

# WILDLIFE MANAGEMENT BULLETIN



DEPARTMENT OF RESOURCES AND DEVELOPMENT  
NATIONAL PARKS BRANCH  
CANADIAN WILDLIFE SERVICE

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NATIONAL PARKS BRANCH  
CANADIAN WILDLIFE SERVICE

THE BIRDS OF ELK ISLAND  
NATIONAL PARK, ALBERTA, CANADA

By  
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Wildlife Management Bulletins are produced to make available to wildlife administrators the information contained in reports **which** are submitted by officers of the Canadian Wildlife Service.

**The reports** do not, in most cases, cover extensive studies and are not written primarily for publication. Recommendations arising from the studies are not included.



## Introduction

Elk Island National Park is situated in the Cooking Lake Highlands of central Alberta approximately 25 miles east of Edmonton. The mean latitude is approximately 53° 38' N. Its southern part is intersected by Highway No. 16; entry is also easily made from the north by leaving Highway No. 15 at the town of Lamont. Various roads in the park give ready access to different parts of this attractive wilderness area including Astotin Lake, the chief point of interest for most visitors.

In one respect, at least, this reserve is unique among the National Parks of Canada. It was the first mammal sanctuary to be established by the Federal Government -- an event that took place in 1906.

This paper is devoted to birds, but it seems desirable to touch briefly upon the circumstances of the origin of the park even though it was created wholly as a sanctuary for a big game animal species. At that time elk were being rapidly destroyed in the remaining virgin areas of central Alberta. The establishment of the park not only saved them from regional extirpation, but also provided sanctuary for many other forms of wildlife. Among these were several important species of big game animals and a rather notable waterfowl population. The park has since played a



distinctive role in the preservation of native fauna and flora.

For its first purpose, the park did not need to be large. At that time it consisted of only 16 square miles in the Beaver Hills, located in Township 54, Ranges 19 and 20, but since then it has steadily grown in size and importance. At present it comprises an area of 75 square miles, or 48,000 acres, more than three times its original size. It has also been developed as a public playground.

The development of the park had proceeded faster than acquisition of knowledge about its native wildlife. Consequently, in 1939 the Department of Mines and Resources (now Resources and Development) decided to have made a complete faunal survey of the area. At that time relatively little was known concerning indigenous species except big game animals and larger fur-bearers. The investigation, entrusted to the writer, was begun in 1940 and continued during various intervals thereafter.

#### ACKNOWLEDGMENTS

This provides a pleasant opportunity to express indebtedness to Dr. B.I. Love, Superintendent of Elk Island National Park for his generous co-operation during the investigations and subsequently through correspondence. Useful information was also secured from Acting Warden J. Coxford whose help is much appreciated.

Thomas Randall, a former warden, furnished a great deal of information on birds of the park, gathered by him especially in 1937. Mr. Randall is well known for his ornithological ability. His unpublished annotated list of the birds of the park is, as far as is known, the only such list in existence. It has been invaluable

particularly for its winter, early spring and autumn records, as it was not possible for the author to carry out investigations during those seasons.

### Physical Geography

The park occupies a relatively small part of the rolling uplands known as Beaver Hills, or Cooking Lake Highlands and most of it consists of low hills and ridges. Some parts, however, are only gently undulating or nearly flat. The terrain is not as rugged as it is farther to the south and southwest as the park lies near the northern extremity of the Beaver Hills which decline in elevation from south to north.

Despite this, some parts of the park are conspicuously, if moderately rugged especially in the centre and northeast, where the hills and ridges commonly rise to 50 or 60 feet in height. Some are composed of clay, many of sand and gravel. The general shape and well-rounded contours clearly illustrate the glaciated character of the entire district. Some of the most featureless topography occurs in the southeastern part of the park where there are scattered patches of prairie.

A profusion of lakes, ponds and potholes exists in extensive portions of the park (Figs. 3 and 4). They are most numerous in the southwest and north-central sections. The most important lakes of the park, in order of size, are Astotin, Tawayik, Little Tawayik, Oster, Long, Adamson, Moss and Mud Lakes. Average elevation above sea-level is approximately 2,340 feet. The water level of most of the lakes is much lower in dry years than in wet years.

Most of the park has poorly developed or immature

drainage. Except during spring freshets there are practically no running streams. Few lakes or ponds have either inlet or outlet. An exception is Astotin Lake which, at high water, drains by way of Astotin Creek to Saskatchewan River, 13 miles to the northwest. Most bodies of water, except the larger and deeper ones, become stagnant in summer.

Other topographic features of interest are the widely scattered bogs and true muskegs (Fig. 1). They are true outriders of the boreal mixed forest to the north. While most of the bogs occur in undrained depressions among the hills, there are a few in more nearly level and less densely wooded country. Most of them are quite small, but a few are many acres in extent.

There is a deep mantle of glacial materials over most of the land. It determines the contours and often influences the vegetation. Over it has developed an excellent soil of very fertile black loam or of sandy or clay loams, ranging in depth from a few inches to one or two feet. Boulder drift is relatively uncommon; in some places it is seen as an out-wash product on the shores of lakes and islands and may consist of both sedimentary and Precambrian rocks. The underlying bedrock is of Mesozoic age; no outcrops are known to occur in the park and it is unlikely that there are any as the overburden of glacial drift apparently averages well over 100 feet in depth.

#### Climatic Conditions

The climate of the region may be classed as temperate. There is wide variation in temperature between summer and winter; recorded extremes are separated by as much as 105° F. In general the climate may be said to partake of a transition character, a blending of those climatic elements common to both the Great Plains



area on the south and the coniferous forest region to the north.

Cold may be intermittently intense during the latter part of December, all of January and February and, occasionally, early March. In this respect there are marked seasonal differences. At long intervals temperatures have dropped to  $-60^{\circ}$  F.; but temperatures of  $-30^{\circ}$  or  $-40^{\circ}$  are more common. The severity of the winter weather is modified at times by chinook winds of brief duration, that bring rapid rises in temperature and melting of snow.

As a rule, spring commences in late March or early April. Snow has usually disappeared by April 10, if not earlier. Vegetational growth, thereafter, is fairly rapid with new leaves unfolding about the third week of May. The combination of warmth and long hours of sunshine brings many plants to maturity at a surprising rate.

True summer weather begins about the middle of June. July and August are usually warm and dry with temperatures of from  $60^{\circ}$  to  $80^{\circ}$ ; noteworthy fluctuations in temperature are not infrequent. Relatively brief hot spells sometimes raise temperatures to the high eighties or low nineties. At such times thunder storms with high winds and localized volleys of hail may often occur.

The first indications of autumn appear about mid-September. This season is well advanced two or three weeks later, although in some years quite warm weather may continue until late in September or early October. There are regular night frosts by then. Bright sunshine is usual in October, and spells of fairly mild weather may extend into November although winter usually commences in the early half of that month.

The long-time average, yearly, mean precipitation is about 18 inches, but the average precipitation for a period of a few years may be considerably lower or higher. This results in excellent agricultural conditions and a high water-table in periods of high precipitation, or semi-drought conditions, with reduced crops, and dry lakes and sloughs in periods of drought. Average length of the growing season from average date of seeding to average date of first frost is approximately 140 days.

#### Faunal Life Zone

The Park lies precisely in that latitude where an interfusion of prairie-parklands and boreal forest types of environment takes place. On the whole, elements of the former are clearly predominant and the area may logically be said to be situated within the zoogeographic division known to naturalists as the Transition Life Zone, or Deciduous Forest Biome, which is characterized by aspen poplar woodlands and open grasslands.

While most of the biological components of the area are to be referred to the Transition Life Zone, there is also a definite, though somewhat dilute intrusion of Canadian Life Zone (Southern Coniferous Forest Biome) conditions consisting of muskegs (Fig. 1), sphagnum bogs, and stands of white spruce and paper birch. Such localized tracts are notably boreal in aspect, and not unlike tracts existing in the main Canadian Life Zone to the north and west. They give the park, and the highlands of which it is a part a somewhat composite character, and provide various habitats which support diverse biotic communities. In the park, the diversity is most noticeable in the south central part.

Species of birds fundamentally more typical of the Transition Life Zone are greatly in the majority, as a casual inspection of the annotated list makes plain. True prairie birds are fairly well represented, among them European partridge, sharp-tailed grouse, Western willet, Sprague's pipit, and Western meadowlark.

In addition to these campestrian species the Transition Life Zone attracts numerous other birds to its biological niches. Some of the most common are game ducks, sparrow hawk, ruffed grouse, lesser yellow-legs, spotted sandpiper, Franklin's gull, black tern, yellow-shafted flicker and a large number of various flycatchers, swallows, vireos, warblers, sparrows and other passerines.

As is the case with the mammals, few species of the birds of the park (aside from migrants) are more typical of the Canadian Life Zone than of the Transition Life Zone. Among those that breed in the park are common loon, pigeon hawk, solitary sandpiper, pileated woodpecker, olive-sided flycatcher, Canada jay, Hudsonian chickadee, red-breasted nuthatch, Tennessee and myrtle warblers, rusty blackbird, Western tanager and white-throated sparrow.

#### Vegetation

As previously remarked, the park lies within the parklands, or aspen grove belt that extends from southeastern Manitoba northwest to the vicinity of Clyde, north of Edmonton. As its name implies, this belt is distinguished chiefly by extensive woodlands or scattered "bluffs" of aspen poplar with frequent intrusion of prairielands.



Another common tree in the park is the balsam poplar (Populus balsamifera) which is locally distributed along streams and lake shores. Equally typical in moist, or wet lowlands--especially muskeg areas--is the black spruce (Picea mariana). Tamarack (Larix laricina) occurs more rarely (Fig. 1).

On the uplands, which comprise about 85 per cent of the park, the aspen poplar is by far the most abundant tree species. Scattered through this deciduous forest are various-sized stands of white spruce (Picea canadensis) and paper birch (Betula papyrifera). Some of the finest examples of the former are on islands, particularly the islands of Astotin Lake (Figs. 2 and 3).

Among the most characteristic plants of the bogs and true muskegs are various combinations of Labrador tea (Ledum groenlandicum), bog moss (Sphagnum capillaceum), low cranberry (Vaccinium Oxycoccus) and cloudberry (Rubus Chamaemorus). Many other species, including willows, find suitable habitat conditions around the margins of the bogs.

Shrubs, an important part of any woodland environment, are well represented in the park. Particularly notable are the dense stands of willows (Salix) and alder (Alnus) around lakes, muskegs and streams. Some ~~varieties~~ form copses in upland woods and clearings. Other indigenous shrubs include silverberry (Elaeagnus argentea), snowberry (Symphoricarpos), buffaloberry (Shepherdia canadensis), hazelnut (Corylus), wild rose (Rosa), red raspberry (Rubus), gooseberry (Ribes), highbush cranberry (Viburnum opulus), choke cherry (Prunus virginiana) and pin cherry (Prunus pennsylvanica).

Considering the park as an environment for water birds,

most of the lakes and ponds have muddy bottoms and are well supplied with aquatic vegetation. From such personal observations as were made, this seems to be particularly true of Astotin Lake, in some parts of which the subaquatic growth is especially abundant. Plant growth is so dense in some of the bays that the progress of a canoe is impeded. Among the water-plants are the northern pondweed (Potamogeton vaginatus), sago pondweed (P. pectinatus), clasping-leaved pondweed (P. perfoliatus), water milfoil (Myriophyllum spicatum), coontail (Ceratophyllum demersum), star duckweed (Lemna minor), arrowhead (Sagittaria cuneata), and yellow waterlily (Nymphaea advena). Since duck foods are common in Astotin Lake, numerous waterfowl are attracted to it. On the other hand, many deep lakelets and ponds back in the woods appear to have little or no duck food, and waterfowl with the exception of grebes and occasional loons are seldom seen there.

Areas in the park with true marsh conditions are inconsiderable, although some bays support dense stands of rank vegetation. Astotin Lake has several such bays, one of them in the northwest extremity where Astotin Creek makes its exit. Small marshy bays of the same kind exist in some other bodies of water, including Tawayik and Oster Lakes. The narrow belts of marsh vegetation along most shores in this district are not regarded as marshes, although similar in character.

Much the greater part of the marsh growth consists of the hardstem bulrush (Scirpus acutus), the softstem bulrush (Scirpus validus), and the cattail (Typha latifolia). Bulrushes predominate and are especially conspicuous around the shores of numerous lakes and ponds where they often exclude other emergent

aquatics. In a few places marsh cane (Phragmites) forms a narrow zone between the bulrush fringe and the shrub-tree associations along shore. It appears to be nowhere abundant in this region.

#### Annotated List of Birds

The data which follows cannot be described as complete. In regard to the details of occurrence, relative abundance or local distribution of the birds, there always seems to be something new to learn. In all probability more species will eventually be added to the list. It is believed, nevertheless, that a general concept of the avifauna of the park has been developed to an advanced stage.

The annotated list of birds comprises 190 species that have been positively identified. Binomial names have been used for all of them, since an insufficient amount of material from the area is available to warrant the consistent use of sub-specific classification. A few other species might well be expected to inhabit the park but there is no valid evidence of actual occurrence and they have been omitted.

The list adheres to the order and terminology of the American Ornithologists' Union Check-list of North American Birds, Fourth Edition, 1931, as amended by Supplements 19 to 25. Frequent reference is made to Randall's unpublished annotated list of birds of the park mentioned previously under "Acknowledgments".

1. Common Loon. Gavia immer (Brunnich).

This species breeds in favourable lakes and ponds throughout the park, but only in moderate numbers. A few small, deep lakes were each inhabited by a single pair, and sometimes



several pairs were found on one large lake. Randall noted that six pairs nested on Astotin Lake in 1937. Several loons were observed there in later years.

2. Red-necked Grebe. Colymbus grisegena Boddaert.

Grisegena is a common inhabitant of ponds, lakes, and potholes throughout the area that provide suitable nesting cover in the form of cattail and bulrush. The species was particularly common in Astotin Lake, which is rich in both subaquatic and emergent vegetation.

3. Horned Grebe. Colymbus auritus Linnaeus.

This grebe is well distributed in the park. It nests in most lakes and ponds where conditions are at all favourable. Occasionally several pairs may be seen inhabiting a very small body of water fringed by emergent marsh vegetation. In a few instances the entire grebe population was composed of this species, but it also associates with grisegena and caspicus. The grebes normally arrive in the latter part of April and depart some time in October.

4. Eared Grebe. Colymbus caspicus Hablizl.

The eared grebe is an uncommon inhabitant of the park. One was observed in a pond east of Moss Lake and a pair in the northwest extremity of Astotin Lake on July 30, 1940. Randall recorded two small breeding colonies on Astotin Lake in 1937 but he did not see the birds elsewhere in the park. Later, the author failed to see it at many lakes in this territory, although it was still present at Astotin Lake. According to observations made in the park and elsewhere, the species evidently fluctuates in numbers from one period to another in the same area,

and may disappear from a lake where it formerly nested.

5. Western Grebe. Aechmophorus occidentalis (Lawrence).

At no time was this species observed in the park by the author. Randall says that it does not nest there and that it was seen in migration by him only once.

6. Pied-billed Grebe. Podilymbus podiceps (Linnaeus).

Podiceps was observed at several places, including Mud, Tawayik, and Astotin Lakes. It was seen more commonly in the last named, where good bulrush and cattail stands provide plentiful cover for nesting.

7. White Pelican. Pelecanus erythrorhynchos Gmelin.

During summer investigations, no pelicans were observed on any of the lakes of the park. This species does not breed within the park, though formerly it did so at several places in the Cooking Lake Highlands, such as at Ministik and Miquelon Lakes. A few small groups are said to visit the larger bodies of water in the park during the spring and autumn migrations. Average date of the first spring arrivals is about April 20. Autumn departures evidently occur between early and mid-October.

8. Double-crested Cormorant. Phalacrocorax auritus (Lesson).

This species evidently does not visit the area during the summer, but a few do so during spring and autumn migrations to and from breeding lakes farther north. Spring arrival and autumn departure dates are about the same as those mentioned for the preceding species.

9. Great Blue Heron. Ardea herodias Linnaeus.

As far as is known, this species has always been a regular, but not common, summer resident in the park and adjacent parts of the Cooking Lake Highlands. It is known that

the birds, on occasion, will change their nesting locality without apparent reason. For many years they nested regularly in tall white spruces on an island in Astotin Lake. Randall reported them still breeding there in 1937 and Dr. Love intimated that they continued to do so at a later date, but in 1940 they were absent. If they re-located in the park that year the fact was not discovered, although one or two individuals were seen flying high above the forest between Astotin and Moss Lakes. The first individuals arrive in late April. General withdrawal apparently occurs about mid-September, or somewhat earlier.

10. American Bittern. Botaurus lentiginosus (Montagu).

This is a rather uncommon summer resident, although several were seen during the late July investigations of 1940. The species breeds about various lakes having suitable marsh growth, including Astotin, Moss, Spruce Island, and Tawayik Lakes. Duration of local residence is approximately from late April until late September.

11. Whistling Swan. Cygnus columbianus (Ord).

These birds were not observed by the writer. The species evidently occurs rarely in the park, although it has been noted on several occasions at Astotin Lake during migration. Randall saw several small flocks passing over on the spring migration. The birds usually are first seen in spring migration about mid-April, but sometimes appear earlier. The autumn migration occurs in the latter half of October.

12. Canada Goose. Branta canadensis (Linnaeus).

Canadensis is not found in the park during the summer, but the birds are commonly observed migrating through the district

in spring and autumn. Flocks occasionally come down on the lakes especially the two larger lakes -- Tawayik and Astotin. It is clear that the forest-enclosed lakes in the park are not very attractive to geese on migration. A few miles to the east, in a lower and more open locality, Beaverhill Lake is visited by many thousands of them. These birds are among the earliest migrants, first appearing early in April. Autumn departures take place late in October.

13. White-fronted Goose. Anser albifrons (Scopoli).

Like the Canada goose, this species passes over the park with fair regularity in spring and autumn, but rarely alights to rest or feed.

14. Lesser Snow Goose. Chen hyperborea (Pallas).

Park personnel have occasionally noted these geese during migration, sometimes in association with the two next preceding species. Over the region as a whole, snow geese appear to be more abundant than albifrons during the seasonal migrations, but less so than canadensis.

15. Ross's Goose. Chen rossii (Cassin).

Ross's goose is comparatively rare in central and east-central Alberta. The main route of its flights between the wintering grounds in California and Perry River, near Queen Maud Gulf in the Western Arctic, lies farther west via Athabasca Delta. Randall reports that a few individuals occasionally migrate over Elk Island Park.

16. Common Mallard. Anas platyrhynchos Linnaeus.

Mallards are present in large numbers during migration and are also common as breeders. They were noted on all the larger

lakes visited and at numerous woodland ponds and sloughs. Among the ducks of the park, the mallard is probably exceeded in abundance only by the lesser scaup.

Owing to former acute drought conditions in the country surrounding the Beaver Hills (where hundreds of sloughs and lakes dried up), ducks were much more plentiful in the better lakes of the park from 1935 to 1938 than subsequently. They were attracted there by good water and feed, lacking elsewhere in vast tracts of the prairie region. During this period the park became a genuine concentration area for waterfowl. By 1940, with abundant spring runoff and rainfall, lakes and sloughs in the great plains of central Alberta began to fill up again with the result that the waterfowl population spread out over a much wider territory and numbers in the park fell off very markedly.

Astotin Lake is the best duck breeding area in the park. On several occasions, between 1934 and 1938, the author saw the surface of its waters actually darkened with masses of waterfowl totalling many thousands and representing most prairie species, including mallards and most of the other species of ducks hereafter described.

The mallard generally arrives in the park about April 1. Most species of wild ducks reach the area early in April and remain until late October or early November.

17. Gadwall. Anas strepera Linnaeus.

Gadwalls are moderately common summer residents, although not nearly as numerous as mallards or lesser scaups. They nest in the semi-open woodlands adjoining many of the water



areas, and upon islands in Astotin Lake.

18. Baldpate. Mareca americana (Gmelin).

This species occurs in moderate abundance. It was seen about Astotin Lake in greater numbers than elsewhere. It nests in the surrounding shrub and tree areas, often in heavy woods at some distance from water.

19. American Pintail. Anas acuta Linnaeus.

Only two of this species were seen by the author -- one at Astotin Lake on July 26, 1940, and another at Tawayik Lake three days later. Obviously few resort to the park. Randall notes that the species was unusually scarce in the summer of 1937, but that a few nested in the area. In August, 1943, a few were seen at Astotin Lake.

20. Green-winged Teal. Anas carolinensis (Gmelin).

Observations indicate that this species is still very scarce, not only in the park, but also throughout much of the southern part of the Prairie Provinces. Only rarely are they even moderately common. A few were seen during late July, 1940, in Astotin Lake; no doubt a few nested in the neighbourhood, but no juveniles were observed.

21. Blue-winged Teal. Anas discors (Linnaeus).

Discors is found in greater numbers than the preceding species practically everywhere in Western Canada but can be considered only moderately common. Some were noted at various points in the park, including Tawayik, Oster and Astotin Lakes. A pair was flushed at a pond east of Moss Lake. It nests in grassland and brush areas, and in woodlands adjacent to lakes and ponds.

22. Shoveller. Spatula clypeata (Linnaeus).

Randall speaks of the species as "common" in the area during the summer of 1937. Only a few were noted there in July, 1940, and most of these at Astotin Lake. Clearly, a marked decline in numbers occurred in the three-year interval. It was noted however, in later years, that they do often breed around the lakes of the park.

23. Redhead. Aythya americana (Eyton).

This species was fairly common at Astotin Lake, where an adult was seen with six young. A few were observed at other points. It nests locally in dense growths of cattail along the lake shores.

24. Canvas-back. Aythya valisineria (Wilson).

Canvas-backs were somewhat more numerous than the redheads in the summer of 1940. The majority were observed at Astotin Lake; others were noted in Tawayik and Mud Lakes. They breed locally in the same type of habitat as redheads. Several adults with broods of young were noted along the north shore of Astotin Lake on July 30, 1940, and others were seen in the same area during mid-August, 1943.

25. Lesser Scaup Duck. Aythya affinis (Eyton).

According to the writer's observations, this is the commonest duck in the park, although in 1937, Randall listed the mallard as the most abundant. Affinis was seen at many points, but was apparently most numerous at Astotin Lake. Adults and well-grown young of the year, resided there in hundreds and formed "rafts" of rather large size. They are partial to broad channels, sequestered bays and the lee of islands. As a rule the species breeds locally in large numbers and is said to nest commonly on the islands in Astotin Lake.

26. American Golden-eye. Bucephala clangula (Bonaparte).

Only two were noted by the writer, both on Astotin Lake on July 28, 1940. Randall says that a fair number nested in that locality during the summer of 1937.

27. Barrow's Golden-eye. Bucephala islandica (Gmelin).

This species was recorded in the park by Randall in 1938. It is of rare occurrence, seen evidently only during migration.

28. Buffle-head. Bucephala albeola (Linnaeus).

The buffle-head was listed by Randall in 1937 as "common". During the 1940 investigations very few were noted, and thus it would seem that the local summer status of this species also changed quite perceptibly in the intervening three years. It doubtless nests in suitable places throughout the park.

29. White-winged Scoter. Melanitta deglandi (Bonaparte).

Moderate numbers (some with young) were seen in Astotin Lake, where they nest on the islands. A pair was also noted at Mud Lake. There is only a sparse population of this species in the park.

30. Surf Scoter. Melanitta perspicillata (Linnaeus).

This species was not personally noted. Randall records the observation of three surf scoters in 1937 on Astotin Lake, where it nested on the islands. As far as is known, these birds have not been seen elsewhere in the park.

31. Ruddy Duck. Oxyura jamaicensis (Gmelin).

The ruddy duck is fairly common. It was observed at several points, chiefly in Astotin Lake. The species nests throughout the park wherever suitable, dense stands of cattail, marsh grasses,

and sedges provide the necessary sites. Except in a few exceptional localities, these little ducks are still scarce throughout the southern part of the Prairie Provinces.

32. Red-breasted Merganser. Mergus serrator (Linnaeus).

This Arctic-nesting species is noted in the park only occasionally and in small numbers during spring and autumn migration.

33. Goshawk. Accipiter gentilis (Wilson).

There is apparently no record of this raptor in the park during the warmer months of the year, but a few are known to visit there at times between late September or early October, and the end of March.

34. Sharp-shinned Hawk. Accipiter striatus (Wilson).

The usual period of summer residence in the Prairie Provinces of this hawk is from about mid-April to mid-September. Like the next preceding species it does not appear in the park during the warm weather months but it is seen there occasionally in spring and autumn.

35. Red-tailed Hawk. Buteo jamaicensis (Gmelin).

Randall states that, in his opinion, there were probably about 60 nesting pairs of this hawk in the park during the summer of 1937. Unquestionably it is the commonest bird of prey everywhere in the Beaver Hills. During the investigations of 1940 and later, varying numbers of them were seen every day, especially in the hilly section eastward from Moss and Astotin Lakes. Average date of spring arrival is approximately April 10. They are observed occasionally as late as the first part of October.

36. Broad-winged Hawk. Buteo platypterus (Vieillot).

A single individual was seen near Tawayik Lake on July 28, 1940. Evidently it occurs in this district only very sparingly. As Randall also saw the species occasionally in the summers of 1937, 1938, and 1939, it probably nests in the park.

37. American Rough-legged Hawk. Buteo lagopus (Brunnich).

Randall reports that a considerable number of these hawks pass over the park and surrounding country during migration. The earliest migrants usually appear during the first week of April. During the autumn migration stragglers may be seen until late October.

38. Golden Eagle. Aquila chrysaetos (Linnaeus).

The golden eagle was not seen by the author in the district. A pair was reported by Randall to have passed the winter of 1936-37 in the park and the birds again appeared there in November, 1937. No more recent records are available.

39. Bald Eagle. Haliaeetus leucocephalus (Linnaeus).

The status of this species is evidently very similar to that of the immediately preceding, except that no definite records of its occurrence in the park during the colder months of the winter are available. It has been observed on a number of occasions during the spring, autumn, and early winter.

40. Marsh Hawk. Circus cyaneus (Linnaeus).

On all occasions when wildlife observations were made in the park, the marsh hawk was only sparingly represented. During July, 1940, only four were sighted, three in the prairie-parklands of the southern area and the other at Astotin Lake. Two were noted in the former locality near Mud Lake in August, 1943.



Average date of arrival is April 15. Some individuals remain until late October or early November.

41. Osprey. Pandion haliaëtus (Linnaeus).

Two examples of haliaëtus were observed by Randall at Astotin Lake in the summer of 1937, but the species was not observed in the park during the next two years. It was not seen there by the author in 1940, or on subsequent visits.

42. Duck Hawk. Falco peregrinus Tunstall.

It is doubtful if this powerful predator visits the park except comparatively rarely during the spring and autumn migration periods while en route to and from its northern nesting-grounds. Randall mentions having observed it several times, at these seasons only, during the year 1937.

43. Pigeon Hawk. Falco columbarius Linnaeus.

In the summer of 1937, two pairs of pigeon hawks were observed in the park by Randall. One of them was found nesting in a white spruce on an island in Astotin Lake. On July 25, 1940, the author saw one flying over a muskeg near Spruce Island Lake and two days later the same hawk, or another of the same species, was noted again in this locality. These circumstances suggested that a pair was nesting in the vicinity.

44. Sparrow Hawk. Falco sparverius Linnaeus.

This falcon was seldom observed and not for days at a time, despite considerable travel. It nests in old flicker holes in various parts of the park and surrounding country. The birds arrive about mid-April and depart in late September or early October.

45. Ruffed Grouse. Bonasa umbellus (Linnaeus).

This upland game bird is a permanent resident. During the investigations of July, 1940, only one ruffed grouse was met with in the park and on short subsequent visits none was observed. Clearly the species was at a very low level in its periodic cycle of abundance. Randall considered that it was at the peak of the cycle in 1937. It would appear that a crash decline occurred in the region during the short interval between 1937 and 1940.

46. **Sharp-tailed Grouse.** Pedioecetes phasianellus (Linnaeus).

The "sharp-tail" was moderately common in 1940. From three or four to about a dozen were observed in the park nearly every day. They were usually in small flocks on the scattered patches of prairie, but a few were flushed from time to time in wooded areas. In regard to the species in 1937, Randall remarked: "Not plentiful, but apparently increasing." It is apparent that the birds were holding their numerical status well, or actually increasing, during the period when the ruffed grouse was undergoing a sharp decline in numbers. Like the latter and like the next succeeding species, the sharp-tailed grouse is a permanent resident.

47. **European Partridge.** Perdix perdix (Linnaeus).

The author did not observe this bird within the park, but a small flock was noted on farmland a short distance to the east. Randall saw two coveys in the park in 1937.

48. **Sandhill Crane.** Grus canadensis (Linnaeus).

Regarding this species Randall remarks: "Cranes pass over the park in large numbers, spring and autumn." Not having been present during the time of their migrations, the

author did not record them. They usually migrate through the district during the last week of April and again during early September and early October.

49. Sora Rail. Porzana carolina (Linnaeus).

This is a fairly common summer resident. Its familiar calls were heard at Tawayik, Oster, and Astotin Lakes, and at smaller bodies of water to the east. While no nests were found, there is no doubt that the species is a regular breeder within the park.

50. Yellow Rail. Coturnicops noveboracensis (Gmelin).

In the list of birds of the park compiled by Randall, he remarks on the yellow rail as follows, "Seen twice in September. It is probably more plentiful than it appears to be". These records were apparently obtained at Astotin Lake in 1937.

51. American Coot. Fulica americana Gmelin.

Numbers of these birds were seen on all visits to the park from 1940 to 1945. They were common on most of the larger lakes, but the greatest numbers were observed at Astotin Lake where there were frequent "rafts" of coots in the bays during August and early September. They nest commonly in suitable marginal areas of park lakes.

52. Semipalmated Plover. Charadrius hiaticula Linnaeus.

This species was recorded by Randall as being fairly common on the sandy shores of Astotin Lake during the spring migration which usually takes place during the third week of May.

53. Killdeer Plover. Charadrius vociferus (Linnaeus).

Curiously enough, the author did not see a single example of this common and widely distributed bird. Randall says

that many small flocks are seen passing over on the spring migration. It is a common breeder in Miquelon and Ministik Lake Bird Sanctuaries to the south and also at Beaverhill Lake to the southeast. The species arrives in early April and departs during the latter part of September.

54. ~~Black-bellied~~ Plover. Squatarola squatarola (Linnaeus).

During the regular migration periods Randall observed this species on several occasions. Moderate numbers are said to land and feed on the muddy shores of some of the lakes and ponds within the park. The first individuals appear about May 10, and the height of the northward migration is reached during the third week of that month. A few laggards remain until early June. Autumn migrants may be noted in some areas from the latter part of August until early October.

55. Wilson's Snipe. Capella gallinago (Linnaeus).

According to Randall, this is a common summer resident. Only one was observed by the author during the 1940 investigations in the park. It was flushed from grass along Tawayik Lake. The species was seen more frequently in previous and in later years about the many lakes in the highlands to the south of the park. The earliest arrivals and the latest departures take place about late April and mid-October, respectively.

56. Spotted Sandpiper. Actitis macularia (Linnaeus).

This familiar bird is well distributed and breeds regularly along the shores of the larger lakes and some of the small streams of the park. More were seen at Astotin and Tawayik Lakes than elsewhere within the park boundaries. The

birds normally arrive about May 5, and apparently depart in early September.

57. **Solitary Sandpiper.** Tringa solitaria Wilson.

The author did not observe this sandpiper during the investigations of 1940, but saw one at Astotin Lake in early August, 1945. Certainly it occurs but rarely in the park and elsewhere in the Cooking Lake Highlands. Randall noted the species in the park on several occasions during the summers of 1937 and 1938; and although no nest was discovered, he concluded that a few pairs may breed there. Arrival and departure dates appear to be about the same as those of the next preceding species.

58. **Western Willet.** Catoptrophorus semipalmatus (Gmelin).

Only one record of occurrence of the western willet in the park has been obtained. Randall states that a pair frequented the west shore of Astotin Lake, near park headquarters, during the first two weeks of May, 1937. This species, like most of the waders, appears much more frequently and in larger numbers in the lower and more open country surrounding the Cooking Lake Highlands. Beaverhill Lake, which is comparatively near the park, is well known to attract thousands of shorebirds during the spring and autumn migrations. Average date of the willet's spring arrival is approximately May 1.

59. **Greater Yellow-legs.** Totanus melanoleucus (Gmelin).

These birds and the next succeeding species are the earliest waders to reach the park in the spring after the disappearance of ice in the lakes. The average date of arrival is about April 22. They are said to remain for a few days to feed along the muddy shores before continuing on to the north. Moderate numbers again visit the area during the autumn, when their stay is more prolonged. A few linger



until well on into October.

60. Lesser Yellow-legs. Totanus flavipes (Gmelin).

This species is commonly observed around many of the lakes and ponds during the summer. The largest flock noted, consisting of 10 individuals, was met with along the shore of Astotin Lake on July 28, 1940. The fact that it is a consistent and continuous spring and summer resident suggests that it is a regular breeder in the park. Immature birds capable of flight have been seen several times during the months of July and August. The first arrivals usually take place about April 20 and latest departures during the third week of September.

61. Pectoral Sandpiper. Erolia melanotos (Vieillot).

Pectoral sandpipers were not observed in the park by the author who had no opportunity to look for them during migration periods. Randall noted the species in the park on a number of occasions during the spring and autumn. The author has observed them as an abundant migrants in late August and early September at nearby Beaverhill Lake. Migratory movements of melanotos are very similar to those of the preceding species, but a few stragglers may be seen as late as mid-October.

62. Baird's Sandpiper. Erolia bairdi (Coues).

The remarks referring to the next preceding species apply also to this one. Randall found bairdi to be a fairly common visitor during migration, at Astotin Lake and some other lakes within the park.

63. Least Sandpiper. Erolia minutilla (Vieillot).

This diminutive wader is listed by Randall as a common migrant. Owing to the exceptionally attractive character of the

shoreline, the species is seen most frequently at Astotin Lake. Most of the small sandpipers are associated during migration. Spring movement is chiefly during late May and early June, and south-bound flights occur in late August and early September.

64. Dowitcher. Limnodromus griseus (Gmelin).

These birds are more or less abundant visitors to the park in both spring and autumn, appearing in larger flocks during the latter season. The peak of the spring migration occurs during the third week of May. First autumn arrivals may be as early as mid-August. Maximum numbers are reached during September and a few linger until about mid-October.

65. Stilt Sandpiper. Micropalama himantopus (Bonaparte)

Randall saw two of these sandpipers feeding in association with a group of dowitchers at Astotin Lake in the latter part of May, 1937. This species is a fairly common migrant at some of the lakes on the open plains immediately to the east of the Beaver Hills. It is apparent that this adjacent territory is much more attractive to most species of shorebirds than the wooded uplands of which Elk Island National Park is a part.

66. Semipalmated Sandpiper. Ereunetes pusillus (Linnaeus).

This species is said by Randall to be a rather rare visitor to the park during migration. It is usually found associating with flocks of Baird's sandpipers feeding along the margins of lakes and ponds.

67. Marbled Godwit. Limosa fedoa (Linnaeus).

A single individual was seen by Randall in July, 1937. One was noted by the author a short distance northeast of the park, between Chipman and Lamont, in August, 1943.

68. Sanderling. Crocethia alba (Pallas).

"A few drop in on their migratory journeys to feed along the edges of the lakes" (Randall). The author found it a fairly common migrant at Beaverhill Lake in late August and early September.

69. Wilson's Phalarope. Steganopus tricolor Vieillot.

Several were seen on Astotin Lake on July 30, 1940. None was seen elsewhere. The species is listed by Randall as a fairly common summer resident within the park, where it undoubtedly breeds.

70. Herring Gull. Larus argentatus Pontoppidan.

The herring gull is an infrequent visitor to this territory. An occasional solitary bird, or a small flock, may appear temporarily at some of the lakes during the spring and autumn. It seems to be a somewhat more frequent inhabitant of the lakes to the west and south of the park.

71. California Gull. Larus californicus Lawrence.

Californicus was found to be sparingly distributed at the larger lakes of the park during July, 1940. A few were seen at Astotin Lake during August, 1943, and August, 1945. It is a fairly consistent ~~inhabitant~~ during the **summer months** but is **not known to nest at any of** the lakes.

72. Ring-billed Gull. Larus delawarensis Ord.

This gull seems to occur only in moderate numbers. In the summer of 1940 it was noted at Astotin, Tawayik, and Oster Lakes and at a small lake to the northeast of Moss Lake. It is not known to breed in the park.

73. Franklin's Gull. Larus pipixcan Wagler.

Randall remarks that this species becomes abundant at

some of the lakes of the park during the spring; the time of arrival is about April 20. It was not seen by the author in July, 1940, but a few were noted at Astotin Lake in August, 1943. After the nesting season, single stragglers, or small flocks, may appear from time to time. Owing to the absence of extensive marshes, the species does not nest in the park. Apparently most, if not all, of these gulls leave the region during the third week of September.

74. **Bonaparte's Gull.** Larus philadelphia (Ord).

In late July, 1940, these gulls, including some immatures of the year, were seen in moderately large numbers at Astotin Lake. A few were noted at several other lakes. Randall says, "Fair numbers were seen in the spring, and in July they again visited us in large numbers ..... Found nesting in 1938 and 1939."

75. **Common Tern.** Sterna hirundo Linnaeus.

Various observations indicate that the common tern rarely, if ever, visits the park during the summer months, but that a few occur there during the migration periods of spring and autumn. The birds normally appear in spring in early May and depart in autumn in early September.

76. **Black Tern.** Chlidonias niger (Linnaeus).

This species is common around most of the lakes, and abundant in some localities. Large numbers were observed along the marshy fringes of Astotin Lake and somewhat smaller numbers at Tawayik, Mud, and Oster Lakes. In all suitable situations the species is a common breeder. The average arrival date is about May 20. Most of the birds migrate south in late August, but a few remain until

early September.

77. Mourning Dove. Zenaidura macroura (Linnaeus).

The mourning dove was observed only casually during the investigations. One was noted near Spruce Island Lake on July 27, 1940, and two in the neighbourhood of Astotin Lake on the 29th and 30th, respectively. Another single was seen in the southern part of the park in August, 1945. The species is generally uncommon throughout the Cooking Lake Highlands and other parts of central Alberta. They begin arriving during the last week of April and the last are usually noted leaving in late September or early October.

78. Great Horned Owl. Bubo virginianus (Gmelin).

This is a fairly common permanent resident. Single birds were seen on four different occasions in various parts of the park during late July, 1940 and another was seen in August, 1943.

79. Snowy Owl. Nyctea scandiaca (Linnaeus).

The snowy owl is usually a rare winter visitor to the park and surrounding country. The wardens have mentioned its presence on several occasions. Usually the records are of solitary birds noted infrequently, but the species may become more numerous at intervals of several years, when large invasions sweep into the Prairie Provinces from the Arctic regions.

80. American Hawk Owl. Surnia ulula (Linnaeus).

The status of this owl in the park is much the same as that of the next preceding species; it is normally rare and apparently occurs only during the winter months. Records for the region at large reveal that the species is not as common as formerly,



has become more erratic in its appearances, and is consequently less frequently observed.

81. Great Gray Owl. Strix nebulosa (Forster).

There is a single record by Randall---a bird observed near Astotin Lake in March, 1937.

82. Long-eared Owl. Asio otus (Lesson).

One was noted on July 26, 1940, flying over a grassy tract not far from Adamson Lake. The species is apparently scarce in the park but probably nests there, as individuals have been seen occasionally during the summer.

83. Short-eared Owl. Asio flammeus (Pontoppidan).

This species was not observed by the author. According to Randall, it was seldom seen in the park during 1937. He saw individuals during the summer, so concluded that the birds may nest there. In the region as a whole this is a commoner species than A. otus.

84. Richardson's Owl. Aegolius funereus (Lesson).

There is one record of this species by Randall a bird observed on November 17, 1937.

85. Saw-whet Owl. Aegolius acadicus (Gmelin).

Randall noted one of these little owls in the park on August 10, 1937. This is the only record for the area.

86. Nighthawk. Chordeiles minor (Forster).

A few were observed in various parts of the park, where the species no doubt nests. They are occasionally flushed from the ground during the day. In some localities they are relatively common during the evening hours and they are sometimes seen flying at other times of the day. The species usually arrives in central

Alberta about May 24, and departs in early September.

87. Ruby-throated Hummingbird. Archilochus colubris (Linnaeus).

This diminutive creature has been occasionally noted in the park. Randall frequently saw a pair that visited the flower beds at park headquarters during the summer of 1937. He believes the birds nested in the neighbourhood. One was observed by the author at Astotin Lake in mid-August, 1945.

88. Belted Kingfisher. Megaceryle alcyon. (Linnaeus).

Kingfishers may be seen occasionally at Astotin Lake and perhaps at other lakes in the park. This species is by no means common, is characterized by spotty distribution, and may easily be overlooked by the casual observer. Whether or not it nests in the park is not yet known. It arrives in the district about May 10, and sometimes at least, remains until late October.

89. Yellow-shafted Flicker. Colaptes auratus (Linnaeus).

The yellow-shafted flicker is one of the more familiar birds in the park, being commonly and rather uniformly distributed there. It breeds there freely, as may be seen by numerous nesting holes in aspen poplars and the immatures of the year are often seen in the latter part of the summer. The species arrives about mid-April and leaves in late September or very early in October.

90. Pileated Woodpecker. Dryocopus pileatus (Linnaeus).

Two pairs were noted in the park in 1937 by Randall, who remarks that, judging by the number of old nest holes, the species probably was common at one time.

91. Yellow-bellied Sapsucker. Sphyrapicus varius (Linnaeus).

This widely distributed species is fairly well represented and nests throughout the area. According to ob-

servations made at various times, the birds are most numerous in the central and northern portions of the park. The first spring migrants are seen about May 10, and departure takes place during the latter part of September.

92. Hairy Woodpecker. Dendrocopos villosus (Linnaeus).

Villosus is a moderately common permanent resident that habitually ranges throughout the greater part of the park. During the investigations in the summer of 1940 the average number of individuals recorded daily was about three. Most of the birds were encountered in mixed forest of conifers and poplars.

93. Downy Woodpecker. Dendrocopos pubescens (Linnaeus).

In common with the next preceding species, the downy woodpecker is a permanent resident in the park, but the population of this species is decidedly smaller, as it is in many large northern areas. During investigations in the park only casuals were seen and these infrequently.

94. Arctic Three-toed woodpecker. Picoides arcticus (Swainson).

Four pairs were noted by Randall during the winter and spring of 1937. The species was not observed by the author in the area. Evidently it does not occur during summer in the Beaver Hills, but in the autumn it usually appears in the second half of September.

95. American Three-toed Woodpecker. Picoides tridactylus (Linnaeus).

This woodpecker is presumably an autumn and winter visitor only, invading the territory in those seasons from breeding grounds farther north. Referring to its autumn and winter status in the park, Randall remarks that it is somewhat more common than P. arcticus.

96. Kingbird. Tyrannus tyrannus (Linnaeus)

This species is common and nests throughout the district during the summer. Numerous kingbirds were observed every day during the investigations in the park. The birds usually appear about May 23, and leave about mid-September.

97. Crested Flycatcher. Myiarchus crinitus (Linnaeus).

It is stated by R.D. Ussher (Can. Field-Nat., 54:5:74-75) that he found this flycatcher at Astotin Lake in July, 1939. He heard one on July 16, and saw one twice on Long Island in Astotin Lake. This is a most unusual record and apparently the only one of occurrence of the species in Alberta. As far as is known, the nearest points where crinitus was previously recorded were Eastend, and Moose and Duck Mountains, Saskatchewan. It was not seen in Elk Island Park by Randall or the author.

98. Eastern Phoebe. Sayornis phoebe (Latham).

The familiar eastern phoebe is a moderately common summer resident in the park, but its distribution is localized apparently because of its preference for nesting sites under bridges and around buildings. Despite this pronounced preference, a few pairs do nest in the woodlands of the park. The period of "summer" residence extends from about April 20, until the latter part of September.

99. Say's Phoebe. Sayornis saya (Bonaparte).

This species is not a summer resident of the park, but a number have been recorded there as migrants to and from the north. The principal nesting ranges of saya lie to the south, west, and northwest. It arrives early in May and departs about mid-September.

100. Yellow-bellied Flycatcher. Empidonax flaviventris  
(Baird and Baird).

Randall lists this species as a moderately common spring migrant arriving in late May. South-bound migrants may be present in late August and early September.

101. Alder Flycatcher. Empidonax trailli (Audubon).

Trailli is well represented in suitable localities throughout the park and doubtless nests wherever found during late spring and summer. As the vernacular name implies, it is essentially an inhabitant of lowland tracts along lakes and streams grown to alders and willows. Sometimes the species resorts to a brule environment in the vicinity of water. It inhabits the region from late May until the latter part of August.

102. Least Flycatcher. Empidonax minimus (Baird and Baird).

This little flycatcher is one of the commonest and most evenly distributed of the park's birds. It is highly characteristic of the pure aspen poplar woods so common in this district, and it also nests in mixed forest of conifers and poplar where poplar is dominant. The average time of spring arrival is about May 16. It leaves during the early part of September.

103. Western Wood Pewee. Contopus richardsonii (Swainson).

Over most of the area under review, richardsonii was either sparsely represented or absent. One or two widely separated males were heard singing near by every day during the July investigations of 1940. Such observations were most often made in the woods within a few miles south and east of Astotin Lake. The song of this species is easily distinguishable from that of the eastern wood pewee (Contopus virens (Linnaeus)), whose breeding range is far distant to the southeast. The duration of summer

residence is similar to that of the preceding species.

104. Olive-sided Flycatcher. Nuttallornis borealis (Swainson).

During the investigations of July, 1940, the author failed to locate this species in the park, but one was observed near Tawayik Lake in August, 1943. Randall reported that he found four pairs nesting in this area during the summer of 1937. In view of this it seems evident that these flycatchers, while not rare, have very localized breeding grounds, and may be easily overlooked. It is also possible that the numerical status of the birds declined between 1937 and 1940. Migration dates are much the same as those of the least flycatcher.

105. Horned Lark. Eremophila alpestris (Linnaeus).

These birds were not seen by the author in the park or its vicinity. Randall remarks: "While no horned larks nest in the park, several small flocks were seen during the spring migration and these, in my opinion, were O (E) a. articola." They arrive early in the spring (most of them in March), and depart about mid-October.

106. Tree Swallow. Iridoprocne bicolor (Vieillot).

This is a common summer resident. A number of them were observed daily wherever investigations were conducted. On July 28, 1940, a flock of about 75 was seen between Tawayik and Astotin Lakes and a few days later much larger flocks were seen in the park and adjacent territory. Large flocks were also noted in the park during August, 1943, and August, 1945. Local residents stay from late April to early September.

107. Bank Swallow Riparia riparia (Linnaeus).

Probably owing to the absence of suitable nesting

sites, riparia has not been seen in the park during the summer, but a few are occasionally observed passing through at the time of migration. Large breeding colonies are often seen in clay cut-banks in neighbouring districts of central Alberta. Average date of arrival is approximately May 10. The birds leave the region in late August and early September.

108. Barn Swallow. Hirundo rustica Boddaert.

Two barn swallows were seen on July 30, 1940, flying across the highway at the southern boundary of the park. None was noted farther north in the park, nor are they known to nest there. The species is a fairly common inhabitant of the farming districts and of the hilly land around the park. They arrive in spring at about the same time as the tree swallows, but leave in autumn about a fortnight later.

109. Cliff Swallow. Petrochelidon pyrrhonota (Rafinesque).

No cliff swallows were seen by the author in the park or its vicinity. They are said by Randall to occur sparingly during the spring migration. In this region their period of summer residence is approximately the same as that of the tree swallows.

110. Purple Martin. Progne subis (Linnaeus).

Individuals, pairs, or small breeding colonies of purple martins were seen almost every day in various parts of the park. In some places they were moderately common. In unmodified primitive areas the birds nest in hollow trees, usually making use of abandoned nest holes of the yellow-shafted flicker and the pileated woodpecker. They usually appear in early May and remain until late August or early September.

111. Canada Jay. Perisoreus canadensis (Linnaeus).



Small numbers of these jays inhabit the park throughout the year, chiefly confining themselves to places where conifers are most abundant. They have a preference for spruce-grown tracts bordering the lakes and large muskegs occupied by black spruce and tamarack. Such habitats are commonest in the northern half of the park, where Randall found six nests of the species in March, 1937.

112. Blue Jay. Cyanocitta cristata (Linnaeus).

One or two blue jays were noted nearly every day during the investigations in the park. The species is resident throughout the year and so must breed locally. Local distribution is fairly uniform except in the more open woodland-prairie in the southeast.

113. American Magpie. Pica pica (Linnaeus).

This is a fairly common resident. It was seen in many parts of the park, and the Cooking Lake Highlands to the south and southwest. It probably nests in the park.

114. Common Crow. Corvus brachyrhynchos Brehm.

The crow is conspicuously common and breeds in all parts of the park. On July 30, 1940, a flock of more than 50 was observed between Astotin and Tawayik Lakes and another flock of about 30 was seen the following day in the vicinity of Moss Lake. In 1943 and 1945 there seemed to be about the same number of crows as in 1940 and again numerous individuals and several flocks were seen. Within the past two or three decades crows have gradually become more abundant in the park and elsewhere in central Alberta than they were in the early part of the century. The species arrives in late March or early April and departs about the middle of October.

115. Black-capped Chickadee. Parus atricapillus (Linnaeus).

The black-capped chickadee is a familiar permanent resident of almost all parts of the park. It was most frequently observed by the author in the north part around Astotin Lake. It seems to prefer mixed forest cover to pure stands of aspen or balsam poplar.

116. ~~Hudsonian~~ Chickadee. Parus hudsonicus Forster.

Unlike the next preceding species, hudsonicus is unquestionably rare. It was not seen by the author during the summer in the park or in the adjacent highlands. The more conspicuous Canadian Zone "islands" of this territory would seem to meet adequately all the requirements of this truly boreal species. That they do so to some extent is shown by the fact that Randall discovered a nesting pair in a coniferous forest area some distance from Astotin Lake in the summer of 1937. This, however, is the only summer record. A regional movement from northern nesting grounds takes place in winter as shown by the fact that hudsonicus is visibly more common in the park at that time.

117. Red-breasted Nuthatch. Sitta canadensis Linnaeus.

This bird was not seen by the author. Randall says it is usually common during migration and that a few pairs nest in the park. It is quite rare, however, in summer. The first immigrants are observed about mid-April. The southward movement in autumn is gradual and prolonged, extending through October to early November.

118. Brown Creeper. Certhia familiaris Linnaeus.

The brown creeper is evidently even more scarce in the park than is the next preceding species, since there is no record of summer occurrence or evidence that many migrants visit the area.

Randall states that it is a rare winter visitor. It seems to withdraw from this region in late April and early May and to re-appear during the latter part of October. A few of the species reside throughout the year in the coniferous woods a short distance west of the park.

119. House Wren. Troglodytes aedon Vieillot.

The investigations in the park revealed that this species is a common summer resident, with relatively uniform distribution. It is an aggressive and confiding bird, with a tendency to nest about buildings, but it is very adaptable and may nest in remote parts of the wilderness. During the nesting season it sings persistently; its familiar nuptial song is heard until late July or early August. It appears in the middle of May and remains until the latter part of September.

120. Long-billed Marsh Wren. Telmatodytes palustris (Wilson).

Scattered individuals were seen in several parts of the park, including Astotin and Mud Lakes and a small, marshy pond east of Moss Lake. The species doubtless occurs elsewhere in the park and nests where found. The chuckling, staccato notes of its song are among the most characteristic sounds of the cattail marshes. The males are notably persistent singers throughout the nesting season, after which there is a gradual reduction in vocal depth and frequency until the song period ends in the early half of August. The species arrives about mid-May and is occasionally seen as late as early October.

121. Catbird. Dumetella carolinensis (Linnaeus).

The Catbird is a moderately common summer resident, with restricted local distribution. Many parts of the park were

examined in 1940 and later years without disclosing the presence of the species. They favour nesting sites in close proximity to buildings, but also nest readily in primitive areas. Average date of spring arrival is May 28. Most of the species seem to leave in the latter part of September, but a few remain until October.

122. American Robin. Turdus migratorius Linnaeus.

These well-known and sociable birds are more or less abundant throughout the park. They are very hardy with early spring arrival and late autumn departure dates (approximately April 5, and October 20, respectively). Since they are rather confiding in nature, they commonly nest near buildings. Many pairs nest in semi-open woodlands showing that they have also a decided preference for that type of environment.

123. Varied Thrush. Ixoreus naevius (Gmelin).

Randall saw one of these thrushes in the park in early October, 1937. This may be regarded as a rare extralimital occurrence.

124. Hermit Thrush. Hylocichla guttata (Pallas).

The hermit thrush is reported by Randall to be quite common on migration. He thinks it probable that a few may nest in the park. No evidence of the occurrence of the species was obtained by the author during July and August investigations nor does he know of a summer record for the Cooking Lake Highlands. Approximate dates of earliest arrival and latest departure are May 1, and October 15, respectively.

125. **Olive-backed Thrush.** Hylocichla ustulata (Nuttall).

The status of this species in the park is similar to that of guttata. It occurs in fair numbers during the two

seasonal migrations, but is not known to nest anywhere in the park or in adjacent territory. The times of spring arrival and autumn departure are approximately May 10, and September 25, respectively.

126. Veery. Hylocichla fuscescens (Stephens).

This thrush occurs with fair frequency over nearly all the park during the summer months. Having a decided preference for dense deciduous woods, it naturally shuns open country. It is the only member of the genus known to nest in the park. The song season normally lasts until about mid-July, but some males sing sporadically until late in the month and occasionally into early August. The average date of spring arrival is the same as that of *ustulata*, but it appears to leave about two weeks earlier.

127. Mountain Bluebird. Sialia currucoides (Bechstein).

Only a few widely separated singles or pairs were met with during the various periods spent in the park. As they are resident throughout the summer and most of the autumn, they unquestionably nest in suitable localities. The southeastern part of the park attracts most of the small population since the species prefers the airy freedom of grassy uplands, prairies, and dry meadows surrounded by semi-open aspen woods. It usually arrives during the first few days of April and departs in mid-October.

128. Townsend's Solitaire. Myadestes townsendi (Audubon).

The Townsend solitaire is evidently an extremely rare accidental as there are only two known instances of occurrence in the park. Both of these records were secured by Randall during October, 1937. Although a sharp watch was kept in later years, the species was not again observed. The habitual breeding range in

Alberta is restricted to the high alplands in the west-central part of the province.

129. Ruby-crowned Kinglet. Regulus calendula (Linnaeus).

Fair numbers pass through the park during migration. Randall states that a few pairs remain to nest, but none was noted by the author. This was probably because most of the investigations were conducted after the song season had ended, when the few resident birds could easily pass unobserved. It is somewhat surprising that the species is not better represented, as numerous apparently ideal potential nesting sites are available in the stands of white spruce around some of the lakes and in the black spruce bogs. The birds appear about April 23, and depart in late September and early October.

130. American Pipit. Anthus spinoletta (Linnaeus).

Not having worked in the park very early or late in the season the author failed to record this species there, but found it to be a common migrant in other parts of the Cooking Lake Highlands. Randall recorded it as being fairly plentiful in the park during migration, in prairies and meadows and along lake shores. During spring migration it tarries in central Alberta during the first two or three weeks of May, and in the autumn from about mid-September until mid-October.

131. Sprague's Pipit. Anthus spragueii (Audubon).

This species is a fairly common although somewhat localized summer resident in the prairie-farmlands region surrounding the Cooking Lake Highlands. It was not seen by the author in the park. Unquestionably it often occurs there as a migrant and according to Randall, it is sometimes a sparse summer

resident. As such the species would be found only on the prairie-lands in the southern part. The average time of spring arrival is May 12. The time of autumn departure is uncertain, but is thought to be about the third week of September.

132. Bohemian Waxwing. Bombycilla garrulus (Linnaeus).

Randall states that the Bohemian waxwing is a fairly plentiful winter visitor in the park. Generally speaking, it appears irregularly in central Alberta from November until April.

133. Cedar Waxwing. Bombycilla cedrorum Vieillot.

This waxwing is common in the park. There is no precise evidence that it breeds there, but there can be no doubt that it does so freely. During the investigations of July, 1940, individuals, pairs, and small, wandering flocks were observed daily in many places. Similar conditions were noted in August, 1943 and 1945, except that flocks were not then so much in evidence. The birds are late breeders in this latitude, deferring nesting activities until late June or early July. The first migrants arrive in late May and a few may stay as late as early October.

134. Northern Shrike. Lanius excubitor Linnaeus.

The nesting range of this species is farther north than central Alberta, and it does not occur in the park during the warmer months. Its status is given by Randall as that of a fairly common winter visitor. The earliest southward migrants usually appear in late October or the early part of November.

135. White-rumped Shrike. Lanius ludovicianus Linnaeus.

This shrike evidently nests in the area, as it is more or less regularly, though not commonly, observed during the summer months. Two were seen in the park in late July, 1940, and



it was sparingly noted in August, 1943 and 1945. These birds appear about April 25, and apparently leave the region very gradually during the early half of September.

136. Blue-headed Vireo. Vireo solitarius (Wilson).

The blue-headed vireo was not observed by the author during the summer investigations. Randall recorded the species in the park as a rare migrant. The first spring arrivals are noted about May 12. Departures take place about mid-September.

137. Red-eyed Vireo. Vireo olivaceus (Linnaeus).

This is a common summer resident which was frequently noted during the investigations in the park. Some males were still in full song up to the early part of August. This species arrives about two weeks later than solitarius, but seems to leave in autumn at about the same time.

138. Philadelphia Vireo. Vireo philadelphicus (Cassin).

This species was observed infrequently in various localities during late July, 1940. As its song season was practically ended, it is quite possible that it was more numerous than it appeared to be. Its period of summer residence extends from late May until early September.

139. Black and White Warbler. Mniotilta varia (Linnaeus).

These warblers were seen only infrequently in different parts of the park during the investigations of late July, 1940. As the song season had ended, probably there was a greater number than the observations indicated. Randall rates the species as a common summer resident. It usually arrives about May 10, and departs during the early half of September.

140. Tennessee Warbler. Vermivora peregrina (Wilson).

This warbler was discovered to be a fairly common summer resident. A few were noted almost daily in various parts of the park, but it appeared to be most plentifully and evenly distributed in central and northern localities where spruce was common. These birds are very persistent singers whose songs are usually heard regularly as late as the end of July or the early part of August. Length of summer residence is from about May 10, until the third week of September; a few may remain a little later.

141. Orange-crowned Warbler. Vermivora celata (Say).

A very close check on the warblers of the park failed to reveal the presence of this species during the summer. The conclusion that it is not present at that time is supported by Randall's lack of summer records. In spring and autumn he found it rather common. It inhabits the region about the same length of time as the next preceding species.

142. Yellow Warbler. Dendroica petechia (Linnaeus).

Without question this is the most plentiful summer resident warbler throughout the park and in surrounding country. Locally it exhibits a preference for mixed shrubs and semi-open deciduous woods, particularly in the vicinity of lakes, streams, and forest glades. It also shows a strong liking for gardens and for shrub areas near human habitations. A fair number of males continue to sing until early August, or even later. On the average, these warblers arrive about May 18, and leave during the first week of September.

143. Magnolia Warbler. Dendroica magnolia (Wilson).

Extensive vigilant observation failed to establish the summer residence of this species in the park although many

localities appear to be well suited for its nesting. It is known to be a fairly common migrant in spring and autumn.

Migrational movements of the species are practically identical with those of the yellow warbler except that many depart in late August.

144. Myrtle Warbler. Dendroica coronata (Linnaeus).

This characteristically boreal species is the earliest of the warblers to reach the park in spring, and it is also the latest to leave in the autumn. Depending upon weather conditions, the vanguard may arrive in late April or early May, whereas the migrational wave of other warblers is at its height in the latter part of May and early June. In autumn the last of the myrtle warblers are usually seen during the early days of October. Only a few pairs of this species nest in the spruce-grown muskegs of the park, the rest going farther north to nest.

145. Black-throated Green Warbler. Dendroica virens (Gmelin).

Virens is one of those rarer warblers seldom met with in central Alberta or farther north. Randall observed it in the park during the spring migration, but remarks that it occurs only rarely. Usually, it is not seen until the last week of May.

146. Black-poll Warbler. Dendroica striata (Forster).

This species has not yet been recorded in the park during the summer months, but eventually a few are likely to be found nesting in the black spruce muskegs, as do a small number of coronata. Numbers of the present species pass through during spring and autumn migrations. The average date of first spring arrival is May 18; autumn migration is about mid-September.

147. Palm Warbler. Dendroica palmarum (Gmelin).

On July 27, 1940, a single male was observed at close range on the border of a spruce muskeg a short distance east of Moss Lake. Another was seen in a similar environment in the central part of the park on August 14, 1943. Randall lists the species as a common migrant and remarks that two pairs were found nesting during the summer of 1937. In hardness these warblers rank next to the myrtle warbler, arriving about May 10, and departing early in October.

148. Oven-bird. Seiurus aurocapillus (Linnaeus).

The infrequent observation of oven-birds in July and August denotes that comparatively few are summer residents in the park. No nests were discovered, although obviously it breeds in this area. The species is more common during migration. Summer residence extends approximately from May 28, to mid-September.

149. Water-thrush. Seiurus noveboracensis (Gmelin).

This species is not known to occur in the park during the summer but commonly migrates through in spring and autumn. The district appears to be suitable for these birds as summer residents, but they favour habitats with fresh, running streams, which are lacking. The water-thrush and the next two species of warblers arrive and depart during the third week of May and about mid-September respectively.

150. Connecticut Warbler. Oporornis agilis (Wilson).

Two of this species were seen in the Astotin-Moss Lake locality between the 26th and the 28th of July, 1940. Others were noted in August, 1943. As the song season of the species had ended, the birds were hard to find. They were probably much more numerous than the above observations seem to indicate. Randall

found nests of a dozen pairs during the summer of 1937, which suggests a fairly numerous summer population.

151. Mourning Warbler. Oporornis philadelphia (Wilson).

During the July observations of 1940 this warbler escaped observation, but a male was seen in mid-August, 1943. Moderate numbers are known to migrate regularly through the area in spring and autumn.

152. Yellow-throat. Geothlypis trichas (Linnaeus).

This warbler is a fairly common summer resident in the park, and is found in numerous localities providing brushy and marshy conditions along lakes and muskeg ponds. The males continue their nuptial songs until late July or early August. The term of summer residence is from about May 20 until the last week of September; occasional records for early October exist.

153. Wilson's Warbler. Wilsonia pusilla (Wilson).

This species was not seen in the park during the summer months, but it is known to be a fairly common migrant through the district. It continues north to nest in the main Canadian Zone forest. Its migration dates are similar to those of the water-thrush and the Connecticut and mourning warblers.

154. American Redstart. Setophaga ruticilla (Linnaeus).

Randall reports the redstart as a fairly common summer resident, and therefore it undoubtedly is a regular breeder. Only three were noted by the author during the July investigations of 1940 and another was recorded in mid-August, 1943. As a migrant it is much more common. In central Alberta the song period apparently terminates about mid-July. Earliest arrivals reach the district about May 12. Like many other warblers this

species departs in the early part of September.

155. English Sparrow. Passer domesticus (Linnaeus).

A few of these birds resort to the park. They are nowhere common except near some of the buildings.

156. Western Meadowlark. Sturnella neglecta Audubon.

This species was observed only once, in a small prairie tract near the south end of the park on July 27, 1940. Obviously it occurs but rarely in the park, although it is common enough in the surrounding country. These brilliant songsters are among the earliest of the passerines to reach the prairies in the spring, arrival dates varying in different seasons from late March to early April. Autumn departure is delayed until late October or even until early November.

157. Yellow-headed Blackbird. Xanthocephalus xanthocephalus (Bonaparte).

This showy blackbird was not seen by the author anywhere in the park during the summer, but Randall saw a few during that season in marshes in the central part. These may have been non-breeding transients, as no nests were discovered. In central Alberta the average date of arrival is May 1, and that of autumn departure is the latter part of September. A few remain until early October.

158. Red-winged Blackbird. Agelaius phoeniceus (Linnaeus).

The "red-wing" is an abundant local breeder in marshes throughout the park. Large numbers were seen in the thick tule and cattail growth of bays in Astotin, Tawayik, and Oster Lakes. They arrive as soon as the marshes are open in the spring (average date of arrival, April 15), concentrate in large flocks in late summer and early autumn, and remain until rather late in the season.

Stragglers are sometimes seen until well on in October, occasionally associated with rusty blackbirds.

159. Baltimore Oriole. Icterus galbula (Linnaeus).

This is a fairly common summer resident. Scattered singles or pairs were noted in many areas, but somewhat more frequently about Astotin Lake than elsewhere, probably because they are attracted by residences and gardens. The average dates of arrival and departure are about May 20 and September 5, respectively.

160. Rusty Blackbird. Euphagus carolinus (Muller).

During migration, the rusty blackbird is a common transient, often appearing during spring and autumn in flocks of a few dozen to hundreds. The larger concentrations are more common in autumn. Like the "red-wings", these birds arrive early in the spring (average date, April 16,) and in autumn they are the latest of the Icteridae to leave, usually during the last week of October. Carolinus was not observed by the author in the park during summer, but Randall found one nesting pair in the season of 1937.

161. Brewer's Blackbird. Euphagus cyanocephalus (Wagler).

These blackbirds are common or fairly common summer residents of the park and a large surrounding region. Distribution is far from uniform; some localities attract numerous nesting pairs, but in others the population is meagre or entirely absent. On the whole, they arrive rather later and leave earlier than the rusty blackbirds, the dates of arrival and departure being the last week of April and the third week of September, respectively. A few linger into October, sometimes in association with rusty blackbirds.



162. Cowbird. Molothrus ater (Boddaert).

This parasitic species is only moderately represented in the park, but occurs in larger numbers in some surrounding prairie-parklands districts. It arrives fairly early in spring--during the latter part of April or early May--but makes a strikingly early departure, few, if any, tarrying beyond the second or third week of August.

163. Western Tanager. Piranga ludoviciana (Wilson).

Randall reported finding three nesting pairs of this species in the park during the summer of 1937. The population is undoubtedly small and may fluctuate to some extent from season to season. None was seen by the author. The species is a relatively common summer resident in the Canadian Zone forest of the Battle Lake district, about 65 miles southwest of the park. The first immigrants appear about May 18; departure apparently takes place in early September.

164. Rose-breasted Grosbeak. Pheucticus ludovicianus (Linnaeus).

The rose-breasted grosbeak is a fairly common migrant and many pairs remain to nest. They were recorded during all visits to the park or adjacent country. The loud song of the species from late May until about mid-July is arresting and unmistakable, although it is thought by many to resemble the robin's. Duration of summer residence is from late May until early September.

165. Evening Grosbeak. Hesperiphona vespertina (Cooper).

Randall refers to this species as a rather scarce winter visitor. As such, it occurs widely in central Alberta.

166. Purple Finch. Carpodacus purpureus (Gmelin).

This delightful songster is a summer resident in small numbers in the park and vicinity. In 1937 Randall recorded several nesting pairs. First spring arrivals are seen about April 23. Most of them appear to go south in the latter part of September, although a few have been seen as late as mid-October.

167. Pine Grosbeak. Pinicola enucleator (Linnaeus).

The pine grosbeak breeds in the boreal forests far to the north of the Beaver Hills and is not found in the park from spring until late autumn or early winter. During winter it becomes a common visitor.

168. Rosy Finch. Leucosticte tephrocotis (Swainson).

Randall remarks, "A bird of this species was seen feeding with English sparrows near the horse barn at headquarters on October 12, 1937, and the three days following." This is a rare extralimital occurrence.

169. Hoary Redpoll. Acanthis hornemanni (Holboell).

This redpoll is seen fairly often in central Alberta during winter, but, in the author's experience, it is quite local in distribution. During the winter of 1937-38, Randall recorded it in the park as a fairly common winter visitor. The birds are rarely noted in unmixed flocks, but occur in association with the next succeeding species. The race referred to is A. h. exilipes.

170. Common Redpoll. Acanthis flammea (Linnaeus).

The status of this redpoll in the park and vicinity is much like that of A. hornemanni but it is usually more abundant, occurs in larger flocks and, in general, is more

widely dispersed. Many flocks are composed solely of common redpolls.

171. Pine Siskin. Spinus pinus (Wilson).

Singles and small groups of these birds were observed in the park with fair regularity during mid-summer, most of them in mixed woods of the centre and north. During the breeding season, at least, siskins are seldom seen in localities lacking conifers. There is no certainty that they nest in this district. Randall says that they arrive in the park during June and remain for several weeks. As a rule, flocks are common during the early half of June and few are seen after late September.

172. Goldfinch. Spinus tristis (Linnaeus).

The goldfinch is a familiar and widely dispersed summer resident in the park and surrounding country, where it breeds regularly in suitable situations. Randall found it nesting in the park during late June and early July. It arrives about June 1, and has usually gone by late September, although a few stragglers may remain until early October.

173. White-winged Crossbill. Loxia leucoptera Gmelin.

Like the redpolls, this species occurs in the park only during winter months. Randall calls it a rather rare winter visitor, but makes no reference as to times of arrival and departure. In some parts of central Alberta it may be seen irregularly from November or early December until May, and a few strays may appear later in the summer.

174. Savannah Sparrow. Passerculus sandwichensis (Gmelin).

This sparrow is a common summer resident. It was noted in all parts of the park where grassy lowlands and potholes occur in the woods. It also inhabits semi-marshy tracts along the lakes

and sloughs, and spruce-tamarack muskegs. The earliest spring migrants reach the district about May 5, and exodus takes place in late September or early October. Some stragglers may remain until about the middle of the latter month.

175. Leconte's Sparrow. Passerherbulus caudacutus (Latham).

Caudacutus is a moderately common resident of the park, but owing to its habitat requirements its distribution is localized. Its favourite haunts are grassy meadows or borderline marshy areas beside streams, lakes, sloughs, and muskegs. Undoubtedly it breeds wherever found during the summer months. The males are normally heard singing until late July or early August. First arrivals are usually recorded during the second week of May. Most departures take place shortly after mid-September, but a rare straggler has been seen in early October.

176. Nelson's Sparrow. Ammodramus caudacuta (Gmelin)

In general appearance and behaviour this sparrow closely resembles the next preceding species, but it is much more scarce. Both occupy the same type of habitat and, because of their similar, almost inaudible, voices, are somewhat difficult to detect. A few widely scattered pairs nest in the park and elsewhere in the Beaver Hills. Apparently spring arrival occurs during the first week of May and departure about the third week of September. The geographical race represented in this region is A. c. nelsoni.

177. Vesper Sparrow. Pooecetes gramineus (Gmelin).

The vesper sparrow cannot be regarded as being plentiful, although it was seen in many parts of the park. It is most frequently seen on isolated patches of prairie in the southern part. The species is more abundant in the prairie-farmlands country

surrounding the Cooking Lake Highlands. In this region the average date of spring arrival is approximately May 1, and that of autumn departure, September 30.

178. Slate-coloured Junco. Junco hyemalis (Linnaeus).

These birds pass through the park in large numbers during the spring and autumn migrations. The peaks of these movements usually occur during the second week of April and the first or second weeks of October, respectively. A moderate number of pairs remain in the park to nest, mostly in the heavier mixedwoods of the central and northern parts.

179. Chipping Sparrow. Spizella passerina (Dechstein).

Passerina is a sparse summer resident, but a common migrant. First arrivals appear about May 12, and the last remaining birds are noted during the early half of September.

180. Clay-coloured Sparrow. Spizella pallida (Swainson).

This species is one of the most common and widely dispersed of the summer residents. It is a bird of the parklands and shrubby prairie tracts, where it is frequently seen in patches of snowberry and wild rose. The species also nests in shrub-grown openings in more heavy woods and near lakes. Most males cease singing in early August. The birds arrive about May 10, and depart some time during the middle or latter part of September.

181. Harris's Sparrow. Zonotrichia querula (Nuttall).

These big, handsome sparrows are among the least common of the Fringillidae recorded in the district. They nest in the Hudsonian Zone and are unknown in the park during the summer. Comparatively few are noted even during seasonal migrations. The heavier streams of migration pass farther east. The first spring arrivals usually appear during the second week of

May and the peak of the south-bound migration is reached in early October.

182. White-crowned Sparrow. Zonotrichia leucophrys (Forster).

This species is a moderately common spring and autumn migrant, much the larger numbers being seen in autumn. It has not been substantiated, but there is reason to believe that the two geographical races, Z. l. leucophrys and Z. l. gambelii occur in the park, since they have been found associating during migration a short distance to the west. The average date of spring arrival is approximately May 5, and that of autumn departure, September 25.

183. White-throated Sparrow. Zonotrichia albicollis (Gmelin).

The "white-throat" is well represented as a summer resident in the greater part of the park and in some very favourable tracts it even approaches abundance. It is more frequently seen in spruce-tamarack bogs and muskegs and in mixed woods on higher ground bordering upon such areas. Much larger numbers are present during migration. The high, clear whistle of the males may be heard until late July or early August; "part songs" are sometimes indulged in during the autumn. The average arrival and departure dates are about May 5, and September 22, respectively.

184. Fox Sparrow. Passerella iliaca (Merrem).

A fair number of these sparrows pass through the district in migration. In 1937 Randall listed the species as a common migrant. In some parts of central Alberta it appears to be rather rare and localized on these north-south movements. The species has not been identified in the park during the breeding season although it was once found nesting a short distance southeast

of Camrose. Possibly a few pairs stay behind to nest in the better Canadian Zone "islands" of the Cooking Lake Highlands. The first spring arrivals are seen about April 15, and evidently the main southward movement occurs during the third week of September.

185. Lincoln's Sparrow. Melospiza lincolni (Audubon).

This is a common migrant, the average spring arrival date being about May 12. A few pairs nest in the park in such environment as spruce-covered muskegs and bogs where there is a tangle of green and dead shrubs and other vegetation. Most or all of the birds leave for the south about mid-September or a little later.

186. Swamp Sparrow. Melospiza georgiana (Latham).

These birds are fairly well distributed in the park during the summer, but they are much more numerous as migrants. They are more readily detected by their trilling, pebbly songs than by visual observation, as they are rather shy and skulk in dense tangles of vegetation on the marshy borders of lakes, streams, and muskegs. Evidently in this district most of the spring migrants arrive during the first week of May, but some of the more ambitious individuals may come in late April. Most autumn departures take place around the middle of September, but stragglers may be noted up to about October 10.

187. Song Sparrow. Melospiza melodia (Wilson).

Among the sparrows, this species is one of the earliest arrivals, appearing at about the time when the last snow disappears from the woods and the last ice from the streams. Average time of first arrival is between April 10 and 15. It is a common inhabitant of the park throughout the summer, having a preference for the vicinity of water. The song of this species possesses a rich



melody and vitality equalled by few members of the family. The song period comes to an end in early August. Apparently most of the song sparrows withdraw from the region about the middle of September or shortly afterward, but belated ones have been recorded until near the end of the month. In exceptionally mild seasons a few remain until early October.

188. Lapland Longspur. Calcarius lapponicus (Linnaeus).

In 1937 Randall recorded this species as a common migrant in the park, where, in flocks, it resorted to the scattered prairies in the south. It is among the earliest of spring migrants, usually coming about April 10. South-bound from the Arctic tundras, the first small groups are normally observed during the third week of September. Thereafter flocks increase in size and the birds become locally abundant on fields and grasslands for several weeks; the last of them usually disappear during the third week of October.

189. Smith's Longspur. Calcarius pictus (Swainson).

Randall noted this species as a rare migrant; in the spring of 1937 he saw several of them in a flock of horned larks. The appearances of these birds during migration through the southern parts of the Prairie Provinces seem to be extremely erratic, as they are irregularly or infrequently observed even by the best ornithologists. Possibly their passage through the region occupies only a few days (unlike that of the abundant next preceding species) and in this short period they may completely escape identification. The species may be expected in central Alberta during the second week of May and again in the third week of September.

190. Snow Bunting. Plectrophenax nivalis (Linnaeus).

These familiar "snowbirds" of the Arctic regions are common winter visitors both in the park and in a large part of the great plains to the south and east. First arrivals from the north usually appear during the third or the fourth week of October. Before they leave in late April, spectacular flocks numbering several thousands may sometimes be seen. The last of them have normally disappeared by the second week of May, but rare stragglers have been noted until near the end of the month.



Fig. 1. Open muskeg flanked by black spruce about 1 mile southwest of Moss Lake.



Fig. 2. Typical lake scene in the west-central part of the park.



Fig. 3. Astotin Lake from the south looking northwest. Crane Island in the middle distance.

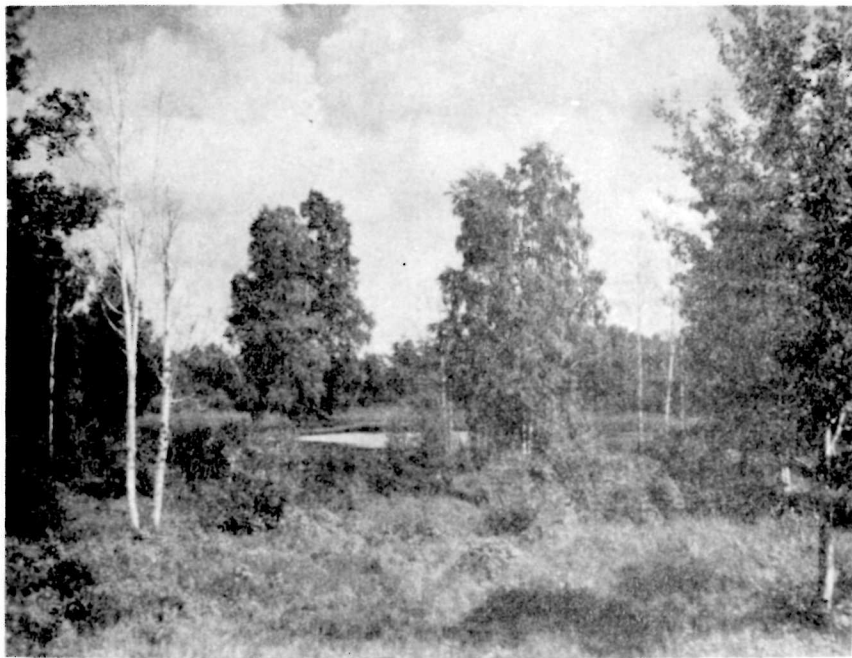


Fig. 4. Small woodland slough in the central part of the park south of Astotin Lake.

CANADA  
DEPARTMENT OF RESOURCES AND DEVELOPMENT  
NATIONAL PARKS BRANCH  
1951

NORTHERN PORTION  
**ELK ISLAND NATIONAL PARK**  
ALBERTA

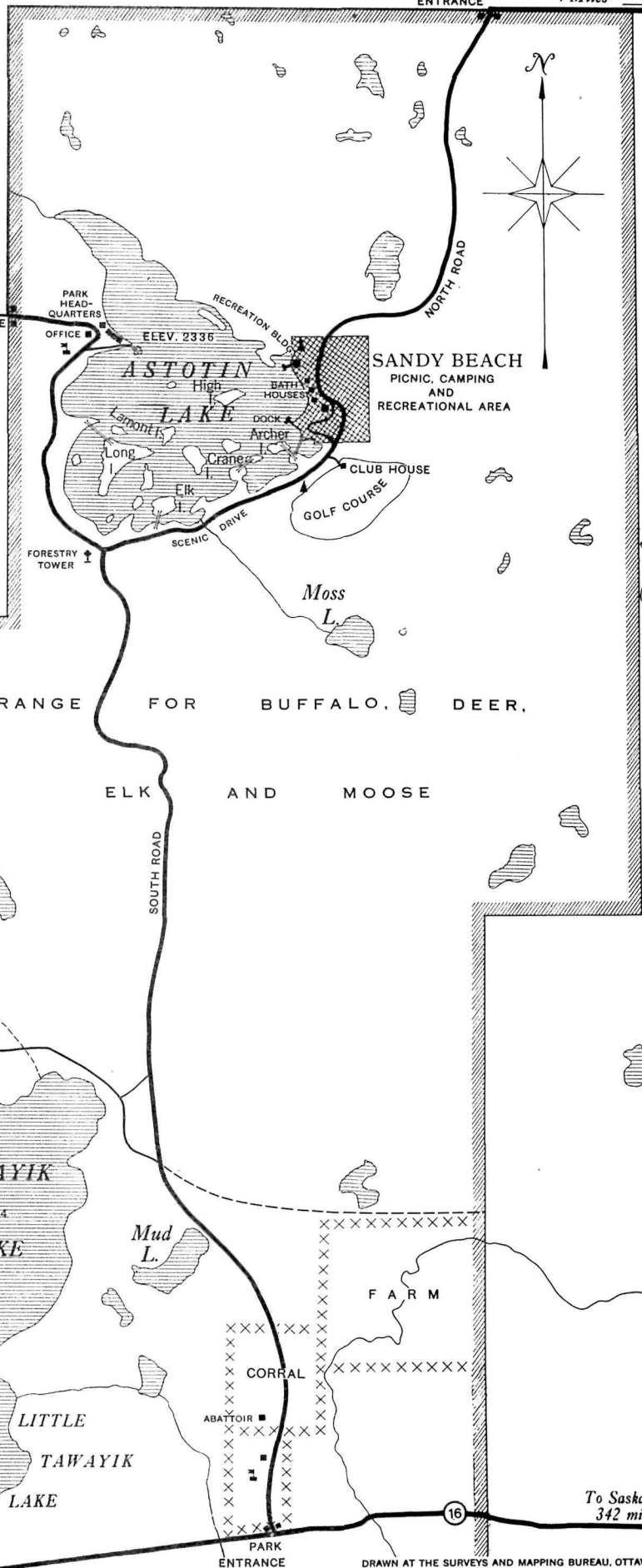
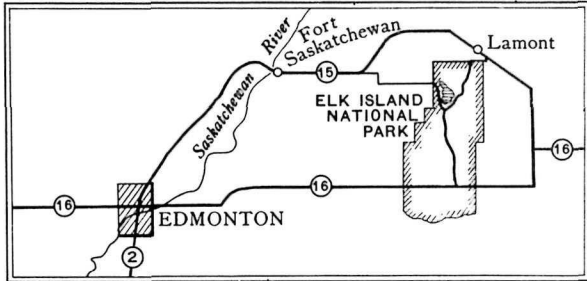
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REFERENCE

- |                      |                       |
|----------------------|-----------------------|
| Park Boundary .....  | Bungalow Cabins ..... |
| Motor Road .....     | Warden's Cabin .....  |
| Secondary Road ..... | Building .....        |
| Trails .....         | Bridge .....          |

To Lamont and  
Highway No. 15  
4 Miles

To Fort Saskatchewan and Edmonton



To Edmonton  
23 miles

To Saskatoon  
342 miles



