SOUTH DAKOTA
ORNITHOLOGISTS' UNION

SOUTH DAKOTA BIRD NOTES

VOL. 39 DECEMBER 1987 NO.4

SOUTH DAKOTA BIRD NOTES, the official publication of the South Dakota Ornithologists' Union (organized 1949), is sent to all members whose dues are paid for the current year. Life members $125.00, sustaining members $15.00; regular members $9.00; family members (husband and wife) with 1 subscription to *Bird Notes* $12.00; juniors (10-16) $4.50; libraries (subscription $9.00. Single and back copies: Members $2.50, Non-members $3.00. All dues payments, change-of-address notices, and orders for back issues should be sent to the Treasurer, Nelda Holden, Rt. 4, Box 252, Brookings SD 57006. Manuscripts for publication should be sent to Editor Dan Tallman, NSC Box 740, Aberdeen SD 57401.

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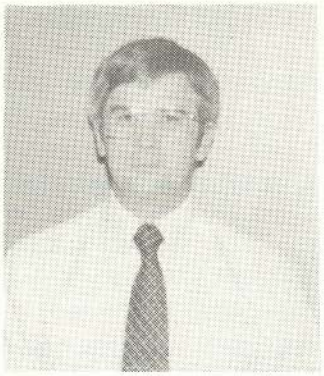

As SDOU vice-president from 1985-1987, and now as president, I wish to thank, on behalf of all of us, Jocelyn Baker for her efforts as SDOU president. Noteworthy are her conservation ethics and awareness. She has promoted SDOU ornithological objectives by assisting the initiation of the atlas breeding bird project in South Dakota. She also worked diligently to bring informative meetings to our membership.

The 1987 Autumn meeting was held jointly with the Inland Bird Banding Association. About 90 people registered (half from each organization), and were graciously received by the Rapid City hosts. Attendees rated the presentations as among the best ever offered by SDOU. Our group now has a reputation for providing a forum for bird biology. I take this opportunity to invite you to next September's meeting, which will be held in Pierre. Our host, the Missouri Breaks Audubon Chapter, is already making preparations.

Prior to the 1988 fall meeting, our 1988 spring meeting will be held near the Waubay National Wildlife Refuge. Headquarters will be at the NESODAK Outdoor Education Camp. At this meeting we can obtain first-hand knowledge about atlasing breeding birds. This project is a type of birding that will be a new experience for many of us. If we intend to make this a successful and meaningful endeavor, we all must plan to attend, learn, and assist.

I find it intriguing how little I know about birds. Many times I am amazed about how little the people I meet during my everday activities know and appreciate birds. I am going to try to capitalize upon this situation by meeting a challenge made to me by past president Baker. While an SDOU membership of 286 is a sustainable organization, it is troubling that the regular membership has fallen about 20% during the past year. I think this decrease in membership can be reversed with minimal effort if we take advantage of opportunities to promote SDOU. Please consider giving gift memberships to individuals and making copies of *Bird Notes* available to those who initiate conversation about birds. Let's share this challenge so others may have the same opportunities at the recreational and scientific enjoyment that our rather unique organization offers.

The Accipitrid Vultures of North America

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The study of vultures presents a series of paradoxes. The gypaetine vultures (the "Old World" vultures) appear to have originated in the New World. The cathartid vultures (the "New World" vultures) appear to have originated in the Old World. The subfamily Gypaetinae, as presently constituted, almost certainly is an unnatural (polyphyletic) group within the accipitrid family. The order Falconiformes is most certainly a polyphyletic assemblage as it includes the cathartid vultures, whose closest living relatives are actually the storks. This paper is concerned mainly with accipitrid vulture origins. The oldest known "Old World" vulture is from an Oligocene deposit in South Dakota.

In their classification of birds, Mayr and Amadon (1951) discussed the polyphyletic nature of the falconiform order, especially with regard to the cathartid vultures. And then, ignoring this discussion, they proceeded to leave the order completely unaltered. This half-hearted jab at orthodoxy by Mayr and Amadon provoked an immediate rebuttal from Clay (1951), who denied that the order is polyphyletic. Clay announced that the phylogeny of birds is disclosed by the similarity of their mallophagan parasites (feather lice). Calling three genera of them as witnesses (*Falcolipeurus, Laemobothrion,* and *Cuculiphilus),* she showed that all three genera parasitize both cathartids and other Falconiformes. The value of the testimony coaxed from the louse genus *Cuculipilus,* however, is quite suspect. *Cuculiphilus* parasitizes *Pseudogyps* and *Gyps* (the Old World griffon vultures) and all genera of cathartid vultures. The evidence here is a bit *too* good, since no one, including Clay, has ever claimed that the Old World and New World vultures are each other's closest relatives--at least not since the early 19th century, when taxonomists transferred the Old World vultures from the Linnaean "vulture" family into the accipitrid family, leaving the New World vultures in their own taxon. Moreover, Clay failed to mention that these mallophaga also parasitize numerous nonfalconiform birds. Unfortunately, a parasite can colonize unrelated hosts too easily for a parasitological approach to phylogeny to be of much value. Mayr (1959) later noted that the evidence from the birds' cestodes (tapeworms) fails to correlate with the mallophagan evidence.

If American cathartid vultures and the Old World griffon vultures sport the same genus of feather lice, what does this really mean? It does not mean that these birds are closely related; it means that their ancestors may have lived in the same region. Where might that have been? In the fossil record, cathartid vultures cease to exist in Europe after the Early Miocene, and none are known from Asia after the Early Oligocene. Gypaetine vultures are not known to have reached Asia until the Middle Miocene and are unknown in Europe until the Pleistocene. (See Figure 1 for a geological timetable on which appear

the possible phylogenetic relationships of all known accipitrid vulture species.) In North America, cathartid and gypaetine vultures coexisted at least since the Middle Pliocene (for the last 3 million years), and probably since the Late Oligocene (for the last 28 million years). Gypaetine vultures became extinct in North America, their birthplace, only by the end of the Pleistocene (10,000 years ago). Clearly, North America is the place where the ancestors of some of today's species of *Cuculiphilus* infested the ancestors of today's New and Old World vultures when they were sympatric.

The first description of an American fossil vulture of any kind, cathartid or accipitrid, was that of Cope (1874), who discovered a partial gypaetine skeleton in the Skull Ridge Member of the Tesuque Formation of the Santa Fe Group in New Mexico. As was Cope's way, he published his find immediately, before the specimen was well cleaned of its rock matrix. He named the vulture *Cathartes umbrosus*, placing the fossil species in the same genus as that of the modern Turkey Vulture. After cleaning the matrix from the beak and seeing that the nostrils were imperforate like those of the accipitrids rather than perforate like those of the cathartids (one can see daylight through the nostrils of the latter when their heads are in profile), Cope realized that he had an "Old World" vulture. Without hesitation, Cope (1875) changed its name to *Vultur umbrosus* in the mistaken notion, prevalent at the time, that *Vultur* was the proper generic name of the Eurasian Black Vulture (*Aegypius monachus*) rather than of the Andean Condor. The prepared specimens of "*Vultur*" *umbrosus* are illustrated in Cope (1877: pl. 67-68).

Today the species is known as *Palaeoborus umbrosus*, and is seen as part of one of the two great lineages of "Old World" vultures in North America. *P. umbrosus* was a rather rapacious gypaetine, intermediate in size between a Turkey Vulture and a Golden Eagle. There has been confusion about the age of the Santa Fe deposits and hence confusion about the age of *P. umbrosus*. Cope (1874, 1875, 1877) and most of the subsequent literature give the bird's age as Early Pliocene. The definitive work on the Santa Fe Group by Galusha and Blick (1971), however, indicates that the Skull Ridge Member is of Barstovian age, a Middle-to-Late Miocene interval .

The three known species of *Palaeoborus* are confined to the Miocene, which was a good time for vultures, who prefer to feed on carcasses of large-bodied ungulates. The Miocene is marked by the largest evolutionary radiation of ungulates since the Eocene. Miocene North America witnessed the golden age of the horses and the camels. Large-bodied deer first appeared. Rhinoceroses and oreodonts continued to thrive, and the elephants first arrived.

The world's oldest known accipitrid vulture, *Arikaromis macdonaldi* Howard (1966), dates somewhat earlier than the Miocene, about 28 million years ago in the Late Oligocene. This bird is known by the distal end of a left tibiotarsus discovered in the Sharps Formation in Shannon Co., South Dakota (Pine Ridge Reservation). The age of the Sharps Formation, strata consisting of volcanic ash with overlying wind-deposited pink silt and clay, was long misunderstood. The formation was originally believed to be basal Miocene, and *Arikaromis* has accordingly been called an Early Miocene bird in all the liter-

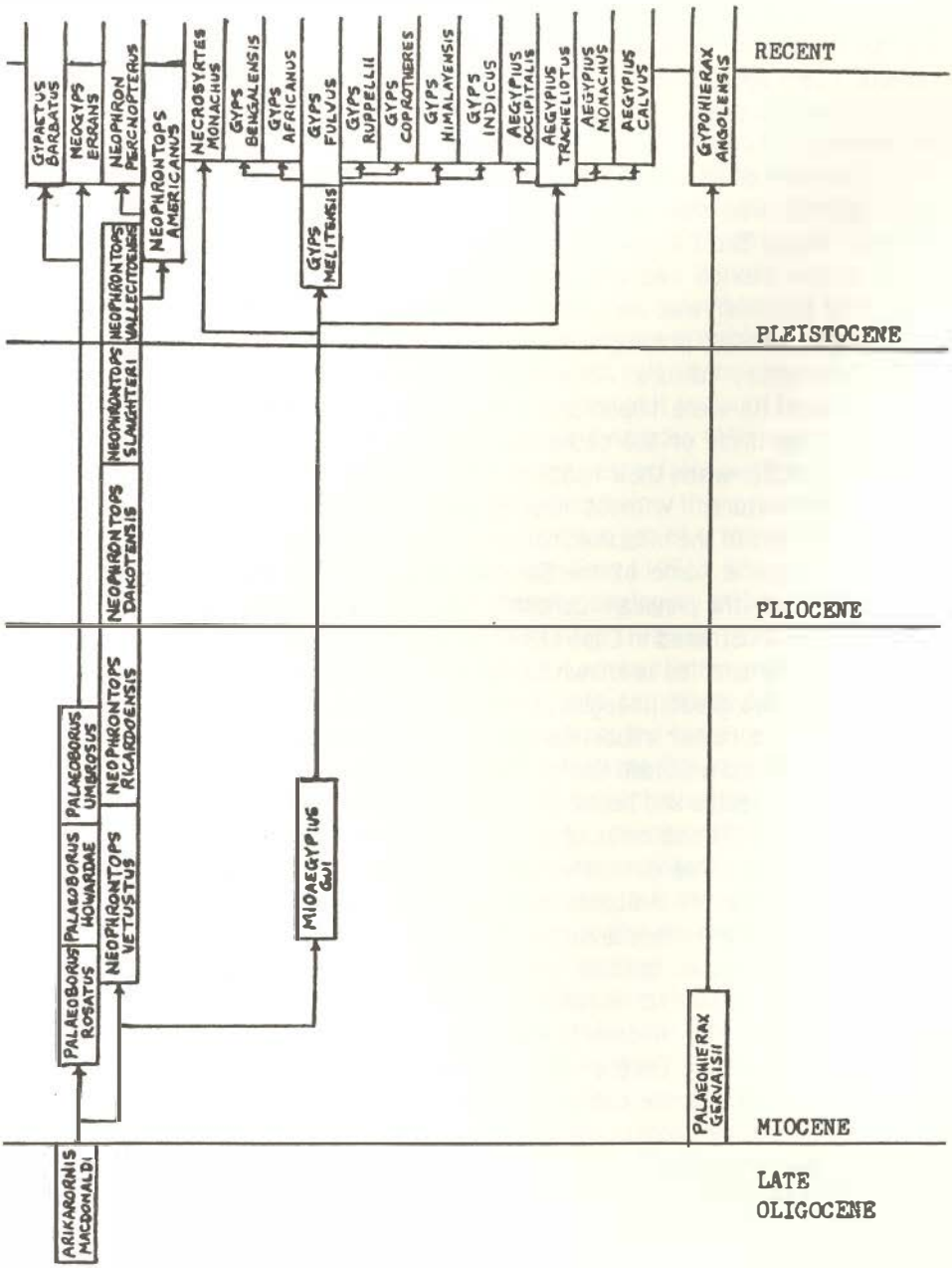

Figure 1. Possible phylogenetic relationships of all known accipitrid vulture species.

ature. Prothero, Denham and Farmer (1983), however, using magneto-stratigraphic evidence, correlated the base of the Sharps Formation with Reversed Polarity interval 9, which puts this formation further back in time, well into the Late Oligocene.

Arikarornis macdonaldi is one of the smallest fossil gypaetines, about the size of a Red-tailed Hawk. Howard (1966) recognized its tibiotarsus as that of an "eagle-like" gypaetine whose immediate ancestry seems buteonine and which is itself ancestral or near-ancestral to *Palaeoborus*.

The earliest known species of *Palaeoborus* is another South Dakotan, *P. rosatus* Miller and Compton (1939) from the Middle Miocene (Batesland Formation) in Bennett Co. Again, confusion has existed about the age of *P. rosatus*, which is given as Early Miocene in all the literature. Miller and Compton explained that the specimen of this vulture--a left ulna, generally well preserved but badly shattered at the proximal end-- was collected from "a lens in the upper part of the so-called Rosebud Formation, Lower Miocene" on Flint Hill, near Martin. This lens, a stream-channel accumulation of cross-bedded sands, silts, clays and marls filling a paleovalley in the older Rosebud Formation, was later recognized as part of the Batesland Formation rather than part of the Rosebud. Its fossil mammalian fauna shows the Batesland to be Middle, not Early, Miocene (Harksen and Macdonald 1967). Other bird fossils from Flint Hill (a flamingo, three duck species, a hawk, a chachalaca, a grouse, a quail, and an owl) indicate a local aquatic and woodland environment during Batesland time (Miller 1944). Seeming to thrive in the Miocene, *Palaeoborus rosatus* was more than twice the size of its possible ancestor *Arikarornis macdonaldi*.

One other species of *Palaeoborus* is known, *P. howardae* Wetmore (1936) from the Middle Miocene (Sheep Creek Formation) of Dawes Co., Nebraska. While both *P. rosatus* and *P. howardae* date from the Middle Miocene, they do not seem to be contemporaries. Within the Middle Miocene's duration of 6 million years, the Batesland Formation is correlated lower in the section than is the Sheep Creek Formation (Harksen and Macdonald 1969). The specimen of *P. rosatus* is on the order of 2-3 million years older than that of *P. howardae,* sufficient time for a species to come into being and go extinct. *P. howardae* was about the size of a Bald Eagle, but slightly smaller than *P. rosatus*.

Palaeoborus is regarded as ancestral or near-ancestral to *Neogyps,* the only known species of which, *N errans* Miller (1916), represents the end of the *Palaeoborus* lineage, at least in North America. *N errans* is especially well known from the Rancho La Brea asphalt pits in Los Angeles, but has a known range in the Late Pleistocene from California and Mexico to Colorado (Brodkorb 1964, Emslie 1985).

North America's other lineage of gypaetines culminates in the late Pleistocene with *Neophrontops americanus* Miller (1916). Unlike Cope, Miller, as he later confessed (Miller and DeMay 1942), was in no hurry to announce the presence of fossil gypaetines so far from "home," and delayed publication of *Neogyps* and *Neophrontops* for two years. Cope's "*Vultur*" *umbrosus,* after all, had not been well received. Coues (1884), hardly believing that gypaetines

once lived in America, renamed Cope's fossil *Palaeoborus* (after *Polyborus),* hinting that the bird was of falconid polyborine affinity. Coues' hint that *Palaeoborus* was a caracara was later stated explicitly in the 1902 edition of Zittel's monumental *Text-Book of Palaeontology.* Wetmore (1927), on the other hand, stated that *Palaeoborus* was cathartid, and even presumed to say whether it was more closely related to the Turkey Vulture or Black Vulture. Miller could not accept a North American origin for the gypaetines, and considered their fossils on this continent the remains of lost individuals (Miller 1916 and Miller and DeMay 1942). Miller's specific name for *Neogyops errans* means "wandering" in Latin, in the sense of being lost. At present, however, we know of enough species of *Neophrontops* to plausibly bridge the time from the Middle Miocene through the Late Pleistocene with little gap. The gypaetines can no longer seem lost in America.

The small-bodied, Middle Miocene *Neophrontops vetustus* Wetmore (1943), the oldest species of the genus, is known from the Sheep Creek Beds in Sioux Co., Nebraska. The Late Miocene *N. ricardoensis* Rich (1980) is known from the Ricardo Formation in California. *N. dakotensis* Compton (1935) is from the Early Pliocene (Ogallala Formation) in Big Spring Canyon, Bennett Co., South Dakota, and from the Middle Pliocene (Drewsey Formation) of Oregon (Brodkorb 1961). *N. slaughteri* Feduccia (1974) is from the Late Pliocene (Glenns Ferry Formation) of Idaho, and *N. vallecitoensis* Howard (1963) from the Middle Pleistocene (Upper Palm Spring Formation) of California. *N. americanus*, like *Neogyps errans*, is abundantly represented in the Late Pleistocene La Brea tar pits, and is also known from deposits of similar age in Mexico, New Mexico, and Wyoming (Emslie 1985). *N. americanus* has also been discovered in California's Middle Pleistocene (Rich 1977), indicating that this species was a contemporary of *N. vallecitoensis*. The species of *Neophrontops* exhibit an increase in size through time, from the Sharp-shinned Hawk-sized *N. vetustus* to the Black Vulture-sized *N. americanus*, although the latter was somewhat smaller than *N. slaughteri* and *N. vallecitoensis*.

Because of numerous similarities between the two birds, Miller (1916) named *Neophrontops* after *Neophron percnopterus*, the modern Egyptian Vulture. *Neophrontops* is most likely *Neophron*'s ancestor (Feduccia 1974), a natural conclusion if one has no bias against American ancestors for Old World vultures. Miller (1916) also noted that *Neogyps* was a sort of smaller version of *Gypaetus barbatus*, the modern Bearded Vulture of Africa and Eurasia. Miller was not about to suggest that *Neogyps* could be close to the ancestry of *Gypaetus,* but such a connection is likely.

The derivation of two of the six modern genera of Old World vultures is thus accounted for. What about the other four? First, let us look at the fossil record of accipitrid vultures in the Old World. Not counting Late Pleistocene and Early Recent remains of modern species, only three species are known: *Gyps melitensis* Lydekker (1890), a large griffon vulture known from Middle Pleistocene cave deposits on Malta and at Monaco; *Mioaegypius gui* Hou (1984), known by a tarsometatarsus from the Middle Miocene (Xiacaswan Formation) of China; and *Palaeohierax gervaisii* Milne-Edwards 1863, based on a tarso-

metatarsus from the Early Miocene of France (Brodkorb 1964, Rich *et al.* 1986). The British Early Eocene "*Parvigyps praecox*" Harrison and Walker (1977), based on undiagnostic bone fragments, can be disregarded. (See Steadman 1981 and Olson 1985 for criticism of Harrison and Walker's work).

Feduccia (1974), believing that the early gypaetines from South Dakota and *Palaeohierax* of France were of similar age, wrote, "Because Old World vultures occur as early as the lower Miocene in both the Old and the New Worlds...., we have no firm evidence as to the group's area of origin. Additional fossils from earlier horizons will be needed to aid in answering this and other questions about the evolution of the aegypiines [=gypaetines]."

Arikarornis now proves to be from an earlier horizon. But even if *Palaeohierax* were as old as *Arikarornis*, Feduccia would still be mistaken; a New or Old World origin would not be equally plausible even then. *Palaeohierax* has always been considered closely related to, and was named after, *Gypohierax angolensis*, the modern sub-Saharan Palm Nut Vulture, a highly aberrant vulture--if it is a vulture (Amandon 1977, Rich 1980, Brown 1984). No claim for an Old World origin for gypaetines can be based on *Palaeohierax*.

Of greater interest is the recently described Chinese bird, the griffon-sized *Mioaegypius gui*. Unfortunately Hou (1984) offers no discussion on the affinities of *Mioaegypius*, or even the generic name's etymology. Answers to these questions can, however, be surmised by examining the figured tarsometatarsus, which most closely resembles that of *Gyps* and *Aegypius* among modern birds. Clearly *Mioaegypius* was named from the genus *Aegypius* rather than from the Latinized Greek *aegypius*, a general word for vulture but which most properly referred to the Bearded Vulture. *Mioaegypius* would seem ancestral or near-ancestral to the three closely related modern genera *Necrosyrtes*, *Gyps* (including "*Pseudogyps*"), and *Aegypius* (including "*Sarcogyps*," "*Torgos*," and "*Trigonoceps*"). Among the extinct genera, *Mioaegypius* most closely resembles *Neophrontops* and would seem to represent an Asiatic branch of the *Neophrontops* lineage.

Some authors (Rich 1980, 1983, Rea 1983) doubt that Gypaetinae is a monophyletic group: different species of accipitrids have probably more than once given rise to lineages of vulturine grade. *Arikarornis* of South Dakota and *Palaeohierax* of France are most certainly derived from different hawk ancestors. Possibly, the two lineages of North American accipitrid vultures, those of *Neophrontops* and of *Palaeoborus*, could also be polyphyletic, i.e., might not share a common hawk ancestor. The North American *Neophrontops* and the Asiatic *Mioaegypius*, equally ancient, seem closely related. However, the balance of evidence, much of it discovered in the wonderfully eroded lands of South Dakota, points to North America as the gypaetine continent of origin.

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GENERAL NOTES

RAPTORS IN NE CUSTER COUNTY. Today, 16 January 1987, was a prize raptor day at my place in NE Custer Co. Eight Ferruginous hawks, three to five Golden Eagles, and two adult Bald Eagles all interacted as follows.

I was scanning the sky about noon and saw a large, dark bird circling 0.5 miles south. It soared north with the wind and passed overhead, where I identified it as a adult Golden Eagle. As it continued out of sight to the north, another followed along almost the same route. With my 100x telescope, I scanned the Prairie Dog colony nearly 0.75 miles south. I observed two large, dark birds on the ground, apparently at a kill. As I went for a better view, I noted a Ferruginous Hawk soaring to the NE and a Bald Eagle in a cottonwood tree 0.75 miles west. Looking around, I noticed the Bald Eagle had flown and was joined by another adult and three dark unidentified eagles.

By the time I drove to a point about 100 meters west of the kill, one Bald eagle was gone and the other returned to the Cottonwood. The other three eagles were on the ground. One was an adult Golden Eagle and the other two were immature Goldens. The immature farthest from the kill flew up and,

from a height of about 30 meters, made a shallow dive to the kill. There ensued some fighting for the prey, the eagles jumping at each other with outspread wings. Then a Bald Eagle came by--more fighting--and left to the south, trailing something from its talons. A Ferruginous Hawk circled above this scene. The other Bald Eagle flew off after the first but landed in a tree along Spring Creek, about 0.5 miles south. Three Golden Eagles returned to picking over what remained. Then two rose and flew low to the north. A Ferruginous flushed and was replaced by the first-to-arrive Golden Eagle, which promptly began picking at the ground, guarding the kill with its half-open wings. Finally the second Bald Eagle returned, but only stood near the site.

Had the Ferruginous Hawk made a second kill while my attention was diverted? I crept behind my pickup and looked up to see the Ferruginous descending slowly. The eagles flew up, perhaps since I was outside, and I noted their talons were empty. I walked over to the kill sites and found only a few entrails. Poison bait (green barley) was near every burrow, so perhaps the raptors merely found dead Prairie Dogs on the ground.

I returned to the truck. When I turned around, the Ferruginous Hawk was actively feeding on the ground some distance east of the second kill. The Ferruginous soon left the site and began picking at the ground, much as I have seen other Buteo species do when feeding on insects. Soon two other hawks approached, landing near the site. One was an adult Ferruginous but the other was smaller and paler, perhaps an immature. Soon a black morph Ferruginous joined them at the site, making quite a contrast with the very pale immature. Within minutes, five Ferruginous Hawks had converged at the site.

The second Bald Eagle returned and flew low over the company of Ferruginous Hawks but made no attempt to take over the kill site. Two new Ferruginous Hawks appeared. By now the Prairie Dogs had all but disappeared. I turned to go. Another Ferruginous Hawk circled to the west, making a total of eight. As I drove away, two of the Golden Eagles had returned and were circling overhead.

Today's observations emphasize what I have noted before: the importance of hawks to the large eagles that steal the hawk's prey and the importance of Prairie Dogs to all. *Michael Melius, RR 2, Box 40C, Hermosa 57744.*

NORTHERN ORIOLE CHRISTMAS COUNT RECORD AT RAPID CITY. During the Audubon Society Christmas Count in NW Rapid City on 20 December 1981, Mrs. Doris Knecht and her party found a bird that they identified as a Northern Oriole, foraging in trees along Lime Creek. We call this area City Springs or, by city designation, Wilderness Park. The next morning I returned to this location and found the bird on part of Dr. M. P. Merryman's home property, still along Lime Creek. I watched the bird for several minutes and noted that its breast and abdomen were yellow, that the wings were darker with two wing bars, and that the area around its face was black. On this basis, I identified it as a hatching-year male, apparently of the eastern or "Baltimore" form. Although I made several subsequent trips to the area in the following days, I did

not see the oriole again. This observation was published in *American Birds* (36:644) and in *South Dakota Bird Notes* (34:47). *Nathaniel R. Whitney, 633 Berry Pines Road, Rapid City 57702.*

BOOK REVIEWS

The Birds of Ancient Egypt by Patrick F. Houlihan and Steven M. Goodman. Aris and Phillips Ltd.: Arminster (England), 1986. Softbound. $49.95.

This fascinating text reflects birding's meld of people of different perspectives and occupations. The first part of this book identifies the birds depicted in ancient Egyptian artwork. The second presents a scholarly annotated checklist of today's Egyptian birds.

The first part will appeal to historians and artists. Species accounts discuss 73 birds (and one bat) taken from black and white photographs of a wide range of ancient Egyptian artwork. The text comments on identification and meaning of the species for the ancients.

The second part, the checklist, seems out of place in this book, belonging, instead, in a scholarly ornithological journal. Unillustrated, the checklist comments on the status and nomenclature of Egyptian birds. Also included in the text is a list of mummified birds and a chronological table of the various dynasties and historical periods in Egyptian history.

Overall, considering there are no color plates and that the book is softbound, I thought the book's price relatively high. Nevertheless, those readers fascinated by birds and history will find considerable enjoyment from this text. *Dan A. Tallman, Northern State College, Aberdeen 57401.*

A Field Guide to the Birds of Hawaii and the Tropical Pacific by H. Douglas Pratt, Phillip L Bruner, and Delwyn G. Berrett. 1987. Princeton Univ. Press, Princeton. Hardbound $50.00, softbound $19.95.

This lovely guide is ideal for those visiting Hawaii or other Pacific ports. Pratt's color plates are stunning, from which one may recognize him as the major National Geographic guide artist. Pratt paints with a distinctive brilliance of color. A very minor criticism is that he occasionally presents birds off profile, which distracts from species profile comparisons.

The introduction is comprehensive and interesting. As well as the normal introductory subjects, we find a discourse on Pacific languages and a short summary of Pacific ecology, complete with habitat photographs. Especially alarming are reports of widespread population declines of native birds. Scattered in the introduction are numerous tables, listing, for example, the distribution and status of little green birds in Hawaii. This sort of presentation will certainly aid the inquisitive birder.

The species accounts are brief but comprehensive and include a wealth

of literature citations. Where appropriate, taxonomic problems are mentioned --a fine introduction to ornithology for the neophyte birder.

An appendix includes regional checklists with indication of the status of each species on the various islands. Thus, one can keep separate lists for different Pacific islands. Following this are a dozen maps of the region. Finally, lamentably lacking in most other field guides, are two plates of color photographs of plants important to birds

In summary, this gem of a field guide includes not only superb bird paintings, but also a summary of Pacific ecology. In all, this book will greatly enhance any birder's Pacific holiday. *Dan Tallman, Northern State College, Aberdeen 57401.*

Hawks by William S. Clark and Brian K. Wheeler. 1987. Houghton Mifflin Co., Boston. Softbound 198 pp. $13.95.

This book is the 35th in the Peterson field guide series. Clearly, this text should be sought out by birders, novice and advanced alike. The book, however, is not without drawbacks. I was disappointed in the color plates. They are somewhat primitive (stiff and lifeless) and many appear to have had their outlines traced from a master drawing and then painted in with the appropriate colors. This style is especially apparent in the drawings of Prairie and Peregrine Falcons. Many of the birds seem small-headed. Some of the book's great strengths, however, are the black-and-white raptor photographs that follow the plates. Despite the photographs not being highest caliber reproductions (they may have been made from slides), they, with their accompanying field mark arrows, make this book worth purchasing.

Even if the drawings are not aesthetically pleasing, they are probably utilitarian. This book is one of the few field guides that will allow the novice to identify a pale immature Swainson's Hawk, so common in many parts of South Dakota. The text includes discussions of subspecies and etymologies of scientific names. Clear range maps accompany the accounts. At the end, references are given both alphabetically and by species. Perhaps the field guide of the future will be a series of specialty volumes, much as this text, covering individual North American bird families.--*Dan Tallman, Northern State College, Aberdeen 57401.*

THE 1987 BREEDING SEASON

by Dennis Skadsen
Box 113, Grenville 57239

In most areas of the state, the weather followed similar patterns to spring with above normal temperatures and below normal precipitation. Colonial birds continued to disperse due to high water inundating colonies in

the NE. By late July, water levels began to drop. An aerial survey of the NE in early June located two new colonies of Great Blue Herons, Great Egrets, and Double-crested Cormorants.

Highlights for the season include the Chuck-will's-widow discovered at Pierre by participants of a breeding bird atlasing workshop, the second observation of an Olivaceous Cormorant in the state, and the nesting of Clark's Grebes in Kingsbury Co. for a first state record.

Observers cited in this report were:

Robert H. Brashears (RHB)
Ralph L. Bryant (RLB)
Mike H. Getman (MHG)
Marjorie A. Glass (MAG)
Scott Glup (SG)
Ken Graupmann (KG)
Willis Hall (WH)
Bruce K. Harris (BKH)
John Jave (JJ)
John W. Koerner (JWK)
Michael M. Melius (MMM)
Scott Mikkelson (SM)
Richard A. Peterson (RAP)
D. George Prisbe (DGP)
Dennis R. Skadsen (DRS)
Lori L. Skadsen (LLS)
Mark S. Skadsen (MSS)
Kent Solberg (KS)
Paul F. Springer (PFS)
Galen L. Steffen (GLS)
Dan A. Tallman (DAT)
Erika J. Tallman (EJT)
Pat Vance (PV)

COMMON LOON--4 June, Pennington Co., Sheridan Lake (MMM). 7 July, Day Co. Waubay Lake (RLB).

PIED-BILLED GREBE--19 May, Yankton Co., adult on nest (PFS).

RED-NECKED GREBE--Day Co., nested at Waubay NWR (DRS).

EARED GREBE--15 June, Day Co., Breske Slough, 3 pair with young (DRS).

WESTERN GREBE--12 July, Day Co., Waubay NWR, 7+ nests with eggs (DRS).

CLARK'S GREBE--30 June, Kingsbury Co., nest with eggs, FIRST DOCUMENTED NESTING OF THIS SPECIES IN SD (BKH). 17 June, McPherson Co. (DAT, DGP).

AMERICAN WHITE PELICAN--11 June, Day Co., S Waubay Lake, 54 nests with eggs (SM, SG). 29 June, Day Co., Bitter Lake, 700+ nests with young and eggs (DRS, LLS). 16 June, Bennett Co., Lacreek NWR, 2511 nests RHB). Colonies also active on Piyas Lake, Marshall Co. and Drywood Lake, Roberts Co. (DRS).

DOUBLE-CRESTED CORMORANT--7 June through 21 July, Day Co., nests with eggs and young at N and S Waubay and Bitter Lakes; Mud and Drywood Lakes in Roberts Co.; and Piyas Lake in Marshall Co. (DRS). 28 June, Walworth Co., Blue Blanket Lake, 17 nests (WH). 28 June, Lyman Co., 22 nests along Missouri River (WH). Also nesting: Bennett Co., Lacreek NWR, Jackson Co. and Kingsbury Co..

OLIVACEOUS CORMORANT--11 June, Hughes Co., Pierre, 2nd STATE RECORD (DAT). 23 June, Hughes Co., Pierre (BKH).

AMERICAN BITTERN--12 August, Day Co., Bitter Lake, 7 nests (MHG).

GREAT BLUE HERON--29 June, Harding Co., Big Nasty Creek, occupied nest, FIRST CONFIRMED NESTING FOR NORTHWEST SD (RAP).

GREAT EGRET--16 June, Marshall Co., Piyas Lake, 10+ nests with young, first confirmed county nesting (DRS et al.). 29 June, Deuel Co., Coteau Lake, 4 nests, first confirmed nesting for this county (BKH). 30 June, Kingsbury Co., Lake Preston, 65 nests with young, largest SD colony to date (BKH).

SNOWY EGRET--9 May, Kingsbury Co., Lake Preston Creek, adults on 10 nests (MSS). 29 July, Charles Mix Co., Lake Andes NWR, 40 nests (JJ). 15 June, Day Co., Breske Slough, nesting (DRS).

LITTLE BLUE HERON--30 June, Kingsbury Co., Lake Preston Creek, 2 nests (PFS).

CATTLE EGRET--Day Co., Breske Slough, nesting (DRS). Kingsbury Co., Lake Preston Creek, nesting (BKH). Codington Co., Grass Lake, nesting (BKH). Charles Mix Co., Lake Andes NWR, 125 nests (JJ).

BLACK-CROWNED NIGHT-HERON--Nesting observed: Day Co., Breske Slough (DRS); Codington Co., Grass Lake (BKH); Bennett Co., Lacreek NWR (RHB), Kingsbury Co., Lake Preston Creek (PFS); Charles Mix Co., Lake Andes NWR, 275 nests (JJ).

WHITE-FACED IBIS--15 June, Day Co., Breske Slough, 9 nests with eggs, first confirmed nesting for county (DRS). 28 June, Perkins Co., 2 (RAP). 30 June, Codington Co., Grass Lake (BKH).

SNOW GOOSE--10 June, Day Co., Waubay Lake, pair (RLB).

WOOD DUCK--Gregory Co., adult with 18 young (GLS).

AMERICAN BLACK DUCK--11 June, Minnehaha Co. (PFS). 20 June, Day Co., Waubay Lake, 2 (PFS). 8 July, Day Co. (KS).

CINNAMON TEAL--11 June, Sully Co. (DAT, EJT). 16 June, Walworth Co., 2 (PFS).

RING-NECKED DUCK--4 July, Roberts Co., female with 6 young (DRS, MSS).

LESSER SCAUP--3 July, Day Co., Bitter Lake, nest with 10 eggs, on edge of Ring-billed Gull colony on island (DRS, MSS).

TURKEY VULTURE--10 June, Lincoln Co., Newton Hills SP, 14 (PFS). 30 June, Haakon Co., 47 (MMM).

NORTHERN HARRIER--Bennett Co., Lacreek NWR, 5 nests (RHB). 26 July, Pennington Co., nest with 2 young *in tree* (MAG).

SHARP-SHINNED HAWK--12 June. Lawrence Co. (MMM). 27 June, Harding Co., Slim Buttes (PFS).

COOPER'S HAWK--1 July, Meade Co., near White Owl, adult at nest (PFS). 5 June, Marshall Co. (BKH, GLS, DRS). 8 June, Day Co. (DRS, GLS). 5 July, Harding Co. (PFS).

NORTHERN GOSHAWK--5 and 12 July, Pennington Co., 2 nests with young and Custer Co., 2 nests with young (RAP).

BROAD-WINGED HAWK--5 June, Marshall Co., Sica Hollow SP (DRS, BKH, GLS).

SWAINSON'S HAWK--24 April, Day Co., adult on nest (DRS). 14 May, Bennett Co., Lacreek NWR (PFS). 6 June, Marshall Co., adult on nest (DRS). 12 July, Faulk Co., 3 young (MMM).

GOLDEN EAGLE--31 May, Fall River Co., Red Canyon, nest wtih 2 downy young (RAP). 14 June, Custer Co., adults and young on nest (RAP).

MERLIN--10 June, Custer Co. (RAP).

PRAIRIE FALCON--4 July, Harding Co., North Cave Hills, 2 pair (PFS).

GREATER PRAIRIE CHICKEN--26 June, GRANT CO., O'Farrel WPA, adult with

brood, second confirmed nesting this year in this area, farthest E nesting of this species since the 1920's (JWK, MHG).

SHARP-TAILED GROUSE--13 May, Grant Co., 4 nests with eggs (MHG).

NORTHERN BOBWHITE--10 June, Union Co., 3 (PFS). Gregory Co., only 1 on 40 mi survey route (GLS).

VIRGINIA RAIL--17 June, Brown Co., adult with 6 young (PFS).

SORA--19 June, Marshall Co., adult with 6 young (PFS).

BLACK-BELLIED PLOVER--18 June, Roberts Co., TIES LATEST EVER (PFS).

AMERICAN AVOCET--3 July, Day Co, Bitter Lake, 2 nests with 4 eggs each (DRS, MSS). 2 July, Haakon Co., adult with young (MMM).

GREATER YELLOWLEGS--29 June, Day Co. (DRS).

SPOTTED SANDPIPER--1 July, Haakon Co., nest with 4 eggs (MMM)

UPLAND SANDPIPER--13 May, Grant Co., 19 nests with eggs found during 300 acre nest drag, O'Farrel WPA (MHG).

LONG-BILLED CURLEW--4 July, Harding Co., 4 (PFS).

MARBLED GODWIT--15 June, Day Co., 4 (DRS). 28 June, Perkins Co., 4 (RAP).

BAIRD'S SANDPIPER--11 June, Kingsbury Co., TIES LATEST EVER (PFS).

STILT SANDPIPER--29 June, Day Co., Bitter Lake, early fall migrant? (DRS, MSS).

COMMON SNIPE--13 May, Bennett Co., Lacreek NWR, nest with 2 eggs (RHB). 16 June, McPherson Co. (PFS). 10 July, Gregory Co., winnowing male (GLS).

AMERICAN WOODCOCK--5 June, Marshall Co., Sica Hollow SP (BKH, GLS, DRS). 10 June, Lincoln Co., Newton Hills SP (PFS). 2 and 11 June, Minnehaha Co. (PFS).

WILSON'S PHALAROPE--30 June, Codington Co., 75 (BKH). 3 July, Day Co., Bitter Lake, nest with 4 eggs (DRS, MSS).

FRANKLIN'S GULL--15 June, Day Co., Breske Slough, 200+ nests with young and eggs (DRS et al.).

RING-BILLED GULL--7 June, Day Co., N Waubay Lake, 117 nests with eggs (BKH, DRS, GLS). 29 June, Day Co., Bitter Lake, 100+ nests with eggs and young (DRS, LLS). 3 July, Day Co., Bitter Lake 149 nests with eggs, second colony found at this location (DRS, MSS).

CALIFORNIA GULL--3 July, Day Co., Bitter Lake, 5 nests with eggs, nesting with Ring-billed Gulls (DRS, MSS).

BLACK-LEGGED KITTIWAKE--6 June, Hand Co., Lake Louise (PV).

CASPIAN TERN--25 June, Day Co., Pickeral Lake (DAT).

COMMON TERN--3 July, Day Co., Bitter Lake, 4 nests with eggs and young in Ring-billed and California Gull colony (DRS, MSS).

FORSTER'S TERN--15 June, Day Co., Breske Slough, 8+ nests with eggs (DRS).

LEAST TERN--30 June, Meade Co., nest (PFS).

YELLOW-BILLED CUCKOO--1 July, Haakon Co., adult with dependent young (MMM).

COMMON BARN-OWL--26 July, Jackson Co, nest with young (KG).

EASTERN SCREECH-OWL--7 June, Day Co, Pickeral Lake Recreation Area (DRS).

SHORT-EARED OWL--Bennett Co., Lacreek NWR, 20 nests observed (RHB).

COMMON NIGHTHAWK--27 July, Haakon Co, nest with 1 egg (MMM).

COMMON POORWILL--27 June, Harding Co, Slim Buttes, 3 (RAP). 29 June, Meade

Co., White Owl (PFS).

CHUCK-WILL'S-WIDOW--13, 14, 23 June, Hughes Co., Oahe Dam, SECOND STATE RECORD (PFS et al.).

WHIP-POOR-WILL--10 June, Lincoln Co. Newton Hills SP, 2 (PFS).

RUBY-THROATED HUMMINGBIRD--12 June, Day Co., Waubay NWR (JWK). Also observed during period in Roberts Co., Sodak Park, where seen nesting last year (BKH).

YELLOW-BELLIED SAPSUCKER--10 June, Lincoln Co., Newton Hills SP, nesting (PFS). 23 June, Deuel Co., Gary Gulch, 2 nests (PFS).

RED-NAPED SAPSUCKER--4-13 June, Pennington Co. and Lawrence Co. (MMM).

DOWNY WOODPECKER--5 June, Pennington Co., adults feeding young in cavity (MMM).

HAIRY WOODPECKER--6 June, Roberts Co., Sica Hollow SP, adult feeding young in cavity (DRS et al.).

THREE-TOED WOODPECKER--10 June, Lawrence Co. (MMM).

BLACK-BACKED WOODPECKER--9 July, Custer Co., Wind Cave NP (PFS).

PILEATED WOODPECKER--9 June, Grant Co. (BKH, GLS). 27 June, Roberts Co., Sodak Park, immature (BKH).

WILLOW FLYCATCHER--4 July, Roberts Co., nest with 2 young (DRS, MSS).

EASTERN PHOEBE--16 May, Todd Co., nest with 4 eggs, 1 young (PFS).

SAY'S PHOEBE--19 May to 31 July, Pennington Co., pair built 3 nests next to each other on porch, successfully fledging 3 broods (MAG).

TREE SWALLOW--Day Co., Waubay NWR, 352 nestlings banded (DRS).

CLIFF SWALLOW--12 May, Roberts Co., 5 nests attached to occupied house (DRS).

CLARK'S NUTCRACKER--7 April, Custer Co., nest with 2 young (RAP). 15 April, Custer Co., 2 nests with 2 young each (RAP).

BLACK-BILLED MAGPIE--28 April, Pennington Co., nest with 7 eggs (MMM).

PYGMY NUTHATCH--3 July, Custer Co., Wind Cave NP, 2 (RAP).

CANYON WREN--5 and 7 June, Pennington Co., 2 (MMM).

BLUE-GRAY GNATCATCHER--10 June, Lincoln Co., Newton Hills SP, pair (PFS).

EASTERN BLUEBIRD--Day Co., Waubay Lake, 68 nestlings banded and fledged (DRS). 21 June, Union Co., feeding young in cavity (PFS).

MOUNTAIN BLUEBIRD--13 June, Lawrence Co., nest with young and nest with eggs (MMM).

VEERY--5 June, Marshall Co., Sica Hollow SP, 5 males singing (DRS, BKH, GLS).

WOOD THRUSH--10 June, Lincoln Co., Newton Hills SP, 7 (PFS). 11 June, Minnehaha Co. (PFS).

GRAY CATBIRD--21 May, Union Co., building nest (PFS). 19 July, Day Co., nest with 3 young (DRS).

NORTHERN MOCKINGBIRD--29 - 30 June, Pennington Co. and Meade Co., 3 (MMM).

CEDAR WAXING--19 June, Day Co., nest with 2 eggs, 1 cowbird egg (DRS).

LOGGERHEAD SHRIKE--13 May, Bennett Co., nest with 5 eggs (MMM).

YELLOW-THROATED VIREO--10 June, Lincoln Co., Newton Hills SP (PFS). 19 June, Marshall Co., Buffalo Lake (PFS).

RED-EYED VIREO--11 June, Roberts Co., Sodak Park, nest with eggs (BKH).

MYRTLE WARBLER--16 June, Walworth Co., Hiddenwood SP, LATEST EVER (PFS).

AMERICAN REDSTART--10 June, Lincoln Co., Newton Hills SP, 5 (PFS). 19 June, Marshall Co., Buffalo Lake (PFS).

SCARLET TANAGER--5 June, Marshall Co., Sica Hollow SP (DRS, GLS, BKH). 10 June, Lincoln Co., Newton Hills SP (PFS). 16 June, Roberts Co., Sodak Park (BKH).

CHIPPING SPARROW--3 July, Day Co., adult feeding fledged cowbird (DRS).

CLAY-COLORED SPARROW--11 June, Minnehaha Co., female on nest, well south of normal breeding range in SD (PFS).

LARK SPARROW--1 July, Haakon Co., nest with 4 young, nest with 2 eggs (MMM).

BAIRD'S SPARROW--20 June, McPherson Co., Ordway Memorial Prairie, 10 males singing (BKH).

LE CONTE'S SPARROW--8 June, Day Co., pair (DRS). Same area where found nesting in 1986.

BREWER'S BLACKBIRD--27 June, Roberts Co., Hurricane Lake, adult carrying food, 3 fledglings flushed, FIRST NESTING NE RECORD SINCE 1950'S (BKH).

NORTHERN ORIOLE--July, Gregory Co., 100 banded (GLS).

RED CROSSBILL--3 July, Day Co., Pickeral Lake, immature (DRS).

Published by
SOUTH DAKOTA ORNITHOLOGISTS' UNION
Editor: Dr. Dan Tallman
NSC Box 740
Aberdeen, S.D. 57401

Nonprofit Organization
U.S. Postage
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GRANTS FOR NONGAME WILDLIFE RESEARCH IN MINNESOTA

The Minnesota Nongame Wildlife Program is soliciting proposals for projects to be conducted during the 1988 and/or 1989 field seasons. Funding comes from contributions to the Minnesota Nongame Wildlife Tax Checkoff. Proposals should be for work contributing to the conservation and management of nongame wildlife in Minnesota. Projects focusing on State Endangered, Threatened, or Special Concern species will be given high priority. Appropriate projects could include censuses, surveys, studies of life history or population dynamics, or habitat identification or assessments. Requests should average $2000 per year, but larger requests will be considered. The deadline for submitting proposals is January 8, 1988. Decisions will be announced no later than March 1, 1988. For proposal format, guidelines, and other information, please contact: Richard J. Baker, Nongame Wildlife Program, Minnesota Department of Natural Resources, Box 7, 500 Lafayette Road, St. Paul, MN 55155-4007 (or call at 612-297-3764).

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