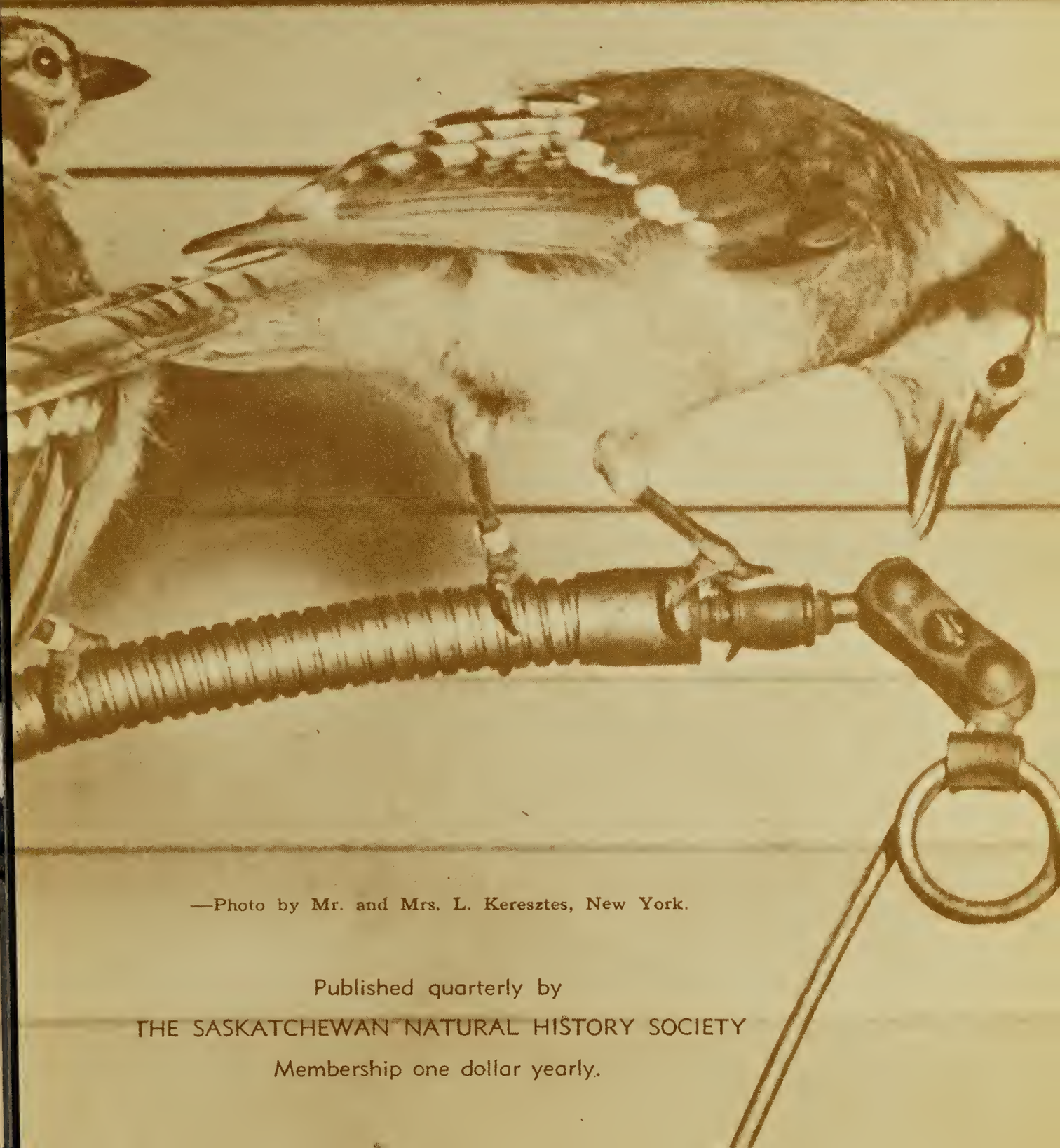
THE Blue Jay

Vol. XIV, No. 1 March, 1956



—Photo by Mr. and Mrs. L. Keresztes, New York.

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Blue Jay Chatter

I know that I speak for all the **Blue Jay** readers when I say how sorry we were to have Mr. L. T. Carmichael resign as editor. He built our little bulletin into an attractive and worthwhile magazine, and we looked forward to every issue. Three cheers and a million thanks to Lloyd for his seven years as editor and for the 28 fine issues which were published during those years.

In taking over from Mr. Carmichael, I am counting on the continued co-operation of all those contributors who have helped to make the **Blue Jay** such a happy medium for the exchange of opinions and observations among amateur naturalists. I am looking forward particularly to the notes and letters which will come to the editor's desk. Although it will not be possible to print all the material received, and although there will be, I hope, much more correspondence than I can promise to answer, I shall depend upon your letters to keep me in direct contact with the readers of the **Blue Jay**. Most of all, I want you to feel that the **Blue Jay** is **your** magazine.

With our readers alert and ready to report their observations, we shall often learn about something rare or new in Saskatchewan or perhaps about something which has previously remained unnoticed and unrecorded. I hope that when questions are asked in the **Blue Jay** you will do everything you can to send in information or to coax others who have the information to send it in. In this issue, for example, Dr. Stuart Houston asks whether any readers know of the occurrence of the rare Pinnated Grouse in Saskatchewan. If you can help answer this question, you will be doing a service not only to the Wisconsin Conservation Department which is carrying on the survey, but to all naturalists in our province who are interested in this bird. We think that collecting information of this kind is one of the important functions of the **Blue Jay**.

Some of our keenest observers may well be the boys and girls in the schools of Saskatchewan. A part of this magazine will continue to be devoted to their interests and activities. We are again announcing the story contest for young people — the best story sent in during each quarter will be printed and one of the Field Guides given as a prize to the author.

We are also pleased to be able to continue the **Spade and Screen** pages under the capable direction of Mr. Fred Robinson. I should like to see more contributions of archeological interest coming to Mr. Robinson, to whom I am personally grateful for editing this interesting section of the **Blue Jay.**

An important part of each **Blue Jay** will be the Museum Section. Here articles by members of the Museum staff will be included and accessions acknowledged. Since the Museum staff is still extremely busy preparing habitat cases and exhibits in the new museum building, we are particularly fortunate to have three good items in this issue by Dr. R. W. Nero, the assistant director.

As the official organ of the Saskatchewan Natural History Society, the **Blue Jay** must take a strong stand for conservation. In a democracy, we cannot expect to have the problems of conservation and wildlife management solved intelligently without an informed public, and I therefore hope that the **Blue Jay** will be able to play a really effective role in conservation education. In this issue the controversial question of the protection of hawks and owls is raised, and we have printed articles that reflect current opinions on predator control. Perhaps Saskatchewan is somewhat behind in its thinking on this subject, and we should help to advance more recent concepts. In any case, these problems are extremely important to all of us who are anxious to play our part in preserving what Durward Allen calls "our wildlife legacy"

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Museum Notes

Dr. G. Ledingham at work in the Herbarium at Provincial Museum of Natural History, Regina, February 2, 1956.

—Saskatchewan Government Photo by Mike Kesterton

Museum Herbarium

In 1947 Mr. F. G. Bard, Director of the Saskatchewan Museum of Natural History, was offered a collection of herbarium specimens by Mr. A. C. Budd of the Dominion Experiment Station at Swift Current. This was the golden opportunity which started the only public herbarium in Saskatchewan.

Since the museum staff is very busy in the new museum with as many as 1500 visitors a day, several outside people have been asked to co-operate in some of the museum activities. Dr. G. F. Ledingham has been appointed honorary curator of the herbarium. He will be responsible for the care of the specimens and will direct the development of this herbarium until a member of the museum staff can be assigned to these duties.

A herbarium is a collection of pressed plants, mounted on 11½ by 16½ white paper with scientific name and collection data on a label in the lower right hand corner. The museum herbarium will specialize in Saskatchewan plants, their variations, distribution, and abundance. The collection is now housed in steel cases. Approximately 1000 specimens have been contributed, mostly by W. Shevkenek and A. C. Budd. Mr. L. T. Carmichael has recently donated another 900 specimens. It is particularly important that a collection of Saskatchewan plants be made, for when most of the plains have been plowed native plants are greatly reduced and some are in danger of extinction.

Amateur botanists may see the herbarium upon request. To appreciate and use a herbarium a person must first have some experience with the identification of plants. An easy way to begin the study of plants is to collect and press two specimens of each kind of plant except rare kinds which need protection and therefore should not be collected. Complete information must be kept with each collection. Every effort should be made to identify the plant while it is fresh using, for instance, Mr. Budd's, *Flora of the Farming and Ranching Areas of the Canadian Prairies*. Complete plants, with roots, should be collected. The pressing may be done in a pile of newspapers, changing the paper occasionally to dry the plants quickly. Several books may be used for weight. These specimens are numbered and one of each pair can be sent away for identification.

The museum herbarium curator will be glad to help anyone interested in learning our native plants. Specimens sent in will be added to the herbarium collection.

Black-throated Blue Warbler in Sask.

By DR. R. W. NERO

The remarkable influence of the Audubon Society was well demonstrated recently when the executive director of the Canadian Society, Mr. John A. Livingston, visited Regina. On October 16, while visiting Moose Jaw with Dr. George Ledingham, Mr. Livingston saw a small bird fly against a window pane. Upon inspection and later preparation as a study skin this bird was found to be an immature female Black-throated Blue Warbler (*Dendroica caerulescens*). This is, so far as I have been able to determine, the second known specimen for the province. The first one, an adult male, was collected at Percival, Saskatchewan, on October 21, 1936 by John and Robert Nelson. It was forwarded to the museum by Mr. E. M. Callin and has been preserved as a mounted specimen. This latter record has been mentioned by Potter (1943: 71) and Bent (1953: 234).

The Black-throated Blue Warbler is a common bird of the eastern deciduous woodlands but it is rare even in Manitoba. Bent (*op. cit.*) suggested that it might be extending its range westward, breeding rarely in Manitoba or Saskatchewan. Movat (1947: 113) reported some sight observations of this species in June and July, 1939, at Emma Lake, and Potter (*loc. cit.*) observed a male at Eastend on September 21, 1937. It was not found, however, in the Flotten Lake region (Godfrey, 1950), the Somme district (R. & T. Hooper, 1954), or at Nipawin (Street, 1943), areas which are all within the Canadian Zone in which this species nests. A breeding record in Saskatchewan of this striking little bird would be an exciting discovery.

BENT, A. C. — 1953 — Life Histories of North American Wood Warblers. Bull. 203. 734 pp.

GODFREY, W. E. — 1950 — Birds of the Cypress Hills and Flotten Lake Regions, Saskatchewan. Nat'l Mus. Can. Bull. 120. 96 pp.

HOOPER, R. and HOOPER, D. — 1954 — A Preliminary List of the Birds of the Somme district, Saskatchewan. Contribution No. 3 of the Yorkton Nat. Hist. Soc. 13 pp.

HOUSTON, C. S. — 1949 — The Birds of the Yorkton district, Saskatchewan. Can. Field-Nat., 63 (6): 215-241.

MOWAT, F. M. — 1947 — Notes on the Birds of Emma Lake. Saskatchewan. Can. Field-Nat., 61 (3): 105-115.

POTTER, L.B. — 1943 — Bird notes from south-western Saskatchewan. Can. Field-Nat., 57 (4 and 5): 69-72.

STREET, M. G. — 1943 — A list of the birds of Nipawin, Saskatchewan. Contribution No. 2 of the Yorkton Nat. Hist. Soc. 9 pp.

The Kangaroo Rat in Saskatchewan

By DR. R. W. NERO

The Kangaroo Rat is a small, light reddish-brown mammal, white underneath and with a white stripe across each flank. The most striking features of the Kangaroo Rat are the greatly enlarged hind legs and feet which, together with the long tail, represent adaptations for a bipedal leaping or bounding gait. It derives the first part of its name from its similarity in this respect to the true Kangaroos. Just as the Prairie Dog is not a dog, the Kangaroo Rat is not a member of the rat tribe but belongs to a group of native mice distinguished by the presence of external, fur-lined cheek pouches in which it can carry large quantities of food. The species found in this province is about the size of a small ground-squirrel. The most recent one captured was 10¾ inches long from the tip of its nose to the end of its tail; however, 5¾ inches of this length consisted of the tail alone. This mammal is so well adapted to dry areas, according to E. T. Seton, that instead of drinking, it obtains water only through eating succulent roots.

The Kangaroo Rat is usually regarded as a mammal of the desert-like regions of North America, but it has been known to occur in Saskatchewan since 1933. (Its only other occurrence in Canada is based on a

single specimen from southeastern Alberta.) Only two specimens have been reported in the province during the last 22 years, but since it is completely nocturnal it may be more common than these few records suggest. The first one known to have been found in Saskatchewan was captured by a dog in 1933 at Shackleton. The following year a second one was found dead on a road near Tompkins (Anderson, 1946, Catalogue of Canadian Recent Mammals). In July, the first week of 1955, a third one was obtained by Mr Michael Spies near Portreeve. A glance at a map shows that these three records of this interesting mammal fall within a circle 55 miles in diameter, in the southwest corner of the province, about 40 miles west of Swift Current. This particular species, the Ord Kangaroo Rat (*Dipodomys ordii*) is widely distributed over the western United States. It is reasonable to expect, therefore, that additional work will reveal the presence of Kangaroo Rats in suitable areas from Portreeve south to the border of the province. Determination of the range of this species within the province, as well as that of other mammals, is one of the important problems which still need to be solved. Since Kangaroo Rats live in colonies and erect large mounds of earth pierced by numerous openings they should not be too difficult to locate.

Commensal Feeding of Muskrat and Rusty Blackbird

By DR. R. W. NERO

In the dictionary commensal behavior is defined as "eating at the same table." In biology this term has been used to designate a kind of parasitism in which, however, the "host" neither loses nor gains. On November 5, 1955, I observed a good example of commensalism between a Rusty Blackbird (*Euphagus carolinus*) and a Muskrat (*Ondatra zibethica*) while hunting along the Qu'Appelle River north of Regina. Although it was cold, the temperature during the day being 15 to 20 degrees F. with a brisk wind blowing from the Northwest, the river was still open in places, a thin layer of ice extending up to 10 feet from each shore. Early in the afternoon I had several times noticed Muskrats sitting on the edge of the ice and eating. On two or three occasions a Rusty Blackbird was observed near a "rat", but since I was fresh and intent on the hunt, little attention was paid to either bird or mammal. Passing by the same general area later in the afternoon, being somewhat wearied and more inclined to pause occasionally, I stopped to watch a Rusty Blackbird which was moving about on the ice on the opposite shore near a rat. The latter was feeding on some dark vegetation which it had evidently just brought up from the stream bottom. As I watched, the Blackbird moved in to within 5 or 6 inches of the rat and began warily picking at the vegetation, jumping back each time the latter raised its head in an obviously aggressive gesture. The Blackbird continued to feed in a cautious manner for 2 or 3 minutes, before I left. It seemed quite clear that the Blackbird was feeding on animal life which had been brought up with the vegetation, presumably crustaceans or other arthropods, or possibly snails. I am convinced that the Rusties which I had seen earlier in the afternoon were dining at the same kind of table.

Commensal feeding involving another icterid was reported by Shelley in 1930 (Companionate feeding activities of a Spotted Sandpiper and a Red-winged Blackbird. *Auk,* 47 (1): 78-79). A Spotted Sandpiper (*Actitis macularia*), feeding on bottom-feeding larvae of the caddis-fly which it brought to shore to eat, was closely followed by a Redwing (*Agelaius phoeniceus*), which quickly ate the larvae which the Sandpiper occasionally discarded.

Rattlesnake dens along the South Saskatchewan River. — Mr. J. J. Deck of Mendham reports that dens of Rattlesnakes are numerous along the river hills on the north side of the Saskatchewan River near the Alberta boundary. Mr. Deck loaned to the Museum, for viewing, a film he had made showing the "rattlers" in this area.

Summary of 14th Annual Saskatchewan Christmas Bird Count, 1955

By DR. STUART HOUSTON

The newly organized Saskatoon Natural History Society led the province with a one-day total of 23 species. The Regina group had the largest total for the Christmas season — 28 species. Greatest credit, however, should go to Joyce Gunn and Bill Anaka at Spirit Lake who saw 17 species in one day — all on foot through deep snow in a district where all roads were blocked.

All together 47 species were seen on the day of the count, and 6 additional during the Christmas season. Five species were recorded for the first time, making a total of 78 species that have been seen in Saskatchewan during the Christmas season, in 14 years. The open water at the Wascana sanctuary, Regina, produced the Pintail, Green-winged Teal, Canada Goose (captive) and the Whistling Swan (captive). Dr. R. M. Bremner at Saskatoon and Laurence Beckie at Bladworth both reported Pine Siskins. (Mrs. McDonald at Swan River reported a Great Gray Owl, but this is just outside Saskatchewan). The Richardson's Owl noted at Dilke by Margaret and J. B. Belcher was the second Saskatchewan Christmas record for this species in 14 years. The Hawk Owl at Spirit Lake was also of unusual interest.

Most frequently recorded species were, in order of occurrence, Magpie, Sharp-tailed Grouse English Sparrow, Black-capped Chickadee, Snow Bunting, Common Redpoll, Pine Grosbeak, Hairy Woodpecker, Downy Woodpecker and Hungarian Partridge. From this, it would seem that the Sharp-tails are well distributed this year.

The adverse weather conditions discouraged some of our regular Christmas counters this year, and we hope they will rejoin us next year.

ARDATH, December 22, by bus. 5 species, 51 indiv. Sharp-tailed Grouse, 8; Hungarian Partridge, 6; Canada Jay, 2; English Sparrow, 25; Snow Bunting, 10 — **Ronald and Donald Hooper.**

BIG RIVER, Dec. 30, ½ mi. on foot. 10 species, 78 indiv. Pileated Woodpecker, 2; Hairy Woodpecker, 2; Downy Woodpecker, 7; Canada Jay, 5; Blue Jay, 12; Magpie, 4; Black-capped Chickadee, 25; White-breasted Nuthatch, 2; Common Redpoll, 16; Snow Bunting, 3; (Add: Raven, 2) — **Mrs. Anne Olson.**

BLADWORTH, Dec. 28, 5 mi. on foot, 2 hrs. 7 species, 317 indiv. Prairie Falcon, 1; Sharp-tailed Grouse 3; Hungarian Partridge, 28; Magpie, 4; English Sparrow, 2; Pine Grosbeak, 4; Snow Bunting, 275; (Add: Bohemian Waxwing, 11; Common Redpoll, 5; Pine Siskin, 2) — **P. Laurence Beckie.**

BROADVIEW, Dec. 25, 108 mi. by car in 3 hrs. 5 species, 17 indiv. Sharp-tailed Grouse, 5; Hungarian Partridge, 4; Snowy Owl, 1; Magpie, 1; Snow Bunting, 6; (Add: Great Horned Owl, 1; Black-capped Chickadee, 1) — **Charles and Audrey Thacker.**

DILKE, Jan. 2, 30 mi. by car in 2¼ hrs. 8 species, 191 indiv. Golden Eagle, 1; Sharp-tailed Grouse, 11; Hungarian Partridge, 40; Richardson's Owl, 1; Starling, 3; English Sparrow, 50; Common Redpoll, 55; Snow Bunting, 30; (Add: Snowy Owl, 1; Magpie, 1; Pine Grosbeak, 1) **S. R., J. B., and Margaret Belcher.**

ESTON, Dec. 21, 6 mi. on foot in 3 hrs. 5 species, 167 indiv. Hungarian Partridge. 13; Snowy Owl, 1; Bohemian Waxwing, 60; English Sparrow, 80; Common Redpoll, 13; (Add: Snow Bunting, 6) — **Ronald and Donald Hooper.**

HAWARDEN, Dec. 31, 1 mi. by team and on foot in 8 hrs. 5 species, 182 indiv. Goshawk, 1; Snowy Owl, 1; English Sparrow, 100; Common Redpoll, 10; Snow Bunting, 70; (Add: Golden Eagle, 1; Sharp-tailed Grouse, 3; Horned Owl, 1; Magpie, 1; Bohemian Waxwing, 18; Pine Grosbeak, 1) — **Harold and Gerhard Kvinge.**

McLEAN, Dec. 30, 2 mi. on foot. 5 species, 19 indiv. Sharp-tailed Grouse, 6; Hairy Woodpecker, 1; Downy Woodpecker, 2; Black-capped

Chickadee, 6; Bohemian Waxwing, 4. **Mrs. Bray and Mrs. Newton.**

MULLINGAR, Jan. 2, 2 mi. by team in 1½ hrs. 9 species. 66 indiv. Sharp-tailed Grouse, 1; Hairy Woodpecker, 2; Downy Woodpecker, 1; Canada Jay, 1; Magpie, 2; Black-capped Chickadee, 6; English Sparrow, 17; Common Redpoll, 15; Snow Bunting, 21; (Add: Ruffed Grouse, 2; Pine Grosbeak, 12) — **Ralph T. Cowell.**

NAICAM, Dec. 29, 5 mi. on foot in 7 hours. 5 species, 23 indiv. Hungarian Partridge, 1; Magpie, 5; Black-capped Chickadee, 4; English Sparrow, 7; Pine Grosbeak, 6. (Add: Downy Woodpecker, 1; Common Redpoll, 5; Snow Bunting, 75) — **W. Yanchinski.**

PUNNICHY, Dec. 30, 6 mi. by team. 6 species, 41 indiv. Ruffed Grouse, 1; Horned Owl. 2; Hairy Woodpecker, 2; Downy Woodpecker, 1; Black-capped Chickadee, 7: English Sparrow, 28; (Add: Sharp-tailed Grouse, 6; Magpie, 2; Crow, 1) — **Carl and Madeline Runyan.**

REGINA, Dec. 27, 8 hrs. 21 species, 530 indiv. Pied-billed Grebe, 2; Whistling Swan, 2; Canada Goose, 20; Mallard, 175; Pintail, 3; Pigeon Hawk, 1; Sharp-tailed Grouse, 33; Hungarian Partridge, 5; Coot, 1; Horned Owl, 1; Downy Woodpecker, 3; Magpie, 7; Black-capped Chickadee, 2; Brown-capped Chickadee, 3; Red-breasted Nuthatch, 1; Bohemian Waxwing, 160; Northern Shrike, 1; English Sparrow, 50; Pine Grosbeak, 7; Common Redpoll, 40; White-winged Crossbill, 13; (Add: Green-winged Teal, 1; American Golden-eye, 5; American Merganser, 1; Snowy Owl, 1; Hairy Woodpeaker, 1; White-breasted Nuthatch, 1; Hoary Redpoll, 300) — **F. Brazier, E. Cruickshank, D. Gilroy, F. Lahrman, G. Ledingham, R. Nero, and E. Fox (compiler).**

SASKATOON, Dec. 26, 112 mi. by car in 16 hrs.; 24 mi. by foot in 21 hrs. 23 species, 3562 indiv. Lesser Scaup, 2; American Golden-eye, 2; Goshawk, 2; Sharp-tailed Grouse, 10; Hungarian Partridge, 109; Ring-necked Pheasant, 1; Horned Owl, 4; Snowy Owl, 2; Hairy Woodpecker, 2; Downy Woodpecker, 2; Canada Jay, 4; Magpie, 51; Crow, 2; Black-capped Chickadee, 28; Bohemian Waxwing, 116; Cedar Waxwing, 40; Northern Shrike, 2; Starling, 10; English Sparrow, 1187; Pine Grosbeak, 118; Common Redpoll, 1072; Pine Siskin, 4; Snow Bunting, 792. — **J. Agar, Dr. R. M. Bremner, Jean Davidson, F. J. H. Fredeen, Mrs. J. Gerrard, Jonathan Gerrard, J. B. Gollop, J. D. Hogg, Dr. C. J. Houston, Dr. and Mrs. Stuart Houston (compilers), John Hunter, Bob Mills, Dr. Lucy Murray, M. W. Nickel, Bob Pravda, Ed. Reed, J. F. Roy, J. Shadick, Keith Thue, John Webster, Reuben Willems, F. J. Wilson, Dr. Keith Yonge (Saskatoon Natural History Society).**

SHEHO, Dec. 31, 3 mi. by car and 6 hrs. on foot. 12 species, 172 indiv. Ruffed Grouse, 2; Sharp-tailed Grouse, 16; Horned Owl, 1; Hairy Woodpecker, 1; Downy Woodpecker, 2; Canada Jay, 1; Magpie, 5; Black-capped Chickadee, 5; Evening Crosbeak, 7; Pine Grosbeak, 16; Common Redpoll, 16; Snow Bunting, 100. — **William Niven.**

SKULL CREEK, Dec. 26, 4 mi. by car, 4 mi. on foot, in 3 hrs. 12 species, 399 indiv. Mallard, 5; Golden Eagle, 1; Hungarian Partridge, 3; Ring-necked Pheasant, 7; Blue Jay, 3; Magpie, 21; Black-capped Chickadee, 14; Robin, 1; Bohemian Waxwing, 147; English Sparrow, 110; Common Redpoll, 84; Tree Sparrow, 3; (Add: Goshawk, 1; American Rough-legged Hawk, 1; Sharp-tailed Grouse, 60; Short-eared Owl, 1; Horned Lark, 39; Northern Shrike, 1; Snow Bunting) — **S. A. Mann, Helen Mann, Peter Swain, Verna Swain, George Swain.**

SOMME, Dec. 24, 6 hrs. on foot. 9 species, 103 indiv. Horned Owl, 1; Hairy Woodpecker, 1; Magpie, 1; Raven, 2; Black-capped Chickadee, 1; English Sparrow, 60; Pine Grosbeak, 6; Hoary Redpoll, 1; Snow Bunting, 30; (Add: Ruffed Grouse, 3; Sharp-tailed Grouse, 1; Hungarian Partridge, 7; Blue Jay, 6; Common Redpoll, 4). — **Ronald and Donald Hooper.**

SPIRIT LAKE, Jan. 1, 6½ mi. on foot in 7 hrs. 17 species, 163 indiv. Ruffed Grouse, 3; Sharp-tailed Grouse, 2; Horned Owl, 2; Hawk Owl, 1; Hairy Woodpecker, 6; Downy Woodpecker, 8; Canada Jay, 4; Blue Jay, 3; Magpie, 2; Black-capped Chickadee, 46; White-breasted Nuthatch, 3; English Sparrow, 25;

Evening Grosbeak, 6; Pine Grosbeak, 4; Common Redpoll, 5; White-winged Crossbill, 3; Snow Bunting, 40; (Add: Snowy Owl, 1) — **Joyce Gunn, Bill Anaka.**

SWAN RIVER, Dec. 26, 20 mi. by car. 16 species, 508 indiv. Hairy Woodpecker, 2; Downy Woodpecker, 2; Canada Jay, 3; Blue Jay, 6; Magpie, 2; Black-capped Chickadee, 16; Brown-capped Chickadee, 1; White-breasted Nuthatch, 1; English Sparrow, 22; Evening Grosbeak, 36; Pine Grosbeak, 2; Hoary Redpoll, 3; Common Redpoll, 16; Red Crossbill, 4; White-winged Crossbill, 17; Snow Bunting, 375. (Add: Sharp-tailed Grouse, 1; Snowy Owl, 1; Great Gray Owl, 1; Pileated Woodpecker, 1; Raven, 5) — **Mr. and Mrs. J. H. McDonald.**

WYNYARD. Jan. 3. 8 species, 60 indiv. Hairy Woodpecker, 2; Downy Woodpecker, 2; Canada Jay, 1; Blue Jay, 1; Magpie, 3; Black-capped Chickadee, 10; English Sparrow, 30; Pine Grosbeak, 11. (Add: Evening Grosbeak, 2) — **D. Bardal.**

YORKTON, Dec. 26, 66 mi. by car in 4½ hrs., 10 mi. on foot in 4 hrs. 11 species, 415 indiv. Sharp-tailed Grouse, 22; Snowy Owl, 1; Hairy Woodpecker, 2; Downy Woodpecker, 1; Blue Jay, 1; Black-capped Chickadee, 8; Bohemian Waxwing, 7; Starling, 6; English Sparrow, 143; Pine Grosbeak, 7; Snow Bunting, 217. — **Mr. and Mrs. Art Gellert; Brother Clarence; Paul Welgan; Lionel Coleman; Cliff, Doug and Karen Shaw.**

The American Egret

(*Casmerodius albus egretta*)

NESTING IN MANITOBA

By RALPH D. BIRD, Brandon, Man.

Mr. E. L. Fox's article on the American Egret in the Oct.-Nov.-Dec. 1955 number of **The Blue Jay** has stimulated me to round out records on its occurrence and breeding by a short note on this bird in Manitoba. In 1954 and 1955 the American Egret appeared in all three prairie provinces. Oeming and Riggall (**Canadian Field-Nat.** 69(2):67-68) record the first occurrence of the bird in Alberta at Cowley and Edmonton in 1954. Fox records it nesting in Saskatchewan in 1955,

—Photo by R. D. Bird

and I have just submitted an article to **The Canadian Field-Naturalist** recording it nesting in Manitoba in the same year. Previous to this there have been only four sight records of the bird in Manitoba.

On May 10, 1955, I observed a single egret feeding on flooded flats of the Souris River near Napinka, Man. On June 5 I saw a single bird among a colony of Great Blue and Black-crowned Night Herons near Pipestone, and on returning on June 19 I found it had a nest and young. One bird was wary but the other, presumably the female, was quite tame and permitted me to obtain a number of photographs, one of which is included. On August 12 Mrs. James Stewart of Napinka saw an adult and three young close to the location where I had seen the single bird in May and only fifteen airline miles from the nesting site.

The number of recent egret records gives evidence of a possible northward extension of breeding range.

Another recent occurrence of a southern bird is a female Red-bellied Woodpecker, which I observed at the feeding station of Mrs. Cliff Chapman, ten miles southeast of Brandon, on New Year's Day 1956. There are only a few previous records of this bird in Manitoba.

Random Notes on the Yellow Rail

(*Coturnicops noveboracensis*)

By R. D. SYMONS

The Yellow Rail is one of the hardest birds to get to know in all Western Canada. I have enjoyed a nodding acquaintance with this species for over forty years, but I am bound to say that what I have been able to learn about its ways is little indeed.

My first meeting with this shy creature was when I worked on a farm in 1914 at a place about ten miles north-east of Moosomin I was young; my greatest passion was birds; and since in those days no cars, radios, or social activities existed to hinder me, I was able to spend all my spare hours in pursuit of my hobby.

Through the farm ran a grassy draw or shallow watercourse, known as "the Ravine" — which it was not. This draw was carpeted with wire grass, set with wolf willow on its drier edges, and with red willow about the several long, narrow pools of water which persisted all summer and were the residue of the spring run-off. Here I first met the Redwing Blackbird, the Willets and Godwits and the grass sparrows — but best of all, the Bobolink.

Books on Canadian birds were not available in those days, but I had a helper and friend in the late Dr. Speechly, of Pilot Mound, Manitoba, to whom I would write when in doubt, and send small sketches I had made to help him identify them for me. I never met the good doctor, but I remember him with gratitude.

The farmer for whom I worked said to me one day, "Bob, you know all (!) about birds — tell me, what is the one which ticks anway in the evenings around the ravine? It sounds like a great clock." I could not tell him although I had heard the creature myself. Every evening after chores, I lay by the little bit of wild land between the great wheat fields and tried to uncover the mystery of the "tick-tick-tick- - - - tick-tick-tick" repeated monotonously from the grass. Sometimes apparently near, sometimes far away, the sound became part of the whole scene — the purpling shadows, the sparkle of water, the nodding grasses. Each night I returned to the farmhouse disappointed.

Haying time came, and the bird — for somehaw I was sure it was a bird — gradually ceased to utter its strange note. Now the shallow valley was neatly moved between the pools and among the willow clumps. And then one evening, as I finished topping off a hay cock, something like a young bird ran from between my feet with wings half-opened and looking from side to side as if seeking cover. I clanged my fork on the ground and the bird, to my surprise, took to weak flight with trailing legs, but dropped into a thicket after a few yards of floppy progress. From its flight I knew it to be a rail. The absence of any more tail than a tuft had given it the juvenile appearance. But what kind of rail? I knew the Sora both in flight and on land, but this was no Sora.

Had I been in a Sussex clover field I would have said it was a landrail (corncrake) It was buffy and mottled like that bird, but probably smaller, with two distinguishing features — rich chestnut undertail coverts, and a white patch on the secondary flight feathers. Now, I argued to myself, this must be the "slough clock" that puzzled the farmer and myself. For the notes heard all spring followed much the same pattern as the Corncrake's, and if my bird's habits were like the Corncrake's, then it was no wonder I had not seen it in the long grass.

I called to mind everything I could remember about the Corncrake, which was not much, as in the Sussex of my early youth that species had already become rare. It was an achievement to see one, for the bird preferred to creep into and through long grass and grain, rather than to take wing. I had seen one flushed by a mower, as the machine swallowed the last round, and it had flown but a few rods before it dropped into the concealment of a heavy swath. I remembered, too, the monotonous "crex-crex-crex" heard from

a grass field on a warm summer's evening, and recalled that the direction from which the notes came was hard to determine, sounding sometimes near, sometimes far, now from this direction, now from that.

So my strange bird was a small rail, even more shy and reluctant to flush than the Sora, in colour and habits very similar to the English Corncrake, resembling it too in its predilection for a drier habitat than is usually associated with rails. As for the notes "click-click" or "crex-crex", they had the same monotonous repetition and ventriloquistic effect. It evidently spent its whole life in the grass and presumably nested there. Like other rails it was probably semi-nocturnal in its habits, hence the notes heard only in the evening. So off to Dr. Speechly went my letter and back came the usual kind reply: "Your bird is probably a Yellow Rail, and I hope you find out more about it, as I only know it from books myself."

The Great War put an end to looking for Yellow Rails. When that was over I went to the Chilcotin cattle country for a while, but I neither saw nor heard a Yellow Rail there. In 1924 I was back in Saskatchewan, looking after cattle in the Arm River Valley east of Davidson. Here I heard the bird quite often and once flushed one. I also found a nest, which had been badly trampled and the eggs crushed. This nest was on the remains of an old haystack where cattle had bedded down.

About 1930 I happened to mention this to Mr. Mitchell of the Museum staff at Regina. At that time I was at Battleford, and Mr. Mitchell suggested I try to find the Yellow Rail there, and if possible get a specimen for the Museum. In 1934 I was successful in taking a male bird in breeding season at Nelson's flats south-east of the "Old Town". The birds were quite numerous here, and on a quiet evening one could hear them "clicking" all around, but not a tremble of a grass tussock revealed their exact whereabouts. One specimen was finally obtained by having two friends drag a 60-yard weighted gill net through the grass where the birds were. This finally flushed one which was shot. The

—Sketch by R. D. Symons

skin the second taken in Saskatchewan — was sent to the Provincial Museum.

Later, Mr. Bard and I together visited several areas in the Battleford district where I had located these birds — Nelson's flats at Battleford, Lamotte's swamp north of Jackfish Lake, and Scentgrass Creek near Iffly on Miller Craig's ranch. Although we heard them with exasperating frequency at all these places, we failed to find a nest, flush a bird, or obtain more specimens. I found this bird (by ear mostly) all the way from Saskatoon to Lloydminster and north to Midnight Lake. Later still my work took me to the Pasquia Hills country; I failed to find them in the hills but heard one on the Pas meadow in Manitoba.

Recently I have made my home in the foothills of the Peace River Country of British Columbia about 500 miles north-west of Edmonton. I have heard a Yellow Rail twice at Charlie Lake, near Fort St. John, where there is an area of grass tussocks at the south end; but nowhere else in the Peace River Country, although I have had no opportunity of carrying on studies in Alberta. I believe the bird has been noted at Great Slave Lake, so no doubt it is very widely spread, at least east of the mountains.

So here is a challenge to somebody — perhaps you? — to track down the full life cycle of this shy

bird, the Yellow Rail. And may that somebody have the time, the patience, and what I did not have — the finances.

Editor's Note: The Museum has records of two specimens in addition to the one received from R. D. Symons. One, taken at the north end of Last Mountain Lake in 1932 by Bert Lloyd, went to the Carnegie Museum, Pittsburg. The other, received from Ronald Hooper of Somme, July 13, 1954, is in the Museum at Regina. This specimen was one of two birds taken by the Hoopers in a large marsh at the confluence of the Bowman and Shand Creeks, where they flushed Yellow Rails on June 8 (3) and June 10 (12+). The stomach of one rail contained the remains of several beetles (one apparently belonging entirely to the Byrrhidae); the other, two small snails, two predacious diving beetle larvae (Water Tigers), and three small seeds. Another report of the occurrence of the Yellow Rail comes from E. M. Callin who has records of them heard (not seen) in the marsh at El Capo Lake and again at Round Lake.

News from the REGINA NATURAL HISTORY SOCIETY

By MARIE ROBINSON, secretary

Signed, sealed and delivered! Yes, at last the Regina Natural History Society has title to the property on which, ten years ago, they began the creation of a wild life sanctuary. This is a long-time dream come true and there are many exciting plans in the offing for the development of our "Hidden Valley" sanctuary.

A big event in our 1955-56 season was the presentation of life memberships to Mrs. Betty Flock and Mr. Jack Taylor. Both Betty and Jack were original members when the society was founded and have been very active, inspiring workers ever since.

We are happy to announce that the "World Wandering" nature shows being sponsored by our society are a huge success. These shows, which are open to the general public, are being featured in the Museum auditorium every Sunday during the winter months. Owing to the crowds that were being turned away every Sunday afternoon, we now have two shows, one at 3:30 p.m. and one at 8:30 p.m. Our president, Mr. Frank Brazier, deserves a great deal of credit for the effort he put forth in obtaining and assembling such outstanding, facinating, educational films. The Saskatchewan Museum of Natural History has also been most cooperative in this endeavor and we hope that, owing to this series of shows, many people will have become better acquainted with their new museum and will also have acquired a keener appreciation of the wonderful world we live in.

SASKATOON NATURAL HISTORY SOCIETY

MRS. J. GERRARD

The first general meeting of the newly-formed Saskatoon Natural History Society was held in the Physics building, University of Saskatchewan, January 26, with more than 60 people present. The guest speaker was Dr. R. W. Nero, Assistant Director of the Saskatchewan Museum of Natural History, who spoke on Bird Behaviour with particular reference to a colony of Red-winged Blackbirds.

The Executive Committee of the Society consists of: President, Dr. R. M. Bremner; Vice-president, Frank Roy; Recording and Corresponding Secretary, Mrs. John Gerrard; Membership Secretary and Treasurer, Glen Burgess; ex-officio Directors, Dave Robinson, Dr. L. G. Saunders, Dr. S. Houston.

The annual membership fee is $1.50 which includes a compulsory subscription to **The Blue Jay**. The fee for family membership is $2.00. If anyone would like to join the society Glen Burgess, 43 Community Apartments, Saskatoon, will be glad to receive subscriptions.

Raven's nest south of the Churchill River. — Mr. Czartoryski of Regina reported to the Museum on November 28, 1955 the finding of a Raven's nest in a ravine off a small lake, south of the Churchill River, in the early summer of 1955, by Emal Wurzycki, a La Ronge prospector. The nest was on a rocky ledge.

Keith Thue and Great Gray Owl

—Photo courtesy Star-Phoenix

Great Gray Owl Banded at Saskatoon

By DR. STUART HOUSTON

The stormy evening of January 6th provided the thrill of a lifetime when Keith Thue phoned from the Beaver Creek Game Farm to say that he had trapped a rare Great Gray Owl. It was a superb specimen — perhaps the most beautiful bird I have ever seen and certainly the finest I have banded. Only five had previously been banded in forty years of banding (some 8 million birds) on this continent. Two were banded near Toronto in 1947 and three juveniles have since been banded in Alberta by Al Oeming. Incidentally, the December 1955 Canadian Geographic is well worth buying for its article by Jones and Oeming on Great Gray Owls and the nest finally found after several years of searching.

The Great Gray is the largest by measurement of our North American Owls — but in weight and actual body size it is smaller than the Horned and Snowy Owls. The difference is in the large head, long wings and tail, and its loose fluffy plumage. This bird was beautifully feathered and appeared well able to withstand any cold that might occur. It was 28" in length, the wing chord 18" and the wing span 58".

It was too stormy to release it that night, so this magnificent owl spent the night in our basement guest room — ignominiously in a cardboard box. Next day it was released unharmed four miles east of Borden, and flew west up the North Saskatchewan.

Owls should never be shot by anyone unfamiliar with their identification; this rare but often rather tame Owl, ordinarily a resident of the northern woods, is an easy prey for any man with a gun. They do venture south, especially during severe winters. If not protected they may easily, like the Whooping Crane, be threatened with extinction. I would like to hear of any other records of the Great Gray Owl in Saskatchewan.

1955 Bird Banding

By DR. STUART HOUSTON

Our banding expeditions met favorable weather more consistently this year, and between May 1st and December 31st, we banded 1010 individuals of 36 species. The greatest number were colonial birds — 476 Ring-billed Gulls, 154 Double-crested Cormorants, 134 California Gulls, 82 White Pelicans and 24 Black-crowned Night Herons. Four days in the fall were devoted to constant attention (inspection every 15 minutes) to four mist nets set near the river edge south of Saskatoon, and a total of 86 individuals of 17 species were banded by this means. The backyard traps yielded only 30 individuals. One Goshawk and one Horned Owl were caught at the Beaver Creek Game Farm by Keith

(Continued on page 29)

Spring Serenade

HAL G. DUNCAN, Boissevain, Man.

Dawn is breaking in the east. Light streamers shoot up into the dark dome of the sky like flickering wands. The hush of night is stirred by a soft, gentle breeze as darkness steals quietly away before the promise of a new day.

On a slight, bare rise bordering a sweeping marsh shadowy forms gather on silent wing. Suddenly a deep, hollow boom, boom, b-o-o-m rolls out over the awakening plains: vibrant and pulsating it quivers away through the clear, limpid air with the stirring quality of battle drums. From somewhere to the east or west or north or south, a half mile, a mile, two miles there rolls back an answering boom, boom, b-o-o-m. Again and again the resonant notes, both challenging and promising, stir the accrescent dawn. It is the drumming of the Pinnated Grouse. Spring has arrived on the prairies.

Year after year when spring pushes winter away to its northern retreat the "Prairie Chicken" gather in their elaborate mating dances. A bare knoll or a spot with very short grass is used year after year for the larger gatherings. The first arrivals settle quietly on the selected spot and stand like sentinels, keen eyes searching for a lurking enemy. Then a hen bird utters a few low, clucking notes; another answers, querulous, tentative sounds. Then a cock bird stretches, his tail fans out and up over his back. The sacs on his neck puff and swell and the stiff, feather ruffs begin to rise up over his head. A low, soft b-o-o-m dies in his throat, to be followed by another and another, each of increasing volume. By now the spirit of battle is full upon him, the sacs extend till they resemble small oranges on either side of his neck and the full, intense booming of the cock "Prairie Chicken" rolls out.

From many points the challenge is accepted and rivals arrive on bullet-like wings. In a few minutes a half dozen pitched battles are in progress. Feathers float to the ground as the adversaries leap high in the air, striking with their wings and pecking viciously with their short beaks. Meanwhile, others not engaged in combat strut and pose before the hen birds and keep up a continuous drumming as though urging contestants to greater efforts. The flash and thump of striking wings, the continual arrival of those fresh for the dance and the departure of the vanquished gives a shifting, kaleidoscopic effect to an unforgettable scene.

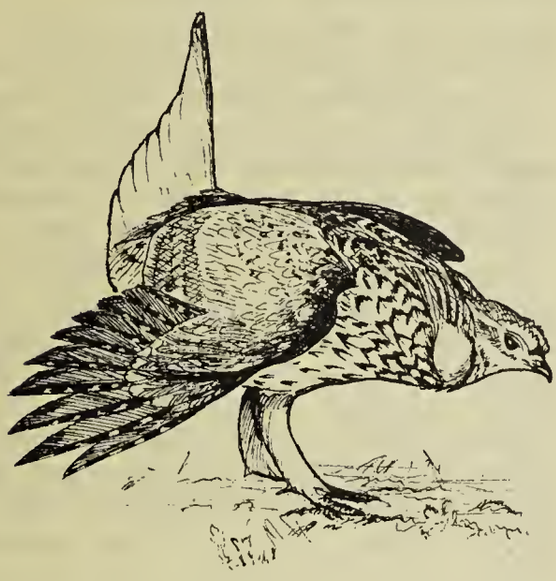
As a boy none of the notes of the symphony of song poured out by the prairie feathered folk in their spring happiness stirred me like the booming of the "Prairie Chicken" during their mating rituals. Many times in years past I have lain in the grass along the edge of Whitewater Lake and thrilled to the action and sound as I watched the "Prairie Chicken" dance on one of their favorite places on the lakeshore.

The mating dance of the Pinnated Grouse is unique amongst birds and those who have seen it are fortunate, for unless this fine bird can make an unprecedented recovery from its present very low ebb it is doomed to follow the others of our birds that have become extinct through lack of protection from over hunting and the careless destruction of their habitat without thought for the future. Then, I and others, will strain our ears in vain for the drumming of the Prairie Chicken in their spring serenade.

SUMMER MEETING

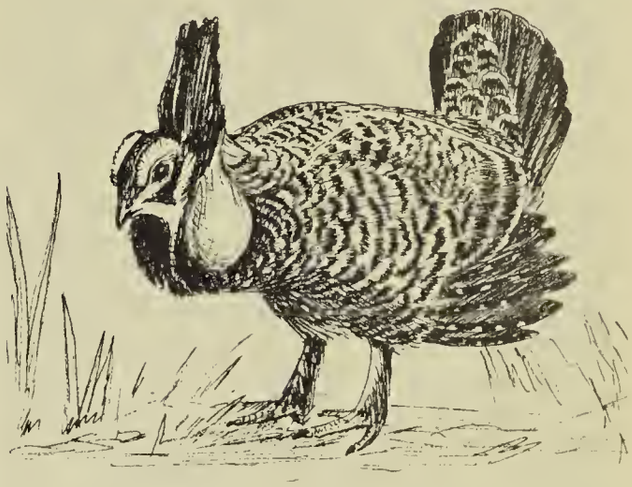
On June 9 and 10, 1956, the Saskatchewan Natural History Society extends a cordial invitation to members and friends to meet at Madge Lake. The roads and accommodation at Madge Lake are good. The lake is in the northern forest zone with lots of evergreens. Plan now to join us at Madge Lake and spend two days making new friends and learning something more about our native plants and animals. Write to Mr. W. Yanchinski, Naicam for reservations.

SHARP-TAILED GROUSE



—F. W. Lahrman

PINNATED GROUSE



—F. W. Lahrman

The Pinnated Grouse

By Dr. STUART HOUSTON

F. N. Hamerstrom, Jr. of the Wisconsin Conservation Department is making a study of the Pinnated Grouse and is anxious to obtain all the information he can concerning the status of this species in Saskatchewan.

The Pinnated Grouse was not an original inhabitant of Saskatchewan, as was its near relative the Sharp-tailed Grouse. The Pinnated Grouse followed the advance of farming westward and at one time was fairly common in open grassy areas in Saskatchewan. However, partly because of more intensive cultivation and partly because of factors unknown, the numbers of the Pinnated Grouse have decreased markedly in the last twenty or twenty-five years. In fact, there are people, like myself, who have only been studying birds for fifteen years, who have never seen a Pinnated Grouse.

Both the Pinnated Grouse and the Sharp-tailed Grouse are commonly called "Prairie Chicken." The name correctly belongs only to the former, but in general usage the name is most commonly applied to the latter. Because of this confusion, as well as confusion with the Ruffed Grouse, most of the recent supposed reports of Pinnated Grouse in Saskatchewan are open to some question. The Pinnated Grouse is a rather dark bird, with heavy barring of its underparts and a rounded tail which is evenly dark in color. The Sharp-tailed Grouse is paler in color and has little v-marks on its breast and a narrow light-colored tail, that appears white in flight. The Ruffed Grouse is a woodland bird with a fan-shaped tail with a black band.

We are anxious to obtain information concerning this species in Saskatchewan, before it is completely extinct. If there are anly local areas regularly inhabited by this species, it might be possible to arrange for their protection. It would be appreciated if all readers would send the approximate date the Pinnated Grouse was last seen in their locality, with details as to numbers, to: Dr. Stuart Houston, Box 179, Sutherland, Sask.

Protection of Hawks and Owls

Recent trends toward general protection of all hawks and owls indicate an increasing awareness of the unsound practice of classifying any form of wildlife as "harmful." The States of Connecticut, Michigan, and Indiana now protect all species of hawks and owls except when doing specific damage. (Copies of a detailed survey of recent protection laws by K. D. Morrison may be obtained from the National Audubon Society, 1130 Fifth Avenue, New York 28, New York at 10c each, 3 for 25c, or 10 for 50c) These new laws are an encouraging sign of progress in public education and should stimulate us to increase our efforts to bring about similar changes locally. The following digest of an article that appeared in **The Minnesota Naturalist** (Vol. III, No. 3, March, 1953) describes one landowner's attitude toward these birds — we hope many readers will agree with his philosophy.

A Digest of

"BANDITS OF THE PINE BARRENS"

By Herman J. Brown

For fourteen years Herman J. Brown raised turkeys and chickens on a farm on the banks of the St. Croix River near Grantsburg, Wisconsin. The farm reached back into the Jack Pine Barrens, two or three hundred square miles dominated by jack pine and scrub oak, with a belt of deciduous forest covering the river lowland. The proximity of this wild area, with its full quota of hawks and owls, gave Mr. Brown an opportunity to work out the relationship between domestic poultry and the various predatory birds.

The farm buildings were grouped on the river bank, just between the pines and the deciduous trees, and the laying flock of turkeys, from December to May, was penned nearby. Young poults were kept in runs until they were six to eight weeks old. Then they were transferred to portable roosts, roofed but open on three sides, and allowed to range in the clearings that lay beyond a belt of woods, a quarter to half a mile away. The turkeys were moved about on these ranges until late November or early December, when the unmarketed birds and breeding flock were moved once more to pens near the buildings. This routine exposed at least some of the birds to predation throughout the year.

Hawks and owls were common in the area. Brown saw and positively identified the Goshawk, Sharp-shinned Hawk, Cooper's Hawk, Red-tailed Hawk, Broad-winged Hawk, Marsh Hawk, Bald Eagle, Sparrow Hawk, Screech Owl, Saw-whet Owl, Short-eared Owl, Northern Barred Owl, Snowy Owl, Great Horned Owl.

Of the resident predatory birds, some species were more harmful than others to the operations of the poultry farm. Ravens were uncommon visitors and never approached the domestic birds, but crows were plentiful and during some years raided the turkeys' nests persistently. Losses from crows amounted to five or six dollars a year.

The Bald Eagle, Osprey, Marsh Hawk, Red-tailed Hawk and Broad-winged Hawk did not interfere with the poultry. As might be expected, however, the accipiters displayed a different attitude, all the members of this group showing an interest in the turkeys and chickens. Perhaps because it was present in fewer numbers, the Sharp-shinned Hawk never actually took a bird, although it was seen hovering over the screen porches on which the young turks were running. The Cooper's Hawk, which appeared in the neighborhood two or three times a week during the spring and summer, was caught killing turkeys only twice during the fourteen years. On both occasions the individual hawk returned once or twice to kill another bird and was shot. No chickens were taken, and the loss for the fourteen years totalled five, seven or eight-week-old turkeys, valued at about ten dollars.

The Goshawk, which occurred in the area only in the winter when the turkeys were well grown, was known to upset the flock by swooping upon them, but never attacked. It did, however, take chickens if they were not penned early in the

fall. During the six years that Brown kept a henhouse, a dozen adult chickens were taken before he could kill the hawks, a total known loss of about twenty-five dollars.

The losses from six species of hawks, and from the Bald Eagle, Crow and Raven, over a period of fourteen years, can be summed up as follows:

From the Crow's egg stealing	$60.00
From the Cooper's Hawk	10.00
From the Goshawk	25.00
TOTAL	$95.00

The conservationist might well compare this figure with losses from animals over which these birds exercise some control. Mice in the granary did about twenty dollars damage a year, squirrels carried off bushels of corn, pocket gophers plagued the hay meadows. Losses from these sources must have added up to three or four times the amount charged to the hawks. To be fair, one should add that had the young chickens and turkeys been exposed, losses would have been greater. Also, a certain loss might have occurred unnoticed.

Of the owls, the smaller species, the Short-eared, Screech and Saw-whet, caused no trouble. The Snowy Owl was rare in the area, and was also never suspected of molesting the poultry. On the other hand, the Barred Owl, quite abundant, took young poults that had been moved into open shelters from the brooder house prematurely. Once old enough to be moved to their customary ranges, young turks were not attacked. Total number of poults taken by these owls was estimated at fifteen, all young, so that the financial loss was not over thirty dollars.

The real villain of the piece was the Great Horned Owl. The Horned Owl turned at once from his native prey to the turkeys. Attacks were made at night, and the owl killed even grown birds (weighing from twelve to seventeen pounds, compared to the owl's three or four). Brown was unable to estimate the damage suffered by the flocks from the Horned Owl because the loss from continual harassing was much more serious than the loss from actual fatalities, although these were numerous enough. The nervous reaction of the turkeys to the Horned Owl's attacks resulted in lost weight and finish in the dressed birds.

In spite of his own experience, Brown does not name the Horned Owl as everybody's enemy. His poultry were raised in a remote area where the owl was native, and many farms are much less exposed. The aim of his whole article is to persuade poultry growers not to act against the predatory birds without cause. He does this by calculating in as fair a manner as possible the exact capacity of these birds for harm.

Alberta Controversy Re: Protection of Birds of Prey

In Saskatchewan, the following birds of prey are not protected by provincial law: Snowy Owl, Great Horned Owl, Goshawk, Pigeon Hawk, Duck Hawk, Cooper's Hawk, Sharp-shinned Hawk. In Alberta, on the other hand, all hawks and owls are protected. However, two resolutions have come recently from the Calgary Fish and Game Association asking for a modification of this blanket protection. These resolutions read as follows:

1. "Whereas the Horned Owl is a voracious, wide-ranging hunter and whereas they are proved to be detrimental to our game bird population and whereas they are now protected and whereas they have no natural enemies and no natural control except food conditions and whereas it is extremely unlikely that they will ever become extinct due to hunting, therefore be it resolved that Horned Owls be placed on the predator list."
2. "Whereas the Marsh Hawk, Sharp-shinned Hawk, Snowy Owl, Goshawk, Cooper's Hawk, Duck Hawk and Pigeon Hawk are harmful to our game bird population and whereas they are now on the protected list, therefore be it resolved that these hawks be placed on the predator list."

There has just come to the Editor's desk a brief prepared by the Predator Committee of the Edmonton Bird Club as a contribution to a joint discussion with the Calgary Fish and Game Association on the subject of predatory birds. The brief begins with a statement of the basic reason why blanket protection has been afforded the birds of prey in Alberta: **That neither one hunter in a thousand, nor any of the boys with .22 rifles, is able to distinguish in the field between the numerous beneficial species and the few controversial ones, resulting in indiscriminate slaughter.**

The most significant part of the brief is its report on an intensive research programme carried on by the Edmonton Bird Club involving stomach and pellet analyses and nest observations. The Alberta statistics studied show:

HORNED OWL: 73 records — 122 beneficial or non-game food items, 14 game items (5 Coots, 3 Mallards, 1 Hun, 1 Ruffed Grouse, 1 Sharp-tailed Grouse, 1 Pheasant).

Conclusion: "It is evident that game predation by the Great Horned Owl varies greatly with local conditions throughout the country and with the seasons. Alberta evidence to date shows that the Snowshoe Hare is the chief food item of this owl, but when hares are scarce and if game predation should be proved excessive, it may be desirable to introduce control measures, exercised by competent men during times of demonstrated predation only."

MARSH HAWK. 61 records — 66 beneficial or non-game food items, 10 game items (3 ducks, all Botulism-infected; 3 ducks, being eaten as carrion after having been wounded or killed by shot; 1 Pintail duckling; 1 Hungarian Partridge; 1 Wilson's Snipe; 1 Snow Goose, being eaten as carrion having been killed by shot).

Conclusion: "It is obvious that predation of healthy game birds is extremely light and that at the moment we have insufficient evidence to warrant control."

SHARP-SHINNED HAWK. 2 records only — no game birds.

Conclusion: "Present evidence would indicate that this species has no effect on game bird populations in Alberta."

SNOWY OWL. 14 records — 16 beneficial or non-game food items, 4 game items (1 wounded duck, 2 Mallards, 1 Hungarian), and in addition numerous wounded Mallards, dead or dying at water holes.

Conclusion: "As the Snowy Owl is an irregular visitor during the winter months, and tends to restrict its food habits to beneficial or non-game food items, mainly mice, it appears that there is insufficient evidence to warrant controls on this species."

GOSHAWK. 8 records. 5 beneficial or non-game items, 4 game items (1 Hun, 1 Ruffed Grouse, 1 Spruce Grouse, 1 Pheasant investigated and proved to have been killed by gunshot).

Conclusion: "Insofar as game interests are concerned, the Goshawk is undoubtedly the most suspect species. If game predation is proved to be particularly heavy in specific areas, control measures should be exercised but only by competent field men and within the limits of these predation areas."

COOPER'S HAWK. No Alberta statistics, as there are so few authentic records of its presence in the province.

DUCK HAWK. 9 records — 12 non-game food items, 3 game items (1 Coot, 1 Mallard, 1 Hun).

Conclusion: "The fact that this bird is nowhere common in Alberta is sufficient evidence that it can have little economic effect on game bird populations."

PIGEON HAWK. 4 records — no game items.

Conclusion: "The limited numbers of this small falcon in Alberta make it a negligible factor in game predation."

The conclusion drawn from this study is stated in the brief as follows: "It appears that there is little evidence in Alberta to warrant controls on any of the above-mentioned species. However, if control measures are proved to be justifiable in the case of the Goshawk and the Horned Owl, it is an absolute necessity that such measures be enforced by **competent** field men able to distinguish the various species, in order to prevent indiscriminate slaughter."

Food and Shelter Problems for Winter Birds

During a severe winter, such as we are having on the prairies this year, there are interesting observations to be made on the various means by which our native birds find food and shelter. A number of readers have written to the **Blue Jay** about the birds wintering in their locality, and we notice in Regina that the continued cold weather seems to have brought into the shelter of the park at the Legislative Buildings an unusual number of winter visitants.

In the Legislative Grounds a flock of White-winged Crossbills and a few Red Crossbills have been feeding all winter on the plentiful crop of spruce cones. Whenever these birds are feeding in a tree, their presence is soon obvious from the shower of cones falling to the ground. A timely item on the wasteful feeding of White-Winged Crossbills came to our notice in the September 1955 issue of *The Wilson Bulletin*. In a note from P. R. Hofslund, William H. Marshall, and Gerald Robinson, of the University of Minnesota Biological Station, Lake Itasca, Minnesota, an adult male and three presumably immature White-winged Crossbills (*Loxia leucoptera*) were reported feeding on the cones of White Spruce (*Picea glauca*). The method of feeding was peculiarly wasteful in that the cones were clipped off from the cluster, held on a branch by one foot, and then a few scales were torn off and the cone was dropped. Marshall and Robinson timed the procedure for 30 minutes. Fifty-nine cones were clipped off and dropped during the half hour at a rate of 20, 20, and 19 per 10-minute period. After the birds moved on, the cones under the trees where these birds were feeding were collected and given to Hofslund for examination. From a total of 619 cones, few had more than four or five scales torn off.

Mrs. Hubbard (Grenfell) reports that Pine Grosbeaks which have visited their farm several times this winter go to the orchard for frozen crabapples (as do our Bohemian Waxwings). In the Legislative Park in Regina we have more commonly observed them eating the winged seeds of ash and maple, and occasionally the buds of willows. The economic status of these birds is probably as nearly neutral as that of any species, but their pleasing whistle and the handsome flush of rose of the mature male's colouring make these visitors from the northern forests peculiarly welcome.

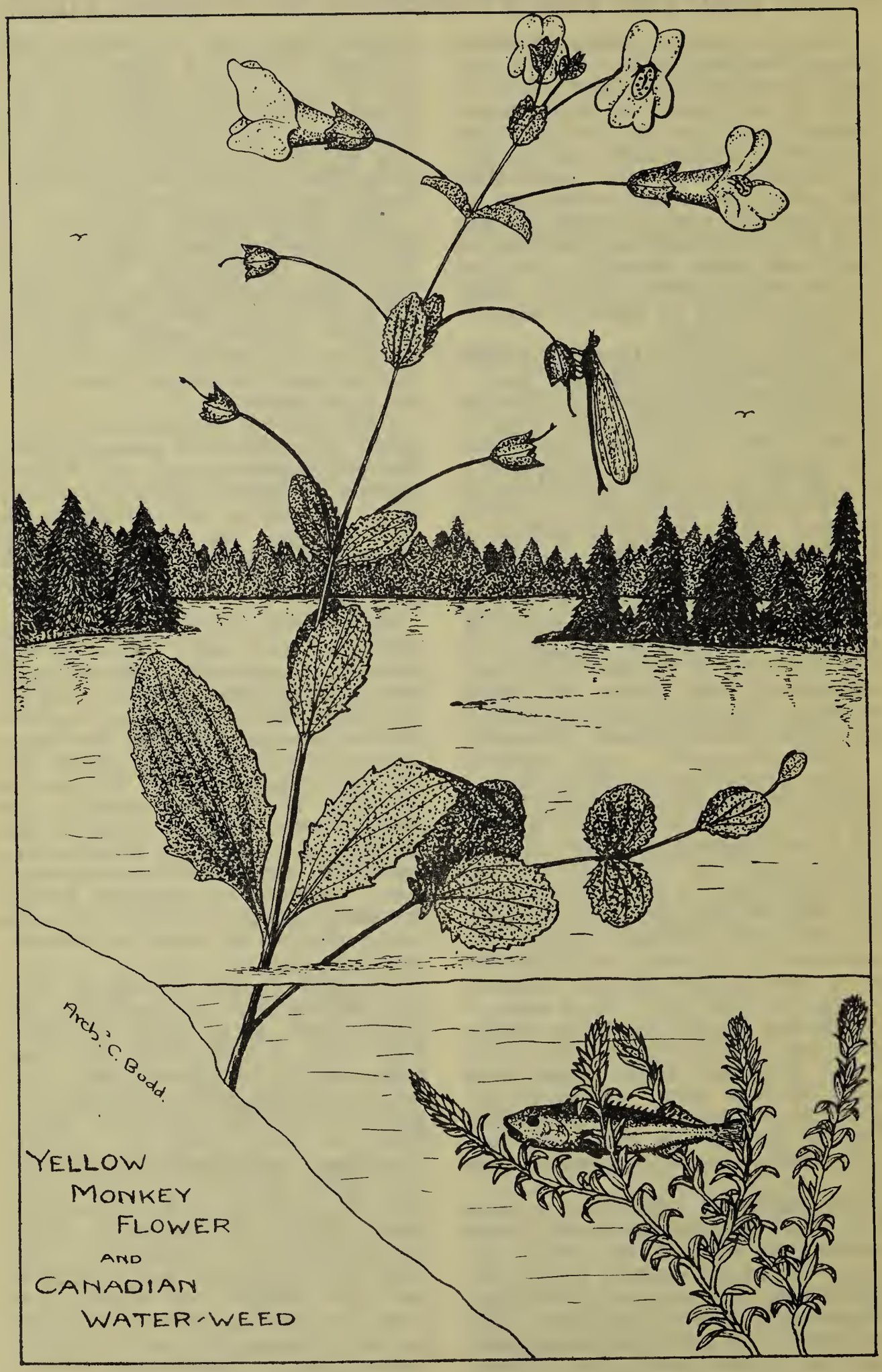
The attractiveness of cover in severe weather may account for the fact that Sharp-tailed Grouse are being seen this winter in the Legislative Grounds. **Mrs. Steve Mann (Piapot)** reports seeing flocks of thirty or forty Sharp-tails that have moved from the fields to feed along the open highway.

Under severe weather conditions, birds find shelter in unusual spots. **Boswell Belcher** reports that, following the December blizzard, a Golden Eagle flew up out of the farm shelter belt at Dilke. He also writes about the Slate-coloured Juncos that shelter on the farm in spring and fall migration.

"One cold stormy evening last spring as Dad and I were driving around the stackyard, which is inside the yard shelterbelt, to get feed for the cattle dozens of juncos flew out of the cracks between the bales where they had sought shelter for the night. Again in late October as we went by our bale stack in the field to start hauling bales in the morning we found our friends once again, and concluded that these birds must approve of modern haying methods!" These examples show the resourcefulness of birds in utilizing existing shelter.

To some extent, of course, food and shelter can be provided for winter birds. Many types of feeding trays are in use, from the most elaborate to such simple ones as the flat salmon tins hung in the caragana bush on the Beaver Creek Game Farm to hold suet for friendly Chickadees. **Mrs. Hubbard, Grenfell,** has regular visitors this year to the suet she puts out in soup bones — three Hairy Woodpeckers, three Chickadees, and a Canada Jay. She notes by comparison that because of the mild weather last winter, suet from last spring was still hanging in the honeysuckle in September. **Joyce Gunn** at **Spirit Lake** makes a

(Continued on page 21)



YELLOW MONKEY FLOWER AND CANADIAN WATER-WEED

They Went to England, Liked it, so Stayed

ARCH. C. BUDD, Swift Current

In some of the slowly moving streams in the Souris River area of South-eastern Saskatchewan, the Canadian Water-weed or Water-thyme may be found. This entirely aquatic plant has long branching stems with leaves about a quarter to half an inch long, less than an eighth of an inch wide, and borne in whorls of threes or rarely fours. These plants are dioecious, that is the male and female flowers are on different plants, but they increase vegetatively and any piece of stem bearing a whorl of leaves will grow very rapidly. Botanists call it *Anacharis canadensis, Elodea canadensis* or *Philotria canadensis,* just take your choice, but I like to call it *Anacharis* as I did when a boy.

In the early 1850's it is said that a piece of Canadian Water-weed fell into the Thames in England from the Botanical Gardens at Oxford and that by 1866 it had so increased that some parts of the river were almost unnavigable. Other reports say it was first noticed about 1842 and was called "Babington's Curse" after the man who was wrongly supposed to have first brought it in to England. Although only the pistillate or female plant is found over there, thus necessitating its spread entirely vegetatively, nevertheless before I left England in 1910 many canals and small streams were entirely choked with the weed. Many water-mills had their mill-ponds so choked that they were unable to function, and it was the chief aquatic plant in most small ponds. *Anacharis* makes a splendid oxygenating plant in our aquariums and is apparently a good food plant for our aquatic life as well as for ducks and swans, but it was an expensive weed for Britain.

Growing in water, on the banks of running streams and along the lake shores of the Cypress Hills, we find a lovely, showy plant called the Yellow Monkey Flower, *Mimulus guttatus.* It has round to lanceolate, much toothed, opposite leaves and grows from six to eighteen inches high and bears conspicuous flowers from one to one and one-half inches long, of the snapdragon type, bright yellow with reddish spots near the centre. This handsome plant was first cultivated in England in most flower gardens but found climatic conditions agreeable and escaped into the streams and rivers. This fairly recent addition to the British flora, although very common now, is hardly likely to become such a nuisance as the Canadian Water-weed.

Familiar Wild Flowers

By B. DeVRIES, Fort Qu'Appelle

Dear Fellow Naturalists:

We are citizens of the comparatively young province of Saskatchewan which in its vast expanse harbours still an abundant wealth of native Flora and Fauna threatened by the steady advance of Civilization. This advance is necessary for the growth of our province, but destructive in its way. Many wild plants face partial or even total destruction. Therefore, I thought it might be worth while to write four quarterly articles about our best known wild flowers. As subjects I have chosen: Crocus Anemone; Western Red Lily; Rose; Goldenrod. These flowers seem to me the most striking. I hope these articles will give us a deeper understanding of our native plants botanically, and that they will show us the importance of protecting them. Once we have become more familiar with these plants through written articles, slides or films, we can help to ensure their protection by establishing Wild Flower Sanctuaries. The Regina Natural History Society already possesses one called "Hidden Valley" near Craven, Saskatchewan. It is badly neglected, but restorable (Members, what about this?). There are also a few privately-owned sanc-

tuaries throughout the province. However, there should be more if we are to enjoy our wild flower heritage for all time. We naturalists know the rewarding experience obtained from close contact with nature, so we must lead the way in any conservation project.

No. 1 Crocus Anemone
PULSATILLA LUDOVICIANA

(Nutt.) Heller

This well known spring flower of our prairies is a genus of the Buttercup or Crowfoot family (Ranunculaceae) — a family of Dicotyledons belonging to the series Ranales and containing 10 genera, divided into 40 species. Formerly this plant was classified a species of the genus Anemone as *Anemone patens* L. var. *Wolfgangiana* (Bess.) Koch. Later on it was re-classified under the genus *Pulsatilla* as *Pulsatilla ludoviciana* (Nutt.) Heller. The Crocus Anemone is commonly called Prairie Crocus, as if it were a crocus. Such is not the case, as a crocus belongs to a totally different botanical family — the Iris family (Iridaceae) which differs distinctly from the Ranunculaceae. Another common name is Pasque Flower, presumably derived from the root word Pasch (Hebrew word pisach, meaning passover). No doubt it got this name first because it blooms around Easter. The Crocus Anemone is a perennial herb appearing each Spring from a thick woody taproot firmly anchored in the soil. With the first warm rays of the sun the violet-purple (occasionally white) flowers are pushed up before the leaves. The flower stalk is short at first but gradually becomes longer; it is erect in form and covered with silky hairs. This slowness in growth could be due to a climatic condition such as cool days with sudden temperature drops. The plants being short and covered with these silky hairs are able to protect themselves by absorbing what warmth they may receive and by keeping this imprisoned in their covering. Later, as the temperature rises, this protection seems less necessary and the flower stalk grows taller, often up to ten inches. Pollination also seems to profit from this slow growth. The flowers are

—Sketch by B. de Vries

solitary and perfect, with 5 to 7 petaloid sepals, followed by numerous stamens with numerous superior carpels. The sepals and stamens are hypogynous. The fruiting stems are tall, bearing many achenes with long, feathery styles. This aids in dissemination and gives the plants a gay attire during the fruiting period. After flowering, the deeply-divided leaves are borne on rather long stalks and covered with silky hairs. The involucral leaves are also divided but have no stalks. The Crocus Anemone is a common plant throughout the prairie region, favoring overgrazed land and a fairly dry soil. It has a slight toxic effect on livestock. We will find this species westward through Alberta to British Columbia where it is replaced by the species *Anemone occidentalis* which grows on mountain slopes. Close relatives of the Crocus Anemone are: *Delphinium* (Larkspur), *Aquilegia* (Columbine), *Ranunculus* (Buttercup), *Anemone* (Anemone). This relationship is to be seen in the deeply cleft leaves, the floral number 5, the fact that the fruits are often achenes. As a convenient method of expressing an arrangement of flower parts, a Floral Formula has been derived in phonetic form. Whorls are represented by the letters S(sepals), P(petals), A(stamens), C(carpels); a figure follows each letter to indicate the number of parts in each whorl. Thus, the Flower Formula for a 5 petaloid Crocus Anemone is as follows: S5 A* C* (* indicated indefinite and — under a letter indicated superior).

FOOD AND SHELTER

(Continued from page 17)

similar observation: "We have more small birds feeding on the window-sill tray this winter than we usually have. Besides the usual Chickadees and Woodpeckers, this winter we have three White-breasted Nuthatches feeding here."

When disaster strikes, as in an unseasonable storm, special measures are often effective. During the snowstorm and freezing temperatures that followed it in early May, 1954, **Mrs. W. E. Cooper** of **Gravelbourg**, rescued waders that would not eat the grain thrown out for other birds, by breaking the ice and putting a gallon of oat chop into the mud from which the water birds would dig it out and eat it. Following a heavy, wet snow late in April, 1955 the **F. A. Wilsons** at **Struan** ploughed the snow to maintain bare patches of ground where they could feed chop and oatmeal to Juncos, Tree Sparrows, Song Sparrows, White-crowned Sparrows and Robins.

Some farms are much better suited than others to attracting and sheltering birds. **Mrs. W. E. Cooper** describes the features of their farm at Gravelbourg that make it a wildlife haven — a tree belt of several hundred evergreens which is a home and nesting place for hundreds of birds, a flower garden which Mrs. Cooper was delighted to have visited by a Ruby-throated Hummingbird, and a large stock dam and a dug-out with trees all around it that supplies water for them all.

This is the time of year to consider planting trees and shrubs that provide shelter for winter birds. A bulletin from the Experimental Farm at Morden, Manitoba (November 5, 1955) recommends the following woody plants of use to winter birds; hawthorn, roses, Manchurian crab-apple, Cherry prinsepia, silverberry, Russian olive, buffaloberry, snowberry, pembina or highbush cranberry, nannyberry, seabuckthorn, sumac, juniper, hazel, oak, barberry, cotoneaster, Russian sloe, buckthorn, arrowwood, basswood, hackberry, Amur lilac, mountain ash, Amur maple and wild grape. The bulletin also lists the following herbaceous plants of use: sweet clover, corn, sunflowers, sorghum and alfalfa. The Morden Experimental Farm contributes seed and some plants to Government game farms and Game and Fish Associations which are extending plantings to provide food and shelter for grouse, partridge and pheasants.

To the Morden list, the Extension Gardeners' Guild of the University of Saskatchewan adds the following trees and shrubs: chokecherry, pincherry, Mongolian cherry, Rocky Mountain juniper, Scotch and Lodgepole pine. Two species of mountain ash are listed as suitable — the Showy and the American, and two honeysuckles — the Tartarian and Amur. Almost all of these plants are available from western nurseries, and they can also be grown from seed although in some cases the seeds germinate slowly. **D. R. Robinson of the Extension Department, University of Saskatchewan, would be glad to hear from anyone interested in this subject.**

A useful little bulletin, **Attracting Birds**, may be obtained for 15 cents from the U.S. Fish and Wildlife Service. Write the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C.

COVER PICTURES

The two Blue Jays on the front cover were rescued, fed and finally released by Mr. and Mrs. L. Keresztes in New York. A series of 14 beautiful photographs are shown in the October, 1955, *Nature Magazine*. Mr. and Mrs. Keresztes sent us a series of 11 fine kodachrome transparencies which were enjoyed by all who attended our Annual Meeting last October 29. The front cover shows Lefty and Tweedy investigating some of the strange environment of a city apartment. I hope they still return from the woods and parks of New York to bring nature news to their friends the Keresztes. Three Blue Jays were reported in the Christmas Bird Count from Skull Creek. Mr. S. A. Mann notes that this is the first sight record in the area since 1920, when one was seen.

The back cover features the Canada Jay. Mr. Doug Gilroy (in his hundredth article in the series *Prairie Wildlife* in the Western Producer, January 19, 1956) mentions the rather unusual southward movement of these birds this winter. We have a few additional reports: P. Laurence Beckie reports (November 24, 1955) seeing the Canada Jay at Bladworth on the following dates: October 26, November 5, November 6, November 19) (a pair feeding near the barn). He comments that he has not seen a Canada Jay for some nine years. Mrs. John Hubbard, Grenfell, reports the first Canada Jays she has ever seen. Mr. Hubbard says there used to be Jays when the local farmers operated a beef ring.

Nature's Schoolhouse

Boys and girls will still have an opportunity of winning a nature field guide, Peterson's Field Guides (birds, mammals or butterflies) or Wherry's Flower Guide. Each contestant must write an original story on some nature observations. The story should contain less than 500 words. Send your name, address, age, grade and school to the editor, **Blue Jay**, 2335 Athol St., Regina. The prize-winning story will be printed in the next **Blue Jay**. Entries for the next issue should be in before April 15, 1956.

The following story came in too late for last year's contest. As her prize Valerie has chosen Wherry's Flower Guide.

Goliath, my Mouse

By Valerie Johnson, Sturgis, Sask.
Age 13, Grade 8.

One day in the school yard, while I was eating my lunch with two of my friends, I happened to notice a half-gown mouse run past us. Taking a piece from the sandwich I was eating, I placed it in front of the mouse. The mouse stopped, sniffed at it, and started to nibble the piece of sandwich. When my friend came to look at him, the mouse became frightened. When the mouse started to run away, I ran and picked him up, for it seemed I suddenly took a fancy to the mouse. My friend had to feed me the rest of my lunch while I held my mouse. When I showed the mouse to the teacher, he thought it was a homely, half-dead thing, but that didn't matter to me.

Some children brought a jar, put grass in it, and I put my mouse in it. The children thought he was very interesting, that is everyone except the big boys. The teacher thought a suitable name for the mouse would be Goliath. At hometime, I carried my mouse home in a matchbox.

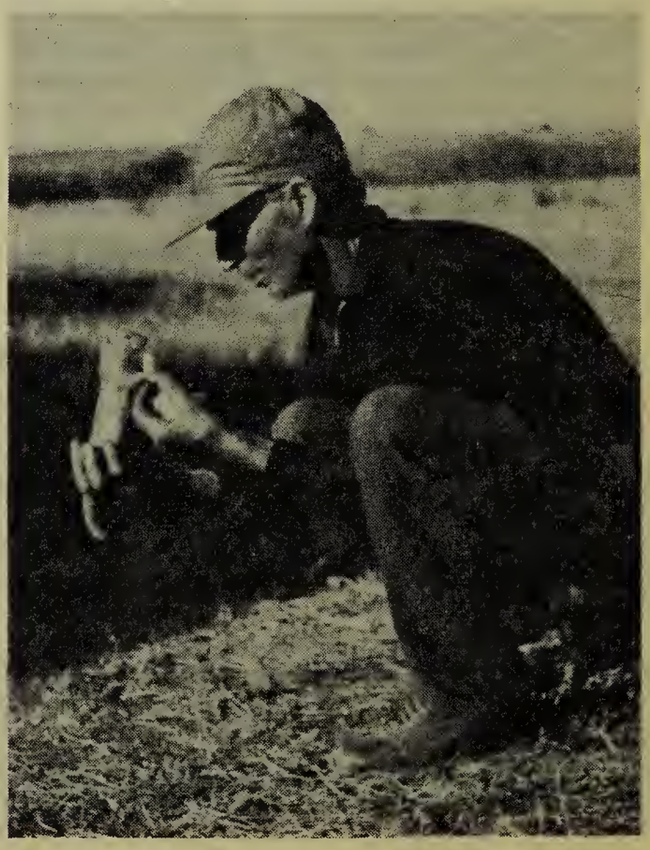
When I reached home, I put Goliath in a fishbowl. He seemed to be thirsty. When I put some water in a vinegar cap, he drank some. After Goliath had a drink, he washed himself. It is very interesting to see a mouse wash himself. First he'd lick his paws, then rub both paws across his face. Mice lick their legs, stomach, and other parts of the body. They resemble a cat when they wash themselves.

The fishbowl seemed too small for Goliath, so I took a double quart sealer, put grass in it, and put him in it. Goliath liked to hide among the grass. I kept bread and water in the sealer.

There was an old tank lying around, so, next day, I put grass in the bottom of the tank and put my mouse in it. Goliath seems quite happy in the tank, so I left him in the tank all the time.

Goliath is very fond of dandelion seeds. I keep him well supplied with them. When I first found him, he was a weak, bedraggled mouse; now Goliath is an active, sleek mouse. That was some time ago, and I still have my mouse.

EDITOR'S NOTE: Valerie has made the wonderful discovery that when you get better acquainted with something you become more interested in it. How many ever thought of making friends with a gopher? Our president gave us some very interesting pictures of gophers which were printed in the last BLUE JAY. Mrs. W. E. COOPER of Gravelbourg sent us the accompanying picture of her brother and his pet gopher, Go-Go. This gopher would come when called and would jump up into his friends hand and eat bread as he is shown doing in the picture.



Strictly for the Little Ones

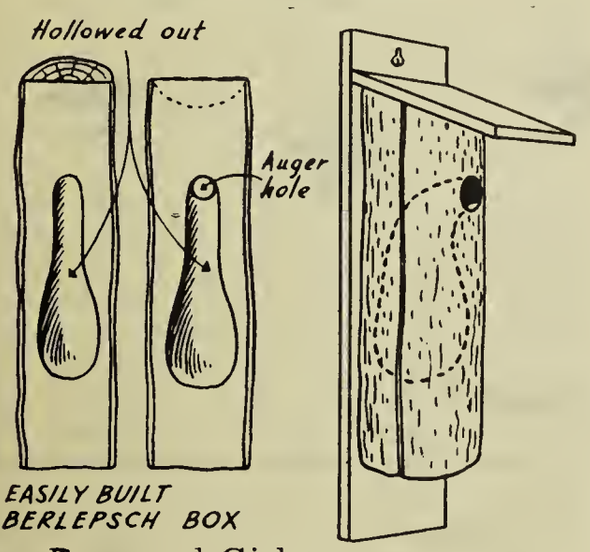
By MARJORIE MANN

It was the Friday before Christmas. There had been six weeks of bitterly cold weather, and Mr. and Mrs. Hungarian Partridge had spent most of it in a stubble field partly covered with snow. There their brownish coloring did not show against the golden colour of the stubble, and this protected them from hawks, owls, and coyotes. They had a family of eight. The boys were called Chumpy, Choppy, Choosy and Chow. The girls were Betsy, Bumpsy, Botsy and Boo.

Dusk was falling. It was cold and stormy and the young folks were getting hungry, so Mr. and Mrs. Partridge decided they would get supper at a pile of grain down near the creek. So all together, they took off with a strong whirring of wings and a flash of reddish tails. Then suddenly Mr. Partridge gave a warning cry, "Look, that truck is going to cross our line of flight. We must land." So down they came, but not on nice soft snow. What do you think? They were on a sheet of ice. Father and Mother, being wise, landed on a rough spot on the farther side, but the poor children lit right on the slippery part. Poor Bumpy slid for a whole foot on her tail. "Oh! Oh!" she cried, "my seat hurts." Then Chumpy, who was always falling anyway, came down awfully hard. Tears were running down his cheeks as he said, "Mummy, I've broken two of my feathers. Just look how I've spoiled my nice red tail." Then Boo, who was the smallest, took a real slide and skinned her legs. Poor little bird; she was really hurt. All the others had a slide too, but they did not hurt themselves. Luckily, the man in the truck had to stop to open a gate so mother and father had time to go back and soothe the hurt ones and get the other frightened ones into the air again.

I'm sure that down the road they found a good feed of grain and a spot sheltered from the cold winter night. I know they would make sure they'd never land on that slippery ice again —or maybe they would learn to slide. What do you think?

BIRD HOUSES



Dear Boys and Girls:

If you would like to build bird houses this spring send to the Royal Bank of Canada for their folder **Bird Houses are Fun to Build.** We show an example of one type illustrated in the folder. We hope you will write us about your experiences with the bird houses. Perhaps you could make a story, for our story contest, about your bird houses and the birds who live in them.

CONSERVATION GOOD TURN

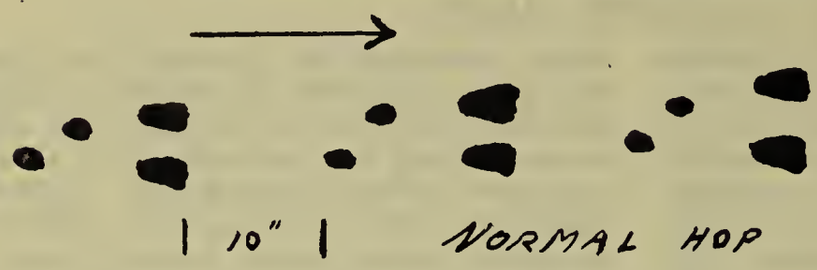
The Boy Scouts of Canada are this year placing a strong emphasis on conservation. The boys will be trying to earn one or more of the four conservation badges which have been designed. Although the requirements overlap considerably the boys may concentrate their activities as forest, soil, water, or wildlife conservationists and may earn one badge at a time. If you are called on to help teach boys anything about conservation I hope you will be able to take time to help them.

CANADIAN NATURE

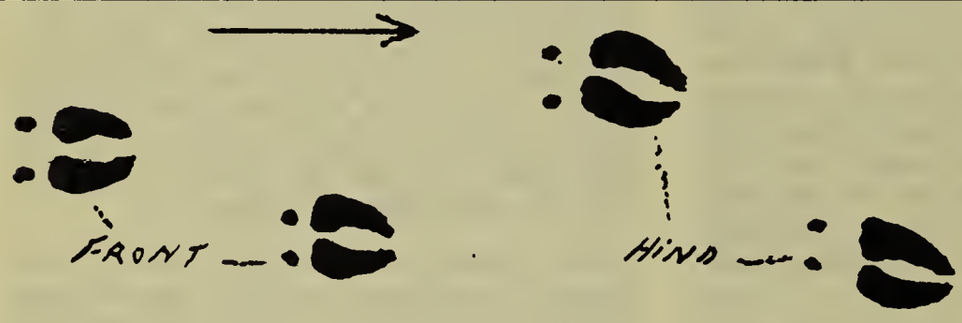
Published by Audubon Society of Canada, Toronto, Ontario. Editor is Jean Hart Whittemore. Executive Director: John A. Livingston. Special stress is on conservation and education. The work of the society is well known but it deserves even more support from us than it is getting. There is perhaps no greater contribution that each of us could make to the future of Canada than

(Continued on page 29)

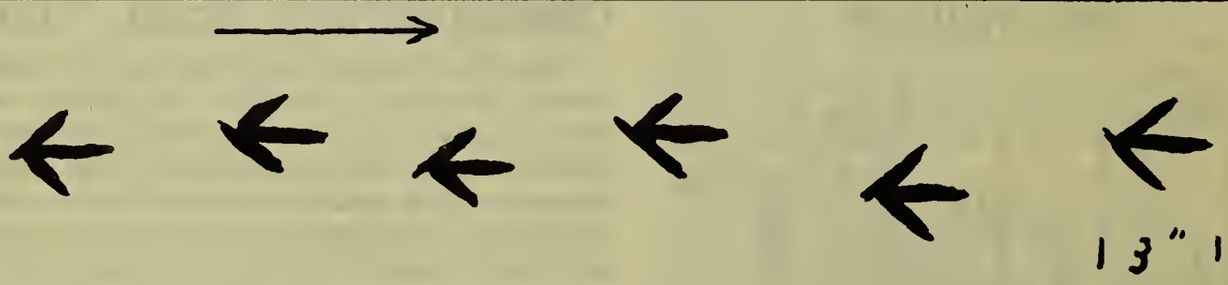
Tracks in the Snow



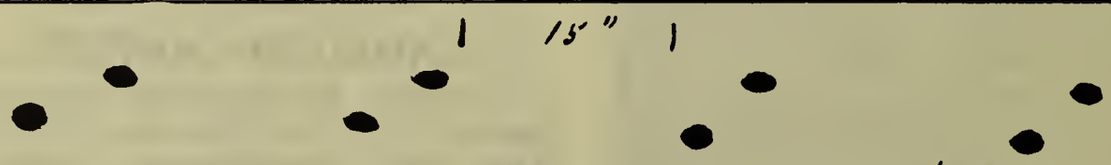
SNOWSHOE RABBIT HIND FOOT



VIRGINIA WHITE-TAILED DEER



RING-NECKED PHEASANT



TRACK IN SNOW (TROTTING)

COYOTE

JCS

Tracks in the Snow

By J. C. SHAVER, Regina

During the winter months many of Mother Nature's family are still about and their travels may be read by the signs that they leave. The footprint of the snowshoe rabbit, as he hurries across an opening in a bluff, the teeth marks in a tree that show where a porcupine has dined, and many other signs, will add a great deal of interest to those who enjoy hiking along a trail in search of birds and animals that stay with us during the winter months.

It is surprising just how many of us do not recognize the various tracks and signs left by our winter residents. A lot more enjoyment and interest in the outdoors could be gathered if people would only use their eyes a little more and notice the signs about them.

There is such a field to cover in trail craft that I will attempt to discuss only the more common species of birds and animals. While my drawings leave much to be desired I trust that you will bear with me and I sincerely hope that you will find the material of interest.

SNOWSHOE RABBIT

The snowshoe rabbit, or varying hare, is more numerous than any other hare in this province. Its name is derived from its large hind foot and toes that spread to form a "snowshoe" surface on the snow. It has a brown suit in summer and a white one in winter. Where this species is numerous it forms well established trails in the woods. While their trails are more noticeable in the winter they can be detected during the summer months by a careful observer. The snowshoe rabbit rests at the base of a tree, under a log or bush pile. It seeks heavier shelter during the winter months. Often times its zig-zag track over an open spot in a bluff will tell of an attack by a Snowy Owl or other bird that depends on it to a certain extent for its food.

A most interesting difference between the rabbits and the hares is that the hares are born furred, have their eyes open and are active from the day of birth. Rabbits are born practically naked and their eyes do not open until they are from eight to ten days old. Both the snowshoe rabbit and the jackrabbit are really hares.

VIRGINIA WHITE-TAILED DEER

The white-tailed deer or "jumper", as it is often called, is the most common member of the deer family in Saskatchewan and may be found throughout the province except in the far north. The young are born during late May or June and the fawns are spotted. Any person who has accidentally came across a young fawn in the spring will know how well they are camouflaged. Fawns should be left alone. Often the touching of a fawn will make the mother leave the young. The male or buck carry antlers and these antlers are shed each year during the winter months. Antlers are seldom found in the field as porcupines, mice and other rodents gnaw on them for the minerals they contain. The white-tailed deer are browsers and eat the branches and small limbs of certain shrubs and trees. They gather together during the winter months in bluffs where food is available. We refer to this as deer "yarding up". In a marshy area or during the winter the deer spreads its weight by using the dew claws on its feet (example shown in drawing).

THE RING-NECKED PHEASANT

This popular game bird is an "exotic" species, exotic meaning that it was introduced into this country. Pheasants require good food, water and shelter. Sound conservation practices in farming and habitat improvement programs will help maintain and improve this species. Pheasants are polygamous, that is one male mates with more than one hen. During the month of May the males establish crowing territories and the hens select nesting sites. The hen lays ten to twelve eggs in a period of between fifteen to sixteen days. The imcubation period is approximately twenty-three days. The young pheasants feed on insects at first but later become seed eaters. Skunks, badgers, ground squirrels, crows and the red fox are the chief predators.

The fact that the male bird mates with more than one female is an important trait in pheasant manage-

ment. Adult males are easily distinguished from the hens and it is therefore possible to have an open hunting season for males only. This allows liberal hunting by sportsmen without affecting the breeding potential for the following spring. Removal of the excess males benefits the pheasant population. Unlike our Sharp-tailed Grouse, the Pheasant has not adapted himself to our winters and has not much ability in finding protection during winter storms. During such storms drifting snow freezes in his nostrils and feathers, causing death.

COYOTE

The coyote may well be called the wanderer of the plains. It is well known to most persons and is distributed throughout the settled and fringe areas of the province. The coyote adapts itself readily and lives on both the open plains and the heavily forested areas of the province. A coyote digs its den in some secluded spot where three to eleven young are born. Food is carried to the young until they are able to forage for themselves. The coyote is not a fussy eater and its food consists of small mammals, birds, fruits and even insects. The coyote is also a carrion feeder and farmers sometimes lose poultry and sheep.

Note: I would be very pleased to hear from any reader who found this material of interest. It is certainly possible to do a series on this type of material and if there are any species that you wish to have included please write, care of Dr. G. Ledingham, The **Blue Jay** Editor.

Big Game News

By W. ARTHUR BENSON

Deer in the mixed wood forests of Central Saskatchewan are, this winter, in dire straits. This condition has primarily been brought about by two factors: (1) The very deep, fluffy snow which has not been seen so generally for about 25 years, and, (2) the very large deer population which was made even larger by virtue of an inclement hunting season which did not harvest sufficient deer. In this northern, fringe-of-settlement area, permits were made available to Conservation Officers which allowed deer to be taken in over-populated areas. So far hunters have not been able to find access to these areas and few permits have been issued. In addition, the Department of Natural Resources has provided transportation for feed bought or given by farmers, Fish and Game Leagues and other interested parties. The feed has been taken to areas where deer are in goodly numbers and are in danger of starvation. So far several deer have died and, depending on the weather, many more might die of starvation. When starvation is the cause of death, it is fairly easy to determine by examining the bone marrow, which, intead of being creamy white (healthy), is varying shades of pink and red (starvation). This red condition of the marrow occurs as stored body fat in the marrow is used up, leaving only the red blood cells which are produced in the bones.

If the condition of large deer populations in process of starvation occurred in the Lake States or parts of Ontario and Manitoba, sound wildlife management would dictate that no feeding be done and the deer population be drastically reduced. This is because winters there are permanently bad as far as heavy snow is concerned. It is the heavy snow which troubles the deer by reducing their travelling ability. In the Eastern States, deer "yard up" every year, and the peculiar thing about it is that the same "yards" are used every year and no amount of inducement will make the deer move. In Saskatchewan, our winter conditions normally are less severe as far as snow is concerned and for this reason higher deer populations can be allowed without fear of starvation. Once in 30 years or so, we have a situation like this winter in the mixed-wood area of northern Saskatchewan. If we get a series of winters such as this one, we will have to reduce our deer population or the slow killers of starvation and disease will do it for us. We are fortunate in that our southern area and aspen parkland area are seldom critical. This year deer in the south

are in no danger except in about three widely scattered particular areas. In the rest of the country, they manage nicely—even easily in some areas, where kind farmers do not mind the deer getting "easy pickings" from haystacks.

CARIBOU

Two of the most important steps in barren ground caribou management occurred this year in Saskatchewan. The first was a meeting held in Saskatoon in the fall of 1955 comprised of game administrators and research personnel from all government agencies concerned with caribou. At this meeting a Senior Caribou Committee was recommended which would judge research findings and take appropriate unified action. In addition, a Technical Caribou Committee was appointed, which was to unify research, gather facts and provide them to the Senior Caribou Committee.

The second step was the first fall meeting of the Technical Caribou Committee in Prince Albert on January 26th, 1956. At this meeting technicians and field men from Northwest Territories, Indian Affairs, Canadian Wildlife Service, Alberta Game Branch, Manitoba Game Branch, Ontario Department of Lands and Forests and Saskatchewan Game Branch were represented. The meeting was much enhanced by the presence of Dr. Doug Clarke, (Ontario representative) who has the advantage of years of experience and a background of very able work conducted in the Northwest Territories. At the conference, plans were laid to conduct an aerial survey of caribou presently in Saskatchewan. This survey will give needed data on sex and age ratios, range conditions and herd distribution. The survey will be on a co-operative basis and participants will be John Kelsall (Canadian Wildlife Service) and T. A. Harper and R. A. Ruttan (Saskatchewan Game Branch, Biological Division). All three are extremely capable men and also tough enough to withstand the very rigourous climate and ground conditions. Other problems discussed at the meeting were: range studies, wolf control assessment and improvement, means of obtaining accurate native kill figures, standardization of methods of collecting data, improvement of aerial survey techniques and plans for an over-all aerial survey to begin next spring.

The caribou population has dwindled steadily over the past several years until the present when only some 300,000 animals make up the mainland caribou population. Every effort is being made to find the cause of the reduction. Having once found the cause, the effort will then be directed to the correction of the situation. So far, we know that neither predation nor human utilization were the sole factors causing the loss in caribou—though of course they helped. We cannot stop human utilization of caribou unless we wish to starve the humans presently using caribou. We hope that we can eliminate wastage by education and enforcement. It is only by the sincere intergovernment co-operation presently found in the Caribou Committee that we have any hope of collecting and transposing facts into action for caribou management.

RACCOONS IN SASKATCHEWAN

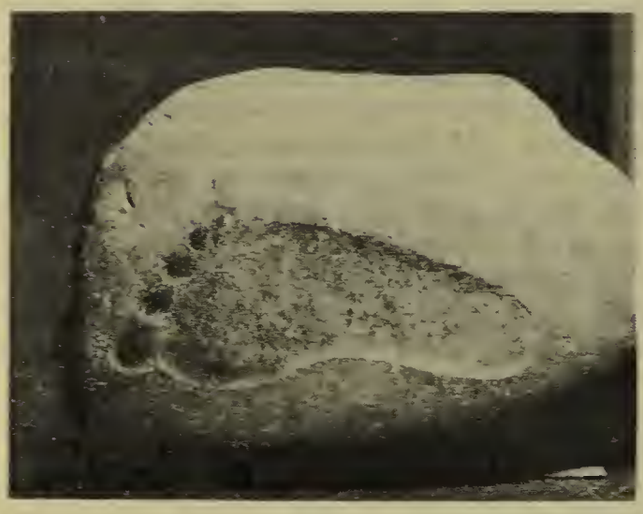
S. A. Mann reports an unusual occurrence from the Cypress Hills District — four Raccoons taken in the early winter on Bear Creek. **Joyce Gunn** from Spirit Lake also reports a Raccoon that arrived in their yard January 21, taking refuge in the garage. When she wrote on January 26, the Raccoon was still sheltering in the garage, thriving on a diet of fish, table scraps and bread and milk. The Gunn family settled at Good Spirit Lake in 1887, and this is the first record that they have of a Raccoon in the district.

UNSEASONABLE ACTIVITY OF SKUNK

Although we do not usually see skunks after the cold weather has set in, **Joyce Gunn** (Spirit Lake) reports that a family of four has been visiting their yard this winter on the average of once every ten days. The smallest one of the four took a liking to the dog's box and stays behind after the rest of the family leaves to have a "cat-nap" in his box. The dog sits back at a safe distance and waits for it to leave — he has learnt it is much easier to let it come out on its own than go in after it!

Spade and Screen

By FRED ROBINSON



Strange Impressions in Stone

The above photograph was sent in by Mr. Paul Bonneau, of Gravelbourg, Sask. This strange find, one of many stone age relics found by Mr. Bonneau, has been made for some purpose by prehistoric man. The marking in the shape of a human foot has been abraided out on a hard boulder by using another sharp stone, or many sharp stone implements, as chipping tools. Such relics are very rare and are related to the "hand" objects shown in the last issue of the Blue Jay. Only one other "Foot" specimen has been found in Saskatchewan and it is quite similar to the above and is now in the Provincial Museum. These with other effigies are a great puzzle to archaeologists the world over. What are they, — badges of authority — stone Gods — markers or just tribal treasures? The puzzle keeps the subject of archaeology a thrilling one indeed. This specimen is cut on a rock weighing 50 pounds and is nearly twice the weight of the similar specimen in the Provincial Museum. An American collector has offered Paul Bonneau $600 for this strange relic. It is hoped that somehow the "foot" will remain in its native land.

A Worthy Exhibition

We are pleased to publish a splendid letter from Mr. A. M. Provick of the Wolverine Hobby and Historial Society which has been received for this issue.

Dear Sir:

I believe that some of the activities of our Society would be of interest to Spade and Screen readers. Our program for 1955 included a very interesting and well supported exhibition of stone age artifacts held in Spy Hill on November 1st last. The quality of the exhibits, and the enthusiasm displayed made it entirely possible that more shows of this kind would be held in the future. Those present included collectors from Welwyn, Spy Hill, Tantallon, Hazelcliffe, Yarbo and Gerald. Mr. J. Ward of Welwyn displayed a very extensive collection of artifacts mostly all from the Welwyn district. Highlight of the evening was Mr. Ward's address, followed by questions and general discussion. In connection with the "limestone artifact" described on page 27 of the last BLUE JAY, owned by J. M. Provick — this oddity was also on display at our show, and I should mention that there were at least two other authentic limestone artifacts on display, and all caused much discussion and comment. One of these was an ordinary grooved hammer of conventional type, another was a very fine moccasin last similar to one illustrated on page 23, Vol. VII, No. 1 of the TENNESSEE ARCHAEOLOGIST, 1951. The third was the oddity owned by J. M. Provick, and I should like to mention here that this artifact in no way resembles a pestle and could hardly be used as one, being hardly ½" in thickness and far too frail in construction. It slightly resembles some tools described as "spuds," illustrated on page 125 of PREHISTORIC ART (The Greater St. Louis Archaeological Society, 1953) but even these would be an inadequate comparison. At a Hobby show staged also at Spy Hill earlier in the year, there was another

limestone object displayed. This was a heavy rough block of limestone with a neat hole of fair diameter drilled right through it, and was found in the Rocanville district. Due to the neatness of the hole some were of the opinion that this object was the work of some early settlers rather than aborigines, and no possible use for it could readily be imagined.

It would be interesting to hear of other limestone tools in the possession of Blue Jay readers. Let's keep the "Spade and Screen" pages going, and enlarged.

A. M. Provick.

Mr. W. J. McDONALD of **Yorkton** has written the editor to say that the "plate" shown on page 27 of the last issue of the Blue Jay (top of picture) is from his Indian Relic collection. He is indeed fortunate to own such a rare specimen.

Mr. THOS. H. DUTTON, Gilbert Plains, Manitoba sent in the accompanying picture of several Pemican Hammers and you will notice another one of the strange stone "Plates" shown in the lower right of the picture. This also has an image and outline of a hand cut in the stone. It was found at Gladstone, Manitoba in 1889. Although these relics are very rare, they are nevertheless widespread as they have been found here and there over the plains. Each museum seems to be able to acquire one or two.

1955 BIRD BANDING

(Continued from page 11)

Thue. The 14 new species banded this year brought the all-time total to 106 species — this apparently is the first time that 100 species have been banded in Saskatchewan. (And only because of my earlier start; Street and Matthews are close behind in number of species and probably ahead in the number of individuals).

I would appreciate learning of the locations of nesting colonies (where the actual nests have been seen) of Pelicans, Cormorants, Gulls and Herons. Write me at 416 - 11th St. Sutherland, or phone collect to Saskatoon 25736 (before July 1st).

CANADIAN NATURE

(Continued from page 23)

the starting and guiding of an **Audubon Junior Club.** Excellent material is sent to each child, who pays only 25 cents per year. The instructions to the leader are so good that any of us could lead a group. Find ten children or more and start a Junior Club now.

Astronomy–and the Amateur

By John Hodges, President of the Regina Astronomical Society

I doubt very much that there is a reader of the **Blue Jay** who at sometime in his life has not seen and still vividly recalls an event that occurred in the heavens. It may have been an eclipse, a comet, a particularly bright meteor or fireball, or perhaps it was a look through a telescope. Yet so often I have heard a remark referring to the hobby of "star gazing" as a difficult, "too-deep-for-me" study. This is far from the truth; otherwise, how did the herders in Arabia come to know the sky so well? No one acquires the skill to identify each bird, tree, insect or flower without spending some time in doing it. Further, it is quite unnecessary to have a background of technical information. Astronomy, like any other hobby, can be a source of pleasure all year round.

Nature is lavish in its display of phenomena and this holds true when the observer turns to the sky and observes the heavens. It is not true that you have to have a telescope. Most amateur astronomers do their observing with the unaided eye and the occasional assistance of binoculars. Those who possess binoculars would do well to scan the night sky at random and, for real comfort, from a deck chair!

First then, how does one go about becoming actively interested in astronomy without becoming bogged down in the technicalities? Usually by asking questions of those who already pursue this interesting hobby. Questions like these are heard every evening that an open night is in session at the Regina Astronomical Society's observatory. How far can you see? How big does a star appear in a telescope? What is a star? What makes the harvest moon appear so large? Are there mountains on the Moon? Can you see stars in the daytime?

Some of these questions may appear ridiculous to us, but they do not seem so to the person asking them. Therefore, let us spend a few minutes answering them.

How far can you see? As far as light can travel. One of the nebulae visible to the naked eye, the great nebula of Andromeda, is 1,500,000 light years away. A light year is the distance light travels in a year going 186,000 miles per second. We therefore see this nebula in a position where it was that long ago, not where it is now. As we look deeper into space we see further backwards in time.

A star in a telescope appears smaller than when seen with the naked eye. The greater the diameter of the aperture of the telescope the more nearly a true pin-point image is observed. Stars, even the nearest, are so far away that we see them as dots, never as a disc (as a planet appears through a telescope).

The question of power is a very common one. We seldom use powers above 250 diameters here at Regina. To do so is to magnify the turbulent air currents through which we are looking and to destroy the image. This condition of the air varies greatly, affording a few rare opportunities when it is very steady because then we can change eyepieces and go the limit on magnification. The finest "seeing" conditions are not found on the prairies, but we are afforded more clear average nights than many other areas of Canada.

What is a star? The nearest star is only 93,000,000 miles away, for it is our sun. The sun is a yellow star of medium size. It is interesting to note that if it should "go out" this instant it would be eight minutes before we knew about it. A star is a spherical mass in a gaseous state so hot it gives off light along with other radiation. Some even broadcast, as radio telescopes have found out in the last few years.

The illusion of the "harvest moon," seen most frequently in August, is just that — an illusion. When no one is watching, turn your back on it and look at it through your legs — the appearance becomes normal even if the observer's position is a little unusual!

Binoculars will show the rough, pock-marked surface of the Moon. A small telescope will reveal ranges of mountains and hundreds of craters, and arouse the curiosity of any nature lover. The deepest crater on the Moon is Newton, 142 miles

across and 24,000 feet deep. Renewed interest is being shown in comparing the geological formations found here on earth and those observed on the Moon. An effort is being made to try and explain the possible ways in which lunar features were formed.

Normally stars are not visible in the daytime. Stars have been seen in the past but these were Nova, stars that increased tremendously in brilliance, later subsiding, to become visible only in a telescope.

Amateur astronomy is never dull. New performers are constantly making unpredicted appearances. I refer to comets of which as many as a dozen have made their appearance during a year. There is an open season on comets all year round for amateurs. To be the first to discover one is a fine feather in the cap. I also refer to the sporadic meteor showers that cannot be forecast. These can be spectacular, but the time of their occurrence does not always allow us to see them during the hours we normally keep. When the Earth runs into these celestial dust clouds believed to be the remnants of the tails associated with comets, the sky may literally rain meteors, as in 1872 and 1885 when 1,000 a minute were estimated to be visible. A rather impressive display! And remember, a repeat performance could occur any time.

Now what is of interest and what is visible this spring? The Spring Equinox occurs March 20 at 3 p.m., the Summer Solstice June 21 at 10 a.m. The Earth's aphelion or point of greatest distance from the sun is reached July 5 at 1 a.m. Only one eclipse, an eclipse of the Moon, occurs in November.

During the first part of the year Venus will be performing at her best. Greatest brilliancy will occur May 16 in the evening sky. Mars will receive most attention during the latter half of the year. During 1956, Mars will be at its closest to the earth, although appearing somewhat to the south to us northern observers. This spring until June, Mars is visible only after midnight; about the end of July it will rise shortly after nine o'clock (MST). Jupiter, easily recognized from its brilliance, will be near the meridian at dusk during April so it will be visible all spring. Binoculars will reveal four of its satellites and also positively identify it. It is a fine sight, so don't miss having a look while the opportunity is at hand. Saturn, the planet with the ring around it at its equator, will be visible later in the spring, rising before midnight in April. A small telescope will reveal the ring that puzzled Galileo. It will, however, be rather far south in the sky this year and hence difficult to observe.

Still to talk about are the sunspots, Northern lights or Aurora Borealis, interesting stars, and nebulae and star clusters. I have only touched on a few of the things that an amateur can look out for. Why not take a look for yourself? Every clear night a display is brought on stage that defies description, yet so few see the individual members of the cast. I must warn you that if you do become interested in this drama you will be caught up and held by it. You become part of it, yet are left with such a feeling of insignificance! Truly a wonderful place, the universe!

Bird Watcher or Seer ?

BOSWELL BELCHER, Dilke, Sask.

One must have infinite patience and energy for travelling many hours and miles afield with binoculars hunting down new species to be called a good bird "watcher." I have not that patience, but being a farmer, I spend many hours afield and cannot help seeing what is about the fields; I might be called a bird "seer." Now a bird seer gets as much satisfaction out of finding a species his friends have not seen as does a true bird watcher. The inconspicuous American Pipit gave me that opportunity for a year or so but the enthusiastic bird watcher has now caught up with me. About May 5 or 6 I expect to see again one or two of these sleek and refined-looking birds running about the flats or slough edges on the open fields as I have done every spring since Stuart Houston and my sister Margaret "drafted" me into identifying birds (I always see them when I'm not looking for them as that is the only

way I ever find anything — maybe that is the attitude of the "seer," not the "watcher").

Some years ago when I first realized I was seeing these birds every spring I went to the bird book to identify them. I soon jumped to the conclusion they were American Pipits — but, alas, I find one must not jump at conclusions, one must be sure if he wishes his friends to respect his identity of birds. Margaret and Stuart immediately began asking innumerable questions about the birds. In fact, they almost had me convinced that it might be a Sprague's Pipit (much commoner and a summer resident here). But my confidence in my former identification was completely rebuilt when Margaret came home one weekend with the news that George Ledingham sees American Pipits in the spring on the farm near Moose Jaw. So for a year or so I was one jump (or should I say one bird?) ahead of the bird "watcher." Last spring, however, the infinite patience of the bird watcher enabled my sister to catch up with me. After vainly walking the fields to see American Pipits I had spotted, Margaret rode with me to where I had seen two during my seeding operations that morning. There on a flat in the summerfallow field were the pair of American Pipits. Now I had proved my identity of the birds, but the bird watcher had caught up to me. Whether you are a "watcher" or a "seer" you, too, may "find" or "see' these beautiful sparrow-sized birds come May 5 to 7 if you're in our area.

Entrancing Puzzle – Nature

By ELIZABETH CRUICKSHANK

Life is a puzzle, yet we know all the bits and pieces we are privileged to see must fit together to make the magnificent master plan.

We witnessed a Northern Shrike in action this winter when it dropped then recaught a Red-breasted Nuthatch. These little acrobats must consume great quantities of insect pests as they climb up and down the tree trunks; but like the Crossbills they often forage on the tips of the branches becoming easy prey for predators. Saddened as we were to lose the little fellow whose life we shared on our birding jaunts, we knew that this experience was but a tiny bit of life's gigantic jigsaw.

Another piece we saw near the power-house where a company of ducks enjoyed the bread cast on the water by faithful friends. On the ice edge, like a lump of snow sat a Snowy Owl, biding his time.

However, a different spectacle began the New Year. In the quiet of the morning in a corner of the park we stood surrounded by tall evergreens, their outstretched arms heavy with their burden of snow, now sculptured by wind and glazed with light. Sun-bronzed cones of their topmost branches beckoned their feathered dinner guests.

Evergreen and poplar, ermine sheathed, sifted the sunlight which fell in patterns on the glistening carpet of snow, "deep and thick and even." A radiance held the place, something immortally lovely, not just a carryover from the thoughts of the cradle of Bethlehem that seemed at the moment just around the corner. A glory shone round about and peace was in this place at least a reality.

As Bohemians, Grosbeaks, Chickadees, Redpolls, Crossbills, Finches and Nuthatches carolled, each from his own score, we felt the spirit of the infinite composing a symphonic poem for us humbly to interpret and to enjoy. Near the open field a flock of Sharptails flew, their wings strumming an accompaniment to the music that lingered in our hearts.

Along the road a company of Pine Grosbeaks "like twinkling winter lamps among the branches of the leafless trees" were lunching on the samaras still clinging to the ash trees. So near were we that we felt the oneness of small things shared, like the breaking of bread together.

On the crabapple tree Waxwings eating the scarlet fruit or resting to hum a little, presented another delayed Christmas card of unbelievable beauty.

Abundance of Butterflies at Hudson Bay Junction

By DONALD HOOPER, Somme

On June 17, 1955 I went to Hudson Bay Junction to collect butterflies for the day. There are black spruce swamps to the north, east and west of the town, while to the south one finds jack pine with patches of poplar and willow. Thus Hudson Bay Junction has a large variety of plants, making it an ideal location for butterflies.

There had been showers on the afternoon and evening of June 16, and at nine o'clock next morning everything was very wet. The sky was overcast with the sun shining at intervals through the clouds. The conditions did not seem too favorable for butterflies that morning. However, at ten o'clock when I was walking through the very wet grass and shrubbery of a clearing in the jack pine, I noticed a large Arctic Butterfly on a pea vine sunning itself. I had no trouble dropping my net over him, and I found that it was beautiful male Macoun's Arctic (*Oeneis macounii*). This is a beautiful insect with a two-inch wing expanse. The upper side of the wings is a bright orange, unmarked except for two eye-spots on the forewing and one on the hindwing Catching this Arctic made me glad that I had come, and I would have been satisfied if I hadn't caught another butterfly that day, as this was a new species for our collection.

As I continued through the jack pine I found that quite a few little blue butterflies were on the wing. I managed to collect four species of these. There were lots of Hoary Elfins (*Incisalia polios*) wherever bearberry was growing. The bush was full of Brown Elfins (*Incisalia augustinus*), and there were also many Pearl Crescents (*Phyciodes tharos*) and Tawny Crescents (*Phyciodes batesii*). Once the grass dried about noon, there was an abundance of butterflies everywhere.

About a mile south of Hudson Bay Junction there is a large clearing in the jack pines where the planes of the Department of Natural Resources land. The many flowers there made the clearing an excellent place for butterflies. I collected several Christina Sulphurs (*Colias christina*) and some Large Marbles (*Euchloe ausenides*). I found some Pine Elfins (*Incisalia niphon*) feeding on the blossoms of Meadow Parsnip. (*Zizia*). (It is interesting to note that this is an eastern species. It has been taken in Manitoba, but not in Alberta.) I collected a tattered American Painted Lady (*Vanessa virginiensis*). The condition of this butterfly suggested that it might have travelled some distance.

In the black spruce swamps there were large patches of Labrador Tea and Pale Laurel in blossom. These plants attract butterflies, and there were lots of Bog Fritillaries (*Boloria eunomia*) and some Jutta Arctics (*Oeneis jutta*).

About four o'clock in the afternoon I quit for the day, and counted my day's catch. I found that I had caught 27 species. This is an extraordinary catch for one day in Saskatchewan, where on an average day one collects 12 to 15 species. In the tropics where butterflies are more numerous than they are here, one might collect only 30 species in a day. A day's collecting in the Malay Islands will only produce 30 to 40 species, while in a day's collecting in Brazil one might take 40 to 70 species.

Saskatchewan has a good representation of butterflies — from 130 to 135 species. England has only 64 species, Germany 150. While there are only three species of Swallow-tails (*Papilio*) in Europe, Saskatchewan has about six. We have three species of Swallow-tails in our collection, a collection that includes 84 Saskatchewan species in all.

EDITOR'S NOTE: A note from Ronald Hooper tells of a Mexican Sulphur collected by his brother near Somme in the summer of 1955. The butterfly was described as being in quite good condition in spite of the fact that it must have windblown about 1,000 miles, as its nearest food plant is in the Central States.

The Blue Jay Bookshelf

OUR WILDLIFE LEGACY

By DURWARD L. ALLEN
New York, Funk and Wagnalls, 1954 - $6.00
Reviewed by Margaret Belcher

When a Great Grey Owl was released in January 1956 from a pole trap on the Game Farm at Beaver Creek, the publicity given the incident focussed attention on game farms and on their programmes of predator control. In the lively discussions that have ensued, sharp differences of opinion have been apparent. What stand is the ordinary sportsman or amateur naturalist to take on such question? Every citizen who wants to be well informed in order to have an intelligent point of view on wildlife conservation and game management should read *Our Wildlife Legacy* by Durward L. Allen.

Wildlife is a renewable resource that can be managed, and we have reached a point where "the question is whether we will use it wisely and in perpetuity, or whether we will use it up and be done with it." In considering the problems involved in the conservation (i.e. wise use) of our resources, Durward Allen draws upon his wide experience as a wildlife biologist, now with the U.S. Fish and Wildlife Service.

Although the field of wildlife management and land-use ecology is new and big, some important principles have already been established. Durward Allen sets these forth very clearly, supporting his conclusions with well documented observations of wildlife around us from the early days of the buffalo to modern times, and of experimental programmes in controlled areas.

The first fact that Allen emphasizes is the tremendous productivity of wildlife under favourable conditions. "Nature habitually maintains a wide margin of overproduction" and "kills off a huge surplus of animals whether we take our harvest or not".

The second impressive truth is that the ability of any given unit of land and water to support a given kind of animal, its "carrying capacity", has strict and measurable limits. It follows, then, that management strategy is primarily the problem of boosting carrying capacity by habitat improvement. Where land areas are concerned, habitat improvement means bringing different types of vegetation into useful association. This the biologists call "interspersion" and the resulting border areas of varied vegetation so favourable to game are known as "edge". In much farm and forest land, the amount of "edge" can be increased without impairing crop or timber production. To improve our lakes and streams, we must prevent erosion and recover our waterways from "deliberate expropriation as sewers". For such major undertakings strategy has to be plotted at government levels, where the planners are unfortunately often handicapped by political expedience and ecological ignorance.

Certain artificial measures such as the winter feeding of game are utilized from time to time to modify the habitat. These expedients are not true habitat improvement, and they are criticized by the wildlife biologist as "leaky-bucket techniques" using public money only to delay a more permanent programme.

Even in good range, we must be prepared for population fluctuations due to factors beyond our control. Expenditures for such expedients as stocking or predator control do not compensate for these natural cyclic declines in numbers.

Average production, however, can be vastly increased by remedying range deficiencies. In discussing the harvest of game, Allen proposes:

1. That any species nearing extinction should be protected from shooting and become a national charge, and

2. That there should be federal control *on an annual basis* of the game harvest, since a large part of management lies in evaluating the size of the game crop and deciding how to use it efficiently. Because that part of the annual surplus not hunted tends to be taken by other factors, game crops do not "store up" from year to year, but must be havested when ripe.

Public prejudice often stands in the way of a wise harvest of game. It is difficult, for example, to persuade the public of the fallacy of preserving female deer from shoot-

ing and of returning little fish to the water. The layman usually refuses to believe that a heavy toll by hunters and fishermen is not destruction, and may in fact be indispensible to continued production. It is also difficult to get the general public to give up thinking of game management in terms of maintenance stocking, and to accept the reasoning of the biologist who can show that the possibilities of "stocking" are limited by "carrying capacity". Game farms and fish hatcheries may be useful research projects but are not the answer to the problem of maintaining public hunting and fishing. Neither are predator control programmes a sound wildlife management measure — in healthy wildlife habitats wildlife communities take care of themselves.

This straightforward review of current thinking about wildlife management is timely and appropriate. Because his carefully documented material is presented in a compelling fashion, Allen makes a real contribution to the preservation of the enjoyment of wildlife which is part of our standard of living.

—Photo by Tom McHugh

SHORT-EARED OWL

This year the Christmas count has only one record of the Short-eared Owl. Is there any part of Saskatchewan in which this owl is known to be a winter resident? We should like to have the dates of any winter observations of the Short-eared Owl.

Exchange Nature Publications

The following publications are received in exchange for the **Blue Jay**. In future we hope to mention interesting items from these periodicals; this time we are merely introducing them to our readers. Members wishing to borrow any of these publications may send 10 cents in stamps, for postage, to the editor.

THE CARDINAL: Published by the McIlwraith Ornithological Club, London, Ontario. Editor, W. D. Sutton. The December issue gives the Christmas bird census for St. Thomas, London and West Elgin. These three groups saw 67, 51, and 47 species respectively. Mr. Sutton reports on the Nature Study Camp which has been operated for 17 years by the Federation of Ontario Naturalists. Mr. W. W. Simpson has some interesting notes on the singing of the Oven-bird. He gives evi-

dence that the increasing crescendo of the song is the bird's way of defending his territory. The song gives the impression that the singer is flying swiftly toward the intruder.

NEWS LETTER of the Thunder Bay Field Naturalists Club, Port Arthur and Fort William, President, Mr. Keith Denis. Mr. Denis is collecting material on the effect of the storm reported in the **Blue Jay**, June, 1954. Mr. Denis would appreciate any evidence you may have of bird mortality as a result of this storm. Mr. C. E. Garton has a 10-page article and list of plants collected in the Roundtable Lake Area. The December, 1955, issue contains the Society's records of birds breeding in the area in 1955.

LES CARNETS: This is the quarterly bulletin of the Zoological Society of Quebec which maintains the Quebec Zoological Gardens in Orsainville. Some of the articles in the bulletin are descriptive in nature; others discuss problems, such as migration and game management, related to the study of the fauna of Canada and particularly of the province of Quebec.

COUNTRY-SIDE: Journal of the British Naturalists' Association. Founded by E. Kay Robinson in 1905. Edited by John Clegg. Like Saskatchewan and Alberta this Society celebrated its Golden Jubilee in 1955. The Autumn 1955 issue contains a short article by Mr. Northwood, Curator of Mill Grove Farm, Pennsylvania, where John James Audubon began his bird study and painting. The Audubon Society purchased this property three years ago and it is now a memorial to Audubon and a sanctuary for birds. Mr. Northwood has already listed 132 different species of birds on the estate and he hopes to attract more.

THE VICTORIA NATURALIST: Published by the Victoria Natural History Society (monthly except June, July and August). This is an active society holding meetings nearly every week during the winter. The meetings and articles in the magazine are directed by group chairmen. The chairmen are as follows: Programme, Mrs. J. R. Parris; Summer Botany, Miss M. C. Melburn; Winter Botany, W. A. Hubbard; Zoology, G. C. Carl; Conservation, D. B. Turner; Ornithology, J. O. Clay; Marine Biology, J. A. Cunningham; Geology, A. H. Marrion; Audubon Screen Tours, Mr. and Mrs. J. A. Berry.

THE CONSERVATION VOLUNTEER: Official Bulletin of Minnesota Department of Conservation. Editor A. L. Nelson. Published bimonthly since about 1912. Excellent articles designed to lead to a better understanding of "Conservation through Education".

THE WOOD DUCK: Published monthly from September to May by the members of the Hamilton Nature Club, Ontario. Editor Miss A. E. LeWarne. The January 1956 issue includes an interesting trip by Mr. and Mrs. L. F. Merrick to the Aransas Pass Game Refuge in Texas. They joined birders on a launch trip along the coast and saw many birds. The highlight of the day was watching a pair of Whooping Cranes from a distance of about 300 yards. They watched them for about 15 minutes and then went on, leaving the Whooping Cranes apparently undisturbed and still feeding.

SOUTH DAKOTA BIRD NOTES: Official publication of the South Dakota Ornithologists' Union (organized 1949). Quarterly. Our first issue, March, 1952, has a cover picture of Dr. J. F. Brenckle. Dr. Brenckle is famous not only as a medical doctor but also as a botanist and enthusiastic bird bander. During nine years (1930-1938 inclusive) he banded 31,600 birds, mostly sparrows and warblers. The last issue December, 1955, includes a report on the Blue Grosbeak in South Dakota by J. S. Findley, the editor.

THE FLICKER: Published quarterly by the Minnesota Ornithologists' Union. Editor, P. B. Hofslund of the University of Minnesota at Duluth. This is perhaps the most attractive and most scientific of the magazines received in exchange for our **Blue Jay**. Each issue contains a seasonal report by Mrs. M. Lupient. This will keep us well informed on bird movements and populations. The editor has some excellent hawk pictures in the last issue. He reported 800 hawks in about three hours observation over Duluth on October 13. The Canada Jay is reported in large numbers in Minneapolis early winter 1955.

Letters to the Editor

OX-TRAILS TO HIGHWAYS: Pub. 1955, 111 pages, $2.00, written by Dr. H. S. Swallow, Yorkton. This book is an account of early pioneering in the Yorkton area from 1882-1955. Mr. C. Stuart Francis has sent us an excellent review of this book. We will be happy to send a copy of this review to anyone interested. The book can be obtained from Dr. Swallow.

CARLTON TRAIL: Mr. Tom Bond, Leask, Saskatchewan wonders why Dr. R. C. Russell "stopped at Carlton when much of the continuation of that trail this side of the river, 'The Snake Plain Trail', especially between this village of Leask and the Carlton Ferry, is still in constant use, in fact constitutes the main road. How much more of that old trail between Leask and the Arctic Circle is still in use I have no idea, but I suspect it could make very interesting reading from the pen of our worthy Dr. Russell."

GUIDE TO THE HISTORIC SITES OF SASKATCHEWAN: Mr. Fred Robinson writes that everyone interested in history should procure a copy of this booklet prepared by Mr. J. D. Herbert for the Saskatchewan Jubilee Committee. It is only 20 pages but it beautifully describes 102 Historic Sites from the great old Stanley Church of the Churchill River to Fort Walsh in the Cypress Hills.

HORNED LARK: Mrs. L. Harris, Bracken, reports that their winter, too, is cold with lots of snow. She says that there are usually lots of Horned Larks throughout the winter but that this year there are very few.

SHANDENEKITAN (Abode of Peace): This is the name of R. Tagore's Outdoor School in India. Mr. R. F. Arnold is using it as the name for his own private Sanctuary, 25 miles north of Prince Albert. We are looking forward to hearing a great deal about the development of this Sanctuary.

STEMLESS LADY'S SLIPPER: Mrs. Margaret Brooker, Love, Saskatchewan tells of seeing many beautiful pink Lady's Slippers on the west side of Rosser Bay, Ile a la Crosse. They grew on the hill top under the scattered pine. "Each flower had long heavy laces or ribbons of a brownish hue, and the cups, or slippers, were Indian pink and as large as walnuts, traced with purplish veins. They were twice as large as the little Yellow Lady's Slipper." The first reports of this orchid in Saskatchewan came from Lac la Ronge (**Blue Jay**, April, May, June, 1952). Every effort should be made to protect our native flora (see Wild Flower Protection by Professor Lowe in **Blue Jay**, March, 1955).

CONSERVATION ON EVERY FARM: Helge S. Abrahamson, of Sylvan Lake, Alberta, suggests that a few acres on every farm should be preserved during clearing operations, for breeding birds, that these areas should include potholes whenever possible, and that they should be fireguarded for protection.

SPRUCE GROUSE AND SAW-WHET OWL: Dr. Stuart Houston sends two bird notes, one an observation by Joyce Gunn, November 7, 1954, at Spirit Lake, of a Spruce Grouse (photographed by W. J. McDonald), a new species for the Yorkton district; the other an observation, also by Joyce Gunn at Spirit Lake, March 4 and 6, 1955, of a Saw-whet Owl. The Saw-whet Owls were heard calling later that summer, but not seen again.

BLUE JAY SUBSCRIPTIONS: Mr. E. Symons of Rocanville, who has himself enlisted so many members for the **Blue Jay**, writes to encourage the rest of us in publicizing our magazine. "By the way, readers. How about gathering in some more subscriptions. I am going to go after them again. It's easy. Surprising how many folks are interested in such things, even mildly. Several old timers around here ask me to send in their renewals, when they ought to get out and gather in a few new ones themselves! Try it, folks. Water's fine once you get in!" Send subscriptions or names of possible new members to Elmer Fox, 1053 Gladmer Park, Regina.

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