SOUTH DAKOTA BIRD NOTES

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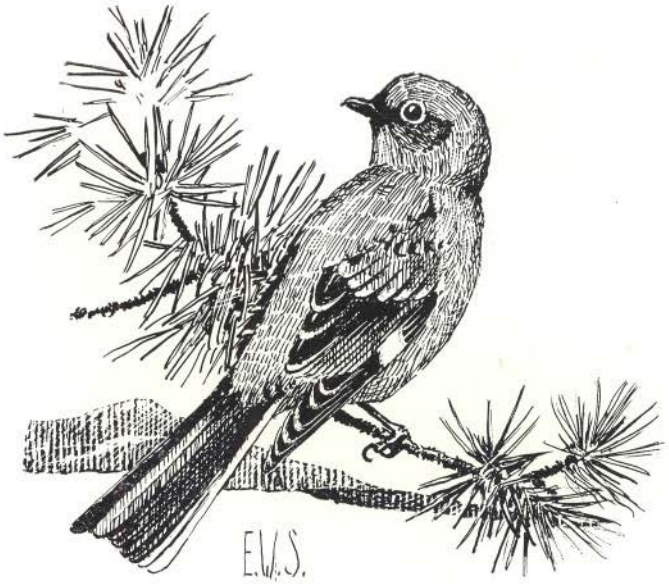

Townsend's Solitaire

—E. W. Steffen

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Vol. XX, No. 1 **March, 1968** **Whole No. 76**

In This Number . . .

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President's Page

AS these remarks are composed in the midst of winter for spring publication, I share the birder's keen anticipation for the coming of spring with its accompanying joys of another bird migration. In looking to another spring, I recall the young A. E. Housman's thoughts in his poem, "Lovliest of Trees." Perhaps a bit ruefully he recognized 20 springs were already behind him. But in the course of traditional expectancy he still had possibly 50 more springs in which to enjoy the wonders of nature. In the abstract, each of us can accept the idea that he has a mystical number of springs—and summers, autumns, winters—to utilize fully. The challenge to the bird student is in how he will use these privileges in living.

Some years ago Ruth Habeger gave us a clue to meeting this challenge, and I urge your reviewing her "Problems of Bird Study in East-Central South Dakota," **Bird Notes**, XI: 8-12, March-June, 1959. Surely, there is an enduring aesthtic delight in bird study. Obviously, the birder must start with mastering bird identifications, with going afield to see the birds. There is satisfaction in such activity, but at some point the serious bird student recognizes the potential for satisfactions beyond merely identifying and listing birds. To such a person, Miss Habeger's remarks are meaningful, for much of what she says about bird study for a restricted area in the state applies anytime and anywhere.

Bird study should be a systematic activity with a specific purpose. There are aids to finding such a purpose. Miss Habeger refers one to **A Laboratory and Field Manual of Ornithology**, by Olin Sewall Pettingill, Jr. This book, exceptionally useful as a handbook of ornithological information, contains extensive suggestions for various kinds of studies. Joseph J. Hickey's **A Guide to Bird Watching** also offers helpful suggestions for special bird-study projects, as do the various recent introductory text books in ornithology. There are such possibilities as migration and distribution study, population study, breeding-bird census, life history of a single species, and many others.

In Miss Habeger's comments, one suggestion deserves special consideration—the desirability of limiting one's study to a restricted area. One may select a small area with a unique habitat and concentrate on regular observation and record keeping in that area. Out of this start should come an awareness of a more specialized study for the area—a project for systematic pursuit over a number of years.

Undertaking a systematic bird-study project, while retaining all the subjective satisfactions of bird watching, will yield expanded fulfillments, including increased personal ornithological knowledge worthy of being shared with others in publications such as **Bird Notes**. This challenging opportunity beckons each of us as we look forward to spring and even to a lifetime of interest in birds.—**L. M. Baylor**

Size, Distribution, and Population of Three Colony Nesting Species in South Dakota

D. G. Adolphson and Marion Adolphson

INTRODUCTION

THERE has never been a statewide study on the colony nesting species in South Dakota. This is an attempt to determine the size, distribution, and population of the Double-crested Cormorant, White Pelican, and Great Blue Heron. All colonies have not been located. Each year new colonies are added and those abandoned are deleted from the list.

OBJECTIVE

Besides plotting rookery locations and censusing the birds, we have tried to determine the status of the colonies to estimate whether the birds are declining or increasing due to : (1) Insecticides; (2) boating, housing and man's other activities; (3) drainage of potholes and lakes and dredging of rivers; (4) impounding of river waters by dams; and (5) short-term abandonment due to flooding or drought.

METHOD AND SCOPE

Three methods were used to locate the colonies: (1) literature was checked for articles on the species; (2) questionnaires were sent to many members of South Dakota Ornithological Union, personnel of the South Dakota Game, Fish and Parks and United States Fish and Wildlife Service; (3) field checks were made on known colonies and field investigations were made on suspected areas that might contain colonies.

Due to the lack of complete information on colonies and populations, this is a preliminary report on findings of the first two year's study. A final report will be written after completion of the project, so that it may be included in **Birds of South Dakota.** The majority of the colonies in the State have been located, however, we believe.

ACKNOWLEDGEMENTS

The authors greatly appreciate the cooperation and information given to them by the following people to help make this report possible: G. M. Jonkel, Larry Fredrickson, J. W. Johnson, B. J. Rose, N. R. Whitney, W. A. Larson, Warren Jackson, Charles Keller, Robert Henderson, C. G. Trautman, H. F. Chapman, Lowry Elliott, Tal Lockwood, John Popowski, Douglas West, and L. J. Moriarty. We also wish to thank the managers of the U.S. Fish and Wildlife National Refuges in South Dakota at Lake Andes, La Creek, Sand Lake, and Waubay.

DOUBLE-CRESTED CORMORANT (Phalacrocorax auritus)

The double-crested cormorant is a common resident throughout much of South Dakota. Many of the lakes and rivers support sizeable breeding colonies. In other areas in the state nonbreeders are summer residents. In late summer, some birds disperse from the colonies, and in the fall they gather in flocks before they depart southward on migration.

Cormorants formerly nested in colonies over most of South Dakota until advancement of civilization, in the late 1800's and early 1900's, reduced the

Young D. C. Cormorants,
White Pelicans
and Nesting Area,
Day County

Don Adolphson with
Young Cormorants
and Pelicans

—Photos by Don Adolphson

breeding range to a few lakes in the northeastern portion of the state.

Breeding colonies were noted in the Fort Sisseton area, and in Day and Marshall counties, by Charles McChesney (1879) in a study from 1875 to 1878. Farmers of the area observed the colonies in 1910 (Lundquist, 1932) and Over and Thoms (1946) studied colonies in Brown, Day, Hamlin, Marshall and Spink counties and banded large numbers of young. Youngworth (1935) compared rookery status studied by Dr. McChesney 60 years earlier on the Fort Sisseton area and reported colonies in Day and Marshall counties. Lundquist (1949) visited the colonies periodically from 1922 until 1960. During this time he banded thousands of young.

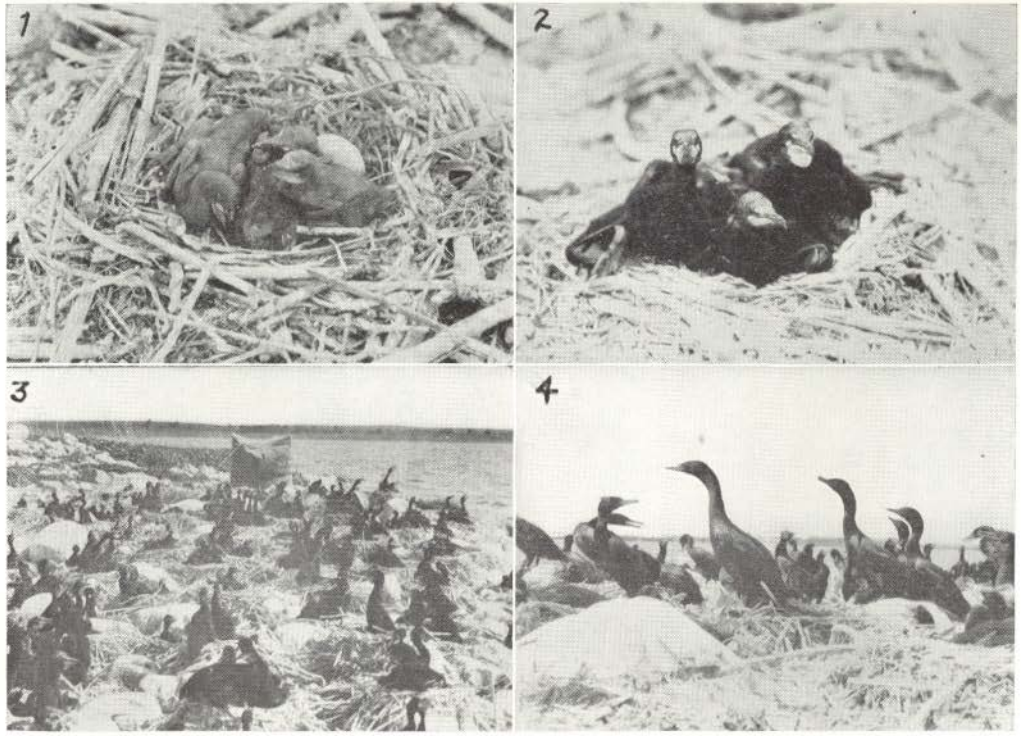
Lundquist noted that the main breeding grounds for the colony nesting bird population in the northeastern area is on East Island, sometimes called Rookery Island or Cormorant Island, Waubay Lake, Day County. The island is about one acre in size during normal lake level times and usually serves as a nesting site for the double-crested cormorant, white pelican, and ring-billed gull. The island is ideal for colonial nesters because it is remote from man's activities, small in size and has gentle slopes. The cormorants probably prefer the island because of the rocky areas; the pelicans because the island does not have any bushes that would impede their taking wing from land. In other colonies in the state, cormorants nest in trees, live or dead, often over water. The nests are large platform structures of sticks and twigs.

During the drought of the mid-thirties, the population was probably minimal for the mid-continent (Palmer, 1962). Harrison Lewis (1929) made a study of double-crested cormorants in North America and estimated the population at 40,000 in 14 known colonies with four colonies in South Dakota. Lundquist noted that the colonies shifted from the dry lakes in the Waubay area of Day and Marshall counties to the deeper lakes. In the late 1930's and the 1940's after the drought and after the forming of federal wildlife refuges, the population made a rapid recovery. Colonies were re-established on many of the lakes in the central and the northeastern parts of the state and on or near the La Creek, Sand Lake and Waubay Federal Refuges. These stable colonies still exist (1967) and are associated with pelicans. There are 36 known cormorant colonies in South Dakota. The size of the colonies range from a few pair to thousands of individuals.

During the 1950's and 1960's a few of the colonies on lakes were lost. However, the breeding range of the cormorants continued to expand in the state with the forming of the "Great Lakes" on the Missouri River. Twelve known colonies, some associated with Great Blue Herons, now exist (1967) in the inundated trees that were formed by the impounded waters of the river from Nebraska to North Dakota.

The status of the species in fairly stable in the state and will probably remain that way since many of the breeding sites are protected. Increased boating and loss of nesting trees, however, could effect the colonies along the Missouri "Great Lakes." Molestations and lowering of water levels could cause abandonment of colonies on some of the lakes in the eastern portion of the state.

The breeding population density of cormorants (Palmer, 1962) is roughly proportionate to adequacy of food supply, protection and stable water levels of the breeding grounds. The census indicates that there are about 5,000 known breeding pairs of cormorants in



Various Views in the Waubay Cormorant Colony, C. 1931

—Photo by W. F. Kubichek. Cut Courtesy Wilson Bulletin

Table 1.—White Pelican Nesting at Three Colonies

(Data from South Dakota Bird Notes and U.S. Fish and Wildlife Service)

	La Creek Refuge	Sand Lake Refuge	South Waubay Lake
1875			None nesting
1920	None nesting	None nesting	None nesting
1922			None nesting
1935	Refuge established	Refuge established	Refuge established at Waubay
1939	Present but not nesting	Migrants stopped during October in quite large numbers	
1949	Colony population 150-200, 22 nests	(Fall population peak and date)	Occasionally nests but never known to have raised young
1950	100 young fledged	8,000 9/2	Nests but with notable lack of success
1951	167 young, only 23 survived hail storm	2,000 9/5	
1952	125 young fledged	6,500 9/9	
1953	100 flightless young banded	1,200 9/25	
1954	250 young fledged	2,400 8/30	
1955	Young were banded	2,000 9/6	
1956	200 young, 100 adults in colony	6,000 9/3	
1957	200 young fledged	12,000 9/4	
1958	No information available	5,500 9/1	
1959	423 nests	5,500	
1960	About 80 nests with about 300 young	6,000 8/10	
1961	200 young fledged	3,000 8/1	
1962	250 young fledged	2,000 9/1	About 200 nests
1963	450 young fledged	2,000 9/5	Estimated 225 to 250 nesting
1964	850 young, 85 died in hail storm in July	2,500 9/12	
1965	970 young fledged	1,500 9/15	About 1,500 in colony
1966	1,196 young fledged	1,500 Late August, 400 young fledged	
1967	310 young fledged	2,000 Late August, 800 young fledged	
		About 500 to 800 young were fledged from 1959 through 1965	

colonies in South Dakota. The present (1967) population is the same if not greater than the ancient colonies that once existed in the state.

WHITE PELICAN
(Pelecanus erythrorhynchos)

White pelicans have re-established between seven and nine permanent colonies in South Dakota. They formerly nested in large colonies at a number of places in this and surrounding states. There was a gradual passing from existence of the colonies until the only one remaining was located at Chase Lake, Stutsman County, North Dakota. This ancient colony is still active and is probably the largest colony east of the Rocky Mountains in the United States.

In 1878, Minnesota lost its last pelican breeding ground, the Mustinke River Colony in Grant County (Roberts, 1936) but migrants still pass over parts of the state occasionally in flocks of considerable size, and non-breeding birds still are summer residents on certain lakes and rivers.

It is not known when the colonies were abandoned in South Dakota but it probably was shortly after the abandonment of the Minnesota's colony. Over and Thoms (1921) reported that pelicans were not nesting in the state during their study of the **Birds of South Dakota.** Thompson (1932) reported that during the 1930's there were only seven major breeding colonies left in North America. It wasn't until 1950 that pelicans were firmly established (see table one) in colonies in South Dakota at Waubay Lake, Day County; La Creek Lake, Bennett County, and Sand Lake, Brown County. The colonies are on or near refuges, as is that of the Chase Lake Colony in North Dakota.

Refuges provide ideal habitat for pelicans, and consequently this species has again become locally common. It was only on refuges that restoration of these birds could have been achieved and maintained, since molestation of their nests and encroachment of their rookeries would again cause their disappearance. It is proper that this graceful flyer be restored to its ancient breeding grounds on the prairie lakes which once were so familiar to the pelicans.

Besides the three colonies on or near Federal Refuges there are colonies on islands or sandbars on five lakes in northeastern South Dakota. Pelicans have been observed in these areas during the breeding season by Larry Fredrickson of Brookings, South Dakota and it is believed that they nest. Non-breeders have been observed on certain lakes in the eastern part of the State during the summer.

The status of the pelican in the state is stable except locally. Individual colonies have major fluctuations due to loss of suitable breeding sites, however, the three major breeding colonies are stringently protected. The estimated population of the pelican is about 8,000 adult birds in the colonies. This does not include the non-breeders that roost on other rookeries in the state.

GREAT BLUE HERON
(Ardes herodias)

Great Blue Herons are common summer residents in South Dakota and non-breeders may occur throughout the summer in areas where the species does not breed. After the breeding season, herons tend to disperse soon after the young can fly. Later a southward migration occurs usually in small, rather loose groups.

The only colony mentioned in **South Dakota Bird Notes** is the one along the James River near Forestburg, Sanborn County, which has been in existence for over 20 years. There are 23 other colonies known in the state with most located in trees along streams. Eight colonies are along the James River, eight along the Missouri River, two along tributaries of the White River

and three along tributaries of the Cheyenne River. Colonies are also located on two lakes on the eastern part of the state. The size of the colonies range from four nests to about 50. There probably are other colonies in the state especially on the Missouri and on other major drainages.

Dozens of nests may be built in the crown of the same tree; and in mixed colonies the Great blue usually nests in the highest parts of the tree and the cormorants building in the lower parts. Red-tailed hawks and great-horned owls often nest in the colonies. Some of the colonies along the Missouri River and in one of the lake colonies are in association with cormorants. The nests are in stands of dead trees in the water in the Missouri and lake colonies.

The status of the Great Blue Heron is changeable, but generally the species continues to maintain its numbers in the state except locally. The Rapid Creek and the Elk Creek of the Cheyenne River had no active colonies in 1967 and some of the colonies on the James and Missouri are used only periodically. Dredging of the James River in Spink County for a reclamation project may effect the status of five colonies which are located in that reach of the river.

The estimated population for Great Blue Herons, is about 1,500 to 2,000 adults. This figure is conservative because it takes into account only the breeders and non-breeders in the colonies and it is not known just how many non-breeders are summer residents throughout the state.

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MIGRATION TO THE MOON?

Where the swallows disappeared each year was a puzzler for 18th Century English naturalists, just as their mechanism for navigation still remains a mystery.

In 1703, the Rev. Charles Morton, director of the Academy at Newington Green, wrote an essay which he termed "the probable solution of the question." He rejected the idea that these birds spent the winter on the bottom of rivers because he had never met anyone "who saw them so."

Their manner of arrival gave him a clue, he thought, concerning their whereabouts. He noticed that they came "so sudden . . . as if they were dropped down upon us from above.' He concluded they wintered on the moon.

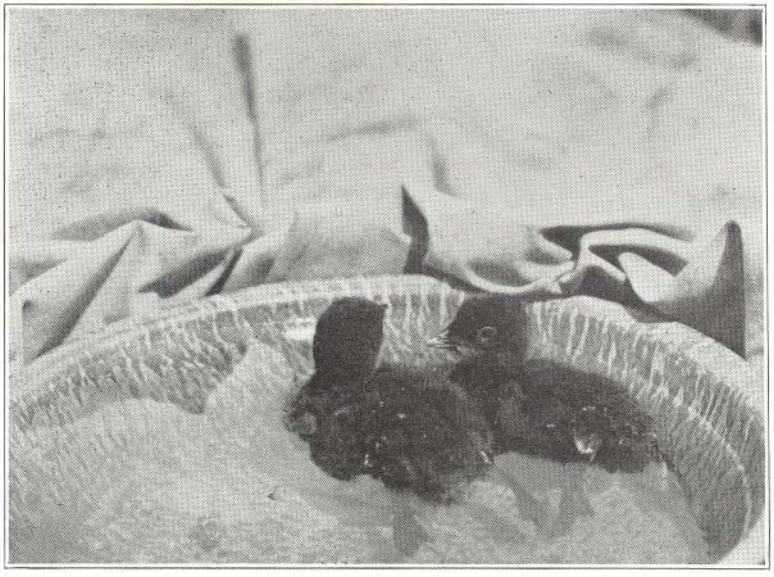
—**New Hampshire Audubon News**

DON'T FORGET . . . HIGHMORE

May 17, 18, 19, 1968

Memorial Auditorium — East Wing

SEE DECEMBER BIRD NOTES FOR DETAILS



Young Loons

—Courtesy Wilson Bulletin

Hyde County Birds, 1962-67

June Harter

ESD—Earliest spring date—or, for some, the only date
NN—Nest note—we have seen a nest or have a record
YB—We have seen the young birds
BSR—Breeding season records (sightings after June 1st)

Species	ESD	NN	YB	BSR
Horned Grebe	4/23			
Eared Grebe	4/11			+
Western Grebe	5/3			
Pied-billed Grebe	3/24		+	+
White Pelican	4/26			
D-c Cormorant	6/7			
Great Blue Heron	4/15		+	+
Bl.-cr. Night Heron	4/14		+	+
Am. Bittern	5/12			+
Canada Goose	3/9			
White-fr. Goose	5/7			
Snow Goose	4/2			
Mallard	3/21		+	+
Black Duck	5/27			
Gadwall	3/25			+
Pintail	3/19		+	+
Green-w. Teal	4/2			+
Blue-w. Teal	4/2	+	+	+
Euro. Widgeon	5/4			
Am. Widgeon	4/3			+
Shoveler	3/21		+	+
Redhead	4/3			+
Ring-necked Duck	4/6			+
Canvasback	3/31			+
Lesser Scaup	3/31			+
Bufflehead	3/31			
Ruddy Duck	3/24			+
Cmn. Merganser	4/11			
Cooper's Hawk	4/15			
Red-tailed Hawk	4/2			+
Swainson's Hawk	5/16			
Ferruginous Hawk			+	+
Golden Eagle	3/15			
Marsh Hawk	PR			
Peregrine	4/17			
Pigeon Hawk	4/19			
Sparrow Hawk	4/16			
Whooping Crane	4/11			

Species	ESD	NN	YB	BSR
Sandhill Crane	3/22			
Sora Rail				+
Coot	3/24	+	+	+
Semipalmated Plover	4/26			
Killdeer	3/17	+	+	+
Golden Plover	5/16			
Common Snipe	4/16			
Upland Plover	3/30		+	+
Willet	4/26			+
Gr. Yellowlegs	4/7			
L. Yellowlegs	4/3			
Pectoral Sandpiper	4/26			
Baird's Sandpiper	4/1			
Least Sandpiper	5/13			
Semipalmated S'piper	4/26			
Western Sandpiper	4/24			
Marbled Godwit	4/24			
Hudsonian Godwit	5/7			
Avocet	5/25			+
W. Phalarope	4/24		+	+
N. Phalarope	5/7			
Herring Gull	4/1			
Franklin's Gull	4/6			
Forster's Tern	4/26			+
Black Tern	4/27		+	+
Mourning Dove	4/10	+	+	+
Y.B. Cuckoo	5/25	+	+	+
Bl.-billed Cuckoo	5/19	+	+	+
Screech Owl	7/7			
Gr. Horned Owl	PR		+	+
Burrowing Owl	4/6	+	+	+
Nighthawk	5/11			+
Swift				
Hummingbird	5/27			
B. Kingfisher	4/4			+
Yellow-shafted Flicker		+	+	+

Species	ESD	NN	YB	BSR
Red-shafted Flicker	3/31			+
Hybrid Flicker				+
Red-headed Woodpecker	5/19			+
Eastern Kingbird	5/5	+	+	+
Western Kingbird	4/28	+	+	+
Gr. Crested Flycatcher	5/29			+
E. Phoebe	4/26			
Yellow-bellied Fl.	4/29			
Traill's Flycatcher	5/11			+
Least Flycatcher	4/28			
E. Wood Pewee	5/4			+
Horned Lark		+	+	+
Tree Swallow	4/26		+	+
Bank Swallow	4/26			+
Rough-winged Swallow	4/26			+
Barn Swallow	4/26	+	+	+
Cliff Swallow	4/26			+
Purple Martin	4/28		+	+
Blue Jay	4/28	+	+	+
Raven	3/15			
Common Crow	3/5	+	+	+
House Wren	4/27	+	+	+
Short-billed Marsh Wren	4/24			
Rock Wren	5/15			
Mockingbird	4/25	+		+
Catbird	5/11			+
Brown Thrasher	4/27	+	+	+
Robin	4/18	+	+	+
Wood Thrush	5/9			
Hermit Thrush	4/22			
Swainson's Thrush	5/12			+
Gray-cheeked Thrush	5/8			
Veery	4/14			
E. Bluebird	4/9			
Townsend's Solitaire	5/13			
American Pipit	4/16			
Sprague's Pipit	4/14			
Cedar Waxwing	4/4			+
Loggerhead Shrike	4/13	+	+	+
Starling	PR			
Bell's Vireo	5/11			+
Solitary Vireo	5/14			
Red-eyed Vireo	5/17			+

Species	ESD	NN	YB	BSR
Philadelphia Vireo	5/14			
Warbling Vireo	5/12			+
Black and White Warbler	4/30			
Blue-winged Warbler	5/8			
Tennessee Warbler	4/27			
Orange-crowned Warbler	4/17			
Nashville Warbler	5/28			
Parula Warbler	5/27			
Yellow Warbler	5/4	+	+	+
Magnolia Warbler	5/11			
Myrtle Warbler	4/2			
Black-throated Green	5/11			
Bay-breasted Warbler	5/31			
Blackpoll Warbler	5/8			
Palm Warbler	4/23			
Ovenbird	5/8			
N. Waterthrush	5/12			
Mourning Warbler	4/24			
MacGillivray's W.	5/27			
N. Yellowthroat	5/8		+	+
Y-b. Chat	5/21			+
Wilson's Warbler	5/11			+
Redstart	5/7			
House Sparrow	PR	+	+	+
Bobolink	5/5		+	+
W. Meadowlark	3/15	+	+	+
Y.-h. Blackbird	4/15	+	+	+
Red-winged Blackbird	3/13	+	+	+
Orchard Oriole	5/6	+	+	+
Baltimore Oriole	5/5		+	+
Rusty Blackbird	4/12			
Brewer's Blackbird	4/11	+	+	+
Common Grackle	3/21	+	+	+
B-h. Cowbird	4/1		+	+
Western Tanager	5/18			
Rose-breasted Grosbeak	5/15			
B-h. Grosbeak	5/10			+
Indigo Bunting	6/5			+
Lazuli Bunting	5/16			
Dickcissel	5/16			
A. Goldfinch	5/10			

(Concluded on Page 23)

Rapid City Christmas Counts 1953-1967

Esther Serr

LET us consider the Christmas Counts. Do we find the information of value to us? That is, worth getting out in all kinds of South Dakota weather to gather? Are we making errors because our optical equipment gets foggy in the cold? Are we counting some birds twice within the circle? Is past experience of the observers beginning to show? Can we improve our methods?

Black Hills Audubon Society members of Rapid City readily admit its being a terrific sport, and look forward to the family pot-luck evening while the results are tabulated.

There have been 15 Christmas Counts within a 15 mile diameter circle with the center at Dinosaur Park in Rapid City.

Total species range from 24 to 60 as shown in the summary tables. The table also shows the totals of mallard, starling and house sparrows that are included in the total individuals for each year.

Species Always Present

Ten species of the 104 appeared every year—mallard, belted kingfisher, American magpie, black-capped chickadee, Townsend's solitaire, starling, house sparrow, white-wing junco, slate-colored junco, and tree sparrow.

Species Present More than Half Time

Thirty-eight species were present eight years or more during the 15 counts — mallard, gadwall, common goldeneye, hooded merganser, common merganser, rough-legged hawk, golden eagle, sharp-tailed grouse, ring-necked pheasant, common snipe, belted kingfisher, red-shafted flicker (possibly hybrid), hairy woodpecker, downy woodpecker, horned lark, blue jay, American magpie, common crow, pinon jay, black-capped chickadee, white-breasted nuthatch, red-breasted nuthatch, brown creeper, robin, Townsend's solitaire, Bohemian waxwing, northern shrike, starling, house sparrow, evening grosbeak, pine siskin, American goldfinch, red crossbill, white-winged junco, slate-colored junco, Oregon junco, tree sparrow, and song sparrow.

Species Present Only Once

Twenty-nine species of the 104 have appeared only once in 15 years—horned grebe, eared grebe, pied-billed grebe, European widgeon, bufflehead, red-breasted merganser, turkey vulture, goshawk, ruffed grouse, turkey, ring-billed gull, mourning dove, burrowing owl, long-eared owl, short-eared owl, red-bellied woodpecker, mountain chickadee, pygmy nuthatch, Carolina wren, mockingbird, brown thrasher, Cassin's finch, gray-crowned rosy finch, white-winged crossbill, rufous-sided towhee, grey-headed junco, white-crowned sparrow, vesper sparrow and white pelican.

Species reported that might be considered in error are turkey vulture, burrowing owl, loggerhead shrike, Brewer's blackbird, and white-winged crossbill.

In most instances where the species only appeared the one time, there has been additional evidence such as: several saw the bird; the species continued to stay around for a period of time; and there have been a few specimens for definite proof. For example, the Carolina wren that stayed in Mary

Summary Tables

Year	Total Species	Total Individuals	Mallard	Starling	House Sparrow
1953	24	2414	2128	3	15
1954	37	2048	1276	6	331
1955	39	1926	1023	91	32
1956	36	1257	815	40	34
1957	39	1777	663	73	129
1958	43	1478	584	43	227
1959	32	1126	269	115	158
1960	42	2024	190	105	427
1961	37	702	148	24	177
1962	41	2423	174	247	559
1963	49	3153	702	463	421
1964	43	2671	495	399	439
1965	42	2606	366	385	490
1966	53	4202	781	338	950
1967	60	3678	498	570	812

Total species accumulated for 15 years is 104.

HAWK AND EAGLE COUNTS

Year	Rough-leg	Marsh	Red-tail	Pigeon	Sparrow	Golden Eagle	Bald Eagle
1953	1					1	
1954	2					3	
1955	1			1		2	
1956	1				1	1	
1957	2	3			2	1	2
1958	5	1	4		1		
1959						3	
1960	3						
1961				1			
1962	4	13		1	1		
1963	11	5	1		3	3	
1964	4			1	1	1	1
1965	2						
1966	9		2		3	4	
1967	18	3	5	1		2	2

Hyde's yard for about six weeks, and then was caught in a mouse trap.

Water Birds Present

A total of twenty-nine species of water birds were recorded in 15 counts probably because of Canyon Lake being located at the edge of the Rapid City limits. This lake of 30 acre surface area is fed by the swift flowing Rapid Creek that originates in the higher Black Hills. Water species are horned grebe, eared grebe, pied-billed grebe, white pelican, Canada goose, mallard, gadwall, green-winged teal, blue-winged teal, European widgeon, American widgeon, shoveler, pintail, wood duck, redhead, canvasback, lesser scaup, common goldeneye, bufflehead, hooded merganser, common merganser and red-breasted merganser. The belted kingfisher and dipper are found on Rapid Creek.

Over the past five years Canada goose, green-winged teal, blue-winged teal, and Harris' sparrow have been quite regular.

1966 proved the best year for the red and white breasted nuthatches, pinon jay, blackcapped chickadee and Bohemian waxwing.

1962 was best for the pine siskin and tree sparrow, and in 1965, the Black Hills species, the white-wing junco, showed best.

A worthwhile job is always assessed for the joy of having done it, and reviewed to find ways to improve the methods used.

An innovation of the 1967 count was the use of a central station to report the finds during the day. For example, in 1965 there was no pheasant count. If the other leaders had known that the leader in Rapid Valley hadn't found a pheasant, the others would have made more effort to find a pheasant as that is the only year out of the 15 that pheasants weren't counted.

When a rarity appears, the observer calls society members, and someone takes photos. The photos provide sound evidence and the birds usually stay around several weeks so that all members can see them.

A better Christmas count can be achieved by making a "dry run" a few days or weeks before. It is important to check feeder reports from outsiders who still have to prove their ability to name the species. We make many friends for the birds and ourselves that way.

Certainly, more competent observers will increase the count. The Black Hills Audubon Society averages about 25 people who spend all day in the field to do a Christmas count. About one-third of these spend a good bit of the time on foot. However, the importance of the feeders cannot be overlooked, for seven feeder observers reported 411 individuals and 17 species to the total count. Two of these species, Bohemian waxwing and the white-breasted nuthatch, were not picked up by field parties.

A valuable bird-watcher can be a sitter or a chaser.

Late migrants—horned grebe, eared grebe, pied-billed grebe, brown thrasher, rufous-sided towhee, mourning dove, Harris' sparrow and white-crowned sparrow—present on some Christmas counts—seem to disappear during the cold that comes upon us in January. Do they die or move south?

The out-of-territory birds—red-bellied woodpecker, mountain chickadee, Carolina wren, and mockingbird—stayed through the cold of the winter and left in early spring.

There is a suggestion during the 15 years that the pine siskin, red crossbill, Cassin's finch, and evening grosbeak are in slightly larger numbers every five years. The common redpoll would seem to erupt every two or three years.

Book Reviews

J. W. Johnson

THE Life of the Pond, by William H. Amos. McGraw-Hill, 1967, developed jointly with the World Book Encyclopedia. $4.95. The ninth of the series, **Our Living World of Nature** and uniform with the earlier volumes. 232 pages, including 32 page appendix on: Ponds in National Parks and Wildlife Refuges, Guide to Common Pond Animals, Exploring the Microscopic Pond World, Glossary, and Index.

The profuse illustrations of color photographs we have come to expect are here, including the full page spectaculars that hit you in the eye. A frog's head and eye emerges from an area of duckweed, leeches cling to the tail of a fish, a scarlet water mite, magnified, a fisher spider enfolds a fish, an osprey perched with its partly eaten fish, a deer in the water browses in a spatterdock meadow, a turtle basks among the lily pads, and many more of at least equal merit.

Air views make clear how some ponds originate and diagrams detail the ecology and food nets in the many habitats found in a pond. One view of a wide expanse of the pothole country of South Dakota shows the way the ponds are being transformed into meadow—both by nature and by man.

Descriptions in good detail bring out the complexities of the many life forms present while photographs illustrate examples of relationships, usually predatory.

One series of pictures shows the water snake swallowing fish while the text brings out the results of observation, that the presence of the snakes is favorable for the production of game fish by reducing the competition for their food and removing defective and diseased individuals.

The author has been a student of aquatic and marsh life from his early years in the Orient where he was raised. He has been associated with numerous research institutions in this country including the Systematics-Ecology Program at the Marine Biological Laboratory in Woods Hole, Massachusetts, where he serves as consultant. He has been the author of many articles and books on marine and aquatic biology, most of which have been illustrated with his own biophotographs.

A Field Guide to the Birds, Eastern Land and Water Birds, by Roger Tory Peterson. This is the "Second Revised and Enlarged Edition"—now in paperback. Houghton Mifflin Company. $2.95.

The covers of this book are substantial but flexible and should give long service. Text and illustrations are identical with the familiar hard cover edition. The original dust jacket design is reproduced attractively on the new cover.

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CORRECTION

In a recent note (VI9: 91) regarding sight records of bluebirds in the east-river country, I erred in writing about **Western Bluebirds.** The birds were **Mountain Bluebirds,** as in the older records cited in my note. To the best of my knowledge, there are no east-river records for the Western Bluebird, a species which is not noted for its wandering out of range, as in the case of the Mountain Bluebird.—**Bruce Harris, Woonsocket**

General Notes of Special Interest

MID-JUNE RECORD OF PARULA WARBLER AT SODAK PARK—While working around the cottage at Sodak Park on June 16, 1967, I was attracted by an unusual bird call—a thin, wispy note which apparently came from high in a Basswood tree. It took a good deal of neck-craning before I found the author of the song. In fact, I have seldom looked longer for an elusive bird! It was not until the bird flew to a nearby spruce that I finally saw it, and identified it as a male Parula warbler. Although it had remained in the vicinity of the cottage for 15-20 minutes while I search for it, the bird soon began a rather determined wandering north along the lake shore. I followed it for some 300 yards before losing track of it. More than two hours later I was much surprised to find the bird back at the cottage, in the very same basswood tree! Needless to say, I envisioned a female with a nest; but two days of diligent watching and listening produced nothing, and I must conclude that the bird was a non-breeding male.

—Bruce Harris, Woonsocket

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LATE BREEDING SEASON RECORD OF TENNESSEE WARBLER IN MARSHALL COUNTY—A Tennessee Warbler, in full song, was found at Buffalo Lake, Marshall County, on July 19, 1967. The bird was singing loudly and persistently near a well-wooded resort area on the southeast shore of the lake. Although the monotonous song of this species is well known to those who follow spring warbler migrations, I was puzzled for some time by the call, and did not identify the bird until it was observed. There was no question of its identity, as close observation was possible. Again, it must be concluded that the bird was in all probability a non-breeding male. The nearest known breeding range for this species (and the Parula Warbler) is 250 miles northeast of Roberts County, in the mixed coniferous-deciduous w o o d l a n d s of northern Minnesota.—**Bruce Harris, Woonsocket**

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RAVEN AT LAKE ANDES—On November 24, 1967, a common Raven (Corvus corax) was found dead along the shore of the center unit of Lake Andes. While picking up un-retrieved waterfowl along the south shore of the north dike I noted a large black bird laying in a patch of bullrush. The bird had apparently been shot by waterfowl hunter as it flew across the "firing line."

The bird's large size and heavy bill clearly indicated that it was a Raven. Although the specimen was badly decomposed it was given to the collection at the University of South Dakota.

This was the first reported observation of a Raven in the Lake Andes area.—**David L. Olsen, Lake Andes National Wildlife Refuge, Lake Andes, South Dakota**

* * * *

M O C K I N G B I R D AT ARMOUR—Around Thanksgiving time, I was startled by what looked like a Mockingbird near our asparagus foliage. My binocular was handy, so I quietly stepped outdoors and approached the bird that was now on a low wire. It let me come within a few feet before it flew down to the asparagus and began feeding on the red seeds. It was clearly a Mockingbird.

Unfortunately, when Mr. Crutchett

came over to see it, it flew away so that he just caught a glimpse of it.

The bird fed on the red berries off and on through the next weeks and was still here after the snow came. The dark and white plumage was a beautiful sight to see in the snow.

When the sub-zero weather followed, I did not see the bird any more, though I walked through the asparagus bed and the thick brush near our home.—**Mrs. S. F. Mead, Armour, S. Dak.**

* * * *

BREEDING SEASON RECORD FOR THE LOON—A possible breeding record for the Loon was obtained at Sodak Park, Big Stone Lake, Roberts County, on June 16, 1967. Two birds were observed, calling excitedly, far out on the lake—actually near the Minnesota shore. I was not able to carry out my intentions of checking them closely from a boat, but their actions suggested that young might have been in the water with them. Contact with the cottage owners on the Minnesota shore was not made in this regard, but I plan to make inquiries during the coming year. Loons have been observed regularly on Big Stone in small numbers. I have two records for 1966, on the 1st and the 9th of June; two birds were observed on the latter date. There is at least one breeding record for this species in South Dakota, near Watertown, but I do not have a reference on it at this time.—**Bruce Harris, Woonsocket**

* * * *

CHUCK-WILL'S-WIDOW IN SOUTHEASTERN SOUTH DAKOTA—On June 1st, 1967 while giving our young son his 4:00 a.m. (3:00 standard time) feeding, the clear unmistakable call of the Chuck-will's-widow was heard to the east of our house which is seven miles south of Brookings. To make sure my ears were not deceiving me, Dave was awakened so he too might hear it. By then it was further away from the house and in the trees to the south. It called for five minutes and then stopped. It was not seen or heard again.

Our bird song records were immediately played to verify the songs but there was no question at all in my mind that that was what it was. The song on the recording verified it completely for us. Since its song is its best field identification we are sure this was our bird.

This could be a first record of the Chuck-will's-widow in South Dakota for in searching the literature have found no reference to it. According to Bent's **Life History of North American Cuckoos, Goatsuckers, Hummingbirds and Their Allies** the closest it has been to South Dakota is a record at Sugar Creek, Iowa (in southeastern Iowa) on June 17, 1933 and one at Lawrence, Kansas on May 4, 1935. Twice it has been recorded in Canada, once at Pictou, Nova Scotia in 1889 and once at Point Pelee, Ontario on May 19, 1906. **—Nelda and Dave Holden, Brookings**

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1967 MOCKINGBIRD RECORDS—NESTING IN SANBORN COUNTY—A number of interesting records have been accumulated on this bird during the past year, suggesting once again that the Mockingbird is much more than a straggler in South Dakota. On May 14, 1967, B. J. Rose recorded a bird five miles west of Wasta, Pennington County, and on May 21 the Roses found a single bird near Kadoka in Jackson County. On May 20th the Roses, with Harris, found single birds south of Belvidere and west of Cedar Butte, in Washabaugh County.

In the east-river country George Jonkel reported a Mockingbird six miles southwest of De Smet, Kingsbury County. An unreported record for 1966

is that of a single bird observed by B. J. Rose three miles west of Warner, Brown County, on the 28th of April.

On June 15, 1967, I noted a single bird in Sanborn County, five miles southeast of Letcher. Returning to this site on the 22nd of June with Charles Backlund, fisheries biologist with the Department of Game, Fish and Parks, we found a nest with three young, attended by both adults.

A singing male was discovered near Forestburg, Sanborn County, on June 4th; driving east three miles, I was surprised to find still another Mockingbird. Later in the month, on the 24th, I checked the first location and found a nest with four eggs. This nest was somewhat exposed and rather isolated along a fence line in a small Hackberry bush. It was only three feet above the ground, and I was apprehensive about its chance for success. But on the 7th of July this nest contained four young; the nest was empty when I visited the locality on July 17th.

These records, along with others published in recent years, justify the conclusion that the Mockingbird is a regular summer resident in South Dakota. I must take this opportunity to correct a statement made in my note regarding a fledgling Mockingbird taken by me in Sanborn County in 1966. That bird did **not** represent the first positive evidence of breeding in the state—Scott Findley presented several convincing breeding records for the Mockingbird away back in 1949, in a fine summary of records as of that date (see Bird Notes, I: 43-44).—**Bruce Harris, Woonsocket**

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1966 BREEDING RECORDS—Twenty-nine breeding records were compiled during the 1966 season, among which the more interesting were the following: Cormorant, Upland Plover, Avocet, Black-billed Cuckoo and Goldfinch. —**Bruce Harris, Woonsocket**

GULLS, TEAL HYBRIDS, AND TRAILL'S FLYCATCHERS: TWO SPECIES?

Glaucous, Iceland, and Thayers Gulls

My December **SDBN** arrived yesterday, and I find I am prompted to make some comments.

The Glaucous Gull observations were especially interesting. As you noted in your editorial comment, the Glaucous and Iceland Gulls are sometimes difficult to tell apart. However, they are very easy to separate in the first year plumage ("dirty" white, or "buffy" as your observers called it) because the Iceland has an almost all-black beak (at very close range the basal fourth is a deep reddish, the distal three-fourths is pure black) while the Glaucous has the black-tipped pink beak as noted by your observers at Gavin Dam. There is no question in my mind as to the specific identity of the gulls they saw, for what that might be worth to you. By the way, have you read Neal Griffith Smith's **Evolution of Some Arctic Gulls (Larus): An Experimental Study of Isolating Mechanisms** (A.O.U. Monograph No. 4)? An abbreviated form of that paper appeared in **Scientific American** magazine not long ago, too. By far and away one of the most exciting pieces of field investigation and experimentation I've ever read. Mr. Smith points out that where the Glaucous and Iceland come together with Thayer's Gull (formerly considered a sub-species of the Herring, but now shown to be a full species), the Iceland develops dark irises as a mechanism for isolation. Most of the Iceland's we've seen here in Minnesota have had dark irises, but this may have been because they were immatures. If we can locate any adults, their iris-color may give us a clue as to where they came from during their migration. By the way, Janet Green

has seen one bird (several years ago) that she felt was a Thayer's Gull but she didn't view it long enough to get any good documentation of it. This would be still another species to watch for in South Dakota, but certainly would be as rare there as the Iceland Gull.

Cinnamon-Blue-winged Teal Hybrids

Regarding the hybrid Cinnamon-Blue-winged Teal, you may note that several issues ago, in the **Loon,** we published a note on that same phenomenon occurring here, plus a hybrid Green-wing-Blue-winged Teal . . . 1967 must have been quite a year for interbreeding among the teal species! The available literature seems to be devoid of such records, but perhaps this hybridism occurs more commonly than we believe?

Traill's Flycatchers Differing Songs May Mean Two Species

By the way, since your checklist committee is working so diligently on the South Dakota list, they may want to initiate a study-idea among South Dakota birders regarding the "song-types" of the Traill's Flycatcher. I refer you to another magnificent piece of work, **Isolating Mechanisms Between Populations of Traill's Flycatchers** by Robert Carrington Stein, **Proc. Amer Philos** Society 107 (1): 21-50, 1963. He demonstrates, rather conclusively, that the Fitz-bew and Wee-be-o song types are two different over-lapping species. Biological data plus response to tape-recorded calls are used to demonstrate his separation. The Fee-bee-o (or Wee-be-o) is **Empidonax traillii** (Audubon), the Traill's Flycatcher and the Fitz-bew is **Empidonax** brewsteri Oberholser, the Willow Flycatcher. Do both song-types occur in South Dakota? This would make a good study.

Those photos of the Kittiwake were superb!—**R. L. Huber, Department of Public Service, 480 State Office Building, St. Paul, Minnesota 55101**

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1967 BREEDING RECORDS—During the 1967 breeding season nest records or strong evidence of breeding (adult feeding young, bob-tailed young, adult at nest hole, etc.) were accumulated on 43 species of birds. Seventy-four individual breeding records were made at various locations around the state, but chiefly in Sanborn and Roberts County. Detailed information is available to any who need the data. Some of the more interesting include the following: Swainson hawk, Loggerhead shrike, Magpie, Eastern phoebe, Meadowlark, Killdeer, Vesper Sparrow, Nuthatch, Blue Jay, Screech owl, Mockingbird, Tree swallow, Wood Peewee, Scarlet Tanager, Western Grebe, Ring-necked Duck, Canvasback, Blue Grosbeak, Song sparrow, Grasshopper Sparrow, Lark Sparrow, Savannah Sparrow and Lark bunting.—**Bruce Harris, Woonsocket**

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PLEA FOR SDOU MEMBERS

The increase in cost for printing South Dakota Bird Notes and the increase in postage for mailing now brings the cost to SDOU to around $1100 per year. We need at least 280 members to pay this expense. To date we have only 230 paid members for 1968 and there are still around 50 members who have failed to renew for this year. If you have not renewed your 1968 membership please do so immediately so SDOU can remain solvent for the year 1968. Please try to interest any new members as well.—**Nelda Holden, Treasurer**

DDT AND MOSQUITOES

If DDT did what its supporters claim, there would be no scuffle in town meetings this spring over mosquito control. There would, in fact, be no mosquitoes.

The truth seems to be that DDT is somewhat less than the cure-all that it once was thought to be. Many insects have developed an immunity to it. Mosquitoes have demonstrated a growing resistance.

The more sophisticated mosquito control agencies of Massachusetts already have neglected DDT to a minor role in their operations. Its use by public agencies has declined drastically over the past few years. The main danger today lies in the mis-guided reliance upon DDT by an in-experienced agency in some small town.

Effective June 1, 1968, the Massachusetts Pesticide Board has banned the use of DDT as a chemical in Dutch Elm Disease control. The Board has suggested that other chemicals "without the hazardous side effects of DDT" are available for use against Dutch Elm Disease.

The Board's decision against DDT was a milepost. It is a step toward the obvious and necessary goal of eliminating altogether the use of DDT in Massachusetts, except in public health emergencies. The effects of DDT upon the environment and its continuing persistence in the webs of life eventually will force its banning. The only relevant question seems to be whether the ban will come in time.

As an aid to readers seeking alternative methods of controlling mosquitoes, the NEWSLETTER prints in this issue a discussion of the problem—**Massachusetts Audubon** Newsletter

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GOLDEN EAGLE STUDY BEGINS BY AUDUBON, WOOL GROWERS

Field investigation has begun in the golden eagle study which the National Audubon Society has undertaken jointly with sheep ranchers and the U.S. government to find out just how much of a threat the golden eagle is to livestock, and what can be done about it.

The study is being made by a team from Texas Technological College, Lubbock, headed by Dr. Thadis W. Box, and financed by the Society, National Wool Growers Association and **U.** S. Bureau of Sports Fisheries and Wildlife.

The study grew out of talks begun by Carl W. Buchheister, now President Emeritus of the Society and still its special representative for the project. Dr. Buchheister was able to cut through much of the traditional distrust between ranchers and conservationists on this issue. He assured the ranchers that the National Audubon Society recognizes the right of the rancher to protect his livestock. The ranchers, for their part, agreed to share the costs of a study to find out how to get such protection without endangering the survival of the golden eagle.

The study is simply a search for facts. There is no doubt, for example, that remains of young lambs have been found in stomachs of eagles, but there is little data on the extent to which such remains might have come from animals killed by eagles or from animals already dead, stillborn or killed by other causes. Likewise, not enough is known about the eagle's range, feeding habits, migration and other factors.

Field teams, following the "lambing season" into different areas, will study eagle habits, examine animal remains in the nest where young are fed, study relationships of herding practices to loss between lambing and kidding time and market, and other such aspects of the problem. Field studies will continue through the spring lambing season in Texas and New Mexico.

It is hoped that this will provide answers, and guidelines for controls that all concerned can agree upon.—**Audubon Leaders' Conservation Guide**

WESTERN GREBE PRODUCTION IN McPHERSON COUNTY—On August 11, 1967, WHP Biologist Jim Sieh, of this office, and Assistant Refuge Manager Bob Ivins, Sand Lake National Wildlife Refuge, counted 43 adult western grebes and 15 young western grebes on a Waterfowl Production Area in McPherson County. This 200-acre marsh is located in T. 128 N., R. 69 W., 5th P. M., sec. 13 and 24 and T. 128 N., R 68 W., 5th P. M., sec. 19, and is owned jointly by the South Dakota Department of Game, Fish and Parks, our Bureau, and a private land owner. Most of this is a Waterfowl Production Area known as the Rau-Hoffman tract.

This is an unsual observation for western South Dakota in that this species is usually associated with large bodies of shallow water. This area contains bulrush stands which provide nesting material and cover which the western grebe requires.

Historically, western grebes were greatly reduced in number by plume hunters and grebe skins brought a fancy price at the market place. The species has made remarkable recovery but its reproductive rate is extremely slow, hatching only one or two chicks each season. The grebes build nests over the water on floating platforms constructed of tules or bulrush. Good habitat for nesting grebes is not plentiful and this Waterfowl Production Area and the small wetlands program is contributing to the preservation of the species.—**Rolf L. Wallenstrom, Wetlands Program Supervisor, U. S. Fish and Wildlife Service, Aberdeen**

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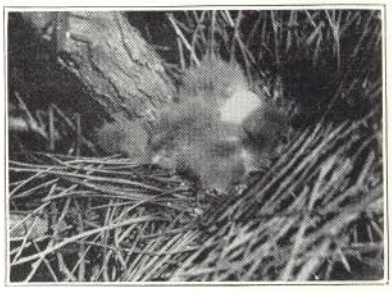
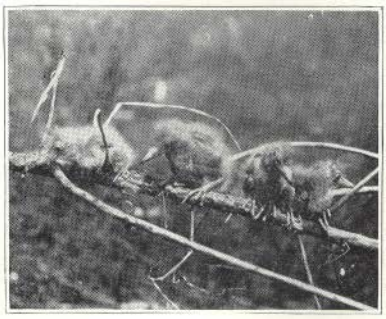
Hyde County Birds

(Concluded from Page 13)

Species	ESD	NN	YR	BSR
R-s. Towhee	5/1			
Lark Bunting	4/22	+	+	+
Grasshopper Sp.	5/16			+
Vesper Sparrow	5/1			
Lark Sparrow	6/5			+
Chipping Sparrow	5/1		+	+
Clay-colored Sp.	4/26		+	+
Field Sparrow	5/1			+
Harris Sparrow	4/28			
White-crowned	4/12			
Gambel's W-c. Sp.	4/17			
White-throated Sp.	4/21			
Fox Sparrow	5/1			
Lincoln Sparrow	4/23			
Swamp Sparrow	4/29			
Song Sparrow	4/7			+
McCown's Longspur	6/3			+
Chestnut-c. Longspur	3/31	+	+	+



Nestling One Day Old



Nestling Three to Four Days Old

Too Young to Perch Well

Banded—10 Days Old

Young Green Heron

—Courtesy Wilson Bulletin