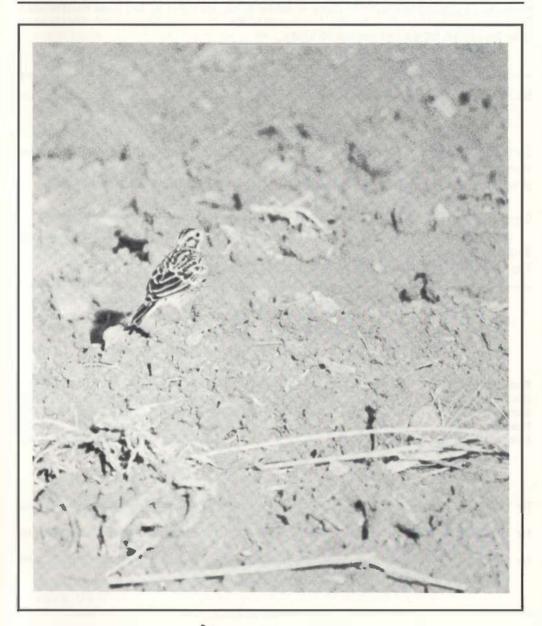
SOUTH DAKOTA ORNITHOLOGISTS' UNION



SOUTH BIRD



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PRESIDENT'S PAGE

1988 will take us into South Dakota's centennial year, an event worth of celebrations, reflections, and projections. Since the Pleistocene epoch until the early part of this century, a time span of approximately 10,000 years, not many changes have occurred in our state's geography. The extreme winter and summer environmental conditions presented severe hardships on people. In order to cope with these difficult conditions, our civilization is using scientific, technological, and engineering advances to push our quest of exploration, production, and a more comfortable life, thus altering South Dakota's geography. For



example, from 1920 until 1950, the prairie pothole wetlands have been drained and reduced by almost 50 percent. The Missouri River impoundments affected more than 500 miles of riparian habitat; now less than 80 miles exist within South Dakota. At times I wonder how good these changes have been to some South Dakota birds.

in order to meet the diverse needs of birds, implementation of skilled management techniques is required. The knowledgeable birder should get involved with attempts to allow diverse birdlife to survive in South Dakota. Federal programs, such as the small wetlands acquisition, swampbuster, multiple use concepts of public grasslands, sodbuster, Missouri River mitigation and conservation reserve are policy programs that can preserve and provide suitable bird habitat. The South Dakota agency responsible for managing nongame birds is the Department of Game, Fish and Parks. Many of its existing programs benefit habitat and birds. Sportsman's license fees provide funding for some of these habitat improvement programs.

We need to address additional nongame biology management plans. We shall continue to encourage the SD Department of Game, Fish and Parks to propose legislation that will implement nongame programs in South Dakota. Perhaps during our centennial year, the legislature and Governor will support and endorse a nongame program.

We can help existing programs already involved with bird management by purchasing the SD Waterfowl Restoration Stamp, the Pheasant Restoration Stamp, and the Federal Migratory Bird Stamp, all of whose funds directly benefit wildlife habitat. In addition, we can continue to support private conservation groups, such as the National Wildlife Federation, The Nature Conservancy, the Wildlife Society, Ducks Unlimited, and the Audubon Society.

When all is said and done, to be knowledgeable in ornithology is an accomplishment. However, that feat may not be enough to preserve the birds so that future generations may have the same enjoyment as we have experienced. Therefore, let us be receptive to ideas that will benefit South Dakota's birds.

On another matter, family Life Memberships are now available at a rate of 15 times the family annual membership fees (rounded up to the nearest

\$25). Therefore, a family (husband, wife, and dependent children) can join SDOU for \$200. Benefits for life memberships will cover yearly membership and allow the principle to remain in SDOU's fund as an endowment for the future that will benefit SDOU after we've gone. Finally, may I remind all members that 1988 dues should be remitted to Nelda Holden at your earliest convenience.

Breeding Records and Observations of South Dakota's Rare Birds Heritage List 1965-1987 PART ONE

by Dennis R. Skadsen
Box 113, Grenville SD 57239

introduction

in 1981 a cooperative research project between The Nature Conservancy and the South Dakota Department of Game, Fish and Parks was initiated. The SD Natural Heritage Programs purpose is to develop a list of plants and animals thought to be rare or uncommon, needing protection or monitoring, or, in several cases, to gain more information about a species' status in the state. The program published a list in 1985 (Houtcooper et al. 1985).

Part One of this paper is the first of two that document breeding distribution and seasons for all breeding birds listed by the heritage program. Part Two, in the next issue of *Bird Notes*, will include a literature cited section for both parts. I thank Bruce Harris, Paul Springer, and Dan Tallman of the South Dakota Ornithologists' Union, and George Vandel III and Dave Ode of the SDGFP for their help and suggestions for this paper.

Species accounts

The heritage list is comprised of 65 species, of which 51 have been confirmed as breeding within the state. Documented breeding records and breeding season observations were compiled from several journals and books beginning with the 1965 breeding season through 1987. Historical records and breeding records prior to 1965 are only briefly mentioned in the text and are not mapped. Each breeding record is cited and listed in the bibliography. Each account gives the species' official designation and the heritage status. Table i provides an explanation of each heritage category. A compilation of nesting data is given under a breeding season review, based on information from Whitney et al. (1978), along with data collected since the book's publication. Specific dates, locations, and evidence of breeding are listed under breeding records. One citation is listed for each county in which the species has been confirmed as breeding. Either the most recent documented record or the record

giving the best evidence of breeding has been used. Confirmed breeding means evidence such as nest building, nests with eggs or young, or flightless and dependent young have been observed. Under the section "Breeding Seasons and Records Adj. States," confirmed breeding in bordering states is listed only for those counties along South Dakota's borders. Known breeding seasons for these states are listed to give a better idea of a species' breeding season in the northern Great Plains. In several cases, more complete information is known for breeding seasons in these states than in South Dakota. Distribution maps accompany most species accounts. A key to the maps is given in Table 2.

Citations from seasons reports in *South Dakota Bird Notes* are cited in the text but not repeated in the literature cited section. A citation such as Harris in Seasons 1983b refers to a record by Harris reported in the second issue of *Bird Notes* in 1983 (a report from the third issue would be cited 1983c).

Discussion

The main Intent of this paper is to generate interest in the gathering of breeding data for the species cited and the Identification of critical habitat used by these species. As shown by the distribution maps, many species lack confirmed breeding records and show uneven breeding distribution. The Swainson's Hawk, for example, is probably more widespread than recent documented records portray. One possible reason for this situation is that many nests go unreported because the species is considered to be common. In the future, observers should report all breeding season sightings and nesting of heritage species to the South Dakota Natural Heritage Program and publish observations In the season report or general notes sections of South Dakota Bird Notes. Observers should give specific dates, locations (including county, township, section, habitat type) and evidence of breeding (such as nest building, nests with young or eggs, or flightless or dependent young). In this paper, some records listed as confirmed breeding might be dismissed under critical review. For example, all confirmed breeding records of the Northern Saw-whet Owl are based on sightings of fledged immatures during the period generally assumed to be the species' breeding season (April through July). Hopefully further fieldwork can confirm breeding. For lack of sufficient information, many species, such as the saw-whet owl, have been placed in the category status undetermined. Only by extensive fieldwork will enough data be collected to change the status of these species.

In the future, both breeding and nonbreeding species may be dropped or added to the list and status may be changed. The listing of some species may be questioned. For example, the Buff-breasted Sandpiper, which nests In the arctic and is considered a rare migrant in South Dakota, is not currently listed by the US Department of the Interior as endangered or threatened and could be dropped from the list. The Eskimo Curlew, listed as endangered by the Department of the Interior and having an historic status as a migrant in South Dakota, could be added (especially in light of recent sightings in Saskatchewan, Nebraska, and Texas). With recent confirmation of nesting in

Table One. Heritage status codes (from Houtcooper et al. 1985).

CRITICALLY RARE -- In danger of extirpation in the state; very rare or habitat seriously threatened.

RARE -- Known from few sites in the state; species or habitat considered vulnerable or declining.

UNCOMMON -- Apparently secure in the state at present, but warrants monitoring; may be localized or declining.

STATUS UNDETERMINED -- Possibly rare, declining, or extirpated in the state; more information is needed on present abundance and status.

HISTORICAL RECORD ONLY -- Not reported in the state for more than 50 years but habitat may still exist and rediscovery is possible.

PRESUMED EXTIRPATED -- No longer believed to occur in the state; populations or habitats have greatly declined and no recent occurrences are known; rediscovery is unlikely.

PERIPHERAL -- A species whose occurrence in SD represents the edge of its natural range.

DISJUNCT -- A species whose occurrence in SD represents a separation of the primary contiguous population or a discontinuous distribution.

northeastern South Dakota, another species requiring attention is the Ruby-throated Hummingbird.

This paper also provides information to those interested in yearly monitoring of known breeding populations. Many species confirmed as breeding since 1965 need to be reevaluated as to their current statuses. For example, the Wood Thrush was confirmed as breeding along the Missouri River in Charles Mix and Gregory counties in 1969 and 1972. No further reports of this species have been received from these areas for over 10 years. Colonial waterbirds should be checked annually. Water levels and human disturbance can drastically alter nesting colonies from year to year.

Specific nesting or breeding season observations should be sent to The South Dakota Natural Heritage Program, South Dakota Department of Game, Fish and Parks, Anderson Building, Pierre SD 57501.

Table Two. Key to distribution maps

- Breeding season observation
- ▲ Confirmed breeding

Confirmed breeding adjacent state.

SPECIES ACCOUNTS

Horned Grebe: Podiceps auritus

Heritage status: Rare.

Breeding season review: 22 May, pair constructing nest; egg dates: 8 June -

12 July; dependent or flightless young observed 19 July - 27 July.

Breeding records: 8 June 1972, McPherson Co., nest with 7 eggs, and 29 June 1972, Edmunds Co., recently hatched young (Duebbert and Lokemoen 1973); 22 June 1978, Marshall Co., nest with eggs, and 12 July 1978, North Drywood Lake, Roberts Co., nest with 3 eggs (Harris In Seasons 1978d); 22 June 1978, Bitter Lake, Day Co., nest with 4 eggs (Harris and Husmann in Seasons 1978d); 1 July 1979, Eagle Butte Ponds, Dewey Co., adults with 13 fledged young (Bjerke pers. comm.).

Breeding seasons and records adj. states: ND: breeding season late May - mid-September, egg dates 26 May - 21 July, dependent young observed 12 June - 13 September (Stewart 1975).

Red-necked Grebe: Podiceps grisegena

Heritage status: Rare.

Breeding season review: SD nesting season late May - mid-July (Whitney et al. 1978). Observed nest building 20 April. Egg dates 14 May - 7 July.

Breeding records: Yearly Waubay NWR, Day Co. (Whitney et al. 1978); 30 May 1970, Bullhead Lake, Roberts Co., nest (Whitney et al. 1978); 4 July 1972, Deuel Co., nesting (Harris In Seasons 1972c).

Breeding seasons and records adj. states: ND: breeding season mid-May - late August, egg dates 18 May - 16 July, dependent young 13 June - 22 August (Stewart 1975).

Great Blue Heron: Ardea herodias

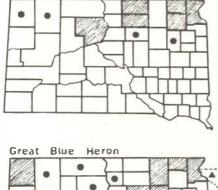
Heritage status: rare.

Breeding season review: SD nesting season April - May (Whitney et al. 1978). Eggs and downy young observed in nest 28 May, feathered young observed in nest 28 May to early August.

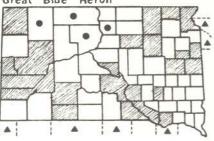
Breeding records: 9 July 1972, Cottonwood Creek, Pennington Co., young in nests (Black Hills Audubon Society In Seasons 1972c); 1972, Lacreek NWR,

Bennett Co., 4 nests, 1 with egg (Fjetland in Seasons 1972c), 1972, Lyman Co., nesting (Backlund 1973); 1978 Peterson Creek, Brule Co., Crow Creek, and Big Bend Dam, Buffalo Co., occupied nests (Blankespoor, Archer, and Ode 1979), 30 June 1979, Farm Island, Hughes Co. (Backlund in Seasons 1979d), 1981, 777 Dam, Custer Co., 20 to 30 nests (Rapid City Bird Club In Seasons 1981d); Davison Co. (McLaird in Seasons 1981d), 2 May 1981 Lawrence Co., 6 nests (Baker In Seasons 1981d); 1 July 1982, Bon Homme Co., 14 nests (Hall In Seasons 1982d); 24 June 1982, Lake Albert, Hamlin Co., young in nests (Harris In Seasons 1982d); 11 June 1983, Stratford Slough, Brown Co., nests with young (Harris in Seasons 1983d), 1984, Faulk Co., nesting (Harris in Seasons 1984d); 10 July 1984, Whetstone Bay, Missouri River, Gregory Co., 6 nests (Steffen pers. comm.); 28 May 1984, Piyas Lake, Marshall Co., young in nest, Drywood Lake, Roberts Co., young and eggs in nest (Harris in Seasons +984d); Glendale heronry, Spink Co. (Dowd and Flake 1984); 22 March 1985, Platte Creek, Charles Mix Co., 3 adults on nests (Skadsen in Seasons 1985d), 18 June 1985, Oakwood Lakes, Brookings Co., pair at nest (Springer, pers. comm.); 1 July 1986, Coteau Lake, Deuel Co., ca. 30 nests (Harris in Seasons 1986d); 7 July 1986, Lake Andes NWR, Charles Mix Co., 6 nests with young (Jave in Seasons 1986d); 20 July 1986, Kadoka Lake, Jackson Co., 14 young (Graupmann) in Seasons 1986d); 29 June 1987, Big Nasty Creek, Harding Co., occupied nest (Peterson In Seasons 1987d); 30 June 1987, Meade Co., 10 nests with young (Springer pers. comm.); 1987, Kingsbury Co., nesting (Seasons 1987d).

Records adj. states: NE: 1982, nesting Cherry, Keya Paha, Knox and Sioux countles (Bennett 1983). MN: Big Stone NWR, Big Stone and Lac Oui Parle countles (Guertin and Pfannmuller 1985). ND: late April - early August, eggs in nests 27 April - 15 May (Stewart 1975).



Horned Grebe







Great Egret: Casmerodius albus

Heritage status: Rare

Breeding season review: Little data available, nest with eggs observed 9 June, young observed in nests 19 June ~ 1 August. Adult observed carrying nesting material 13 July.

Breeding records: 4 July 1981, Lake Albert, Hamiln Co., nest with young, 7 July 1981, Whitewood Lake, Kingsbury Co., nest with young (Harris 1982); June - 10 July 1982, Stratford Slough, Brown Co., nests (Carrell and Tallman in Seasons 1982d); 1 July 1985, Lake Andes NWR, Charles Mix Co., 3 nests with downy young (Jave pers. comm.). 1 August 1979, Sand Lake NWR, Brown Co., downy young (Colonial Bird Register, Cornell University, Ithaca); 16 June 1987, Plyas Lake, Marshall Co., 10+ nests with young (Skadsen et al. in Seasons 1987d); 29 June 1987, Coteau Lake, Deuel Co., 4 nests (Harris in Seasons 1987d).

Breeding seasons and records adj. states: MN: Big Stone NWR, Lac Qui Parle Co., active nesting colony (Guertin and Pfannmuller 1985), Big Stone Co., nesting (Janssen and Simonsen 1984a).

Snowy Egret: Egretta thula Heritage status: Rare.

Breeding season review: Little SD data available, 9 May, adults on nest, nest with eggs observed 9 June, young observed in nests 1 - 24 July.

Breeding records: 1984, Sand Lake NWR, Brown Co., 2 nests (Waldstein in Seasons 1984d); 9 June 1984, Rush Lake, Day Co., 5 nests with full clutches (Skadsen and Harris pers. comm.); 17 July 1983, Lake Preston, Kingsbury Co., 30 nests with young (Harris et al. in Seasons 1983d); 1 July 1985, Lake Andes NWR, Charles Mix Co., 10 nests (Jave in Seasons 1985d).

Breeding seasons and records adj. states: MN: 1977, Big Stone NWR, Lac Out Parle Co., nesting (Buer 1981).

Comments: Species observed in western SD at Lacreek NWR, Bennett Co., where not confirmed as breeding.

Little Blue Heron: Egretta caerulea Heritage status: Critically rare.

Breeding season review: Little data available for SD, adults on nest with eggs 9 June - 21 June, young in nests observed 7 - 26 July.

Breeding records: 21 June 1979, Sand Lake NWR, Brown Co., nest with eggs (Colonial Bird Register, Cornell Univ., Ithaca); 1 July 1985, Lake Andes NWR, Charles Mix Co., 3 active nests (Jave in Seasons 1985d); 20 July 1986, Lake Preston Creek, Kingsbury Co., 4 nests with young (Skadsen in Seasons 1986d). Breeding seasons and records adi. states: ND: 6 active nests observed 7

Breeding seasons and records adj. states: ND: 6 active nests observed 7 July (Lokemoen 1979). MN: 1979, Big Stone NWR, Lac Oul Parle Co., nesting (Buer 1981).

Tricolored Heron: Egretta tricolor

Heritage status: Status Indeterminate.

Breeding season review and Record: Little data available for SD: only confirmed nesting, nests with young observed 13 - 26 July 1986, Lake Preston Creek, Kingsbury Co. (Skadsen 1986).

Breeding seasons and records adj. states: ND: nest with eggs observed 30 July 1978, Long Lake NWR, Burleigh Co. (Schmidt 1979).



Green-backed Heron: Butorides striatus

Heritage status: Rare.

Breeding season review: Little data available for SD, nest with eggs observed 30 May, adult at nest 22 June, nests with downy young 7-8 July.

Breeding records: 7 July 1980, Paul L. Errington Memorial Marsh, Brookings Co., nest with 5 young (McPhillips 1981); 11 August 1980, Burke Lake, Gregory Co., immature (Steffen 1981); 30 May 1984, Codington Co., nest with eggs (Harris and Gilman in Seasons 1984d), 1973, Wall Lake, Minnehaha Co., young (Whitney et al. 1978); August 1986, Deuel Co., nesting (Seasons 1987a).

Breeding seasons and records adj. states: ND: probable breeding season from early May - late August (Stewart 1975), 1985, Sargent Co. (Faanes 1985). MN: nests with eggs observed 12 May - 11 June (Johnsgard 1979); Lac Qui Parle Co. (Janssen and Simonson 1984a) and 1985, Yellow Medicine Co. (Wilson and Shedd 1986).

Black-crowned Night-Heron: Nycticorax nycticorax

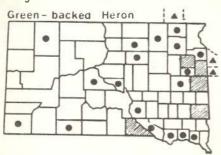
Heritage status: Uncommon.

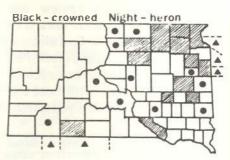
Breeding season review: SD nesting season late May - mid-July (Whitney et al. 1978). Nests with eggs observed 16 May - 14 July, young in nests 16 May - 27 July.

Breeding records: 14 June 1969, Rubindall Slough, Sanborn Co., nest with eggs (Harris 1970a); 14 July 1977, Lacreek NWR, Bennett Co., nest with egg and young (Ely and Lohoefener 1978); 14 July 1978, Sand Lake NWR, Brown Co., nesting colony (Waldstein in Seasons 1978d); 29 June 1978, Scatterwood Lake, Faulk Co., 110 nests (Harris and Husmann in Seasons 1978d); 1980, Goose Lake, Codington Co., active colony (Harris in Seasons 1980d); 28 June 1980, Peever Slough, Roberts Co., 50 nests (Harris in Seasons 1980d); 1981, Wigdahl Slough, Deuel Co., Milwaukee Slough, Lake Co., active colony (Harris in Seasons 1981d); 16 May 1981, Piyas Lake, Marshall Co., 2 young, 2 eggs in nest on ground (Harris and Husmann in Seasons 1981d); 7 June 1983, Rush Lake, Day Co., 50

nests with eggs and young (Harris et al. in Seasons 1983d); 9 July 1984, Lake Andes NWR, Charles Mix Co., 100 nests with eggs (Colonial Bird Register); 9 June 1983, Lake Preston, Kingsbury Co., nest with eggs and young (Wells and Wells 1983).

Breeding seasons and records adj. states: MN: nests with eggs observed from 6 May - 11 July (Johnsgard 1979); Big Stone and Lac Qui Parle counties on the Big Stone NWR (Guertin and Pfannmuller 1985). ND season from early May - early August with nests with eggs observed from 19 May - 29 June (Stewart 1975). NE: 1984, Cherry Co., nesting (Bennett 1985) and 1985, Sheridan Co., nesting (Faanes 1985)





Yellow-crowned Night-Heron: Nycticorax violaceus

Heritage status: Critically rare.

Breeding season review: Little data available for SD, nesting may occur in

Black-crowned Night-Heron colonies.

Comments: Observed mid-May - August at Big Stone NWR, Lac Qui Parie Co., MN, where immatures have been seen 1977 - 1980 (Buer 1981).

White-faced lbis: Plegadis chihi

Heritage status: Rare.

Breeding season review: SD nesting season, nests with eggs observed 17

May ~ 23 July, young in nests seen 28 June ~ 1 August.

Breeding records: 28 June 1978, Sand Lake NWR, Brown Co., nest building and nests with eggs (Waldstein in Colonial Bird Register); 14 July 1981, Whitewood Lake, Kingsbury Co., 2 nests with 3 eggs each (Harris and Husmann in Seasons 1981d); 11 July 1986, Goose Lake, 4 nests with eggs, and 1 July 1986, Grass Lake, Codington Co., 2 nests (Harris et al. in Seasons 1986d); 15 June 1987, Breske Slough, Day Co., 9 nests with eggs (Skadsen in Seasons 1987d).

Breeding seasons and records adj. states: ND: 4 July 1979, nest with 4 eggs Kraft Slough, Sargent Co. (Schmidt 1980). MN: breeding seasons June - early July (Johnsgard 1979). NE: 1984, Cherry Co., nesting (Bennett 1985).

Hooded Merganser: Lophodytes cucullatus

Heritage status: Rare.

Breeding season review: Last week of May - First week of June (1 record only).

Breeding records: 22 May 1980, Brookings Co., Big Sloux River, nest with 10 eggs (Smith 1981) and in same area 1981, 2 nests with 11 eggs each (Smith 1982).

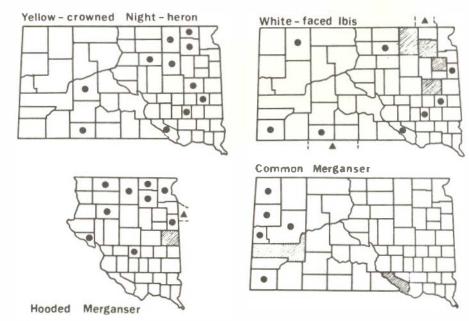
Breeding seasons and records adj. states: ND. nests with eggs observed from June – early July with young on 24 July (Stewart 1975). IA: estimated season. late April – early May (Dinsmore et al. 1980). MN: Lac Qui Parle Co., nesting (Janssen and Simonson 1984).

Common Merganser: Mergus merganser

Heritage status: Rare.

Breeding season review and records: SD young observed 6 June - 6 August; female with third-grown young observed 1 August 1968, Missouri River, Charles Mix Co. (Whitney et al. 1978); 1984–1986, adults with young, Canyon Lake and Rapid Creek, Pennington Co. (Baylor et al. 1987).

Breeding seasons and records adj. states: ND: nests with eggs observed 26 May - 1 June with most eggs hatching from 20 June - 25 June (Stewart 1975). MN: dependent young from 3 June - 11 August (Johnsgard 1979).



Osprey: Pandion hallaetus

Heritage status: Historical record only. Official designation: state threatened.

Breeding season review: Nested in 1883 along the Missouri River, Clay Co., now considered an uncommon transient throughout the state (Whitney et al. 1978).

Breeding seasons and records adj. states: ND: pair observed from 2 May - 9 May constructing a nest along the Missouri River near Garrison Dam (Stewart 1975), where the species is listed as state endangered (McKenna and

Seabloom 1979).

Bald Eagle: Haliaeetus leucocephalus

Heritage status: Critically rare, Federal endangered.

Official designation: State endangered.

Breeding season review: Formerly considered a rare breeder in SE SD, now an uncommon transient throughout SD (Whitney et al. 1978).

Breeding seasons and records adj. states: NE, nest along the Missouri River, Cedar Co., January - February 1973, nest later abandoned by 4 April (Lock and Schuckman 1973).

Cooper's Hawk: Accipiter cooperii

Heritage status: Rare.

Breeding season review: SD nesting seasons probably late April - May (Whitney et al. 1978), adult on nest incubating 23 April, nests with eggs observed 7 May - 27 May with young seen in nests 1 July - 14 July.

Breeding records: 15 May 1975, Sodak Park, Roberts Co., adult on nest (Harris 1977); 7 May 1982, Knight's Coulee, Marshall Co., nest with eggs (Harris In Seasons 1982c); 14 July 1984, Jackson Co., nest with young (Graupmann In Seasons 1984d); 1 July 1985, Pennington Co. nest with 4 young (Mellus in Seasons 1985d); 1 July 1987, Meade Co., adult at nest (Springer In Seasons 1987d)

Breeding seasons and records adj. states: ND: nest building seen 16 April with young observed in this nest 29 June, eggs in nests observed 5 May - 28 May (Stewart 1975).

Northern Goshawk: Accipiter gentilis

Heritage status: Uncommon, population disjunct.

Breeding season review: SD nesting season April - June (Whitney et al. 1978). Nest under construction 27 March, nests with young observed 9 June - 28 July.

Breeding records: 27 March 1972, Lawrence Co., nest under construction (Wild 1973); 24 July 1976, Harding Co., 2 fledged young (Blair 1981); 24 June 1976, Pennington Co., nest with dead nestling (Bartelt in Seasons 1976d); 9 June 1985, Custer Co., nest with 2 young (Peterson in Seasons 1985d).

Breeding seasons and records adj. states: MN: nest with eggs seen 12 April - 10 May (Johnsgard 1979).

Broad-winged Hawk: Buteo platypterus

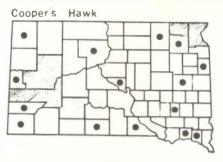
Heritage status: Critically rare.

Breeding season review: SD nesting season May, nest with eggs 26 May (Whitney et al. 1978), young observed in nests from 3 July - 21 July.

Breeding records: 25 May 1977, Terry Peak, Lawrence Co., nest with nestlings (Scott and Whitney 1977); 3 July 1981, Sica Hollow, Roberts Co., nest with 2 young (Glusti 1982).

Breeding seasons and records adj. states: ND: active nests observed 17

May and 5 June (Stewart 1975). MN nests with eggs observed 19 May - 13 June with young in nests from 17 June - 4 July (Johnsgard 1979).





Swainson's Hawk. *Buteo swainsoni* **Heritage status**: Uncommon.

Official designation: Candidate for Federal listing

Breeding season review: SD nesting season mid-May - July (Whitney et al. 1978). Pair observed building nest 23 April, adults seen on nests 16 May - 15 June, young observed on nests 2 July - 17 July.

Breeding records: 11 May 1967, Clay Co., newly constructed nest (Whitney et al. 1978); 16 July 1969, Pennington Co., nest with 2 young (Whitney 1971); 2 July 1969, Harding Co., nest with 3 young (Baylor and Rosine 1970); 1973, McPherson Co., nesting (Lokemoen and Duebbert 1976); 1977, Custer and Day counties, nesting (Seasons 1977d); 1978, Lacreek NWR, Bennett Co. and Yankton Co., nesting (Seasons 1978d); 17 May 1979, Deuel Co., adult on nest (Harris in Seasons 1979d); 1979, Lyman Co., nesting (Thletje in Seasons 1979d), 15 June 1980, North Drywood Lake, Roberts Co., adult on nest (Harris and Husmann in Seasons 1980d); 1981, Gregory Co., 3 nesting pair (unpublished season report); 23 April 1981, Brown Co., 2 nests under construction (Spomer in Seasons 1981d); 23 May 1983, Brookings Co., adult on nest (Wells in Seasons 1983d); 17 July 1985, Charles Mix Co., nest with 2 downy young; 17 May 1986, Marshall Co., adult on nest (Skadsen pers. comm.); 1985, Bon Homme Co., nesting (unpublished season report); 12 July 1987, Faulk Co., nest with young (Melius in Seasons 1987d).

Breeding seasons and records adj. states: ND breeding season from late April - early September with eggs observed in nests from 29 April - 15 July, nestlings from 1 July - 15 August, 29 April 1968, Sargent Co., nest with eggs (Stewart 1975). MN: 1974, Pipestone Co., nesting; 16 July 1976, Rock Co., nest with 2 young; 1977, Lac Qui Parle Co., nesting; 1979, Big Stone Co., nesting (Johnson 1982). NE: 1981, Sheridan Co., nesting (Bennett 1982). WY: 11 May 1984, Latilong 14, nest with 2 young (Oakleaf et al. 1982).

Ferruginous Hawk: Buteo regalis Heritage status: Uncommon.

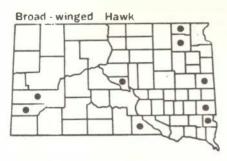
Official designation: Candidate for Federal 11sting.

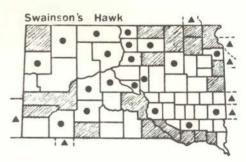
Breeding season review: SD nesting season mid-April April - June (Whitney et al. 1978), nests with eggs seen from 9 April - 25 May with young

In nest from 17 May - 11 July.

Breeding records: 21 April 1965, Todd Co., pair at nest; 28 April 1965, Hughes Co., nest under construction (Whitney et al. 1978); 30 April 1971, Edmunds Co., nest with 3 eggs (Kantrud In Seasons 1971c); 1972, Bennett Co., active nest (Lohoefener and Ely 1978); 1973, McPherson Co., nesting (Lokemoen and Duebbert 1976); 23 June 1977, Perkins Co., pair at nest (Hinds in Seasons 1977d); I June 1978, Hyde Co., 2 nests with 4 young each (Seasons 1978d); 11 June 1979, Jackson Co., nesting (Bjerke in Seasons 1979d); 1976 - 1977, Harding Co., nesting (Blair and Schltoskey 1982), 1981, Potter Co., nest with eggs, and 9 April 1981, Walworth Co., nest with 1 egg (Spomer In Seasons 1981d); 19 May 1984, Brown Co., nest with young (Harris In Seasons 1984d); 10 April - 10 June 1986, Faulk Co., nesting (Melius In Seasons 1986d).

Breeding seasons and records adj. states: ND: breeding season mld-April – late June; nests with eggs observed from 17 April – 7 June with young In nests 27 May – 16 July (Stewart 1975). NE: 1984, Dawes and Sloux counties, nesting (Bennett 1985). WY: 16 June 1986, Latilong 14, nest (Oakleaf et al. 1982).





Golden Eagle: Aquila chrysaetos Heritage status: Uncommon-

Breeding season review: SD nesting season March - June (Whitney et al. 1978). Nest building observed 18 February 1980 (Rosche and Rosche in Seasons 1981d), adults observed on nests 6 March - 3 May, nestlings observed 4 May - 15 June.

Breeding records: 6 March 1968, Butte Co., adult in tree nest; 13 June 1968, Harding Co., Slim Buttes, nest with 2 young (Whitney et al. 1978); 4 May 1972, Custer Co., nest with 2 young (Nordstrom In Seasons 1972b); 1980, Pennington Co., nesting (Seasons 1980d); March - April 1984, Fall River Co., active nest (Peterson In Seasons 1984c); June 1983, Badlands, Jackson Co., nest with 2 young (Graupmann in Seasons 1983d).

Breeding seasons and records adj. states: ND: breeding season mid-March to late July nests with eggs; 27 March - 14 May and young In nests 29 April - 22 July (Stewart 1975). NE: 1984, Dawes, Sloux, and Sheridan counties, nesting (Bennett 1985). WY: 16 June 1983, Latllong 14, nest with 2 young (Oakleaf et al. 1983).

Merlin. Falco columbarius Heritage status: Rare

Breeding season review: SD nesting season late April - June (Whitney et al.

1978) nests with young seen 11 June - 14 July.

Breeding records: 1978, Cave Hills, Slim Buttes, East and West Short Pines, Harding Co., ca. 176 young fledged in 1978 (Sharps 1980). Nest record prior to 1965 in Pennington Co. (Springer pers. comm).

Breeding seasons and records adj. states: ND: nests with young observed 21 June - 10 July Stewart 1975), 1980, Bowman Co., nest with 4 eggs (Serr 1980), species listed as state endangered (McKenna and Seabloom 1979). NE: nesting 1978, Dawes Co. (Bennett 1980) and 1980, Sloux Co. (Bennett 1981).

Peregrine Falcon: Falco peregrinus Heritage status: Critically rare.

Official designation: Federal Endangered, State Endangered.

Breeding season review: SD estimated season May - July (Whitney et al. 1978).

Breeding records: May no longer breed in SD (Whitney et al. 1978). In 1979, 3 young were fledged from Prairie Falcon nests under a foster-parent re-introduction program in the Black Hills (Sharps and O'Brien 1984).

Breeding seasons and records adj. states: ND: breeding season from late April - mid-August with nests with eggs observed 1 - 29 May, nestlings seen 28 June - 2 August (Stewart 1975). MN: nests with eggs seen 10 May - 15 June with nestlings seen 23 April - 23 June (Johnson 1982).

Prairie Falcon: Falco mexicanus
Heritage status: Critically rare.

Breeding season review: SD nesting season mid-April - July (Whitney et al. 1978), nests with eggs observed 24 April - 26 June, nests with young 12 June - 22 June.

Breeding records: 13 June 1969, Harding Co., nests with downy young (Baylor and Rosine 1970); 22 June 1969, Beaver Creek Canyon, Custer Co., nest with 2 young (Weaver 1982); 5 June 1981, Fall River Co., nest (Hall in Seasons 1981d).

Breeding seasons and records adj. states: NE: 1980 nesting, Sheridan Co. (Bennett 1981), 1984, nesting, Dawes and Sloux counties (Bennett 1985). WY: 1 June 1978, Lattlong 7, nest with 4 young (Oakleaf et al. 1978).

Yellow Rail: Coturnicops noveboracensis
Heritage status: Status undetermined.

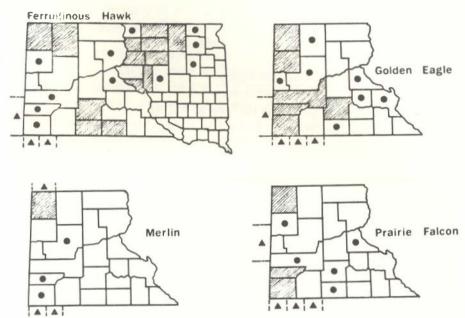
Breeding season review: No definite breeding record for SD where considered a rare summer resident (Whitney et al. 1978).

Breeding seasons and records adj. states: ND: nesting season late May - late July, egg dates, 25 May - 19 June (Stewart 1975). MN species of special concern in MN (1984 Minnesota Official List of Endangered, Threatened and Special Concern Plants and Animals).

King Rail: Rallus elegans Heritage status: Rare.

Breeding season review and Records: SD nesting season probably late May – mid-July, adults with young seen 29 June 1952, Moody Co., and 7 July 1974, Lacreek NWR, Bennett Co., the only recent evidence of breeding in SD (Whitney et al. 1978).

Breeding seasons and records adj. states: ND nesting season probably mid-May - mid-August (Stewart 1975). IA: nests with eggs observed 13 Ma; - 23 June (Johnsgard 1979). MN: species of special concern In MN (1984 Minnesota Official List of Endangered, Threatened and Special Concern Plants and Animals).



Whooping Crane *Grus americana*Heritage status: Critically rare.

Official designation: Federal endangered, state endangered.

Comments: Rare spring and fall migrant, no historical nesting records (Whitney et al. 1978). See Blankespoor (1985) for compilation of observations.

Piping Plover *Charadrius melodus*Heritage status: Critically rare.

Official designation: Federal endangered

Breeding season review: SD nesting season mid-May - July (Whitney et al. 1978). Egg dates 4 May - 5 August, downy and feathered young in nests 24 June - 4 August (Schwalbach pers. comm.).

Breeding records: 1 July 1968, Missouri River, Clay Co., 2 nests with eggs (Harris 1968); 1 June 1972, Hughes Co., 2 nests (Rose in Seasons 1972c); 18 May 1985, Bitter Lake, Day Co., nest with 4 eggs (Harris and Gilman in Seasons

1985c); 1986, Missouri River, Charles Mix. Potter, Stanley, Sully, and Yanton counties, nests with eggs and young (Schwalbach pers. comm.).

Breeding seasons and records adj. states: ND egg oates 19 May to 5 July, dependent young seen from 26 June - 27 July (Johnsgard 1979). NE. egg dates 10 June - 27 July (Johnsgard 1979), 1984, Beyd Co., nesting (Bennett 1985), 1986 Cedar Dixon, and Knox counties, nests with eggs and young (Schwalbach et al. 1986).

Mountain Plover: Charadrius montanus
Heritage status: Presumed extirpated.

Official designation: Candidate for federal listing.

Comments: Listed as a former breeding species in western SD but now extirpated (Whitney et al. 1978). One recent breeding season observation: 1, 5, and 12 July 1977, Lacreek NWR, Bennett Co. (Lohoefener 1978).

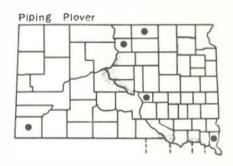
Long-billed Curlew: *Numenius americanus*Heritage status: Status undetermined.

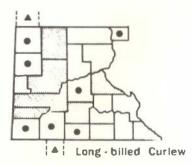
Official designation: Candidate for Federal listing.

Breeding season review: SD nesting May - June (Whitney et al. 1978). Egg dates 1 May - 1 June. Nest with nestlings observed 1 June, adults with young 24 June to 15 July.

Breeding records: 9 July 1972, Custer Co., adults with young (Behrens in Seasons 1972c); 1972 Pennington Co., "good hatch" (Seasons 1972c); 24 June 1979, Jackson Co., adults with young (Whitney in Seasons 1979d); 1 June 1979, Meade Co., nest with young and egg (Miller in Seasons 1979d); 11 July 1981, Stanley Co., adults with young (Spomer 1981); 3 May 1982, Perkins Co., nest with 4 eggs (Hinds in seasons 1982c). Formerly bred in southeastern SD (Whitney et al. 1978).

Breeding seasons and records adj. States: NE: 7 June 1985, Sheridan Co., downy young (Bray 1985a). ND: probable breeding season late April - early August with eggs seen 18 May and young birds 1 July (Stewart 1975); 15 May 1979, Bowman Co., nesting (Berkey 1987).





Buff-breasted Sandpiper: Tryngites subruficollis

Heritage status: Status undetermined. Official designation: State threatened.

GENERAL NOTES

RED CROSSBILLS NESTING IN DAY COUNTY. Between 17 and 29 March 1987, at Pickerel Lake State Recreation Area, Day Co., South Dakota, I banded seven female Red Crossbills with well-developed brood patches. These birds were part of a flock of 20 to 30 crossbills that I observed in the park since 20 October 1986. The birds are attracted to the area by the park's numerous Ponderosa Pines.

On 24 March, after hearing young begging for food, I located a crossbill nest. The nest, containing three well-feathered young, was built about eight feet above the ground near the end of a horizontal branch of an Eastern Red Cedar. The nest tree was located in our yard, where a male crossbill was observed singing on several occasions prior to the discovery of the nest. I found the nest during a snow storm. The nest rim was covered with wet snow. Two young were dry and warm, but the third nestling was wet and cold. Later I found the nest on the ground, apparently blown from the tree by strong winds. Two nestlings were alive, a third was dead. I placed the surviving young in a plastic container filled with straw and paced it under a heat lamp. I kept the young Inside until 6 am the next morning, when I placed the artificial nest In the original site. Both adults gave alarm calls at the nest tree and immediately began feeding the young after I left the area. Both young were being fed out of the nest on 4 April.

The Birds of South Dakota (1978) lists the Red Crossbill as an occasional breeder in the Black Hills. The last confirmed East River nesting occurred on 29 March 1920 in Yankton when Larabee observed a nest with two eggs. Adults with immatures are occasionally observed in eastern South Dakota in the late spring and early summer. On 3 July 1987, an immature was seen in the park and adults were observed again in August. Crossbills are always associated with confers and the abundance of cones for food governs their choice of nesting sites. In good cone production years, crossbills may nest in several areas outside of the black Hills. Dennis Skadsen, Box 113, Grenville SD 57239.

LATE ROSE-BREASTED GROSBEAKS AND OTHER LATE MIGRANTS AT RAPID CITY AND ABERDEEN. On the evening of 15 October 1987, Whitney briefly observed a bird that he identified the next day as a first-year Rose-breasted Grosbeak. The pinkish cast to the upper breast and definite rose-red patagial patches confirmed the identification. The bird frequented Whitney's feeding station through 20 October, the second latest date of occurrence for this species in Scuth Dakota. Whitney hoped to trap and photograph the grosbeak, but it refrained from entering his traps. The possibility remains that the bird

was a hybrid Rose-breasted, Black-headed Grosbeak, although Rapid City is well west of the known hybrid zone.

Tallman had better luck in Aberdeen, netting a first-year male Rose-breasted Grosbeak on 15 October 1987. A rather prolonged mild fall may have contributed to these late migrants. Other late migrants at Aberdeen banded by Tallman included a Scarlet Tanager on 17 October and a Solitary /ireo on 1 November. Nathaniel R. Whitney, 633 5 Berry Pines Road, Rapid Cit, 5D 57702 and Dan A. Tallman, Northern State College, Aberdeen SD 57401.

BOOK REVIEWS

Field Guide to the Birds of North America, Second Edition by The National Geographic Society. 1987, The National Geographic Society, Washington D.C. Softbound 464 pp.

With this second edition, this text becomes the field guide of choice for South Dakota birders. Changes between this edition and the last do not appear to be numerous. Indeed, the number of pages remains the same, as do the birds that occur on each page number. For these reasons, those already owning the first edition can probably retain their present copy. But If your old book is dog-eared or If you are recommending an entry-level text for a friend, this book is a solid choice. I plan to use it in my ornithology class.

Now. In one guide, we have Clark's Grebes and Red-naped Sapsuckers listed as distinct species. So perhaps now we can begin reporting them correctly to our seasonal compiler. When I reviewed the first edition (SDBN 36:8-10), I had several minor complaints about the superb plates. Most of my criticisms still stand; for instance, the Swainson's Thrushes don't have tan everings. On the other hand, the Common Loon's eyes are now correctly shown to be red (previously they were brown). At least two sets of plates have been completely redone (others have recently discovered extralimita) species added). The redone plates, the cuckoos and swallows, were the worst of the old edition. The cuckoos are by Douglas Pratt and are excellent. Unfortunately, John O'Neill's swallows still have fat wings and his Barn Swallow has an odd-colored blue back. But these are relatively minor criticisms and are overshadowed by O'Neill's addition of many perching swallows. Finally, 1 still find fault with the sparrows being dwarfed by their backgrounds. Larger birds with uncluttered backdrops would better facilitate identification. With those few exceptions, however, both artistically and practically, I highly recommend this guide. Dan Taliman, Northern State College, Aberdeen SD 57401.

Breeding Birds of Ontario: Nidiology and Distribution. Volume 2. Passerines by George K. Peck and Ross D. James. 1987. Royal Ontario Museum, Ontario. 387pp. \$36.00.

This text summarizes almost all that is known about the distribution and nesting of Ontario passerines. A companion volume on the province's non-passerines was reviewed in SDBN 35:72-74. Both volumes are handsomely designed and contain fine black-and-white drawings and photographs. Included in an appendix are recent records acquired for Ontario's nonpasserines (although still no mention is made of Erika and my breeding Solitary Sandpiper records published in *Ontario Birds*). In a second appendix is a chart that graphs the time and intensity of the species' breeding seasons. In my first review, I criticized the price of these books, but I no longer believe that the cost is excessive: 62 Canadian dollars is a reasonable price. This volume, like its companion, will inspire birders to contribute to Ontario ornithology. *Dan Tallman, Northern State College, Aberdeen SD 57401*.

Plants and Animals Rare in South Dakota: A Field Gulde by Michael M. Melius. 1987. Ornate Press, RR2 Box 40C, Hermosa SD 57744. 92 pp. \$4.00.

The author obviously expended much time and effort in compiling information on the distributions and diagnostic characteristics of plants and animals considered endangered or threatened in South Dakota. The species were selected from a list furnished by the South Dakota Natural Heritage Program. Notes on habitat preferences and habits accompany thumbnail descriptions (occasionally supplemented by a line drawing) for each species.

The species accounts are listed under four geographical headings: state-wide, east-river, west-river, Black Hills, and Missouri River. Some are further subdivided into northern and southern sections with the end result being a confusing sequence or array of plant, reptile, bird, and mammal accounts alternating throughout the text. The placement of certain accounts also tends to mislead, as in the case of Tall Cottongrass, reported only under east-river (southeast) but occurring across the state. The Least Shrew is reported only under west-river but the species also occurs across the southern part of east-river.

invertebrates, fishes, and amphibians excluded from the main body of the text are listed in an appendix, which also includes many plants, reptiles, birds, and mammal species that the author elected to exclude from the main text. The status of each species is given in the index of scientific names but not in the text, thus requiring one to filp back and forth for this information. The accounts are concise and generally well-written, though some standard common names appear to have been "altered" (e.g., Prairie-lined Racerunner for Prairie Racerunner, Redbelly Snake for Red-bellied Snake, Hog-nosed Snake for Hognose Snake). There are few spelling errors and typos (e.g., *Conupus* should be *Contopus* on page 72, *Drysopus* should be *Dryocopus* on page 88, Sceloporus is misspelled *Sceloperus* throughout, and Hall and Nelson should be Hall and

Kelson on page 86).

If one wishes to have a complete set of works on the biota of South Dakota, \$4.00 is not an exorbitant price for these 92 pages, and all the profits are contributed to the Nature Conservancy. But if one is serious about the field identification and natural history of blota in the state, this publication would be of very limited use. Don Buden, Northern State College, SD 57401.

The Migrations of Hawks by Donald S. Heintzelman. Indiana University Press, Bloomington. 369 pp.

This book, first printed as Autumn Hawk Flights, contains a wealth of information on raptors. As Heintzelman states in the preface, much data have been collected in recent years and the popularity of hawk watching has increased. This statement is evidenced by the recent publication of several new field guides on raptor identification and life histories.

The book is divided into four parts. Part one gives a brief history of hawk watching and migration study from 1500 to the present, field study methods (including binoculars and telescopes), field data forms, recording weather conditions, hawk counting techniques, and information on migration seasons, speeds, and distances. Part two is a comprehensive listing of regional hawk watching locations. Eleven regions are listed--Eastern Canada, Western Canada, Great Lakes, New England, Middle Atlantic, Southern Appalachian, Gulf Coast, Central States, Western States, Central American, and West Indies. Each region is further broken down to states or provinces. South Dakota is listed under Central States, a region Heintzelman writes has received uneven field study coverage of annual hawk migrations. He lists only one study conducted in Clay Co. and cites observations in Sioux Falls and northeastern South Dakota. Part three, Hawk Migrations and Weather Conditions, is the most informative section of the book, with chapters on hawk migrations and general weather systems, local weather variables, thermals, and deflective updrafts. I found the latter subject particularly interesting, having observed recent spectacular spring and fall hawk migrations along the Prairie Coteau in northeastern South Dakota. I wonder if this geological feature does not produce enough deflective updraft for migrating hawks to frequently use. Part four provides information on migration routes, geography, and hawk counts. An extensive bibliography is given in the literature cited section.

This book answers many questions, but also leaves us asking more, which may be the book's main purpose, to stimulate further study and careful observations of hawk migrations. Hawk watching and migration study have come of age. Dennis Skadsen, Box 113, Grenville SD 57239.

Bluebirds. Their Daily Lives and How to Attract and Raise Bluebirds by Tina and Curtis Dew and R. B. Layton. Nature Book Publishers, Jackson MS. 212 pp.

This book is divided into two parts, the first composed of letters written by the Dew's to the Layton's describing in layman's language the daily lives of their bluebirds. The second part contains information on food, housing, and protection for bluebirds.

The problem with the first half of the book is that we learn more about the Dew's than the bluebirds. In the first two chapters alone, we learn of every magazine they subscribe to, what time they arrive home every day, and their overhauling of a Honda CVCC. All we really find out about the bluebirds is that they are "doing great" and they prefer raisins over dogwood berries in their feeders. The following 23 chapters, each representing one letter, follows much the same format. When the authors do write about bluebirds, their observations are wholly anthropomorphic. They describe a thrasher pecking at a bluebird for no reason at all, single nestlings as being "so lonely," and they assume that a dead adult female in a nest box died of a heart attack. The caption under a picture of an incubating female states that she liked to be photographed. The Dew's would have been better off keeping a journal of their observations and publishing only their bluebirds' behavioral activities in a more objective way than in the unedited letters.

The second half begins with a brief history of the Eastern Bluebird's plight and the conservation movement begun to restore the species' dwindling population. The section on providing natural fruits and berries for bluebirds is one of the book's better sections. A list of plant species is provided with a map giving hardiness zones for each part of the country to insure the survival of the plant. Adequate plans are given for the construction of bluebird feeders, nests, and roosting boxes, along with notes on maintenance. Under the section titled "The Threat of Other Small Birds," descriptions of other species usually encountered using bluebird nest boxes are given. Too much of this chapter is devoted to the House Sparrow, with well-illustrated plans of the Huber sparrow trap, but no mention is made of wren or swallow problems. Plans for predator shields and quards are given in the section called "The Threat of Predators." In "The Threat of Insects," we learn of fire ant problems. A map showing the known range of the insect would have been beneficial to those managing bluebird trails in areas where the ant is extending its range. The last section of the book answers often-asked questions about bluebirds.

This book could have been an update of Lawrence Zeleny's classic *The Bluebird*. Much has been learned about managing bluebird trails in the ten years since Zeleny published his book. Instead, we are given a one-sided correspondence and little, if any, new information on bluebird management. *Dennis Skadsen, Box 113, Grenville SD 57239.*

The Known Birds of North and Middle America. Part 1. Hirunc'inidae to Mimidae; Certhildae. by Allan R. Phillips 1986, published by the author, c/o Denver Museum of Natural History. 259 pp.

This text is a most difficult book to review. Its audience is professional and deserves a place in scholarly libraries. Sections of the pook are co-authored by Dickerman, Rea and Webster but the majority represents Phillips' life work. The introductory sections as well as many of the comments under the species accounts provide a rare glimpse into the intrigue and passion of taxonomic ornithology. Allan Phillips is a renegade amongst the ornithological community; as such, he has many strongly held opinions, both on his fellow ornithologists and the current state of the science. He never minces words about either subject. He has no truck with statistics or theoretic ecology ("new technologies", multivariate analysis", "discriminant function analysis", etc., are no substitute for a little basic knowledge of birds, their biology and geographic variation").

Phillips' sermon begins with his title--Known Birds of North and Middle America. He feels that distributional reports based on sight records or photographs rather than specimens are unreliable. Phillips raves for many pages against research granting agencies supporting "ecological research (which drifted farther and farther from reality), picayune projects to 'prove' idle theories, biochemical errors...and similar absurdities." He warns against state and federal laws that have made scientific collecting almost impossible. And he gives dozens of examples of birds misidentified in the field by leading birders, followed by a list of taxonomic mistakes made by leading ornithologists. Phillips' greatest villains are the "zoopolitical" National Science Foundation and the American Ornithologists' Union. Phillips is correct, too, that omithology should be based on specimen evidence (populations of common birds will not be harmed by discriminate collecting). However, I am not sure that his case is well advanced by name-calling and strident preaching. On the other hand, when not even the Fish and Wildlife Service recognizes the need to document state and regional records, much less geographical variation in American birds, perhaps only through such argument can a compromise be reached.

The species accounts will be essential for the avian taxonomist and jabs and criticisms of his colleagues will entertain the casual reader. For example, "collecting of lost strays...would be far more enlightening and scientific than.... sending disoriented birds out to watery graves with bands on." Often a clear understanding of Phillips' debates necessitates a prior familiarity of the problem at hand. Nevertheless, I was somewhat confused by a map showing the distribution of American *Corvus corax* (ravens) that shows no breeding east of the Rockies. Undoubtedly the map should be titled "Western distribution of Common Ravens," since ravens certainly breed across Canada. He also states that the raven is a visitor to South Dakota in fall or winter, although I doubt he has recent specimen evidence to support this ascertation. Perhaps Phillips should treat those with whom he disagrees more forgivingly, as even he is not immune from error. Nor is he completely consistent in demanding specimens:

he cites Dick Peterson's nesting Pygmy Nuthatches as reported in *Bird Notes* and, although Dick is correct in his identification, his sight records are nonetheless not based on specimens. (Phillips is fond of quoting "consistency is the hobgobiln of little minds," yet he has so stridently advocated only relying on specimens, I am surprised by his inclusion of these data.)

I look forward to the future volumes of this text. Unfortunately, no literature cited section occurs, presumably awaiting a final volume of the work, which is frustrating considering the long term nature of this project. Phillips has begun with the oscines, since these he claims are our best studied birds. Especially enlightening will be Phillips' opinions of the taxonomic status of flycatchers and crossbills. Dan A. Tallman, Northern State College, Aberdeen SD 57401.

Flora of the Great Plains by Ronald L. McGregor (Coordinator) and T. M. Barkley (Editor). 1986. University of Kansas Press, Lawrence. 1392 pp. Hardbound \$55.00.

Flora of the Great Plains was published by the Great Plains Flora Association, through the University Press of Kansas in 1986. Ronald L. McGregor coordinated the assembly of this volume, with contributions by at least 13 regional taxonomists (listed on the title page). The work is inclusive of all vascular plants, native and introduced, known to be established in the wild in the Great Plains. This text is the first such regional compendium since Rydberg's work in 1932. Much of the information in this volume comes from state floras and checklists published since Rydberg and from the vast herbaria of the contributors.

As an ecologist, rather than a taxonomist, my primary requirement of a flora is that it be usable by any broadly trained biologist, not just specialists in taxonomy. Nontaxonomists need to be able to identify species unequivocally for physiological and ecological studies. While technical vocabulary is necessary to keep the work to a reasonable size, that vocabulary must be well-defined and used consistently. By these criteria, I have been generally pleased in using this book. The glossary is excellent and very inclusive. I have identified nearly every plant that I have attempted with little confusion. (The exceptions have been a couple of late fall Asteraceae, always confusing.)

I teach an undergraduate plant taxonomy course in northern South Dakota. The required text is Van Bruggen's *The Vascular Plants of South Dakota* (1985). Van Bruggen's text is, of course, much less inclusive and, hence, less expensive. In class, however, we frequently supplemented Van Bruggen's text with the Flora to positively identify many species.

For classroom use, clear and unequivocal keys are the primary value of a flora. From my admittedly limited usage, these keys appear to be excellent. If a trait is mentioned that cannot be found on a particular specimen, ways to get around the obstruction usually exist. The Flora gives valuable extra information in the species descriptions, which often clinches identifications. This volume is really too large and expensive for efficient use in the field, but

It has become the first source for identification by my students and me when we return to the lab.

Flowering plant families are organized by the system of Cronquist (1981), then the genera (and their species) are arranged alphabetically. I would have preferred alphabetical listings of families as well, for ease of use. However, the index is quite complete, so it is easy to locate known families. Because this volume is multiauthored, the editor comments that differences in interpretation and style are bound to appear. True, but such inconsistencies are not obvious to me and I appreciate the job the editors have done in making this volume consistent.

In short, this text is probably too technical to be used by the lay person. However, with this book, any professional biologist or anyone who has had a plant taxonomy course somewhere in his or her background should have no trouble in keying out Great Plains plants. Lynn Hodgson, Northern State College, Aberdeen SD 57401.

THE 1987 FALL MIGRATION

BOX 113, GRENYILLE SD 57239

The fall migration was both early and late. An early migration of passerines provided 20 earliest ever fall records. The peak waterfowl migration was two to three weeks later than normal, occurring the second week of November. Highlights of the season include the second observation of a Pomarine Jaeger, the first West River record of an Oldsquaw outside of Lacreek NWR, a photograph of a Common Raven, and a Varied Thrush.

Weather for the season was mild and dry. Most lakes and larger sloughs remained open through November. Most notable was the lack of any major winter storms.

Abbreviations used in this report are: BNM (Badlands National Monument), LNWR (Lacreek National Wildlife Refuge), SLNWR (Sand Lake National Wildlife Refuge), SRA (State Recreation Area), WNWR (Waubay National Wildlife Refuge).

Corrections to the 1987 Breeding Season Report: Little Blue Heron, change PFS to BKH; Black Duck, change 8 July to 8 June; Sharp-shined Hawk, change PFS to RAP; American Woodcock, delete "2 and" from the citation: 11 June, Minnehaha Co. (PFS); Black-legged Kittiwake, change PV to JV (= John Van Dyke); Common Nighthawk, change 27 July to 1 July; Eastern Bluebird, change 21 June to 21 May; Northern Mockingbird, change to read Sprague's Pipit.

Observers cited in this report:

Jocelyn L. Baker (JLB) Ralph L. Bryant (RLB) Mike H. Getman (MHG) Michael M. Melius (MTM)
Everett C. Montgomery (ECM)
Jeanette Montgomery (JM)

John Gilman (JG)

Marjorie A. Glass (MAG)

Dave Griffiths (DG) Ken Graupmann (KG)

Tom Grube (TG)

Willis Hall (WH)

Bruce K Harris (BKH)

Augle Hoeger (AH)

John W. Koerner (JWK)
Dave Kohenecke (DK)

Blanche Johnson (BJ)

James D. McLaird (JDM)

Marjorle J. Parker (MJP)

Richard A. Peterson (RAP)

D. George Prisbe (DGP)

Bob Rogers (BR)
Jim Salver (JS)

Dennis R. Skadsen (DRS)

Joe Staab (JS)

Galen L. Steffen (GLS)

Dan A. Tallman (FAT)

Sam J. Waldstein (SJW)

Steve Warren (SW)

Nathaniel R. Whitney (NRW)

COMMON LOON--7 November, Yankton Co., 8 (WH). 14 November, Butte Co., Belle Fourche Reservoir, 6 (JLB). Also seen in Codington, Day and Fall River Co.

PIED-BILLED GREBE--18 November, Yankton Co., 5 (WH)

HORNED GREBE--29 September, Walworth Co., 2 (WH). 25 November, Yankton Co., very late (WH).

WESTERN GREBE--17 November, Codington Co. (BKH). 26 November, Perkins Co., 4, Shadehill Reservoir, very late (DG, CG).

CLARK'S GREBE--Meade Co. (NRW).

AMERICAN WHITE PELICAN--11 November, Bennett Co. late, LNWR (NRW).

DOUBLE-CRESTED CORMORANT--17 November, Codington Co. (BKH, ECM). 27 November, Charles Mix Co., 5 (WH).

LEAST BITTERN--28 August, Clark Co., 2 (RLB).

GREAT EGRET--13 September, Sanborn Co., 2 (BR). 29 September, Walworth Co., 6 (WH). 18 October, Codington Co., Goose Lake, late (JG).

SNOWY EGRET--13 August, Brule Co., 4 (MM).

LITTLE BLUE HERON--4 September, Brown Co., Stratford Slough (DGP).

CATTLE EGRET--18 August, Brule Co., Red Iron Lake, 50 (BR). 31 August, Day Co., 118 (DRS). 29 September, Walworth Co., 19 (WH).

WHITE-FACED IBIS--6 August, Day Co., 5 (DGP). 10 September, Potter Co. (MMM)

TUNDRA SWAN--1 November, Brown Co., SŁNWR, 4000 (S.JW). 24 November, Day Co., 20 (MHG).

SNOW GOOSE--5 November, Brown Co., SLNRW, 85,000 (SJW).

WOOD DUCK--23 November, Yankton Co., LATEST EVER (WH).

AMERICAN BLACK DUCK--4 October, Deuel Co., shot by hunter (DK fide BKH).

NORTHERN SHOVELER--28 November, Corson Co., Missouri River, 25 (DG).

GADWALL--22 November, Codington Co., late (JG).

AMERICAN WIGEON--7 November, Day Co., Waubay Lake, 5000+ (JG).

CANVASBACK--21 November, Yankton Co., 17 (WH).

REDHEAD--3 November, Yankton Co., 220 (WH).

LESSER SCAUP--28 November, Walworth Co., 3, very late for N SD (DG).

OŁDSOUAW--14 November, Meade Co., Bear Butte Lake, FIRST W RIVER RE-CORD OUTSIDE OF LNWR (JLB). SURF SCOTER--17 October - 2 November, Perkins Co. (DG, CG).

WHITE-WINGED SCOTER--21 November, Meade Co., Bear Butte Lake, late (JLB)

BARROW'S GOLDENEYE--26 November, Pennington Co., Canyon Lake, SAME MALE OBSERVED SINCE 19797 (NRW).

BUFFLEHEAD--25 November, Yankton Co. (WH) 26 November, Fennington Co., (NRW).

HOODED MERGANSER--7 November, Codington Co., (JG). 20 November, Oaile Dam (NRW). 28 November, Corson Co., Missourt River, 15 (DG).

COMMON MERGANSER--26 November, Charles Mix Co., Fort Randall Dam, 2267 (WH) 28, November, Yankton Co., 2657 (WH)

RED-BREASTED MERGANSER--26 November, Perkins Co., Shadehill Reservoir, late for N SD (DG, SG).

BALD EAGLE--7 September, Day Co., WNWR (JWK). 27 November, Charles Mix Co., Fort Randall Dam, 16 (WH). Many other reports.

NORTHERN HARRIER--26 November, Charles Mix Co. (WH). 24 October, Shannon Co., 24 (RAP et al.).

SHARP-SHINNED HAWK--10 August, Brown Co., 2 (DGP).

COOPER'S HAWK--6 September, Brown Co., Richmond Lake SRA (DGP). 18 September, Minnehaha Co. (AH). 29 October, Sanborn Co., 2 (BR). Also reported Pennington, Waiworth, and Perkins Co.

NORTHERN GOSHAWK--13 August, Custer Co., 2 (RAP).

BROAD-WINGED HAWK--28 September, Day Co., 391+ in several kettles (DRS).

RED-TAILED HAWK--28 September, Day Co., 18 In 1 hour during major movement of raptors (DRS).

ROUGH-LEGGED HAWK--1 September, Pennington Co., EARLIEST EVER (MAG). 8
November, Meade and Pennington Co., 17 (JLB). Many other reports.

MERLIN--15 November, Day Co., Pickerel Lake SRA, 2 immatures (DRS). 21 November, Davison Co. (BR, JDM).

PRAIRIE FALCON--15 October, Codington Co. (RLB). Many other reports.

GREATER PRAIRIE CHICKEN--17 October, HAMLIN CO. (BKH).

AMERICAN COOT--23 November, Day Co., 4 (MHG).

SANDHILL CRANE--18 October, Gregory Co., 7500 in 2 hours (GLS).

BLACK-BELLIED PLOVER--18 September, Minnehaha Co. (AH). 3 October, Day Co. (RLB). 10 October. Codington Co. (JG). 22 October, Hughes Co. (JLB).

LESSER GOLDEN-PLOVER--19 October, Day Co., 28 (DRS).

SEMIPALMATED PLOVER--16 August, Brown Co. (DGP).

AMERICAN AVOCET--6 September, Marshall Co., 38 (DRS).

GREATER YELLOWLEGS--30 September, Walworth Co. (WH). 11 October, Brown Co., SLNWR (DGP).

LESSER YELLOWLEGS--29 August, Fall River Co, Hot Springs Lagoon, 20 (RAP).

SPOTTED SANDPIPER--230 August, Day Co., Pickerel Lake SRA, 18 (DRS).

UPLAND SANDPIPER--1 August, Faulk Co., 70+ (MMM).

MARBLED GODWIT--6 September, Marshall Co., 18 (DRS).

WESTERN SANDPIPER--16 August, Meade Co., Seavey's Lake, 10-20 (NRW).

LEAST SANDPIPER--29 August, Fall River Co., 4 (RAP).

BAIRD'S SANDPIPER--29 August, Fall River Co., 30+ (RAP).

BUFF-BREASTED SANDPIPER--2 August, Deuel Co., EARLIEST EVER (BKH).

LONG-BILLED DOWITCHER--16 August, Meade Co., Seavey's Lake, 4 (NRW). 10 September, Faulk Co., 400-500 (MTM).

AMERICAN WOODCOCK--11 August, Deuel Co. (BKH).

RED-NECKED PHALAROPE--18 September, Codington Co. (JG).

POMARINE JAEGER -- 2 October, Brown Co., SENWR, SECOND STATE RECORD, Rare Bird Report to be filed (DAT).

BONAPARTE'S GULL--27 November, Charles Mix Co., Fort Randall Dam, 40, very late (WH).

THAYER'S GULL--28 November, Corson Co., Missouri River, 2 adults, 3 immatures (DG, CG).

CASPIAN TERN--18 September, Codington Co. (JG).

YELLOW-BILLED CUCKOO--9 August, Grant Co. (DGP).

EASTERN SCREECH-OWL--11 October, Day Co., Pickerel Lake SRA, 2 calling (DRS).

SNOWY OWL--1 November, Brown Co., SLNWR (JHD). 8 and 20 November, Day Co. (JWK, MKG, RLB). Also reported in November from Perkins and Walworth Co. (DG. TG).

LONG-EARED OWL -- 18 September, Day Co., Pickerel Lake SRA (DRS)

NORTHERN SAW-WHET OWL--9 October, Brown Co., first of 5 banded during October (DAT).

LEWIS' WOODPECKER--10 August, Custer Co., 7 (RAP). 16 August, Lawrence Co., 4 (NRW).

RED-BELLIED WOODPECKER--20 October, 24 November, Day Co., WNRW (JWK, MHG). 8 November, Beadle Co. (BJ).

BLACK-BACKED WOODPECKER--29 October, Custer Co., 2 (RAP).

NORTHERN FLICKER--7 October, Brown Co., hybrid banded (DAT).

PILEATED WOODPECKER--26 November, Grant Co., Yellowbank drainage (BKH).

OLIVE-SIDED FLYCATCHER-- 10 August, Brown Co., 2, early (DGP).

WESTERN WOOD-PEWEE--20 August, Pennington Co., singing (NRW).

WILLOW FLYCATCHER--20 August, Jackson Co., banded (KG). 21 September, Brown Co. (DGP).

EASTERN PHOEBE--30 October, Jackson Co., very late (KG).

SAY'S PHOEBE--7 September, Hand Co., 3 (BR). 15 September, McPherson Co. (MMM).

WESTERN KINGBIRD--14 September, Gregory Co. (GLS).

EASTERN KINGBIRD--25 August, Yankton Co., 173 (WH).

CLARK'S NUTCRACKER--18 August, Custer Co., 20 (RAP). 27 September, Pennington Co., 3 (MMM).

BLACK-BILLED MAGPIE--20 November, ROBERTS CO., Sica Hollow SP (MHG, RLB).

COMMON RAVEN -- 3 October, Brown Co., SLNWR (ECM), photographed 9 November (SJW), record submitted to Rare Bird Committee.

RED-BREASTED NUTHATCH--29 August. Brown Co. (DAT). 13 November, Day Co., Pickerei Lake SRA, 3 (DRS).

PYGMY NUTHATCH--27 September, Custer Co. (RAP et al.)

BROWN CREEPER--18 September, Minnehaha Co., 3 (AH). 19 September, Brown Co., SLNWR (DGP). BOTH EARLIEST E VER .

ROCK WREN--30 August, Perkins Co., 2 (DG, CG).

WINTER WREN--13 September, Beadle Co. (BJ). 30 September, Brown Co. (DAT).

GOLDEN-CROWNED KINGLET--18 September, Minnehaha Co., EARLIEST EVER (AH).

RUBY-CROWNED KINGLET--5 September, Brown Co. (DGP). 18 October, Deuel Co. (BKH).

EASTERN BLUEBIRD--4 October, Brown Co., Richmond Lake, 11 (DGP). 8 September, Gregory Co., 12 (GLS). 26 October, Day Co., 6 (DRS).

MOUNTAIN BLUEBIRD--4 September, Custer Co., 30 (MJP).

SWAINSON'S THRUSH--27 August, Brown Co., very early (DAT). 17 August-13 September, Jackson Co., 73 banded (KG).

HERMIT THRUSH--29 September, Brown Co., very early (DAT). 14 November, Day Co., late (DRS).

AMERICAN ROBIN--4 September, Deuel Co., feeding recently fledged young (BKH)

VARIED THRUSH -- 18 September, Minnehaha Co., Sioux Falls (AH).

GRAY CATBIRD--Jackson Co., 27 banded during period (KG).

NORTHERN MOCKINGBIRD--19 October, Spink Co. (JS).

BROWN THRASHER--Jackson Co., 91 banded during period (KG).

WATER PIPIT--24 September, Stanley Co. (BKH, ECM). 30 September, Perkins Co. (DG).

SPRAGUE'S PIPIT--21 September, McPherson Co. (DAT). 24 September, Stanley Co. (BKH, ECM).

BOHEMIAN WAXWING--27 October, Day Co., Pickerel Lake SRA, 2 earliest ever (DRS) 26 November Perkins Co., 30 (DG). Also reported from Pennington and Roberts Co.

NORTHERN SHRIKE--17 October, Jackson Co., very early (KG). 24 October, Custer Co. (RAP).

LOGGERHEAD SHRIKE--19 November, Yankton Co. (WH).

SOLITARY VIREO--5 September, Day Co., Pickerel Lake SRA (DRS). 6 September. Brown Co., Richmond Lake SRA, 2 (DGP). 1 November, Brown Co., very late, banded (DAT).

YELLOW-THROATED VIREO--10 September, Roberts Co., Big Stone Lake, very late (BKH).

PHILADELPHIA VIREO--22 August, Minnehaha Co., EARLIEST EVER (AH).

TENNESSEE WARBLER--11 August, Deuel Co., EARLIEST EVER (BKH).

ORANGE-CROWNED WARBLER--18 August, Jackson Co., banded, EARLIEST EVER (KG).

NASHVILLE WARBLER--12 August, Roberts Co., EARLIEST EVER (BKH).

CHESTNUT-SIDED WARBLER--23 August, Brown Co., TIES EARLIEST EVER (DAT).

MAGNOLIA WARBLER--5 September, Brown Co. (DAT).

YELLOW-RUMPED WARBLER--15 November, Day Co. (DRS).

BLACK-THROATED GREEN WARBLER--26 September, Lincoln Co., 2 (JS, SW).

BLACKBURNIAN WARBLER--11 August, Deuel Co., 2, EARLIEST EVER (BKH).

PINE WARBLER--6 August, Roberts Co., Big Stone Lake, EARLIEST EVER (BKH).

BAY-BREASTED WARBLER--11 August, Deuel Co., EARLIEST EVER (BKH).

BLACKPOLL WARBLER--11 August, Deuel Co., EARLIEST EVER (BKH).

NORTHERN WATERTHRUSH--6 August, Roberts Co., EARL!EST EVER (BKH). 6 September, Brown Co. (DGP).

MOURNING WARBLER--15 August, Minnehaha Co., 2, EARLIEST EVER (AH).

MACGILLIVRAY'S WARBLER--27 August, Jackson Co. (KG).

COMMON YELLOWTHROAT -- 28 October, Deuel Co., LATEST EVER (BKH)

WILSON'S WARBLER--1 September, Jackson Co., 2 banded (KG).

CANADA WARBLER--14 August, Brown Co., EARLIEST EVER (JM). 25 August, Minnehaha Co. (AH).

YELLOW-BREASTED CHAT--4 September, Brown Co. (DAT).

SCARLET TANAGER--28 August, Roberts Co. (BKH). 17 October, Brown Co., 1 banded (DAT).

WESTERN TANAGER--6 September, Custer Co., 6 (MJP). 21 September, Pennington Co., 2 (NRW).

ROSE-BREASTED GROSBEAK--16 - 20 October, PENNINGTON CO., LATEST EVER (NRW).

BLUE GROSBEAK--13 September, Sanborn Co., 3, late (BR).

AMERICAN TREE SPARROW--20 September, Gregory Co., very early (GLS).

CHIPPING SPARROW--7 November, Codington Co. (JG).

LARK BUNTING--11 August, Pennington Co., BNM, 150 (MAG).

BAIRD'S SPARROW--28 August, McPherson Co., Ordway Prairie (DGP). 30 August, 12 and 13 September, Perkins Co., 2 (DG).

GRASSHOPPER SPARROW--13 October, Clay Co., late (WH).

LE CONTE'S SPARROW--16 August, 19 September, Brown Co., several immatures (DGP)

FOX SPARROW--6 September, Brown Co., EARLIEST EVER (DGP).

WHITE-THROATED SPARROW--7 September, Brown Co., EARLIEST EVER (DGP).

RUSTY BLACKBIRD--27 October, Day Co., 78 (DRS).

ROSY FINCH--23 October - 30 November, Pennington Co., BNM, 150 peak (MAG). 26 October, Custer Co. (MJP).

PURPLE FINCH--Reported from Brown, Codington, Day, Gregory and Minnehaha Co.

CASSIN'S FINCH--13 September - 5 November, Custer Co. (MJP). 31 October, Pennington Co. (NRW)

RED CROSSBILL--Reported from Brown, Custer, Day, and Gregory Co.

WHITE-WINGED CROSSBILL -- 5 November, Deuel Co., 3 (BKH).

EVENING GROSBEAK--22 November, Beadle Co. (BR).

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