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REVIEW OF THE BREEDING STATUS OF PINYON JAY IN NEBRASKA

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HISTORIC RECORD

The Rev. J.M. Bates (1900) was the first to suggest breeding by Pinyon Jays (*Gymnorhinus cyanocephalus*) in Nebraska when he reported, "Breeding at Holly, Sheridan Co., north of Rushville, July 15, '97." While he gave us no indication of what he saw, the date cited in the report, 15 July,

should raise a cautionary flag, since by that date the young are normally 2 months past fledging and would be free-flying and moving about with the flock.

In discussing birds which breed in the state, Bruner (1901) placed the species in Part II of the list, along with other species which "undoubtedly breed here, but concerning which more definite data as to such breeding is desired."

Later, reporting on the 1901 field work in the Pine Ridge by a team from the University of Nebraska, Cary (1902) reported, "Both adults and young abundant, but the only breeding evidence secured was a couple of old nests which Mr. Carriker found at the head of Gerlach's Canyon." Cary was confident enough of the finding that he included Pinyon Jays in a list of species for which "breeding.... was definitely established" in a note to the Auk (1901). He gave no indication, however, that the nests were collected; and there was neither a description of them, nor a statement of how they were identified.

On that basis, in their "Preliminary Review of the Birds of Nebraska," Bruner et al. (1904) comment that the species is a "Common resident, spending the summer and occasionally breeding along the Pine Ridge."

Later, however, in a frequently overlooked review of the status of Pinyon Jays in the Nebraska, Bates (1918) comments, "Following my notes, rather than my memory, I find my first acquaintance with this gentle robber beginning at Holly, Sheridan County, July 15, 1897, as far as Nebraska is concerned. Holly is a post office on the road from Rushville to Pine Ridge Agency, less than half way. *I don't recall inquiring whether they nested there, but they undoubtedly did*" (my emphasis). Thus, he admits that he did not see nesting himself, nor apparently did he even ask if anyone else did. Again, while he still did not tell us what he actually saw, it seems most likely that he saw adults and what he took to be young of the year. Thus, regarding this critical, oft-quoted first report of breeding in the state, the author casts doubt on his initial report.

Based on the preceding, most subsequent local bird lists have included the species either as a breeder or as a resident (and assumed breeder) (Swenk 1919, Haecker et al. 1945, Rapp et al. 1958, Rosche 1982, Johnsgard 1980, 1998, Ducey 1988). Bent (1946), however, was more cautious, commenting: "It has been recorded in summer without evidence of breeding in northern Nebraska."

During the Nebraska Breeding Bird Atlas Project the species was "confirmed" as breeding in survey blocks in Scotts Bluff and Sioux counties, in both cases by the observation of begging fledged young as they were fed by adults. Since the young were free-flying and following the flock, however, it could be argued that they might have been hatched at some distance from where they were found (Mollhoff in press).

Other indications of breeding include a report of young seen in Dawes County in 1966, but without a location or date (Sharpe 1967). More

recently, I reported finding used nests in the immediate vicinity of adults and young of the year on 17 May 1998 near Redington, Morrill County (Silcock and Jorgensen 1998). After further research, however, the identification of the nests was retracted (Mollhoff 1999).

Thus, although Pinyon Jays have been locally accepted as breeders in Nebraska for a century, the supporting evidence has been scanty; and conclusive evidence in the form of an active nest or non-flying young restricted to the natal site has not been presented.

CURRENT FINDINGS

After being repeatedly unsuccessful in March and April nest searches from 1987 through 1998, finding many more snowstorms and spring blizzards than nests, I obtained a copy of The Pinyon Jay (Marzluff & Balda 1992). In it the authors and their associates detail the highly complex social behavior of this fascinating species. In their decades-long study of several flocks in Arizona and New Mexico, they found that the species forms stable, coherent flocks made up of pairs which appear to mate for life. The flocks maintain long-term territories of many square kilometers, which contain discrete nesting areas within which the flock nests as a loose colony. They found that nesting consistently began mid-March to mid-April and was followed by attempted re-nesting by pairs that were unsuccessful on the initial attempt. After fledging, the young form creches (nursery groups of just-fledged young) that stay in the area of the nests for 2 to 3 weeks, until they can fly well enough to join the flock. Rarely, on some years with exceptionally heavy pinyon nut crops, the flock was found nesting again in the fall. The authors repeatedly point out the fact that the species breeds, and does everything else, as a flock.

On 22 May 1999, while studying Pygmy Nuthatches (*Sitta pygmaea*) in the Gilbert-Baker State Wildlife Management Area in East Monroe Canyon, Sioux County, Nebraska, I found myself among a silently feeding flock of about 30 Pinyon Jays which included a number of mousy, brownish-gray young of the year. The young birds were foraging for themselves on the ground alongside some adults and flew off across the canyon with the rest of the flock when it left, indicating that they were probably over a month old (Bateman & Balda 1973).

I searched through the flock for adults exhibiting behavior that might indicate nesting and after 10 to 15 minutes noticed two birds which appeared to be following each another. After tracking their movements for a few minutes, I saw one of them pick up and begin carrying several long blades of dead grass, still followed by the other bird. After I tracked them with difficulty for 5 to 10 minutes as they moved among the flock, from ground level to treetop and back again, the bird with the grass flew off about 30 meters to a low horizontal pine branch where it disappeared into dense foliage. It was soon followed by the other bird, where they remained out of sight for several minutes before emerging without the grass to rejoin the

flock momentarily. The pair then flew off across the canyon by themselves, giving a soft "wheer" call. The rest of the flock flew off in the same general direction shortly afterward. After they left, I investigated the site the pair visited. I was unable to see any sign of a nest from below; but after climbing the tree, I found a well-hidden, incomplete nest saddled on a horizontal branch, 3.5 meters from the ground and 0.6 meters from the trunk. The nest platform was complete and the nest cup perhaps half finished.

The flock returned about a half hour later, and a pair of birds flew down to the aforementioned horizontal branch and disappeared from sight briefly before rejoining the flock. I could not see if they carried nesting material. The flock spent an hour in the area before leaving about 1030 hrs MDT and did not return before I left at dusk.

I returned on 11 June 1999, accompanied by John Dinan, a biologist with Nebraska Game and Parks Commission. We found a Pinyon Jay on the nest when we arrived at 1100 hrs. It was attended by another adult, which fed the incubating bird on the nest before chasing away a pair of Western Tanagers (*Piranga ludoviciana*) that approached too closely. When we checked the nest at 1300 hrs, I found it contained four eggs and two newly hatched young. When I returned at 1600 hrs to obtain photos, I found that a third egg had hatched.

I visited the nest again on 25 June, found and photographed five well-feathered young packed tightly inside. On 13 August, I salvaged the remains of the deserted nest, which bore only slight resemblance to the original structure. It has been placed in the collections at the University of Nebraska State Museum.

This report appears to be the first of an active Pinyon Jay nest in Nebraska. This late nesting also appears to be a second nesting attempt, following an unsuccessful first attempt, as described by Marzluff & Balda (1992).

There is little doubt that Pinyon Jays have been regular breeders in Nebraska since first reported a century ago. Flocks seem to be established throughout the Pine Ridge portions of Sioux, Dawes and Sheridan counties, and the Wildcat Hills area in Scotts Bluff, Banner, and Morrill counties. Their breeding distribution appears to coincide closely with the ponderosa pine scarp woodlands in those counties. Although individuals and flocks occasionally wander to other parts of the state, and occasionally remain into the breeding season, there has been no indication of breeding away from the Wildcat Hills and the Pine Ridge.

NESTING PHENOLOGY

Using the times reported by Marzluff and Balda (1992) for successive periods of the nesting cycle, and working backward from my own and others reported observations of free-flying young by the second or third week of May, the following nesting phenology is estimated for Nebraska:

Nest building	~ first or second week of March
Egg laying	~ second or third week of March
Hatching	~ first or second week of April
Fledging	~ 1 May
Creching	~ first half of May
Free-flying young	~ second or third week of May

Obviously, much more work is needed to discover basic life history data in Nebraska on this extreme edge of their range.

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