P.D. Skaar's
Montana bird
distribution
1996

P. D. Skaar's

Montana Bird Distribution

Fifth Edition

March, 1996

Montana Natural Heritage Program
Special Publication No. 3

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P.D. Skaar's

Montana Bird Distribution

Fifth Edition

**Revised by the
Montana Bird Distribution Committee:**

Janet Ellis
Cedron Jones
David Genter
Jim Reichel
Betsy Spettigue
Daniel Sullivan

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Special Publication No. 3
Montana Natural Heritage Program
1996

Dedication

This book is dedicated to Montana's volunteer birdwatchers, whose passion for birding and careful record keeping allow us to better understand our bird populations. Your efforts are greatly appreciated!

Volunteer birdwatchers are used extensively for collecting bird records because of their skill and the enormity of the task at hand: the number of bird species, the variety of habitats birds occupy, and the different times of year that birds use our state. Individual birdwatchers who collect and report their records contribute an important piece of the information needed to monitor the health and welfare of Montana's birds.

This book would not be possible without the thousands of records submitted by volunteer birdwatchers. These individuals see the beauty, grace, and diversity of birds, yet also understand that the conservation of our bird populations and the environment on which they depend requires awareness and knowledge.

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Acknowledgments

We are most grateful to the dozens of contributors who submitted thousands of recent records to make this edition possible (see Appendix G). Other major sources of information include the U.S. Fish and Wildlife Service's Breeding Bird Survey and databases of the Montana Natural Heritage Program.

The Montana Bird Distribution Committee was responsible for the production and fundraising for the Fifth Edition of *Montana Bird Distribution*. Members include Janet Ellis, David Genter, Cedron Jones, Jim Reichel, Betsy Spettigue and Dan Sullivan. Martin Miller was employed to compile data and assist in production. Special thanks to this committee for their long hours and dedicated efforts in writing, revising, troubleshooting, and getting things (finally) to the printer!

The Montana Bird Records Committee reviewed rare bird sightings and provided advice and comment on a number of issues for the Fifth Edition. The Records Committee is comprised of Chuck Carlson (Chair, Fort Peck), Helen Carlson (Billings), Dan Casey (Kalispell), Dr. Bob Eng (Bozeman), Bebe FitzGerald (Billings), Harriet Marble (Chester), Terry McEneaney (Gardiner), Fritz Prellwitz (Malta), and Dr. Phil Wright (Missoula). We thank them for their continuing efforts and dedication to a better understanding of Montana birds.

We thank the Natural Resource Information System and the Montana State Library for staff time and computers. Dan Sullivan obtained and compiled the data from the Breeding Bird Surveys. Editorial advice was provided by Dan Casey, Christian Frazza, George Holton, Sue Jackson, Cary Lund, and Dorothy Poulsen. Several other individuals provided helpful suggestions and advice in planning and review of the project. We thank them all.

Financial support for the project came with the cooperation of the following individuals and organizations: Montana Fish, Wildlife & Parks (Betsy Spettigue, Dennis Flath, Tim Gallagher and Heidi Youmans), Bureau of Land Management (Dan Hinkley), Bureau of Reclamation (Rick Blaskovich and Jerry Jacobs), Glacier National Park (Steve Frye), U.S. Fish & Wildlife Service (Kemper McMaster), U.S. Forest Service (Bill Ruediger), WESTECH (Dean Culwell and Pat Farmer), Golden Sunlight Mine (Bill Seybert), Montana State Parks & Wildlife Interpretive Association; Montana Nature Conservancy, and Montana Audubon.

Seven artists contributed their meticulous drawings to this book. They deserve special recognition. Their time and talent have significantly improved the book's appearance. Cover: Boreal Owl by **Jerry Kustich**. **Pam Bond**: Common Loon, p. 12; Canvasback, p. 24; Sandpiper species, p. 123. **Jim Clayborn**: American Dipper, p. 82; Yellow-rumped Warbler, p. 93. **Marsha Davis**: Great Horned Owl, p. 58; Pileated Woodpeckers, p. 68; Barn Swallow, p. 75. **Ron Jenkins**: Calliope Hummingbird, Dedication Page; Rufous Hummingbird, p. 64; Black-capped Chickadee, p. 78; Western Meadowlark, p. 130. **Jerry Kustich**: Marsh Wren, p. 11; American Kestrel, p. 32; Spotted Sandpiper, p. 42; California Gull, p. 51; Horned Lark, p. 73; Townsend's Solitaire, p. 84; Northern Shrike, p. 88; Western Tanager, p. 100; American Tree Sparrow, p. 103; Song Sparrow, p. 107; Bullock's Oriole, p. 113; American Goldfinch, p. 117; Pygmy Owl, p. 118. **Larry Thompson**: Trumpeter Swan, p. 19; Sharp-tailed Grouse, p. 36. **James Utsler**: Common Raven, Title Page.

About This Book

This book summarizes information on where birds are found in Montana. It lists every species observed in the state, and presents maps for each bird that show breeding, migration and wintering areas.

Birders in Montana have recorded 394 species in the state, of which 99 species are considered rare (fewer than 20 documented sightings for the state). There are 248 species that are confirmed breeders in the state. The total number of overwintering species is 151. An additional 18 species are of hypothetical occurrence (see Appendix F), including several species that are expanding their ranges and may make their way into future editions of this book.

This edition of *Montana Bird Distribution* follows the same basic format used in the Fourth Edition, with two exceptions. First, where adequate information was available, maps have been provided for monitored subspecies (see Appendix B). These maps illustrate how little is currently known about subspecies distribution. Second, the number of sightings reported during the last five years (1991 - 1995) appears for each bird species. This information is included to encourage birdwatchers to report their observations of all species.

New Bird Information in this Edition

Seven bird species are new to the Fifth Edition of *Montana Bird Distribution*: Arctic Tern, Yellow-bellied Sapsucker, Yellow-bellied Flycatcher, Bewick's Wren, Golden-winged Warbler, Prothonotary Warbler, and Painted Redstart. The records for these species have been reviewed and accepted by the Montana Bird Records Committee.

Three new breeding records appear in this book: the Barn Owl was found nesting in quarter latilong (QLL) 25D, the Northern Hawk-Owl in QLL 2B, and the Nelson's Sharp-tailed Sparrow in QLL 12B. Three new overwintering records were also added: Sandhill Crane (QLL 28D), Brown-headed Cowbird (QLL 2D), and Brambling (QLL 2D).

Taxonomic Changes and Subspecies

Several taxonomic changes appear in this edition. Most notably, several species were split, elevating subspecies to the species level. The Rosy Finch officially became three species, two occurring in Montana: Gray-crowned Rosy-Finch and Black Rosy-Finch. The Rufous-sided Towhee became two species, one occurring in Montana: Spotted Towhee. And the Sharp-tailed Sparrow became two species, one occurring in Montana: Nelson's Sharp-tailed Sparrow.

One species, the Northern Oriole, also became three species, two occurring in Montana: the Bullock's Oriole and the Baltimore Oriole. Because this change only recently happened, and there is no quick way to separate historic records of these two species, this book contains three

maps: a map of the Northern Oriole, a bird which no longer exists; and maps containing the current records we have for both the Bullock's Oriole and Baltimore Oriole. Future editions of this book will only contain maps for the Bullock's and Baltimore Orioles.

All species names and taxonomic revisions follow the American Ornithologists' Union (AOU) *Check-list of North American Birds*, Sixth Edition (AOU, 1983, as amended by the 35th through 40th supplements (AOU, 1985; 1987; 1989; 1991; 1993; 1995)).

Because future taxonomic changes are inevitable, the Montana Bird Records Committee has identified five species where data collection for subspecies distribution is requested. The five species and their 13 subspecies are identified in Appendix B.

A History of P.D. Skaar's Montana Bird Distribution

Dr. Palmer David Skaar

No one person did more to further the study of Montana birds than Dr. Palmer David Skaar (1923-1983). Dr. Skaar came to Montana in 1957 to join the faculty of Montana State College (now Montana State University) as a microbial geneticist. Accomplished in his academic field, he was also known for his interest in birds. His involvement in the study of Montana bird distribution earned him great respect throughout the state. His enthusiasm was contagious, and his patience and modesty were exemplary.

Dr. Skaar pioneered the “latilong” concept in animal distribution studies. His definitive *Birds of the Bozeman Latilong*, published in 1969, was a model regional bird account. In 1975, he published the First Edition of *Montana Bird Distribution*. The impact of this book was tremendous. It motivated volunteers and professionals across the state, and resulted in careful ornithological scrutiny of vast areas of Montana that had never before been studied. Since the publication of the First Edition of *Montana Bird Distribution*, several other states and classes of animals have been mapped using the latilong system. The annual Breeding Bird Surveys sponsored by the U.S. Fish & Wildlife Service also use this system.

Dr. Skaar published the Second Edition of *Montana Bird Distribution* in 1980. The Third Edition was published in 1985 by Don Skaar (Dr. Skaar's son), Dennis Flath, and the late Larry Thompson (Skaar et al. 1985).

The Fourth Edition of *Montana Bird Distribution* appeared in March, 1992 (Bergeron et al. 1992) with two innovations. First, it introduced mapping quarter latilongs to better define species distribution. Second, and more significantly, the maps in the Fourth Edition were generated from a computerized database of bird distribution records (see *About the Bird Distribution Database* on page 3).

P.D. Skaar's Montana Bird Distribution is revised and updated approximately every 5 years. Each update is cumulative, adding new bird records to those documented historically. This Fifth Edition of *Montana Bird Distribution* is one of Dr. Skaar's ongoing legacies. Future editions will continue as a direct result of his inspirational and visionary efforts.

An Introduction to Montana

Montana is a diverse state: the western third of the state is dominated by high rugged mountain ranges dissected with broad forested valleys; the central portion features island mountain ranges rising out of the grassy plains; and the eastern half of the state can be characterized by rolling grass-covered plains carved by major rivers. Ecologically, Montana includes portions of the Great Basin, Great Plains, and Northern Rockies, resulting in a diversity of wildlife habitat.

Vastly different climates also occur in Montana. Continental air masses with cold, dry winters and hot summers dominate most of the state. Climate extremes are demonstrated in the eastern plains which range between - 40°F(- 40°C) to over 100°F (38°C), with annual precipitation between 8 inches (20 cm) and 15 inches (40 cm). The plains also have droughts that can be frequent and severe. Northwest Montana is more influenced by Pacific moist air with moderate temperatures. The Rocky Mountains are somewhat cooler and more moist, with annual precipitation generally increasing with elevation, much of it in the form of snow.

The diversity of Montana's geography, ecology, and climate all contribute to the great natural diversity and abundance of birds in our state. However, land use practices are changing the abundance and distribution of our avifauna. Some species, such as the European Starling, tend to thrive in human-altered landscapes. These birds have expanded their range and numbers as Montana's human population has grown. Other species, such as the Piping Plover, require specialized natural habitat. Human development of these specialized habitats may make such species increasingly rare or threatened. As we view the distribution of Montana birds over time, we will undoubtedly witness the expansion of some species and the decline of others.

About the Montana Bird Distribution Database

The Fifth Edition of *Montana Bird Distribution* is a "snapshot" of the Montana Bird Distribution Database as of January 1, 1996. Likewise, the Fourth Edition of this book was a snapshot of the same database on January 1, 1992. The Montana Bird Distribution Committee hopes to produce future "snapshots" at five-year intervals.

The Montana Bird Distribution Database was created in 1991. It stores basic information on every bird record submitted - the who, what, when and where. Specimen data and photograph records are also stored in the database. It is housed and maintained at the Montana Natural Heritage Program at the Montana State Library in Helena.

Anyone interested in the distribution of Montana birds may use this database. It can provide information far beyond what appears in this book: for example, which species occur in the Jordan area; or what is the current range of the Say’s Phoebe in Montana; or how many times have Blue Jays been reported since 1990?

The database was established by entering information from the Third Edition of *Montana Bird Distribution* (1985). Entries from the Third Edition do not include the source (observer), location (except latilong), and date. In addition, Third Edition records represent an unknown number of actual observations. In contrast, all subsequent records added to the database represent an actual observation by a known individual at a specific time and place.

The database contained approximately 48,000 records when the maps in this book were generated. Of these, 12,910 represent latilong values from the Third Edition, 13,570 are records entered for the Fourth Edition (records received in 1985 through 1991), and 21,520 are records new for this edition (records received in 1992 through 1995).

Mapping with Latilongs and Quarter Latilongs

Maps in this book are shaped in the general outline of Montana. They show the distribution of bird species by mapping bird sighting information in units called latilongs and quarter latilongs. The map on the back cover depicts the 49 latilongs and 185 quarter latilongs in Montana. These mapping units work well in a large, sparsely populated state like Montana.

Latilongs (LL) are mapping units formed by successive lines of latitude and longitude, each at one degree intervals. These lines form a rectangular grid pattern across the state. Each latilong is assigned a number: 1 through 49. Latilongs 48 and 49 cover small portions of south-western Montana. The average dimension of each latilong is 47 miles (76 km) wide and 69 miles (111 km) long, representing an average area of 3,200 square miles (8,436 sq. km). Latilongs along the Canadian border are 5.4 percent smaller than those along the Wyoming border.

Quarter latilongs (QLL) are created by dividing each latilong unit into four quarters, each at the 30 minute degree mark. Each quarter latilong is identified by its associated latilong number, with the addition of a letter (A, B, C, or D), ordered left to right (see Figure 1). Thus, latilong 25 is broken into 4 QLLs: 25A, 25B, 25C, and 25D.

Figure 1. Quarter latilongs are created by dividing each latilong unit into four quarters.

Quarter latilong information has only been recorded since 1985. As additional information is collected by quarter latilong, *Montana Bird Distribution* will more accurately reflect species distribution.

A Summary of Bird Record Information by Latilong

The following maps use the latilong system to summarize the information stored in the Montana Bird Distribution Database in two different ways. Figure 2 shows the total number of records of all species entered for each quarter latilong (QLL) for the period 1991 through 1995. Figure 3 shows the relative diversity of bird species with two different numbers: 1) the center number indicates the total number of species ever reported for that latilong; and 2) the QLL number shows the total number of species recorded in each QLL for the period 1991 - 1995. Both maps reflect where our contributors are birdwatching.

Figure 2. Total Records of all Species for Each Quarter Latilong, 1991 - 1995.

Figure 3. Total Number of Species Ever Recorded in Each Latilong (Center Number) and the Number of Species Recorded in Each Quarter Latilong since 1991.

How to Read the Maps

The maps show the distribution of birds in Montana. Each species is listed by common and scientific name in taxonomic order. The scientific order and family names are inserted to aid in grouping the species. To help users of this book, the common family name is placed in the top outside margin of each right hand page for the predominant group of species found on that page.

As explained above, this edition of *Montana Bird Distribution* is cumulative, adding new bird records to those documented historically. Latilongs can have historic as well as current sighting information. "Historic" bird records are considered pre-1991 sightings. These records appear in the center of the latilong. The most recent observations, gathered in the last five years (1991 - 1995) are displayed in the quarter latilong position of each map.

Figure 4. Example of Distribution Map for a Bird with Special Status.

Bird Status and Number of Reported Sightings

The number of reported sightings and status of each species is provided on the lines beneath the bird's name. Symbols and their definitions are explained below.

1991-95 = The total number of bird sightings reported for this species in the last five years, 1991 - 1995. If no sightings were turned in during the last five years (1991-95 = 0) the year and location (latilong or quarter latilong) of the most recent sighting is listed.

(introduced) Not native to North America or a native North American species transplanted to Montana (see Appendix D).

n=	Rare birds (fewer than 20 verified sightings in the state) are identified by the letter “n” followed by the number of sightings. The year and location (latilong or quarter latilong) of the most recent sighting is listed for all rare species.
TES	Threatened, Endangered or Sensitive Species. Species assigned to this category are one of the following: federally recognized endangered or threatened species under the Endangered Species Act; U.S. Forest Service sensitive species; or species of special concern recognized by the Montana Natural Heritage Program (see Appendix A).
SI	Birds for which “Supplemental Information” is needed. This group of species is poorly known in the state or has unique breeding habits that warrant further study (see Appendix A).

Symbols on Distribution Maps _____

The main distribution maps include observations recorded during both the spring and fall migration, and the summer breeding season (observations recorded between February 16 and December 14). Separate maps exist for winter sightings, with observations recorded between December 15 and February 15 (see below).

Each symbol within latilong and quarter latilong rectangles represents the highest documented status for that species in each latilong or quarter latilong (“B” greater than “b” greater than “t”). The symbols used are defined as follows:

- B Direct evidence of breeding.** Use of the “B” to designate breeding requires “hard evidence.” A “B” can be hard to get. Breeding is not assumed simply by presence or behavior. “B” is used only if one of the following criteria are met:
1. Occupied nest; adults entering or leaving nest site in circumstances indicating an occupied nest (includes high nests or nest-holes, the contents of which cannot be seen) or adult incubating or brooding.
 2. Recently fledged young (of altricial species) incapable of sustained flight, or downy young (of precocial species) restricted to the area by dependence on adults or limited mobility.
 3. Attending young; adult carrying food or fecal sac for young, or feeding recently fledged young.
 4. Used nest or eggshell found (Caution: identification must be convincing for such records to be accepted).
 5. Nest with egg(s) which can be clearly identified. The presence of cowbird eggs or

young is confirmation of breeding for both cowbird and host species.

b Indirect or circumstantial evidence of breeding.

1. Singing males or territorial birds observed in suitable nesting habitat during the breeding season.
2. Courtship behavior or copulation.
3. Adults visiting a probable nest site.
4. Agitation behavior, distraction display, feigning injury, or anxiety call from an adult.
5. Nest building.
6. Physiological evidence of breeding (brood patch or eggs in oviduct) based on bird in hand.

t No evidence of breeding. Transients, migrants, or wide ranging species that exhibit no breeding behavior at the time observed.

— No records

Winter Distribution Maps

The winter distribution of species is recorded between December 15 and February 15. Winter maps display data in latilong blocks only. However, the Montana Bird Distribution Database does record winter quarter latilong information for all post-Third Edition data. The symbols used are defined as follows:

W Overwintering. Regular sightings during the winter period.

w Overwintering not yet documented, but species observed at least once between December 15 and February 15.

— No records

Subspecies Maps

Birds for which information is requested at the subspecies level are listed in Appendix B. Subspecies maps appear directly after the species map. For example, following the Northern Flicker map, there is a map for both the Red-shafted and the Yellow-shafted Flicker subspecies.

Submission of New Records

The recording of bird sightings in Montana is an ongoing process. For that effort to succeed, all species, common and rare alike, must be recorded for each quarter latilong during each revision period.

Most records should be submitted on the Quarter Latilong Report Form found in Appendix I, or a similar format. If there were several birding trips within a single quarter latilong (QLL), the sightings from each trip should be summarized into a single master list for that QLL. For each species recorded, list the highest status observed (“B” greater than “b” greater than “t”) and the date of that observation.

The use of Rare Bird Report Forms is described on page 10.

Individuals who want to submit records electronically should contact the Montana Natural Heritage Program for information about the format required.

This book summarizes thousands of individual bird sighting records. Verifying the quality of records, whether collected by professionals or volunteers, is an important step taken to ensure that only the highest quality information is accepted. Therefore, rare bird records are screened by the Montana Bird Records Committee; all other distribution records are screened by staff at the Montana Natural Heritage Program.

Information Required of All Sightings

The bird distribution database includes only those records submitted by birdwatchers that are accurate and complete. Every record that is turned into the Montana Bird Distribution Database must have the following information:

- The **name** of the bird (either common name or scientific).
- The **date** of the sighting. Dates are critical for knowing when birds are breeding, arriving to breed, or migrating through Montana. The date also gives database managers a tool for verifying records. For example, a breeding record for a warbler in March would not be accepted without substantial documentation. Consequently, records without dates are not accepted.
- The accurate **location** of the observation. In addition to quarter latilong information, a short description of the location of all records is requested (i.e., Bean Lake; Chinook; Hwy 200, 10 miles west of Simms; etc.). For finer resolution in determining locations and quarter latilongs, please refer to U.S. Forest Service, Bureau of Land Management (BLM), or U.S. Geological Survey (USGS) maps; or the *Montana Atlas and Gazetteer* (DeLorme Mapping, 1994).

- Observations marked with a “**B**” or “**W**” must be accompanied by information documenting why the designation was used.

A detailed description of “**B**” appears under *Symbols on Distribution Maps* on pages 7-8. At least one of five specific criteria must be met to qualify a sighting for this category (i.e., occupied nest, dependent young, etc.). If no information is included with a “**B**” designation, the record will be recorded as a “b.”

Similarly, “**W**” has a specific definition that needs to be documented: “regular sightings during the winter period.” Without documentation, an (upper case) “**W**” will be recorded in the database as a (lower case) “w.”

- The **name, address and telephone number** of the main observer. This information allows the observer to be contacted if questions arise about an observation.

Because of the volume of data being managed and the limited time available for scrutiny of individual bird sighting records, efforts made to provide complete and accurate information are appreciated - and contribute greatly to our knowledge of Montana bird distribution.

Rare Birds ---

A Rare Bird Report Form, found in Appendix H, must be submitted for the following observations: rare birds (species with less than 20 sightings); out-of-range species; the first state breeding record for a species; and the first overwintering record for a species. The Montana Bird Records Committee was established in 1991 to review rare and unusual sightings. Only rare bird records approved by the Records Committee are included in the database.

When you submit a rare bird sighting, describe only what you actually observed. Do not report details you felt you should have seen, but did not. Seldom is it possible to see all criteria. Complete the report as soon as possible following the observation while your impressions are fresh. Please submit any drawings or photographs; they will become part of the permanent record unless return is requested. Although the main emphasis should be on describing the species under consideration, it is also helpful to note how you eliminated similar species.

Sensitive Species ---

Specific details are requested for all sightings of **threatened, endangered, and sensitive species (TES)**, as well as species where **supplemental information** is being collected (**SI**). All birds in these categories can be found in Appendix A.

For all TES and SI species, the precise location of a record is particularly important. Therefore, a short description of the location of all records is requested (i.e., Bean Lake;

Chinook; Hwy 200, 10 miles west of Simms; etc.). Nesting information on these species is also critical. Nesting records should include the exact location of the nest(s), number of individuals observed, and a general habitat description.

Observations of TES and SI species can be reported on the quarter latilong report form found in Appendix I. Use multiple lines for your descriptions of the requested information, if necessary.

Subspecies Reports _____

There are five species for which records need to be collected for subspecies distribution. These species are listed in Appendix B. In particular, subspecies records for the Solitary Vireo (Cassin's and Plumbeous) are needed.

When and Where to Submit Records _____

All Rare Bird reports should be submitted immediately after the sighting, while details of the observation are fresh in your mind. Quarter latilong (QLL) lists should be aggregated and submitted at least once per year.

New records are added to the Montana Bird Distribution Database on a regular basis. Regular submission of observations will allow the database to stay current for queries on individual species and will greatly facilitate production of the next edition of this book.

All records should be mailed to:

Montana Bird Distribution Update
Montana Natural Heritage Program
1515 East Sixth Avenue
P.O. Box 201800
Helena, MT 59620
(406) 444-3009

Legend

For detailed descriptions of each legend item, see pages 6 - 8.

1995-91=	Total number of sightings submitted in the last five years, 1991 - 1995
B	Direct evidence of breeding (occupied nest, dependent young, etc.)
b	Indirect or circumstantial evidence of breeding
(introduced)	Not native to Montana
LL	Latilong
QLL	Quarter latilong
n=	Number of documented records (if fewer than 20)
SI	Supplemental information requested for this species
t	Observed between Feb. 16 and Dec. 14; no evidence of breeding
TES	Threatened, endangered, or sensitive species
W	Overwintering; regular sightings between Dec. 15 and Feb. 15
w	Overwintering not documented
—	No record

Red-throated Loon

Gavia stellata

1991-95 = 1; 1991 - QLL 10D
n = 8

--W-----

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-	-	t	-	-	-	-	-	-	t	-	-
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		-	-	t	-	-	-	-	-	-	-
			-	-							

Pacific Loon

Gavia pacifica

1991-95 = 1; 1993 - QLL 40B
n = 3

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-	-	t	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-
		-	-	t	-	t	-	-	-	-	-
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Common Loon

Gavia immer

1991-95 = 119
TES

WWW-----W--
 WW-----
 ---W-----
 --W-----
 --

B B	B B	B B	t	t	t	-	-	t	b	-	t
B	B	B		t					t		t
B B	B B	B B	t t	t	t	-	t	t	t	-	t
t t	t	B b	t t	t					t		
b	B	B	t	t	-	t	t	t	t	-	t
	B B B	t t	t								
	t	B	t t	t	t	t	t	t	-	t	t
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		-	t	t	t		t	t	t	t	t
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			t	t							

Yellow-billed Loon

Gavia adamsii

1991-95 = 1; 1994 - QLL 10D
n = 2

 ---W-----

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	-	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-
			-	-							

Pied-billed Grebe

Podilymbus podiceps

$$1991-95 = 75$$

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WWW-----W--
WW-----
 W-WW-----
  -WWW-W-----
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WW-----

W-WW-----

- WWW - W - - - -

• •

b	B	b	B	B	B	b	B	B	B	t
B	B	b	B	B	B	B	B	t	B	t
t	b	b	B	B	b	B	B	b	B	B
t	B	b	B	B	B	t	b	b	B	B
	B	t	t	t	B	b	B	B	B	b
	B	B	B	B	b	b	t	B	B	B
	t			b	t	t	t	b	B	B
		t	t	B	B	b	B	B	B	B
					t		B	b		b
		b	B	B						
		b	B	B						

Horned Grebe

Podiceps auritus

$$1991-95 = 40$$

www - - - - -
ww - w - - - - -
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- - - - -
- -

WW- -W- - - - -

100 200 300 400 500 600 700 800 900 1000

100 90 80 70 60 50 40 30 20 10 0

648

B	B	t b B B	b	-	t	b	t	B	B	t	B	t
t	t	b	t	t	-	t	t	t	t	t	t t	t
t	B	b	B	B	-	t	t	t	t	t	-	
t	t	t	b t	t	t	t	t	b	t	t	b	
		-	t	t	t	t	-	t	t	-	b	
			-	t								

Red-necked Grebe

Podiceps grisegena

$$1991-95 = 68$$

www-----
-w-----

- W - - - - -

00000000000000000000000000000000

.....

—

B	B	t b	t	-	t	-	t	t	t	-	t
B	B	B	t						t		
	b B	b B	b						t		
t t	B b	B	B B						t		
t	B	B	B	t	-	-	-	-	-	-	-
	b	B B	t b								
	B	B	b t	b							
	t	B	B	t	t	-	-	-	-	-	-
		B	t	t	t						
		t	-	b	t		t	-	-	-	-
		t		t	t						
		-		t	-						
				-							

Eared Grebe

Podiceps nigricollis

$$1991-95 = 92$$

- WW - - - - -
 - W - - W - - - - -
 - - - - -
 - WW - - - - -
 - -

-W--W-----

— — — — —

- - WW - - - - -

—

t	B	t b	t b	b b		b b						b
B	B	b	B	B	b	B	B	B	B	B	t	B
	B	B	b t	b	b	b			b t		t b	
t	t		B	B				B	t			
t	B	B	B	B	b	B	B	B	B	B	t	
	b		t t	t						b		
	t	t	b t	b	t			b				
	B	b	B	t	B	B	B	B	B	t	b	
	t		t	t B	B b	t					t	
		B		b t		t	t B t					
		b	b	b	t	B	t	-	t	B	B	
				t	t							
			B B									
		B	B									

American Bittern

Botaurus lentiginosus

$$1991-95 = 30$$

W

W- - - - -
- - - - -
- -

W- - - - -
- - - - -
- -

— —

— —

B t b	B b	b t b	- b	B	t	b	b	B	t t	t	t B b t
t -	b	b B b	b b b	t b	b	B	B	b	t	-	b
	B b	b	b	t t	-	-	b	t	t	t	-
		B	b	b	t	t t	t	t	-	b	b
			b	B B							

Least Bittern

Ixobrychus exilis

1991-95 = 0; 1976 - LL 10

$$n = 4$$

1000 900 800 700 600 500 400 300 200 100 0

1000 900 800 700 600 500 400 300 200 100 0

1000 900 800 700 600 500 400 300 200 100 0

— —

-	-	-	-	-	-	-	-	-	t	-	-
-	t	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	b	-	-	-	-	b
			-	-							

Great Blue Heron

Ardea herodias

$$1991-95 = 209$$

SI

WW--W-----
 WWW---W-----
 WWW--W-----
 WWW-WWW--
 -W

WWW - - - W - - - -

WWWW-----W--

www/w- www- -

-W

t b	t	b t	t b	t t	t t	B	B	B	b	t
B	B	B	B	B	B	B	B	B	B	B
b b	B	t b	b B	t	b t	t		B		B
t t	t	t B	t B	t	B B	t	t B	B	t	B
B	B	B	B	B	B	B	B	B		B
	t B	b t	b t	B	t t	t	t	t		t t
	B	t B	B B	B B	B	t	t	t	t	
	B	B	B	B	B	B	B	B	B	B
	B	t b	B B	B B	b	B	t	t	t	
	B	t	t	B t	b b	b t	t t	t t	t	B
		b	B	B	B	B	B	B	B	B
		t		B t	B t			b t		t
		t t	B B							
		B	B							

Great Egret

Ardea alba

1991-95 = 3; 1994 - QLL 9C

$$n = 22$$

— 66 —

-	-	-	-	-	-	-	-	-	t	-	-
-	t	-	t	t	-	-	t	-	-	-	-
	t	-	-	t	-	-	-	-	-	t	-
		-	-	t t	-	-	t	-	-	-	t
			-	t							

Snowy Egret
Egretta thula
1991-95 = 12

--

-	-	-	-	t	-	-	-	t	-	t	t
-	t	-	t	t	-	-	t	b	-	t	t
	t	-	t	t	-	-	t	t	-	t	-
		-	-	t	-	-	t	-	-	-	-
			t	t							

Little Blue Heron
Egretta caerulea
1991-95 = 0; 1987 - QLL 10D
n = 4

--

-	-	-	-	-	-	-	t	-	t	-	-
-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	t	-
		-	-	-	-	-	-	-	-	-	-
			-	-							

Cattle Egret
Bubulcus ibis
1991-95 = 7; 1994 - QLL 25D
n = 20

--

-	t	-	-	-	-	-	-	t	-	-	-
t	-	-	t	-	-	-	-	t	-	-	-
	t	-	-	t	-	-	t	-	-	-	-
		-	t	-	t	t	t	-	t	-	-
			-	-							

Green Heron
Butorides virescens
1991-95 = 0; 1985 - QLL 9C
n = 9

--

-	t	-	-	-	-	-	-	t	t	-	-
-	t	-	-	t	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	t	t
		-	-	-	-	t	-	-	-	-	-
			-	-							

Nycticorax nycticorax

$$1991-95 = 25$$

SI

-	B	-	-	-	t	t	B	B	t	B	B
				b	b				t		t B
-	t	-	B	B	t	-	t	t	t	t	t
	b			t	t	t	t	-	-	t	t
	t	-	-	t	t	t	t				
		-	-	t	t	t	t	-	t	-	t
			b	B							
			b	B							

Nyctanassa violaceus

1991-95 = 1; 1995 - QLL 14D

$$n = 3$$

-	-	-	-	-	-	-	t	-	-	-	-
-	- t	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	t	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-
			-	-							
				-	-						

White-faced Ibis

Plegadis chihi

$$1991-95 = 17$$

TES

-	t	-	-	-	-	-	t	B	t	-	t
-	t	-	B	B	-	-	-	t	-	-	-
	t	t	t	t	t	-	B	t	-	t	-
		-	t	t	t	B	t	-	-	-	-
			t	t							
			B	t							
			t								

Wood Stork

Mycteria americana

1991-95 = 0; 1918 - LL 32

$$n = 2$$
[illegible]

-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	t	-	-	-
		-	-	t	-	-	-	-	-	-	-
			-	-							

Tundra Swan
Cygnus columbianus
1991-95 = 61

-W--W-----
WWWWW-----
WW-W-----
--WW-W-----
-W

t	t	t	t	t	t	t	t	t	t	t	t
t	t	t		t	t				t	t	
t	t	t	t	t	t	t	t	t	t	-	t
	t	t		t	t	t	t	t	t	t	-
	t			t	t	t					
		t	t	t	t	t	t	t	t	-	-
			t	t							
			t	t							

Trumpeter Swan
Cygnus buccinator
1991-95 = 46
TES

-W-----
-W--W-----
W-----
--WW--W--
-W

-	b	t	t	-	-	-	-	-	-	b	-
-	t	t	t	t	-	t	-	-	-	-	-
	t	b	t	t	t	-	-	-	-	t	-
		t	t	b	t	t	-	-	-		
	-	t	B	b	t	B	-	-	t	-	-
			B	b	t						
		b	B	B							
		B	B

Mute Swan
Cygnus olor
1991-95 = 3
SI (introduced)

---W-----
--

-	-	-	-	-	-	-	-	-	-	-	-
-	t	-	-	-	-	-	-	-	-	-	-
	-	-	-	t	t	-	-	-	-	-	-
		-	t	B	B	-	-	-	-	-	-
			t	B							
			t	B							

Greater White-fronted Goose

Anser albifrons

1991-95 = 15

-W-----

---W-----
--W-----
--

-	t	-	-	-	-	-	-	t	t	t	t
-	t	-	t	t	-	-	-	t	t	-	t
	t	-	-	t	-	t	t	t	t	t	-
	t	-	-	t	-	-	t	-	t	-	-
				t			t				
				-			-				
				-			-				

Snow Goose

Chen caerulescens

1991-95 = 58

WW-----
-W-----
--WW---WW--
--WW-W-----
--

t	t	t	t	t	t	t	t	t	t	t	t
t	t	t	t	t	t	t	t	t	t	-	t
	t	t	t	t	t	t	t	t	t	t	-
	t	t	t	t	t	t	t	t	t	t	-
				t			t				
				-			-				
				-			-				

Ross' Goose

Chen rossii

1991-95 = 20

--

-	t	t	t	t	t	t	-	t	t	-	t
-	t	-	t	t	t	t	-	-	-	-	-
	t	t	t	t	-	-	t	-	-	t	-
				t	-	t	-	-	-	-	-
				-			-				
				-			-				

Brant

Branta bernicla

1991-95 = 0; 1980 - LL 16

n = 7

--

-	t	-	t	-	-	-	-	-	-	-	-
-	-	-	t	-	-	-	t	-	-	-	-
	-	-	-	-	-	-	-	-	t	-	-
				t	-	-	-	-	-	-	-
				-			-				
				-			-				

Cinnamon Teal

Anas cyanoptera

1991-95 = 129

-w-----
w--w-----

--

B	t	B	t	b	b	b	b	B	b	t	-	t
b	B	b	B	b	b	t	b	B	b	t		t
t	t	b	B	B	B	t	t	B	B	b	b	t
t	b	B	B	B	b	t	b	t	b			
	B	t	t	B	b	t	-	B	b	-	t	b
	B	B	b	B	b	b	b	t				
		b	b	b	t	t	b	t	B	B	t	-
		t		B	B	B	B	B	b	-	t	
			b	B	B							
			b	B	B							

Northern Shoveler

Anas clypeata

1991-95 = 132

ww-----
w-----
w--w-----
--ww-w-----
-w

b	B	B	t	b	b	b	b	B	B	B	B	B
	b	B	B	B	b	b	b	B	b	B	t	t
t	b	B	t	B	t	b	B	B	B	b	B	B
t	B	b	t	B	B	t	t	b	B	B	B	B
	B	t	b	t	b	t	B	B	b	b	B	b
	b	t	B	b	b	t	b	t	t			b
		t	t	b	t	t	B	B	t	B	b	B
		b	t	B	t	t	B	B	B	b	B	B
			b	B								b
			b	B								

Gadwall

Anas strepera

1991-95 = 147

ww-----ww--
ww--w-w-----
w-ww-----
--ww-ww---
-w

b	t	B	b	b	b	b	b	B	b	B	B	b
	t	B	B	b	b	b	b	B	b	t	b	t
t	b	B	B	t	b	b	b	t	b	b	B	B
	B	b	B	B	b	B	B	B	B	B	B	B
	B	b	b	t	b	t	b	b	b	-	-	B
	t	b	b	B	B	b	B	B				b
		b	b	b	B	b	b	b				
	b	t	t	t	t	t	t	t	b	t	b	b
	t	t	t	B	t	B	B	b	t	B	B	B
		t	t	t	t			t	b	t	b	
			b	B	B							
			B	B	B							

Eurasian Wigeon

Anas penelope

1991-95 = 17

-----w-----

--

-	t	t	-	t	-	t	-	-	t	-	-
	t		t	t					t		
t	-	t	t	t	-	-	t	-	-	-	-
		t	t	t							
		t	-	t	t	-	-	-	-	-	-
		t									
			-	-	t	-	t	t	-	-	-

American Wigeon
Anas americana
 1991-95 = 156

WWW-W---Ww--
 Ww--Ww-----
 Ww-W----Ww-
 --Ww-Ww---
 -W

t B	B b	t B t B	t b B	b b B	b B	b b b	b B	b B	B B	B t	B t	B t	b t
t t t	t b B b	t t B B	B B B b b	t b B	b b B	b b B	b B	B B	b B B	B B	B b	B b	
	b B t	b B t	B b B t	b b b B	B b B	t b t	b B	b B	b b		t B		
		t B t	t B t	B t B t	t t	b t	B t	b t	B t	B t	b B	b B	b b
			b B	B B B									

Canvasback
Aythya valisineria
 1991-95 = 84

WWW-----
 Ww--W-----
 W-----
 --Ww--W---
 -W

B	B B	B t B	B	b b b b	b	b b	b B B B	B B	b t	t	B t B		
t t	t b b	B B	B B	t B	b B	B t	B B	B B	t t B	b	b		
	b B	b B	B t t	t t B	t t	t t t	B	b t	t t	t t	t t		
		t -	b t t	b t t t	t t	b t	t t	t t	t t	t t	t t		
			b B	B B

Redhead
Aythya americana
 1991-95 = 101

Ww--W----W--
 Ww--W-----
 W-----
 --Ww-Ww---
 -W

b B	t B B	B b B	b b B t	b b b b	b b	b b b	b B	B	b t	t	B t b		
t t	t b B b	t B t t	B B b b	t B t t	b	B t	B B	B t B	t t B	b	b		
	B B t	b B	b t b	t B t B	b b b	t t t	B	b b	b b	t t	t t		
		t t	t t	b t B t	B t	B t	t t	t t	t t	t t	b t		
			b B	B B									

Ring-necked Duck

Aythya collaris

1991-95 = 88

WWW-----
WW--W-----
W--W-----
--W-----
-W

B	t	t	B	b	-	t	b	t	t	t	t	t
t	t	b	t	B	B	t	b	t	t	t	t	t
t	t	t	b	b	b	t	t	t	t	t	t	t
	B	t	t	t	b	t	t	t	t	B	t	t
	t	B	t	t	t	t	t	t	t	t	t	t
		t	t	t	t	t	t	t	t	t	t	t
			t	t	b	t	t	t	t	t	t	t
				-	t	b	b	t	t	t	t	t
					t	t	t	t	t	t	t	t
						b	B	B				
						t	B	B				

Greater Scaup

Aythya marila

1991-95 = 4

-WW-----
---W-----
W--W-----
--W-----
--

-	-	t	-	-	-	-	-	-	-	-	-	-
-	t	-	t	t	-	-	-	-	-	-	-	t
	t	t	-	t	-	-	t	-	-	-	-	-
		-	-	t	-	t	-	-	-	-	-	-
			-	-								

Lesser Scaup

Aythya affinis

1991-95 = 129

WW--W----W--
WW--W-----
W-WW-----
--WW-WW---
-W

b	t	B	t	b	b	b	b	b	B	B	b	B
B	B	b	B	b	B	b	b	B	B	t	t	b
t	t	B	B	B	B	t	B	B	B	t	b	B
	B	t	b	t	B	t	t	b	B	b	t	t
	t	B	B	B	b	b	t	b	t	t	t	t
		b	b	b	t	b	B	t	t	t	b	t
			t	b	b	b	t	t	t	t	b	b
				b	B	B						
				b	B	B						

Harlequin Duck

Histrionicus histrionicus

1991-95 = 45

TES

-W-----

--

B	B	B	b	B	-	-	-	-	t	t	-	-
B	B	b	B	B	B	-	-	-	-	-	-	-
B	B	B	B	B	-	-	-	-	-	-	-	-
	b	B	-	t	t	b	-	-	-	-	-	-
		B	t	t	b	-	-	-	-	-	-	-
			-	-	b	B	b	-	-	-	-	-
					b	B	b	-	-	-	-	-

Oldsquaw
Clangula hyemalis
1991-95 = 12

-W-----
----W---W--
-W-W-----
-----W---
--

-	t t	-	-	-	-	-	-	t	- t	-	t
-	t	-	t t	t t	-	-	t	-	t	-	-
	t -	t	t	t t	-	t	-	-	-	-	-
		-	-	t	t	t	t	t t	-	-	-
			-	-							

Black Scoter
Melanitta nigra
1991-95 = 1; 1994 - QLL 41B
n = 5

--

-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	t	t	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-
		-	-	t	-	t	- t	-	-	-	-
			-	-							

Surf Scoter
Melanitta perspicillata
1991-95 = 8

--

-	t	t t	-	-	-	-	-	- t	t t	-	t
t	t	-	t t	t t	-	-	-	-	-	-	-
	-	t	t t	t	-	t t	-	-	-	-	-
		-	t	t	-	t	-	-	t	-	-
			-	t							

White-winged Scoter
Melanitta fusca
1991-95 = 10

-W-----

W--W-----

--

-	t t	t	-	-	-	-	-	t	t	-	t
t	t t	t	t t	t t	-	-	t	t	-	-	-
	t t	t	-	t t	-	-	t	-	-	-	-
		-	-	t	-	t	-	t	-	-	-
			-	-							

Osprey
Pandion haliaetus
1991-95 = 139

W-----

--

b B	B	t B	t	t	-	-	-	t	t	-	t
B	B	B	b	b					b		t
B B	B	B t	b t	t	t			B	B	B	t
B	B B	b B	b	B	-	t				-	
	t B	b B	b t	t B	t	t	t	t	-	t	-
	B	t	B t	B B	t						
	b	b		B B	B	t	B	b	B	-	t
		B	B	t	B	t					-
				B B							
			b	B							

Bald Eagle
Haliaeetus leucocephalus
1991-95 = 210
TES

WWW-WW-wwwww
WWWWWWWWW-W
WWW!WWWWWWW
wwwwwwwww
ww

B B	B B	B B	b	t	t	t	t	t t	B	b	t
B	B	B b	b	t	B	t	t	t t	t	b	t t
B B	B	B	t t	t	B	t	B	b	t t	t	B
B	B B	t B	B	B B	t	t			B	t	
	B	B B	B B	B	t	t	t	B	B B	B	t
	B		B t	t B	t t	t	t	B B	B B	B	
	B		B t	B	B B	B	B	B	B	t	t
	t	B	B	B	B	b	B	B	B		
		B B	B	B	t						
		B									

Northern Harrier
Circus cyaneus
1991-95 = 221

WW--WWW-WW-W
WW-WW-WWW--W
W-WWWWWWWW
-WWWWWW-W
ww

B	b	t b	t b	b t	b	b	b b	b	b	B	b b
	b b	b	b t	B	b b	B	B	b t	t b	b	t b
t	B b	b	b B	t b	b b	b	t t	b	t t	B	B
b	B	t	B	t t	b B	b	B	B	B	b	b
	b	t B	b b	b t	t	t b	b	b	b	b	B
	B	B	B	B	B	b	B	B	b	B	B b
	B	t	t t	b b	t b	b t	t		b		
	b b	b	b b	b	b	b	b	b	b	b	b b
	B	B	B	b	b	B	b	b	b	B	B b
		t	t	t	t	t	t	t	t	t	
		b	b b								
		b	B								

Sharp-shinned Hawk
Accipiter striatus
1991-95 = 81

WWWWW-----
WWW-W-W-----
WWWW----WW-
-WWW-W-W--
-W

b t	t	b b	-	b	b	b	t	t	t	-	t
B	t	B	b		t		t	t	t t		
t t		t b									
B	b	b	B	b	b	B	t	t	t	t	b
b	t	t t	b			t					
	t	t	t b	t	b	b	-	-	t	t	t
	B	B	B	B	b	b					
	B	t	t t		t						
				B t	b	t	t b	t	t	b	B
		b	t	B	B	b					
			t	t	t t						
				t							
				B							
				t							
				b	t t						
				b	b						

Peregrine Falcon
Falco peregrinus
1991-95 = 40
TES

WW--WW-WWW--
-W--W--WW-W-
W--W-WW-W--
-WWW-W----
--

b	b	t t	-	t	t	B	t	t	t	-	t
	B	t t	t						t		B
b	B	B	b	b	-	t	B	t	t t	t	t
		t		B							
	B	t	b	t	b	t	t	b	t	B	t
		t									
		t	t	t	B	t B	t	B	B	t	t
					b	b					-
				B	B						
				B	B						

Gyrfalcon
Falco rusticolus
1991-95 = 33

-W--W---WW-W
-W-WWWW--W--
WWWWW-----
--W---WW--
--

-	t	-	-	t	-	t	-	t	t	-	t
	t			t					t		-
-	t	-	t	t	t	t	-	-	t t	-	-
			t	t					t		
	t	t	t	t	t	-	-	t	-	t	-
			t t	t	-	t	t	t	-	t	
			t								
			-	t							

Prairie Falcon
Falco mexicanus
1991-95 = 97

WW-WWW--WW-W
WW-WW-WWWWWW
WWWWW-WWWWWW
-WWWWWWWWWW
W-

b	b	t b	t	t	B	B	b	B	t	t	t
	t	t b	B	B	B	B	b	B	t	t	B
B	B	t	B	B	B	B	b	B	b B	B	B
		t	B	B	B	B	b	B	B	B	B
	b	B	t b	b t	B	t	t	B	B	B	B
	B	B	t	B	B	B	t	B	B	B	B
		t	B	t	t B	B	B	t	B	B	B
		B	B	B	B t	B	B	b	B	B	B
			t	B							
			B	B							

■ GALLIFORMES ■ Phasianidae
Gray Partridge
Perdix perdix
1991-95 = 92
(introduced)

WWWWWWWWWWWW
WW-WWWWWWWWW
WWWWWWWWWWWW
WWWWWWWWWW-
-W

B	B	b	b	B	b	B	B	B B	B	B	b
	b	b	B t	b	B b	b	B	b	b b	B	B
t	B	t	t B	B	B	B	B	B	b b	b	b
b	B	t	B	t	B	B	B	B	b	b	b
		t	B	t	t	B	B	B	b	B	B
	B	B	B	B	B t	B	t	B t			
		B	B t	t	B	B	B	B	B	B	B
		b	B	B	t	B	B	B	B	B	B
			B	B	t	B	B	B	B	B	B
			B	B							
			B	B							

Chukar
Alectoris chukar
1991-95 = 7
(introduced)

-W-----
-W-----

---W-W---
--

-	b t	-	-	-	-	-	-	-	-	-	-
-	B	-	-	-	-	-	-	-	-	-	-
	-	b	t	-	-	-	-	-	-	-	-
		-	-	t b	t	-	B b	B	b	-	-
			-	-							
			-	-							

Ring-necked Pheasant
Phasianus colchicus
1991-95 = 155
(introduced)

WW-WWWWWWWWW
-W-WWWWWWWWW
WWWWWWWWWW
-WWWWWWWW-
--

b	B B	b	B b	b t	B b	t b	B b	B B	B B	t b	b b
t -	b B	b B	t B	t B	B b	b b	b t	B B	b B	B B	b t
	b B	b B	t B	b B	t B	b B	b B	B B	B B	b B	B B
		b B	b B	t B	b B	t B	b B	B B	B B	b B	B B
			b B	B b	t B	b B	b B	B B	B B	b B	B B
				B b	B b	B b	B b	B b	B b	B b	B b

Spruce Grouse
Dendragapus canadensis
1991-95 = 31

WWWW-----
WWWW-----
WW-----

--

B t	B B	t B	B b	-	-	-	-	-	-	-	-
B B	b B	t B	t B	B b	t	-	-	-	-	-	-
	t B	b B	B b	B b	B	-	-	-	-	-	-
		t B	B b	B b	B	-	-	-	-	-	-
			B b	B b	B	-	-	-	-	-	-
				B b	B b	-	-	-	-	-	-
					B b	-	-	-	-	-	-

Blue Grouse
Dendragapus obscurus
1991-95 = 64

WWWW--W-----
WWWW-WWW-----
WW-WWW-----
--WW-----
-W

B b	t B	t B	B B	-	-	-	B	-	-	-	-
t B	b B	b B	b B	B b	B b	B b	B b	-	-	-	-
	b B	b B	b B	t B	t B	t B	t B	-	-	-	-
		b B	b B	t B	t B	t B	t B	-	-	-	-
			B b	B b	B b	B b	B b	-	-	-	-
				B b	B b	B b	B b	-	-	-	-
					B b	B b	B b	-	-	-	-
						B b	B b	-	-	-	-
							B b	-	-	-	-

Willow Ptarmigan

Lagopus lagopus

1991-95 = 0; 1914 - LL 3

$$n = 1$$

W

-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-
			-	-							
			-	-							

White-tailed Ptarmigan

Lagopus leucurus

$$1991-95 = 6$$

SI

W

[illegible]

Ruffed Grouse

Bonasa umbellus

1991-95 = 113

```

WWWW-----
WWWW-WWWW---
  WWWWWWWW---
    -WWW-
      -W

```

b b	B B	b B	t	-	-	-	-	-	-	-	-
B	B	B									
B b	b B	B B	B								
b b	b	B b	B t	B	t	B	t	-	-	-	-
B	B	B	B		t	b					
	b	b B	B b		b b	b					
	b B	b b	b b	b	b B						
	B	B	B	B	B	B	B	t	-	-	-
	B	B	b b	b	b						
b			b	B							
	B	B	B	B	B	B	B	B	b	-	-
				B t							
		B B									
	B	B									

Sage Grouse

Centrocerus urophasianus

$$1991-95 = 19$$

```

- - - - WWWW - -
- - - - WWWW - -
- - WWWW WWW
- - W- WWWW
- W

```

[illegible]

$$1991-95 = 22$$

-	t	t	-	- t	-	t -	t	t	t t	t	t t
-	t t	-	t t	t t	-	t	t	t	t t	-	t
	t t	-	t t	t t	t	t t	t	-	-	t	-
		-	-	t	-	t t t	t t	-	t	t	t
			-	t							

(formerly Lesser Golden-Plover)

-	t	-	-	- t	-	-	-	t	t t	-	t
-	t	-	t	t	-	-	-	-	t	-	-
	t t	-	-	-	-	-	t	-	-	t	-
		-	-	t	-	t	t	-	-	-	-
			-	-							

 $n = 4$

-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	t	-	-	-
	-	-	-	b	-	-	-	-	-	-	-	-
		-	-	-	-	-	t	-	-	-	-	-
			-	t								

$$1991-95 = 25$$

-	t t	-	-	t t	t	t t	-	t t t	t	-	t t
t	t t	t t	t t	t t	-	t	t	- t	t	-	t
	t t	t	t	t	- t	t t	t	-	-	t	-
		-	-	t	-	t t	t t	-	t	-	t t
			-	t							

Piping Plover
Charadrius melodus
5the ed. = 13
TES

--

-	-	-	B B	-	-	-	-	B B	-	B B	B B B
-	-	-	t	-	-	-	-	-	B B B	-	-
	-	-	-	t	-	-	-	-	-	-	-
		-	-	-	t	-	-	-	-	-	-
			-	-							

Killdeer
Charadrius vociferus
1991-95 = 264

WW--WW--W---

WW--W-----

W-WW--wwwW

-WWW-W-W--

-W

b B B	t B B	B B b	t B B	b B B	b B B	b B b	b B b	b B b	b B b	b B b	b B B	b B B
t B	t B b	b B b	b B b	b B B	b B t	b B t	b B b	b B b	b B b	b B b	b B b	b B b
	B B	b B	b B	B B	b B	b B	b B	b B	b B	b B	b B	b B
	t B	b B	b B	b B	B B	t B	b B	b B	b B	b B	b B	b B
		b B	B B	B B	B B	B B	B B	B B	B B	B B	B B	B B

Mountain Plover
Charadrius montanus
1991-95 = 15
TES

--

-	t	-	-	-	b	b	B	B	B	b	-
-	-	-	t	b	-	-	B	t	t	-	-
	-	-	-	B	B	B	B	b	-	B	b
		B	B	B	B	B	B	b	-	B	b
	-	B	t	-	-	-	t	-	-	-	-
		B	t	-	-	-	t	-	-	-	-
			-	-	-	-	-	-	-	-	-

Recurvirostridae

Black-necked Stilt
Himantopus mexicanus
1991-95 = 28
TES

--

-	- t	-	t	-	-	-	B	B B	-	-	t
t	-	t	B	B	-	t	t	-	t	-	-
	t	t	B	B	-	t	t	-	-	-	-
	t	t	t	t	t	t	B	-	-	-	-
	t	-	t	t	t	t	t	-	-	-	-
	-	-	t	-	b	b	t	-	-	-	-
		-	t	-	b	t	-	-	-	-	-
			-	t	t	t	t	-	-	-	-

American Avocet
Recurvirostra americana
1991-95 = 105

--

-	t	b	t b	b t	b	B b	B	B	B	t	B
t	t	b	t	B	b	b	B	B	B	t	B
t	B	t	B	B	b	b	t B	B B	B t	t	t
	B	t	t b	B t			b	t	B		
	b	t	t	b	t			b			
	t	b	B	t	t	b	B	t	t	t	t
		t t	t	b b	b	t	t t		b		
		t	b	t t		B			b		
		t	t	B	t	B	B	t	t	t	t
				t							
				b	B t						
				b	B						

■ Scolopacidae
Greater Yellowlegs
Tringa melanoleuca
1991-95 = 40

--

t	t	t	t	t	t	t t	t	t	t	t	t
	t	t	t	t		t	t	t	t t	t	t
t	t	t	t	t t	-	t	t	t	t t	t	t
	t	t	t	t							
	t	t	t	t	t	t	t	t	t	t	t
					t t	t	t	t	t	t	t
					-	-	t	-	t	t	t
					t	t					

Lesser Yellowlegs
Tringa flavipes
1991-95 = 40

--

t	t	t	t	t	t	t t	t	t	t	t	t
	t	t	t	t	t	t	t	t	t t	t	t
-	t	t	t	t	t	t	t	t	t t	t	t
	t	t	t	t	t	t	t	t	t	t	t
					t t	t	t	t	t	t	t
					t	t	t	t	t	t	t
					t	t	t	t	t	t	t
					t	t	t	t	t	t	t
					t	t	t	t	t	t	t

Solitary Sandpiper
Tringa solitaria
1991-95 = 25

--

t	t	t	t	t	t	t	t	t	t	t	t t
	t	t	t	t	-	t	t	t	t	-	t
t	-	t	t	t							
	t	t	t	t	t	t	t	t	t	t	t
					t	t	t	t	t	t	t
					t	t	t	t	t	t	t
					t	t	t	t	t	t	t
					-	t					

Willet
Catoptrophorus semipalmatus
1991-95 = 83

--

-	t	t	b	t	b	b	b	B	B	b	B	b	B	b
	t	t	b	b	B	b	t	b	B	b	B	t	b	B
t	t	-	t	B	t	b	b	B	t	b	b	t	b	b
	t	t	t	-	t	b	b	B	B	b	t	t	t	
		t	t	B	t	b	B	t	t	t	t	t	B	b
			b	B	t	b	B							
			b	B										

Spotted Sandpiper
Actitis macularia
1991-95 = 179

WW-----

--

b	B	B	b	b	t	b	b	b	b	B	B	B	b	
B	B	B	B	B	B	B	B	b	B	B	B	B	b	
b	b	B	B	B	B	b	b	b		b	t		B	t
B	b		B	b	b	b	b	b	b	b	b	b	b	b
	B	B	B	B	B	B	B	B	b	B	B	B	B	B
	b	b	B	t	b	b	b	t	b	b	B	B	B	b
	B	B	B	t	B	b	b	B	B	t	t			b
	b	b	b	b	t	t	B	b	B	B	b	t	b	b
		B	B	B	B	B	B	B	b	b	b	b	b	b
			b	b	B	B								
			b	b

Upland Sandpiper
Bartramia longicauda
1991-95 = 72

--

t	t	b	b	B	b	b	b	b	B	B	b	B	B	b
	B	t	b	B	B	b	B	B	b	t	t	b	b	b
		b	B	b		b	B	B	b	b	b	B	B	B
	t	b	-	-	B	B	b	b	t	B	b	B	B	b
		t	t	B	b	B	B	b	b	B	B	B	B	B
			-	B	B	B	b	t	b	B	B	B	B	t

Whimbrel

Numenius phaeopus
1991-95 = 5

--

-	t	-	-	-	-	-	-	t	t	-	t
-	-	-	t	t	-	-	-	-	t	-	-
	t	-	t	t	-	-	t	t	-	-	-
		-	-	t	-	t	t	t	-	-	-
			-	-							

Long-billed Curlew
Numenius americanus
1991-95 = 104

--

t	b	b	t	b	b	b	B	b	b	b	t
B	t	b	B	B	B	B	B	b	B	b	b
-	b	b	b	B	t	b	t	B	b	t	b
	b	B	B	B	b	B	B	B	b	B	B
	t	B	B	B	B	B	B	B	B	B	B
		B	t	b	b	t	B	b			
		b	b	b	t	b	b	b	b	b	B
		t	B	B	t	b	b	B	b	t	B
			B	t							
			b	B							
			B	B							

Hudsonian Godwit
Limosa haemastica
1991-95 = 3; 1994 - QLL 12B
n = 13

--

-	t	-	-	-	-	-	-	t	t	-	t
-	-	-	t	t	-	t	-	-	-	-	-
	-	-	-	-	-	t	t	-	-	t	-
		-	-	-	-	-	t	-	-	-	-
			-	-							

Marbled Godwit
Limosa fedoa
1991-95 = 64

--

t	t	t	t	b	b	b	b	b	b	B	b	B	b	b
t	t	t	B	B	t	b	t	b	t	b	t	t	b	b
	t	t	t	t	t	B	-	b	t	-	t	t		
		-	-	t	b	b	b	b	-	t	-	t		
			b	t										
			t	t										

Ruddy Turnstone

Arenaria interpres

1991-95 = 10

--

-	-	-	-	-	-	-	-	t	t	-	t
				t				t			t
-	t	-	t	t	-	-	-	-	t	-	-
		t	-	-	t	-	-	t	-	-	-
			-	-	t	-	-	-	-	-	-
			-	-	t	-	-	-	-	-	-
				-	-						
				-	-						

Black Turnstone

Arenaria melanocephala

1991-95 = 0; 1957 - LL 3

n = 1

--

-	-	t	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-
				-	-						
				-	-						

Red Knot

Calidris canutus

1991-95 = 10

--

-	-	-	-	-	-	-	-	t	-	-	t
				t							t
-	-	-	t	t	-	-	-	-	t	-	-
		-	-	-	-	-	t	t	-	-	t
			-	-	t	-	-	t	-	-	-
			-	-	t	-	-	t	-	-	-
				-	-						
				-	-						

Sanderling

Calidris alba

1991-95 = 16

--

-	t	-	-	-	-	-	-	t	t	-	t
									t		t
-	t	-	t	t	-	t	-	-	t	-	-
		t	t	t	t	t	t	t	-	t	t
					t	t	t	t			
			-	-	t	-	-	-	-	-	-
				-	t	-	-	-	-	-	-
				-	-						
				-	t						

Semipalmated Sandpiper

Calidris pusilla

1991-95 = 14

--

t	t	-	-	t	t	-	-	t	-	-	t
	t								t		t
t	t	-	t	t	-	-	t	t	t	t	-
	t	t	t	t	t	t	t	t	t	t	t
						t					
		-	-	t	t	t	t	-	t	-	-
				t	t	t	t				
				-	t						

Western Sandpiper

Calidris mauri

1991-95 = 16

--

-	t	-	-	-	t	-	-	t	-	-	t
	t						t		-		t
t	t	t	t	t	-	-	-	-	t	-	-
	t	-	t	t	t	t	t	t	-	t	-
						t					t
		-	-	t	-	t	t	-	-	-	t
				t							
				-	t						

Least Sandpiper

Calidris minutilla

1991-95 = 28

--

t	t	-	-	t	t	t	-	t	t	-	t
	t			t	t				t		t
t	t	t	t	t	t	t	t	-	t	t	t
	t	-	-	t	t	t	t	t	t	t	t
					t	t	t	t			
		-	t	t	t	t	t	-	t	t	t
				t							
				-	t						

White-rumped Sandpiper

Calidris fuscicollis

1991-95 = 4; 1995 - QLL 12B
n = 16

--

-	t	-	-	-	-	-	-	t	t	-	t
-	-	-	-	-	-	-	-	-	-	-	-
	t	-	-	-	-	-	t	-	-	t	t
		-	-	t	-	-	-	-	-	-	-
				-	-						

Baird's Sandpiper
Calidris bairdii
 1991-95 = 25

 --

t	t	t	t	t	t	t	-	t	-	t	t
	t			t			-	t	-	t	t
-	t	t	t	t	-	-	t	-	t	t	-
		t	t	t	t	t	t	-	t	t	-
					t	t		t			
			t	-	t	t	t	-	-	t	t
			-	-	t	t	t	-	-	t	t
					t	t					
					t	t					

Pectoral Sandpiper
Calidris melanotos
 1991-95 = 18

 --

t	t	t	-	t	-	t	t	t	-	t	t
	t			t					-	t	t
-	t	t	t	t	-	t	t	-	t	t	t
		t	-	t	t	t	t	t	t	t	-
				t	t	t	t				
			-	-	t	-	t	t	-	-	t
					-	t					

Dunlin
Calidris alpina
 1991-95 = 6

 --

-	t	-	-	-	-	-	-	t	t	-	t
				t	t						
-	-	-	t	t	-	-	-	-	-	-	-
		t			t	-	-	t	-	-	-
			-	-	t	-	t	t	-	-	t
					t	t					

Curlew Sandpiper
Calidris ferruginea
 1991-95 = 0; 1972 - LL 17
 n = 1

 --

-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	t	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-

Stilt Sandpiper
Calidris himantopus
1991-95 = 15

--

t	t	t	-	-	-	-	t	t	-	-	t
-	t	-	t	t	-	-	-	t	t	-	-
	t	-	t	t	-	t	t	t	-	t	-
		-	-	t	-	-	t	-	t	-	t
			-	-							
				-	-						

Buff-breasted Sandpiper
Tryngites subruficollis
1991-95 = 2; 1994 - QLL 5D
n = 10

--

-	-	-	-	-	-	-	-	t	-	-	-
-	t	-	-	-	-	-	-	-	t	-	-
	-	-	-	t	-	-	t	-	-	-	-
		-	-	t	-	-	t	-	-	-	-
			-	-							
				-	-						

Short-billed Dowitcher
Limnodromus griseus
1991-95 = 1; 1994 - QLL 14D
n = 20

--

-	t	-	-	-	-	-	-	t	-	-	t
-	t	-	t	-	-	-	-	-	-	-	-
	t	-	-	-	-	-	-	-	-	t	-
		-	-	t	-	-	-	-	-	-	-
			-	-							
				-	-						

Long-billed Dowitcher
Limnodromus scolopaceus
1991-95 = 34

--

t	t	t	-	t	t	t	t	t	t	t	t
-	t	t	t	t	-	t	t	t	t	t	t
	t	t	t	t	t	t	t	t	t	t	t
		t	t	t	-	t	t	t	t	t	t
			t	-							
				t							

Common Snipe

Gallinago gallinago

1991-95 = 168

WW-----Ww--

WW--w-W-----w

WWWW-----WW

-WWWWW-----

WW

b b	b b	b	b	b	b	t	b	b	t	b	b b
B	B	B	b	B	b	B	b	b	t	b	B
b b	b	b	b		t	b	b	b t	t t	b	t
t b	b	B	b b	t b	b		b	b	t	b	b
b	b b	b b	b b	b		t b	b	b			
	b	b	b b	b b	b b	t b	b	b	b	b	b
	B	B	b	B	B	b	b	b	b	b	b
	B	b	b B	b b	b	b t	B t		b		
		b b	b	b B	B	t b		b t	b	b	b
		B	B	B	B	B	B	b	b	b	b
				t	B b			t	b		
			b b	B B							
			b	B							

American Woodcock

Scolopax minor

1991-95 = 0; 1983 - LL 14

n = 2

--

-	-	-	-	-	-	-	-	-	-	-	-
-	t	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	t	-	-	-	-
			-	-							
			-	-							

Wilson’s Phalarope

Phalaropus tricolor

1991-95 = 114

--

b	t	b	t b	b b		t	b	B	b	b	b b
	B	B	b	B	B	b	b	B	b	b	B
-	B	B	t B	b	b	B	t	b	t b	b	b
	t	t	b b	b	t	t	b				
	b	b	b b	b t		b	b	b	b	b	b
	B	b	b	b	b	b	B	b	b	t	b
	t	t	t b	t b	b B	B t	B t				b
		b	B	b t	b	t	t	b	b	B	b
			B	t	t	B	b	b	b	B	b
					t						b
			t b	B							
			b	B							

Red-necked Phalarope

Phalaropus lobatus

1991-95 = 21

--

-	t	t	t	-	-	-	-	t	t	t	t
	t		t	t				t	t	t	t
-	t	-	t	t	t	t	-	t	t	t	t
	t	t	t	t	t	t	t	-	-	t	-
		t	t	t	t	t	t				
		t	t	t	t	t	-	-	t	t	-
			t	t	t	t					
			t	t							
			t	t							

Red Phalarope
Phalaropus fulicaria
1991-95 = 1; 1992 - QLL 31C
n = 7

--

-	-	-	-	-	-	-	-	t	-	-	-
-	-	-	t	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	t	-	-	-	-
		-	-	t	-	-	-	-	-	-	-
			-	-							

■ **Laridae**
Pomarine Jaeger
Stercorarius pomarinus
1991-95 = 0; 1990 - QLL 40B
n = 4

--

-	-	-	-	t	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	t	-	-
	-	-	-	t	-	-	-	-	-	-	-
		-	-	-	-	t	-	-	-	-	-
			-	-							

Parasitic Jaeger
Stercorarius parasiticus
1991-95 = 0; 1987 - QLL 2D
n = 13

--

-	t	-	-	-	-	-	-	-	-	-	-
-	-	-	t	t	-	-	-	-	-	-	-
	-	-	-	t	t	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-
			-	t							

Long-tailed Jaeger
Stercorarius longicaudus
1991-95 = 0; 1988 - QLL 14B
n = 6

--

-	-	-	-	-	-	-	-	-	-	-	-
-	t	-	-	t	-	-	-	-	-	-	-
	-	t	t	-	t	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-
			-	-							

Laughing Gull

Larus atricilla

1991-95 = 2; 1995 - QLL 40B
n = 3

--

-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
	-	-	t	-	-	-	-	-	-	-	-
		-	-	-	-	t	-	-	-	-	-
			-	-							
			-	-							

Franklin's Gull

Larus pipixcan

1991-95 = 70
TES

--

-	-	t	t	t	b	b	t	B	t	t	t	B
	t	b	t	b	b	b	t	B	t	t	B	B
t	t	t	t	B	t	t	t	t	t	t	t	t
	t	t	t	B	t	t	t	t	t	t	t	t
		t	t	t	t	t	t	t	t	t	t	t
			t	t	t	t	t	t	t	t	t	t
				t	t	B	t	-	t	t	t	t
				t	B							
				t	B							

Bonaparte's Gull

Larus philadelphia

1991-95 = 24

--

t	t	t	-	-	-	-	-	t	t	-	t	t
-	t	-	t	t	-	-	-	-	t	-	-	-
	t	t	t	t	t	t	t	-	-	t	-	-
		t	t	t	t	t	t	-	t	-	-	-
			-	t	t	t	t	-	t	-	-	-
				t	t	t	t	-	t	-	-	-
				-	t							
				-	t							

Mew Gull

Larus canus

1991-95 = 2; 1995 - QLL 10D
n = 3

-----W--
-W-----

--

-	-	-	-	-	-	-	-	-	t	-	-
-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-
				-	-						
				-	-						

Thayer's Gull

Larus thayeri

1991-95 = 3; 1994 - QLL 2D
n = 5

--

-	-	-	-	-	-	-	-	-	t	-	-
	t								t		
-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-
				-	-						
				-	-						

Iceland Gull

Larus glaucoides

1991-95 = 1; 1991 - QLL 10D
n = 3

---W-----

--

-	-	-	-	-	-	-	-	-	t	-	-
									t		
-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	t	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-
				-	-						
				-	-						

Glaucous Gull

Larus hyperboreus

1991-95 = 1; 1995 - QLL 17B
n = 13

-----W--
---W---W--

--

-	t	-	-	-	-	-	-	-	-	-	t
-	t	-	-	-	-	-	-	-	t	-	-
	-	-	-	-	-	-	-	-	-	-	-
		-	-	t	-	-	-	-	-	-	-
			-	-							
				-	-						

Glaucous-winged Gull

Larus glaucescens

1991-95 = 5; 1995 - QLL 2D
n = 5

-W-----

--

-	-	-	-	-	-	-	-	-	-	t	-
	t								t		
-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-
				-	-						
				-	-						

Great Black-backed Gull

Larus marinus

1991-95 = 1; 1992 - QLL 17B
n = 3

-----W--

--

-	-	-	-	-	-	-	-	-	t	-	-
-	-	-	-	t	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-
				-	-						

Black-legged Kittiwake

Rissa tridactyla

1991-95 = 0; 1990 - QLL 28A
n = 4

-----W--

--

-	-	-	-	-	-	-	-	-	-	-	-
-	t	-	-	-	-	-	-	-	-	-	-
	-	-	-	t	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-
			-	-							

Sabine's Gull

Xema sabini

1991-95 = 2; 1995 - QLL 16B
n = 12

--

t	-	-	-	-	-	-	-	-	-	-	-
-	t	-	t	t	-	-	-	-	-	-	-
	-	-	t	t	-	-	-	-	-	t	-
		-	-	t	-	t	-	-	-	-	-
			-	-							

Ivory Gull

Pagophila eburnea

1991-95 = 0; 1974 - LL 10
n = 1

--

-	-	-	-	-	-	-	-	-	t	-	-
-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-
			-	-							

Caspian Tern
Sterna caspia
1991-95 = 35
TES

--

t	t	t	-	-	t	-	-	b	t	b	-	B
	t			b				t	b			B
-	B	-	B	-	-	-	-	t	B	B	-	-
	t	t	t	t					B	B		
	t	t	t	b	t	-	-	-	-	-	-	t
			t	b			t					
			t	t	B							
		-	-	t		t	t	-	t	-	-	
				t								
				t								
			-	t								

Common Tern
Sterna hirundo
1991-95 = 22
TES

--

-	-	t	t	b	b	B	t	B	B	B	t	B
	B			b		b		B	B	t		B
-	t	t	B	t	-	t	B	B	B	B	-	t
	B		B	B								
	t	t	t	B	t	t	B	t	-	t	-	
			t									
		-	-	t	t	t	t	-	t	-	-	
				t								
				t	b							

Arctic Tern
Sterna paradisaea
1991-95 = 1; 1994 - QLL 29D
n = 1

--

-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-
					t						
		-	-	-	-	-	-	-	-	-	-
				-							

Forster's Tern
Sterna forsteri
1991-95 = 30
TES

--

-	b	t	t	-	-	-	t	t	-	-	t
	t								t		B
-	B	t	B	B	-	t	t	t	t	-	-
	B		t	-							
	t	t	t	t	t	-	B	t	t	t	t
			t	-	B	t	t				
		-	-	t	t	t	t	-	t	-	t
				t							
				t	B						
				t	b						

Least Tern
Sterna antillarum
1991-95 = 11
TES

--

-	-	-	-	-	-	-	-	-	-	B	t
										B B	B t
-	-	-	-	-	-	-	-	-	B	-	-
										B B	B
		-	-	-	-	t	-	-	-	B B	B
										B	-
			-	-	-	-	-	-	t	-	-
				-	-						

Black Tern
Chlidonias niger
1991-95 = 52
TES

--

b	B	B	-	B	b	b	b	t	B	t	t	B
	b B	B								t		t B
-	B	B	B	B	t	t	t	b	t t	t	t	
	b	t	b	B					B			
	t	B	B t	t	t	t	b	t	t	b	t	
		t	B	b	t t	t	b	t	t	b	t	b
			b	t	b t	t	B	t	-	t	t	t
				t	t	-						B
				t	B	b						

■ Alcidae

Marbled Murrelet
Brachyramphus marmoratus
1991-95 = 0; 1985 - QLL 15C
n = 1

--

-	-	-	-	-	-	-	-	-	-	-	-
-	-	t	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-
				-	-	-	-	-	-	-	-
				-	-						

Ancient Murrelet
Synthliboramphus antiquus
1991-95 = 0; 1979 - LL 10
n = 5

--

-	-	-	-	-	-	-	-	-	t	-	-
-	t	-	-	-	-	-	-	-	-	-	-
	t	t	-	t	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-
				-	-						

Rock Dove

Columba livia

1991-95 = 165
(introduced)

WWWWWWWWWWWW
WWWWWWWWWWWW
WWW- - - - WW
- WWW- - - W
W-

b t	B b	B b	b b	b B	B B	t t B	b b	b B	B B	t B	b B
b t	b B	b t	B t	b B	B t	B t	b b	b t	b b	t t	b t
b t	b t	b t	B t	B t	B t	B t	B b	b b	b b	t t	b b
B B	b B	t B	b B	t B	t B	t B	b B	b b	b b	b b	b b
t -	b t	B t	B t	B t	t b	b b	b b	b b	b b	- b	b B
	t b	b									

Band-tailed Pigeon

Columba fasciata

1991-95 = 1; 1991 - QLL 15A
n = 18

t	t	t	-	-	t	-	-	-	-	-	-
t	t	t	-	-	-	-	-	-	-	-	-
	t	t	-	-	-	-	-	-	-	-	-
		-	-	t	-	-	-	-	-	-	-
			-	-							

White-winged Dove

Zenaida asiatica

1991-95 = 0; 1979 - LL 17
n = 1

-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	t	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-
			-	-						
			-	-						
				-						
				-						

Mourning Dove

Zenaida macroura

$$1991-95 = 309$$

WW---W---W---
-W---W-----
W-W-----
--WW-W-----
--

t b	b	b	b b	b	b b	b b	b b	b	b	b b	b b
b	B	b	B	B	B	B	B	B	B	B	B
B b	B	t b	b	b	B b	b b	b t	b b	B B	b b	b b
t b	t b	t	b B	b b	B b	b b	b		B B	t	
B	B	B	B	B	b	B	B	B	B	B	B
	b b	b b	b	B B	t b	t b	b b	b	t	b	t b
	B	b B	b b	B t	t b	t b	b	b		b	
	B	B	B	B	B	B	B	B	B	B	B
	B	b b	t t	b B	b	b b	b b		b		b
b		b	b t	b	b b	B b	b t	b b	b b	b B	
	B	B	B	B	B	B	B	B	B	B	
		t	t	t		t b	t	b b	b t	t b	
		b	b b								
		b	b								

Black-billed Cuckoo

Coccyzus erythrophthalmus

1991-95 = 12

--

-	-	b	b	b	b	b	b	b	b	b	b
-	b	-	b	b	b	b	b	b	b	b	b
	-	-	b	B	-	b	b	b	b	b	b
				B	b	b	b	b	b	b	b
		-	b	B	b	b	b	B	B	b	B
								B			b
				-	t						

Yellow-billed Cuckoo

Coccyzus americanus

1991-95 = 1

TES

--

-	t	-	-	-	-	-	-	t	-	-	-
-	t	-	-	-	-	-	-	-	-	-	-
	t	t	-	-	-	-	-	b	b	b	-
			t	b	-	-	b	-	b	b	b
				-	-						

STRIGIFORMES

Tytonidae

Barn Owl

Tyto alba

1991-95 = 3; 1995 - QLL 25D

n = 13

SI

--

t	-	-	-	-	-	t	-	t	-	-	-
-	t	-	-	-	-	-	-	-	-	-	-
	t										
	-	t	-	-	-	-	-	-	-	-	-
		B									
			t	-	-	-	B	-	t	-	-
				-	-						

Strigidae

Flammulated Owl

Otus flammeolus

1991-95 = 17

TES

--

b	-	t	-	-	-	-	-	-	-	-	-
-	b										
b	-	-	-	-	-	-	-	-	-	-	-
	b										
	B	b	B	t	-	-	-	-	-	-	-
		t	b								
	B	B		B							
		-	-	-	-	-	-	-	-	-	-

Snowy Owl
Nyctea scandiaca
1991-95 = 26

WW-wwwwwwww
-W-wwwwwwww
W--wwwwwwww-
W-W-wwww--W
--

t	t	t	t	t	t	t	t	t	t	t	t
				t	t				t	t	t
-	t	t	t	t	t	t	t	t	t	t	t
		t	t	t	t	t	t	t	t	t	-
			-	-	t	t	t	t	t	-	t
				-	-						

Northern Hawk-Owl
Surnia ulula
1991-95 = 4; 1994 - QLL 2B
n = 18
SI

-W-----W
-W-----

--W-----
--

t	B	t	-	-	-	-	-	-	-	-	-
	t								t		
-	t	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	t	-	-	-	-
			-	-	t	-	-	-	-	-	-
				-	t						

Northern Pygmy-Owl
Glaucidium gnoma
1991-95 = 53

WWW-----
WWWw-----
WWWw-W-----
--WW-----
--

b	B	b	-	-	-	-	-	-	-	-	-
	b	B	b	b	t	-	t	-	-	-	-
t	b	B	b	b	b	t	t	-	-	-	-
		B	b	t	B	b	t	t	-	-	t
		B	t	t	t	b					
			b	b	b	B	b	-	-	-	-
				-	-						

Burrowing Owl
Speotyto cunicularia
1991-95 = 44
TES

-----W-----

--

b	t	-	t	B	b	B	b	B	B	B	b	B
				B	b	B	B	B	t	B	B	t
t	t	-	B	B	b	t	t	b	B	B	B	B
		t	-	b	B	t	b	B	b	b	b	B
			b	B	B	B	t	B	B	B	B	b
				t	t							

Boreal Owl

Aegolius funereus

$$1991-95 = 40$$

TES

-W-----

- - W - - - - -

— — — — —

100 100 100 100 100 100 100 100 100 100

— —

b	b	B	B											
b		t		B	-	-	-	-	-	-	-	-	-	-
b		B		b										
-		B	b	b										
	-		b	-	-	-	-	-	-	-	-	-	-	-
		B	t	-		b	t							
		b	b	b	t	b		-	-	-	-	-	-	-
		b	B			b	t	b						
			b	-		t	t	-	-	-	-	-	-	-
			b	b		b								
					-	-								

Northern Saw-whet Owl

Aegolius acadicus

$$1991-95 = 45$$

WWW- - - - - W- -

WW--W-W-----

W-W- - - - -

--WW-WWW--

-W

[illegible]

■ CAPRIMULGIFORMES ■ Caprimulgidae

Common Nighthawk

Chordeiles minor

$$1991-95 = 169$$

• • • • •

0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000

— — — — —

— —

t t	t t	t b	t	b		b b	b	b	b	b	b b
B	B	B	b	B	B	B	b	B	b	b	b
b b	b	t b	B	b	B b	b		b b	t b	b	
b	b	b b	b b	b	b b	b b	b	b	t t		
B	B	B	b	B	b	B	B	b	B	b	B
b	b	b b	b b		t	t	b		b	b	b
	B b	b b	b b	B	t		b	b	b	b	
	B	B	B	B	b	b	B	B	b	B	b
	B	t t	b b	b b	b b	b b	t B		b	t	b
		b b		b	b	b b	B	b t	t b	b	b
		B	b	B	B	B	B	B	B	B	B
				b t	B b	b b		b			b
	b										
		t	b								

Common Poorwill

Phalaenoptilus nuttallii

$$1991-95 = 12$$

.....

00000000000000000000000000000000

.....

*** $P < 0.001$ vs. control; ** $P < 0.01$ vs. control; * $P < 0.05$ vs. control.

— —

-	-	-	-	b	t	-	-	-	b	-	-
t	b	-	b	-	-	b B	b B b	b	b	-	t
	t	b	-	-	b t	b b	B	-	B	B	-
		-	b -	b	t	b	B b	b	b b B b b	B	b B
			-	-							

$$1991-95 = 165$$
[illegible]

```

WWW-W-----W--
WWWW-WW-----
  WWWWW-----W-
    -WWWWWWWW--
      WW

```

PICIFORMES ■ Picidae

Lewis' Woodpecker

Melanerpes lewis

$$1991-95 = 47$$

t	B B b	B b	B	-	-	b t	b	-	-	-	-	-
b	b b	B b t	B	B	t t	b	t t	b	-	-	-	-
	b B B		t b B b	b B t	b t	b t	t t	t t	t	b	-	-
	t		t	b	B	b	B	B	B B	B	-	B b
			-	t b								

WW-----

WW-----
--W--W--W--
--

Red-headed Woodpecker

Melanerpes erythrocephalus

$$1991-95 = 20$$

-	t	t	-	t	b	B	b	^B B	B	b	B	t
-	t	b	t	t	-	B	B	B	t	b	B	t
			^t t	t	b	b	b	b	B	B	B	t
		-	t	t	t	B	B	b	b	t	b	b
			-	-	t	t	B	B	b	B	b	B
				-	t							

- W -

--

Red-bellied Woodpecker

Melanerpes carolinus

1991-95 = 1; 1992 - 10с

$$n = 2$$

-	-	-	-	-	-	-	-	-	t t	-	-
-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-
			-	-							

A set of handwriting practice lines. It consists of five rows of horizontal lines. Each row has a solid top line, a dashed midline, and a solid bottom line. The first row is the most complete, while the subsequent rows are progressively shorter, starting from the left margin.

Sphyrapicus varius

-	-	-	-	-	-	-	-	t	-	-	t
-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-
				-	-						
				-	-						

Sphyrapicus nuchalis

W

B b	B B	b b		b	-	B	t	t	-	-	-
B	B	B	b								
B b	B B	B B	b								
b b		B b	B b		b t		t				
B	B	B	B	-	B	B	t	-	-	-	t
b	b	b B			t	b					
	B	b	b B	b b	b b	t					
	B	B	B	B	B	B	t	-	-	-	-
	B	b	B B	b b	B	t					
	b	b B	b B	b B	B						B
		b	B	B	B	B	b	B	b	-	-
			B	t	B						
	B	b	B B								
		b	B								

Sphyrapicus thyroideus

b	B	b	-	-	-	-	-	-	-	-	-
B	B	b	-	-	-	-	-	-	-	-	-
B	b	b	B	b	-	-	-	-	-	-	-
-	b	b	B	b	-	-	-	-	-	-	-
	b	b	t	-	-	-	-	-	-	-	-
	b	B	B	b	b	-	-	-	-	-	-
	b	B	B	-	-	-	-	-	-	-	-
	B	b	b	b	-	-	-	-	-	-	-
		b	b	B	B	B	B	-	-	-	-
				B	B	B	-	-	-	-	-
				b	b	-	-	-	-	-	-

Picoides pubescens

WWWWWWWWWWWWWWWW
WWWWWWWWWW-WW-W
WWWWWWWWWWWWWWWW-
WWWWWWWWWWWWWWWW
-W

b b	B	B	b	b	b	b	t	b	B	b	b
B b	b B	b b	b	b t	b	b t			b		t
t t	b	B b	b t	t	b b	b	b t		t		
B	B	B	B	t	b	B	t	t	t	b	b
b	b t	b B	b	t		b					t
	B	b t	t B	b	t	t					
	B	B	b	b	B	B	b	t	b	b	b
	B	b	t t	b b	b	b	t b			B	
t			b b	B	b	b b	B	b	b	b	
	t	B	B	B	B	B	b	b	b	b	
			t					b b			
			B b								
		t	b								

$$1991-95 = 362$$

b b	b b	b b		t	B	t	b		b	B	B	
B	B	B	b	B	B	B	B	b	B	B	B	B
B b	b B	b b	b	b	b b	b	t	t		B		t
b B	b	B b	B b	b t	B b	b b	B B		b t			
B	B	B	B	b	b	B	B	b	b	b	B	
b	b b	b B	b b	B t	B b	b	b b				t b	
	B B	b b	b B	B b	b b	t B	b	b				
	B	B	B	B	B	B	B	B	b	B	B	
	B	B t	b B	B b	b B	t t	t B		b	b	b	
	b	B b	t b	b b	B	b	b b	b t	b b	b b	b b	
		B	B	B	B	B	B	B	B	B	B	
			t	t t	B t	t	t b	t	b b		b	
	b	b	B B									
		b	B									

[illegible]

t		b b	-	-	-	t	b	-	-	-
b b	b			b t	b	b	t		b	
t B	b		t t	b t	B b	b b	b	b		
	b b	b B	t b	t t	B t	b b		b		t b
	B b b	b b	b			t b	b b	b		b
	-	-	-	-	-	-	-	-	-	-
	b b	b	b b	b b	b b	b		b	b	b
b	b b	b B	b	b	-	b b	b	b b	b	b b
	-		b			-	-	-	-	b
		b b						b		b
			b b							
			-	-						

www- - - - -
www- - - - -
www- - - - -
- - - - -
- -

[illegible]

$$1991-95 = 67$$
[illegible]
$$1991-95 = 165$$

t	B	b	b	B	B	B	B	b	B	b	b
B	B	b	b	B	B	B	B	t	b	b	b
b	b	B	b	b	b	b	b				
b	b	b	b	b	b	b	b	B	b	b	b
b	B	b	B	B	b	B	B	b	b	b	b
b	b	b	b	B	b	t	B	b	b		
	t	B	B	t	b	b	b	b	b	B	b
	B	B	B	b	B	b	b	b	b	b	b
	b	B	t	b	b	b	B	b	b	B	b
		b	b	b	t	b	t	b	b	b	b
		b	B	B	B	B	B	b	B	b	b
				t				b	b	b	b
		b	b	b	b						
			b	b	b						
			-	B							

1991-95 = 1; 1995 - QLL 12B
n = 3

-	-	-	-	-	-	-	t	-	-	-	t
-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	t
			-	-							

1991-95 = 1; 1995 - QLL 12B
n = 1

-	-	-	-	-	-	-	-	-	-	-	t
-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-
				-	-	-	-	-	-	-	-
					-	-	-	-	-	-	-

Alder Flycatcher
Empidonax alnorum
1991-95 = 5; 1995 - QLL 16A
n = 7
TES

--

-	-	-	-	-	-	-	-	t	-	-	-
-	-	-	b b	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-
				-	-						

Willow Flycatcher
Empidonax traillii
1991-95 = 85

--

b b b b	b B b	b b B b b	b b b	b b b	t b b	b b t	- b t	t - -	- -	- -	b -
b b B b	b B b t	b B b b	b b b	b b b	b b b	t b t	b t -	- -	- -	- -	b -
	b B b	b B t	t b B b b	b b b b	t B b	b -	t b -	b t -	t t -	- -	- -
	b b b	b b b	b b b	b b b	b B b b	b -	b b -	- -	b -	- -	t -
			b b b	B B b b							

Least Flycatcher
Empidonax minimus
1991-95 = 103

--

b b b	b b b	b b b	- b b	b b b	b b b	b b b	t t t	t t t	b b b	b b b	b B t
b b - b	b b b	b b b	B b b	b b B	b b b	B b b	B b b	- t b	t t b	b b b	b b b
	B B B	b b t	b b b	b b b	b b b	b b B	b b b	b b b	t b B	b b B	b b b
	b b b	- b b	b b B	t B b	b b b	B b b	b b b	B b b	B b b	b b b	b b b
			- b b	t b b							

Hammond's Flycatcher
Empidonax hammondii
1991-95 = 66

--

b b B b B	B b B b b	b b b b b	- b b	- b b	- b b	- b b	- b b	- b b	- b b	- b b	- b b
b b b b	b B b	B b b b b	b b b	- b b	t b b	- b b	- b b	- b b	- b b	- b b	- b b
	b b B B	b b B b	b B b b	b b b	b b - b	b -	- b b	- b b	- b b	- b b	- b b
	b b b	b b b b	b b B	B b b	b B B	t b b	b -	- b b	- b b	- b b	- b b
			- b b	B B b b							

Dusky Flycatcher
Empidonax oberholseri
1991-95 = 102

--

b b	b b	b	b	b	-	b	b	-	-	-	-
B	B	b	b	b							
b b	b b	b b									
b b	b	B b	b b	b	-	B	b b	b	B	-	-
B	B	B	b			b b	B				
b	b	b b									
	b	b	b B	b b	b b	b	b	b	-	-	-
	B	B	B	b	b	b	b				
	b	b	b b	b b	b						
		b	b b	B	B	b b	b	b	-	b	-
			b		B	b	t b	b		b	-
				b b b	B B						
				b	B						

Cordilleran Flycatcher
Empidonax occidentalis
1991-95 = 32

--

b	b	b	-	B	-	B	-	-	-	-	-
B	b	b									
b	b	B	b	t	b	-	b	-	-	-	-
b	b	b			b						
	B	B	t	b	b	b	t	-	-	-	-
	b	t	b	t	-	-					
		t	t	t	b	b	b	-	-	-	-
		-	t	b	b	b	b				
				b b							
				b	t						

Eastern Phoebe
Sayornis phoebe
1991-95 = 1; 1994 - QLL 15A
n = 6

--

-	-	-	-	-	-	-	-	-	-	-	t
		t	-	-	-	t	-	-	-	t	-
	-	-	-	-	-	-	-	-	-	t	-
		-	-	-	-	-	t	-	-	-	-
			-	-							
				-							

Say's Phoebe
Sayornis saya
1991-95 = 91

--

b	b	t	B	b	B	B	t	B	b	b	B
b	t	B		b	B b	b	b		t b		
t	B	b	B	t	b t	b	B	b	t t	B	b
		b	b	t	b	t t	b	b	B B	b	b
	b	B	B	t	t	B	b	b	b	B	B
		t	b		b	t b		b	b		b
		-	B	B	t	B	B	b	B	b	B
						t	b b	B	t	b	
				b	t						

Ash-throated Flycatcher
Myiarchus cinerascens
1991-95 = 0; 1978 - LL 27
n = 9

--

t	-	-	-	-	-	-	-	-	-	-	-
-	t	-	-	-	-	-	-	-	-	-	-
	t	t	t	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-
			-	-							
			-	-							

Great Crested Flycatcher
Myiarchus crinitus
1991-95 = 0; 1972 - LL 45
n = 2

--

-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	t	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	t
			-	-							
			-	-							

Cassin’s Kingbird
Tyrannus vociferans
1991-95 = 9
TES

--

-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	B b	b	-	B t	-
		-	-	-	-	-	t	-	b B b	b	t
			-	-							
			-	-							

Western Kingbird
Tyrannus verticalis
1991-95 = 147

--

b B b	B t	b b	b b B	b B b	B b B	b b B	b b B	b B b	b B B	B b	b B b
t B	b B b	b t	t b b	B b t	b B t	b b B	b b B	b B b	t B b	t B b	B b
	b B B	b B t	B b	B b b	b b b	b b b	b B t	b b B	B b	B b	B b
		b b	b B	b t	b t	t B	b B	b b B	b b B	b b b	b b b
			t	t b							
			t	b							

Eastern Kingbird
Tyrannus tyrannus
1991-95 = 232

--

b	B	b	t	b	b	t	b	b	b	b	B	t	b	b
B	b	B	b	b	B	B	B	b	b	b	B	B	B	B
b	B	t	b	b	t	b	B	b	b	t	b	B	b	b
t	B	t	b	b	t	B	b	b	b	b	b	t	t	b
b	B	B	B	B	B	B	B	B	B	b	B	B	B	B
b	t	b	b	B	t	b	b	b	b	b	b	b	b	b
	B	b	t	t	B	B	b	b	b	b	b		b	
	B	B	B	B	B	B	b	B	B	B	B	B	B	B
	B	t	B	b	b	B	b	t		b	b	b	b	b
		B	t	b	b	b	b	t	b	b	b	b	b	b
		B	B	B	B	B	B	B	B	B	B	B	B	B
					t				b	b	b	b	b	b
			b	t	t									
			b	B										

Scissor-tailed Flycatcher
Tyrannus forficatus
1991-95 = 2; 1993 - QLL 18A
n = 8

--

-	t	-	-	-	-	-	-	-	t	-	-
-	-	-	-	-	t	-	-	-	-	-	-
	-	-	-	-	-	-	t	-	-	-	-
	t										
		-	-	-	-	t	t	-	-	-	-
		-	-								

■ Alaudidae
Horned Lark
Eremophila alpestris
1991-95 = 235

WWWWWWWWWWWW
WWWWWWWWWWWW
WWWWWWWWWWWW
WWWWWW-WWW
WW

b	t	b	b	b	b	b	b	b	b	b	t	b	b
	t	B	b	B	B	B	B	B	B	B	B	B	B
		b	b	b	b	b	b	b	b	b	b	b	b
t	b	b	B	t	b	b	b	b	b	B	B	t	B
	b	t	B	B	b	B	B	B	B	B	B	B	B
		b	t	b	t	t	b	b	b	b	t	b	b
		B	B	B	B	B	B	B	B	B	B	B	B
		t	b	b	t	t	b	b	b	b	b	b	b
		B	B	B	B	B	B	B	B	B	B	B	B
		t	B	t	B	t	B	B	t	t	b	t	b
		b	b	b	t								
		B	B	B

■ Hirundinidae

Purple Martin

Progne subis

1991-95 = 1; 1995 - QLL 12B
n = 19

--

-	-	-	-	-	-	-	-	t	t	t	t
-	-	-	-	t	-	t	-	-	-	-	t
	-	t	-	-	-	-	-	b	b	t	-
		-	t	t	-	-	t	-	-	-	-
			-	-							

Tree Swallow

Tachycineta bicolor

1991-95 = 205

--

B B	B b	t b	b	-	b	t	B	-	B	B	b	t
B	B	B	b	-	b	B	B	b	-	t	B	b
B b	B B	b B	b	b	B B	B	b	-	B	B	b	t
	B	t b	B	t B	b b	b b	B	b	b	b	b	t
	B	B	B	B	B	B	B	B	b	t	b	t
	b	b t	B B	b B	b t	b b	b	b			b	
		b	b t	b B	B	b b	t	b	b			
		B	B	B	B	B	B	b	t	b	B	t
			B	B	b b	b b	b					b
		b	b B	b	b b	B	b	b B	b	b	b	b
			B	B	t	B t	B	B	b	B	b	b
				B	b	B B						
				B	B	B						

Violet-green Swallow

Tachycineta thalassina

1991-95 = 146

--

b b	t	b b	-	B	t	b	-	t	B	b	-
B	B	B	b	b	b b	b	-	t	B		
B b	B	b B	b	B	b b	B	B	b	B	b	-
	B B	t b	B t	t	B	b b	b b	b	b	t	-
	B	B	B	B	B	b	B	B	b	-	t
	b	b t	B	b b	t	t					
		t b	b b	B B	b B	b	b	-	b	b	-
		B	B	b	B	b	b				
		B	t b	t B	b b	b B	t		B B		
		b	b	b	b t	b	b	b	b	B	b
			b	B	B	B	B	B	b	B	b
			t	t t	B t		b	t	b b	B	b
				b	B B						
				b	b						

Northern Rough-winged Swallow

Stelgidopteryx serripennis

1991-95 = 106

--

b b		t b	b	b	b	b	b	B	-	t	b
B	B	B	b	b	b B	b			b	t	b
t B	B	b	b	b	b	B	B	b	-		t
	t	b	B	b b	b	B B	B	b	t	b	b
	b	B	B	b	B	b	B	b	b	b	b
		B	B	b	t	t	t	b			
		B	b t	b b	b	t B	b	b	b	b	t
		B	b	B	B	b	b	b	b	b	B
		B	b	b	b b			b			b
		b	b	b	b t	b	b	b	t	b	b
			b	B	B	B	b	B	b	b	b
			t	t	B				b		t
				b b	B B						
				b	b						

Bank Swallow

Riparia riparia

$$1991-95 = 89$$

t	b	b	b	B	B	B	b	B	B	B	t
B	B	b	b	B	B	B	b	B	B	B	B
b	B	t	b	b	b	B	B	b	B	b	t
B	b	B	b	b	b	B	b	b	t	B	B
B	B	B	b	b	b	B	b	b	b	B	B
	b	b	b	B	B	B	-	B	B	B	B
	B	B	B	B	B	B					
	B	t	t	b	B	b			B		b
	b	t	b	b	B	B	B	B	b	b	t
		-	B	B	B	B	B	B	b	b	
			t		B				B		
			b								
			B	B							

Cliff Swallow

Hirundo pyrrhonota

$$1991-95 = 228$$

t	t	b B	b	b		B B	b				b b
B	B	B	B	B	B	B	b	B	B	B	B
b b	B	B B	B b	B	B B	b	b b	b	B		t b
b t	t b	B	b B	B b	B B	B B	b b		b t		B
B	B	B	B	B	B	B	B	B	B	B	B
	b B	t B	b B	B	t b	t B	b	b		b	b
	b	b	t B	B b	b B	b	b	b		b	
	B	B	B	B	B	B	B	B	B	B	B
	B	B	b B	b B	b b	b B	B b		b	b	b
	b b	b	b t	b t	t b	B B	B B	t b	t b		b
	B	B	B	B	B	B	B	B	B	B	B
		b	t t	t		B		B B	t t	t b	
		B b	B B								
		B	B								

Barn Swallow

Hirundo rustica

$$1991-95 = 268$$

b t	B b	b B	b	b b	b b	b b	b b	b b	B	b b	t	b b
B	B	B	B	B	B	B	B	B	B	B	B	B
B b	B	B B	B	b	B B	B b	b B	b b	b B	b		b
t B	b b	B t	B B	b b	b b	b b	b	b	B B	t		
B	B	B	B	B	b	B	B	B	B	B	B	B
b	b b	b B	B	t t	b b	t b	b			b		b
	b	b t	b b	B b	b b	t	b	b		b		
	B	B	B	B	B	B	B	B	B	B	B	B
	B	B b	B	b b	b b	b t	t		b	b	b	b
	b b	b	b b	B t	t b	b	b t	b b	b b	b b	b b	b b
	B	B	B	B	B	B	b	B	B	B	B	B
		B	t t	B	B	t b		B b	b t	t b		
	b	b b	b B									
		B	B

■ **Corvidae**

Gray Jay

Perisoreus canadensis
$$1991-95 = 101$$

www- - - - -

WWW--W-----

WWW- - - - -

WWW-W----

- 3 -

B t	B t	t b	-	-	-	-	-	t	-	-	-
B	b	B									
B B	t B	b b									
t B	t b	B t	b B								
b	B	b	B	b	b	t	-	-	-	-	-
b	b b	b t	B		b						
	b	b b	t b	b	b b						
	B	B	b	b	b	b	-	-	-	-	-
	t	b t	t b		t						
	b	b b		t	b	t	b	-	-	-	-
		b	B	B	B	t					
		B		t	t						
			t	B							
				b							

Steller's Jay

Cyanocitta stelleri

$$1991-95 = 95$$

WWW- - - - -

WWW- - - - -

WWW- - - - -

- WWWW - - - -

-W

B t	t t	b b	-	-	-	-	-	-	-	-	-
b	b	B									
B b	t t	b b									
t b	b	B b	B	b	-	-	-	-	-	-	-
b	B	b	b	b	-	-	-	-	-	-	-
	t b	t	b	b							
	b b	b	t b	t b	t b	t	b	t	-	-	-
	B	b	b	b	b	t	b	t	-	-	-
	b	b	t t	t t							
	b	b b	t	b	b	t	-	-	-	-	-
		b	B	B	b	t	-	-	-	-	-
			t	t							
			B	B							
			t	b							

Blue Jay

Cyanocitta cristata

$$1991-95 = 56$$

WWW-WWW-WW--

- W W W W - W - - - - W

W-WW- - - WWW-

- W W W - W - - - -

— —

t t t	t t B	t t t t t	-	t t t	t t t	t	-	t b B	t t t	b	t
t -	t t	t	t	t b t	-	t t	-	t	t	-	b t
	t t t	t t t	t t t	t	t	-	-	b	b	t b	t
		-	t	t t t	t t t	t	t	-	-	b	b B
			t	t							

Pinyon Jay

Gymnorhinus cyanocephalus

$$1991-95 = 29$$

.....

-----WW-----

WWW-WWWWWW

WWWW - WWWWW

..

t	t	-	-	-	-	t	-	-	t	-	-
-	-	-	-	t	t	b ^b b	b	b	b	b	- b
	t	t	t ^B t	t ^B b	t	b ^b t	b ^b t	b	b	t ^b b	t
		t	t	b ^t B B	B ^B B	t ^b b	b ^b B b b	t	b ^B B	b ^b b	b ^b b
			-	-							

Black-capped Chickadee

$$1991-95 = 239$$
[illegible]

Parus gambeli

WWWWWWW--W---
 WWWWWWWWW--
 WWWWWWW--
 WWWWW--
 WW

b B	B b	b b		b					-	-	-
B	B	B	t	b	t	B	b	t	-	-	-
b b	b B	b b	b						t		
b b	b	B b	b b	t	t			t			
b	B	B	B	B	B	B	b	t	-	-	-
b	b B	b B	b b	t b	b b	B					
	b	b b	b B	b t	b b	t B					
	B	B	B	B	B	b	t	-	-	-	-
	b	b b	b b	b b	b						
	b	b b		B B	B	b t	B	-	t	-	-
		b	B	B	B	B	b b	B	-	-	-
			t t	B b		b b					
		b b	B B								
		b	b								

Parus hudsonicus

ww - - - - -
- - w - - - - -
- - - - -
- - - - -
- - - - -

b	b	b	-	-	-	-	-	-	-	-	-	-
b	B	B	-	-	-	-	-	-	-	-	-	-
b	t	b	B	-	-	-	-	-	-	-	-	-
	t	t										
		-	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-	-
			-	-								

$$1991-95 = 73$$

```

WWW-----
WWWWWWW-----
  WWWWW-W--W--
    -WWWWW-----
      -

```

b b	b	b b	-	t	t	b	t	t	t	t	t
B	b	B									
b b	b b	B			t				t		t
b b	t	B	B	t	t	t	-	-	-	-	-
t	t	b				b					
	b	b t									
	b b	t	b	b	b	-	-	-	t	t	t
	b	b	b	b	b						
	b	b	t								
		B	t	t	B	t	t	t	t	-	b
				t	B						
				b	B						
				t t	t t						
			b	t							
			b								

$$1991-95 = 116$$

W

b b b b b	b b b	b b b b	b b b	b b b	t b b	b b b	b b b	B b b	b b b	b b b	B b b
b B b	b B b	- t b b	B B b b	B B b	b b b	B B b	b b b	b b b	B B b	b b b	b b b
B B b	b b B	b B b b	b B b b	b B b b	b b b b	b b b	b b b	b b b	b b b	b b b	B b b
b b b	b b b B	B b B B	b b B B	b B B b	b B t b	b b B b	b b b	b b b	b b b	b b b	b b b
		b b b	B b								

$$1991-95 = 11$$

- - - - -
 - WW - - - - -
 - - - W - - - - -
 - - W - W - - - -
 - - -

b t	-	-	b	-	-	-	-	-	-	-	-	-
b t	B	B	-	-	-	-	-	-	-	-	-	-
	b	-	-	B b	b	-	t	-	-	-	-	-
		-	-	B	b	b	t b B b	b	b	-	B	
			t -	-								

$$n = 2$$

-	-	-	-	-	-	-	-	-	-	-	-
-	-	t	-	-	-	-	-	-	-	-	-
	t	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-
			-	-							
			-	-							

■ Cinclidae

American Dipper

Cinclus mexicanus

1991-95 = 106

WWW-----

WW-WW--W----

WWWW-----

WWWWW-----

WW

B B	B b	b b	-	-	-	-	-	-	t	-	-
B	B	B	b								
B	b	b B	b	b	b	t	t	-	-	-	-
b	b t	B t	b b								
	B	b B	B	b	t t						
	B	B	B	B	b	t	-	-	-	-	-
	B	b B	B t	b	B						
	t		t	b	b t	B	b	-	-	-	-
		B	t	B	B						
			t	B B							
			b	B

■ Muscicapidae

Golden-crowned Kinglet

Regulus satrapa

1991-95 = 104

WW-W-----W---

WWWW-----

WWWW-W-----

--WWW-----

--

B b	b b	b b	t	b	t	t	t	t	t	-	t
B	B	b		t	t				t		
B b	b b	b b	b b	t	t				t		
b B	B	b b	b	t	-	t	-	-	-	t	t
b	b	b b		b	b	t					
	b	b	b b	t	B		-	-	t	-	-
	b	b	b	b b	t				t		
	b	b b		t	b	t	b	-	t	-	t
		B	b	b	b	t	b	-	t		
					b						
			-	b							

Ruby-crowned Kinglet

Regulus calendula

1991-95 = 156

WW-----W---

-W-----

W-----

--W-----

--

b b	b b	b b	b	B	t	b	t	t	t	t	t
B	B	B	b	t	t				t		
b b	b b	b b	b b	t	b	b	t	-	t	-	t
b	B	B	B	b	b b	t b					
b	b	B b	b b	t	b b	B	-	-	-	t	t
	b	b	b b	b b	b						
	b	b B	t	b	b	B	b	B	-	t	t
		b	B	B	b	B	b	B			
				B b	b B						
		b	b b	B B							
			b	b							

Blue-gray Gnatcatcher

Polioptila caerulea

1991-95 = 1; 1995 - QLL 41C

$$n = 2$$

SI

-	-	-	-	-	-	-	-	-	t	-	-
-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	t	-	-	-	-
			-	-							

Eastern Bluebird

Sialia sialis

1991-95 = 4; 1994 - QLL 34C

$n = 21$

-	-	t	-	-	-	-	-	-	B	t	t
-	-	-	-	-	-	-	-	-	-	-	b
	-	-	-	-	-	-	-	-	-	B	t
		-	-	-	t	-	-	-	B	-	B
			-	-							

Western Bluebird

Sialia mexicana

$$1991-95 = 29$$

B	b	B	b	-	-	t	-	-	-	-	-	-
B	B	B	t	-	-	-	-	-	-	-	-	-
B	B	B	-	t	-	-	-	-	-	-	-	-
B	b	B	-	b	-	-	-	-	-	-	-	-
	B	t	B	t	-	t	-	-	-	-	-	-
	B	B	t	-	-	-	-	-	-	-	-	-
	B											
	t	-	-	t	-	-	-	-	-	-	-	-
		-	t									

Mountain Bluebird

Sialia currucoides

$$1991-95 = 267$$

B B	B b	b B	B	b b	t	B	t	b	b	b	t
B	B	B	B	B	t	B	t	b	b	b	t
B b	b B	B B	B b	B	B	t b		t	t		t
B B	t B	B b	B B	t	B	b	t B	B	B t		B
B	B	B	B	B	B	B	B	B	B	B	B
	b b	b B	b B	b t	B B	t b	b	B b			t b
	B	b b	b B	b b	b B	b	b			B	B
	B	B	B	B	B	B	B	b	b	B	B
	B	B	B B	b b	B b	b B	B b			B	
	b	b B	B B	b B	B	t b	B		B B	b B	b B
		B	B	B	B	B	B	B	B	B	B
				t t	B t	b t	t t		b b		b
		b b	B B								
		B	B								

Swainson's Thrush
Catharus ustulatus
1991-95 = 128

--

b b	b b	b b	-	t							t
B	B	B		b	t	B	-	t	t	t	t
b b	B b	b b	b	t	t				t		t
b B	b	B b	b t	t		b	b	-	-	t	t
B	B	B	B	b	b	B	b		t		
b	b	b b	b b			b					
	b b	b b	b b	t b	b	b					
	B	B	b	b	b	b	t	t	t	t	-
	b	b B	b	b	b						
	b	b		t t	b	t	t	t	t	t	t
		b	b	B	B	b	b	t	t	t	-
					B b	b b					
				-	B						
					b						

Hermit Thrush
Catharus guttatus
1991-95 = 79

w-----

--

B b	b b	b b	-	b	-	-	-	t	t	-	-
b	B	B			t				t		
b b	b b	b b									
b b	b	B	b	t	b	b	b	-	t	-	t
b	b	b	t		b b						
	b b	b b	b b		b	b					
	B	B	B	b	B	b	-	-	-	-	-
	b	b b	b	b							
	b	b b	t	b	b	b	b	-	-	-	-
		B	b	B	B	b	b b				
					t b	b					
				b	b	b					
				b	b						
				b	b						

Wood Thrush
Hylocichla mustelina
1991-95 = 0; 1981 - LL 43
n = 5

--

-	-	-	-	-	-	-	-	t	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-
		-	-	t	-	-	t	-	t	-	-
			-								
				-	-						

American Robin
Turdus migratorius
1991-95 = 395

WW-----WWW-W
WWW-WWWWWW--W
WWWWWWWWWWW
WWWWWWWWW-
--

b B	B b	b B	B	b b	b	b b	b	B	B	B	b b
B	B	B	B	B	B	B	B	B	B	B	B
B b	b B	b B	B	b	B b	b b	b	b t	B B	b	t
b B	b b	B b	B B	b b	B b	b B	b	B	b	B t	b
B	B	B	B	B	b	B	B	B	B	B	B
b	b t	b B	B B	B B	B b	B	b b	b b	B	b	t b
	B	b b	b B	b B	B B	b	b	B	B	B	B
	B	B	B	B	B	B	B	B	B	B	B
	B	B b	B B	b b	b B	b B	b	b	b	B	b
	b	b b	b b	b B	B B	t b	b b	B	b B	b b	b b
		B	B	B	B	B	B	B	B	B	B
			t b	t t	B	B B	t	t	b b	b t	t b
			b b	B B							
			B	B							

■ **Sturnidae**

Shrikes, Starling, Vireos

European Starling

Sturnus vulgaris

1991-95 = 262
(introduced)

WWW-WWWWWW-W

WWWWWWWW-W-WW

WWW- -WWW-

-WWW-WWW-W

WW

[illegible]

■ Vireonidae

Solitary Vireo

Vireo solitarius

1991-95 = 101

— — — — —

0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000

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1000 1000 1000 1000 1000 1000 1000 1000 1000 1000

1998

b b B B b	b b B b B	b b b b b	-	t	t t	-	-	-	t	-	t
b b b b	b B b b	B b b b b	b b B b b	b	- t	b	b t	b	-	-	t
	B B B b	b b B b	b b b b	b - b	b b b	b -	b	b	b	b b B	-
	b	b b b	b -	t b	b b	b b	b b		b b B b b	b b	b -
			-	t							

Cassin's Vireo

Vireo solitarius cassinii

-	-	t	-	-	-	-	-	-	-	-	-	-
-	B	-	t	-	-	-	-	-	-	-	-	-
	t	-	t	-	-	-	-	-	-	-	-	-
	t	-	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-	-
		-	-									

Plumbeous Vireo

Vireo solitarius plumbeus

-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	b	-	-
			-	-							

Warbling Vireo

Vireo gilvus

$$1991-95 = 173$$

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b b	b b	b b	b	b	b	B	b	b	b	b	b	b
B	B	B			b	b	b	b	b	b	b	b
b b	b b	b B	b		t b	b			b	b		
b b	b	B b	b b		b b	b	b					
b	B	B	B	b	b	b	b	b	b	b	b	b
b	b	b b	b B		b b	b						b
	B	b	b b	B b	b b	b				b		
	B	B	B	B	B	b	b	b	b	b	b	b
	b	b b	b B	b b	b B				b	B		
b	b B	b b	B	B B	b	b	b	b	b	b	b	b
	B	B	B	B	b	b	b	b	b	b	b	b
				B b	b	B	b					
		b b	b									
		b	B									

Philadelphia Vireo
Vireo philadelphicus
1991-95 = 1; 1994 - QLL 12B
n = 4

--

-	-	-	-	-	-	-	-	-	t	-	t
-	-	-	-	-	-	-	-	-	-	-	-
	t	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-
			-	-							

Red-eyed Vireo
Vireo olivaceus
1991-95 = 48

--

b	t	b	-	b	b	B	b	b	b	b	b
B	B	B	b	b	t	B	b	b	b	b	b
b	b	b	b	b	b	b	B	b	t	t	-
b	B	B	t	t	b	b	B	t	t	-	B
	b	b	b	b	b	b	b	t	B	b	B
		B	b	b	b	t			b	B	-
			b	b	t	t	t	b	b	B	b
			b	b	B	b	b	b	B	b	b
				-	t						

■ Emberizidae
Golden-winged Warbler
Vermivora chrysoptera
1991-95 = 1; 1995 - QLL 26A
n = 1

--

-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
	-	t	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-
			-	-							

Tennessee Warbler
Vermivora peregrina
1991-95 = 9
SI

--

b	b	b	-	-	t	-	t	t	t	t	t
b	B	b	-	-	-	-	t	t	t	t	t
-	b	t	-	-	-	-	-	-	-	t	t
	t	t	t	t	-	-	-	t	t	t	-
	t	t	t	t	-	-	t	t	t	-	t
		-	-	t	-	-	t	t	t	-	t
			-	-							

Orange-crowned Warbler

Vermivora celata

1991-95 = 97

[illegible]

Nashville Warbler

Vermivora ruficapilla

$$1991-95 = 36$$

B b	b	b	-	-	-	-	-	-	-	-	t
B	B	b	-	-	-	-	-	-	-	-	t
b b	b	b b	-	-	t	-	-	-	-	-	t
b	b	B b	-	-	-	-	-	-	-	-	t
b	b	b	-	-	-	-	-	-	-	-	t
	b b	b	-	-	-	-	-	-	-	-	t
	b	b	-	-	-	-	-	-	t	t	-
	b	t	-	-	-	-	-	-	-	-	-
	b	b	-	t	t	t	t	-	-	-	-
		b	-	t	t	-	t	-	-	-	-
			-	-							

Northern Parula

Parula americana

1991-95 = 1; 1995 - QLL 3A
n = 5

-	-	t	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
	t	-	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-	t
			-	-								

Yellow Warbler

Dendroica petechia

$$1991-95 = 261$$

b b	b b	b b		b b		b	b				b b
B	B	B	B	B	B	B	B	b	B	B	B
b b	b B	b b	b	b	b b	b b	b	B t	t B	b	t b
b b		b B	B B	b b	b b	b b	b		B		b
B	B	B	B	B	b	B	b	b	B	B	b
b	b b	b b	b b	B t	b b	b	b	b			t b
	b B	b b	b B	b b	b b	t t	b	b		b	b
	B	B	B	B	B	B	B	b	B	B	B
	B	b	t b	b b	b B	b	b	b	b	b	b
b	b b	b b	b B	b B	b b	b b	b t		b	b b	b b
	B	B	B	B	B	B	B	B	B	B	b
		t	b	B b	B	b	b	b	b b	b	b
	b	b b	B B								
		B	b								

Chestnut-sided Warbler
Dendroica pensylvanica
1991-95 = 0; 1990 - QLL 12B
n = 7

--

t	-	-	-	-	-	-	-	t	-	t	-	t
-	-	-	-	-	-	-	-	-	-	-	-	-
	-	t	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	t	-	-	-	-	-
			-	-								

Magnolia Warbler
Dendroica magnolia
1991-95 = 4; 1995 - QLL 12B
n = 16

--

-	t	-	-	-	-	-	-	-	t	t	t ^t
t	-	-	-	-	-	-	-	-	t	t	
	-	-	t	-	-	-	-	-	-	-	-
		-	-	-	-	-	t	t	-	t	-
			-	-							

Cape May Warbler
Dendroica tigrina
1991-95 = 3; 1994 - QLL 10D
n = 8

--

-	-	-	-	-	t	-	-	t	t	-	t
					t				t		
-	-	-	-	-	-	-	-	-	-	-	t
	-	-	-	-	-	-	-	-	-	-	-
		-	t	-	-	-	-	-	-	-	-
			-	-							

Black-throated Blue Warbler
Dendroica caerulescens
1991-95 = 0; 1980 - LL 41
n = 3

--

-	-	-	-	-	-	-	-	-	t	-	-
-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	t	-
		-	-	-	-	t	-	-	-	-	-
			-	-							

Yellow-rumped Warbler

Dendroica coronata

$$1991-95 = 233$$

WW-----

-WW- - - - -

-W-----

- - WW - - - - -

slip gap

B b	b b	b b		b b	b						t
B	B	B	b	B	t	b	b	t	t	t	t
b B	b b	b B	b	t	t			t	t t	t	t
b B	b	B b	b b	t		b	b		t		
B	B	B	B	t	b	b	b	b	b	t	t
b	b b	b b	b b	t	b b	b					
	b B	b b	b B	b b	b b	t b					
	B	B	B	B	B	b	b	b	b	b	t
	b	b b	b b	b b	b	t				B	b
	b	b b		b	b B	b	t		b b	b b	b b
	B	B	B	b	b	t	B	B	B	t	b
			t	B b	B	t t			b		
	b	b	B B								
	b	b	b								

Audubon's Warbler

Dendroica coronata auduboni

-	-	-	-	-	-	-	-	-	-	-	-
b	b										
b	b	B	t	-	-	b	b				
-	-	-	-	-	-	-	-	-	-	-	-
b	b	b	t	t		b		t			
	b	b	b	b	b	-	-	-	-	-	-
	-	-	-	b	-	-	-	-	-	-	-
	b	b	b	t	b				b		
	b	b	b		b	B	b		b	b	b
		-	-	-		-	-	-	-	b	b
				t	b				b		
	b	b	b								
		-	-								

Myrtle Warbler

Dendroica coronata coronata

-	-	-	-	-	-	-	-	-	-	-	t
-	-	-	t	t		t		-	-	-	-
			t								
	-	-	t								
	-	-	-	-	-	-	-	-	-	-	-
	t		t								
		-	-	-	-	-	-	-	-	-	-
		-	-								
			-	-

Black-throated Gray Warbler

Dendroica nigrescens

1991-95 = 1; 1994 - QLL 30C

$$n = 4$$

100 100 100 100 100 100 100 100 100 100 100 100

.....

100 100 100 100 100 100 100 100 100 100 100 100

- - W - - - - -

—

-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
	-	-	t	-	-	t	-	-	-	-	-
		-	-	t	-	t	-	-	-	-	-
			-	-							

Pine Warbler

Dendroica pinus

1991-95 = 2; 1995 - QLL 6C
n = 4

--

-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	t	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-
		-	-	t	-	-	t	-	-	-	-
			-	-							

Prairie Warbler

Dendroica discolor

1991-95 = 0; 1973 - LL 10
n = 1

--

-	-	-	-	-	-	-	-	-	t	-	-
-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-
			-	-							

Palm Warbler

Dendroica palmarum

1991-95 = 6; 1995 - QLL 5D
n = 21

W-----

--

t	-	-	-	-	t	-	-	t	t	t	t	t
-	-	t	-	t	-	-	-	-	t	-	-	-
	-	-	-	t	-	-	-	-	-	-	-	-
		-	-	-	-	-	t	-	-	-	-	-
			-	-								

Bay-breasted Warbler

Dendroica castanea

1991-95 = 0; 1981 - LL 41
n = 5

--

-	-	-	-	-	t	-	-	-	t	-	-
-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-
		-	-	t	-	-	t	-	-	-	-
			-	-							

Mourning Warbler
Oporornis philadelphia
1991-95 = 2; 1995 - QLL 12B
n = 4

--

-	-	-	-	-	t	-	-	t	-	-	t
-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-
			-	-							

MacGillivray's Warbler
Oporornis tolmiei
1991-95 = 139

--

b b B b b	b B B b b	b b B b b	b B b	B t t	t b	b t	t t	t t	-	t
b b b b	b B b b	b b B b	b b B b t	t t	b b	b b	-	-	t	t
	b b B B b	b b B b b	b b b b b	b b B t	b b	-	-	t	t	t
	b b b	t B	t b B	b B	t B b	t b b	-	-	-	-
		b b	B B B							

Common Yellowthroat
Geothlypis trichas
1991-95 = 181

--

b b b b	b b B b	b b B b b	b B	b b B b b	b B	t B	b b	B t	B t	b b b b
b b b	b B b b	B B b b	b b	B b	b b	B t B	b b t	t t b b	B b	b b
	b b B B	b B t b	b b B b b	b b B b b	b b	b b	B b	b b	b b	b b
	b B	b B	b b B B	b t B	t b b	b B	b B	b b b	b b b	b b b
		t b b	B B b							

Wilson's Warbler
Wilsonia pusilla
1991-95 = 92

--

B b b b b	b b B B b	b b B b b	t t	t t	t t	t t	t t	t t	t t	t t
b b b b	b b b t	b b B b	t b	t t	-	t t	t t	t t	t t	t t
	b b b b	b b b	t b t b	t t	t t	t t	t t	t t	t t	t t
	b b b	B b	t t	t t b	t b b	t t	t t	-	-	t
		b b	B B b							

Canada Warbler

Wilsonia canadensis

1991-95 = 2; 1993 - QLL 6C

 $n = 6$

-	-	t	-	-	-	-	t	-	-	-	t
-	-	-	-	-	t	-	-	-	t	-	-
	-	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	t	-	-	-	-	-
			-	-							

Painted Redstart

Myioborus pictus

1991-95 = 0; 1987 - QLL 26A

$$n = 1$$

-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
	-	t	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-	-
			-	-								
				-								

Yellow-breasted Chat

Icteria virens

$$1991-95 = 50$$

B	b	-	-	b	b	B	b	b	b	b	B
b	b				b	b	b		b	b	
-	B	b	-	b	b b	b b	b	b	t	b	b
	b				b	B	b			b	
	b		b				b			b	
	t	b	-	b	-	b	b	B	b	B	b
					b		b		b	b	
		t	B	b	b	b	b b	b	b	b	b
							B	B	b	b	
							b b	b	b b		
			-	b							

Summer Tanager

Piranga rubra

1991-95 = 0; 1981 - LL 41

 $n = 2$

-	t	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	t	-	-	-	-	-
			-	-								

Scarlet Tanager
Piranga olivacea
1991-95 = 4; 1995 - QLL 12B
n = 10

--

-	-	-	-	-	-	-	-	-	-	t	-	t
-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	t	t	t	-	-	-	-	-	-	-
		-	-	t	t	-	-	-	-	-	-	-
			-	-								

Western Tanager
Piranga ludoviciana
1991-95 = 162

--

b b	b b	b b	-	b	-	B	b	t	t	-	-	
B	B	B	b									
B b	b B	b b	b									
b b	b	B b	b b	b	b	B	B	b	-	-	t	
B	B	B	B	t	b b	b		b				
b	B b	b b	b									
	b B	b b	b B	b B	b b	b	t	t	-	t	-	
	B	B	B	B	b	b				b		
	b	B b	B b	b b	b							
		b b	B t	b	b b	b	b	b	t b	b	b	b
		b	B	B	B	B	b	B	b b	b		
			t	b b	B B							
				b b	B b							
				b	b

Rose-breasted Grosbeak
Pheucticus ludovicianus
1991-95 = 8

--w-----
--

-	t	t	t	t	t	-	-	t	t	t	t	
-	-	-	-	-	-	-	t	-	t	-	-	
	t	-	t	-	t	-	t	-	t	t	-	
	t									t		
		-	t	t	t	t	b	-	-	-	-	
			t									

Spiza americana

TES

-	-	-	-	-	-	-	-	-	b	b	b
-	-	-	-	-	-	-	-	-	-	-	b
	-	-	-	-	-	-	b	b	b	B	-
		-	-	-	-	-	b	-	-	b	
			-	-							
				-							

Pipilo chlorurus

-	-	t	-	-	-	b	-	-	-	-	-
-	-	-	-	-	-	b	b	t	-	-	-
	t	-	b	b	B	-	-	-	-	-	-
			t	b	b	b	b				
		-	b	b	t	t	b	b	b	b	b
			b	B	B	B	B	b	t	-	-
				B	b	b	B	B	b		
			b	b	B						
			b	b							

Pipilo maculatus

WW-----
W-----
WWW-----
- -W- -W- -
- -

b b	B	b	t	b	b	B	B	b	B b	B	b	b	b
B b	b	b b	b	b	b b	b	b b	b B	B	B	b	b	b
b b	b	b		b	b b	b b	b B		b t			B	
B	B	b	b	b	b	B	b	B	b	b	b	b	t b
b	b b	b	b	b t	b	B	b	b			b		
	B	t	b	b b		b b	b				b		
	B	B	b	B	b	b	b	b	b	b	B	b	
	b	t	t	b b	b	t	b	b	b	b	b	b b	b b
		b	b	B	B	B	b	b	B	b	B	B	b
			t				t b	b B	b b	b b	b		
		b	t	b									

Spizella arborea

WW- WWW- WW- W
 WWW- WWW- - W
 WWW- WWW-
 WWW- WWW-
 WW

[illegible]

Chipping Sparrow
Spizella passerina
1991-95 = 250

-W-----
-W-----
----W-----
--

B	B	b	B	b	b		b	b	B	b	t		b	t
B		B	B	B	b	b	t	b		b	t	B	b	B
b	b	b	B	b	B	b				t		b		b
b	B	t	b	B	b	b	b	t	b	b		b	b	
B		B	B	B	B	B	b	B	B	b	B	b		B
b	B	B	b	b	b	B	t	B	B	b			t	b
	b	B	B	b	B	b	b	t	b		B	b	b	
	B		B	B	B	B	B	b	B	b		b	b	t
	B	B	b	b	b	b	B		b		b	B		b
		b	b	b	t	b	b	b	b	b		b	b	b
		b		B	B	B	B	B	B	B		B	B	B
		b			b	B	b	B	B	b		b	b	b
			b	b	B	B						b	b	
			b		b							b		
				b	b	B	B							
				b		b								

Clay-colored Sparrow
Spizella pallida
1991-95 = 78

--

b		b	b	b	b	b	b	b	B	B	B	b	b
-	b	b	B	b	t	B	b	b	B	B	B	B	b
	b	b	b	b					b	b	b	b	
-	B	-	b	B	b	b	b	b	b	b	b	b	
			b	b	b	b	b	b				b	
	b	-	b	b	b	b	b	b	b	b	b	B	b
			b	b	b	b	b						
			b	b	B	b	t	t	b	b	b	b	
			b	b									
				b	t								
			-		t								

Brewer's Sparrow
Spizella breweri
1991-95 = 71

--

t	B	t	b	b	b	b	b	B	B	b	t
B						B	b	b	B	B	
b						b	b	b			
-	b	-	b	b	b	b	B	t	B	b	b
	B		b	b				b	B	B	b
	b		b	t	b	b	b	b	b	b	B
	t		t	b	b	b	b	b	b	b	
		b	b	b	b	b	b	b	B	b	t
		B	b	B	B	b	B	B	B	B	B
		b									b
			b	B	B						
			B	b							

Field Sparrow

Spizella pusilla

$$1991-95 = 21$$

— — — — —

— — — — —

— — — — —

— — — — —

— —

-	t	-	-	-	-	-	-	t	b	b	b
			t						b	b	b
-	-	-	-	-	-	-	-		b	t	b
	t				b		b	b	b	b	B
		-	-	-	-	-	-	b	b	b	B
									b	B	
		-	-	-	-	t	-	-	b	b	b
									b	b	b
			-	-							

Vesper Sparrow

Pooecetes gramineus

$$1991-95 = 249$$

B	t b	b	t b	b b	b	b B	b	b	b	t	b
B	B	B	b	B	B	B	b	B	b	B	B
t b	b	B	b b	b	B b	b b	b	b t	b b	b b	b
b	t b	b	b b	b b	b	b	b	b	b b		
B	B	B	B	B	b	B	B	B	b	b	b
	b b	B	b B	t	t b	t b	b B	b		b	b
	b	b b	B b	b b	b t	b b	b	b		b	
	B	B	B	B	B	b	B	b	b	b	B
	B	B b	B b	b b	b B	b B	b b		b	b	b
	b B	B b	b b	b	t b	b	b	t b	b b	b b	b b
	B	B	B	B	B	B	B	B	B	b	B
	b			B		B b		b b	b t	t b	
	b	b b	B B								
		B	B								

Lark Sparrow

Chondestes grammacus

$$1991-95 = 124$$

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.....

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.....

.....

B	t b	b b	-	B b	B b B	B b	B b	b b b	B b	b	B B
-	b b b	t t	B b t	b b t t	b t b	b b B t t	b B b b		b b B b b	B b	B b
	b B b	b	b B t	B B b b	b b	b b B	b B B t	b b	B b	b b	B B
	t	-	b B	b b b	b B	b B	B t B	b t b B	b b B b b	b b B b t	b b b t b
			t	b							

Black-throated Sparrow

Amphispiza bilineata

1991-95 = 0; 1975 - LL 25

$$n = 2$$

-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
	t	-	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-	-
			-	-								

Grasshopper Sparrow
Ammodramus savannarum
1991-95 = 56

--

b b	t b	b	b	-	b b	b B	b b	b b	B b	b b	b t	b b
-	B b	t b	t b	B t	b b	B b	b b	b b	b t	b b	b t	b b
	b t	b	-	-	b b	b b	b b	b b	b b	b b	B b	b b
		-	-	b b	b b	B b	b b	b b	B b	b b	b b	b b
				t t								

Le Conte's Sparrow
Ammodramus leconteii
1991-95 = 3; 1995 - QLL 12B
n = 20
TES

--

-	t B	b	-	-	-	-	-	t	-	-	B b
-	-	-	-	-	-	-	-	-	-	-	-
	t	-	-	t	-	-	-	-	-	-	-
		-	-	-	-	-	t t	-	-	t	-
				-	-						

Nelson's Sharp-tailed Sparrow
Ammodramus nelsoni
1991-95 = 1; 1995 - QLL 12B
n = 4
TES
(formerly Sharp-tailed Sparrow)

--

-	-	-	-	-	-	-	-	-	-	-	B b
-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-
				-	-						

Fox Sparrow
Passerella iliaca
1991-95 = 55

WW---W-----

W-----
---W-----
--

b b	b B	b B	-	-	t t	-	-	t t	t t	-	-	t
t b	b B	b b	t b	t t	-	-	-	-	-	-	-	-
	b t	b b	t b	b b	t b	-	-	t t	-	t t	-	-
		b b	b b	b b	b b	-	t t	t t	-	-	-	-
			b b	b b								

Zonotrichia albicollis

WW-----
 --W-----
 WWW-----
 --WW-W-----
 --

t	t	-	-	t	t	t	t	t	t	t	t
t	t			t	t			t	t	t	t
-	t	-	t	t	-	t	t	-	t	-	-
	t	t	t	t	t	-	-	t	t	t	t
		-	t	t	t	-	t	-	-	-	t
			-	-							

Zonotrichia atricapilla

W - - - - W - -
- - - -
- - - -
- - - -
- -

-	-	-	-	-	-	-	-	t	-	-	-
t	-	-	-	-	-	-	-	-	-	-	-
	-	t t	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	t t	-	-	-	-
			-	-							

Zonotrichia leucophrys

WW---W-----
 --W-----
 W--W-----
 --WW-W-----
 -W

b b	B b	b b		b		t	B	t	t	t	t	
B	b	B	b	t	t		t b					
b b	t	b b	b	t	t			t	t			
t		B	b t	t t						t		
b	b	b	b	B	b	B	b	t		t	t	t
		t	t	t t	b b	b						t
	t		b	t b	b							
	b	b	b	b	B	B	t	t	t	t	t	
	t	b	b t	b	b	t t						
b	b b		b	b b								
	B	B	B	B	B	B	b	t	t	t	t	
			t t	B b	b		b					
	b	b b	B B									
		b	B									

Zonotrichia querula

```

WW---W--W---W
-WWW--W-----
  WWW-----WW-
    WWW-----
      --

```

t	t	t	-	-	t	t	t	t	t	-	t
	t				t				t		t
-	t	t	t	t	-	t	t	-	t	t	t
			t								
	t	t	t	t	t	-	-	t	t	t	-
			t		t						
		-	t	t	-	-	t	-	-	-	-
								t			
			-	t							

Bobolink

Dolichonyx oryzivorus

1991-95 = 98

— — — — —
— — — — —

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t	B	t	b	b	b	t	b	b	b	b	b
b	b	t	b	b	b	b	b	b	b	b	b b
t b	t	B	b b	t	b t	B	b	b	b	b	b
b	B	t t	b b	t	b t	t B	-	b	t	b	b
	b	b t	b b	b b	t	t	b	b	-	t	b
	B	B	b	B	B	b	b	b	b	b	b
	b	b	b b	b b	b b	b	b	b	b	b	b
			b b	b	t b	B	B	b	b	b	b
			B	b	B	b	b	b	b	b	b
						B	B				
			-	t							

Red-winged Blackbird

Agelaius phoeniceus

$$1991-95 = 306$$

WWW-W-W-WWW-
-WW--W-----W
WWW--WWW-
W-WW-W-----
-W

[illegible]

Western Meadowlark

Sturnella neglecta

$$1991-95 = 328$$

WW--WW--WW--
-W--W-----
W--W-W-WWWW
-WWW-W-----
-W

[illegible]

Yellow-headed Blackbird

Xanthocephalus xanthocephalus

$$1991-95 = 153$$

- W - - - - -
 - W - - - - -
 W - W - - - -
 - - - - W - - -
 - -

b B	B B	B B	b b	b b B	B b	b b B	b b	B b	B b	B b	B b	b b
t - b	t b B b	B B B b	b B B B B	t b B t	b b b	b B t t	b b b	b B b b	B B b b	B b	B b	b b
	b B B	t t B	b b B B t	b B b b	b b b t	b B b b	b B t	b b b	b b b	b b	B B	B b
		t t b	b B	b B B	b B B	B B	t b B	b B	b b	b b	b B	b B b
			b B	B B								

Orchard Oriole

Icterus spurius

$$1991-95 = 8$$
[illegible]

-	-	-	-	-	-	-	-	t t	b B	t	b b
-	-	-	-	-	-	-	-	b	b	b b	B
	-	-	-	-	-	-	-	b	b	b b	b
		-	-	-	-	-	b	-	-	t	t b
			-	-							

Northern Oriole

Icterus spp.

$$1991-95 = 130$$

(split into Bullock's and Baltimore)

b	B	b	b	b	B	b	B	B	B	B	b
b	B	t	b	B	b	b	B	t	B	b	t
b	b	b	b	B	B	B	B	b	b	b	B
B	B	t	B	B	t	b	b	B	B	B	B
B	B	t	b	b	b	b	b	b	b	b	b
t	b	B	B	B	t	b	b	B	B	b	b
-	B	B	B	B	B	B	B	B	B	B	B
b						b	t	b	b		b
	t	t									

Bullock's Oriole

Icterus bullockii

-	-	-	-	-	-	-	b	-	-	-	-	b
b				b	b	b		b		b		
-	b	-	b	b	b	b	b	-	-	-	-	-
	b	b	-	b	-	-	-	b	b	b		b
	B		b	b			b	b	b		b	
	-	-	-	-	-	-	-	-	-	-	-	-
	t		b	b	b	b		b	b	b	b	
		-	b	b	-	-	b	b	B	b	b	b
			-	-			-	-	-	b	b	-
			b				b			b	b	b
			-	-								

Baltimore Oriole

Icterus galbula

[illegible]

Brambling

$$n = 3$$

W

-	-	-	-	-	-	-	-	-	-	-	-
-	-	t t	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-
			-	-							
				-							

$$1991-95 = 10$$

- - - - -
 - - - W - - - - -
 - - WW - W - - - -
 - WWW - W - W - W
 - W

-	-	-	-	-	-	-	-	t	t	-	-
-	-	-	-	t	-	-	-	-	t	-	-
	B	B	t	B	B	-	-	-	-	t	-
		B	B	b	t	B	B	t	-	t	-
			B	B							
				B	b						

$$1991-95 = 36$$

WWW-WWW-WW-W
-WWWWWWW--W
W-WWW--WWW-
-WWWWWWWWW
-W

B	B	B	-	t	t	t	-	t	t	-	t
	t	B		t				t	t		
t	t	t	b	t	t	b	t	t	-	t	-
b		B	t	t					t	-	t
			t						t		
	b	b	t	t	b	t	t	t	t	t	-
		-	t	t	t	t	t	t	t	t	-
			t	t							
			t	t							

$$1991-95 = 66$$

WWW-W-W-WW--
 WWW-WWW-W---
 WWW--W---W
 WWWWWW-----
 -W

B b	b b	b b	t	b	t	t	-	t	t	-	-
b b	B b	b b						t	t		
b b	b b	b b									
b b		b b	t	t	t	t	-	t	t	-	t
b	b	b		t	t	t					
		b									
	b	b	t	t	t b	b	t	-	-	-	-
	t	b b	t								
t	t		t	t	B	b	t	-	-	-	-
	B		b	B							
			t								
				B							
			-	b							

Purple Finch
Carpodacus purpureus
1991-95 = 6

-W-----WW--
-----W-----
-W-----W--
--WW-W-----
--

-	t	-	-	-	-	-	-	t	t	-	t
t	t										
-	t	-	-	-	-	t	-	-	-	-	-
	-	t	t	-	-	-	-	-	t	t	-
		-	-	t	t	-	t	-	-	-	-
			-	t							

Cassin's Finch
Carpodacus cassinii
1991-95 = 134

WWW-----W---
WWW-----W---
WWW-----
-WWW-W-W---
-W

b b	b b	b b	-	-	-	b	-	-	-	-	-
B	B	b									
B b	b b	b b					t	t			
b b	b	B	t b	b	b	B	-	-	-	-	-
b	B	b	b t	b t	b b	b					
	B B	B b	b B		b b	b	-	-	-	-	-
	B	B	b	b	b	b					
	b	b	b t	b	b						
	b	b b	t	t t	B	b	B		b	-	-
		b	B	B	B	b	b	-	b	-	-
		t	t t	B b					b		
			b	B B							
			b	b							

House Finch
Carpodacus mexicanus
1991-95 = 110

-W-----
WW--W-W-----
WWW-----
--WW-W-----
--

t	-	b	-	-	-	b	-	-	t	t	-	-
t		B				t						
-	t	-	t b	t b	-	t	-	-	-	-	-	-
b	b		t	B B	t	b					t	
	B	b t	t B	t	t	-	-	-	t	-	-	-
	B	B	b	t	-	-	-	-				
	B	B	t	b	t	b						
	b	b	b	b B	b	t b	B B		b	t	-	-
		-	b	B	t	b	b	-	t	t		
			b	-								

Red Crossbill
Loxia curvirostra
1991-95 = 137

WWW--W-W---
WWW-WWW---W
WWW-W---W
--W--W---W
-W

b b	b b	b b	t	b	-	b	t	t	t	-	-
b	B	b	b								
B b	b B	b b	b								
b b	b	b b	b t	b	b	b	b t	t	-	-	b
b	b b	b b	b				b	t	b		
	b b	b t	b B	b	t t	t	b	b	B	b	b
	B	B	b	b	b	b	b	b			
	B	b t	t b	b	b		t				b
	b	b	b	t	B	b	b	B	t b	B	B
		b	t	B	b	b	B	B	B	B	
		t B	t				B t	B	b		
			b	B B							
			-	b							

White-winged Crossbill

Loxia leucoptera

1991-95 = 33

WWW-----W---
WWW-----W---
W-W-----
--W--W---
--

b	b	b	b	b	-	-	t	-	-	t	t	-	-
b	b	b	b	b	t								
b	b	b	b	b									
t	t	b	b	b	t	t	-	t	-	t	-	-	-
	t	t	t	t	-	t	b	b	-	-	-	t	-
		b	t	b	b	-	t	t	-	-	-	-	t
			t	-									

Common Redpoll

Carduelis flammea

1991-95 = 51

WWWWWWWWWWWW
WWWWWWWW-WWW
WWWWWWWWWW-
WWWWWWWWWW
-W

t	t	t	t	t	t	t	t	t	t	t	t	t	t
t	t	t	t	t	t	t	t	t	t	t	t	t	t
	t	t	t	t	t	t	t	t	t	t	t	-	
		-	t	t	t	t	t	t	t	t	t	t	-
			-	t									

Hoary Redpoll

Carduelis hornemanni

1991-95 = 10

WWW-----WW--
-WW---W-----W
W-WW---W-----
--W-WW-W--
--

t	t	-	-	-	-	-	t	t	t	-	t		
-	t	t	-	t	-	t	-	-	-	-	-	t	
	t	t	t	t	t	-	t	-	-	t	-		
		-	-	t	-	t	t	-	t	-	-		
			-										

Pine Siskin

Carduelis pinus

1991-95 = 233

WWW--WWW--
WWW-W-W-----
WWW-WW--W-
-WWW-WWW-W
-W

b	b	B	b	b	b	b	t	b	t	t	t	-	t
B	B	B	B	b	B	t	b	t	t	t	t		
B	b	b	B	b	b	t							
b	b	b	B	b	t	t	t	b	t	b	b	t	t
	b	B	b	B	b	t	b	B	-	b	b	b	b
		B	b	b	b	t	b	B	t	b			
			b	b	b	b	t	B	t	t	b	b	b
				b	B	B	B	b	B	t	b	b	b
					t	t	B	b	t	b			
				b	b	B	B						
					b	B							

American Goldfinch

Carduelis tristis

$$1991-95 = 212$$

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WW-----
WWW-W-----
  WWWW-----
    -WWW-W-----
      --

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t b		t b		b t	b b		b b	b	t	b b
b	b	b	b	b	B	b		b	b	B
t b	b	t b	b	t	b b	b	t b	b b	b	t
t	b		t b	b	b b	b b	B		t t	b
b	B	b	B	b	b	B	b	b	b	b
b	b t	b	b b	B t	b b	t b	b	b	b	t b
	b	b	t B	b	t t	t t	b	b		b
	B	b	B	B	B	B	b	b	b	b
	B	b	t b	b b	b b	b	t	b	b	b
b		b	b t	B b	B b	B b	b t	b	b	b b
	b	B	B	B	B	B	B	b	b	b
		t	t	t b	b B	b b	b b			b
		b b	t							
		b	b							

Evening Grosbeak

Coccothraustes vespertinus

$$1991 \cdot 95 = 141$$

WWW-WWW-
 WWW-WWW-
 WWW-
 -WWW-
 -

[illegible]

■ **Passeridae**

House Sparrow

Passer domesticus

$$1991-95 = 170$$

WWWWWWWWWWWWWWWW
 WWWWWWWWWWWWWWWWW
 WWWWWWWWWWWWWWWWW
 - WWWWWWWWWWWWWWW
 - W

t	B	B	b	b b	B B	b	b t		B	B		b
B	B	B	B	B	B	B	B		B	B	B	B
B	B	B		B	B B	b b	b	B b	B	b		b
B	t b		t B	t b	b				t			
B	B	B	B	B	b	B	B	B	B	B	b	b
b	b		b	B B	b b	b	b			b	t b	
	B	B b	B	b	b	t				b		
	B	B	B	B	b	B	B	b	B	B	b	
	B		t b	B b	b	b			b		b	
t	b	t b	b B	B	b	b	b	b	b	b b	B	
	b	B	B	B	B	B	B	b	b	B	B	
	b	t	t						b		b	
			b	b

Appendix A. Threatened, Endangered and Sensitive Species (TES) and Species Requiring Supplemental Information (SI)

Detailed information, especially breeding records, is requested for all of the species found in this Appendix (for information format, see *Sensitive Species* on pages 10 - 11).

Species considered **threatened, endangered or sensitive (TES)** in Montana or throughout their range are listed below. Species assigned to this category are one of the following: federally recognized endangered or threatened species under the Endangered Species Act; U.S. Forest Service sensitive species, as assigned by the Regional Forester; or species of special concern, recognized by the Montana Natural Heritage Program. These lists are subject to change. For current information, contact the U.S. Fish & Wildlife Service, U.S. Forest Service, or Montana Natural Heritage Program.

Species for which **supplemental information (SI)** is requested are also listed below. These are generally species that are poorly known in the state or have unique breeding habits that warrant further study.

"TES" Species

Common Loon	Yellow Rail	Flammulated Owl
Clark's Grebe	Whooping Crane (E)	Burrowing Owl
American White Pelican*	Piping Plover (T)	Great Gray Owl
Black-crowned Night-Heron*	Mountain Plover	Boreal Owl
White-faced Ibis*	Black-necked Stilt*	Black Swift
Trumpeter Swan	Franklin's Gull*	Black-backed Woodpecker
Harlequin Duck	Caspian Tern*	Alder Flycatcher
Bald Eagle (T)	Common Tern*	Cassin's Kingbird
Northern Goshawk	Forester's Tern*	Dickcissel
Ferruginous Hawk	Least Tern (E)	Baird's Sparrow
Peregrine Falcon (E)	Black Tern*	Le Conte's Sparrow
Columbian Sharp-tailed Grouse	Yellow-billed Cuckoo	Sharp-tailed Sparrow

"SI" Species

Double-crested Cormorant*	California Gull*	Blue-gray Gnatcatcher
Great Blue Heron*	Barn Owl	Loggerhead Shrike
Mute Swan	Eastern Screech-Owl	Tennessee Warbler
White-tailed Ptarmigan	Western Screech-Owl	Black-and-white Warbler
Ring-billed Gull*	Northern Hawk-Owl	

T = Species considered threatened under the Endangered Species Act.

E = Species considered endangered under the Endangered Species Act.

* = Colonial nesting birds for which nesting information is needed.

Appendix B. Species for Which Subspecies Information is Needed

It seems likely that one or more of the subspecies listed in this Appendix will be elevated to species status in the near future. Therefore, observations and information on breeding habits of these birds are much needed at the subspecies level. This is especially true for the Solitary Vireo, as scientific evidence currently suggests that it will be divided into at least two species in the near future.

For the first time, this book provides maps displaying both species and subspecies distribution for the birds listed in this Appendix. Bird distribution maps were created for each subspecies to encourage birdwatchers to submit future records at the subspecies level. No subspecies maps appear for the following subspecies or forms because of a lack of data: White-winged and Gray-headed subspecies of the Dark-eyed Junco; and Gray-crowned and Gray-headed (Hepburn's) forms of the Gray-crowned Rosy-Finch.

The reason for requesting subspecies information is illustrated by two changes made since the last edition of this book. Both the Rosy Finch and the Northern Oriole, for which we requested subspecies information in the Fourth Edition, were each officially split into several species (see *Taxonomic Changes and Subspecies* on pages 1 - 2). Few records have been submitted with what was then subspecific designations; hence many of Montana's "Rosy Finch" and "Northern Oriole" records cannot be assigned to either of the currently recognized species.

Species for which information is requested at the subspecies, race or form level:

Northern Flicker

- Red-shafted Flicker
- Yellow-shafted Flicker

Solitary Vireo*

- Cassin's (Western) Vireo
- Plumbeous (Rocky Mountain) Vireo

Yellow-rumped Warbler

- Audubon's Warbler
- Myrtle Warbler

Dark-eyed Junco

- Slate-colored Junco
- Montana (Oregon) Junco
- Pink-sided Junco
- White-winged Junco
- Gray-headed Junco

Gray-crowned Rosy-Finch

- Gray-crowned form
- Gray-headed (Hepburn's) form

The subspecies of these five species are shown in the current edition of several major field guides, with the exception of Cassin's Vireo which is not illustrated in the *Birds of North America* (Robbins et al., 1983).

*Added to this list since the Fourth Edition.

Appendix C. Extinct Species

Only one extinct species has been recorded in Montana: the Passenger Pigeon. The last reported sighting of this bird was by George Suckley on August 30, 1853, in the Bearpaw Mountains (Latilong 7). Earlier records showed the Passenger Pigeon inhabiting latilongs 3, 4, 5, 7, 11, 12, 17, 26, and 41.

Appendix D. Introduced Species in Montana

The following birds are either native North American species transplanted to Montana (*) or not native to North America:

Mute Swan	Ring-necked Pheasant	Rock Dove
Gray Partridge	Wild Turkey*	European Starling
Chukar	Northern Bobwhite*	House Sparrow

Appendix E: Montana Neotropical Migratory Species

There are many birds that are known or suspected to breed in Montana (“B” or “b” records) that spend their winter in the “neotropics” (Central and South America). Recent evidence suggests that populations of some of these bird species may be declining. Thus, a major initiative called “Partners in Flight” has been established for the conservation of migratory land birds that breed in North America and winter in neotropical countries.

Several federal land management agencies, conservation groups, state fish and wildlife agencies, and scientists have joined in a collaborative effort to determine the causes for declines in our migratory bird populations and to work towards conservation of all landbirds in the state. Part of this effort involves identification of species vulnerable to declines from either of the two primary causes suggested: fragmentation of breeding habitat in the United States and Canada, and loss of wintering habitat in Mexico, Central and South America, and the Caribbean.

We have listed the Neotropical Migratory Bird species known to occur in Montana, including both long- and short-distance migrants. Wintering zones for species are identified and described in the “Conservation” subheading of *The Birder’s Handbook* (Ehrlich et al. 1988) and *Neotropical Migrant Landbirds in the Northern Rockies and Great Plains* (Dobkin, 1992).

Turkey Vulture	Swainson's Hawk	Peregrine Falcon
Osprey	Red-tailed Hawk	Prairie Falcon
Northern Harrier	Ferruginous Hawk	Killdeer
Sharp-shinned Hawk	Golden Eagle	Mountain Plover
Cooper's Hawk	American Kestrel	Willet
Northern Goshawk	Merlin	Spotted Sandpiper

Upland Sandpiper	Violet-green Swallow	MacGillivray's Warbler
Long-billed Curlew	Northern Rough-winged Swallow	Common Yellowthroat
Marbled Godwit	Bank Swallow	Wilson's Warbler
Mourning Dove	Cliff Swallow	Yellow-breasted Chat
Black-billed Cuckoo	Barn Swallow	Western Tanager
Yellow-billed Cuckoo	Brown Creeper	Black-headed Grosbeak
Flammulated Owl	Rock Wren	Lazuli Bunting
Burrowing Owl	House Wren	Indigo Bunting
Long-eared Owl	Sedge Wren	Dickcissel
Short-eared Owl	Marsh Wren	Green-tailed Towhee
Common Nighthawk	Ruby-crowned Kinglet	Spotted Towhee
Common Poorwill	Golden-crowned Kinglet	Chipping Sparrow
Black Swift	Eastern Bluebird	Clay-colored Sparrow
Chimney Swift	Western Bluebird	Brewer's Sparrow
Vaux's Swift	Mountain Bluebird	Vesper Sparrow
White-throated Swift	Townsend's Solitaire	Lark Sparrow
Ruby-throated Hummingbird	Veery	Sage Sparrow
Black-chinned Hummingbird	Swainson's Thrush	Lark Bunting
Calliope Hummingbird	Hermit Thrush	Savannah Sparrow
Broad-tailed Hummingbird	American Robin	Baird's Sparrow
Rufous Hummingbird	Gray Catbird	Grasshopper Sparrow
Belted Kingfisher	Northern Mockingbird	Fox Sparrow
Lewis' Woodpecker	Sage Thrasher	Song Sparrow
Red-naped Sapsucker	American Pipit	Lincoln's Sparrow
Williamson's Sapsucker	Sprague's Pipit	White-crowned Sparrow
Northern Flicker	Cedar Waxwing	Dark-eyed Junco
Olive-sided Flycatcher	Loggerhead Shrike	McCown's Longspur
Western Wood-Pewee	Solitary Vireo	Chestnut-collared Longspur
Alder Flycatcher	Warbling Vireo	Bobolink
Willow Flycatcher	Red-eyed Vireo	Red-winged Blackbird
Least Flycatcher	Tennessee Warbler	Western Meadowlark
Hammond's Flycatcher	Orange-crowned Warbler	Yellow-headed Blackbird
Dusky Flycatcher	Nashville Warbler	Brewer's Blackbird
Cordilleran Flycatcher	Yellow Warbler	Brown-headed Cowbird
Say's Phoebe	Yellow-rumped Warbler	Orchard Oriole
Cassin's Kingbird	Townsend's Warbler	Baltimore Oriole
Western Kingbird	Black-and-white Warbler	Bullock's Oriole
Eastern Kingbird	American Redstart	Cassin's Finch
Horned Lark	Ovenbird	Pine Siskin
Purple Martin	Northern Waterthrush	American Goldfinch
Tree Swallow		

Montana's Partners in Flight is particularly concerned about grassland and riparian birds because these two important bird habitats are threatened. In addition, grassland birds are showing declines in their populations. Information and activities directed at bird conservation are being developed in Montana including educational material, monitoring activities, national and international partnerships, studies of habitat relationships, and development of management guidelines. For more information on local activities, contact Montana Partners in Flight, Daniel Casey (Chair), Montana Fish, Wildlife & Parks, 490 N. Meridian, Kalispell, MT 59901.

Appendix F. Hypothetical Species

Currently all reports of rare birds, including birds not previously reported for Montana, must be reviewed and accepted by the Montana Bird Records Committee before they are added to the Montana Bird Distribution Database. The Records Committee requires the following criteria for approving first state records: a specimen, a definitive photograph, or independent documentation by two or more skilled observers.

"Hypothetical" species are species that have been reported in Montana, but whose reports have not been accepted by either the Records Committee or previous compliers of Montana Bird Distribution. The species listed below are segregated into three groups. The first includes species with acceptable reports of a sighting by only a single observer. The second includes species for which the identification is possible but not certain. The last includes species carried over from previous editions that have not been reviewed under the current criteria established by the Records Committee. The year and location (latilong or quarter latilong) for the latest observation follows the bird's name. Additional species have been reported, but without sufficient information to warrant inclusion here.

One Observer Sightings

- Red-breasted Sapsucker: 1984 - QLL 27B
- Bell's Vireo: 1995 - QLL 24B
- Northern Cardinal: 1987 - QLL 42C

Identification Possible But Not Certain

- Tufted Duck: 1990 - QLL 16B
- King Rail: 1995 - QLL 17B
- Pacific Golden-Plover: 1994 - QLL 16B
- Ross' Gull: 1987 - QLL 42C
- Gray Flycatcher: 1987 - QLL 39C
- Dusky Thrush: 1993 - QLL 2A
- Virginia's Warbler: 1992 - QLL 25D
- Cerulean Warbler: 1992 - QLL 40C
- Hooded Oriole: 1995 - QLL 47A

Species from Previous Editions

- Common Eider: 1907 - LL 24
- Eskimo Curlew: 1973 - LL 12
- Spotted Owl: 1976 - LL 3
- Phainopepla: LL 3
- Blue-winged Warbler: 1984 - LL 41
- Painted Bunting: 1978 - LL 43

Appendix G. List of Contributors to the 5th Edition

More Than 1000 Records:

Dan Casey, Harriet Marble, Jim Reichel, Don Stoecker, and Daniel Sullivan.

501 - 1000 Records:

Margaret Adams, Kathleen Anderson, Rob Fergus, Judy Hoy, Cedron Jones, and Michael Schwitters.

101 - 500 Records:

Janissa Balcomb, Clifton Barry, Marcella Bishop, Sharon Browder, Charles Carlson, John Carlson, Kay Casperson, Jill Davies, Dave Dickson, Kirk Eakin, David Ewer, Robert Flores, Betsy Follman, G. J. Frazier, S. J. Gniadek, Deborah Goslin, Jim Greene, Liz Hill, C. J. Hoff, George Holton, Elly Jones, Stephen Martin, Terry McEneaney, Janice Miller, Chris Paige, John Parker, M. Rabenberg, Sue Reel, Katherine Roberts, Bill Roney, Jean Smith, Sally Sovey, J. R. Sparks, Karen Stutzman, and D. C. Tribby.

1 - 100 Records:

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Appendix H. Rare Bird Report Form

Print clearly or type; include photos or drawings if available; use back of form if needed.

SPECIES: _____ Photo ? _____ Specimen? _____
Date: _____ QLL: _____ Status:(B,b,t,W,w) _____

Observer's name: _____
address: _____
phone: _____
Other Observers: _____
Reported by: _____ Report Date: _____

Specific Location: _____
Township: _____ Range: _____ Section: _____
Habitat: _____
Weather: _____
Optics: _____
Light: _____
Distance from bird: _____ Duration of Observation: _____
Previous experience with species: _____
Describe the bird(s) - include age, sex, molt:

Describe the behavior:

Discuss how other species were eliminated:

Send to: MBD - Montana Natural Heritage Program
1515 E. 6th Ave., Helena, MT 59620

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Notes

ions
e:

Wildlife
migration

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Great Falls

25B

26A

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17D

27C

27D

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37B

Butte

27B

28A

Helena

41A

41B

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A	B
C	D