

**Birds of the
Nova Scotia–
New Brunswick
border region**

by George F. Boyer



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With addendum by A. J. Erskine and A. D. Smith



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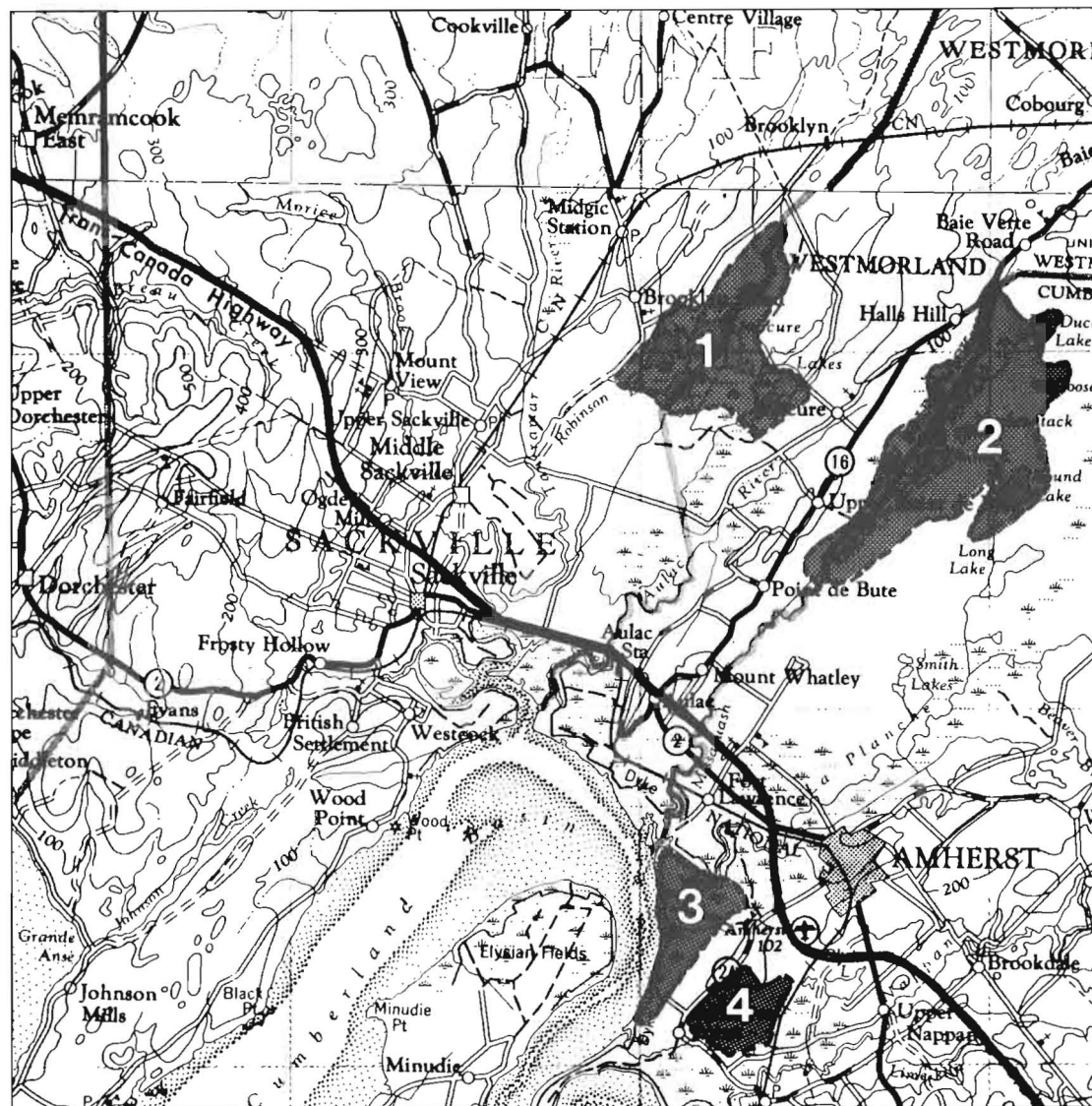
George Boyer was born in Woodstock, New Brunswick, on August 24, 1916. He graduated in Forestry from the University of New Brunswick in 1938 and served with the Canadian Army from 1939 to 1945.

He joined the Canadian Wildlife Service in 1947, and worked out of the Sackville office until 1956. During that time he obtained an M.S. in zoology from the University of Illinois. He carried on private research from April 1956 until July 1957, when he rejoined CWS. He worked out of Maple, Ontario, until his death, while on a field trip near Aultsville.

While at Sackville, Mr. Boyer worked chiefly on waterfowl of the Nova Scotia–New Brunswick border region, with special emphasis on Pintails and Black Ducks. He also studied merganser–salmon interrelationships on the Miramichi River system, Woodcock, and the effects on bird populations of spruce budworm control spraying in the Upsalquitch area. While at Maple, Mr. Boyer evaluated waterfowl production in Luther Marsh and made goose surveys around James Bay.

George Boyer completed the first draft of this paper before his death on October 20, 1960. Observations made after Mr. Boyer left the Maritimes in April 1956 have been assembled and incorporated by Anthony J. Erskine and Allan D. Smith, of the Canadian Wildlife Service, Sackville, New Brunswick. Observations through July 1965 were included in the first edition (1966); the present account discusses changes through September 1971 in an addendum.





- 1 Tintamarre National Wildlife Area
- 2 Missaguash Marsh Wildlife Management Area
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- 4 Amherst Point Bird Sanctuary

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Introduction

The Bay of Fundy side of the Isthmus of Chignecto contains a variety of wetland conditions. Several species of water and marsh birds breed there, some of which are found sparingly or not at all in other parts of the Maritime Provinces. This paper deals primarily with the birds of that region, but the history and plant ecology, particularly of the wetlands, which influence the bird populations are discussed in some detail.

The area under study includes the north end of Cumberland Basin and land areas extending some ten miles from the sea towards the north-east. The approximate limits of the area would be given by a line joining the communities of Wood Point, Fairfield, Cookville, and Jolicure, in New Brunswick, and Amherst and Nappan, in Nova Scotia. The region contains four major marsh areas formed by the drainages of the Tantramar, Aulac, Missaguash, and La Planche rivers. Separating those marshes are low, rolling ridges rising to about 100 feet above sea level. On the lateral boundaries of the marshes the ground rises gradually to a height of approximately 500 feet.

The bay has a tempering influence on the climate, making the region less subject to extremes than points farther inland. The average temperature for July and August is about 65°F, while February, the coldest month, averages 17°. Precipitation is moderate, averaging about 38 inches annually. The average frost-free period extends from May 22 to September 24.

While stationed at Sackville, New Brunswick, with the Canadian Wildlife Service, between October 1947 and April 1956, the writer carried out studies in the Nova Scotia-New Brunswick border region. Important data on the bird life of the region are contained in the reports of Harold S. Peters, then Atlantic Flyway Biologist of the United States Fish and Wildlife Service, who visited the area for brief periods each year from

1938 to 1944. John Tingley, formerly a game warden with the New Brunswick Department of Lands and Mines, assisted Peters at that time, and later furnished the writer with many observations.

(Added 1971) Boyer worked alone or with his wife through most of his time in Sackville. Few local residents then showed more than passing interest in birds, and only in 1953 was a second biologist added to the CWS office staff there. Interest in birds has greatly increased since 1956 in the border region as well as elsewhere in the Maritimes (Nova Scotia Bird Society formed 1955, and three naturalists' clubs in New Brunswick between 1960 and 1963). The biological staff of the CWS office increased from two in 1960 to six (plus seasonal help) in 1967, later decreasing to three in 1971. The many local feeding stations, with the annual (since 1960) Christmas bird count, have led to apparent changes in numbers of many wintering birds.

History

Ganong (1903) dealt, at some length, with various theories of the formation of the marshes. The most acceptable of these is described below.

At one time Cumberland Basin was a shallow, fresh-water lake surrounded by peat bogs. A gradual subsidence brought the land below sea level, forming a brackish lagoon and, later, a salt-water bay. The subsidence of the land caused an increase in the tidal currents, and wave action on the soft, red, Permocarboneous sandstone bedrock caused erosion. Mud and silt from this erosion were carried landward by the tides and deposited gradually, building up the land. Borings have shown these depositions to be as deep as 80 feet in some places. Very little of the marsh soil has been built up by other means, such as deposition of plant detritus or silting by rivers.

During historical times the activities of man have had a great effect on the marshes. As early as the middle of the seventeenth century diking and draining were in progress, and much of the salt marsh was turned into agricultural land, principally hay meadow and pasture. The general system of reclamation has changed little over the years except, of course, that it is greatly accelerated by modern machinery.

Dikes from seven to eight feet in height above the normal high tides were built. The tidal portions of the rivers are controlled by diking along the banks, as in the case of the Tantramar; or by the construction of aboideaux near the mouth. Aboideaux are dams with clapper gates so constructed that they are closed by the pressure of high tide and opened by the current of the river during low tide. The diked marsh is drained into the rivers with a system of ditches about a foot wide at the bottom, three feet deep, and 21 yards apart.

From time to time neglect of the dikes and ditches has caused ecological changes in the cultivated marsh lands. Where the dikes have broken

down, the sea invades the land once again and much of it is eroded away. The rest of the affected area reverts to salt marsh. Neglect of the ditches soon results in the formation of ponds on the poorly drained soil, and marsh vegetation begins to grow. Usually the soils contain a large amount of salts deposited in former years by the sea. These soils are alkaline and produce rich types of plants attractive to many species of birds. Several such marshes were formed after World War I during the depression years, but recently, as part of a government-assisted reclamation program, these marsh areas have been greatly reduced.

The redraining of the Midgic marsh was begun in 1955, and by 1960 only a few ponds there retained water after the spring thaws. The Tantramar River was closed by a tidal dam or aboideau in 1960. Tidal influence is now shut off from all four rivers. The reduction of marsh area is almost certainly a major cause of the marked decline in production of waterfowl and other marsh birds noted in recent years.

(Added 1971) A 6000-acre section of the Missaguash Marsh was purchased by the Nova Scotia Department of Lands and Forests in 1965 with subsequent impoundment and water control measures being undertaken for waterfowl management. Similarly, the Canadian Wildlife Service purchased the 1500-acre John Lusby salt marsh (SW of Amherst) in 1967 and 3800 acres of lake, bog and marshland in the Jolicure area during 1968 to 1970. Both areas have been established as National Wildlife Areas and intensive management development for waterfowl has been undertaken on the Jolicure marshes (known as the Tintamarre National Wildlife Area). The restored marshlands have already attracted significantly larger populations of breeding and migrant wetland bird species.

Vegetation

A detailed study of the plant ecology of the area was carried out in the summers of 1898, 1899, and 1901 by Professor Ganong. His paper (Ganong, 1903) formed the basis for the writer's studies of the vegetation.

Forests

Upland forest

The forest cover of the region lies within the Central Section of the Acadian Forest Region described by Halliday (1937). Mixed wood associations predominate, with yellow birch (*Betula lutea*), white birch (*Betula papyrifera*), sugar maple (*Acer saccharum*), beech (*Fagus grandifolia*), red spruce (*Picea rubens*), black spruce (*Picea mariana*), and balsam fir (*Abies balsamea*) as the principal species, and red pine (*Pinus resinosa*) and hemlock (*Tsuga canadensis*) in smaller numbers.

In the many places where the climax forests have been removed, the second growth consists of white birch, wire birch (*Betula populifolia*), aspen (*Populus tremuloides*), and largetooth aspen (*Populus grandidentata*), with occasional spruce and balsam fir. Many of the upland forest areas have been replaced by cultivated lands and pasture.

Examples of climax forest types are to be found at White Birch Road, Beech Hill Road, and part of the Amherst Point Sanctuary. Principal bird species here are Broad-winged Hawk, Great Horned Owl, Hairy Woodpecker, Downy Woodpecker, Swainson's Thrush, Hermit Thrush, kinglet, chickadee, and warbler. The second-growth forest is typically represented at West Sackville and contains such forest-edge species as Red-eyed Vireo, Slate-colored Junco, and White-throated Sparrow.

Around the cultivated areas there are swallows, Robins, Yellow Warblers, Bobolinks, Savannah Sparrows, and Song Sparrows.

Lowland forest

Lowland forest is usually associated with bogs and heaths, the latter being old *Sphagnum* bogs largely filled in and on which there is a good growth of various species of heath (*Ericaceae*), pitcher-plant (*Sarracenia purpurea*), and sedges (*Carex*). There are good examples of this type of forest along the Rockport Road and in the border area. Birds are Palm Warbler and Lincoln's Sparrow.

Marshes

The marshes have been divided into three types, each consisting of a number of associates.* The marshes are in a constant state of fluctuation both from the influence of nature and by the hand of man. There is a variety of ecotonal† areas separating the various marsh types, and it is not within the scope of this paper to deal in detail with them and the influences which bring them about. All of these marsh areas offer abundant opportunity for manipulation by man depending on his needs at the moment. Some have been turned into good hay-producing areas by draining and dyking. The less well drained areas, however, appear to be more suitable for production of aquatic forms of wildlife, such as waterfowl.

Salt marsh

This may be divided into three associates.

1. The cord-grass (*Spartina pectinata*) associates. This forms a narrow belt along the tide line and extends up the tidal rivers as far as they are influenced by saline conditions. It is used mainly by waterfowl for feeding purposes at high tide and by shore-birds at low tide.

*Associate or association is a term used in plant ecology to describe a consistent and different vegetation type within a formation (such as coniferous forest, grassland, etc.).

†An ecotone is a transition zone between two major vegetation types.

2. The samphire (*Salicornia europaea*) – sea-blite (*Suaeda maritima*) associates.

This is the middle area and occurs on the bare areas of mud above the regular high-tide marsh, on newly built dykes, and in places which are silted after exceptionally high tides. Members of this associates are low succulent plants growing either erect or prostrate and far apart.

In addition to the dominants there are such species as sand-spurrey (*Spergularia canadensis*) and orach (*Atriplex patula*).

Shore-birds, Sharp-tailed Sparrows, and Savannah Sparrows feed in this associates.

3. The salt-meadow grass (*Spartina patens*) associates.

The third or highest community of the salt marsh is reached only occasionally by the highest tides. Other plants found here are love-grass (*Eragrostis* sp.), seaside plantain (*Plantago juncooides*), sea lavender (*Limonium carolinianum*), arrow-grass (*Triglochin maritima*), and sea-milkwort (*Glaux maritima*). In ecotonal areas between this associates and drier, less saline areas are found fescue grass (*Festuca ovina*) and squirrel-tail grass (*Hordeum jubatum*).

Brackish ponds containing thick masses of widgeon-grass (*Ruppia maritima*) occur in some of the larger areas of this associates.

Savannah Sparrow nests have been found in this associates, which is also used for feeding by Canada Geese, shore-birds, Sharp-tailed Sparrows, Lapland Longspurs, and Snow Buntings. Black Ducks use the area, especially around the ponds, for the raising of their young.

The salt marsh borders Cumberland Basin, two places of interest being Coles Island and the Ram Pasture near Sackville.

Cultivated marsh

This is the largest of the marsh communities and is maintained by dyking and ditching. Originally

the land now covered by cultivated marsh was tidal. Reclamation work was started in the mid-seventeenth century by the Acadians and most of the dykes have since been kept in repair. Two communities were recognized by Ganong (1903):

1. The timothy (*Phleum pratense*) – couch-grass (*Agropyron repens*) associates. Here timothy is the most important of the dominants, and grows in the best drained and most salt-free soils, while couch-grass is found in the less well drained and salt-free areas. In the ecotonal areas between this associates and the fresh marsh such species as blue-joint bentgrass (*Calamagrostis canadensis*) and red-top grass (*Agrostis alba*) become dominant.

2. The roadside weed associates. This community contains a wide variety of plants, aster (*Aster* sp.) and goldenrod (*Solidago* sp.) being the most important.

The cultivated marshes are used by waterfowl, Bobolinks, and Savannah Sparrows for nesting. After the hay has been cut in late July many birds gather here to feed. Waterfowl, Herring Gulls, shore-birds, Crows, and Ravens are seen in large numbers.

Fresh marsh

Much of the fresh marsh was cultivated marsh at one time, but through lack of ditching it has returned to the hydrosere.†

The fresh marsh is difficult to describe as it is in a constant state of flux and would require the hand of man to keep it in any one stage of succession. Poor drainage causes the formation of numerous ponds which in some places are separated by low dykes.

Some of the common submerged aquatics are pondweeds (*Potamogeton pectinatus*, *P. pusillus*, *P. natans*), mare's tail (*Hippuris vulgaris*), bladderwort (*Utricularia vulgaris*), and duckweed (*Lemna minor*, *L. trisulca*).

Emergents are chiefly cat-tail (*Typha latifolia*, *T. angustifolia*), bur-reed (*Sparganium eurycarpum*, *S. americanum*), water plantain (*Alisma triviale*), arrowhead (*Sagittaria latifolia*, *S. cuneata*), and soft-stem bulrush (*Scirpus validus*). Leafy three-square bulrush (*Scirpus paludosus*) occurs in the drier areas.

The type of vegetation is largely affected by the neighbouring communities, such as the acid bog areas and the basic cultivated marsh. There is indication that in time the ponds in the fresh marsh would gradually become choked with the two species of cat-tail.

The fresh marsh is the most interesting community in regard to bird life. Pied-billed Grebes, bitterns, the usual species of waterfowl, plus a few newcomers such as the Shoveler and Pintail, Marsh Hawk, three species of rails, and passerines, such as long-billed and short-billed Marsh Wrens, Red-winged Blackbirds, and Sharp-tailed Sparrows nest commonly.

Some of the fresh marsh areas mentioned in the text are found at Midgie, Cookville, and White Birch Road in New Brunswick, and at parts of the Amherst Point Bird Sanctuary in Nova Scotia.

Lakes

The lakes in the areas of better soil and drainage form a community which merits a place by itself. These lakes are bordered at least in part by cultivated land, and in these shallower portions tend to resemble the fresh marsh, although there are intrusions of the bog types.

Submerged and floating vegetation consists of pondweed (*Potamogeton natans*, *P. spirillus*),

bladderwort, and mare's tail, with buckbean (*Menyanthes trifoliata*) and some water lilies of the genus *Nuphar*:

The principal emergents are bulrushes (*Scirpus validus*, *S. acutus*), cat-tail (*Typha latifolia*), bur-reeds (*Sparganium eurycarpum*, *S. chlorocarpum*, *S. americanum*), arrowhead (*Sagittaria latifolia*, *S. cuneata*), sweetflag (*Acorus calamus*), and soft-rush (*Juncus effusus*).

The three Jolicure lakes (Front, Long, and Large lakes), Morice (Silver) Lake, and lakes at Cookville in New Brunswick and Blair Lake in Nova Scotia are mentioned in the text.

Most of the birds of the fresh marsh are found here, and the Common Loon and the Ring-necked Duck begin to appear in good numbers.

Bogs

The principal bog areas lie along the boundary between New Brunswick and Nova Scotia. Here are numerous lakes bordered by cat-tail with intervening areas filled with *Sphagnum* moss.

Submerged and floating vegetation consists of water-shield (*Brasenia Schreberi*), pond lily (*Nuphar variegatum*), pondweeds (*Potamogeton natans*, *P. amplifolius*, *P. epihydrus*, *P. zosteriformis*), submersed duckweed (*Lemna trisulca*), and greater duckweed (*Spirodela polyrrhiza*).

Emergents consist mostly of cat-tail and, in lesser abundance, reedgrass (*Phragmites communis*), bulrush, and (introduced) wild-rice (*Zizania aquatica*).

The floating bog contains species of horsetail (*Equisetum*), spike-rush (*Eleocharis*), sedge (*Carex*), cotton-grass (*Eriophorum*), sundew (*Drosera*), pitcher-plant (*Sarracenia purpurea*), and buckbean (*Menyanthes trifoliata*).

The shrub stage consists of alder (*Alnus*), which grows principally on the banks of the streams.

Black spruce and larch are the principal tree species, growing along the edge of the bog and scattered through it, especially near the streams. These clumps of trees merge into the lowland forest in some places and in others border on jutting fingers of higher ground containing species of upland forest trees.

Areas specified as border region in the text come under the definition of bog.

The principal birds are Common Loon, Black Duck, Green-winged Teal, Blue-winged Teal, Ring-necked Duck, Marsh Hawk, Palm Warbler, and Swamp Sparrow.

†Hydrosere is the vegetation succession from open water through submerged aquatic plants, floating leaved plants, emergent plants, floating bog, shrubland, to bog forest. Definitions after H. J. Oosting, 1958. The study of plant communities. W. H. Freeman and Co., San Francisco.

Annotated list of birds

The following list of birds follows the order and terminology of the American Ornithologists' Union check-list of North American Birds, fifth edition, 1957. Binomial names are used, as the subspecies was not certain in most cases. The New York State Standards of abundance, frequency and seasonal occurrence (Arbib, 1957) were used throughout the list, which comprises a total of 217 species.

Common Loon *Gavia immer*

Fairly common summer resident. Pairs of loons appear on the lakes during the last half of April. This species is usually present during the spring and summer in the lakes along the provincial boundary line, the Jolicure lakes, Cookville, and Morice Lake.

A nest with two eggs was found by Peters at Missaguash on July 1, 1941. A pair, with one downy young, was seen on Morice Lake on July 4, 1955.

There was a flock of seven, of which four had not attained full adult plumage, on Large Lake, Jolicure, on July 2, 1953. On July 6, 1955, four loons were displaying on Large Lake.

Season

April 4 to August 3

Red-throated Loon *Gavia stellata*

Occasional transient. An adult in breeding plumage was recorded at West Sackville on June 16, 1951.

Possibly a few Red-throated Loons cross the Isthmus of Chignecto regularly as this species winters in small numbers along the shores of the Bay of Fundy.

Horned Grebe *Podiceps auritus*

Irregular autumn transient. One was seen at Front Lake, Jolicure, on October 12, 1953, and another at Long Lake, Jolicure, on October 25,

1949. This species probably crosses the Isthmus of Chignecto regularly in small numbers.

One was seen at Amherst Point Sanctuary on October 24, 1960.

Pied-billed Grebe *Podilymbus podiceps*

Common summer resident. This species is especially common at Midgic Marsh, Front Lake, and Amherst Point Sanctuary. Also recorded in the border lakes region, Cookville, and Morice Lake.

Broods were recorded between June 8 and August 7. The average number of young from 14 broods was 4.1.

Season

April 6 to October 24

Double-crested Cormorant *Phalacrocorax auritus*

Very rare transient and summer visitant. One was recorded at Large Lake, Jolicure, on July 2, 1953. The greatest number seen in one day was three at the head of Cumberland Basin on May 9, 1955.

Season

Spring: April 9 to May 13

Autumn: August 10 to September 29

Great Blue Heron *Ardea herodias*

Fairly common transient and uncommon summer visitant. Six were seen at Midgic on August 3, 1948.

Season

March 30 to November 17

Little Blue Heron *Florida caerulea*

Exotic summer visitant. An immature was seen by Boyer and Pimlott about three miles northwest of Midgic on August 12, 1948.

Black-crowned Night Heron *Nycticorax nycticorax*

Irregular summer visitant, very rare. One was seen at Midgic on August 16, 1948, and one near

Midgic in mid-August, 1950. Both birds were in adult plumage.

Least Bittern *Ixobrychus exilis*

Occasional summer visitant. One was seen by Addy and Boyer at Midgic on July 5, 1949.

American Bittern *Botaurus lentiginosus*

Common summer resident. Bitterns are especially common at Midgic, Amherst Point Sanctuary, and Front Lake. A high count at Midgic was 11 on August 3, 1948.

Nests with eggs were found between May 8 and June 30 at Midgic. The average clutch for May nests was 4.5, with extremes of four and five. One nest found on June 30, 1955, contained three eggs.

Stomach contents of a female collected on November 9, 1949, were as follows: dragonfly nymph (*Odonata*) - 1, beetle (*Dytiscidae*) - 2, killifish (*Fundulus diaphanus*) - 2, nine-spined stickleback (*Pungitius pungitius*) - 13, unidentified fish - 1.

Season

March 30 to November 9

Canada Goose *Branta canadensis*

Very common spring transient and fairly common autumn transient. High counts are March 31, 1950 (300), April 5, 1949 (250), May 5, 1948 (250).

Canada Geese rest on the waters of Cumberland Basin and feed at the upper salt marshes and fresh-water areas.

Season

Spring: March 7 to May 21

Autumn: September 15 to December 12

Brant *Branta bernicla*

Very common spring transient. Brant do not stop in this area, but large numbers fly across the

Isthmus of Chignecto each spring. High counts are March 5, 1948 (500), March 31, 1948 (1500), May 12, 1955 (500).

Nineteen were seen at Amherst Point Sanctuary on November 3, 1956 (C. O. Bartlett). This is the only autumn record.

Season

March 5 to May 12

Snow Goose *Chen hyperborea*

Four snow geese were seen flying over Sackville in a flock of 250 Canada geese on November 7, 1949.

Mallard *Anas platyrhynchos*

The status of this species is uncertain, as three residents of Sackville keep free-flying Mallards. During the period 1953 to 1955, 226 hand-reared mallards were banded and released at Midgic and Amherst Point. These birds associated with flocks of Black Ducks, and band recoveries indicated that the Mallards followed the migration routes of the latter. Some instances of mallard-black hybridization were noted after these releases (Boyer, 1959).

Black Duck *Anas rubripes*

Very common summer resident and transient. Fairly common in winter. Pairs of Black Ducks appear on the marshes as soon as the snow begins to disappear, usually about mid-March. Possibly the first pairs are those which winter in the general area.

The spring migration is usually not spectacular, but occasionally large numbers are seen, such as a flock of 500 which landed at Amherst Point on the evening of April 14, 1948.

This species nests early, the first recorded nest with eggs being a clutch of five at Midgic on April 13, 1949. The average number of eggs for six complete clutches was 9.3. Nest sites vary

greatly, some being in the cat-tails close to water and others in upland second-growth forests as much as one and one-quarter miles away.

The brood season is protracted, and broods able to fly were captured by a Labrador retriever on July 4, 1954. The latest brood of downy young was caught in a banding trap on August 20, 1948.

Concentrations, largely composed of young birds, begin to appear by late July. By early September flocks of more than 200 are seen. At the height of migration in mid-October as many as 5,000 Black Ducks have been noted at one time. On December 21, 1952, a flock estimated at 200 was seen in Cumberland Basin.

Several hundred locally raised Black Ducks have been banded here, and recoveries indicate that the population splits up into at least two migrating groups with a few birds wintering locally. The greater part of the population appears to travel down the northern shore of the Bay of Fundy and on down the coast of the Atlantic states. The preponderance of banding recoveries is in the region from Cape Cod to Delaware. Two birds were recovered in Florida. A second substantial section of the population must winter along the south shore of Nova Scotia from Queen to Yarmouth counties, as several January recoveries have been made here. Several autumn recoveries have come from Prince Edward Island, but the hunting season closes too early there to give definite indications of wintering.

Pintail *Anas acuta*

Locally very common summer resident and common migrant. Pintails were first noted as breeding by Peters (1938) who, together with John Tingley, discovered a nest with 10 eggs on June 6, 1938, at Midgic. An examination of Peters' records shows the Midgic population as 1938-6

to 7 pairs, 1939-20 pairs, 1940-50 pairs, 1941 to 1945-50 to 100 pairs. In May 1949, C. E. Addy and the writer counted 45 pairs and 58 other adults. In May 1950, 57 pairs and 29 other adults were counted.

The Pintail population was at its height in 1950 and the birds meanwhile were spreading to neighbouring areas, such as Cookville, Front Lake, the border lakes, and Amherst Point Sanctuary. The local population declined during the mid 1950's, presumably due to the reclamation work being carried out at Midgic.

Bartlett (1960) outlined the decrease in numbers through 1958. A few broods were noted near Midgic, along the Missaguash, and at Amherst Point Sanctuary, from 1960 to 1965. August observations at Midgic and Amherst Point confirm that small numbers of Pintail still breed in the border area.

Nesting begins early and most birds are paired on arrival. Nests with eggs have been found between April 26 and June 18. The average clutch for nine nests was 9.3. All nests were within 30 yards of the water. Some were placed under clumps of dried grass (*Spartina pectinata*), while others were in clumps of leather-leaf (*Chamaedaphne*), blueberry (*Vaccinium*), sweet gale (*Myrica gale*), and spiraea (*Spiraea*).

Broods were noted from the last week of May to early August. The height of the brood season was in the first two weeks of July. Fourteen broods were counted in 400 acres at Midgic on July 4, 1949. There appeared to be heavy mortality of young, because out of 37 complete broods counted in 1948 and 1949 the average size dropped from 5.3 downy young to 2.8 young ready to fly.

Predation of Pintail nests by crows, foxes, and skunks has been noted. One instance of predation of an adult male by a Duck Hawk was observed at Midgic on May 10, 1948.

Banding recoveries indicate that there is an explosive movement of locally raised birds. Although the main points of recovery have been in the Atlantic coastal region, a significant number of direct recoveries have been made in the St. Lawrence River area and in several states of the Mississippi flyway including Wisconsin, Minnesota, and Iowa. One bird was recovered as far west as Alberta.

Judging from band recoveries, local birds appear to have moved out by October, but there is another heavy flight in the latter half of the month.

Adult males apparently move off the breeding grounds to moult, as no adult males were trapped or banded in the region.

Common Teal *Anas crecca*

Exotic. A male in full breeding plumage was seen in a group of male Green-winged Teal at Amherst Point Sanctuary on April 25, 1955.

Green-winged Teal *Anas carolinensis*

Uncommon summer resident and common transient. Migrants arrive in waves, leaving only a few scattered breeding pairs. As many as three or four of these waves numbering as high as 250 individuals are seen between the first week of April and early May. Autumn populations start to build up in late July and reach their peak by mid-October. Some high counts are spring: April 14, 1949 (106), May 6, 1949 (107); autumn: October 8, 1948 (200), October 17, 1948 (500), and November 7, 1948 (300).

Green-winged Teal seem to prefer the smaller and more remote marshes. Usually four or five pairs are found in close proximity. No nests were found. Records for first broods were June 21, 1940, and 1942 (Peters), and June 20, 1960. The latest record for a brood was August 14, 1948.

Season

April 4 to December 21

Blue-winged Teal *Anas discors*

Locally very common summer resident and common autumn transient. Blue-winged Teal arrive in small flocks of five or six individuals and scattered pairs around the first week of April. At no time during the spring migration are there flocks of more than a few birds. John Tingley counted 25 pairs at Midgic on May 12, 1942.

Observations indicate that early clutches start around May 20. A nest with 12 eggs was found on July 10, 1954. Six nests averaged 12 eggs each. All nests were located in clumps of grass. Some were placed on old dikes in the cat-tail marsh and others in fields close to the water. First broods hatch around mid-June and most of the young birds reach flying age by the end of July. Flocks of Blue-winged Teal begin to concentrate in early August and are at their peak by mid-September. Most have departed by early October. In 1948 flock counts at Midgic were August 2 (45), September 13 (300), October 5 (40).
Season

April 6 to November 1

American Widgeon *Mareca americana*

Irregular spring transient, rare. Uncommon summer resident. Uncommon autumn transient. Spring records are Amherst Point Sanctuary, March 30, 1953 (3); Midgic Marsh, May 4, 1948 (one male), and May 5, 1955 (one male). Addy saw a pair at Midgic on May 15, 1949. Autumn records are Amherst Point Sanctuary, September 28, 1955 (10), October 30, 1949 (15), December 12, 1948 (10). Five immature females shot at Midgic in October 1949 were examined by the writer. On October 11, 1955, an immature male and an immature female were shot from a flock of three at Midgic.

Small numbers now breed annually at Amherst Point Sanctuary. Bartlett (1960) reported the first brood in 1957. Three or four pairs have

been observed each spring since then, and a maximum of three broods has been seen in one season (1961). A nest was found near Lower Nappan in early June 1965 (Fred Payne). Autumn migrants have also become more numerous; for instance, 75 were seen on October 24, 1960.

Season

March 30 to December 12

Shoveler *Spatula clypeata*

Very rare summer resident. Irregular rare autumn transient. This species was first discovered breeding in the region at Midgic in 1948 (Boyer). Since that time a few pairs have nested at Midgic and Front Lake, Jolicure. Records include one pair in 1948, three pairs in 1949, and three pairs in 1950. Two were seen at Amherst Point Sanctuary on August 24, 1961.

A flock of six was seen at Amherst Point on October 30, 1949. On October 1, 1949, an immature female was shot at Midgic.

Season

April 24 to October 30

Wood Duck *Aix sponsa*

Rare summer resident and transient. A few pairs of Wood Ducks are seen each spring at Cookville, Large Lake, Jolicure, and in the Missaguash area. The only definite breeding record is of a brood of seven seen by John Tingley on June 29, 1949, at Missaguash.

The White Birch Road area appears to have a concentration of moulting males each year. During the summer of 1949, 16 males and one female were banded there. On July 3, 1953, two moulting males of three observed were caught by a Labrador retriever and were banded, and on July 3, 1954, a concentration of 21 males was seen at White Birch Road.

Season

April 30 to October 12

Ring-necked Duck *Aythya collaris*

Common summer resident and fairly common transient. The Ring-neck ranks next to the Black Duck and Blue-winged Teal as a local breeding species. It is commonly found on the lakes of the New Brunswick-Nova Scotia border region and in smaller numbers on the larger ponds in the fresh marshes. The Ring-neck returns later than most ducks, arriving in numbers around mid-April. This species migrates in small groups seldom numbering more than 25 individuals. On arrival many of the birds are paired, but where pairing does not seem to have taken place the males outnumber the females by about three to one. Paired birds still associate in flocks in April and early May.

No nesting data are available, but the earliest brood seen by Tingley was at Tamarack Lake, in the border region, on June 5, 1942. Broods of half-grown young have been observed as late as August 10, 1950. The average number of young in eight broods was 8.8.

Season

April 9 to November 18

Greater Scaup *Aythya marila*

Rare transient. A few Scaup are seen each year, but the only definite records of this species are Amherst Point Sanctuary, October 14, 1948 (8), and October 30, 1947 (1). A female was shot at Morice Lake on November 11, 1949.

Lesser Scaup *Aythya affinis*

Rare transient. My only definite records are for a pair at Amherst Point Sanctuary on April 28, 1950.

Common Goldeneye *Bucephala clangula*

Uncommon transient. Highest spring counts are Midgic, April 9, 1948 (40); Large Lake, Jolicure, November 10, 1948 (50).

Season

Spring: March 14 to May 5

Autumn: October 10 to December 12

Bufflehead *Bucephala albeola*

Irregular transient, rare. Spring observations are Midgic, April 7, 1949 (1); Amherst Point, May 6, 1949 (9). Autumn: Front Lake, Jolicure, October 25, 1949 (1); Amherst Point Sanctuary, November 13 to 18, 1948 (5), November 16 to 24, 1949 (1); and Morice Lake, November 13, 1947 (5).

Season

Spring: April 7 to May 6

Autumn: October 25 to November 24

Oldsquaw *Clangula hyemalis*

Irregular transient, uncommon transient. Few Oldsquaw stop here, but the species is commonly seen during migration and in the winter at Baie Verte. All my records are for spring: Morice Lake, April 23, 1948 (4); Front Lake, April 28, 1948 (9); and Midgic, May 4, 1950 (1).

There is one autumn record - a female-plumaged Oldsquaw was seen on a pond at Middle Sackville on October 14, 1960.

Season

April 23 to May 4

Common Eider *Somateria mollissima*

Transient, common in some years. Usually Eider do not stop in Cumberland Basin but fly directly across the Isthmus of Chignecto. On April 10, 1949, a flock of 150 was seen, about half of which were adult males. On April 20 of the same year a flock of 45 was seen, and on April 27, 1949, approximately 50 alighted in Cumberland Basin. On June 16, 1955, a flock of 52 males was counted. As there seem to be large moulting concentrations of the species off the shores of Prince Edward Island, it is possible that these

birds were going to that area. A few birds presumably migrate across the isthmus in autumn, as an adult male was shot near Upper Sackville on November 23, 1964.

Season

April 10 to June 16

White-winged Scoter *Melanitta deglandi*

Irregular transient, very rare. Spring records are for Large Lake, Jolicure, May 2, 1955 (1); Morice Lake, May 3, 1955 (1 pair); and Amherst Point Sanctuary, June 8, 1955 (1). Autumn: Large Lake, Jolicure, October 4, 1947.

Season

Spring: May 2 to June 8

Surf Scoter *Melanitta perspicillata*

Fairly common spring transient. Seventy-five were seen at Morice Lake on April 21, 1948, and eight were noted in the same place on April 27 of the following year. On April 15, 1955, over 100 were noted on Cumberland Basin, and on May 1, 1955, there were over 300 in the same place.

Season

April 15 to May 1

Common Scoter *Oidemia nigra*

Rare transient. Spring records are Cumberland Basin, April 9, 1955 (5); Morice Lake, April 25, 1949 (4). Autumn records are Jolicure lakes, October 15, 1949 (1); November 3, 1949 (2); Amherst Point Sanctuary, October 30, 1949.

Season

Spring: April 9 to April 25

Autumn: October 15 to November 10

Ruddy Duck *Oxyura jamaicensis*

Irregular transient and summer visitant, rare. There is one spring record, an adult male at Frosty Hollow on May 15, 1955. Four adult

males were seen at frequent intervals from July 14 until September 30, 1953. Autumn records: In 1948 there was a record flight of this species from late October until early December, 1948. The greatest number seen at one time was 19. In 1949 observations were Jolicure lakes, November 3 (3); Amherst Point Sanctuary, November 17 (1).

An immature male was shot at Midgic on October 27, 1948.

Nine were seen at Amherst Point Sanctuary on October 17, 1957, by C. O. Bartlett, and two there on October 24, 1960.

Season

May 15 to December 4

Hooded Merganser *Lophodytes cucullatus*
Occasional transient, rare. An immature male was shot from a flock of three at Midgic on October 8, 1949.

Common Merganser *Mergus merganser*
Uncommon transient, very rare in winter. The greatest number seen in one day during spring migration was 15 at Amherst Point Sanctuary on May 2, 1949. An adult female was shot at Midgic, October 31, 1949. All winter records are for adult males in the Cumberland Basin: December 19, 1948 (1), December 31, 1954 (2), January 1, 1949 (1).

Three males were seen on a brook at Middle Sackville on February 24, 1963, and a male and two females at the same place on March 14, 1965.

Season

Spring: February 24 to May 9

Autumn: October 31 to January 7

Red-breasted Merganser *Mergus serrator*
Uncommon transient, very rare in summer, about twice as common as *Mergus merganser*.

A flock of 36, of whom about one-half were adult males, was seen in a small salt marsh pond near Sackville on April 21, 1949. These birds were engaged in courtship display.

There was a female at Sackville on June 13, 1954, and another on July 4, 1955. The latter bird appeared to be nesting.

On November 16, 1949, a flock of 20 was at Amherst Point Sanctuary.

Season

Spring: April 1 to May 6

Autumn: October 30 to November 17

Goshawk *Accipiter gentilis*

Rare transient and resident. My only summer record is an adult male at Beech Hill Road on June 28, 1949.

During the winter it is more often seen around cultivation. One was seen periodically between February 27 and March 12, 1948, near Sackville. In 1949 there was one at West Sackville between December 8 and April 7. Other records are Wood Point, October 29, 1952 (1); West Sackville, January 23, 1955 (1); Fairfield, December 26, 1961 (1).

Sharp-shinned Hawk *Accipiter striatus*

Rare summer resident, occasional in winter. This species is well distributed and probably more common than records indicate.

An adult male was found dead at Sackville on February 6, 1948, and one was seen on February 24, 1948.

One or two birds were seen around feeding stations in Sackville each winter 1962-1965, and one was collected on February 7, 1963.

Cooper's Hawk *Accipiter cooperii*

An immature was carefully identified, sitting and in flight at 20 yards, at Amherst Point Sanctuary on October 8, 1961.

Red-tailed Hawk *Buteo jamaicensis*

Very rare summer resident and uncommon transient. I have one summer record at Beech Hill on June 28, 1949. A few apparently migrate along the shore of Cumberland Basin annually. Seven were counted on November 2, 1947, at Wood Point.

Broad-winged Hawk *Buteo platypterus*

Fairly common summer resident. Pairs have been observed during breeding season, each year, at Cookville, Missaguash, White Birch Road, and Beech Hill.

Season

April 27 to November 2

Rough-legged Hawk *Buteo lagopus*

Irregular transient and winter resident, fairly common. During the winters of 1947-1949 this species was quite common, but I have few records since then.

The 1947-1948 records are Midgic, November 6 (1), March 23 (1); Jolicure, March 21 (2), April 4 (1); Missaguash, March 30 (7). In 1948-1949 records are Midgic, December 4 (1), April 9 (2), April 30 (1).

One was found dead in a mink trap at West Sackville on January 27, 1949.

One was seen at Midgic on May 6, 1950, and one on April 28, 1955.

These hawks were again fairly common on the marshes each winter from 1958-1959 to 1964-1965. The largest number noted in one day was 12, on December 22, 1963. One was seen near Aulac on May 12, 1962. Two were at White Birch Road on June 26, 1965, and one, probably one of the same birds, near Point-de-Bute on the following day.

Season

November 6 to June 27.

Bald Eagle *Haliaeetus leucocephalus*

Occasional visitant. My only record is an adult seen at Missaguash on May 7, 1955.

Marsh Hawk *Circus cyaneus*

Common summer resident and occasional in winter. There are records for a male at Jolicure on December 18, 1948; a female at Midgic on January 16, 1949; a male at Sackville on January 22, 1955; and a male and a female near Upper Sackville on December 1, 1963.

Two males and a female were observed in courtship flight at Midgic on May 5, 1949.

A Marsh Hawk was flushed from a freshly killed Virginia Rail in summer, and others have been noted feeding on crippled ducks during the hunting season. Waterfowl showed no fear of Marsh Hawks during the brood season.

Season

March 29 to November 9

Osprey *Pandion haliaetus*

Rare summer resident. Recorded regularly during the breeding season at Jolicure, Cookville, and Missaguash.

Season

March 30 to August 21

Peregrine Falcon *Falco peregrinus*

Rare transient. My observations are Midgic, October 4, 1948 (1); Morice Lake, November 30, 1948 (1); and Amherst Point Sanctuary, October and November 1948 (1).

One was found dead, shot, on October 5, 1949, at White Birch Road. Other observations are West Sackville, April 6, 1952 (1); and Missaguash, May 5, 1954 (1).

A Peregrine Falcon was seen to capture an adult male Pintail at Midgic on May 20, 1948, and another caught a Black Duck at the same place on October 4, 1948.

Season

Spring: April 4 to May 20

Autumn: October 4 to November 30

Pigeon Hawk *Falco columbarius*

Very rare summer resident and rare transient. This species may have nested at Wood Point in 1948, as a pair was seen frequently during the period June 10 to late August.

A few Pigeon Hawks are seen in the open country each spring and autumn.

A single bird was seen near Aulac on December 21, 1960. Probably the same bird was seen near Fort Lawrence half an hour later on the same day.

Season

Spring: April 23 to June 6

Autumn: August 17 to December 21

Sparrow Hawk *Falco sparverius*

Common summer resident. This species is probably about as common as the Marsh Hawk. It is found in all types of habitat and may even breed in barns on the cultivated marsh area.

On May 16, 1948, a Sparrow Hawk was seen to capture a Common Starling at Sackville.

Season

April 6 to November 26

Spruce Grouse *Canachites canadensis*

Uncommon resident. A female and two fully grown immature birds were seen north of Midgic on September 19, 1962.

Ruffed Grouse *Bonasa umbellus*

Fairly common resident. This species is found most commonly in the upland forest, but occurs also in the swampy areas.

Ring-necked Pheasant *Phasianus colchicus*

Uncommon resident, introduced. This species has survived better than the partridge and is well

distributed and holding its own. The remains of six pheasants were found under a raven's nest at Sackville on March 25, 1948.

Gray Partridge *Perdix perdix*

Rare resident, introduced. This species is scattered over the open fields in summer and found chiefly in fields near the tidal salt marshes in winter. Broods average around 16 in number, but apparently there is heavy mortality as there has been no noticeable increase in population between 1947 and 1956. Three were seen near Amherst Point on December 26, 1962, the only occurrence between 1960 and 1965.

Virginia Rail *Rallus limicola*

Common summer resident. Late autumn records are Midgic, November 2, 1954 (3), and November 17, 1954 (1). One was heard on December 3, 1953.

A nest with two well-incubated eggs was found at Midgic on June 19, 1954, and the last egg in another nest hatched on July 19, 1953.

A half-grown young was banded on July 3, 1949, at Midgic and an adult and two downies were seen at the same place on August 7, 1948.

An immature male was collected at Midgic on August 5, 1949, and an adult male in a flightless condition owing to molt on August 14, 1950.

None have been reported since 1955.

Season

April 27 to December 4

Sora *Porzana carolina*

Common summer resident, very common at Midgic and Amherst Point Sanctuary. Soras are first noted in late April or early May. Some high spring counts for Midgic are May 24, 1952 (22), May 27, 1949 (15), and May 27, 1953 (12).

Nest building was noted on May 5, 1955, and nests with eggs were found between May 5 and

July 30. Although 21 nests were found at Midgic and one at Amherst Point it is difficult to comment on clutch size as complete clutches were not easy to determine. The largest number of eggs in one nest was 15 at Midgic on June 15, 1949. There were still 15 eggs in this nest on June 19. One nest of 11 eggs was destroyed by a dog and three eggs broken on June 10, 1953. The remaining eggs were replaced and on June 12 it was found that the bird had rebuilt the nest and was continuing to incubate. On June 16 there were six eggs and two young and by June 20 all but three eggs had hatched. Sixteen nests were in cat-tails, two in clumps of marsh-grass, two in bulrushes, and two in sedge.

The maximum noted in one day at Midgic and Amherst Point in 1960-1963 was three.

Season

April 27 to October 12.

Yellow Rail *Coturnicops noveboracensis*

Rare summer resident. Fairly common at Midgic and also noted during the summer at Front Lake, Jolicure. It was recorded once, on July 1, 1951, near Amherst Point and once on a salt marsh near Radio Station CBA, Sackville, on August 5. Twelve were heard at Midgic on July 15, 1949.

An adult male, dark phase, was collected by C. E. Addy at Midgic on July 20, 1949.

American Coot *Fulica americana*

Very rare summer resident and rare transient. Although no nests or young of this species were found, three engaged in courtship display were seen at Midgic on April 26, 1949. Coots were also noted in early May at the same place, and one was engaged in distraction display at Midgic. One was frequently seen at Amherst Point Sanctuary from May 13 until late August, 1955. One, or perhaps two birds were seen at Amherst Point Sanctuary on July 16, 1961.

A few occur each autumn and there was an exceptional flight in 1948. Records for that year are Jolicure, November 10 (10), November 13 (25); Amherst Point Sanctuary, November 18 (17), and November 29 (2).

A juvenile male was collected at Jolicure, November 13, 1948.

Season

April 26 to November 29

Semipalmated Plover *Charadrius semipalmatus*

Fairly common fall transient. This species was not recorded during the spring migration but was frequently observed in mixed flocks of shore birds from July until mid-September. It was usually found on the sandy beaches of Cumberland Basin but also occasionally on fresh marshes such as Midgic. The largest number seen in one day was 50 in a mixed flock of about 500 small sandpipers at Wood Point in early August 1955.

Season

July 15 to October 5

Killdeer *Charadrius vociferus*

Very rare summer resident and transient. A pair was seen at Sackville on April 14, 1948, and again on May 23, 1948. Lack of opportunity prevented further observation of this pair and it is not known whether or not they nested.

A few have been seen at Midgic in late summer: August 7, 1948 (1), August 10, 1948 (2). One was seen at Sackville on October 16, 1947.

One was seen at Middle Sackville on August 27, 1961. A pair with young were seen several times on a marshy area near Sackville between June 26 and July 15, 1965.

Season

April 4 to October 16

American Golden Plover *Pluvialis dominica*

Occasional autumn transient. A flock of 25 was

reported by H. R. Webster and Ralph Mosher at Midgic in late August, 1950.

This species is apparently more numerous now than in former years. There were 16 on two dry fields near Amherst on August 28, 1962, and Miss E. Lowerison reported maximum totals of 38 there that season. A. J. Erskine and D. McPhail saw flocks totalling at least 100 birds on August 31, 1963, near Sackville.

Black-bellied Plover *Squatarola squatarola*
Uncommon spring transient, fairly common in autumn.

My only spring record is for 100 at West Sackville on May 28, 1950. Most autumn records are for October and November. Peters (MS) saw it on September 7, 1941.

One was seen at CBA salt marsh on June 4, 1957 (C. O. Bartlett), three by the Missaguash on September 3, 1961, five near Sackville on August 31, 1963, and one there on August 7, 1965.

Season

Autumn: August 7 to November 18

Ruddy Turnstone *Arenaria interpres*
Uncommon fall transient. Two were seen by the Missaguash on September 3, 1961.

American Woodcock *Philohela minor*
Locally common summer resident. Woodcock counts at Fairfield, Cookville, Aulac, and Rockport roads averaged about four displaying males per mile. A nest with four eggs was found at Cookville on April 29, 1950.

Although I have frequently looked for Woodcock in this region during the autumn, I have never seen any. None of the local sportsmen have reported any autumn covers.

Season

March 24 to June 20

Common Snipe *Capella gallinago*

Very common summer resident especially at Midgic, Cookville, and Aulac.

Completed nests were found at Jolicure on June 5, 1953 (C. Robbins), and at Midgic on June 11, 1954. In the latter nest two young had already hatched and apparently had left the nest while the other two were just emerging from the egg. A nest with two eggs was located at White Birch Road on June 22, 1955. On July 6, 1949, a half-grown young was banded at Missaguash (in Nova Scotia).

Snipe concentrations start to build up in late July and appear to be at their height in August and September and taper off by mid-October. Some counts at Midgic are July 30, 1954 (60), August 24, 1949 (15), September 8, 1948 (25); at Amherst Point Sanctuary, September 15, 1949 (30).

One bird at Middle Sackville on March 28, 1964, may have wintered, as the area was suitable, and no others were seen for three weeks.

Season

April 14 to November 6.

Whimbrel *Numenius phaeopus*

Uncommon fall transient. This species was apparently much more common in the 1940's. I did not record it at all between 1950 and 1956. My records are Midgic, mid-August, 1948 (2), September 5, 1948 (1), August 26, 1950 (18); Aulac, September 9, 1949 (27). Peters (MS) reported that John Tingley saw 40 at Midgic on September 7, 1941.

Season

Mid-August to September 22

Spotted Sandpiper *Actitis macularia*

Fairly common summer resident. Most commonly seen along the shores of the Jolicure lakes and Morice Lake.

A downy young was found at Morice Lake on August 2, 1948.

Season

May 9 to September 15

Solitary Sandpiper *Tringa solitaria*

Occasional transient, very rare. Possibly a few of these easily overlooked birds pass through the region yearly. One was seen several times during August, 1949, at White Birch Road; and one near Sackville on September 1, 1962.

Greater Yellowlegs *Totanus melanoleucus*

Common transient, more common in autumn. Some high daily counts for Midgic are spring: May 6, 1955 (13), May 14, 1948 (20), May 23, 1952 (6); autumn: September 1, 1950 (50), September 7, 1948 (35), September 13, 1948 (25).

Two were seen at CBA salt marsh on June 15, 1960.

Season

Spring: April 6 to June 15

Autumn: July 8 to November 7

Lesser Yellowlegs *Totanus flavipes*

Common autumn transient, occasional in spring. During the autumn migration this is the more common of the two yellowlegs. Some high daily counts in 1948 are August 3 (44), August 6 (16), September 5 (25), September 17 (45); in 1949, August 16 (100), August 24 (40); in 1950, September 1 (100); in 1951, July 15 (25).

Flocks of yellowlegs frequent the new-mown fields of marsh hay at Midgic.

The only spring records are for May 21, 1939, at Aulac, by Peters (MS), and four seen on June 13, 1954, on a salt marsh near radio station CBA, Sackville.

Season

Spring: May 21 to June 13

Autumn: July 2 to October 10

Pectoral Sandpiper *Erolia melanotos*

Fairly common autumn transient. This species was not recorded in spring. It was most commonly seen at Midgic, White Birch Road, and Coles Island. Twenty-five were noted at Midgic on August 12, 1949.

Season

July 28 to November 15

White-rumped Sandpiper *Erolia fuscicollis*

Occasional transient, very rare. A few were seen at Midgic in July and August, 1949.

There were single birds at the Tantram dam on September 21, 1961, October 2, 1962, and September 2, 1963. Flocks of up to several hundred birds were seen near Dorchester Cape, a few miles west of the area, in October 1962 and 1963.

Least Sandpiper *Erolia minutilla*

Fairly common spring and very common autumn transient. The greatest number seen at one time in the spring was 30 at Midgic on May 15, 1949. In the autumn mixed flocks of up to 1,500 Least and Semipalmated sandpipers (*Ereunetes pusillus*) frequent the sandy beaches of Wood Point and Rockport.

Season

Spring: May 6 to May 26

Autumn: July 1 to September 19

Dunlin *Erolia alpina*

Fairly common autumn transient. Not recorded in spring. The largest number seen in one day was 30 at West Sackville on November 18, 1949. An immature male was collected at West Sackville on November 30, 1949. Three were near Sackville on October 12, 1964, and flocks of up to several hundred were seen near Dorchester Cape (west of the study area) in October 1962 and 1963.

Season

November 18 to December 10

Short-billed Dowitcher *Limnodromus griseus*

Fairly common autumn migrant, occasionally common. No spring records. Small numbers of dowitchers are seen each year in mixed flocks of shore birds at Midgic and Amherst Point Sanctuary. The most seen in one day was approximately 100 at Amherst Point Sanctuary on July 15, 1951.

Season

July 7 to October 5

Semipalmated Sandpiper *Ereunetes pusillus*

Common fall transient. No spring records.

Usually occurs in mixed flocks with the Least Sandpiper, which it seems to outnumber by a considerable margin.

Twenty were seen near Aulac on October 9, 1961, and thirty at the Tantramar dam on October 6, 1962. One bird with an injured leg was at the dam on November 11, 1964.

Season

July 1 to October 9

Hudsonian Godwit *Limosa haemastica*

Occasional transient, rare. Four were seen by C. E. Addy at Amherst Point Sanctuary in mid-August, 1950, and four were near Sackville on October 24, 1964.

Avocet *Recurvirostra americana*

Accidental. One bird, believed the first of the species to be seen in New Brunswick since 1880, appeared at the Tantramar dam on September 15, 1964. It was seen by many people from Sackville, Amherst, and Moncton, on succeeding days, and both still and motion pictures were obtained. It was last seen on October 2.

Great Black-backed Gull *Larus marinus*

Fairly common transient and very rare winter resident. Flocks ranging from 6 to 20 occur

regularly during migration. A few spend the winter around the dumps at Sackville and Amherst. Winter records are January 1, 1955 (1), January 20, 1949 (2), February 21, 1954 (1).

Now noted at all seasons, even in winter, e.g., December 26, 1961 (72), December 30, 1964 (57).

Season

Spring: March 29 to June 7

Autumn: September 8 to December 9

Herring Gull *Larus argentatus*

Common transient and visitant. Herring Gulls may be seen at any time of the year but are most numerous in late summer when flocks of 100 or more frequent the newly mown hay fields. Examination of food pellets indicates that at this time of year they feed largely on grasshoppers. They winter in good numbers especially around the dumps at Amherst and Sackville. On January 1, 1955, a count of 49 was made at Sackville.

Ring-billed Gull *Larus delawarensis*

Two were seen near Upper Sackville on September 18, 1961 (Squires, 1961). That is the first record for the Cumberland Basin side of the Isthmus, although that species is regular at Baie Verte, less than 20 miles away on Northumberland Strait.

Bonaparte's Gull *Larus philadelphia*

Occasional transient. Although Bonaparte's Gulls migrate regularly along the Northumberland Strait they rarely wander across the Isthmus of Chignecto. There are two records for Midgic: August 20, 1948 (1), and August 15, 1949 (1).

Black Tern *Chlidonias niger*

Occasional visitant. It has been recorded only twice, at Midgic, on June 15, 1949 (1) and on August 12, 1949 (1).

Thick-billed Murre *Uria lomvia*

An immature was picked up by a road maintenance crew near Sackville on December 21, 1954. This bird was banded and released.

Dovekie *Plautus alle*

Accidental. One was picked up dead near Brooklyn on December 3, 1960, and another was found injured east of Amherst on January 3, 1963. Both specimens were preserved.

Mourning Dove *Zenaidura macroura*

Irregular fall transient, very rare. There are three records: White Birch Road, August 23, 1949 (1); Amherst Point Sanctuary, September 15, 1954 (1); and West Sackville, October 2, 1955 (1).

Recent records include birds at Sackville, October 10, 1962 (2), and September 15, 1963 (2); and at Amherst Point, September 26, 1962 (2). One bird remained at Mount View in the autumn of 1964 and was finally taken indoors and fed all winter (*vide* George Johnstone). It was released in early April 1965, and what was probably the same bird was seen near Sackville on April 15, 1965.

Black-billed Cuckoo *Coccyzus*

erythrophthalmus

Rare summer resident. Heard calling each summer at West Sackville.

Season

June 6 to July 6

Great Horned Owl *Bubo virginianus*

Fairly common resident. Not often seen but frequently heard during the Woodcock counts from April to mid-May. Some records are Rockport, April 22, 1949 (2); West Sackville, April 16, 1949 (2); Cookville, May 12, 1955 (1); and Midgic, September 9, 1949 (1).

Snowy Owl *Nyctea scandiaca*

Irregular transient and occasional winter visitant. This species was seen by Peters (MS) at Midgic on October 21, 1941, and at Aulac on April 30, 1943. I have recorded it at Midgic on March 30, 1955, and at Aulac on March 30, 1955, and also at Midgic on May 1, 1952.

Snowy Owls were reported several times in the winters of 1960-1961, 1961-1962, and 1964-1965. One was seen on March 24, 1963, east of Upper Sackville; none in winter 1963-1964.

Season

October 20 to May 1

Barred Owl *Strix varia*

B. C. Carter reported one near Midgic on April 24, 1957.

Long-eared Owl *Asio otus*

Very rare. One was heard by Robbins and Boyer at Aulac on May 26, 1952.

Short-eared Owl *Asio flammeus*

Fairly common summer resident and transient, sometimes winters. Recorded at Midgic, West Sackville, Wood Point, White Birch Road, and Cookville.

Two nests were found at Midgic by Peters and Tingley in 1940. One nest contained five young on June 1, 1940. There were four young and one egg in the second nest on June 11, 1940.

Two late records are for December 12, 1949, and December 15, 1947.

Season

April 22 to December 22

Saw-whet Owl *Aegolius acadicus*

Fairly common resident. Heard in late April and May during the Woodcock counts at Cookville, Aulac, Jolicure, and Rockport. Heard in the ratio of one bird for every four miles.

Whip-poor-will *Caprimulgus vociferus*
Possibly rare summer resident. One was heard calling at Fairfield Road on June 10, 1949.

Common Nighthawk *Chordeiles minor*
Fairly common summer resident. A migrating flock of 50 was seen June 9, 1955.
A nest with two eggs was found at Beech Hill Road on June 28, 1949.
Season
May 28 to August 5

Chimney Swift *Chaetura pelagica*
Fairly common summer resident.
Season
May 7 to September 12

Ruby-throated Hummingbird *Archilochus colubris*
Fairly common summer resident. Dates of first spring observations are May 23, 1955 (1), May 27, 1953 (1 pair), May 28, 1948 (1).

Belted Kingfisher *Megasceryle alcyon*
Common summer resident. Recorded at Sackville Quarry, Midgic, Missaguash, Cookville, and Amherst Point Sanctuary.
Season
April 4 to October 1

Yellow-shafted Flicker *Colaptes auratus*
Fairly common summer resident in the upland forest and cultivated areas. Competition with starlings for nesting sites occurs, and the flickers are frequently driven away after completing their nesting holes.
Season
April 4 to October 30

Yellow-bellied Sapsucker *Sphyrapicus varius*
Uncommon transient. One was seen in Sackville

on April 15, 1963, by Mrs. D. McPhail and A. J. Erskine.

Hairy Woodpecker *Dendrocopos villosus*
Fairly common resident. Like all woodpeckers it is found most commonly in the upland forest type.

Downy Woodpecker *Dendrocopos pubescens*
Fairly common resident, found in the upland forest type and also in the towns and cultivated areas.

Eastern Kingbird *Tyrannus tyrannus*
Fairly common summer resident. Pairs of kingbirds are scattered throughout the region, mainly in the orchards.
Season
May 10 to September 5

Western Kingbird *Tyrannus verticalis*
Occasional visitant. One was seen on October 24, 1951, along the roadside near Midgic.

Eastern Phoebe *Sayornis phoebe*
Irregular transient. Recorded at Fairfield Road (Sackville) on April 11, 1948, and at Sackville Quarry between April 25 and April 29, 1948.

Yellow-bellied Flycatcher *Empidonax flaviventris*
Rare summer resident. Pairs have been recorded at Beech Hill Road, West Sackville, and Rockport Road.
Season
June 6 to September 10

Traill's Flycatcher *Empidonax traillii*
Fairly common summer resident. Recorded at West Sackville, Wood Point, Midgic, White Birch Road, Cookville, Missaguash, Morice Lake, and Amherst Point Sanctuary.

Season
May 29 to mid-September

Least Flycatcher *Empidonax minimus*
Rare summer resident. Recorded at Sackville, Beech Hill Road, and Amherst Point Sanctuary.
Season
May 29 to September 1

Eastern Wood Pewee *Contopus virens*
Rare summer resident. Recorded at Beech Hill Road, Sackville, and Amherst Point Sanctuary.
Season
May 24 to September 1

Olive-sided Flycatcher *Nuttallornis borealis*
Fairly common summer resident. Recorded at White Birch Road, Fairfield Road, Jolicure lakes, Cookville, West Sackville, and Amherst Point Sanctuary.
Season
June 5 to August 2

Horned Lark *Eremophila alpestris*
Fairly common at all seasons of the year. Presumably the breeding form is *E.a. praticola* which is replaced by *E.a. alpestris* in the winter months. Horned larks are most commonly seen on the cultivated marsh.

Tree Swallow *Iridoprocne bicolor*
Common summer resident and abundant transient. This is undoubtedly the most common swallow in the area, where it utilizes the numerous bird houses which have been erected. Over 300 were estimated at Midgic on the evening of May 4, 1948; 200 were seen in the same place on April 24, 1949; and 250 at Amherst Point on April 15, 1955. These flocks appeared to arrive just about dusk and to roost in the dead cat-tails.

Following the disastrously wet and cold breeding season of 1959 (Bagg, 1959), that species was very scarce in the area in 1960–1965. Five was the greatest number noted in one day between the spring migration and the appearance of flying young.
Season
April 22 to September 7

Bank Swallow *Riparia riparia*
Common summer resident and transient. This is probably the third most abundant swallow (second most abundant, 1960–1965). Colonies were recorded at Wood Point (200 pairs), Cookville (50 pairs), Frosty Hollow (100 pairs), and Amherst Point (100 pairs). Two hundred were seen at Jolicure on May 26, 1952, and 100 at Midgic on June 6, 1955.
Season
May 12 to September 7

Barn Swallow *Hirundo rustica*
Common summer resident and transient. This would seem to be the second most abundant swallow and is found nesting in most of the hay barns and other buildings on the marshes. A flock of about 250 was seen at Jolicure on May 26, 1952. Some late dates for these species are Midgic, November 10, 1948 (3); and White Birch Road, November 11, 1948 (2). Nests with eggs were found between June 18 and July 4. Half-grown young were noted on July 23.
This species is now much more common than the Tree Swallow, except briefly during the early part of spring migration.
Season
April 27 to September 14

Cliff Swallow *Petrochelidon pyrrhonota*
Rare summer resident but common transient.

The greatest number recorded at one time was 250 at Midgic on June 6, 1955.

Season

May 9 to September 5

Purple Martin *Progne subis*

Rare summer resident and transient. Four were recorded at Amherst Point on May 13, 1955, and three at Midgic on August 7, 1948. A small colony started to nest in a bird house in Sackville during the summer of 1950.

No colony was known in Sackville in 1960–1965. At least five colonies were active in Amherst during 1964, one new colony having been established there in 1963.

Season

May 9 to August 7

Gray Jay *Perisoreus canadensis*

Uncommon resident. Recorded at Sackville (Rifle Range and Fisher's Woods), White Birch Road, Johnson's Lake, and Beech Hill Road.

Blue Jay *Cyanocitta cristata*

Uncommon resident and irregularly common transient. Scattered summer records indicate that this species nests sparingly. Late autumn and winter records are of small groups of three or four appearing at irregular intervals. During late May there is an influx of Blue Jays in the West Sackville area apparently crossing Cumberland Basin from Nova Scotia. Some high spring flock counts for West Sackville are May 30, 1949 (40), May 15, 1950 (54). Very few were noted September 1964 to August 1965, a fairly general situation in the Maritimes then.

Common Raven *Corvus corax*

Fairly common resident. Ravens are found in all suitable habitat in the region, even wintering and nesting within the town limits of Sackville.

A nest was found at Sackville on March 25, 1948, and another at Jolicure on April 19, 1949. In the latter young birds were heard calling. Both nests were about 30 feet up in the dense branches of spruce trees.

Flocks of as many as 25 birds are seen throughout the winter at the Sackville dump.

Common Crow *Corvus brachyrhynchos*

Common summer resident, uncommon during winter. Migrants apparently start to arrive during March. Flocks are seen throughout April and early May. This species starts nesting during the first half of May.

Some high spring counts at Midgic are March 10, 1948 (8), March 20, 1949 (55), April 7, 1949 (10), May 5, 1949 (14), March 29, 1953 (20), April 28, 1950 (20), May 4, 1950 (34). An unusually large migration flock of 282 was seen near Amherst Point on March 12, 1957 (C. O. Bartlett).

Some high autumn counts at Midgic are October 2, 1949 (50), November 11, 1949 (13).

A nest containing six eggs was found at West Sackville on May 13, 1948, and another containing two half-grown young at Amherst Point on June 18, 1963.

Black-capped Chickadee *Parus atricapillus*

Common resident. A flock of more than 25 was observed feeding in the middle of a cat-tail marsh at Midgic on October 2, 1949.

Boreal Chickadee *Parus hudsonicus*

Fairly common resident. In habitat where both occur, the Black-capped Chickadee appears to be about twice as abundant as this species.

The Black-capped Chickadee is much more common than the Boreal Chickadee in towns, villages, and open farming country, where the latter species seldom occurs. In coniferous forest,

the most common forest type in the area, the Boreal Chickadee is always as common as the Black-capped, and often (1960–1961, 1965) much more common.

White-breasted Nuthatch *Sitta carolinensis*

Irregular transient and visitant. My only observations are at West Sackville where a pair was seen on May 14, 1955, and one individual on September 30, 1949.

One wintered near a feeding station in Sackville in 1960–1961 (D. McPhail) until at least April 2; another wintered in the same block from October 17, 1963, to April 4, 1964.

Red-breasted Nuthatch *Sitta canadensis*

Rare, probably breeds. This species was recorded far less frequently than would be expected. During the period of observation 1949–1955 there seemed to be a general low population throughout the southern half of New Brunswick and the entire province of Nova Scotia. My only local records are West Sackville, June 30, 1953 (1); Wood Point, October 30, 1952 (1); Amherst Point, November 7, 1947 (1); Sackville, November 8, 1947 (1).

This species was noted nine times in 1960–1965. The only summer records were June 26 and July 16 in 1965. Single birds were seen near Fairfield on December 24, 1960, and December 30, 1964.

Brown Creeper *Certhia familiaris*

Irregularly common visitant, rare summer resident. This species was especially common during the winters of 1948 and 1949, and was recorded throughout the area, usually single birds but on occasion two or three together. Brown Creepers apparently breed in the Jolicure area and Beech Hill Road as I have spring and summer records for both places.

Winter Wren *Troglodytes troglodytes*

Uncommon summer resident. This species is most common in the Beech Hill Road area where four singing males were heard on June 28, 1949. On June 5, 1955, one was heard in the same place. Other records are for Aulac, Cookville, and Rockport.

Season

April 2 to October 15

Long-billed Marsh Wren *Telmatodytes palustris*

Uncommon summer resident and fairly common transient. Three or four pairs are seen annually at Midgic during the breeding season. An adult female, just beginning to moult, was collected by C. E. Addy at Midgic on July 5, 1949. This species was identified as *T.p. dissaepus*, by Parkes (1952).

Long-billed Marsh Wrens appear in fairly good numbers at Midgic in late autumn. A high count is six recorded on November 15, 1949.

This species has not been observed since 1955.

Season

May 29 to December 8

Short-billed Marsh Wren *Cistothorus platensis*

Locally common summer resident. There are colonies located at Midgic and Front Lake, Jolicure. Individuals have been heard singing at Cookville and Amherst Point Sanctuary. Addy collected an adult male at Midgic on July 7, 1949, and another on May 16, 1950. A singing male was collected at Front Lake, Jolicure, on May 15, 1950 (Boyer).

J. A. Hagar (pers. comm.) reported that this species had disappeared from Midgic by July 1960, and that only one bird was then present at Jolicure.

Season

May 15 to August 14

Mockingbird *Mimus polyglottos*

Occasional visitant. A male was collected at West Sackville on December 18, 1955.

One visited a feeding station in Sackville from mid-November 1961 to late January 1962, and another a feeding station in West Sackville in November and December 1964.

Catbird *Dumetella carolinensis*

Rare summer resident. This species has been recorded during the nesting season at White Birch Road, Fairfield Road, and West Sackville.

Season

May 21 to August 15

Robin *Turdus migratorius*

Very common summer resident, occasional winter visitant. Robins arrive from early to mid-March and spring migration is at its height during the first half of April. Fall migration is usually under way by mid-September. Robins were recorded during the winters of 1947, 1949, and 1955. The most seen in one day during spring migration was 145 at West Sackville on March 26, 1955.

The earliest nest, containing two eggs, was found on May 14, 1948. A nest contained one egg on July 1, 1952, and three newly hatched young on July 19. A nest started approximately July 7, 1952, contained one egg on July 13 and four eggs on July 16. Young left a nest in Sackville about August 25, 1963.

Season

March 3 to November 16

Hermit Thrush *Hylocichla guttata*

Fairly common summer resident. Common at Cookville, Rockport, and Fairfield Road.

This species was termed a "disaster species" (Bagg, 1958), after severe losses in the southeastern United States in February 1958. It was

generally scarce in northern Nova Scotia between 1960 and 1963, and the only local records from that period were one bird singing near Wood Point, New Brunswick, on April 28, 1960, and one in Sackville on October 1, 1963. It was much more common in 1965, when birds were noted on five dates between June 6 and July 11. Adults were carrying food near White Birch Road on June 26.

Season

April 4 to October 30

Swainson's Thrush *Hylocichla ustulata*

Fairly common summer resident.

Season

May 5 to October 27

Gray-cheeked Thrush *Hylocichla minima*

Rare transient. This species does not seem to spend any time in this region during migration but is heard flying over at night. It may be much more common than is apparent.

Eastern Bluebird *Sialia sialis*

Occasional. I have only one record of one seen examining a bird box on May 3, 1950.

Golden-crowned Kinglet *Regulus satrapa*

Fairly common resident. The greatest numbers seen in one day were 20 at West Sackville on January 20, 1949, and 24 at Fort Lawrence and Amherst Point on December 26, 1964.

Ruby-crowned Kinglet *Regulus calendula*

Fairly common summer resident. The bulk of the spring transients appear to arrive during the first three weeks of May.

Season

April 20 to December 8

Water Pipit *Anthus spinoletta*

Occasional transient. My only record is one seen at West Sackville on May 1, 1953.

Ten birds were noted on October 2, 1962, five on October 14, 1962, and one on October 11, 1964, by the Tantramar dam.

Bohemian Waxwing *Bombycilla garrula*

Two birds were seen in Sackville on December 22, 25, and 26, 1963, by Mrs. McPhail, Mr. and Mrs. H. Harries, and A. J. Erskine. H. Harries saw one in Sackville on November 18, 1964.

Cedar Waxwing *Bombycilla cedrorum*

Common summer resident.

Some nest records for West Sackville are as follows:

1948 - July 10, being built; July 12, two eggs.

1952 - July 1, being built; July 3, five eggs;

July 19, eggs hatched.

1952 - July 2, three eggs; July 7, six eggs.

1953 - June 30, three eggs; July 4, five eggs.

1954 - June 28, no eggs; June 29, one egg.

Season

April 27 to October 20

Northern Shrike *Lanius excubitor*

Very rare winter resident; rare transient.

Season

November 25 to April 9

Loggerhead Shrike *Lanius ludovicianus*

Very rare summer resident and transient. For a few days in late April of 1954 and 1955 a singing male was noted at West Sackville. A pair was seen daily by Boyer and Robbins at Upper Sackville during May 1952.

One was seen at Amherst Point Sanctuary on April 25, 1957 (C. O. Bartlett).

Season

April 12 to June 15

Starling *Sturnus vulgaris*

Very common summer resident and transient, fairly common in winter. The spring migration of this species does not seem to be well marked. Some high numbers are West Sackville, March 6, 1949 (50), and March 14, 1949 (30). In 1950 there were 27 at West Sackville on April 2. Fall migration is well marked. There were about 2,500 at Midgic on October 16, 1948, and on November 10, there were from 200 to 250. At White Birch Road there were an estimated 2,500 on November 12, 1948. Numbers are much the same each year, with migration appearing to take place between mid-October and early December.

During the nesting season Starlings have been observed to appropriate Flicker nests usually just after the latter have finished excavation.

Starlings are common around the town dumps at Sackville and Amherst during the winter.

Solitary Vireo *Vireo solitarius*

Uncommon summer resident. Recorded at Cookville, Sackville Reservoir, Fairfield Road, and White Birch Road. The earliest recorded date is May 21.

One was seen near West Sackville on September 8, 1962, and one near Sackville on May 4, 1963.

Red-eyed Vireo *Vireo olivaceus*

Common summer resident. Recorded at Sackville, West Sackville, Morice Lake, Cookville, Beech Hill Road, Missaguash, and Amherst Point.

A nest with two eggs was found at West Sackville on June 29, 1954.

Season

May 29 to October 14

Black-and-white Warbler *Mniotilta varia*

Uncommon summer resident. Noted six times in

1960-1965, at Cookville, Jolicure, White Birch Road, Sackville, and Amherst Point.

Season

May 24 to September 14

Tennessee Warbler *Vermivora peregrina*

Locally fairly common summer resident. This species was first recorded in 1952 and has been seen regularly since then. Four singing males were recorded at West Sackville on July 7, 1952, three in the same place on June 6, 1953; and two at Rockport Road on July 4, 1953.

Season

May 24 to September 8

Nashville Warbler *Vermivora ruficapilla*

Fairly common summer resident. Recorded at Cookville, Jolicure, Missaguash, West Sackville, and Rockport Road.

Season

May 12 to September 17

Parula Warbler *Parula americana*

Uncommon summer resident. Summer records are for Sackville, Beech Hill, Fairfield, Cookville, and Amherst Point. Earliest observation is on May 14, 1949, and the latest on September 14, 1964.

Yellow Warbler *Dendroica petechia*

Common summer resident. Especially common around small ponds at the Sackville and Wood Point quarries where it might almost be described as colonial. Five singing males were recorded at one time at Wood Point Quarry.

A brood of four was old enough to leave the nest on July 9, 1952.

One was noted August 24, 1961, at Amherst Point, and one September 8, 1963, at Sackville.

Season

May 13 to September 8

Magnolia Warbler *Dendroica magnolia*

Very common in suitable habitat. The most common warbler. Recorded at Cookville, White Birch Road, Beech Hill, Rockport Road, Fairfield, Sackville, West Sackville, Missaguash, Jolicure, Rockport, and Amherst Point.

A nest with four eggs was found at West Sackville on June 12, 1948.

Season

May 15 to September 14

Cape May Warbler *Dendroica tigrina*

Rare irregular transient. Single birds were seen in Sackville September 2 and 14, 1963. This species was not seen in northern Nova Scotia at all in 1960-1962, but was seen on six dates in the spring of 1963.

Black-throated Blue Warbler *Dendroica caerulescens*

Rare transient. One was heard near Fairfield on May 25, 1963.

Myrtle Warbler *Dendroica coronata*

Very common in suitable habitat. The second most abundant warbler. Especially common during spring migration which lasts from late April until mid-May. Autumn migration lasts from early September to mid-October.

Season

May 4 to October 13

Black-throated Green Warbler *Dendroica virens*

Fairly common summer resident. Found in much the same localities as the Magnolia and Myrtle warblers.

Season

May 8 to September 17

Blackburnian Warbler *Dendroica fusca*

Rare summer resident. One was recorded at the Sackville Rifle Range on May 24, 1948. Two singing males were heard at Beech Hill on June 28, 1949, and two were heard in the same place on May 29, 1955.

Season

May 24 to August 28

Chestnut-sided Warbler *Dendroica pensylvanica*

Uncommon summer resident. Pairs were recorded at White Birch Road, Cookville, West Sackville, and Rockport.

Season

May 24 to August 1.

Bay-breasted Warbler *Dendroica castanea*

Fairly common summer resident. Recorded at Fairfield, Sackville, and West Sackville. The most noted in one day was eight singing males at Fairfield on May 25, 1955. Earliest observation was May 21, 1950.

Blackpoll Warbler *Dendroica striata*

Rare transient. Seven were recorded at Sackville Quarry on May 23, 1948, and two at West Sackville on May 29, 1949.

Season

May 23 to June 5

Palm Warbler *Dendroica palmarum*

Very common summer resident and transient. This species probably ranks with the Myrtle Warbler in abundance. It occurs throughout the region in suitable habitat.

A nest with four eggs was found at Rockport on June 9, 1953. All eggs had hatched by June 17.

Season

April 22 to October 21

Ovenbird *Seiurus aurocapillus*

Irregular probable summer resident. There are two records only, a male at Sackville on May 24, 1948, and another at White Birch Road on June 6, 1950. One was heard near Jolicure on June 6, 1965.

Northern Waterthrush *Seiurus noveboracensis*

Irregular probable summer resident. Three were recorded at Sackville Quarry on May 18, 1948, and one at the Wood Point Quarry on June 10, 1948.

One was seen near Cookville on June 17, 1960.

Yellowthroat *Geothlypis trichas*

Very common summer resident in suitable habitat. Probably ranks fourth in abundance. Ten singing males were recorded at West Sackville on May 29, 1949, and seven at Rockport on July 4, 1953. Two pairs were carrying food on July 4, 1955.

This species was noted until October 4, 1960; October 1, 1962; September 30, 1963; and September 21, 1964.

Season

May 18 to October 4

Wilson's Warbler *Wilsonia pusilla*

Very rare. I have spring records of single individuals at West Sackville, Jolicure, and Cookville, and one fall record for West Sackville.

There is no direct evidence of breeding but a singing male was noted at West Sackville on June 4, 1955. One male was singing at Abou-shagan Road on June 26, 1965.

Season

May 18 to September 15

Canada Warbler *Wilsonia canadensis*

Uncommon fall transient. Single birds were seen

near Frosty Hollow on September 6, 1961, and in Sackville on August 28, 1963.

American Redstart *Setophaga ruticilla*

Very common summer resident. Recorded at Cookville, Morice Lake, Jolicure, Sackville, West Sackville, Fairfield, and Amherst Point.

Season

May 21 to September 15

House Sparrow *Passer domesticus*

Rare resident except in the cultivated areas where it is common.

Bobolink *Dolichonyx oryzivorus*

Common summer resident. Widespread through the reclaimed marsh areas.

A nest found at Midgic on July 2, 1950, contained five well-grown young.

Season

May 22 to September 9

Eastern Meadowlark *Sturnella magna*

Irregular transient. One was seen at Midgic on October 27, 1949, four on November 11, 1949, and one on November 4, 1953. There is one winter record for December 31, 1954, on a salt marsh near Sackville. One was seen east of Upper Sackville on May 12, 1962.

Redwinged Blackbird *Agelaius phoeniceus*

Very common summer resident and transient. This species usually arrives in late March but there is one record for five males at West Sackville on March 6, 1949. It is most commonly seen at Midgic, Cookville, Jolicure, and Amherst Point. The largest spring flock was 65 seen at Cookville on May 1, 1950. Large fall flocks are Midgic, 500 on November 3, 1949, 1,000 on November 2, 1954.

The average number of eggs in 13 nests was 3.85. Nests with eggs were found between May 27 and June 10. Early hatching date was June 9.

Single birds were reported at feeding stations in Sackville in the winters of 1961-1962 and 1964-1965.

Season

March 6 to November 4

Orchard Oriole *Icterus spurius*

Occasional visitant. There is one record only for a singing male in an apple tree at West Sackville on June 2, 1954.

Baltimore Oriole *Icterus galbula*

Occasional visitant. One was recorded at West Sackville on September 22, 1949.

One bird which attempted to winter in Sackville in 1958-1959 was captured and kept indoors until spring (D. McPhail). Another remained at a feeding station in Middle Sackville from mid-November until December 26, 1962. One was seen in Sackville on September 8, 1963. All three were apparently immature males.

Rusty Blackbird *Euphagus carolinus*

Rare summer resident, and fairly common transient. The largest number seen in one day during spring migration was at West Sackville on March 30, 1948 (25).

Season

March 27 to October 27

Common Grackle *Quiscalus quiscula*

Fairly common summer resident and very common transient. The largest number seen in one day in autumn was 850, at White Birch Road on October 27, 1948.

Three nests found at Sackville on May 13 and May 18, 1948, averaged five eggs each.

At least one bird attempted to winter at Sackville each year from 1959-1960 to 1964-1965, and several survived all winter around feeding stations. At least six birds were seen on January 5, 1965.

Season

March 27 to October 27

Brown-headed Cowbird *Molothrus ater*

Fairly common transient and uncommon summer resident. The greatest number seen in one day was 25 at West Sackville on March 6, 1949.

The spring flight in 1961 was unusually large, in line with general increases throughout the northeastern United States in recent years. Peak numbers were noted on March 31, 1961 (25), April 8, 1961 (60), and April 9, 1961 (45).

Season

March 6 to October 16

Indigo Bunting *Passerina cyanea*

Occasional summer visitant. I have one record, a singing male at Cookville on June 9, 1948.

Evening Grosbeak *Hesperiphona vespertina*

Fairly common winter visitant. Twenty were seen at West Sackville on October 24, 1951, and 25 were counted at Sackville on January 23, 1949.

In line with recent evidence of breeding in New Brunswick, the species has been seen both earlier and later in 1960-1965 than formerly. In 1965, birds were first noted in summer near Sackville, on June 6 near Jolicure, and on June 26 near Fairfield. Largest numbers seen in one day were on October 12, 1964 (70), April 4, 1965 (200), and April 15, 1965 (60).

Season

August 30 to May 12

Purple Finch *Carpodacus purpureus*

Fairly common summer resident, irregular in

winter. Seven were seen at West Sackville on January 23, 1953.

There was a major irruption into the Maritimes in early March, 1963, and groups of up to 30 birds were seen at Sackville all that spring. Considerable numbers wintered in 1964-1965, when 74 were noted on December 30 (Christmas Bird Count), and singing birds were common in Sackville from March 5.

Season

April 1 to November 18

Pine Grosbeak *Pinicola enucleator*

Irregular fairly common winter visitant.

Season

October 29 to February 14

Common Redpoll *Acanthis flammea*

Common transient and winter visitant. The highest count in one day was 200 at West Sackville on February 18, 1952.

Season

November 25 to April 17

Pine Siskin *Spinus pinus*

Irregular transient, rare. Twelve were seen at Sackville on April 13, 1948.

A number of birds were noted in the summer of 1965, at Amherst Point May 24 (2), June 23 (1), and June 28 (1); and at White Birch Road June 26 (2).

Season

October 4 to April 14

American Goldfinch *Spinus tristis*

Fairly common summer resident, common transient. Twenty-six were seen at Sackville on March 30, 1948, and 56 at Wood Point on October 16, 1948.

Season

March 24 to November 30

White-winged Crossbill *Loxia leucoptera*
Resident, irregularly common. There is no actual evidence of breeding, but flocks of this species are seen at all times of the year. It has been noted at Jolicure, Sackville, Fairfield, West Sackville, Wood Point, and Rockport.

Savannah Sparrow *Passerculus sandwichensis*
Abundant summer resident. This species is found in all the cultivated fields, on the edges of the fresh marsh, and in the salt marsh. It is probably the most abundant bird in the region. Twenty-seven singing males were counted in about 50 acres at Midgic on May 4, 1950.

Two nests were found on a salt marsh near Sackville on June 8 and June 9, 1955, respectively, in an area that is covered with water during high spring tides. Nests with eggs were found between June 8 and July 3. The average clutch of three nests was four eggs. Parents were seen carrying food on June 6, 1949. There is one winter record for December 31, 1954.

Season
April 4 to October 20

Sharp-tailed Sparrow *Ammospiza caudacuta*
Common summer resident. This species is especially common in the drier parts of the fresh marshes such as Midgic, Jolicure, and Amherst Point, and also on the upper edges of the salt marsh. It is sometimes found in the same habitats as the preceding species. This species is usually first noted around mid-June.

An adult was seen carrying food on September 9, 1948. There is an unusually early record, April 6, 1949, for a singing male.

Season
May 27 to October 29

Vesper Sparrow *Pooecetes gramineus*
Rare summer resident. There are small colonies

of four or five pairs each located at Cookville and West Sackville. The earliest recorded observation is for April 29, 1949.

Lark Sparrow *Chondestes grammacus*
Occasional exotic. Two were seen at a feeding station in Sackville on October 26, 1947 (Boyer).

Slate-colored Junco *Junco hyemalis*
Fairly common summer resident, very common transient, and irregular winter visitant. Juncos start to arrive in late March, and migration reaches its peak during the latter part of April. Flocks of over 100 individuals are common during peak periods. Normally the juncos have left by the latter part of October. One spent the winter of 1948-1949 at West Sackville, and five were present at the same place from November 30, 1952, until the latter part of March 1953. Some of them may have nested locally. Twenty-five were seen at Rockport on January 2, 1953.

A nest with four eggs was found at West Sackville on May 24, 1952, and another with two eggs and two newly hatched young at Beech Hill on June 28, 1949.

Season
March 18 to November 1

Tree Sparrow *Spizella arborea*
Fairly common transient and winter resident. High counts are Sackville, December 31, 1947 (25); West Sackville, March 26, 1955 (17).
Season
October 16 to May 1

Chipping Sparrow *Spizella passerina*
Uncommon summer resident. Small numbers have been noted at Sackville, West Sackville, and Wood Point. Five singing males and two others were recorded at West Sackville on July 7, 1952.

A pair was building a nest at the Sackville Quarry on May 24, 1948.

Season
May 8 to October 15

White-crowned Sparrow *Zonotrichia leucophrys*

Irregular transient, uncommon to rare. There were seven at the Sackville Quarry on May 14, 1948, and one was observed between October 2 and 9, 1948.

White-throated Sparrow *Zonotrichia albicollis*
Very common summer resident and transient, occasionally winters. Probably the third most abundant Fringillid. This species usually arrives in May and migration is at its height during the latter part of the month. Autumn migration begins around mid-September.

Nesting probably starts in the last week of May. One was seen carrying nesting material at Sackville on May 24, 1948. A nest with five eggs was found at West Sackville on June 11, 1948.

There is a late fall record for Wood Point on December 20, 1948, and one was noted at West Sackville between January 23 and February 4, 1953.

Season
April 23 to October 31

Fox Sparrow *Passerella iliaca*

Transient-irregularly very common in spring, uncommon in fall. Although the first spring arrivals appear occasionally in early March, migration is not at its height until the second week in April. During a three-day period in late April, 85 were banded at West Sackville.

During the fall single individuals or small groups of five or six are seen.

Season
Spring: March 4 to May 1
Autumn: October 19 to November 1

Lincoln's Sparrow *Melospiza lincolnii*

Very rare summer resident. The only known breeding colony occurs in a black spruce (*Picea mariana*) bog at Rockport. Four or five pairs nest in a small section of this bog every year. Two were found in breeding season at Round Lake on June 20, 1960, and two at Patterson Lake near Midgic on July 8, 1960. This species was noted September 6, 1961, near Frosty Hollow.

Swamp Sparrow *Melospiza georgiana*

Common summer resident and transient; occasionally winters. This is probably the fourth most abundant Fringillid in the region. Forty-one were counted at Midgic on May 3, 1955.

Nests with eggs were found at Midgic from May 19 until June 27. Three nests averaged 4.3 eggs. Flying young were noted at Midgic on June 27, 1954. One was seen at Midgic on December 8, 1948, and three on December 22 of the same year; and one at Sackville on December 25, 1952. Other winter records include December 23, 1962, December 22, 1963, and December 11, 23, and 30, 1964. Apparently none of these birds survived into January.

Season
May 5 to November 2

Song Sparrow *Melospiza melodia*

Common summer resident, occasionally winters. One was recorded on December 25, 1949, at West Sackville. Other winter records include January 19 (1), Middle Sackville, and February 14 (1), Sackville, in 1962; December 12 (2) and 22 (1), 1963, Sackville; and in 1964 March 4 (1), December 23 (1), and 30 (1), Sackville, and December 26 (1), Amherst Point.

Nests with eggs were found between May 24 and July 18. The average clutch for six nests was 4.3 eggs. A nest found at West Sackville contained one egg on July 18, 1955, and four on

Addendum

July 21. On August 13 two young had left the nest.

A Song Sparrow banded at West Sackville was recovered the same autumn in Virginia.

Season

March 4 to November 5

Lapland Longspur *Calcarius lapponicus*

Common transient, occasionally winters. Some autumn records are West Sackville, November 8, 1949 (25); Sackville, November 26, 1952 (50) and December 19, 1948 (71); Midgic, December 9, 1948 (30). Winter records are Sackville, January 1–14, 1949 (4), December 22, 1963 (3), and Fort Lawrence, December 26, 1962 (2).

Noted each winter in 1961–1964, chiefly at the Sackville dump.

Season

Spring: February 23 to April 10

Autumn: October 9 to December 19

Snow Bunting *Plectrophenax nivalis*

Very common transient and winter visitant, irregularly abundant. Some high counts are Midgic, November 15, 1949 (200), November 24, 1949 (400); Middle Sackville, November 15, 1949 (200); West Sackville, November 23, 1949 (300), December 9, 1949 (2,500), and December 31, 1954 (1,000).

Season

October 25 to April 5

Additional records since 1956, and particularly those since 1965, are discussed under four headings: (1) species new to list, (2) species showing changes in status, (3) recently wintering birds, (4) extended seasonal dates.

1. Species new to list

Red-necked Grebe *Podiceps grisegena*

Occasional transient. One was shot by a duck hunter on Large Lake (Jolicure) on October 7, 1967 (specimen in CWS collection).

Leach's Petrel *Oceanodroma leucorhoa*

Accidental. A single bird observed by Mrs. Ruth Henderson, College Street, Sackville on September 8, 1970, was found dead the following day. The specimen was identified by A. Smith and is now in the Acadia University Museum.

Green Heron *Butorides virescens*

Irregular summer visitant. A single bird was observed by A. Smith near Gunners Lakes (Missaquash Marsh) on June 11 and July 9, 1967. One was seen by Simon Lunn at Fillmore's Hole (Tintamarre National Wildlife Area) on May 9, 1969.

Cattle Egret *Bubulcus ibis*

Casual transient. Two were observed and photographed by A. Smith in the pasture behind his home on Queens Road, Sackville on November 7, 1970.

Glossy Ibis *Plegadis falcinellus*

Irregular spring visitant. Two were observed at Amherst Point Bird Sanctuary on May 24, 1971 (A. Smith and R. K. McAloney) and two (the same?) at the Tintamarre National Wildlife Area on May 31, 1971 (W. R. Whitman).

Gadwall *Anas strepera*

One record only. A pair was observed at Front Lake (Tintamarre N.W.A.) on May 3, 1968 by R. G. Hounsell.

Upland Plover *Bartramia longicauda*

Rare summer visitant. One was seen on a dry pasture east of Upper Sackville, August 13, 1965 (Erskine).

Sanderling *Crocethia alba*

Uncommon autumn transient. Five were at the Tantramar Dam on September 3 and one on October 5, in 1966. They are seen regularly at Dorchester Cape 15 miles to the southwest.

Glaucous Gull *Larus hyperboreus*

Rare winter visitant. One in immature plumage was seen over Sackville on November 10, 1965.

Iceland Gull *Larus glaucoides*

Rare winter visitant. One in immature plumage was seen at the Sackville dump, December 28, 1965. This species is abundant at the Cape Tormentine ferry dock 30 miles to the northeast.

Common Tern *Sterna hirundo*

Rare visitant. A. Smith observed two at Duck Lake (Missaquash Marsh) on June 30, 1966 and one at Round Lake on September 8, 1966.

Rock Dove *Columbia livia*

(Presumably present in Boyer's time) Fairly common resident, mainly in the towns. Most of those seen are free-living birds, nesting on higher buildings in towns and sometimes in hay barns on the marsh.

Barn Owl *Tyto alba*

Only one record known, that of an individual captured at Robb Engineering works in Amherst

on May 29, 1971 and taken to E. Lowerison. Identification confirmed and photographs taken by A. Smith—bird was released.

Pileated Woodpecker *Dryocopus pileatus*

Rare resident. R. McManus heard one near Breau Creek, December 30, 1964, and one was seen near Midgic on December 28, 1965, by R. and L. Fyfe and G. Johnstone. One was seen at Cookville December 31, 1969 by H. Harries.

Brown Thrasher *Toxostoma rufum*

Occasional summer visitant. One was observed by R. G. Hounsell on May 28, 1968 at the farm of Lorne Bell, Jolicure, and Lee Calkins reported one at her home in Sackville on May 19, 1971.

Varied Thrush *Ixoreus naevius*

Exotic winter visitant. One was seen in Sackville on January 6, 1968 (A. J. and R. Erskine, Dr. and Mrs. W. S. Godfrey). It probably perished in the blizzard next day, as it was not seen again. This is the third known record in New Brunswick.

Yellow-headed Blackbird *Xanthocephalus xanthocephalus*

Exotic winter visitant. One was seen (and photographed) at an Amherst feeder from December 1970 to February 1971 (E. Lowerison).

Scarlet Tanager *Piranga olivacea*

Occasional spring visitant. An adult male was found dead at the home of J. W. Black, East Main Street, Sackville on May 30, 1970 (specimen in the CWS Sackville collection).

Rose-breasted Grosbeak *Pheucticus ludovicianus*

D. MacLaughlin reported one in West Sackville May 20, 1967.

Red Crossbill *Loxia curvirostra*

Irregular visitant. R. McManus reported four near Breau Creek on December 30, 1964. An irruption through much of the Maritimes occurred in the winter of 1966-67, local records extending from December 27 (10), near Jolicure (Harries and Smith), through at least March 28 (15), by Fairfield Road (Erskine).

Rufous-sided Towhee *Pipilo erythrophthalmus*

Rare visitant. One was seen in a garden on West Main Street, Sackville by L. Calkins and H. Harries, November, 1969.

2. Species showing changes in status

Canada Goose. Spring counts, especially on the John Lusby National Wildlife Area (salt marsh) near Amherst, are far higher than in former years: e.g. March 30, 1968 (3,000), March 31, 1970 (4,430).

Shoveler. There are annual spring records at Amherst Point Sanctuary and usually on the Missaquash Marsh. A brood was captured and banded on the Missaquash Marsh on July 27, 1968 (Smith, 1968).

Surf Scoter. Uncommon in autumn as well as spring. Recent records at the Tantramar dam included October 2, 1962 (1), October 1, 1966 (1), November 13, 1966 (2).

Goshawk. There are annual records along the western ridge (Fairfield, British Settlement, West Sackville) between September 26 and December 26, in recent years. A trapper, J. Johnson, caught two in wildcat traps in February 1971.

Red-tailed Hawk. A few wintered in 1966-67; an adult was seen near Frosty Hollow, December 27, and an immature near Aulac on January 14.

Rough-legged Hawk. These hawks are now seen every winter, sometimes in considerable numbers. The Christmas bird counts reported at least 34 on December 27, 1967, and 33 on December 21, 1969. Besides presumed migrants in spring (latest May 12, 1962) and autumn (earliest October 5, 1968, on the Missaquash Marsh), a number of non-breeding birds summered on the border marshes in 1965-67 (Erskine, 1968).

Gray Partridge. This species has now disappeared from much of the border area. There have been no reports in the Sackville-Midgic-Jolicure-Amherst area since the severe winter of 1962-63. Two to three coveys have been observed near the experimental farm at Nappan during the winter from 1967 to 1971.

American Coot. With the development of waterfowl management areas on the Missaquash and Jolicure Lakes marshes coots are now uncommon summer residents and regular fall migrants. A brood of 5 young was observed by Smith at Beach Pond (Tintamarre N.W.A.) on July 26, 1971. A young coot was captured and banded on the Missaquash Marsh on August 20, 1969, and fall records from the Missaquash Marsh for 1966 are as follows: October 14 (8), October 18 (27), October 23 (20), October 28 (1), October 31 (2), (Smith, 1969).

Killdeer. Several recent summer records for the Jolicure, Point de Bute, Sackville areas. This species has shown a marked increase in breeding populations during the period 1965 to 1971.

Whimbrel. Several August records from 1967 to 1971 along the Aulac River and Fort Beausejour area.

Avocet. One was seen at the Tantramar dam from August 31 until September 21, 1965. Its appearance and behaviour suggested that it was not the same bird seen in 1964. Another Avocet was seen in New Brunswick (Red Head, September 18) in 1965, and two each in Nova Scotia in 1969 and 1970, which indicates that the 1964 record was part of a trend rather than an outright vagrant.

Ring-billed Gull. Regularly in small numbers in late fall in Blair Lake-Amherst Point area. Flocks of from 40 to 75 birds were observed feeding in plowed fields in the Jolicure-Upper Point de Bute area on September 13, 1969 (84) (Harries).

Black Tern. This species has been reported every summer from 1966, with evidence suggesting breeding at the Missaquash Marsh and near Jolicure Front Lake (newly-flying juveniles seen at gravelly Beach Pond near Midgic, July 1967, Harries).

Long-eared Owl. A freshly-dead bird was found by R. Anderson on the High Marsh Road east of Upper Sackville, October 9, 1966 (specimen in CWS collection). One was observed by several people (Greenslade, Harries, Whitman, Calkins) in a tree on Charlotte Street, Sackville during the week of December 13, 1970.

Purple Martin. Numbers in Amherst took a marked increase from about 1968, and four colonies were established in Sackville in 1970-71, for the first time in nearly 20 years.

Red-breasted Nuthatch. From about 1964, this species appeared regularly in August (earliest August 4, 1966) and was seen into October, with individuals lingering to late December. The only summer record since 1965 was in 1969, three near Midgic on July 3 (S. Lunn).

Hermit Thrush. Lack of field work in suitable areas probably obscured the recovery from the 1958 "disaster". This species was generally distributed in 1965 and succeeding years.

Cape May Warbler. Uncommon transient. Noted in or near Sackville on three dates between May 21 and 28, 1967, and on five dates between August 24 and September 14, in 1963, 1967, and 1968.

Blackpoll Warbler. Uncommon transient. There are spring records in most recent years, but only one autumn record, October 3, 1965, one near Fairfield.

Evening Grosbeak. First noted in summer in 1965, they have been seen or heard each summer since. Probably this change is correlated with the advance of spruce budworm into southern New Brunswick in the last decade.

Pine Grosbeak. Major irruptions occurred in 1965, first seen September 26 (1), west of Frosty Hollow, and 1968, first seen September 2 (1), same area. The Christmas counts in those years listed 161 and 104 Pine Grosbeaks, respectively, compared to 20 or less in other years. Two were heard north of Jolicure on July 5, 1967, so a few may breed nearby.

Pine Siskin. Spring migration was detected only in 1966 and 1968, with maximum numbers noted being 20 on May 21 and 25, 1966. They were

noted from late July or early August each year from 1965, with high counts on September 3, 1968 (55) and October 11, 1965 (50). There is one recent winter record, near Fairfield on December 30, 1964 (13).

3. Recently wintering birds

White-breasted Nuthatch. The Christmas counts showed this species in six of the last 10 years, the maximum number reported being five in 1969. Several survived all winter, usually near feeding stations.

Mockingbird. Although none has been reported on a Christmas count in Sackville, we have winter records in five of the last 10 years, mostly at feeding stations. None was seen after January. One observed on October 15, 1971 on Squire Street, Sackville (Harries).

Robin. Robins were seen nearly every winter, usually at feeders, where a few may have survived until spring.

Red-winged Blackbird. Reported at feeders in five of the last 10 winters. Not known to have survived.

Common Grackle. A few winter every year around feeders. The largest number on a Christmas count was 12 in the very mild winter of 1969-70.

Brown-headed Cowbird. Noted on Christmas counts in six of the last 10 years, the maximum count being 5 in 1961. A few survived until spring in 1965-66 and 1967-68.

Slate-coloured Junco. Winters regularly in small numbers. The high Christmas count was

98 in 1961, but no other count exceeded 35. Some frequent feeders, but others have been seen miles from any known artificial source, e.g. near Fairfield, January 2, 1967 (5).

White-throated Sparrow. There were winter records at feeders each year from 1967 to 1970. These and the next species probably did not survive until spring.

Fox Sparrow. Feeders reported single birds on the Christmas counts in 1967 and 1969.

4. Extended seasonal dates (not including changes of less than 10 days)

Common Loon. April 4 to August 25.

Common Scoter. A summer record; July 13, 1966 (1).

Semipalmated Plover. July 15 to October 25.

American Golden Plover. August 12 to September 20.

Dunlin. September 12 to December 10.

Great Black-backed Gull. All year.

Black-and-White Warbler. May 11 to September 14.

Parula Warbler. May 14 to October 3.

Bobolink. May 11 to September 11.

Common Grackle. March 20 to October 31.

Brown-headed Cowbird. March 6 to October 31.

Evening Grosbeak. All year.

Pine Grosbeak. September 2 to March 18.

Slate-coloured Junco. All year.

Lapland Longspur. October 9 to December 31.

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