

The snow was so deep that deer were confined to the centers of quite large areas of bluff and they had places in there that were almost like yards. Deer are browsers and so they gained sufficient food from the small bushes and trees that they like, to keep alive through the winter. However, they were in such poor condition that a great number died from weakness on account of a delayed spring. Some of these weakened deer also fell victims to coyotes. I would say that the loss of deer, due to the hard winter and predators, was at least twenty-five per cent. Many farmers took the trouble to make feed available, and if it were not for this, the loss would have been heavier.

Birds seem to be able to withstand any amount of cold as long as they have adequate food, and many of our winter birds came through all right. Many people took pity on the birds and placed out food for them.; that certainly helped to bring many through safely. There is no denying, however, that the heavy snow was hard on certain species. The Hungarian Partridge suffered severely as they are not used to burrowing under the snow, as is customary with the Sharp-tailed Grouse, and their food problem was a big one. Most of those that came through the winter were able to do so because they spent most of the time near a straw-stack, or near some farm yard. The Hungarians have a habit of huddling down all together in a small circle. In case of deep snow and drifting the loss in such cases could embrace the whole covey. The Sharp-tailed Grouse is so different in this regard for they burrow under the snow individually, and only rarely are they unable to break the crusted snow to escape. I have often seen them fly out of an expanse of snow that did not show a trace of where they went in, due to drifting snow after they had made the burrow. Under adverse conditions the Sharp-tail seems able to rustle food more easily than the Hungarian, and so is less subject to heavy losses. I do not think that the Ruffed Grouse suffered in any way. Living as they do in the deeper woods, and having buds that they like to eat available. Reports indicate they came through in fine shape and are increasing.

One rather strange phenomena, which may have had nothing to do with the weather, was the marked decline in the gopher population. This was probably due to some disease and not to the depth of snow or the severity of the weather, for these mammals hibernate underground. At least the farmers are not complaining because the gopher population is reduced.

H. S. Swallow.

1947 Christmas Bird Counts

BATTLEFORD. Dec. 29. Walk of six miles. Time afield: 10 a.m. to 4:30 p.m. Weather clear and frosty. Temp. 15 degrees. Hungarian Partridge, 15; Chuker Partridge, 7 (no details, Ed.) Ring-necked Pheasant, 11; Snowy Owl, 1; Hairy Woodpecker, 3; Downy Woodpecker, 2; Blue Jay, 3; American Magpie, 7; Black-capped Chickadee, 11; Evening Grosbeak, 5; Lapland Longspur, 3. Totals, 11 species, 69 individuals. C. INNES.

TULLIS Dec. 24. Fields around the hamlet of Tullis, together with a trip to the South Saskatchewan River and adjoining coulees. Weather clear. Wind, strong, N.W.; 10 inches of snow, drifts to 30 inches. Temp., 33 at start, 30 degrees at return. 3 observers in one group. Total party hours afield, 3½ (1½ by car, 2 on foot); total party miles 22 (18 by car, 4 on foot)

The first part of the book is devoted to a general survey of the history of the world, from the beginning of time to the present day. The author discusses the various stages of human development, from the primitive state of the first man to the advanced civilization of the present. He also touches upon the different religions and philosophies that have shaped human thought and action throughout the ages.

The second part of the book is a detailed account of the life and times of the great men of the world. The author describes the lives of the most famous philosophers, scientists, and statesmen, and how their ideas and actions have influenced the course of human history. He also discusses the lives of the great artists and writers, and how their works have enriched the human mind and soul.

The third part of the book is a study of the different religions and philosophies of the world. The author discusses the teachings of the major religions, and how they have shaped the lives of the people who believe in them. He also discusses the different philosophies that have been developed by the great thinkers of the world, and how they have influenced human thought and action.

THE HISTORY OF THE WORLD

The fourth part of the book is a study of the different civilizations of the world. The author discusses the rise and fall of the great empires, and how they have shaped the course of human history. He also discusses the different cultures and customs of the various peoples of the world, and how they have contributed to the richness and diversity of human civilization.

The fifth part of the book is a study of the future of the world. The author discusses the different theories and predictions about the future of human civilization, and how they have shaped the way we think about the future. He also discusses the different challenges and opportunities that the world faces in the future, and how we can best prepare ourselves for the future.

1947 Christmas Bird Counts

Time afield; 11.30 a.m. to 3.00 p.m. Sharp-tailed Grouse, 3; Hungarian Partridge, 33; Snowy Owl, 1; American Magpie, 3; Starling, 15; English Sparrow, 120 (est.); Snow Bunting, 39. Total, 7 species, 214 individuals. (Downy Woodpecker noted Dec. 23. The Starlings represent the first winter record for this district.) J.B. TULLIS, WARREN S. ROY, J. FRANCIS ROY.

KAMSACK to VEREGIN Dec. 26. 2.15 to 3.00 p.m. and 4.00 to 4.45 p.m. Clear bright day; N.W. wind; 2 feet of snow. Temp. 32. 19 mile stretch of highway covered on outgoing and return trips. Hungarian Partridge, 9; Snowy Owl, 1. Total, 2 species, 10 individuals. J. NEIL BLACK.

YORKTON. (area 15 miles in diameter with Yorkton as center.) Dec. 26; 9:00 a.m. to 5:00 p.m. Clear, bright day; calm in morning, but wind at 15 mph by late afternoon; loose snow, averaging 20 to 24 inches in depth. Temp. 20 at start, 34 by 1 p.m. 9 observers in 5 groups. Total party hours afield, 12 (5 by car and 7 on foot); total party miles, 38½ (34 by car and 4½ on foot.) Ruffed Grouse, 3; Sharp-tailed Grouse, 76; Hungarian Partridge, 14; Downy Woodpecker, 3; Canada Jay, 1; Blue Jay, 7; Magpie, 4; Black-capped Chickadee, 4; Bohemian Waxwing, 58 (est.) English Sparrow, 217; Snow Bunting, 4. Total 11 species, approximately 391 individuals. JIM ALLEN, BROTHER CLARENCE, JIM DAVIS, FRED DICKER, DR. C. J. HOUSTON, C. STUART HOUSTON, FRED LANGSTAFF, MRS. J. MEEKMA, NATHANIEL OLSON. (Members Yorkton Natural History Society.)

BULYEA Dec. 25. Walk of 7 miles. Time afield, 2½ hours. Temp. 25 above. No wind. Black-capped Chickadee, 3; English Sparrow, 17. Total, 2 species, 20 individuals. CLIFF SHAW.

WAWOTA Jan. 3. Walk of 5 miles. Temperature 20 above. Sky cloudy and wind south. Prairie Chicken, 9 (Sharp-tails ? Ed.) Hungarian Partridge, 15; Snowy Owl, 1; Woodpeckers, (species?) 3; Magpie, 8; Black-capped Chickadee, 20; English Sparrow, 35; Common Redpoll, 6; Snow Buntings, 31. Total, 9 species, 128 individuals. GEORGE C. WHITE.

BURNHAM (No date given) Snow 8 inches in depth. Temp. 20 above. Eagle, 1 (flying south-west at too great a distance to identify it as to species); Hungarian Partridge, 11; Starling, 6; English Sparrow, 20. Total, 4 species, 38 individuals. ARTHUR WARD.

SASKATOON Dec. 26. In City of Saskatoon. Weather, clear and mild. Temperature 15 to 20 above zero. Time spent afield, 4 hours. Distance covered, 4 miles. Lesser Scaup, 3; Hungarian Partridge, 9; Blackcapped Chickadee, 1; Bohemian Waxwing, 24. Total, 4 species, 37 individuals. (The one male and two female Lesser Scaup were on open water below the dam.) ROY CRAWFORD.

TORCH RIVER Birds seen around the farm yard and trips to logging bush two miles distant between Dec. 20 to Jan. 5. Open field to heavy forest. Mild weather and light winds. First occurrence of each species recorded. Goshawk, 1; Golden Eagle, 1; Ruffed Grouse, 4; Sharp-tailed Grouse, 6; Willow Ptarmigan, 1; Hawk Owl, 1; Saw-whet Owl, 1; Pileated Woodpecker, 1; Hairy Woodpecker, 1; Downy Woodpecker, 1; Canada Jay, 4; Blue Jay, 6; Magpie, 6; Raven, 3; Black capped Chickadee, 4; White-breasted Nuthatch, 1; English Sparrow, 35 (est) Evening Grosbeak, 2; Pine Grosbeak, 5; Common Redpoll, 4; Snow Bunting, 20 (est.) Total, 21 species, approximately 108 individuals. This winter has been notable

... ..

... ..

... ..

... ..

... ..

... ..

... ..

... ..

... ..

1947 Christmas Bird Counts

regarding the scarcity of Great Horned Owls, Hudsonian Chickadees and Redpolls. The lone Ptarmigan is the first one I have seen in several years. C. STUART FRANCIS.

BENITO, Man. (Just a few miles from Saskatchewan boundary.) Jan. 3. Six miles through open country, scattered with poplar bluffs and ravines, S.W. wind, drifting snow. Temperature 30 above. Ruffed Grouse, 5; Sharp-tailed Grouse, 3; Blue Jay, 1; Magpie, 1; Raven, 3; Blackcapped Chickadee, 3; Evening Grosbeak, 2; Pine Grosbeak, 1; Snow Bunting, 10. Total, 9 species, 37 individuals. Grouse sign good. Predators not very numerous. A. ISFELD.

SANDWICH Jan. 1. Birds seen around the farm. Temp. 5 above zero. Sharp-tailed Grouse, 4; Saw-whet Owl, 1; Hairy Woodpecker, 1; Downy Woodpecker, 1; Blue Jay, 1; Magpie, 7; Northern Shrike, 1; English Sparrow, 9; Pine Grosbeak, 9; Snow Bunting, 37. Total, 10 species, 71 individuals. GUSTAVE J. YAKI.

NAICAM Jan. 2. Birds observed during a walk of 5 miles, beginning at 11 a.m. Weather, clear, wind at 20 mph. Temp. 25 above. Magpie, 1; Black-capped Chickadee, 3; English Sparrow, 8; Snow Bunting, 6. Total, 4 species, 18 individuals. W. YANCHINSKI.

GRENFELL Birds seen on an 11 mile drive from farm to Grenfell, by team and sleigh, Jan. 6. Two observers Bluff country. Wind S. E. at 15 mph. Sharp-tailed Grouse, 20; Magpie, 1; Black-capped Chickadee, 1; Snow Bunting, small flock. Total, 4 species, over 22 individuals. MR. & MRS. JOHN HUBBARD JR.

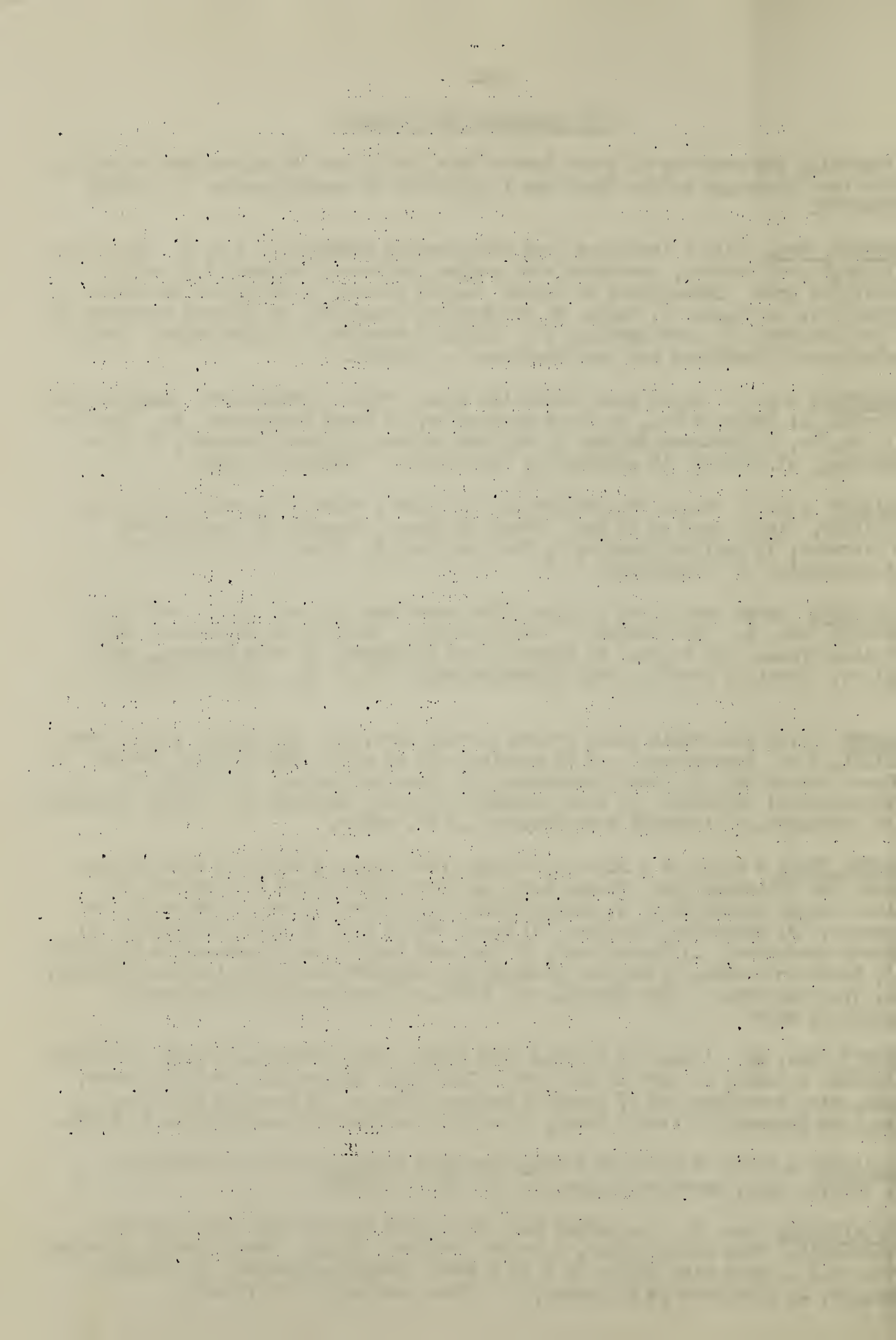
SHEHO Birds seen while doing chores on farm, Dec. 30. Sky mostly clear, wind light, S.E. Temperature - 25 in morning - 05 at noon. Sharp-tailed Grouse, 12; Great Horned Owl, 2; Hairy Woodpecker, 2; Downy Woodpecker, 1; Magpie, 3; Black-capped Chickadee, 3; Pine Grosbeak, 17; Snow Bunting, 20. Total, 8 species, 60 individuals. (Goshawk seen January 2.) WM. NIVEN.

SKULL CREEK A drive of 4 miles by sleigh, Dec. 28, and a walk of 1 mile through bush the following day. Temperature, 42 above Dec. 28 and 6 below Dec. 29. Amer. Rough-legged Hawk, 1; Golden Eagle, 1; Ruffed Grouse, 2; Sharp-tailed Grouse, 13; Hungarian Partridge, 5; Great Horned Owl, 2; Hairy Woodpecker, 2; Downy Woodpecker, 1; Horned Lark, 9; American Magpie, 46; Black-capped Chickadee, 5; Northern Shrike, 2; English Sparrow, 32; Brewer's Blackbird 1; Pine Grosbeak, 1; Tree sparrow, 4; Snow Bunting, 60. Total, 17 species, 187 individuals. STEVE A. MANN.

SCOTT Dec. 26. A walk of 2 miles over field, along hedges and about buildings. Approx. 6 inches of snow on the level. Calm day. Temperature 29 to 34 above. Hungarian Partridge, 62 (7 coveys); American Magpie, 3; European Starling, 2; English Sparrow, 60 (est.) Total, 4 species, approx. 127 individuals. F. ROUSE.

GLASLYN A drive of 36 miles through the park country north of Glaslyn Jan. 3. 1 species only, American Magpie, 1. CHARLES I. THACKER.

SPIRIT LAKE Jan. 3. A snowshoe hike of 4 miles through bush and into the sandhills. Time spent afield, 3 hours. Weather foggy. Temp. zero to 22 above. Two feet of snow with drifts of 5 to 6 feet. Downy Woodpecker, 1; American Magpie, 2; Black-capped Chickadee, 2. Three species, 5 individuals.



1947 Christmas Bird Counts

(Bohemian Waxwings seen Dec. 19; Pine Grosbeaks, Nov. 3 and Redpolls Nov. 18. Hanging dried fruit abundant. JOYCE GUNN.

LAIRD Jan. 1. A walk of 2 hours through clumps of trees and brush. Distance covered, three to four miles. High wind, Temp. 12 to 15 above. Blue Jay, 1 (others heard); English Sparrow, 50 (est.); Blackbird (species ?) 1. Total, 3 species, approx. 52 individuals. D. MURRAY.

TISDALE Dec. 25. At or near the feeding station of E. W. VanBlaricom, K.C. and in nearby woods. Pileated Woodpecker, 1; Hairy Woodpecker 1; Downy Woodpecker, 1; Blue Jay, 2; American Magpie, 1; Bohemian Waxwing, 55; English Sparrow, 6; Evening Grosbeak, 8. Total, 8 species, 75 individuals (no Canada Jays or Redpolls this winter.) E. W. VAN BLARICOM.

GERALD Jan. 1. Count taken around the home yard. Sky clear. Temperature 20 above at 3 p.m. Downy Woodpecker, 1; Blue Jay, 1; Blackcapped Chickadee, 1; Bohemian Waxwing, 30; English Sparrow, 6; Evening Grosbeak, 9; Pine Grosbeak, 25. Total, 7 species, 72 individuals. LADISLOVE MARTINOVSKY

HAWARDEN Dec. 27. Observations made while doing farm work about the yard from 10 a.m. to 3 p.m. Snow 15 inches in depth. Temp. 22 above. Light wind. Sky clear to partly cloudy in late afternoon. Open prairie, no trees except groves around farms. Hungarian Partridge, 12; Snowy Owl, 1; Magpie, 1; English Sparrow, 125 (est.) Total, 4 species, 139 individuals, (est.) Snow Buntings seen during early Dec. Northern Shrike, Dec. 12. One Golden Eagle, Dec. Northern Shrike, Dec. 12. One Golden Eagle, Dec. 2. Starling, Dec. 22. HAROLD KVINGE.

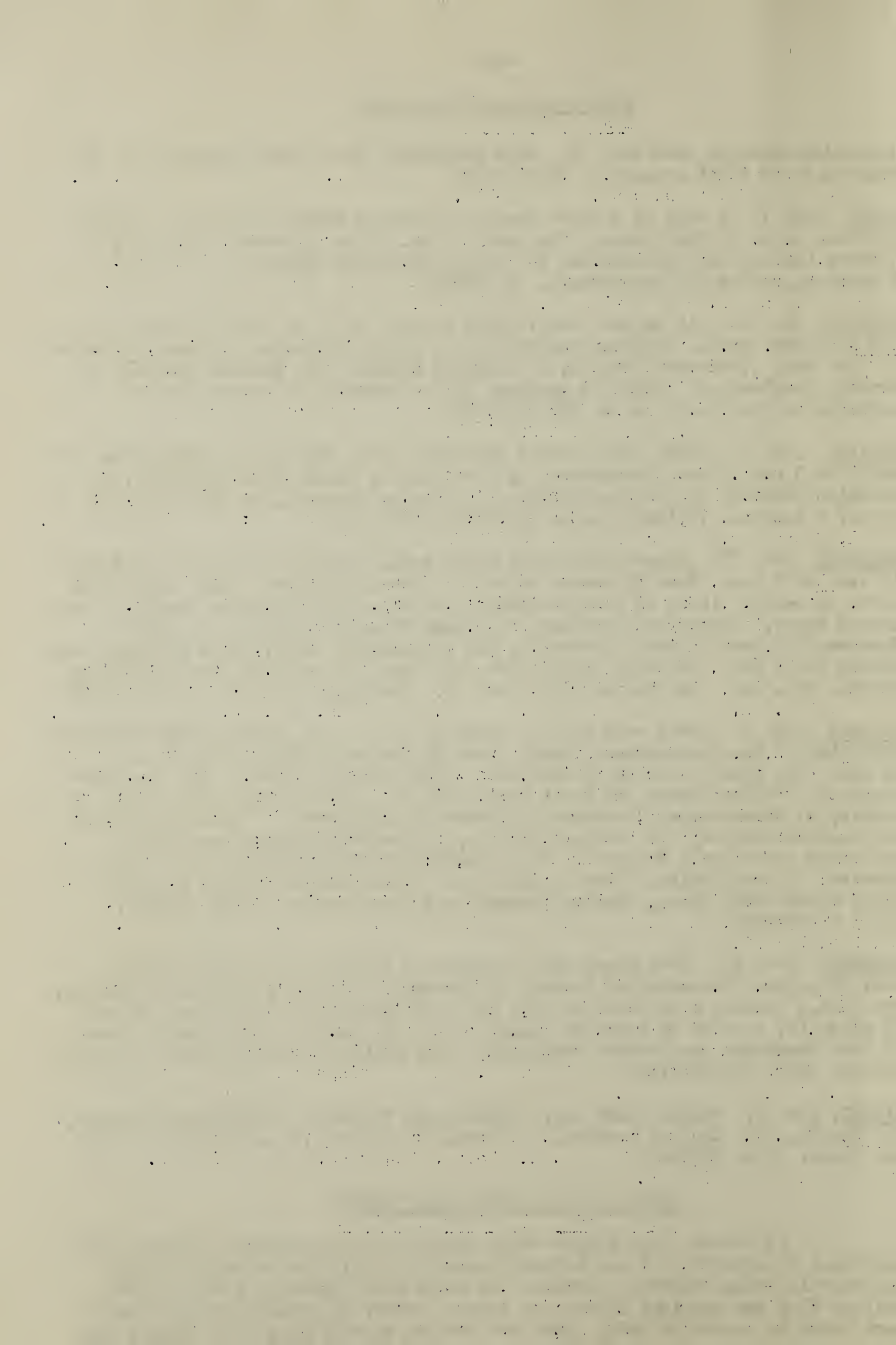
NIPAWIN Jan. 2. Birds seen during a walk of five miles, through town and along east side of the Saskatchewan River. Snow 22 inches in depth. Wind S.W. at 15 mph. Sky clear to slightly overcast. Time afield, 4 hours. Two observers together. Ruffed Grouse, 2; Great Horned Owl, 1; Canada Jay, 3; Blue Jay, 3; Magpie, 2; Black-capped Chickadee, 3; Hudsonian Chickadee, 5; Bohemian Waxwing, 50; English Sparrow, 10; Bronzed Grackle, 1; (grackle present about grain elevators since early November) Pine Grosbeak, 8; Common Redpoll, 4. Total 12 species, 92 individuals. Other species seen during Christmas week include, Hairy Woodpecker, Raven, Evening Grosbeak and Snow Bunting. ALEX. WRIGHT, DAVID H. WRIGHT.

WAUCHOPE Dec. 27. From Nixon farm to Wauchope 3½ miles, then from Redvers west 2½ miles. Sharp-tailed Grouse, 2; Pheasant, 1; Magpie, 2; English Sparrow, 200 (est.) Total, 4 species, approx. 205 individuals. An exceptional dearth of wildlife; a flock of Bohemian Waxwings early in November and a small flock of Pine Grosbeaks just before Christmas. Snow Buntings came early but are very scarce. MRS. MARION NIXON.

HAZLET. Jan. 1. Bright sunny day. Temperature 35 above. Hungarian Partridge, 4; Starling, 12; English Sparrow, 4. Total, 3 species, 20 individuals. Very few birds. MRS. OLSGARD.

SUMMARY OF 1947 XMAS BIRD COUNTS

25 counts, from almost every section of the province, thanks to the continued co-operation of our members, resulted in 37 species and over 2161 individuals being recorded. Despite the count being taken in rather milder weather than any previous Census, no greater number of species or individuals were noted by reason of this. Deep and drifted snow in some areas caused the



number of miles traversed by observers to be rather less than in previous counts.

Four species not recorded in any previous count were noted. These were Lesser Scaup at Saskatoon; Chukar Partridge at Battleford, Hawk Owl at Torch River, and Bronzed Grackle at Nipawin. These new records bring the total species recorded in mid-winter in Saskatchewan, in six years of Christmas Bird Counts, to a rather amazing 58.

The Magpie is still the most commonly recorded species, along with the English Sparrow. To offset this, sportsmen should be heartened to hear that our Game Birds - Sharp-tailed Grouse and Hungarian Partridge, and to some extent Ruffed Grouse- seem to be making a fair comeback and with luck and a good breeding season in 1948 should be well on their way to recovery after being at a very low ebb during the past few years. At the same time, birds of prey appear to be very scarce.

Winter birds from the north such as the Pine Grosbeak, Evening Grosbeak and Bohemian Waxwing, while apparently well distributed over the province are present in much smaller numbers than last winter, in the more southern parts. Redpolls, usually an abundant visitor, prove to be extremely scarce, there being only 10 individuals reported from three points.

A Note on Richardson's Ground Squirrel in Saskatchewan.

By W. A. Fuller.

Richardson's ground squirrel, the prairie "gopher", is a well-known animal to most Saskatchewan residents. It is probably the most familiar of our native wild mammals. Such a well-known mammal, however, is apt to be taken too much for granted and consequently, many of the details of its life history go unnoticed.

Zoologically, Richardson's ground squirrel is known as Citellus richardsonii Sabine. Its near relatives in Saskatchewan are two in number, Citellus franklini, the grey or bush "gopher" and Citellus tridecemlineatus, the 13-lined or striped "gopher." More distant relatives are other members of the squirrel family including the red squirrel, chipmunk, ground hog, and in the extreme southwest corner of the province, the black-tailed prairie dog. The proper common name for the genus Citellus is ground squirrel. The term "gopher" should be reserved for the pocket gopher which is all too often incorrectly labelled "mole" in Saskatchewan.

A study of the abundance of ground squirrels has been done in Alberta by J. H. Brown of the Alberta Rodent Plague Survey. His results, based on actual counts of burrows, show that native prairie, the natural habitat of the animals, harbors the greatest number of individuals - about 5,120 per section (Brown & Ray 1943.) This type is followed by "abandoned" (3,840) "grassland" (3,200) and "cultivated" (1,920.) On irrigated land, flooding keeps the population down to a minimum.

A small amount of information concerning the reproductive cycle was collected in the springs of 1946 and 1947, mainly near Saskatoon. In 1946, the animals were first seen to be active during the last week of March. The first individuals were collected on April 15 - a female carrying 8 embryos. A week later, April 23, two females, each with 10 embryos nearly at term, were collected. On April 25, two females collected had just given birth to their litters and were nursing. The young were first seen above ground at Estevan on May 15, a warm sunny day. The spring of 1947 was generally much earlier than that of 1946, however, the first active ground squirrel was "drowned out"

