point site. It contained one nestling when discovered by Kizirian on the afternoon of 20 August. The bird fledged before we visited the site the following evening, at which time we saw an immature flying

Sharp-shinned
Hawk on nest, 22
June 1982.
Photograph by Matt
Bradley, courtesy
National
Geographic Society.

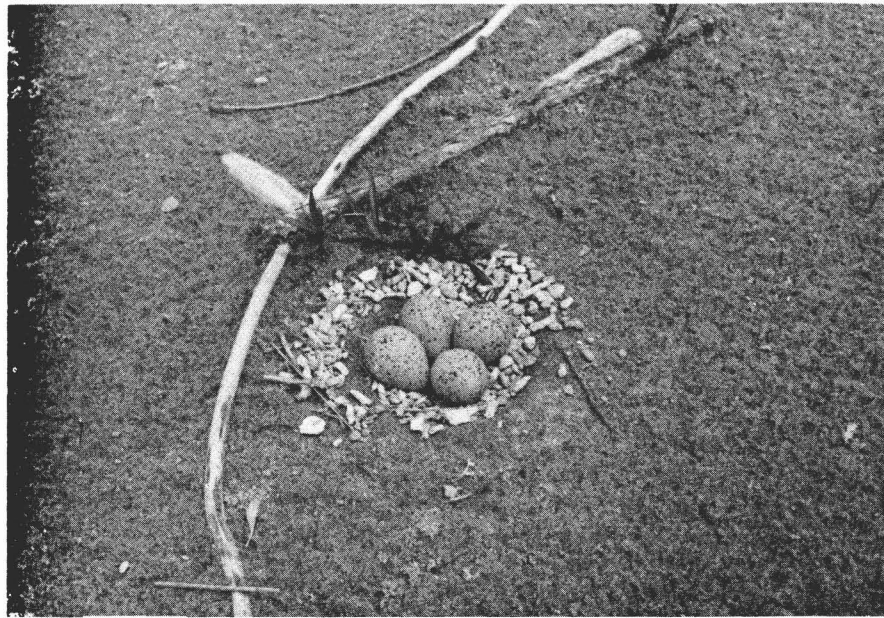


over the area. The nest cavity was evidently expanded by mammal digging; it is located under a fallen boulder near the base of a 4 m tall cliff, and is 4 m from a known rattlesnake den. It consists of 2 contiguous chambers, each 3-6 dm high and 6-10 dm in diameter.

The **Sharp-shinned Hawk** has been on the Blue List since 1972, and the only state nesting records are from many years ago in Sioux County (Bruner et al. 1904, Johnsgard 1979a). According to Youngworth (1955), this species was a "resident in small numbers" in the study area 30-50 years ago. We saw Sharpshins frequently in April and May, including an apparent pair on 12 May and a male carrying food at another site in late May. At a third site (T32N R24W, Brown County) we found an active nest in a 10 m red cedar at a height of 5.5 m, in a strip of woods consisting mostly of bur oak, red cedar, and green ash. Both the male and female "kakked" at us on 16 May, at which time the nest was empty. The female was incubating 4 eggs on 6 June, and was on the nest on 22 June. On 2 August a bird was seen flying from the nest. On 25 August the nest was empty except for the remains of songbird prey, and it appeared that nestlings had fledged. Both parents were in immature plumage.

The **Cooper's Hawk** is on the special concern lists of Nebraska and *American Birds*. It is evidently a rare summer resident in Nebraska with no recent nesting records. This species was seen at 7 localities on the study area from 12 May to 30 July, and it probably nests here. Adults were heard kakking defensively at 2 of these sites, and an adult female was carrying food at a third site. Youngworth (1955) found resident Cooper's Hawks in the study area previously.

The **Piping Plover** is a Blue List species with special concern status in Nebraska, where it is a rare and local breeder. This species nested on our study area in 1982, in a mixed colony with Least Terns, on a sandbar 3 km east of Meadville (see site description in Least Tern account). On 14 July we found 4 nests with clutch sizes of 1, 3, 4, and 4; no chicks were seen. We searched the site thoroughly on 22 July and found 16 chicks and an active nest with 4 eggs; the site had been recently disturbed by cattle. Piping Plovers were seen nowhere else along the river.



Piping Plover nest near Meadville, 14 July 1982.

The **Interior Least Tern** is threatened in Nebraska and is included on the Blue List. Several colonies are known from Nebraska and in recent years 4-10 colonies have been found annually along the Niobrara River, almost all of these being downstream from our study area (Gregory Wingfield, Nebraska Game and Parks Commission, unpubl. data 1975-1981). On 29 July 1979, the Game and Parks Commission (*op. cit.*, unpubl. data 1979 and in litt. 1982) recorded 7 Least Terns on a sandbar at the mouth of Chimney Creek, within the study area. The survey was

conducted by air and thus no positive evidence of nesting was found. No birds were found at this site during the surveys of 1975, 1978, 1980, 1981, nor 1982.

A colony was discovered at a second site in 1982 by the Game and Parks Commission, 3 km east of Meadville in T32N R21W Sec. 18 E½, at the eastern edge of the study area. Nests were placed on a broad low sandbar ca. 6 ha. in size, bordered on the north by a channel ca 1m deep and 20-50 m wide, and on the south by braided channels 0.2-0.5 m deep and 5-15 m wide. The sandbar was mostly bare, with scattered, stunted *Elocharis*, *Scirpus*, *Salix*, and grasses. We visited the site on 14 July and counted 5 active nests with 1, 2, 2, 2, and 3 eggs respectively, and at least one old nest. A maximum of 24 adults was seen. On 24 July a more thorough search of the entire sandbar revealed 4 well-feathered chicks unable to fly, one nest with 3 eggs, and one immature flying with a maximum of 14 adults. The site had been trampled by cattle which had evidently approached from the south since our previous visit. This may have caused failure of some Tern and Plover nests. Tracks of raccoon (*Procyon lotor*) and coyote (*Canis latrans*) were also found.



Least Tern nest near Meadville, 14 July 1982.

The **Long-eared Owl** is an uncommon to rare resident in Nebraska. We found this species at 3 sites, all in mixed red cedar and hardwoods. On 12 May a nest was discovered at one of these sites in a dense patch of red cedars beside a stream in T33N R25W Sec. 11, center of E½, Cherry County. The nest was in a 13 m tall red cedar at a height of 9 m, and contained 4 eggs. One adult was incubating and the other was perched 40 m away in the same patch of cedars. On 23 June no Owls were found at the site, and the matted nest contained pellets, whitewash, and a dead Grasshopper Sparrow, suggesting that young had fledged.

A few species that have evidently suffered population declines in recent years in the United States were absent or occurred in surprisingly low numbers on our study area, even though suitable breeding habitat apparently occurred. The **Northern Harrier** and **Swainson's Hawk** are Blue List species that were surprisingly rare in our area. Youngworth considered them both "regular summer residents" in our area. We saw only one Harrier during the breeding season (2 June). We saw Swainson's Hawks at only 2 sites, both in the sandhills near wooded canyons. At one of these sites — a recently disced field — adults and young were seen on several occasions and an adult was seen carrying food. The **Short-eared Owl** is on the Blue List and the state special concern list, and was not recorded during our study; a nest was found and photographed on the study area in the late 1960's (Loring Kuhre, pers. comm. 1982). The **Bank Swallow** is

considered of special concern by *American Birds* and was also absent, although it was a regular summer resident along the Niobrara 30-50 years ago (Youngworth 1955).

Several other Blue-listed species were relatively common breeders on the study area, including the **Upland Sandpiper**, **Loggerhead Shrike**, **Dickcissel**, and **Grasshopper Sparrow**. Common species that are on the American Birds special concern list include the **Sharp-tailed Grouse**, **Eastern Screech-Owl**, **Burrowing Owl**, and **Common Nighthawk**.

SUMMARY

We conducted a thorough inventory of breeding birds on a 42,000 ha area along the Niobrara River valley in north-central Nebraska, and documented the abundance and breeding status of many species that are at or near the margins of their breeding range. The data presented here help interpret the results of less intensive surveys of larger areas within the Great Plains (e.g., Short 1961, 1965), and helps define species breeding ranges, many of which are not well understood in Nebraska (e.g., Johnsgard 1979a). Nesting is documented or suggested for 16 eastern, 6 western, 6 northern, and one southern species. Fourteen other "geographically marginal" species which might have been expected were absent from the study area during the nesting season. At least 2 species, Ruby-throated Hummingbird and Yellow-throated Vireo, are present some years and absent in others, suggesting that the range limits of some species may fluctuate in this region.

This study also documented nesting for 6 species that are not near the limits of their breeding range but which are considered rare or declining in Nebraska, or for which very few state breeding records exist. Although several species known to be suffering population declines elsewhere were common nesters on the study area, other of these species were absent or surprisingly rare in apparently suitable habitat on the study area.

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LITERATURE CITED

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