PRELIMINARY BIRD INVENTORIES FOR FIDLER-GREYWILLOW AND LA BUTTE CREEK WILDLAND PROVINCIAL PARKS, NORTHEAST ALBERTA

By

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Parks and Protected Areas Division

Alberta Community Development

NOTE TO THE READER:

This report is based on information collected and prepared by Richard Thomas. The opinions and statements expressed by the author do not necessarily reflect the views of the Parks and Protected Areas Division of Alberta Community Development. The author is responsible for the accuracy of the data and analysis contained in the report.

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1.0 INTRODUCTION

1.1 Background

In light of the present, human-induced, global extinction crisis (*e.g.*, Leakey and Lewin, 1996), maintaining protected areas' ecological integrity (and thus, their natural levels of biological diversity) is vital. An essential prerequisite underpinning any intelligent management regime designed to achieve this goal is a thorough grasp of each reserve's biodiversity, specifically: 1) a complete inventory of species present; 2) their distribution and habitat requirements; 3) their abundance and population trends; and 4) their risk status, and the nature and severity of any threats they face. Framed in terms of these types of basic biological data, our overall knowledge of most of northern Alberta's flora and fauna can only be characterised as comparatively poor. For example, in the case of birds – one of the province's best-known faunal groups – only 16 (8.7%) of the 183 10 km x 10 km squares covering the Canadian Shield Natural Region were actually surveyed during fieldwork for the *Atlas of Breeding Birds of Alberta* (ABBA) (Semenchuk, 1992, p.26).

Under the auspices of the Special Places 2000 initiative, a number of wildland provincial parks (WPPs) have recently been established within and adjacent to the Canadian Shield Natural Region in the northeast 'corner' of Alberta. Since June 2000, Parks and Protected Areas has been conducting biological inventory work in order to repair obvious gaps in our knowledge of these wildland parks' biological diversity. This report presents the results of the avifaunal component of inventory fieldwork undertaken during June and July, 2001, in Fidler-Greywillow WPP and La Butte Creek WPP. Equivalent bird survey data from June-July 2000 are contained in Thomas and Carroll (2001).

It is worth noting that bird distribution / abundance studies of the type presented herein have long been 'out of fashion' with academic ornithologists (*e.g.,* McGillivray, 1992; Contreras, 2000). Indeed, according to Contreras (2000), "basic distributive bird study" is no longer even considered to be "real" science or ornithology by many academics. This is doubly unfortunate. Not only do such studies constitute a fundamental building block of ornithological science, but they are destined to become ever more valuable as bird populations are used to track the impacts of anthropogenic global climate change (*cf*. Hughes, 2000; Thomas and Lennon, 1999) – particularly the effects of global warming upon the Boreal Forest biome.

1.2 Purpose and Scope of Study

The principal goal of the work outlined in this report was to generate avifaunal inventories for two, newly designated protected areas, *viz.* Fidler-Greywillow and La Butte Creek Wildland Provincial Parks, located in northeasternmost Alberta (Figure 1).

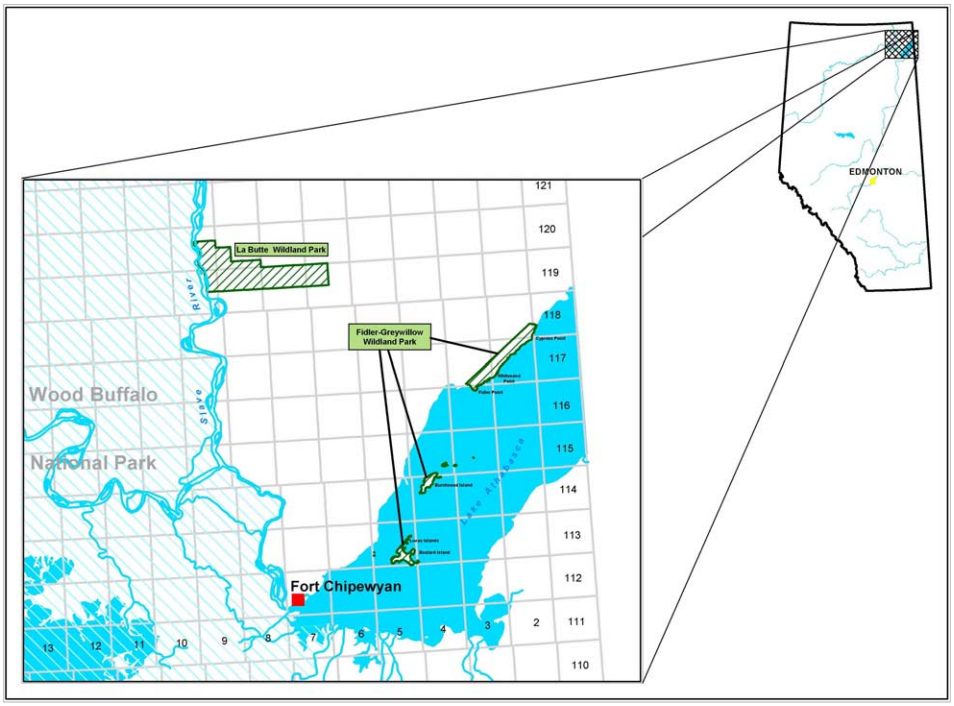

Figure 1: Map of northeast Alberta showing locations of Fidler-Greywillow and La Butte Creek Wildland Provincial Parks.

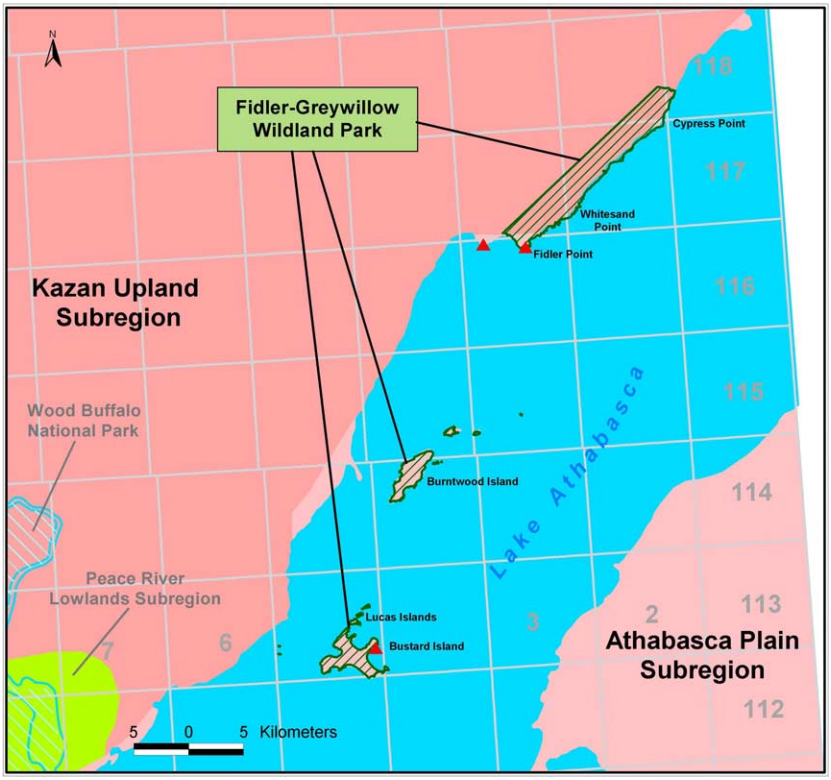

Figure 2: Map of Fidler-Greywillow Wildland Provincial Park. The red triangles show locations of the June-July 2001 field parties' campsites.

Consisting of a series of islands within Lake Athabasca, plus a strip of land along the Lake's northern shore, Fidler-Greywillow straddles the boundary between the Athabasca Plain and Kazan Upland Sub-Regions of the province's Canadian Shield Natural Region (*cf.* Bradley, 1978a, fig. 3.0; Achuff, 1994; AEP, 1994; and see Figure 2). Although Fidler-Greywillow has at least been visited on a few previous occasions by ornithologists (see Section 1.3), prior the present study La Butte Creek WPP constituted in essence, a blank page in the 'book' of avian science. Extending eastward at the latitude of Townships 119 and 120 from the Slave River, most of La Butte Creek WPP lies within the Kazan Upland Sub-Region. However, its western end forms part of the Peace River Lowlands Sub-Region of the Boreal Forest Natural Region (*Ibid.*; Figure 3) – a biogeographic circumstance of considerable significance in terms of its influence upon the composition of the Park's birdlife.

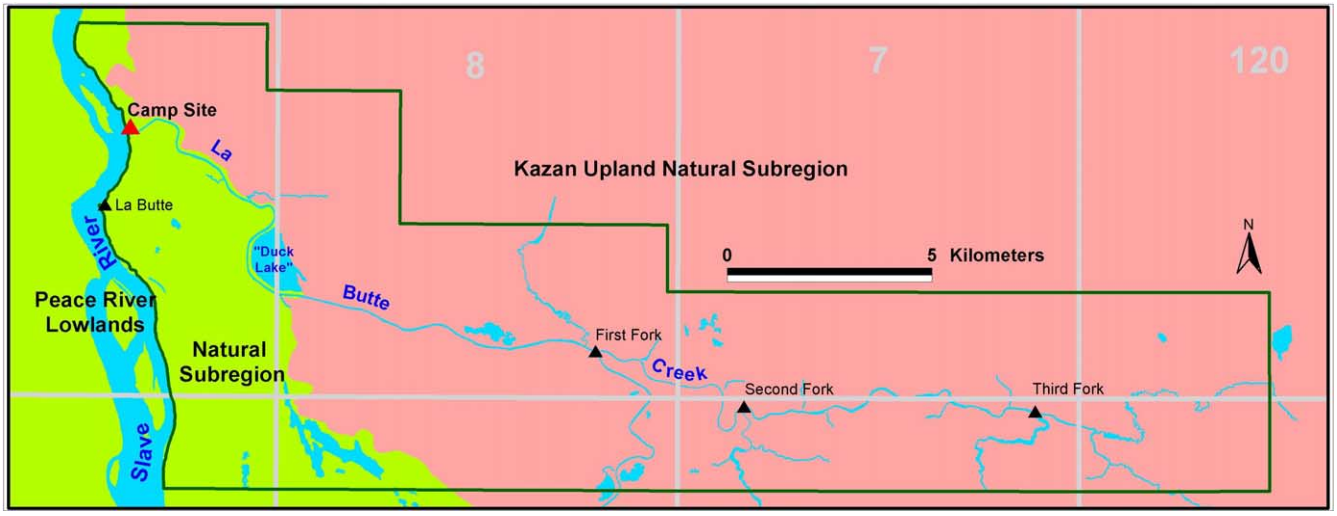

Figure 3: Map of La Butte Creek Wildland Provincial Park.

Following fieldwork during the peak (June-July) of the 2001 breeding season, provisional bird inventories were drawn up for both WPPs. For every species we recorded, an effort was made to determine (as accurately as possible) its breeding status, relative abundance and distribution (in terms of preferred habitat type(s)) per park. General ornithological and park-specific, published and unpublished (or "grey", *cf.* Czech and Krausman, 1997, p. 667) literature was used to augment and refine each WPP's provisional bird checklist. These lists, together with other pertinent materials, were then analysed in order to fulfil our supplementary objective*, i.e.,* evaluate both parks with respect to their most noteworthy avian features and conservation values, and identify related management issues and needs.

Indisputably, the results of this study constitute a significant advance in our knowledge regarding the birdlife within the area circumscribed by these two WPPs. Nonetheless, given the project's inherent limitations, a word of caution is appropriate here. First, at best, our fieldwork only provides – both areally and temporally – a very restricted "snapshot" of each park's avifauna. Second, the timing of our visits was deliberately biased toward the breeding season since we anticipated that, from an avian conservation standpoint,

provision of breeding habitats would represent these areas' most significant ecological role. More research will clearly be needed then, to fully document all the bird species that regularly occur within both WPPs.

1.3 Previous Research

In the post-Alexander Mackenzie (who worked in the area in 1792) era, Fort Chipewyan served as the 'gateway' to the Peace-Slave-Mackenzie River system (and the Canadian Shield north of Lake Athabasca) for many parties of scientists, naturalists and explorers including, in 1820, John Franklin's first expedition (McGillivray, 1992). The ornithological observations of most significance to the current study are contained in the expedition accounts of Preble (1908) and Harper (1915). Based on his zoological observations, Harper (1931) later argued for the recognition of a new "Tazin Highlands faunal area" – which circumscribes the whole of what is now termed Alberta's Kazan Upland Sub-Region.

Except for a few sites and/or, species that have been the subject of moderately detailed ornithological investigations, the general level of our knowledge concerning the province's Canadian Shield avifauna can unequivocally be categorised as rudimentary. During the twentieth century, the lion's share of the limited ornithological interest directed at northeast Alberta has been garnered by the Peace-Athabasca Delta (PAD) due to its importance as a waterfowl staging and breeding area (*e.g.*, Soper, 1950; USFWS, 2001; Gendron *et al.*, 2001). [The most recent summary of the PAD's birdlife is that of Thomas (2002; and see references therein).] It is a sobering fact that though now sixty years old, Soper's (1942) classic account of the birds of Wood Buffalo National Park has yet to be updated or superseded.

Without question, the existing bird distribution literature of greatest significance and utility to be present study is E. Otto Höhn's work (especially his 1972 and 1973 contributions) on the avifauna of the "Lake Athabasca region." As defined by Höhn (1973, fig. 1), this region includes both WPPs under discussion and the whole of the Kazan Upland. Höhn (1972, 1973) incorporated Nero's (1963) data for the (NW) Saskatchewan portion of the region into his reports.

Otto Höhn (1972) conducted his ornithological fieldwork in the Lake Athabasca region from 1969 to 1972. He visited (what is now) Fidler-Greywillow WPP at least twice, *i.e.*, Fidler Point (on the north shore of Lake Athabasca; NSLA) on 3-4 June, 1969; and Bustard Island on 2 July, 1971 (Höhn, 1972). Wallis and Wershler's (1984) list of bird records for the Kazan Upland includes a July 11, 1983 observation of a Red-tailed Hawk at Fidler Point. In 1984, Cliff Wallis (accompanied by Matt Fairbarns) birded extensively within the WPP, as follows: NSLA (July 2-4); Bustard Island (July 5-6); and Burntwood Island (July 4) (Wallis, 1984). A summary of the natural history, archaeological and recreational values of the NSLA / parts of Fidler-Greywillow WPP is given by Bradley (1978b).

The Canadian Shield assessment report for Special Places 2000 notes that "no biological field investigations have been conducted" in the La Butte Creek drainage area (AEP, 1996, p.38). However, there are several sources of avifaunal information relevant to La Butte Creek WPP (for comparative purposes) including Soper (1942) plus (on the Kazan Upland) Wallis and Wershler's (1984) study of the Colin-Cornwall-Wylie lakes areas, and the Provincial Museum of Alberta's investigations at Andrew Lake (Erickson and McGillivray, 1990). Höhn (1972) visited Andrew Lake on July 10-14, 1970, and Leland Lake on July 5-8, 1971. Also useful are data from the North American Breeding Bird Survey (BBS) routes run near Ft. Smith and Peace Point by Dr. Mark Bradley.

In her brief overview of Kazan Upland birdlife, Bradley (1978a, pp.21-23, fig. 7.0) utilized the results of Bishoff and Fyfe's (1975) aerial (and some ground) surveys (mostly conducted in July, 1975) of "rare, potentially endangered and sensitive birds" in northeast Alberta. Species 'mapped' by Bishoff and Fyfe (1975) included Bald and Golden eagles; Common, Caspian, Black and Arctic terns; Osprey; American White Pelican; Common Loon and Sandhill Crane. The important Peregrine Falcon breeding population of the Fort Chipewyan (NSLA) area has been annually monitored since 1971 (Bradley, 2001). Efforts to census the major Caspian Tern nesting colony on Egg Island (an ecological reserve in Lake Athabasca) have been much more sporadic (*e.g.*, Weseloh and Cocks, 1979; see Section 2.7). To date, Beyersbergen's (2000) aerial (with some ground) surveys of migrant shorebirds on the PAD in 1999, represent the only systematic investigation concerning this group of birds undertaken within the Lake Athabasca region.

Apart from the above-listed sources, numerous additional references were consulted during the course of this project. Bird distribution information was compiled using the Alberta Breeding Bird Atlas (Semenchuk, 1992); Pinel *et al.* (1991, 1993); recent studies by Thomas and Carroll (2001) and Thomas (2002); ornithological journals such as *North American Birds* (formerly *American Birds* and *Field Notes*) and *Birders Journal*; the species range maps in Salt and Salt (1976), Smith (1996), Fisher and Acorn (1998), McGillivray and Semenchuk (1998), and (at a coarser scale) Godfrey (1986), Dickinson (1999) and Sibley (2000).

Useful general habitat requirement information concerning Boreal Forest landbirds was furnished by Erskine (1977) and Kirk *et al.* (1996) while, in this regard, Francis and Lumbis's (1979) excellent study, contains much more detailed habitat utilization data specific to northeast Alberta. Important sources of conservation-related material, including population trend data, were (among others) Dunn *et al.* (2000), Downes *et al.* (2000), Gratto-Trevor *et al.* (2001), Rodriguez (2002), COSEWIC (2002), AFWD (2001) and Thomas (1994). Biological details concerning individual species and discussions of general avian ecological principles were gleaned from Ehrlich *et al.* (1988) and Newton (1998), respectively, together with papers in various scientific journals.

1.4 Methods

Fieldwork for the 2001 Fidler-Greywillow / La Butte Creek WPPs' biodiversity inventory project was conducted from June 6th – 16th and July 5th – 27th (both inclusive). Gathering ornithological data was the main objective of the June expedition and the bulk of the bird records comprising this report were compiled during this first field session. Birding was, at best, a subsidiary activity for the large, multidisciplinary team that visited the parks in July. Nevertheless, members of this second expedition contributed many valuable avian observations that included several unusual, surprising and noteworthy records.

Access to and from the parks (from Ft. Chipewyan) was by floatplane and/or, motorboat, while within the parks we used combinations of motorboat, canoe (on La Butte Creek) and (for most of our work) foot travel. In terms of visit dates and campsite locations per park, the 2001 fieldwork broke down as follows. Fidler-Greywillow: (1) June 6-9th (incl.), Bustard Island; (2) June 10-12th (incl.), east side of Lapworth Point (just west of the Park); (3) July 17-27th (incl.), east of Fidler Point (Figure 2). La Butte Creek: (1) June 13-16th (incl.) and (2) July 5-15th (incl.), campsite (for both sessions) located on north bank of La Butte Creek at its confluence with the Slave River (Figure 3).

The June fieldwork was undertaken by Wayne Nordstrom, Drajs Vujnovic and the author, plus (for the Bustard Island segment) Rob Hughes. These bird surveys involved a total effort of 25 man-days – 16 man-days within and adjacent to Fidler-Greywillow, and the remainder spent in La Butte Creek WPP. In each park we undertook reconnaissance-type surveys designed to enable us to sample as many different habitat types / cover as much ground as possible. Due to time constraints, no attempt was made to set up (Canadian Forest Bird Monitoring Program-style) transects along which point counts could be conducted. Our sampling, in terms of sites visited per park, was non-random. Potential birding areas were selected using air photo mosaics (with superimposed Ecological Land Classification interpretive data) combined with our previous Boreal ornithological experience. These site 'wish-lists' were then modified on the basis of practical / logistical considerations.

The identities and numbers of all birds encountered throughout the course of each day's fieldwork were recorded, together with notes concerning habitat, and any behavioural or other observations relevant to determining every species' breeding status within the park. Also noted was all indirect physical evidence (*e.g.*, feathers, tracks, distinctive excavations) indicating the presence of various bird species. (In rare instances, such evidence furnished our only clue to the occurrence of certain taxa in the WPPs.)

Once synthesized, and integrated with existing records from the literature, our June and July ornithological data sets were used to compile the annotated checklists presented below.

2.0 RESULTS

2.1 Introduction

The account of each park's avifauna given herein follows the same two-part format. Provided first is an annotated checklist compiled using all bird records for the WPP known to the writer. (Checklist organization and content is fully explained in Section 2.2 below.) This is followed by a "Discussion" section that commences with a short summary of the overall character / composition of each park's avifauna (built around a series of basic ornithological "vital statistics" derived from an analysis of its checklist). Noteworthy bird records for the WPP are highlighted. Each protected area's most significant attributes and values – from an avian conservation perspective – are reviewed in Section 3.0.

During the course our fieldwork in 2001, we accumulated numerous bird observations from outside Fidler-Greywillow and La Butte Creek parks. Section 2.0 concludes with accounts of two such data sets, namely, our (June 11, 2001) census of the Caspian Tern colony on Egg Island, plus the most interesting of our bird records from the Fort Chipewyan area.

2.2 Explanation of Checklist Format, 'Codes' and Abbreviations

{NOTE: Unless stated otherwise, all comments and subsections below apply to both annotated checklists within this report}

Checklist Organisation: Each annotated checklist is organized into bird families – shown thus: **ENGLISH NAME (Scientific Name)** – and their constituent species. Only species' common (English) names are given. The taxonomic order and nomenclature used follows that in *The Check-List of North American Birds (Seventh Edition)* (American Ornithologists' Union, 1998), and its *Forty-second* (AOU, 2000) and *Forty-third* (AOU, 2002) *Supplements.*

Categories of Bird Records: Five distinct categories of bird records have been used to compile the two annotated checklists found in this report. As shown below, differences in typeface *etc.* have been used to indicate the record category to which each species belongs. Definitions of these five categories are as follows:

- Category 1. **American Robin:** Species definitely recorded by us (during June-July, 2001, fieldwork) within a given park.

- Category 2. **(American Robin):** Species previously recorded by others within the area now circumscribed by the park (*i.e.*, records derived from the literature).

- Category 3. American Robin**:** Species recorded by us (in June-July, 2001) outside (but in close proximity to) a park, that we believe to also occur (or to have occurred) somewhere within that park.

- Category 4. *American Robin***:** Species believed to occur (or have occurred) within a park based on 'indirect' physical evidence (*e.g.*, feathers, distinctive excavations in trees, *etc.*) found by us (in June-July, 2001) or others (from literature).

- Category 5. [*American Robin*]**:** Species whose occurrence in a park must (for various reasons), based on the evidence available, be considered hypothetical.

Structure / Components of Individual Species Accounts: With respect to the organization of their contents, all descriptions of species recorded during our June-July, 2001 fieldwork follow the same 'standard' order / format. In the case of other records, one or more components of this basic descriptive structure may have been omitted (due to the absence of appropriate information).

As explained in the "Note" at the start of Section 2.3, species descriptions for Fidler-Greywillow begin with one or more acronyms denoting those parts of the WPP in which the bird has been recorded. The first ornithological component of species accounts for both parks is *Breeding Status* (see below). Following this is an assessment of the species' *Abundance* (see below) within the WPP, and then a *Details* (of the relevant record(s)) section. A variety of information may be found in the latter, including – if available – number of records and the total number of individuals involved; sex and age of those individuals; behavioural observations; and details concerning the location(s) / habitat type(s) where the bird(s) was/were found. Next, indicated by its acronym CI, is a segment that consists of *Conservation Information* pertaining to the species in question. Found here are the answers to such questions as: Is the species a habitat specialist? / colonial or cavity nester? / sensitive to anthropogenic disturbance? / vulnerable to specific environmental threats? Also, is it a Neotropical Migrant? and, what is its risk status (*e.g.*, COSEWIC, 2002) and current population trend? Finally, completing the Species Account, is a 'catch-all' *Comments* section composed of additional relevant material (mostly from the literature), with an emphasis (for comparative purposes) on distribution data.

Breeding Status: To render our results compatible with those of the *Atlas of Breeding Birds of Alberta* (Semenchuk, 1992), the Atlas Project's breeding status codes have been employed herein. These codes are reproduced in Table 1 below. This was done with some misgivings, since a strong case can be made that the Atlas codes are insufficiently rigorous.

Table 1. ABBA breeding status codes (Semenchuk, 1992).

The objective of the atlas was to obtain the strongest breeding evidence for as many species as possible within each square. There are four levels of evidence coded as follows:

● **Confirmed**

⊕ **Probable**

○ **Possible**

• **Observed**

Within each of these levels, there are categories of evidence denoted by a letter-code representing behavioral and empirical evidence. All of these codes apply to a species seen or heard during its breeding season:

Observed (O)
X - species identified, but no indication of breeding.

Possible (PO)
H - species observed, or breeding calls heard, in suitable nesting HABITAT.

Probable (PR)
P - PAIR observed in suitable nesting habitat.
T - TERRITORY presumed through territorial nesting behavior in the same location on at least two occasions a week or more apart.
C - COURTSHIP behavior between a male and a female.
V - VISITING probable nest-site, but no further evidence obtained.
N - NEST-BUILDING or excavation of nest hole by wrens and woodpeckers.

Confirmed (CO)
NB - NEST-BUILDING or adult carrying nest material; used for all species except wrens and woodpeckers.
DD - DISTRACTION DISPLAY or injury feigning.
UN - USED NEST or eggshells found.
FL - recently fledged young or downy young.
ON - OCCUPIED NEST indicated by adult entering or leaving nest-site or adult seen incubating.
CF - CARRYING FOOD; adult seen carrying food or faecal sac for young.
NE - Nest with EGGS.
NY - Nest with YOUNG.

For example, there is a fundamental difference between nesting, *i.e.*, the intention to breed, and actual breeding – as defined by the successful production of viable young. Nevertheless, due largely to our limited time in the field, it is clear that restricting our lists of breeding species to those in the "confirmed breeding" category would distort the true picture. This is because – despite a lack of full supporting evidence – there is a strong likelihood that the vast majority of species found within the two parks at this season (June-July), do in fact breed somewhere within their boundaries.

Abundance: These codes are not accurate measures (in terms of absolute numbers) of any given species' population size although, in part, they reflect its relative abundance. Rather, they represent the chance that a birder (assumed to be experienced in identification, and in suitable habitat during the appropriate time of year) has of finding (seeing and/or hearing) a given species through the course of a day's birding in any particular park.

Definitions of these codes (taken from Thomas and Klauke, 2001) are as follows:

- **Common** – Should be found on every visit, sometimes in good numbers.
- **Fairly common** – Found on almost all visits, but can be missed (usually present in smaller numbers than Common species).
- **Uncommon** – Present every year, usually in fairly small numbers. Often missed.

- **Rare** – Usually occurs annually – though in very limited numbers, and/or, is of very local distribution. May be absent in some years. Missed on a majority of visits.
- **Casual** – Non-annual. Very rare. Highly unlikely to be encountered, but species is anticipated to occur irregularly in the park again.

Attribution of Records: A majority of the bird records comprising the two checklists in this report (especially those obtained in June, 2001) have been utilized without personal attribution. However, in many instances involving either reports of rarities, other noteworthy observations, or single observer records, the individual(s) who contributed the record are identified by their initials (given in parentheses), as follows: LA – Lorna Allen; GD – Gabe Durocher; JG – Jennifer Gammon; RH – Rob Hughes; DJ – Derek Johnson; TJ – Ted Johnson; DM – Doug Macaulay; WN – Wayne Nordstrom; BR – Bill Richards; KS – Karen Stroebel; RT – Richard Thomas; and DV – Drajs Vujnovic.

Abbreviations and Acronyms: For convenience and to save space, the species accounts for the two parks employ numerous abbreviations and acronyms in addition to those already discussed. Explanations of these follow:

- ABBA = The Atlas of Breeding Birds of Alberta (Semenchuk, 1992);
- AFWD = Alberta Fish and Wildlife Division;
- BBS = The North American Breeding Bird Survey (*e.g.*, Peterjohn, 1994);
- BSI = Bustard Island;
- BWI = Burntwood Island;
- *ca.* = *circa* (about);
- *cf.* = confer (compare);
- CI = conservation information;
- COSEWIC = Committee on the Status of Endangered Wildlife in Canada;
- cardinal compass points and their derivatives are represented by their (capital) letters, *e.g.,* NW = northwest, E = east, *etc.*;
- DDT = dichlor-diphenyl-trichlorethane;
- *e.g.* = *exempli gratia* (for example);
- *etc.* = *et cetera*;
- Ft. = Fort;
- *Ibid.* = *ibidem* (in the same reference);
- *i.e.* = *id est* (that is);
- incl. = inclusive;
- km = kilometer;
- L. = Lake;

- LBC = La Butte Creek;
- LPE = Lapworth Point (east);
- NSLA = north shore of Lake Athabasca;
- NTM-F = Facultative Neotropical Migrant (a minority of this bird species' North American breeding population winters in the tropics);
- NTM-O = Obligate Neotropical Migrant (all, or a majority of this species' North American breeding population overwinters in the tropics);
- NWT = Northwest Territories;
- PAD = Peace-Athabasca Delta;
- *pers. comm*. = personal communication;
- *sic* = quoted exactly;
- USFWS = United States Fish and Wildlife Service;
- WBNP = Wood Buffalo National Park;
- WPP = wildland provincial park.

2.3 Annotated Checklist of Birds for Fidler-Greywillow Wildland Provincial Park

NOTE: Apart from the abbreviations *etc.* already described in Section 2.2, in the Fidler-Greywillow species accounts that follow, acronyms are used to identify the four main locations for which bird observations were compiled. The first three refer to the major (disjunct) sub-units comprising the Wildland Provincial Park (WPP) (Figure 2), while the fourth lies outside the Park (immediately adjacent to sub-unit #3). These acronyms / sites are:

1. BSI = Bustard Island (and associated islets).
2. BWI = Burntwood Island (and associated islets).
3. NSLA = North Shore of Lake Athabasca, *i.e.*, the Park's largest sub-unit, a *ca.* 20 km x 2.5 km SW-NE oriented strip of 'mainland', that stretches northeastward from Fidler Point to about 3 km beyond Cypress Point. (From the standpoint of geographic accuracy, Fidler-Cypress would be a more appropriate name for this WPP.)
4. LPE = Lapworth Point - East, *i.e.*, the *ca.* 2 km-long segment of Lake Athabasca shoreline that extends northeast from Lapworth Point to the Park's southwestern 'corner', plus the area lying up to *ca.* 1 km inland of it.

A location acronym shown in parentheses, *e.g.*, (NSLA) in the case of Surf Scoter, indicates that the only known records of particular species from the sub-unit in question, are those reported in the literature by previous researchers (principally Wallis, 1984).

The area covered by this checklist can be formally defined as consisting of: (a) all islands within Lake Athabasca, and the portion of the Lake's northern shore, circumscribed by the current legislated boundary of Fidler-Greywillow WPP; (b) those waters of Lake Athabasca that lie within 800 metres (0.5 mile) of the shorelines of the afore-mentioned land areas; and, (c) the airspace overlying the combined total area of 'a' plus 'b'.

Species Accounts

- **LOONS (Gaviidae)**

  Common Loon: BSI, NSLA, LPE; Probable breeder [P]; Common; 19 records (12 for June; 7 in July) involving a total of *ca.* 25 birds that included at least 3 pairs. Observed on Lake Athabasca, several medium-sized and large inland lakes, and in flight over the WPP. CI: Sensitive to disturbance and vulnerable to environmental contamination (*e.g.*, acid rain, bioaccumulation of mercury, and lead poisoning – from spent shot or sinkers; *cf.* Scheuhammer and Norris, 1995; Leahy, 1998). Declining in

eastern North America. Comments: Often nests on islands or Beaver lodges. Although not confirmed during our surveys, this species undoubtedly breeds within the Park.

- **GREBES (Podicipedidae)**

  Red-necked Grebe: BSI; Possible breeder [H]; Rare; Represented by one individual, heard and seen (June 8) from the north end of the larger of Bustard Island's two lakes. Comments: Unexpectedly, this bird constituted the sole example of its family encountered in Fidler-Greywillow during this survey.

- **CORMORANTS (Phalacrocoracidae)**

  Double-crested Cormorant: NSLA; No evidence of breeding [X]; Casual; One record (June 11) of two birds swimming close to shore near Fidler Point (DV). CI: NTM-F; Sensitive to disturbance; Colonial nester; Range expanding and numbers increasing within northern Alberta. Comments: Höhn (1972, 1973) had no Lake Athabasca sightings for this species but noted (Höhn, 1972, p.3) that "a few stragglers" had been recorded "as far north as Great Slave Lake" by Preble.

- **GEESE, SWANS & DUCKS (Anatidae)**

  Snow Goose: BSI; No evidence of breeding [X]; Rare; On June 7, one (apparently healthy) adult was sighted on Lake Athabasca off the northeast shore of Bustard Island (WN) to furnish the only record for the Park (but *cf.* Section 2.8). Comments: Höhn (1973, p.9) regards this species as a "regular common migrant" in the Peace-Athabasca Delta but gives no information regarding its abundance on Lake Athabasca. Presumably, however, numbers must overfly the WPP during both migration periods. This record represents a tardy spring migrant, since Francis and Lumbis (1979, p.166) give spring arrival and departure dates for this species as May 10th and May 27th, respectively. Snow Geese can be abundant on the PAD during spring and fall migration (Soper, 1950; Pinel *et al.*, 1991, pp.38-39).

  Canada Goose: BSI, NSLA, LPE; For LPE: confirmed breeder [FL]; Common; A dozen records involving *ca.* 160 birds. Seen on Lake Athabasca and its shoreline, but the majority of individuals were recorded passing overhead (largest flock noted consisted of ~50 birds). CI: Range expanding and numbers increasing in Alberta. Comments: Although breeding was only confirmed for LPE (a pair with 5 goslings on June 11th), this is another species that undoubtedly breeds within the WPP. The flocks overflying the Park probably comprised non-breeding (sub-adult?) birds. Interestingly, this species was not recorded by Wallis (1984).

  American Wigeon: BSI, (NSLA), LPE; Probable breeder [P]; Fairly common; 12 records involving 26 individuals that included at least 3 pairs. The maximum number seen together at one time was 5. Mostly observed on Lake Athabasca but a pair was present (June 8) on BSI's smaller lake (back-beach lagoon). CI: NTM-F. Comments: On July 3, 1984, Wallis (1984) observed 3 in the "inlet bay" east of Fidler Point.

Mallard: BSI, NSLA, LPE; Confirmed breeder [FL]; Fairly common; 15 records totalling about 50 birds. Twelve males flying over BSI on June 8th was the largest group encountered. Breeding confirmed for NSLA only: "one adult with ducklings" on July 22nd (WN). CI: Populations not as robust as those of most other dabbling ducks in Canada. Comments: Identified as the PAD's most numerous duck species by the USFWS (2001) and by Gendron *et al.* (2001, table 3).

Blue-winged Teal: BSI; Probable breeder [P]; Uncommon; Five records comprising 3 separate pairs and two solitary males; all for Lake Athabasca adjacent to BSI (June 7-9 inclusive). CI: NTM-O.

Northern Shoveler: BSI, (NSLA), LPE; No evidence of breeding [X]; Rare; Only two records, both of single males, on Lake Athabasca (near to shore) north of Bustard Island (June 8) and east of Lapworth Point (June 11). CI: NTM-F. Comments: Wallis (1984) notes the observation of a shoveler (by Matt Fairbarns) in the Fishing Creek area (NSLA) on July 3, 1984.

Northern Pintail: BSI, BWI, (NSLA), LPE; Probable breeder [P]; Fairly common; About 10 records involving at least 23 birds that included a minimum of 5 pairs. Most observations (60%) were of birds passing overhead. The majority of our records were from BSI (June 6-8 inclusive). A single bird overflying Burntwood Island on July 22nd (DV) constitutes this survey's only record for both that location and month. CI: NTM-F; North American population described as "struggling" (Miller and Duncan, 1999). Comments: Wallis and Wershler (1984, p.61) state, "Nest found on island in Lake Athabasca, Alberta in 1971 (Höhn)", but no mention of this record could be located within Höhn's 1972 or 1973 publications. One pintail was noted by Wallis (1984), east of Fidler Point, on July 3, 1984.

Green-winged Teal: BSI; Probable breeder [P]; Uncommon; All sightings (June 6-9 inclusive) are for Bustard Island – from Lake Athabasca, and the Island's two lakes. For this survey, there were a total of 9 records of 16 birds; however, the figures are inflated due to repeated sightings of the same individuals or pairs. At least two, and perhaps three, separate pairs were present on BSI. CI: NTM-F.

Ring-necked Duck: BSI; Probable breeder [P]; Uncommon; At least two pairs present (June 6-8 inclusive) on Bustard Island's larger lake. All of our records are from this location on BSI. CI: NTM-F.

Surf Scoter: BSI, (NSLA); No evidence of breeding [X]; Uncommon; Three records – all involving flocks of adult birds on Lake Athabasca to the north and east of Bustard Island. Six on June 7th; "approximately 30" at sunrise on June 8th (WN), 6 observed later the same morning (RH) were probably a remnant of the earlier flock. CI: Declining. Comments: Höhn (1973, p.10) characterizes this species as a "fairly common summer resident" of the Lake Athabasca Region. Wallis (1984) recorded a flock of 20-25 on Lake Athabasca, from Fidler Point, on July 2, 1984.

White-winged Scoter: BSI; No evidence of breeding [X]; Rare; Represented by a single record (June 8), of a male swimming close to shore on the east side of Bustard Island (RH). CI: Undergoing long-term decline.

Bufflehead: BSI, BWI, (NSLA); Confirmed breeder [ON; FL]; Fairly common; Ten records (involving at least 18 birds), all except one of which were from BSI – where birds were observed on Lake Athabasca and both of the Island's lakes. One pair was seen (June 6-8) entering and leaving a tree cavity, presumably an active nesting site, on the east side of Bustard Island (WN). The sole BWI record (July 21) consists of 3 ducklings on a small lake (DV). CI: Cavity nester. Comments: Wallis (1984) recorded one female in a bay east of Fidler Point (July 3, 1984), and "3 Bufflehead females and one brood" at BSI on July 5, 1984.

Common Goldeneye: BSI, NSLA, LPE; Possible breeder [H]; Fairly common; About 10 records for a total of ~30 birds, although some duplication involved. All sightings consist of birds on Lake Athabasca. Only one record each for LPE (a group of 9 males on June 11) and NSLA (a single bird on July 20). CI: Cavity nester.

Common Merganser: BSI, NSLA, LPE; Possible breeder [H]; Common; Roughly 10 records (excluding the mixed-species flock described in the succeeding account) yielding a total of over 150 individuals. Lone birds, single sex groups, and mixed sex flocks of up to ~35 birds (*e.g.*, Fidler Point on June 11) were observed on Lake Athabasca, resting upon rock outcrops along its shoreline, or passing overhead. Males were more commonly observed than females. CI: Cavity nester.

Red-breasted Merganser: BSI, BWI, NSLA, LPE; Probable breeder [P; C]; Common; About 16 records involving a total of *ca.* 80 individuals. As for the previous species, it was observed upon, along the shore of, or flying over Lake Athabasca. The largest single-species flock seen was 19 birds (LPE; June 11). The sole BWI record (July 21) consisted of two pairs (DV). On the evening of June 12th, a large (*ca.* 120) mixed sex, feeding flock of this and the previous species was observed off Lapworth Point.

- **HAWKS & EAGLES (Accipitridae)**

Bald Eagle: BSI, BWI, NSLA, LPE; Confirmed breeder [NY]; Fairly Common; Fifteen records involving a dozen or so individuals, with subadults outnumbering adults at a ratio of *ca.* 2:1. At least two (and perhaps 3) active nests – each containing a single juvenile – observed within NSLA. Several old / inactive nests were also reported. The sole BWI record (July 21) was a lone subadult (DV). CI: Sensitive to disturbance and bioaccumulation of toxins. Comments: Agonistic interactions between Bald Eagles and (1) a Golden Eagle, and (2) a Sandhill Crane are described in the accounts of those species.

Northern Harrier: BSI; Possible breeder [H]; Rare; The sole record during this survey (June 8) was an adult female in flight (RH). CI: NTM-F; Sensitive to disturbance; Decreasing? Comments: Höhn (1972, p.8) could "find no specific breeding records" for the Lake Athabasca area, and saw no examples of this species during his three (7 to 18-day) periods of fieldwork in the summers of 1969-1971, inclusive.

Sharp-shinned Hawk: BSI, LPE; Possible breeder [H]; Rare; Two records: one flying above the forest (July 24) on Bustard Island (DV); and a single male, hunting between the landward margin of the lakeshore willow flats and the edge of a spruce/birch forest west of NSLA (June 12). CI: NTM-F.

Northern Goshawk: BSI, LPE; Possible breeder [H]; Rare; Two records: one adult observed (June 8) in the mixedwood forest adjacent to the large lake on Bustard Island (WN); and one immature was found dead (June 11) in the backshore willow-sedge flats west of the mainland portion of the Park. CI: Resident. Sensitive to disturbance. Area-demanding; requires large tracts of intact mature / old-growth forests. Declining due to on-going loss of habitat.

Red-tailed Hawk: NSLA; Possible breeder [H]; Rare; The only record for this survey was of an adult within NSLA on July 22 (WN). CI: NTM-F; Has benefited from forest clearance / fragmentation. Comments: Wallis and Wershler (1984, p.62) recorded this species at Fidler Point on July 11, 1983, and a western race bird was noted by Wallis (1984) near the same location, on July 3, 1984.

Golden Eagle: NSLA; No evidence of breeding [X]; Rare; The sole record for this survey was one adult, on July 24 near Fidler Point (TJ, GD), observed in a confrontation with a Bald Eagle over a food item (a dead fish ?). CI: Sensitive to disturbance. Comments: Bishoff and Fyfe's (1975) surveys produced no sightings of this species within the areas now designated as Fidler-Greywillow WPP. Wallis (1984) observed two Golden Eagles on the west side of Fidler Point (July 2, 1984), feeding on a Beaver.

- **FALCONS (Falconidae)**

(Merlin): LPE, (BSI), (BWI); Possible breeder [H]; Rare; One adult female, calling whilst perched in a black spruce located in the backshore east of Lapworth Point (outside the Park), constitutes the lone record during this survey. CI: Resident. Comments: The Atlas of Breeding Birds of Alberta (Semenchuk, 1992, p.91) shows no Merlin records for the Kazan Upland. In 1984, Wallis (1984) noted single birds on Burntwood Island (July 4) and Bustard Island (on both July 5th and 6th).

- **GROUSE & ALLIES (Phasianidae)**

  Spruce Grouse: BWI, NSLA; Confirmed breeder [FL]; Uncommon; Six records, all in July, involving 5 adults and at least 17 young. For example, in NSLA: July 18, one adult female with 5 chicks in an area of jack pine forest and rock outcrops (WN); July 19, 1 adult in a black spruce stand (LA); July 22, 3 young inland from Fidler Point; on BWI: July 21, 9 chicks (DV). CI: Resident. Comments: According to Höhn (1972, p.11), on July 6, 1945 a male Spruce Grouse was "collected" by Shortt at Burntwood Island. During this survey (including on BSI), old grouse droppings were regularly encountered. Presumably, most of the latter – especially those in black spruce and jack pine stands some distance away from Lake Athabasca – are attributable to this species.

  [*Willow Ptarmigan*]**:** The occurrence of this species as a regular (?annual) winter visitor to (and/or, migrant through) the Park can be inferred from the literature and the presence of old grouse droppings within backshore willow thickets. Regarding Wood Buffalo National Park, Soper (1942, p.47) states that Willow Ptarmigan invade "in large numbers…for the duration of the winter months". Höhn (1972, pp.12-13) notes that this species is "an annual winter visitor" that is most often found in areas of willow growth on lakeshores. "Willow buds and twiglets" apparently constitute the "main winter food of Willow Ptarmigan" (Höhn, 1984, p.87). At present, however, in the absence of confirmatory evidence, this species must be considered 'hypothetical' for the wildland park.

- **RAILS & COOTS (Rallidae)**

  Sora**:** LPE; Possible breeder [H]; Rare; Two records (June 11 and 12), each consisting of a single bird calling from the same location – a backshore Beaver pond complex situated west of the SW corner of the Park's NSLA sub-unit. CI: NTM-F.

  (American Coot): (NSLA); No evidence of breeding [X]; Casual; CI: NTM-F. This species' population and range in central and northern Alberta appear to be expanding. Comments: Included here on the basis of Matt Fairbarns' observation of a single bird, in the Fishing Creek (NSLA) area (on July 3, 1984), reported by Wallis (1984).

- **CRANES (Gruidae)**

  Sandhill Crane: BSI, BWI, NSLA, LPE; Confirmed breeder [FL]; Fairly Common; About a dozen records (excluding sightings of tracks on a number of Lake Athabasca beaches) involving at least 10 different individuals. A selection of these records follows. BSI: one feeding along 'tideline' of a sandy beach (June 8); LPE: June 11, three birds feeding on foreshore, including one noticeably rustier-colored individual (?subadult). One of the adults was observed using its wings to form a parasol when hunting in shallow pools; June 12, an adult seen threatening one of two subadult Bald Eagles sitting near it on the foreshore, and forcing the eagle to retreat several metres; NSLA: July 19, one pair with two young

in the Whitesand Point area (WN); July 23, five on Whitesand Point backshore (WN); BWI: July 21, "one pair with young" (JG). CI: NTM-F. Sensitive to disturbance. Decreasing.

- **PLOVERS (Charadriidae)**

  Black-bellied Plover**:** LPE; No evidence of breeding [X]; Rare; One confirmed record: a group of three, not quite in full alternate (breeding) plumage, on sandflats east of Lapworth Point (June 12). CI: NTM-O. Decreasing in Canada (Gratto-Trevor *et al.,* 2001). Comments: On June 9th a calling plover thought to be a Black-bellied was heard (but not seen) as it flew past our campsite on BSI.

  Killdeer: BSI, NSLA, LPE; Confirmed breeder [NE]; Fairly common; A total of *ca.* 11 records (only two for July) involving approximately 16 different birds. From a breeding status perspective, the two most significant records were: (1) BSI, June 7, a nest containing four eggs was found on a muddy, lakeside gravel flat (DV); (2) NSLA, June 11, a pair, with one bird performing a distraction display, was observed near Fidler Point. CI: NTM-F. Has undergone significant, wide-scale declines in Canada and U.S.A. over the last 20-30 years (Gratto-Trevor *et al*., 2001; Rodriguez, 2002). Comments: Wallis (1984) observed a "family of Killdeer" near Fidler Point, on July 3, 1984.

- **SANDPIPERS & ALLIES (Scolopacidae)**

  Greater Yellowlegs: NSLA; No evidence of breeding [X]; Rare; Our only record was of a single bird heard on July 22nd (WN). CI: NTM-O. Comments: This species breeds in the Lake Athabasca region (*e.g.*, Höhn, 1973, p.15) and may well do so within the Park. However, given the time of year, our record could easily represent a southbound migrant. This must surely be the case with respect to the "flocks of….mostly Greater" yellowlegs noted by Wallis (1984) flying over the NSLA (east of Fidler Point) on July 3, 1984.

  Lesser Yellowlegs: BSI, (NSLA), LPE; Possible breeder [H]; Uncommon; At least five records involving 4 or 5 individuals. BSI: on June 8th, at least two birds were heard by three different observers. LPE: "several" heard and/or, seen by three separate observers west of Fidler Point (June 11). CI: NTM-O. Has declined significantly in North America over the last 30 years (Rodriguez, 2002). Comments: Wallis (1984) found both yellowlegs species to be "common" along the NSLA (east of Fidler Point) on July 3, 1984. Presumably (as with the previous species), most Lessers he encountered were early migrants (?failed breeders) on their way south.

  (Solitary Sandpiper): (NSLA); Possible breeder [H]; Rare; CI: NTM-O. Decreasing in Canada. Comments: Only two records (of two different individuals) are known for the WPP – both by Wallis (1984), in the vicinity of Fidler Point, on July 3, 1984.

Spotted Sandpiper: BSI, BWI, NSLA, LPE; Confirmed breeder [FL]; Common; Thirteen records documenting at least 21 birds. Most frequently observed on the mixed sand/gravel beaches of Bustard Island. Breeding confirmed for NSLA: one adult accompanied by a single chick along the shore of Lake Athabasca (July 18, LA). Only one bird reported (July 21) from BWI (DV). CI: NTM-O. Comments: Accurately described by Höhn (1972, pp.22-23) as "the only truly common and generally distributed shorebird of the Lake Athabasca area". He observed (no date given) an "adult in intense injury display (indicating eggs about to hatch or downy young nearby) on an islet" *ca.* 2 km SW of Cypress Point (*Ibid.*).

Upland Sandpiper: NSLA; No evidence of breeding [X]; Casual; A single adult, reported from NSLA on July 25th (TJ) represents the sole record of the 2001 survey. CI: NTM-O. Prairie populations have declined significantly due to habitat loss (Gratto-Trevor *et al.*, 2001). Comments: Small breeding populations of this species are believed to exist in WBNP (Höhn, 1956; 1972, p.22) and are known to be present within Maybelle River Wildland Park (Thomas and Carroll, 2001), *i.e.*, to the NW and S, respectively, of Fidler-Greywillow Wildland Park.

Sanderling: BSI; No evidence of breeding [X]; Uncommon; Our handful of records – all from Bustard Island for June 6-8 inclusive – refer to *ca.* four flocks of between 4 and 18 birds observed feeding along sandy beaches, or in flight. CI: NTM-F. Decreasing in Canada (Gratto-Trevor *et al.*, 2001).

Semipalmated Sandpiper**:** LPE; No evidence of breeding [X]; Rare; One record: a group of four feeding frantically along the water's edge, on sand flats west of Fidler Point (June 11). CI: NTM-O. "Recent large declines (for unknown reasons)" noted across Prairie Canada (Gratto-Trevor *et al.,* 2001).

[*Western Sandpiper*]**:** (NSLA); No evidence of breeding [X]; Casual; CI: NTM-F. Comments: On July 3, 1984, about 3.2 km east of Fidler Point, Wallis (1984) observed a number of peeps feeding on backshore flats adjacent to Lake Athabasca. In his notes Wallis (1984) states "one peep appears to be Western Sandpiper?" Pending an unequivocal record, this species is treated as hypothetical for the WPP.

Least Sandpiper: BSI, (NSLA); No evidence of breeding [X]; Rare; One record: a party of 6, on June 8th, feeding on mudflats on the east side of Bustard Island (RH). CI: NTM-F. This species is experiencing a significant decline in Canada (Gratto-Trevor *et al.*, 2001). Comments: On July 2, 1971, Höhn (1972, p.24) flushed two Least Sandpipers "from a muskeg area" on an "island north of Burntwood Island". In his opinion, such occurrences "strongly suggest breeding" within the Lake Athabasca area. However, in an 'average year' by this date, small parties of southbound peeps are regularly observed in central Alberta (author's records). It seems equally likely therefore, that the birds

seen by Höhn were migrants. Wallis (1984) saw one or more Least Sandpipers on the Lake Athabasca backshore, *ca.* 3.2 km east of Fidler Point, on July 3, 1984.

White-rumped Sandpiper**:** LPE; No evidence of breeding [X]; Rare; One bird, associating with the above-described Semipalmated Sandpipers (June 11), represents the sole 2001 survey record. CI: NTM-O. Undergoing a significant decline in Canada (Gratto-Trevor *et al.*, 2001).

Baird's Sandpiper: BSI, (NSLA); No evidence of breeding [X]; Rare; A lone bird, flushed from a lakeside gravel flat on Bustard Island (June 8) furnished our only confirmed record. CI: NTM-O. Comments: Wallis (1984) noted a flock of 10 Baird's Sandpipers, near Fidler Point, on July 3, 1984.

Pectoral Sandpiper: BSI; No evidence of breeding [X]; Rare; Another shorebird species that was only encountered once – on June 8th, three were watched while feeding a mudflat on the eastern side of Bustard Island (RH). CI: NTM-O.

Wilson's Snipe**:** LPE; Possible breeder [H]; Rare; Somewhat surprisingly, only two records – both from LPE: June 11th, one heard ('winnowing') overhead; June 12th, one heard calling from a perch within a (backshore) Beaver pond complex. CI: NTM-F. This species is declining significantly in Canada (Gratto-Trevor *et al.*, 2001). Comments: Formerly known as Common Snipe, from which it has recently been split (*cf.* AOU, 2002).

- **GULLS, TERNS & JAEGERS (Laridae)**
  (Pomarine Jaeger): (NSLA); No evidence of breeding [X]; Casual; Included here on the basis of Höhn's (1970; 1972, p.26) June 3rd, 1969 observation of one flying NW from Lake Athabasca over Fidler Point. CI: NTM-O.

Parasitic Jaeger**:** LPE; No evidence of breeding [X]; Rare; On the evening of June 11th, one light-phase adult was seen, *ca.* 80m off Lapworth Point, heading northeastward (RT). Past the Point, this bird – which was flying only 1-2 m above the almost flat calm water – changed course towards the south, *i.e.*, in the direction of Egg Island (*cf.* Section 2.7). CI: NTM-O. Comments: Jaeger sightings within most of Alberta (especially in summer) are rare, but reports of this species greatly outnumber those of Long-taileds and Pomarines, and the Lake Athabasca/Peace-Athabasca Delta area is, arguably, the most likely place in the province to encounter it.

Franklin's Gull: BSI; No evidence of breeding [X]; Uncommon; Only three records – all for BSI on June 11th. In the morning, a group of 11 and later, two other birds, were seen soaring in a thermal and catching insects. At about 10 pm, a total of *ca.* 30-35 were overhead or sitting on the water of Lake Athabasca. CI: NTM-O. Colonial nester. Sensitive to disturbance and fluctuations in water levels.

Declining on the Prairies. Has expanded its range northwards in Alberta, possibly in response to losses of wetlands (to agriculture, urbanization and drought) in the south. Comments: Soper (1942, p.57) refers to a large Franklin's Gull colony north of Lake Mamawi (in WBNP) as "the northernmost nesting locality on record". Several subsequent authors have reported that this distinction applies to a colony at Loutit Lake (which lies some 20 km NW of BSI). Some confusion exists over who actually discovered the latter colony. Wallis and Wershler (1984, p.63) attribute it to Bishoff and Fyfe (1975), while Pinel *et al.* (1991, p.151) credit Francis and Lumbis (1979; colony found in 1975). The ABBA (Semenchuk, 1992, p.132) cites Francis and Lumbis 1975 (*sic*). However, neither Bishoff and Fyfe, nor Francis and Lumbis mention Loutit Lake in connection with this species. On July 5, 1984, Wallis (1984) noted 40-50 Franklin's Gulls loafing on small islands just east of BSI.

Mew Gull**:** LPE; No evidence of breeding [X]; Rare; One record: an adult together with a second summer bird were observed catching dragonflies (by jumping upwards from a standing position – like nightjars) on the sandflats east of Lapworth Point (June 11). Comments: According to Soper (1942, p.57), "Bent (1921, p.145) records its breeding at Lake Athabaska (*sic*)."

Ring-billed Gull: BSI, BWI, NSLA, LPE; Confirmed breeder [FL]; Common; At least 18 records in total. Half of these are from BSI (June 6-8 inclusive), where from 2 to 50+ birds were seen in flight, offshore (on the Lake), and resting or feeding on the beaches. LPE: On June 11th, just east of our campsite, a 'pack' of 50+ was walking in shore-face vegetation (reeds, *etc.*) hunting dragonflies (exploiting the local, super-abundance of a recently hatched Emerald species). Many of these gulls were later observed perching on the tops of spruce trees. NSLA: "several" were noted on each of three dates (July 17, 18, 20). BWI: a previously undescribed, mixed Ring-billed and California Gull nesting colony, was discovered on an islet adjacent to Burntwood Island's NE shore on July 21st. In addition to an estimated (combined species) total of 500 pairs of adult gulls, numerous fledglings – most hiding between rocks, some swimming in the water – were also observed (DV). CI: NTM-F. Colonial nester. Sensitive to disturbance. In common with much of North America, numbers in Alberta have been increasing in the post-DDT era. Comments: Soper (1942, pp.56-57) failed to find this species in WBNP. Höhn (1972, p.28) rated it as "common on Lake Athabasca". On July 1st, 1971, he noted "a number behaving as if they had nests" on an islet east of Whitesand Point (*Ibid.*).

California Gull: BWI, NSLA, LPE; Confirmed breeder [FL]; Fairly common; About 6 records. "Several" noted for NSLA - including near Fidler Point (June 11) and Whitesand Point (July 20), on each of four dates (others = July 17 and 18). Old nests (of this species or Ring-billeds), together with evidence of human disturbance, noted on an islet near Whitesand Point (July 20; DV) – possibly the same islet described by Höhn ? (see previous species' account). BWI: A 'new' nesting colony of this species was found (July 21) off Burntwood Island (see Ring-billed Gull description for details). LPE: one adult in full alternate plumage (June 11). CI: Colonial nester. Sensitive to disturbance. Comments:

Although locally abundant (near nesting colonies), overall, this species was observed far less often in the Park than Ring-billeds.

Herring Gull: BSI, NSLA, LPE; No evidence of breeding [X]; Uncommon; Six records involving 11 individuals. BSI: one bird on both June 7 and 8. NSLA: approximately 5 adults on July 20 (WN). LPE: a total of 4 birds (3 separate records) all on June 11th. CI: NTM-F. Colonial nester. Sensitive to disturbance. Comments: Soper (1942, p.56) considered it "a locally abundant breeding bird", while for the Kazan Upland, Wallis and Wershler (1984, p.63) found it to be their "commonest gull species". Described by Höhn (1973, p.16) as a "common summer resident" of the Lake Athabasca region that breeds on islands within the Lake. Given these assessments of this species' former abundance, it appears possible that the Herring Gull population of the Region may be declining and/or, has undergone a change in distribution. Further survey work will be required before the validity of this speculation can be properly evaluated.

Caspian Tern: BSI, NSLA; No evidence of breeding [X]; Uncommon; Three records involving *ca.* 9 birds. BSI: two in flight on June 6th, and 4 overhead on June 8th. NSLA: "several observed over the lake" on July 20th. CI: NTM-O. Colonial nester. Sensitive to disturbance (Cuthbert and Wires, 1999). Comments: The above-listed individuals are all assumed to be part of the species' major nesting colony on Egg Island (see Section 2.7). Increased sightings on the PAD may represent a 'spill over' effect from the expansion of this colony (Thomas, 2002). Wallis (1984) also reported small numbers of this species from NSLA ("two+" and "a couple" on July 2nd and July 3rd, 1984, respectively), and a small island near BSI (three on July 5, 1984).

Common Tern: BSI, NSLA; Confirmed breeder [NE, NY, FL]; Uncommon; Two records. On June 8th, three terns – believed to be of this species – flew over the NE portion of Bustard Island. NSLA: A small nesting colony, consisting of *ca.* 12 nests (containing eggs, hatchlings or half-grown juveniles) was discovered (July 20) on a rocky islet near Cypress Point (WN, DV). CI: NTM-O. Sensitive to disturbance. Colonial nester. Comments: Höhn (1972, p.30) reports finding "several pairs (and) two nests with eggs" of this species on an islet off Whitesand Point (July 2, 1971), plus two other "nests with eggs on an adjacent islet". Wallis (1984) found "numerous Common Terns nesting on (*an*) island", offshore from NSLA at least 3.2 km east of Fidler Point.

(Arctic Tern): (NSLA), (BSI?); No evidence of breeding [X]; Rare; CI: NTM-O; Colonial nester. Sensitive to disturbance. Comments: On July 3, 1984, Wallis (1984) noted the presence of "some Arctic Terns" at a nesting colony of Common Terns, on an island east of Fidler Point (see 'Comments' for previous species). He also observed "some probable Arctic Terns" on the islets just east of BSI on July 5, 1984. "Considerable numbers" (Höhn, 1972) of Arctic Terns nest on islands in the Saskatchewan portion of Lake Athabasca, and in the dunefields south of the latter's southern shore

between Beaver Point and William River (Nero, 1961, and 1963, pp.89-91; Höhn, 1972, pp.30-31, and 1973, p.C6, fig. 3). To date, the only confirmed nesting records for this species in Alberta are from the Athabasca Dunes Ecological Reserve, *ca*. 60 km SSE of Ft. Chipewyan (Thomas and Carroll, 2001).

[*Forster's Tern*]**:** BSI; Hypothetical for the Park; No evidence of breeding [X]; Casual; On June 8th, a tern showing the fieldmarks for this species was briefly observed in flight over Bustard Island (RT). CI: NTM-F. Colonial nester. Sensitive to disturbance. Comments: Within Alberta, this species is normally not encountered north of Utikuma Lake, although its range does seem to be expanding northward (McGillivray and Semenchuk, 1998, p.140). Pinel *et al.* (1991, p.163) list a record by E. Kuyt (on August 13, 1978) of "3 young flying with 3-4 adults" from the Birch River Delta (Lake Claire, WBNP). Because of the brevity of our sighting, the problems inherent in differentiating Forster's from Common Terns (*e.g.*, Kaufman, 1990), and the vagrant status of Forster's Tern in the Lake Athabasca region, we prefer to regard the occurrence of this species in the Park as unconfirmed.

- **OWLS (Strigidae)**

  Short-eared Owl: BSI; Probable breeder [P]; Rare; Two records, both for Bustard Island on June 8th: (1) a pair hunting along the northern margins of BSI's larger lake and over the adjacent sedge marsh; (2) one in flight near our campsite on the east side of the island. (The latter bird is presumed to be one of the pair observed earlier in the morning). CI: NTM-F; Species of Special Concern (COSEWIC, 2002). Declining across breeding range in North America. Irruptive. Comments: ABBA (p.155) shows no data for this species on the Canadian Shield, and Höhn (1973, p.18) has "no definite records" east of WBNP.

- **NIGHTJARS (Caprimulgidae)**

  Common Nighthawk: BSI, (NSLA), LPE; (Probable) breeder [P]; Uncommon; Four records representing 6 or 7 birds, all observed in flight at dusk and dawn. BSI – records for June 6 and 9; LPE – records for June 11 and 12. Courtship activity (display dives) only observed outside the park (June 11th, over Lapworth Point). CI: NTM-O; Is undergoing a significant, long-term decline across the Prairie Provinces (based on BBS data). Comments: A pair and another individual were noted by Wallis (1984) in the Fidler Point area on July 3, 1984.

- **WOODPECKERS (Picidae)**

  Hairy Woodpecker: NSLA; Possible breeder [H]; Rare; An adult (sex undetermined) observed on July 22nd, constitutes our lone record. CI: Resident. Cavity nester. Area sensitive. Mature/old-growth forest dependent. Comments: ABBA (p.172) shows no breeding records for this species on the Kazan Upland. Soper (1942, p.63) found it to be "of rather meagre occurrence" in WBNP and cited evidence that some leave the Region in winter. Woodpecker workings noted in a birch snag on Bustard Island (June 8) are attributable to either this species or Downy Woodpecker.

(Three-toed Woodpecker): (NSLA); Probable breeder [P]; Rare; CI: Resident. Irruptive. Cavity nester. Old-growth dependent. Comments: On July 2nd, 1984, Wallis (1984) recorded a pair of this species in an area of burnt forest near Fidler Point (NSLA). Although no birds were observed in 2001, the characteristic workings of either Three-toed and/or, Black-backed Woodpeckers, *i.e.*, "red-barking" (*cf.* Thomas, 2000a) of spruce trees were noted on BSI (June 7; several trees) and east of Lapworth Point (June 12; a single tree).

Northern Flicker: BSI, NSLA, LPE; Confirmed breeder [ON]; Fairly Common; Seven records (5 visual, 2 vocalizations), each of a single bird. All sightings were of the expected, Yellow-shafted race. BSI: 3 records (one apiece on June 6-8, incl.), the first being of an active nest hole, in an aspen on the east side of the island. NSLA: 3 records, *i.e.*, June 11, July 18 and July 22nd. CI: Cavity nester; Undergoing gradual, significant, long-term decline across Canada (*e.g.*, Dunn *et al.*, 2000). Comments: Obviously, by far the commonest representative of its family in the Park. Soper (1942, p.62) considered it "an abundant summer resident" in WBNP for which he gave 'extreme' arrival and departure dates of May 3rd and September 20th, respectively.

Pileated Woodpecker: This species' distinctive excavations were noted only once within the Park – NSLA, July 22nd (WN). Evidence of its presence outside (but adjacent to) the Park, comprised an old hole at the base of a mature jack pine – LPE, June 12th. CI: Resident. Cavity nester. Keystone species. Area-demanding, forest-interior/old-growth forest specialist. Comments: Höhn (1972, p.35) characterizes it as "quite scarce" and has "no local breeding records" (for the Lake Athabasca area).

- **FLYCATCHERS (Tyrannidae)**

  Olive-sided Flycatcher: NSLA; Possible breeder [H]; Rare; One aural record of a single bird (June 11). CI: NTM-O. Has undergone significant, long-term decline in Canada over the last 30 years (Dunn *et al.*, 2000). Comments: Soper (1942, p.67) remarks on this species' preference for "brulé country (*i.e.*, burnt over forest) adjacent to green timber". Comments: Wallis (1984) found single (different) birds in the Fidler Point area on both July 2nd and 3rd, 1984. The latter individual was observed at the "edge of a black spruce bog."

  [*Yellow-bellied Flycatcher*]: A single bird giving a 'Least Flycatcher-type' vocalization was encountered on BSI (June 8) in an area of black spruce bog with birch snags and patches of willows. In Alberta's boreal forests, Yellow-bellied Flycatcher is the Empidonax species most likely to be present within such habitat. However, since the bird in question was never seen and only sang briefly, this species must (at best) be considered hypothetical for the Park.

  Alder Flycatcher: BSI, (NSLA), LPE; Possible breeder [H]; Fairly common; Six records involving at least 9 birds. BSI: one heard (June 7) and several seen or heard (June 8), all in backshore willow

thickets. LPE: two heard in back-beach willow thickets (June 11) and three different birds heard calling from a Beaver-dammed pond complex (June 12). CI: NTM-O. Comments: One reported by Wallis (1984), from backshore willows just east of Fidler Point, on July 3rd, 1984.

Least Flycatcher: BSI, NSLA, LPE; Possible breeder [H]; Fairly common; Five or six records representing about 8 individuals. On BSI (June 7 and 8) found in backshore aspen-dominated mixedwoods and associated deciduous thickets. Also reported from mature paper birch-dominated mixedwoods within NSLA (June 11). No July records. CI: NTM-O. Some population declines in Canada over the last decade (Dunn *et al.*, 2000).

(Eastern Phoebe): NSLA; Possible breeder [H]; Rare; CI: NTM-F. Comments: Included here on the strength of Wallis's (1984) record of one "in mixed birch pine" forest, near Fidler Point, on July 2nd, 1984. Höhn (1973) characterizes this species as a "fairly common" summer visitor (that breeds) in the Lake Athabasca region.

- **VIREOS (Vireonidae)**

  (Blue-headed Vireo): NSLA, BSI; Possible breeder [H]; Rare; CI: NTM-O; Old-growth coniferous forest dependent. Comments: Single birds reported by Wallis (1984); (a) along NSLA at least 1.6 km east of Fidler Point, "in black spruce/pine edge" (July 3, 1984) and, (b) on BSI (July 6, 1984) without details. Considered an "uncommon summer resident" (of the Lake Athabasca region) that "probably breeds", by Höhn (1973).

  Red-eyed Vireo: BSI, NSLA, LPE; Possible breeder [H]; Common; Fourteen records (*ca.* 75% aural) involving about 16 birds (with perhaps 25% duplication). Shows a marked preference for deciduous-dominated mixedwoods. Dates/locations break down as follows: BSI: June 6-8 inclusive; NSLA: June 11; LPE: June 11 and 12. CI: NTM-O. Area sensitive. Comments: The boreal forest's most indefatigable vocalist! Remarkably, Wallis (1984) did not encounter it within the Park.

- **JAYS, CROWS & ALLIES (Corvidae)**

  Gray Jay: BSI, NSLA, LPE; (Confirmed) breeder [FL]; Common; Nine records involving about 15 different birds. BSI: a single bird heard in a black spruce/Labrador tea bog (June 8); NSLA: 2 or 3 adult birds observed on both July 18 and 24th, and up to 5 on July 22nd; LPE: two, 'sooty' juveniles and one adult (June 11), one heard (June 12). CI: Resident. Declines noted across Canada over the last decade (Dunn *et al.*, 2000). Comments: Sightings of juveniles east of Lapworth Point on June 11th confirmed breeding in general area. Breeding within the Park was established by Wallis (1984) who observed a family near Fidler Point, on July 3, 1984.

American Crow: BSI, BWI, NSLA; (Probable) breeder [P]; Fairly common (BSI) to uncommon (NSLA). BSI: six or seven records (June 7 and 8) probably involving up to a dozen different individuals. Observations range from single birds, to a party of 6 feeding on a sandy beach (June 8, RH). NSLA: Single adults seen on July 20 and July 22 (WN). CI: A beneficiary of forest fragmentation. Increasing. Comments: Fairly common on BSI, but decidedly uncommon further north within NSLA. Wallis (1984) has a record for BWI, of a pair (July 4th, 1984).

Common Raven: BSI, BWI, NSLA, LPE; Confirmed breeder [CF, NY]; Common; About 10 records concerning 15+ individuals. A nest containing young was noted (June 6-8, incl.) on the east side of Bustard Island. It was built in an aspen growing in an old (dry) Beaver pond (DV). Another nest was located on a cliff near Fidler Point (NSLA). Within it were four, almost fully-fledged young (June 11). On the same date, also in the vicinity of Fidler Point, an adult raven that was scolding a perched Bald Eagle, was heard emitting an unusual, Northern Pygmy Owl-type call. Only one raven was reported from BWI (July 21) although, as at a number of other locations within the Park, tracks made by this species were present on a sandy beach. CI: Resident.

- **SWALLOWS & MARTINS (Hirundinidae)**

  Tree Swallow**:** LPE; Possible breeder [H]; Rare; One record: on June 12th, vocalizations of 2 or 3 individuals were heard in a backshore, Beaver pond complex located west of the park's southwestern 'corner' (WN). CI: NTM-O. Cavity nester.

- **CHICKADEES (Paridae)**

  Black-capped Chickadee: BSI; Probable breeder [P]; Rare; Our solitary record is of a pair heard on Bustard Island (June 8). CI: Resident. Cavity nester.

  Boreal Chickadee: BWI, NSLA; Possible breeder [H]; Fairly common; Six records (representing at least 12 individuals) all for July and all, except one – a single bird on BWI (July 21, DV) – are from NSLA. Dates of NSLA observations = July 17, 18, 22 and 24. CI: Resident. Cavity nester. Has undergone significant declines across Canada over the last three decades (Dunn *et al.*, 2000, table 4). Dependent on old-growth coniferous forest.

- **NUTHATCHES (Sittidae)**

  Red-breasted Nuthatch: BSI, NSLA; Possible breeder [H]; Rare; Two records only – both vocalizations and both of single birds. BSI (June 8); NSLA (July 17, WN). CI: Resident. Cavity nester. Irruptive (*cf.* Koenig, 2001). Dependent on old-growth coniferous forest (*cf.* Steeger and Hitchcock, 1998). Comments: For WBNP, Soper (1942, p.71) considered this species "distinctly migratory" and "completely absent in winter". Whether this holds for the Park is unknown. Wallis (1984) reported one bird singing at his (NSLA) campsite on July 4, 1984.

- **KINGLETS (Regulidae)**

  Ruby-crowned Kinglet: BSI, (NSLA); Possible breeder [H]; Uncommon; Five records (3 aural, 2 visual), all from BSI (June 7-8) and all of single birds. CI: NTM-F. Comments: Höhn (1973, p.22) considers this species a "common summer resident" (that breeds) in the Lake Athabasca region. Two (separate) individuals recorded by Wallis (1984) on July 3rd, 1984, east of Fidler Point, were in "black spruce/pine edge" and (singing) at the "edge of a black spruce bog."

- **BLUEBIRDS & THRUSHES (Turdidae)**

  Swainson's Thrush: BSI, NSLA, LPE; Possible breeder [H]; Fairly common; Eight records, probably only involving about 5 different individuals. All records comprise single birds. Dates and locations were as follows: BSI: 6 records (June 7-9, incl.); NSLA: one record, July 22 (WN); LPE: one record (June 11). All records were aural. CI: NTM-O. Forest-interior specialist. Wallis (1984) noted at least two individuals in the vicinity of Fidler Point on July 2nd, 1984, and another east of the Point, the following day.

  Hermit Thrush: BSI, NSLA; Possible breeder [H]; Rare; Only two records, each involving a single bird, as follows. BSI (June 7): one singing in a (backbeach) stand of mixedwood forest; NSLA: one adult observed on July 22 (DJ). CI: NTM-O. Forest-interior specialist. Comments: As for the previous species, Höhn (1973, p.22) describes this thrush as a "fairly common summer resident" which breeds in the Lake Athabasca region. In his notes for July 2nd, 1984, Wallis (1984) refers to the presence of "Hermit Thrushes in pine woods and burn," near Fidler Point.

  (American Robin): (NSLA); Possible breeder [H]; Rare; CI: NTM-F. Comments: Not recorded in June-July, 2001. Included here on the basis of Wallis's (1984) report of one singing at his camp, east of Fidler Point, on July 4, 1984. Höhn's (1973) assessment that this species is a "fairly common" breeder throughout the Lake Athabasca region, is belied by our failure to find it in the Park, and its apparent absence from Marguerite Crag and Tail WPP during June-July, 2000 (Thomas and Carroll, 2001).

- **WAXWINGS (Bombycillidae)**

  (Bohemian Waxwing): (NSLA); No evidence of breeding [X]; Rare; CI: Resident. Irruptive. Comments: The only known record of this species for the Park is the report by Wallis (1984) of "Bohemian Waxwings (passing) over" his camp, east of Fidler Point, on July 3rd, 1984. For the Lake Athabasca / PAD region, Höhn (1972) considers this species "no doubt in part a year-round resident," that "breeds" and is "fairly common" (Höhn, 1973, p.C23).

- **WOOD-WARBLERS (Parulidae)**

  Tennessee Warbler: BSI, NSLA, LPE; Possible breeder [H]; Common; About 18 records (almost exclusively aural), involving about 20-25 individuals. Two-thirds of our records are for BSI (June 7-9, incl.) where this species favoured damper areas of second growth and, in particular, willow thickets. One was also heard in a back-beach stand of spruce/birch forest. Our only NSLA record (June 11) of "several", and five LPE records (June 11-12) also came primarily from backshore willow thickets. CI: NTM-O. Spruce budworm specialist. Irruptive. Declining. Comments: Höhn (1973, p.45) identified this species as the region's "most abundant warbler".

  (Orange-crowned Warbler): LPE, (NSLA); Possible breeder [H]; Rare (uncommon); A single bird singing in an aspen/black spruce/jack pine/paper birch mixedwood stand on the flanks of a granitic outcrop, located just west of the Park's mainland sub-unit, constitutes our sole record (June 12). CI: NTM-F. Comments: Wallis (1984) has three NSLA records, all of single birds, as follows: July 2nd, one in willows at Fidler Point; July 3rd, one in willows east of Fidler, and another at the willow/sedge flats edge further to the east.

  Yellow Warbler: BSI, NSLA, LPE; Probable breeder [P]; Common; A dozen records (almost all aural), representing approximately 16 individual birds. This species was most frequently encountered in backshore willow thickets on BSI. Records, dates and numbers are as follows: BSI: 10 records, June 6-9 inclusive, about 12 birds. NSLA: "several" heard on June 11. LPE: one heard, also on June 11th. No July records. CI: NTM-O. Comments: None recorded by Wallis (1984).

  Yellow-rumped Warbler: BSI, BWI, NSLA, LPE; Probable breeder [P]; Common; Found in most forest types including mixedwood, jack pine and black spruce stands. The Park's most widespread and abundant warbler. Our total of roughly 20 records involves about 30-35 individuals. Locations, numbers and dates are as follows: BSI: 10 records, up to 14 birds (June 7-8), "numerous" in jack pine stands (July 24, DV). BWI: a single individual, July 21 (DV). NSLA: 5 records, 11 birds (June 11; July 17, 18 and 22). LPE: 4 records, about 4 birds (June 11-12). CI: NTM-F. Comments: All our records pertain to the expected 'Myrtle' race.

  Palm Warbler: NSLA, LPE; Possible breeder [H]; Rare; Only two records: one inside, and one for just outside the Park, as follows. NSLA: One adult observed (race undetermined) July 22 (WN). LPE: a single bird, heard only, June 12. CI: NTM-O. Comments: For the Lake Athabasca region, Höhn (1973, p.24) regards this as a "fairly common" breeder. On the Kazan Upland its preferred habitats are black spruce-tamarack bogs and young, second-growth forest on previously burned areas (Wallis and Wershler, 1984, p.65). Wallis (1984) found one in pine forest, just east of Fidler Point, on July 3rd, 1984.

Mourning Warbler**:** LPE; Possible breeder [H]; Rare; Two records, both on June 11th, of single birds heard singing in the understorey of backshore, mixedwood forest, west of the Park's (mainland sub-unit's) southwest 'corner'. CI: NTM-O. Area sensitive. Decreasing. Comments: Höhn (1973, p.25) believed it to be absent east of Fort Chipewyan.

- **TANAGERS (Thraupidae)**

  (Western Tanager): (NSLA); Possible breeder [H]; Rare; CI: NTM-O. Old-growth forest dependent. Declining in parts of North American range. Comments: One, reported singing near his NSLA campsite on July 4th, 1984 by Wallis (1984), is the only known record for the Park.

- **SPARROWS & ALLIES (Emberizidae)**

  Chipping Sparrow: BSI, BWI, NSLA, LPE; Confirmed breeder [NE]; Common; About 22 records representing at least 30 individuals, as follows: BSI: 11 or 12 records, about 15 birds (June 7-9 incl.), including a nest with 4 eggs found on June 7 (DV); BWI: one record, including "7 or 8 in spruces", July 21 (DV); NSLA: Two records of single birds on June 11; another of a pair (July 18) in a backshore clump of birch (LA); LPE: 5 records representing 6 individuals (June 11-12), including a pair (on the earlier date) seen in a backshore willow thicket. CI: NTM-F. Has declined in Canada over the last two decades (Dunn *et al.*, 2000). Comments: The most abundant and widespread sparrow species found in the Park. Wallis (1984) reports the occurrence of "family groups" near Fidler Point on July 2nd, 1984.

  Clay-colored Sparrow: (NSLA), BWI; Possible breeder [H]; Rare, (Uncommon); Only one record (July 21) of "5 or 6" in backshore willows on Burntwood Island (DV). CI: NTM-O. Declining in Canada (Downes *et al.*, 2000). Comments: Wallis (1984) has four records, involving at least 5 individuals, from NSLA (east of Fidler Point) on July 3rd, 1984. Habitats in which he found this species include a willow/alder thicket, "birch pine edge", and willows near a large dune field.

  (Le Conte's Sparrow): (NSLA), LPE; Possible breeder [H]; Rare; Two records, both from outside the Park west of Fidler Point, as follows: (1) "several" heard singing in an area of backshore sedge/willow flats (June 11); (2) "vocalizations heard" in the vicinity of a Beaver pond complex (July 20; WN). Comments: On July 3rd, 1984, at least one Le Conte's was found by Wallis (1984), alongside a stream in a large sedge meadow, east of Fidler Point. Regarded as a "local summer visitor" (that breeds in the Lake Athabasca region) by Höhn (1973, p.27).

  Song Sparrow: BSI, BWI, NSLA, LPE; Probable breeder [C]; Fairly common; About a dozen records in all (though with *ca.* 33% duplication), concerning a total of at least 13 different birds, that break down as follows: BSI: 8 records, involving 5 or 6 individuals (June 7-8), including a bird performing a song (display) flight; BWI: one bird found on July 21 (DV); NSLA: "several vocalizations heard" on July 17 (WN); LPE: two records for June 11, involving a total of 3 or 4 birds. CI: Has declined in Canada over

the last decade (Dunn *et al.*, 2000). Comments: In the Park (as elsewhere), favours deciduous shrubbery/tangles – especially willow thickets – along lakeshores and watercourses, but was also seen in beds of *Phragmites*.

Lincoln's Sparrow: BSI, NSLA, LPE; Possible breeder [H]; Uncommon; Only 3 records (two within, and one outside the Park) for a total of 4 or 5 birds, as follows: BSI: one singing (June 7) on a black spruce snag in the fen south of the island's larger lake (DV); NSLA: one adult heard on July 20 (WN); LPE: two or three heard in the vicinity of a Beaver pond complex (June 11). CI: NTM-O. Comments: On July 3, 1984, east of Fidler Point, Wallis (1984) recorded at least 3 individuals of this species, one of which was found in "low birch along beach." A "fairly common" breeder in the Lake Athabasca region according to Höhn (1973, p.27).

Swamp Sparrow: BSI, BWI, NSLA, LPE; Confirmed breeder [FL]; Fairly common; Roughly 10 records, involving perhaps as many as 14 different birds, which break down as follows. BSI: 4 or 5 records concerning 3 adult individuals in willow thickets (June 7-8), plus 3 young found dead (July 27) (in snap traps) at the south end of BSI's larger lake (DV); BWI: one bird (July 21) in a lakeshore reed patch (DV); NSLA: a total of 2 or 3 heard singing (one on June 11; one or two on July 22); LPE: several heard on June 11, and vocalizations also heard (July 20) in a backshore Beaver pond complex (WN). Comments: Regarding this species, Höhn (1972, p.56) remarks that there is "apparently no proof of local breeding".

White-throated Sparrow: (NSLA), BSI; Possible breeder [H]; Uncommon; About 7 records (all from willow thickets or the understorey of deciduous-dominated mixedwood stands on Bustard Island) involving 8-11 individuals. All our records are from June 6-8 (inclusive) with the exception of one (of a single bird) for July 24 (DV). CI: Declining in the northern portion of its North American range (Downes *et al.*, 2000). Comments: Wallis (1984) has two records, both of single birds – one in willow, and the other in shrubby birch/willow – from east of Fidler Point (NSLA), on July 3rd, 1984. Considered common in the Lake Athabasca region by Soper (1942) and Höhn (1972, 1973) with the exception of the Kazan Upland. Wallis and Wershler (1984, p.66) describe their records as being the first for this species from the latter area.

Dark-eyed Junco: BSI, NSLA; Possible breeder [H], (confirmed breeder [FL]); Uncommon; Our 3 records are as follows: (1) BSI: June 7, one in a spruce stand away from the lakeshore (DV), a possible second bird was also heard on this date; (2) NSLA: July 19, one adult observed in the uplands NW of Whitesand Point (LA), and (3) NSLA: July 24, two adults seen in open jack pine / birch forest (WN). Comments: "Family groups" of juncoes were observed near Fidler Point on July 2nd, 1984 by Wallis (1984). Considered a common summer resident / breeder by Höhn (1973, p.C27) but one that

exhibits a patchy distribution (Höhn, 1972, p.53). "Slate-coloured Junco" is the expected race in this portion of Alberta.

- **BLACKBIRDS, ORIOLES & ALLIES (Icteridae)**

  Red-winged Blackbird: LPE; Possible breeder [H]; Rare; Our sole record is from the much-mentioned Beaver pond complex located west of the southwest 'corner' of the Park's mainland sub-unit; "several" Red-wingeds were observed at this location on July 22 (DJ). CI: NTM-F. Has declined in Canada over the last two decades (Dunn *et al.*, 2000). Comments: Listed by Höhn (1972, 1973) as being a common summer resident (that breeds) throughout the region, that is especially abundant in the Peace-Athabasca Delta.

- **FINCHES (Fringillidae)**

  (Red Crossbill): (NSLA); Possible breeder [H]; Rare; CI: Resident. Irruptive. Specializes on the seeds of Jack Pine (cones). Comments: Owes its place on the Park checklist to Wallis's (1984) reports of Red Crossbills "feeding in pine" near Fidler Point (July 2nd, 1984), and passing over the NSLA (east of Fidler Point) on July 3rd, 1984.

  Pine Siskin: NSLA; Possible breeder [H]; Rare, (uncommon); Our sole record is from the mainland, where "several vocalizations" were heard on July 22 (WN). CI: Irruptive. Vacates the region during the winter. This species has declined in Canada during the last decade (Dunn *et al.*, 2000). Comments: Wallis (1984) has several records (for July 3rd, 1984) of siskin flocks passing over the NSLA (east of Fidler Point).

2.4 Fidler-Greywillow Checklist: Summary and Discussion

The Fidler-Greywillow checklist comprises a total of 99 species representing 29 families. Short definitions of the 5 categories of records used to compile this list (*cf.* Section 2.2), and the number of species per category, are given below:

Category		No. of Species
1	(Recorded in Park during June – July, 2001)	70
2	(Previously recorded [by others] within Park)	14
3	(Recorded adjacent to Park in 2001)	10
4	(Presence in Park inferred from indirect evidence)	1
5	(Hypothetical for the Park)	4
	TOTAL	**99**

Pileated Woodpecker is the lone Category 4 species, and the four species whose occurrence in the Park is considered hypothetical, are: Willow Ptarmigan, Western Sandpiper, Forster's Tern and Yellow-bellied Flycatcher.

With respect to the various 'classes' of Breeding Status and Abundance (*cf.* Section 2.2), those species composing Record Categories 1, 2 and 3 (N = 94) break down as follows:

Breeding Status {No. of Species (% of species total)}			**Abundance** {No. of Species (% of species total)}		
No evidence	23	(24.5)	Casual	4	(4.3)
Possible	40	(42.5)	Rare	42	(44.7)
Probable	14	(14.9)	Uncommon	18	(19.1)
Confirmed	17	(18.1)	Fairly Common	17	(18.1)
			Common	13	(13.8)

Thus, breeding is probable or confirmed for only one-third (33%) of these 94 species, while slightly less than one-third (31.9%) can be regarded as Fairly Common or Common. These figures reflect the fact that **average** population densities for most bird species are low across NE Alberta's Boreal Forest and Shield Natural Regions (*cf.* Thomas and Carroll, 2001).

The complete Park birdlist (N = 99) can also be broken down according to its component species' residency/migratory status:

Status	No. of Species	(% of species total)
Residents	11	(11.1)
Winter Visitors	1	(1.0)
Short-distance Migrants	26	(26.3)
Neotropical Migrants (NTMs) – Facultative	26	(26.3)
Neotropical Migrants (NTMs) – Obligate	35	(35.3)
Total NTMs	61	(61.6)

Although the Park's checklist is far from complete, it is worth noting that the above-listed proportions of residents (11.1%) and Neotropical Migrants (61.6%) closely resemble those of many other local (Boreal) northern Alberta avifaunas, as well as the equivalent values for the Boreal avifaunas of Alberta and Canada as a whole (*e.g.*, Thomas, 1994; author's unpublished data). The small number of resident species is a function of the length and severity of the region's winters.

Dividing the entire Park checklist into the four major groups of birds regarded as the "pillars" of the North American Bird Conservation Initiative (NABCI) yields the following figures:

Bird Group	No. of Species	(% of species total)
Waterfowl	15	(15.1)
Waterbirds	17	(17.2)
Shorebirds	15	(15.1)
Landbirds	52	(52.5)

Seven of the Park's Landbird species (*e.g.*, Red-winged Blackbird) are wetland-dependent during the breeding season. Adding these to the list of Waterbirds changes the two groups' totals to: Waterbirds = 24 (24.2%); Landbirds = 45 (45.5%).

Concerning their risk status, only one Fidler-Greywillow species is listed by COSEWIC (2002), namely Short-eared Owl – a Species of Special Concern. A further 11 species have been classified as "Sensitive" (*i.e.,* …"may require special attention or protection to prevent it from becoming at risk.") by Alberta's Fish and Wildlife Division (AFWD, 2001). They are: Bald Eagle, Caspian Tern, Common Nighthawk, Forster's

Tern, Golden Eagle, Northern Goshawk, Pileated Woodpecker, Sandhill Crane, Upland Sandpiper, Western Tanager and White-winged Scoter.

To date, of the WPP's 84 Category 1 plus 2 species, 12 have only been recorded from islands within Lake Athabasca (*i.e.*, Red-necked Grebe, Snow Goose [but see Section 2.8], Blue-winged and Green-winged Teal, Ring-necked Duck, White-winged Scoter, Northern Harrier, Sanderling, Pectoral Sandpiper, Franklin's Gull, Short-eared Owl and Black-capped Chickadee). Records of another 19 (*viz.* Double-crested Cormorant, Red-tailed Hawk, Golden Eagle, Greater Yellowlegs, Upland Sandpiper, Hairy Woodpecker, Olive-sided Flycatcher, Palm Warbler, American Coot, Solitary Sandpiper, Three-toed Woodpecker, Eastern Phoebe, American Robin, Bohemian Waxwing, Western Tanager and Red Crossbill), have been restricted to the mainland (NSLA) thus far. Obviously, the composition of both these lists will change as 'new' species are added, and our knowledge of bird distribution within the Park improves.

The ornithological fieldwork conducted for this project in June-July, 2001, yielded a number of noteworthy records. These records, and a brief statement explaining their significance (see individual Species Accounts for more detail), are as follows: Double-crested Cormorant (regional rarity); Snow Goose (late migrant, east of main migration route); Golden Eagle (rare in region); Merlin (no ABBA records for Lake Athabasca islands / Kazan Upland); Upland Sandpiper (regional rarity); Parasitic Jaeger (rare in province; uncommon-to-rare in region during summer); Mew Gull (uncommon in province; uncommon-to-rare on Lake Athabasca in summer); Forster's Tern (vagrant to region; well north of established range in province); Short-eared Owl (no data in ABBA, or records in Höhn [1973] for region); Mourning Warbler (no Shield records in ABBA; absent east of Ft. Chipewyan according to Höhn [1973]); and, Swamp Sparrow (first confirmed breeding record for Lake Athabasca islands, and second such record [*cf.* ABBA] for region).

On the negative side of the balance sheet, the 2001 field team experienced some notable avian 'misses' in Fidler-Greywillow. For example, we failed to find any of the following species recorded in the Park by Wallis (1984): Blue-headed Vireo, American Robin, Western Tanager, Eastern Phoebe, Solitary Sandpiper, Bohemian Waxwing and Red Crossbill. Other species we expected (to a greater or lesser degree) to encounter, but did not, included: other grebe species (particularly Horned); Lesser Scaup; Osprey; Peregrine Falcon; American Kestrel; Ruffed Grouse; other owl species; Bonaparte's Gull; Belted Kingfisher; Yellow-bellied Sapsucker; Downy Woodpecker; Eastern Kingbird; other vireo species; Cedar Waxwing; Northern Waterthrush; Wilson's Warbler and Common Grackle. However, Soper's (1942) phrase "characterized by capricious distribution" – which he applied to the occurrence of Bohemian Waxwing within WBNP – is appropriate to many other bird species on the Shield. Wallis (1984) for instance, had no Park records of Canada Goose, chickadees, Red-eyed Vireo or Yellow Warbler – species (except for chickadees) found to be common at Fidler-Greywillow in 2001.

One question that begs an answer is ‘How many species are missing from the current checklist?’ Consideration of all migrants and winter visitors expected to occur within the Park (based upon comparisons with a new annotated avifaunal list for the PAD [Thomas, 2002]), indicates that the number of bird species recorded from this WPP will eventually total at least 170.

2.5 Annotated Checklist of Birds for La Butte Creek Wildland Provincial Park

NOTE: The area covered by this checklist can be formally defined as comprising: (1) all lands (and waters) encompassed by the current, legislated boundary of La Butte Creek WPP; (2) the eastern half of the Slave River (and any islands, or portions of islands, therein) adjacent to the entire western boundary of LBC Park (*i.e.*, that part of the Slave River east of a line drawn midway between the eastern boundary of WBNP [= the west bank of the Slave] and the western boundary of LBC [= the east bank of the Slave]; and, (3) the airspace overlying the (combined) above-described areas.

Species Accounts

- **LOONS (Gaviidae)**

  Common Loon: Probable breeder [P]; Rare; Two records, both for the upper end of La Butte Creek (LBC) on July 15; *viz*.: one adult at the east end of the Park (JG), and two adults on a waterbody (WN). CI: Sensitive to disturbance and vulnerable to environmental contamination. Comments: Often nests on small islands or Beaver lodges. Declining in eastern North America.

- **GREBES (Podicipedidae)**

  Pied-billed Grebe: Possible breeder [H]; Rare; Two records, both for 'Duck Lake' (Figure 4), of one heard on June 14, and (it or another) seen on June 15. CI: NTM-F. Undergoing significant, wide-scale, long-term decline in North America (Rodriguez, 2002). Comments: No Kazan Upland records for this species shown in ABBA (Semenchuk, 1992, p.37) or obtained by Höhn (1972), Wallis and Wershler (1984) or Erickson and McGillivray (1990). However, Höhn (1972, p.3) states that west of the Slave River its breeding range "appears to reach at least up to" the NWT / Alberta boundary.

  Horned Grebe: Probable breeder [P]; Rare; One record, of a pair sighted at 'Duck Lake' on June 15 (RT). CI: Declining throughout range in Alberta (AFWD, 2001). Comments: No Kazan Upland records for this species given in ABBA, but Wallis and Wershler (1984) found a "pair with newly hatched young" near Woodman Lake on July 9, 1983.

  Red-necked Grebe: Confirmed breeder [ON; FL]; Uncommon; Three records: one heard calling (from the general area of 'Duck Lake') on June 14; one sitting on a nest at a small lake north of La Butte Creek (July 12; DV); and, an adult with 5 chicks, seen on July 15, at the upper end of La Butte Creek (WN). Comments: This is the grebe species most likely to be encountered on the Kazan Upland.

Eared Grebe: Probable breeder [P]; Rare; Our only records concern a party of 4 that was observed on 'Duck Lake' on both June 14 and 15. CI: NTM-F. Colonial nester. Sensitive to disturbance. Comments: These appear to be the first Kazan Upland records of this species.

- **PELICANS (Pelecanidae)**

  American White Pelican: No evidence of breeding [X]; Rare; Just two records, both from the west boundary of the Park: June 13, three adults on the Slave River (WN); July 7, several flying along the Slave River (WN). CI: NTM-F. Colonial nester. Sensitive to disturbance and environmental contamination (*e.g.*, pesticides). Populations have rebounded since the mid-1970s. Comments: Individuals passing the Park are presumably derived from the Pelican Rapids colony (this species' northernmost breeding location, on the Slave River, 3 km upstream of Ft. Smith), which has been in existence since at least 1789 (Höhn, 1972, p.3).

- **HERONS (Ardeidae)**

  American Bittern: Confirmed breeder [FL]; Uncommon; Four records (two aural, two visual) as follows: June 14, one heard 'booming' north of La Butte Creek; June 15, one heard near 'Duck Lake' (DV); July 13, one adult seen flying over a wetland (WN); and, July 14, one downy immature observed on the edge of La Butte Creek, several kilometers upstream of its mouth (LA). CI: NTM-F. Area-demanding. Sensitive to disturbance. Declining due to habitat loss. Comments: Based upon a review of the literature, our July 14th observation appears to represent the first confirmed breeding record of this species for the Kazan Upland of NE Alberta.

- **GEESE, SWANS & DUCKS (Anatidae)**

  Canada Goose: Confirmed breeder [FL]; Fairly common; Six records involving approximately 24 adults and 20 goslings, as follows: June 13, one (heard) overhead; June 14, flock of 15 passing overhead; June 15, on middle reach of La Butte Creek (from first fork to above second fork; *cf*. Figure 3) 4 pairs encountered, accompanied by 3-4, 6, 0, and 10 goslings. CI: Alberta population is increasing.

  Gadwall: Possible breeder [H]; Uncommon; Only 3 records for two dates, involving 5 individuals: June 15, one male (in very worn or subadult plumage) on a small pond between La Butte Creek (LBC) and 'Duck Lake', plus 3 other (adult) males on 'Duck Lake' itself; July 8, one female observed on LBC (LA). CI: NTM-F. Comments: A small flock seen over Colin Lake on July 5, 1983 by Wallis and Wershler (1984, p.61) was thought by them to be the first Kazan Upland record. Numbers of this species have been increasing (from the mid-1950s to present) within the region as a whole (USFWS, 2001).

  American Wigeon: Confirmed breeder [FL]; Fairly common; Eight records, for a total of *ca.* 14 adults, but probably involving at most 8-10 different individuals. These records comprise: June 14, a pair on

'Duck Lake', and a pair plus a single male on LBC; June 15, five males on LBC, a pair and one male on 'Duck Lake'; July 12, "one adult with ducklings" (WN). CI: NTM-F.

Mallard: Confirmed breeder [FL]; Common; About 13 records (7 for June, 6 for July) involving totals of 20 adults (6 males, 14 females) and at least 25 ducklings. Observations were widely distributed throughout the Park, with birds being seen on various wetlands (including 'Duck Lake'), LBC, and in flight. In all, 7 females accompanied by ducklings were recorded on 5 different dates, namely: June 15; and July 6, 11, 12 and 15. The largest single group of ducklings reported was 8. CI: Populations not as robust as those of most other North American dabbling duck species.

Blue-winged Teal: Probable breeder [P]; Rare; Two records, both for June 14, of one pair on 'Duck Lake' and another pair on LBC. CI: NTM-O. Comments: Although Höhn (1973, p.9) characterizes this species as "rare (for the) Slave River Valley" and "unknown further east", ABBA (p.58) shows two confirmed breeding records on the Kazan Upland.

Northern Shoveler: Confirmed breeder [FL]; Rare; We have 4 records that may only involve a single breeding pair. They are: June 14, one male flying over 'Duck Lake'; June 15, the same or another male on 'Duck Lake'; and, on both July 9 and 10, an adult female accompanied by 5 ducklings was present on LBC. CI: NTM-F. Comments: ABBA (p.60) indicates only one confirmed Kazan Upland breeding record.

Northern Pintail: No evidence of breeding [X]; Rare; Only two records, both of flocks flying along the Slave River: 8 on July 11 (LA); and 15 birds on July 13 (WN). CI: NTM-F. North American population described as "struggling" (Miller and Duncan, 1999). Comments: No Kazan Upland records for this species shown by ABBA (p.57). Neither Wallis and Wershler (1984) nor Erickson and McGillivray (1990) encountered it during their fieldwork.

Green-winged Teal: Confirmed breeder [FL]; Uncommon; Five records comprising a total of 14 birds (5 males, 4 females and 5 young). On June 14, a pair was observed on 'Duck Lake', while on LBC another pair, a lone male, and a party of 2 males and 1 female were also seen. An adult female accompanied by 5 ducklings was noted at the upper end of LBC on July 15. CI: NTM-F.

Ring-necked Duck: Confirmed breeder [FL]; Fairly common; Ten records in total for June (14th and 15th), involving 14 adults (9 males; 5 females) that probably represent 7 or 8 different individuals. Almost all birds were seen on LBC except for single males on 'Duck Lake' and a small Beaver pond. On June 15, a female with 6 very small ducklings was noted on LBC. Our only July record is of a lone adult (sex unreported) at the upper end of LBC (WN). CI: NTM-F.

Lesser Scaup: Possible breeder [H]; Uncommon; Three records involving *ca.* 7 birds: June 14, one male on a small pond; June 15, four males on 'Duck Lake'; and July 12, "several" along LBC. CI: NTM-F. Undergoing widespread decline, but cause(s) uncertain (Austin *et al.,* 2000).

Bufflehead: Confirmed breeder [FL]; Fairly common; We have 11 records comprising 17 adults (14 females; 3 males) although, due to repetition, the actual number of individuals involved was probably only half that total. Nine of these records are for June (14-16, inclusive). Seventy percent of our sightings were made on La Butte Creek. An adult female was reported on July 12th; and on July 13th, a pair accompanied by 9 ducklings was found. CI: Cavity nester.

Common Goldeneye: Probable breeder [P]; Common; About 13 records, for a total of *ca.* 39 birds representing approximately 20-25 individuals. Apart from 3 records of (5) birds in flight, virtually all our reports are for LBC. Of the 36 goldeneye whose sex was noted, all except 3 were females. This species was recorded on the following dates: June 14-16 inclusive; and July 10, 12 and 13. CI: Cavity nester. Comments: One of the two (Mallard being the other) waterfowl species most frequently encountered with the Park.

Common Merganser: No evidence of breeding [X]; Rare; Only two records, both of small groups flying along the Slave River, as follows: June 16, one male and 6 females (RT); July 10, "several" (DM). CI: Cavity nester. Comments: Common on large Kazan Upland lakes in summer (*e.g.*, Wallis and Wershler, 1984, p.62) where it breeds.

Red-breasted Merganser**:** Possible breeder [H]; Rare; Only one record, of one adult, from outside the Park at Darwin Lake on July 15 (WN). Comments: ABBA (p.75) shows three confirmed breeding records for this species on the Kazan Upland.

Ruddy Duck: Probable breeder [P, C]; Uncommon; Three records, all from 'Duck Lake' and its environs, for a total of 13 birds (7 males, 4 females) that include at least 11 different individuals. June 14: 2 females on 'Duck Lake'; June 15: a female and two males (one displaying) at a small pond near 'Duck Lake' with, simultaneously, two males plus three pairs on 'Duck Lake' itself. CI: NTM-F. Comments: Höhn (1973, p.10) states this species is absent east of WBNP, Wallis and Wershler (1984) and Erickson and McGillivray (1990) failed to find it, and ABBA (p.76) has no Ruddy Duck records for the Kazan Upland.

- **HAWKS & EAGLES (Accipitridae)**

Bald Eagle: Possible breeder [H]; Fairly Common; About 9 records for the Park, totalling 11 birds which, owing to duplicate sightings, may involve only a handful of different individuals. Most of our reports concern birds in flight and, for the 10 that were 'aged', adults outnumbered subadults by 9 to 1.

Two records (June 16 and July 9) refer to single adults on the east bank of the Slave River, and the rest to lone birds soaring above or flying along LBC (except July 6: two adults and one subadult over the mouth of La Butte Creek [DV]). From outside the Park, there is a July 15 record at Darwin Lake of an adult and two possible juveniles in flight (DV). CI: Sensitive to disturbance. Comments: According to Wallis and Wershler (1984, p.62) this species' highest nesting density in Alberta is on the Kazan Upland, although Erickson and McGillivray (1990, p.90) believe this distinction actually belongs to the Bistcho Lake region. The PAD and its environs is also a provincial stronghold for this species (Thomas, 2002).

Northern Harrier: Possible breeder [H]; Uncommon; Seven records, all of single adults in flight over, or adjacent to, LBC. Of the six individuals identified to sex, 5 were males. The dates of our sightings are: June 14 and 15; July 8, 9, 12 and 13. Conceivably our records could all refer to a single pair. Of most interest is the July 8 report of a male attacking a duck near La Butte Creek (LA). CI: NTM-F. Believed to be decreasing. Comments: At best, this species is of rare occurrence on the Kazan Upland. None were reported by Höhn (1972), Wallis and Wershler (1984) or Erickson and McGillivray (1990), and ABBA has just a single "Possible breeding" record (from the Slave River Valley). The PAD is thought to represent a provincial center of abundance for this species (Thomas, 2002).

Sharp-shinned Hawk: Confirmed breeder [CF]; Uncommon; All of our 4 records involve single adults in flight. Dates / locations are as follows: June 14, in (creekside) 'gallery' forest (DV); July 10, near the mouth of LBC (WN); July 12, a bird carrying prey (WN); and July 13, no details (DJ). CI: NTM-F. Comments: Wallis and Wershler (1984, p.62) believed their record (one adult at Colin Lake, July 10, 1983) to be the first for the Kazan Upland, although Höhn (1972, p.5; 1973, p.11) considered it a "scarce breeding bird of the region".

Northern Goshawk: Possible breeder [H]; Uncommon; Each of our 4 records concerns a single adult: June 16, a large bird (believed to be a female) flew out of the Wildland Park across the Slave River (into WBNP) where it pursued a Northern Flicker (a favoured prey item); July 7, a female (quite probably the same bird as the previous record), seen flying over willows and aspen on the east shore of the Slave River (DV); also July 7, one noted in a Beaver dam complex (WN); and on July 8, a probable male was perched in an aspen overhanging LBC (LA). CI: Resident. Sensitive to disturbance. Area-demanding. Requires large tracts of intact mature / old-growth forest. Declining due to on-going habitat loss.

Red-tailed Hawk: Possible breeder [H]; Uncommon; About 6 records, all of single adults in flight, on the following dates: June 14; June 15 (two records); July 7, 10 and 14. CI: NTM-F. Has benefited from forest clearance/fragmentation. Comments: Höhn (1972, p.5) believed it to be absent from northeasternmost Alberta east of the Slave River Valley, while Wallis and Wershler (1984, p.62)

describe it as “very local” there. ABBA (p.87) shows only a single (“probable”) breeding record for the Kazan Upland.

Rough-legged Hawk: No evidence of breeding [X]; Casual; Two records, presumably of the same bird, seen in flight over LBC on July 10 (GD) and July 12 (TJ). CI: Irruptive; normally just a winter visitor to the province (and a spring and fall migrant across the Kazan Upland). Comments: Easily the most unusual and eyebrow-raising record to emerge from our fieldwork. At this season, the nearest Rough-legged Hawks should be located some 500 km NE of the Park. However, both observers are familiar with the species and confident of their identifications. In addition, remarkably, there is a precedent for a summer record in the region. According to Soper (1942, p.43), one was seen at Salt River, NW of Ft. Smith on June 25 (1907) by Seton.

- **FALCONS (Falconidae)**

  Merlin: Possible breeder [H]; Rare; Two July records, both of single adults: July 7 (TJ); and one harassing a Bald Eagle along the Slave River on July 9 (WN). CI: Resident. Comments: Höhn (1973, p.12) labels it a “fairly rare” breeding resident of the Lake Athabasca Region. ABBA (p.91) shows no records for this species on the Kazan Upland.

- **GROUSE & ALLIES (Phasianidae)**

  Ruffed Grouse: Confirmed breeder [FL]; Rare; Only 3 records: June 14, a male heard drumming in balsam poplar ‘gallery forest’; July 9, an adult with 8 chicks (BR); July 11, in a willow stand at the southwestern end of the Park, a female accompanied by 3 chicks (LA). CI: Resident. Populations exhibit ‘boom and bust’ cycles. Comments: Soper (1942, pp.46-47) states (for WBNP) that “birds of this latitude are in part migratory”. Considered “rare” east of the Slave River Valley by Höhn (1973, p.12).

  Spruce Grouse: Possible breeder [H]; Rare; Two records, involving two adults and a single adult, on July 7 (BR) and July 10 (GD), respectively. CI: Resident. Comments: At least 5, Kazan Upland, confirmed breeding records for this species are shown in ABBA (p.97). Piles of old grouse droppings were regularly encountered in the Park. Presumably, most of those found within black spruce and jack pine stands are attributable to this species.

  [*Willow Ptarmigan*]**:** There is a high probability that this species is a fairly regular winter visitor to (and/or, migrant through) the Park (*cf*. Soper, 1942; and Höhn , 1984). In the absence of confirmed observations, however, it must remain ‘hypothetical’ for the LBC checklist at present.

- **RAILS & COOTS (Rallidae)**

  Sora: Possible breeder [H]; Common; At least 9 records (all aural), probably involving a total of about 13-15 individuals. Heard in a variety of habitats throughout the Park, including: sedge meadows north

of the mouth of LBC; a Beaver pond complex, a saline meadow, and – in particular – from the wetlands adjacent to 'Duck Lake'. The dates for which we have records are: June 14 and 15, and July 7, 10, 11, 13 and 15. CI: NTM-F.

American Coot: Possible breeder [H]; Fairly common; Highly localized in its distribution within the Park. Three records for only two sites: 'Duck Lake' (June 14 and 15) where it was common (about 28 birds were counted on the latter date [RT]); and a wetland at the upper end of LBC (July 15), where "several" were observed (WN). CI: NTM-F. This species' population and range in central and northern Alberta appear to be expanding. Comments: Not reported by either Wallis and Wershler (1984) or Erickson and McGillivray (1990). Höhn (1972, p.17) states that "the coot is near the northern limit of its breeding range in the Lake Athabasca area." The Park's proximity to the Slave River Valley migration corridor is probably the key factor contributing to the presence of this species.

- **CRANES (Gruidae)**

  Sandhill Crane: Possible breeder [H]; Rare; Our lone record consists of one bird heard calling, adjacent to LBC, on June 15. CI: NTM-F. Sensitive to disturbance. Decreasing. Comments: Wallis and Wershler (1984, p.63) characterize this species as being "very local" in its Kazan Upland distribution. ABBA (p.110) gives no records for the Kazan Upland.

- **SANDPIPERS & ALLIES (Scolopacidae)**

  Greater Yellowlegs: Confirmed breeder [DD]; Rare; Only two records: June 15, one flying along the stagnant channel of a tributary to LBC; July 15, a very noisy and agitated adult, seen at the upper (east) end of LBC (WN). CI: NTM-O.

  Lesser Yellowlegs: Possible breeder [H]; Uncommon; Our three records are as follows: June 15, one calling / somewhat agitated bird flying over the 'Duck Lake' wetlands; July 13, an adult observed at the mouth of LBC (WN); and July 15, a single adult at the upper end of LBC (WN). CI: NTM-O. Has declined significantly in North America over the last 30 years (Rodriguez, 2002).

  Solitary Sandpiper: Possible breeder [H]; Rare; An adult seen on July 6th (KS), constitutes the Park's lone record. CI: NTM-O. Decreasing in Canada.

  Spotted Sandpiper: Confirmed breeder [CF]; Common; About 23 records (19 for June; 4 in July) involving an estimated 7 or 8 pairs. All records are for LBC apart from two June 16th observations (of a single, and a pair) along the east bank of the Slave River. Sightings were made on the following dates: June 13-16, inclusive; and July 8, 12 and 14. On June 14th, one adult was seen carrying food. CI: NTM-O. Undergoing a significant decline in Canada (Gratto-Trevor *et al.*, 2001).

Wilson's Snipe: Probable breeder [T]; Common; Approximately 13 records (predominantly aural) of about 20 birds, representing around 10-12 different individuals. Apart from "several" heard winnowing on July 7 (WN), and a vocalization heard in a saline meadow on July 15 (LA), all our records are for June 14 and 15. The wetlands in the vicinity of 'Duck Lake' yielded more reports of this species than any other site we visited within the Park. CI: NTM-F. Declining significantly in Canada (Gratto-Trevor *et al.*, 2001). Comments: Formerly lumped with Common Snipe and only recently recognized as a separate species (AOU, 2002).

- **GULLS, TERNS & JAEGERS (Laridae)**

Franklin's Gull: No evidence of breeding [X]; Rare; We obtained only 2 records. On June 15, at least 8 were flying low over the surface of the Slave River catching insects, opposite the mouth of LBC. The following day (June 16), 3 or 4, exhibiting the same behaviour, were visible some distance downstream of the mouth of LBC. CI: NTM-O. Colonial nester. Sensitive to disturbance and fluctuations in water levels. Comments: Abundant in the Peace-Athabasca Delta where it is the commonest gull species (*cf*. Höhn, 1972, p.28).

Bonaparte's Gull: Probable breeder [P]; Fairly common; Seven records involving a total of about 20 birds. Dates / numbers *etc.* are as follows: June 15 – 3+ (with a group of Franklin's Gulls) hawking insects low over the Slave River, opposite the mouth of LBC; June 16 – one adult (in full breeding plumage) flew up LBC; and, on the same day, "several" were catching insects above the Slave River downstream of the mouth of LBC; July 6 – "several" patrolling the east shore of the Slave River; July 12 – two pairs seen at a small lake north of LBC (DV); and July 15 – "several" observed in a wetland area (WN). CI: NTM-F. Colonial nester. Nests in conifers, usually near "small muskeg lakes" (ABBA, p.133).

Mew Gull: Confirmed breeder [FL]; Uncommon; Two records for the Park and one from just outside, as follows: June 16 – one adult in alternate plumage flying along the Slave River (just west of the mouth of LBC); later the same day, two alternate plumaged adults were noted perched on a log, two-thirds of the way across the Slave River (*i.e.*, just beyond our study area) opposite the mouth of LBC; these same birds were later seen flying low over the Slave deftly catching insects (RT). On July 10, two pairs accompanied by 4 chicks, together with evidence of recent nesting activity, were discovered on an island on the east side of the Slave River, south of La Butte Point (WN; DV). CI: Colonial nester. Sensitive to disturbance. Comments: This represents only the third documented nesting record for this species in Alberta, the two others being those of : (1) Wallis and Wershler (1984, p.63) – a nest with a pipped egg (July 11, 1983) on an islet in Colin Lake; and, (2) Erickson and McGillivray (1990) – three pairs with nests, of which these authors killed 5 birds and collected one set of eggs – at Andrew Lake.

California Gull**:** No evidence of breeding [X]; Rare; Our only certain record is of a lone bird, flying along the west bank of the Slave River (opposite the mouth of LBC), on June 16th. CI: Colonial nester. Sensitive to disturbance. Comments: ABBA (p.136) shows no breeding records for this species on the Kazan Upland away from the north shore of Lake Athabasca. Wallis and Wershler (1984, p.63) describe it as a "scarce visitor" to (the region's) larger lakes.

Herring Gull: No evidence of breeding [X]; Rare; Just a single record for the Park, *i.e.*, one adult in full alternate plumage, standing on the east shore of the Slave River, just downstream from the mouth of LBC (June 16). CI: NTM-F. Colonial nester. Sensitive to disturbance. Comments: Our dearth of records is surprising since all relevant sources in the literature consider it "common" on the Kazan Upland.

Common Tern: No evidence of nesting [X]; Rare; Two records: "several" on July 6; and "several" seen fishing at the mouth of LBC on July 10 (WN). CI: NTM-O. Colonial nester. Sensitive to disturbance. Declining over parts of its range.

Black Tern: Probable breeder [T]; Common; Seven records, 3 of which (June 14 and 15, July 10) refer to the probable nesting colony at 'Duck Lake'. The maximum number of adults counted at this location was 40+ on June 14, and at least 30 were present on July 10. On the former date, many birds exhibited aggressive behaviour toward the observers, suggesting the presence of nests. Other records include: June 16, 25+ flying low (catching insects) over the Slave River just upstream (south) of the mouth of LBC; 2+ adults over LBC on both July 8 and 10 (LA); and "several" in a wetland on July 15 (WN). CI: NTM-O. Colonial nester. Sensitive to disturbance and fluctuations in water levels (at nesting colonies). Undergoing serious, long-term declines across Canada (Peterjohn and Sauer, 1994).

- **OWLS (Strigidae)**

  Great Horned Owl: Probable breeder [T]; Fairly common; Twelve records, on the following dates: June 13-16 (inclusive), July 7, 9, 10, 12 and 14, comprising a total of 14 birds. All were of singles except for one report of two (July 12). Only one aural record – of a bird calling at about 10:30 pm (July 9) near the mouth of LBC (LA). Of our 11 visual records, 9 were from the margins of balsam poplar 'gallery' forest along the lower reach of LBC, plus two sightings at the riparian forest edge on the east bank of the Slave River. CI: Resident. Declining across Canada over last three decades (Dunn *et al.*, 2000). Comments: Considered "the commonest owl" of the Lake Athabasca region by Höhn (1972, p.32). Most (if not all) of our records probably involve repeated observations of the members of just two pairs. ABBA (p.148) has no Kazan Upland records for this species.

- **NIGHTJARS (Caprimulgidae)**

  Common Nighthawk: Possible breeder [H]; Fairly common; Our 6 records, involving about 14 individuals, are as follows: June 13, one heard overhead at 10:37 pm; June 14, "several"; June 15, one heard above our campsite near the mouth of LBC at 10:15 pm; July 5, "several"; and, on both July 6 and 7, "several" were heard in the vicinity of a Beaver pond complex (WN). CI: NTM-O. Is undergoing a significant, long-term decline across the Prairie Provinces. Comments: Regarded as "common and generally distributed" across the region by Höhn (1972, p.34).

- **KINGFISHERS (Alcedinidae)**

  Belted Kingfisher: Probable breeder [T]; Common; About 14 or 15 records, involving a total of roughly 22 birds, including both sexes. We have reports for: June 13-15 (inclusive); and, July 8, 10 and 12. Apart from one adult seen in a Beaver dam complex near LBC on July 10 (LA), all our sightings were made along LBC itself. On June 15, a bird was watched while it subdued a 'large' fish by repeatedly whacking the latter's head against a branch. CI: NTM-F. Nests in holes in river banks. Undergoing a significant, long-term decline in North America (Rodriguez, 2002). Comments: Our observations probably represent repeated sightings of 3 or 4 pairs.

- **WOODPECKERS (Picidae)**

  Yellow-bellied Sapsucker: Confirmed breeder [ON]; Uncommon; Five records on three dates involving 5 birds, as follows: June 14, one heard; July 6, two separate adults seen, including one north of the mouth of LBC near the Slave River (LA); and, on July 9, a pair was observed at an active nest within a Beaver pond complex (WN). One example of this species' distinctive (sap well) workings was also reported (July 13; WN). CI: NTM-F. Cavity nester. Possible keystone species in the boreal forest (*cf*. Ehrlich and Daily, 1988). Comments: Höhn's (1972, p.35) discovery of a nest containing young (July 6, 1971) at Leland Lake appears to be the only previous breeding record documented for the Kazan Upland. ABBA (p.169) includes one atlas square with "confirmed breeding" along the Slave River Valley.

  Hairy Woodpecker: Possible breeder [H]; Uncommon; Four records, all on June 14, and all of single birds (3 males, one female) seen in balsam poplar 'gallery' forest along the lower reach of LBC. CI: Resident. Cavity nester. Area sensitive. Mature / old-growth forest dependent. Comments: No Kazan Upland breeding records for this species reported in the literature.

  ***Tridactyl woodpecker sp.*:** The characteristic workings ("redbarking") of either Three-toed and/or Black-backed Woodpeckers were observed in a white spruce stand, near the 'first fork' of LBC on June 15th. CI: Both cavity nesters. Resident. Irruptive. Three-toeds are dependent on old-growth coniferous forest. Black-backed Woodpeckers are habitat specialists that require areas of early, post-fire, forest successional stages in which to breed (*cf.* Murphy and Lehnhausen, 1998).

Northern Flicker: Probable breeder [P]; Fairly Common; Seven records involving 8 birds (4 heard, 4 seen). All sightings were of the expected 'Yellow-shafted' race. Single birds heard on both June 13 and 14. Two heard on June 15, as well as one seen flying across LBC. July 9: a pair was observed in a Beaver dam complex near LBC (LA); and on July 10, a single adult was observed (TJ). CI: Cavity nester. Undergoing gradual, long-term decline across Canada (Dunn *et al.*, 2000). Comments: Withdraws from the northern part of its range (including NE Alberta) in winter. The most widespread and frequently encountered woodpecker on the Kazan Upland.

Pileated Woodpecker: Possible breeder [H]; Rare; Five records, involving two birds and three examples of this species' distinctive workings, as follows: June 14, fairly fresh excavations, in a snag adjacent to LBC, between the first and second forks; excavations also noted on July 7th and 9th (WN); July 9, one adult seen (BR, LA), and (later on the same day) another adult observed north of LBC (LA). CI: Resident. Cavity nester. Keystone boreal species. Area-demanding, forest-interior / old-growth forest specialist. Some populations declining due to forest destruction / fragmentation. Comments: Soper (1942, p.63) noted that it "occurs very sparingly throughout the region", and Höhn (1972, p.35) termed it "quite scarce".

- **FLYCATCHERS (Tyrannidae)**

Yellow-bellied Flycatcher: Possible breeder [H]; Rare; Only one report, of a single bird, ascribed to this species, *viz*.: an adult, on July 10th, in a stand of black spruce (TJ). CI: NTM-O. Comments: The current status of this species within the region is unclear. No Canadian Shield breeding records are shown in ABBA (p.180).

Alder Flycatcher: Possible breeder [H]; Fairly common; Eight records, all aural, involving 8+ birds. Heard on two days in June (13 and 14), and two in July (12 and 13). Typically encountered in deciduous shrubbery (especially willow stands and patches) adjacent to water, such as the 'Duck Lake' wetlands, LBC point bars, and Beaver pond complexes. CI: NTM-O. Various authors regard it as a common (Erickson and McGillivray, 1990), fairly common (Höhn, 1973), or local and uncommon (Wallis and Wershler, 1984) summer resident / breeder within the region.

Least Flycatcher: Probable breeder [T]; Common; About 21 records, mostly aural, concerning approximately 33 birds. Principally encountered in aspen stands, but also reported from the understorey of balsam poplar-dominated 'gallery' forest adjacent to LBC. CI: NTM-O. Some population declines in Canada over the last decade (Dunn *et al.*, 2000). Comments: Abundant in WBNP but becoming scarcer further east (Höhn, 1972 and 1973).

- **VIREOS (Vireonidae)**

  Philadelphia Vireo: Possible breeder [H]; Uncommon; Seven records (6 aural, one visual), each of a single bird, spanning 5 dates, namely: June 13-16, inclusive, and July 12. Our aural reports concern birds heard in mature, balsam poplar 'gallery' forest or aspen stands adjacent to LBC. On June 16, one was seen (as it sang) in tall willows at the landward edge of a riparian balsam poplar tract, near the mouth of LBC. In total, our records probably involved 3 or 4 different individuals. CI: NTM-O. Has suffered substantial losses of wintering habitat. Declining. Comments: Höhn (1972, p.44) reiterates Soper's assessment that this species is "one of the rarest birds of the region". In part, this might be an artifact of the oft-discussed problem of differentiating the songs of Philadelphia Vireos from those of Red-eyeds (*e.g.*, Semenchuk, 1992, p.244). However, in NE Alberta at least, the songs of Philadelphias are comparatively distinctive and fairly easy to identify (*e.g.*, Thomas 2000b, pp.24-25).

  Red-eyed Vireo: Possible breeder [H]; Common; From June 13th to June 16th (inclusive) we amassed a total of 44 (predominantly aural) records – mostly of birds heard singing as we travelled the lower and middle reaches of LBC. In all, these reports concern about 51 birds – a total which probably represents 30+ individuals. This species favors submature / mature deciduous and deciduous-dominated mixedwood stands. CI: NTM-O. Area sensitive. Comments: Undoubtedly breeds within the Park, where it appears to be the commonest, most widespread songbird.

- **JAYS, CROWS & ALLIES (Corvidae)**

  Gray Jay: Confirmed breeder [FL]; Uncommon; Three records, involving about 8 birds: June 14, a family group – consisting of two adults with two recently fledged, semi-dependent juveniles – observed near the mouth of LBC; another bird was heard (at a different location) later the same day; July 12, "several" reported. CI: Resident. Declines noted across Canada in last decade (Dunn *et al.*, 2000).

  Common Raven: Probable breeder [P]; Fairly common; We have records from three dates, as follows: June 14, four separate reports concerning a total of 5 individuals; July 7, two adults seen south of the mouth of LBC (LA); and on July 9, a pair was observed north of LBC (LA). CI: Resident. Some Alberta populations (*e.g.*, in the Calgary region) are increasing due, presumably, to their exploitation of garbage dumps as food sources (*cf*. Gainer and Schmutz, 1997).

- **SWALLOWS & MARTINS (Hirundinidae)**

  Tree Swallow: Confirmed breeder [ON]; Uncommon; Three records, all in July, all from (separate) Beaver pond complexes, involving a total of at least 4 or 5 pairs. Dates/ details are: July 6, at least 2 pairs and an active nest observed (WN); July 9, "several" individuals noted adjacent to LBC (LA); and on July 10, an active nest was found in a snag (within a Beaver pond complex) near LBC (LA). CI: NTM-O. Cavity nester. Comments: The status / distribution of this species on the Kazan Upland is

described as “common” by Höhn (1973) and Erickson and McGillivray (1990; for the Andrew Lake area), but only as “local” by Wallis and Wershler (1984).

Cliff Swallow**:** A single record, from outside the Park, of a nesting colony (comprising about 35 active nests) located (July 9) on a bank on the west side of the Slave River (WN). CI: NTM-O. Colonial nester. Comments: Undoubtedly, at times, birds from this colony overfly the western margin of the Park. About 6 breeding colonies of this species were found within WBNP by Soper (1942, p.69).

- **CHICKADEES (Paridae)**

  Black-capped Chickadee: Possible breeder [H]; Fairly common; Eight records involving about 20 individuals. A total of 3 birds was found on June 14, and two on June 15. “Several” were also encountered on each of the following dates in July: 6th, 7th, 8th, 10th and 13th. Birds were most often located in (LBC) point bar willow thickets and aspen stands adjacent to LBC. CI: Resident. Cavity nester. Comments: For WBNP, Soper (1942, p.71) noted the existence of “peculiar fluctuations” in the relative abundance of this species “from place to place and at different times”.

  Boreal Chickadee: Possible breeder [H]; Rare; Only two records from within the Park, both of “several” encountered in stands of mixedwood forest, on July 12th and 13th. CI: Resident. Cavity nester. Old-growth conifer forest-dependent. Has undergone significant declines across Canada over the last three decades (Dunn *et al.*, 2000). Comments: Several individuals of this species were also recorded (on July 8) from a forested island in the Slave River, outside the Park.

- **WRENS (Troglodytidae)**

  [*House Wren*]**:** A singing wren, believed to be this species, was heard in the Park on July 9th (WN). However, given an element of uncertainty concerning the identification of this brief vocalization, we have opted to designate the occurrence of this taxon as “hypothetical”, pending the acquisition of confirmatory evidence. CI: NTM-F. Cavity nester. Comments: Interestingly, on June 24, 1932, Soper (1942, p.72) saw a pair of House Wrens (and heard the male singing) “at Murdock (*sic*) Creek” in WBNP. Murdoch Creek joins (the west shore of) the Slave River, only 2.5 km south of the mouth of LBC.

- **BLUEBIRDS & THRUSHES (Turdidae)**

  Veery: No evidence of breeding [X]; Casual; An example of this species’ distinctive song was heard (July 9) near the ‘first fork’ of LBC (DM). CI: NTM-O. Declining in Canada over the last two decades (Dunn *et al.,* 2000). Comments: At present in Alberta, the Veery’s breeding range is restricted to the southern half of the province (ABBA, p.225; Pinel *et al.,*1993, p.73). This remarkable extralimital record is apparently the first for the Canadian Shield Natural Region. Francis and Lumbis (1979, p.212) reported the occurrence of two singing males on 27 May, 1977 near Ft. MacKay.

Swainson's Thrush: Confirmed breeder [NY, NE]; Common; Twelve records in total; the 11 for June (14^{th} - 16^{th}, inclusive) each involve a single bird singing. Unusually, at dawn on June 15^{th}, one such individual was perched at the tip of a riverside spruce. On July 8, an active nest containing two young and two eggs was found within a jack pine stand growing on rocky terrain (WN). CI: NTM-O. Forest-interior specialist. Comments: ABBA (p.227) shows no confirmed breeding records for this species on the Kazan Upland. Interestingly, on the PAD 'lowlands', this species' preferred habitat is dense, riparian willow thickets (Thomas, 2002), *i.e.*, a habitat-type favoured by Veeries in southern Alberta. LBC Swainson's Thrushes appear to utilize the range of mature-to-old mixedwood and conifer-dominated forest stands traditionally regarded as this species' 'normal' breeding habitat.

Hermit Thrush: Possible breeder [H]; Fairly common; Seven records (all aural), each involving lone, singing individuals. All reports are for June (14^{th} - 16^{th}, inclusive) except one on July 5^{th}. Found in coniferous forest or conifer-dominated mixedwood stands. CI: NTM-O. Typically, a forest-interior specialist.

American Robin: Possible breeder [H]; Fairly common; Ten records (8 aural, 2 visual) for a total of 11 birds, with all our reports being from June (14^{th} - 16^{th}, inclusive). CI: NTM-F. Comments: Our present (*cf.* Section 2.3) and previous studies (Thomas and Carroll, 2001, p.17) suggest the existence of substantial "holes" in this species' distribution across northeasternmost Alberta.

- **WAXWINGS (Bombycillidae)**

  Bohemian Waxwing: Possible breeder [H]; Rare; Only two records, both on July 6 (WN), of "approximately 5 adults", and later, of a single adult in a Beaver dam complex. CI: "In part a year-round resident" (Höhn, 1972, p.42). Irruptive. Comments: Soper (1942, p.75) describes this species as "not uncommon" (in WBNP) but "characterized by capricious distribution". [NOTE: The specific identity of two separate parties of "several" waxwings, encountered on July 7^{th} (in the vicinity of a Beaver dam complex) and heard on July 12^{th} (WN), could not be determined. Wallis and Wershler (1984, p.65) describe their observation of two Cedar Waxwings at Colin Lake (on July 5, 1983) as the "first record for (*the*) Kazan Upland in Alberta".]

- **WOOD-WARBLERS (Parulidae)**

  Tennessee Warbler: Possible breeder [H]; Common; Twenty-three records (>90% aural), all from June 14-16 (inclusive), representing a total of 25 birds (= about 16-18 different individuals). Within the Park, favours deciduous second-growth, plus wetland margin and LBC point bar willow thickets. CI: NTM-O. Spruce budworm specialist. Irruptive. Declining. Comments: With respect to the 'Lake Athabasca area', Höhn (1972, p.45) describes this species as the "most abundant warbler and quite generally distributed".

Orange-crowned Warbler: Possible breeder [H]; Rare; Two records only. On June 15, one was observed singing from the top of a black spruce, within a black spruce / aspen / paper birch / jack pine mixedwood stand growing over creek-side rock outcrops (RT). A second adult individual was encountered in mixedwoods on July 6 (WN). CI: NTM-F. Comments: Although ABBA (p.247) shows no records for this species (on the Kazan Upland) away from the Slave River and north shore of Lake Athabasca, Wallis and Wershler (1984, p.65) characterize it as being "common in pine-birch stands, especially on slopes, and in older burns".

Yellow Warbler: Confirmed breeder [NY]. Common; Fifteen records (mostly aural) for a total of about 20 birds representing, at most, *ca*. 15 different individuals. Found in deciduous shrubbery, understorey and second-growth. Dates for which we have reports are as follows: June 13-16 (inclusive); "several" on both July 6 and 7; vocalizations heard July 8th in an aspen stand along LBC (LA); on July 9, a nest containing young was discovered (WN); and, at the mouth of LBC on July 13, one was found dead in a snap trap (DV). CI: NTM-O. Comments: Soper (1942, p.78) regarded this species as a common, widely-occurring summer resident of WBNP (and not as "very sparingly distributed in the breeding season", as attributed to him by Höhn [1972, p.45]). Yellow Warbler (together with Tennessee Warbler and Ovenbird) is one of the three most common and widespread warbler species in the Wildland Park. ABBA (p.249) shows no confirmed breeding records for the Region away from the Slave River.

[*Magnolia Warbler*]**:** A brief interval of song, believed attributable to this species, was heard from creek-side deciduous shrubbery on June 14th. However, since the identity of the singer could not be confirmed, the occurrence of this taxon in the Park must be considered "hypothetical" pending a fully-documented record. CI: NTM-O. Decreasing. Comments: Described as "local and uncommon" by Wallis and Wershler (1984, p.65).

Yellow-rumped Warbler: Confirmed breeder [CF]. Fairly common; Ten records (8 visual, 2 aural) more-or-less evenly split between June 14th and 15th, involving 11 individuals. On June 15, an adult female was observed carrying food. All sightings were of the expected 'Myrtle' subspecies. Able to utilize most forest types, but favours coniferous, and conifer-dominated mixedwood stands. CI: NTM-F. Comments: This is the most abundant breeding warbler in northern Alberta's boreal forests as a whole. As such, we expected to encounter it more frequently within the Park than was actually the case. Interestingly, with respect to WBNP, Soper (1942, p.79) regarded it as a rather scarce, local breeder.

Black-and-white Warbler: Possible breeder [H]; Common; Thirteen records in total: 12 in June (14th-16th, inclusive) all representing single birds; one July (7th) report of "several" (WN). Generally encountered in willow thickets bordering LBC or the moderately dense, deciduous understorey (*e.g.*, alders) of channel margin, balsam poplar 'gallery' forest. CI: NTM-O. Area sensitive. Decreasing ? Comments: Not reported by Wallis and Wershler (1984) or Erickson and McGillivray (1990). Höhn

(1972, p.45) knew of no Kazan Upland reports, and ABBA (p.260) contains no confirmed breeding records for this Sub-Region.

American Redstart: Probable breeder [P]; Uncommon; Four records from two dates, involving a total of 5 birds, as follows: June 14, three separate, singing individuals all heard in creek-side deciduous shrubbery / willow thickets; July 13, an adult male and adult female observed in a willow community at the north end of the Park (WN). CI: NTM-O. Area sensitive. Decreasing ? Comments: Not found east of WBNP according to Höhn (1973, p.25) and hence, Wallis and Wershler (1984, p.65) regard their records as the first for the Kazan Upland. ABBA (p.261) shows no occurrences upon the latter away from the Slave River Valley and north shore of Lake Athabasca.

Ovenbird: Possible breeder [H]; Common; Twenty records (almost entirely aural) representing 22 birds (but probably involving about 30% duplication), for the following dates: June 13-16 (inclusive), and July 5, 7 and 8. Most often heard in aspen or aspen-dominated mixedwood stands, but also reported from balsam poplar 'gallery' forest and, on at least one occasion (July 7), a birch-alder stand (LA). CI: NTM-O. Forest-interior specialist. Area sensitive. Declining ? Comments: Found by neither Wallis and Wershler (1984) nor Erickson and McGillivray (1990). No Kazan Upland records for this species indicated by ABBA (p.262) away from Fort Chipewyan and the Slave River corridor.

Northern Waterthrush: Possible breeder [H]; Uncommon; Only 5 records, all in July, and all involving single birds, as follows: July 6, one adult (KS); July 7, an adult in a Beaver dam complex (WN); July 8, one heard in a creek-side aspen stand (LA); July 9, an adult in shrubbery along LBC (WN); and, also on July 9, one found dead in a snap trap located within an alder/willow/horsetail community at the mouth of LBC (DV). CI: NTM-O. Comments: Wallis and Wershler (1984, p.65) regard this species as "very local and uncommon" and believe their records to be the first "for (*the*) Kazan Upland in Alberta". Our lack of June reports is puzzling since this warbler has a loud, distinctive song and we visited several of the locations where it was encountered in July.

Connecticut Warbler: No evidence of breeding [X]; Casual; Our lone record involves a brief vocalization, heard while canoeing along the lower reach of LBC on June 14th. CI: NTM-O. Has undergone a significant decline in Canada over the last three decades (Dunn *et al.*, 2000). Comments: There appear to be no previous reports of this species from Alberta's Canadian Shield Natural Region. However, west of the Slave River in WBNP, Dr. Mark Bradley recorded a Connecticut Warbler along his Peace Point BBS route in both 2000 and 2001. Francis and Lumbis (1979, p.228) found territorial males on two of their AOSERP survey plots near Ft. MacKay.

Mourning Warbler: Possible breeder [H]; Uncommon; Eleven records, involving a total of 12 birds, that probably represent only half that number of individuals. Our reports (evenly divided between aural

and visual records) are for 7 dates, *i.e.*, June 13-16 (inclusive) and July 5-7 (inclusive). Birds were encountered in the shrubby understorey of riparian ('gallery') deciduous forest and in creek-side willow thickets. CI: NTM-O. Area sensitive. Decreasing. Comments: Höhn (1972, p.48) follows Soper (1942) in regarding the Peace-Athabasca Delta as the northern limit of this species' breeding range in northern Canada. Concerning its distribution in the Lake Athabasca Region, he (Höhn, 1973, p.25) describes it as a summer resident of Ft. Chipewyan but "absent elsewhere". ABBA (p.265) gives only one Canadian Shield record for this species – a "possible breeding" occurrence at the Ft. Chipewyan townsite.

[*Wilson's Warbler*]**:** Our only potential record involves a single individual, believed to be of this species, heard singing in a LBC point bar willow thicket on June 15th. However, the singer's identity could not be confirmed. CI: NTM-O. Comments: Although "scarce" according to Wallis and Wershler (1984, p.65) – who reported the first Kazan Upland record for Alberta, this species should be expected to occur within the Park (which contains an abundance of suitable habitat).

Canada Warbler: Possible breeder [H]; Uncommon; Six records, each involving a single bird, that represent at least 4 different, singing males. Two birds noted on both June 14 and June 16; vocalizations heard on July 7 (WN), and one adult observed on July 10 (DM). Favours the understorey (*e.g.*, alder thickets) of the balsam poplar-dominated, 'gallery' forests along the lower reach of LBC. A male, observed at dawn on June 14th, was singing from a *ca.* 6m-high perch on a snag in a wetland, adjacent to the landward margin of the 'gallery' forest. In June, at least two males were present in the vicinity of our campsite near the mouth of LBC. CI: NTM-O. Comments: Our records appear to represent the first for the Kazan Upland Sub-Region of Alberta.

- **TANAGERS (Thraupidae)**

  Western Tanager: Possible breeder [H]; Fairly common; Eight records (all aural), from the following dates: June 14 and 15; July 7, 12 and 13; each representing a single, singing male. Found in white spruce stands and mixedwood tracts containing clusters of mature white spruce. CI: NTM-O. Old-growth dependent. Declining in parts of North American range. Comments: Wallis and Wershler (1984, p.66) encountered only one individual, and Erickson and McGillivray (1990) did not observe this species. However, ABBA (p.271) has two probable, and one confirmed, breeding records for the Kazan Upland away from the north shore of Lake Athabasca (NSLA) and the Slave River Valley.

- **SPARROWS & ALLIES (Emberizidae)**

  Chipping Sparrow: Confirmed breeder [CF]; Common; Ten records representing about 17 individuals. Reported in the Park on four dates, as follows: June 14, two records of single birds; June 15, five records; July 12, "several" (WN); and July 15, "several" at the upper end of LBC (WN). Widespread. Birds observed foraging in willow thickets on a number of occasions. One carrying food,

seen in the top of a white spruce near 'Duck Lake', on June 14th. CI: NTM-F. Has declined in Canada over the last two decades (Dunn *et al.*, 2000). Comments: The most common and widely-distributed sparrow species in the boreal forests of northern Alberta.

Clay-colored Sparrow: Possible breeder [H]; Rare; Only two records (both for June 15th), each involving a single bird heard singing in willow thickets, on two different LBC point bars, just downstream of its 'second fork'. CI: NTM–O . Declining in Canada (Downes *et al.*, 2000). Comments: Wallis and Wershler (1984, p.66) describe this species as "very local and uncommon". ABBA (p.278) has no Kazan Upland breeding records for it away from the NSLA and the Slave River Valley.

Le Conte's Sparrow: Probable breeder [T]; Fairly common; Seven records (all aural) in total, representing about 15 birds (but amount of duplication, hence true number of individuals involved, uncertain). Lone June report: 2 or 3 heard near 'Duck Lake' on the 14th; "several" heard on each of the following days in July: 5th, 6th, 10th, 12th and 13th. Invariably found in sedge meadow complexes bordering small lakes or wetlands. Comments: This species' weak, lisping song can be difficult to detect. Wallis and Wershler (1984, p.66) who believed their records to be the first for the Kazan Upland, describe this species as "local and uncommon".

Song Sparrow**:** Our lone record (from outside the Park), concerns a single bird heard singing on a small island in Darwin Lake, on July 15th (DV, WN). With respect to this species' habitat preferences on the Kazan Upland, it is worth noting that both Höhn (1972, p.56) and Wallis and Wershler (1984, p.66) comment upon its marked predilection for small wooded islands in lakes (one or two pairs per island). Our record conforms to this pattern. The reason(s) why Song Sparrows are absent from the seemingly, highly suitable habitat furnished by the lush thickets of willows and other shrubs bordering LBC, remains a mystery.

Swamp Sparrow: Possible breeder [H]; Rare; Only two records, consisting of "vocalizations heard" on July 12th, and "several heard" on July 13th (WN), with no further details. Comments: This species is unanimously described as "fairly common" on the Kazan Upland by Höhn (1973, p.27), Wallis and Wershler (1984, p.66), and Erickson and McGillivray (1990, p.89).

White-throated Sparrow: Possible breeder [H]; Common; Fourteen records (9 aural), 9 for June (the remainder in July), involving about 19 birds (degree of duplication uncertain). We have reports from June 14 and 15, and July 6, 7, 8, 10 and 13. Found in a variety of habitats, including moderately dense understorey within deciduous and mixedwood stands; tracts of shrubbery associated with Beaver pond complexes; and willow thickets on point bars and flanking LBC and its tributaries. CI: Declining in the northern portion of its range. Comments: Together with the Chipping Sparrow, it is the most

widespread and common sparrow of Alberta's boreal forests. However, Wallis and Wershler (1984, p.66) considered it "local and uncommon" in their study area. Undoubtedly breeds within the Park.

Dark-eyed Junco: No evidence of breeding [X]; Rare; A solitary record, of one observed on July 7th, in a birch-alder stand south of the mouth of LBC (LA). Comments: Höhn (1973, p.27) regards this species as a common summer resident (that breeds) across the Lake Athabasca Region. Presumably, our dearth of records reflects a lack of suitable breeding habitat within the Park. "Slate-coloured" is the expected race in NE Alberta.

- **GROSBEAKS & ALLIES (Cardinalidae)**

  Rose-breasted Grosbeak: Possible breeder [H]; Uncommon; Five records (4 aural), each involving a single bird, spanning a four-day period (June 13-16, inclusive). Prefers stands of mature aspen or aspen-dominated mixedwood forest. CI: NTM-O. Area sensitive. Some North American populations are declining. Comments: Considered by Höhn (1973, p.26) to probably breed in WBNP and at Ft. Chipewyan, but to be "absent further east". Not encountered by Erickson and McGillivray (1990) or Wallis and Wershler (1984). ABBA (p.272) has only one record (of possible breeding, adjacent to the Slave River) for the Kazan Upland.

- **BLACKBIRDS, ORIOLES & ALLIES (Icteridae)**

  Red-winged Blackbird: Probable breeder [V,T]; Uncommon; Four records, all for 'Duck Lake' and vicinity, from June 14 and 15, and July 10th. Nesting activity was observed on the latter date (LA) in the cattail beds adjacent to 'Duck Lake'. At least 5 or 6 pairs were noted, but the total number of adults present was not determined. CI: NTM-F. Has declined in Canada over the last two decades (Dunn *et al.*, 2000). Comments: This is the blackbird species most likely to be encountered across the Kazan Upland.

  Yellow-headed Blackbird: Possible breeder [H]; Rare; Only three records, all for the 'Duck Lake' area on June 14th and 15th. Noticeably less common there than Red-wingeds, and is apparently represented in the Park by a handful of birds at this one location. The total number of individuals present was not determined. CI: NTM-F. Nests in loose colonies in emergents over deeper water than Red-wingeds. 'Colony' locations and nesting success very dependent upon water level conditions. Comments: According to Höhn (1972, p.49), the Peace-Athabasca Delta "is the northern limit of (*this species*) Canadian breeding range". Our records apparently constitute the first for the Kazan Upland.

  Rusty Blackbird: Possible breeder [H]; Rare; Our lone record comprises a party of "approximately 6 adults" observed on July 6th (KS). CI: This species has undergone a precipitous decline (of about 90%) over the past three decades (Greenberg and Droege, 1999), whose causes are uncertain. Comments: While Soper (1942, p.84) regarded it as "rather common locally", and Höhn (1973, p.25) described it as

a “fairly common summer resident (*which*) breeds” (for the Lake Athabasca Region), both Wallis and Wershler (1984, p.66) and Erickson and McGillivray (1990, p.89) found it to be uncommon. ABBA (p.302) has a single confirmed, and one probable, breeding record for the Kazan Upland.

Common Grackle: Probable breeder [P]; Uncommon; Five records (all visual) from three dates (*i.e.*, June 13, 14 and 15), involving a total of 7 birds. Seen in flight over LBC and in the vicinity of ‘Duck Lake’ (with its extensive beds of cattails). CI: North American populations have declined significantly over the last three decades (Rodriguez, 2002). Comments: From the literature, this species appears to be widely distributed, but generally uncommon, across the Kazan Upland.

- **FINCHES (Fringillidae)**

  (Pine Grosbeak): Apparently a fairly rare winter visitor to the region. Soper (1942, p.86) reports the sighting of one “at La Butte” on November 7, 1932. CI: Irruptive.

  White-winged Crossbill: Confirmed breeder [NB]; Rare; Two records only. From the top of a granite ‘knob’ adjacent to LBC, a pair was observed on June 15th. The female was watched carrying nesting material (a twiglet) into the club-like top of a black spruce, and seen to emerge 30 seconds later without it (RT). On July 12th, several vocalizations of this species were heard (WN). CI: Irruptive, but presumably, some reside year-round in the region (*cf.* Höhn, 1972, p.52). Comments: ABBA (p.313) gives no breeding records for the Kazan Upland away from the Slave River corridor.

  Pine Siskin: Possible breeder [H]; Rare; Our sole record consists of “several” observed in a spruce stand on July 7th (WN). CI: Irruptive. Has declined in Canada during the last decade (Dunn *et al.*, 2000). Comments: According to Höhn (1972, p.52), this species “occurs sporadically throughout the (Lake Athabasca) area in the summer half of the year”.

2.6 La Butte Creek Checklist: Summary and Discussion

The 101 species comprising the LBC checklist represent a total of 30 families (29 confirmed, 1 hypothetical) of birds. Five different categories of avian records were used to compile this list. Brief definitions of these categories (see also Section 2.2) and the number of species assigned to each, are set out below.

Category		No. of Species
1	(Recorded in Park during June – July, 2001)	91
2	(Previously recorded, by others, within the WPP)	1
3	(Recorded adjacent to Park in 2001)	4
4	(Presence in Park inferred from indirect evidence)	1
5	(Hypothetical for the Park)	4
	TOTAL	**101**

The lone Category 4 "species" is tridactyl woodpecker sp. (either Three-toed and/or, Black-backed). Ornithologically, prior to the fieldwork (in 2001) for this project, LBC was essentially an unknown quantity. Thus, the Park list contains only one Category 2 species namely, Pine Grosbeak (seen at La Butte Point, in 1932, by Soper [1942]), whereas 14 species owe their presence on the Fidler-Greywillow checklist to the efforts of earlier observers (mostly Wallis, 1984). Species considered hypothetical for LBC are Willow Ptarmigan, House Wren, Magnolia Warbler and Wilson's Warbler.

In terms of their various 'classes' of Breeding Status and Abundance (*cf*. Section 2.2), the species composing Record Categories 1, 2 and 3 (N = 96), break down as follows:

Breeding Status {No. of Species (% of species total)}			**Abundance** {No. of Species (% of species total)}		
No evidence	12	(12.5)	Casual	3	(3.1)
Possible	43	(44.8)	Rare	34	(35.4)
Probable	18	(18.8)	Uncommon	25	(26.0)
Confirmed	23	(23.9)	Fairly Common	18	(18.8)
			Common	16	(16.7)

Why the combined total of Confirmed and Probable Breeding species for LBC (*i.e.*, 42.7%) is substantially greater than the equivalent figure for Fidler-Greywillow (33%) is unclear. However, the fact that the Fidler-Greywillow percentage of species with 'No evidence of breeding' (24.5%) is virtually double that of the LBC list (12.5%), is largely due to the higher number of (Arctic breeding) shorebird species on the former Park's checklist (see below).

The complete LBC birdlist (N = 101) can also be broken down according to its component species' residency/migratory status:

Status	**No. of Species (% of species total)**	
Residents	12	(11.9)
Winter Visitors	2	(2.0)
Short-distance Migrants	24	(23.8)
Neotropical Migrants (NTMs) – Facultative	30	(29.7)
Neotropical Migrants (NTMs) – Obligate	33	(32.7)
Total NTMs	63	(62.4)

As noted earlier (Section 2.4), these values are more or less representative of those calculated for the avifaunas of, and within, the Boreal Forest biome of Canada. Including hypothetical species, LBC supports twice the number of wood-warblers found at Fidler-Greywillow (13 *vs*. 6). This reflects both the greater productivity of LBC's floodplain habitats, and its proximity to the Slave River Valley migration corridor (and adjacent Peace River Lowlands).

Splitting the Park's complete species list (N = 101) into the four major bird groups regarded as the "pillars" of the North American Bird Conservation Initiative (NABCI), yields the following totals:

Bird Group	**No. of Species (% of species total)**	
Waterfowl	15	(14.8)
Waterbirds	17	(16.8)
Shorebirds	5	(4.9)
Landbirds	64	(63.4)

Although the numbers of waterfowl and waterbird species for the two WPPs are identical, Fidler-Greywillow – with its abundance of (Lake Athabasca) shoreline habitat – has three times LBC's shorebird total (15 *vs*. 5 species). Eleven of La Butte's Landbird species are water or wetland-dependent (especially) during the breeding season (*e.g.*, Belted Kingfisher and Yellow-headed Blackbird). Adding them to the Park's list of Waterbirds changes the two group's totals to: Waterbirds = 28 (27.7%); Landbirds = 53 (52.5%).

With respect to their risk status, no birds listed by COSEWIC (2002) as Endangered, Threatened or Species of Special Concern appear on the current Park checklist. However, twelve LBC species, namely: American Bittern; American White Pelican; Bald Eagle; Black Tern; Canada Warbler; Common Nighthawk; Horned Grebe; Northern Goshawk; Pied-billed Grebe; Pileated Woodpecker; Sandhill Crane and Western Tanager, are classified as "Sensitive" (see Section 2.4 for definition) by AFWD (2001).

The fieldwork conducted within LBC during June-July, 2001 yielded numerous ornithological records of note which, together with a brief explanation of their significance, are listed below. (**Note:** In the following descriptions, the letters KU stand for the "Kazan Upland Sub-Region" of Alberta.)

- Pied-billed Grebe: first KU records?
- Eared Grebe: first records for the KU?
- American Bittern: first confirmed breeding record for the KU.
- Northern Shoveler: one of very few confirmed breeding records for the KU.
- Northern Pintail: rare on the KU north of the NSLA.
- Ruddy Duck: based on the literature, may be the first KU records.
- Northern Harrier: a KU rarity.
- Rough-legged Hawk: an extremely unusual summer record for this species in Alberta.
- American Coot: rare on the KU away from the NSLA and Slave River corridor.
- Sandhill Crane: "very local" on the KU (Wallis and Wershler, 1984).
- Mew Gull: only the third documented nesting record for the province.
- Yellow-bellied Sapsucker: second confirmed breeding record for the KU?
- Yellow-bellied Flycatcher: rare on the KU.
- Philadelphia Vireo: very rare on the KU.
- Veery: first record for the Canadian Shield Natural Region of Alberta.
- Swainson's Thrush: first confirmed breeding record for the KU.
- Northern Waterthrush: rare on the KU?
- Connecticut Warbler: ? first provincial Canadian Shield Natural Region record.
- Mourning Warbler: rare on KU away from NSLA and Slave River Valley.
- Canada Warbler: first KU records?
- Le Conte's Sparrow: rare on KU away from the NSLA.

- Rose-breasted Grosbeak: a KU rarity.
- Yellow-headed Blackbird: first records for KU?
- White-winged Crossbill: first probable breeding record for KU away from Slave River Valley.

On the opposite side of the achievements' coin, our 2001 surveys failed to record a number of species that, based on the existing literature and the availability of suitable habitat, we had confidently expected to encounter within the Wildland Park. Among these 'absentee species', the most remarkable are undoubtedly Red-breasted Nuthatch, Ruby-crowned Kinglet and Song Sparrow. Less striking "misses" (though surprising nonetheless), include: American Kestrel; Downy Woodpecker; Olive-sided Flycatcher; Western Wood-Pewee; Eastern Phoebe; Eastern Kingbird; Cedar Waxwing; Lincoln's Sparrow and Red Crossbill. Only additional work will enable us to determine whether these 'missing species': (a) were present in parts of the Park not visited by us in 2001; (b) occur within the Park on an irregular (non-annual) basis; or (c) have ranges in NE Alberta that do not include the Park. In all likelihood, explanation of these species' apparent absence from LBC in 2001, will involve various combinations of these possibilities. Comparisons with other NE Alberta checklists (*cf*. Soper, 1942, 1950; Höhn, 1972, 1973; Thomas, 2002) suggest that the list of birds found within this WPP will eventually total about 145-150 species.

2.7 Egg Island Ecological Reserve

Egg Island (Figures 5 and 6) is a small (*ca*. 70 m long by 40 m wide), elliptical island located in the east-central portion of Lake Athabasca, some 8km ENE of Burntwood Island. Composed of (pebble, cobble, and boulder) gravel with its highest point rising *ca*. 2.5 m above Lake level, this Island is about 0.36 ha (~0.89 acres) in size. In 1992, based upon the fact that it supports Alberta's largest nesting colony of Caspian Terns, it was officially designated a provincial Ecological Reserve.

Just before 8 p.m. on the evening of June 11, 2001, Wayne Nordstrom, Drajs Vujnovic and the writer (in the company of boatman Richard "Smoky" Ladouceur) visited Egg Island to estimate the size of its Caspian Tern nesting colony. The Lake was almost dead calm during our 20+ minute visit. Having landed on the Island, we quickly realized it was impractical and undesirable to try and count all the tern nests on foot. This was because of: (a) the large number of tern and gull nests on the Island, (b) the fact that the eggs of both Caspian Terns (Figure 7) and California Gulls were so well camouflaged, that treading on them was an eventual certainty, and (c) our presence was causing the Island's avian population a great deal of distress, and disrupting the birds' normal behaviour.

Therefore, we returned to the boat, circumnavigated the island, and counted sitting, standing and flying individuals of the five bird species that were present as best we could. The following estimates are agreed-upon (consensus) averages of the three observers' counts (several counts per observer):

- Caspian Terns: at least 150 pairs (*i.e.*, 300+ adults)
- California Gulls: 400+ adults
- Herring Gulls: *ca*. 10 adults
- Ring-billed Gulls: 60+ adults
- Common Terns: 30+ adults

These numbers are conservative. The species listed were all nesting on the Island. All nests observed during the on-Island visit contained eggs only.

Weseloh and Cocks (1979, p.214) concur with E.O. Höhn's assessment that Caspian Terns breed "annually on Egg Island" and have "almost certainly done so since at least the beginning of the (20^{th})century". Previous counts of Caspian Terns nesting on Egg Island, together with other information concerning the status of Alberta's Lake Athabasca Caspian Tern population, are presented below:

- Salt and Wilk (1958, p.214) state that "…on an islet near Ft. Chipewyan, some twenty pairs of Caspian terns nested in 1952 in close association with a colony of California and herring gulls."

- B. Wilk, quoted by Weseloh and Cocks (1979, p.213) in reference to "his initial discovery of the nesting colony at Egg Island," ventured "a guess" that "perhaps about 25" nests were present during his June 18th, 1952, visit.
- Höhn (cited by Weseloh and Cocks, 1979, p.214) visited the island on July 2, 1971 and estimated "a little over 20 pairs of (Caspian) Terns and 50-80 pairs of California Gulls" were present. He noted some nests still held eggs but most contained downy young.
- In *The Birds of Alberta*, Salt and Salt (1976, p.206) indirectly suggest that occupancy of the Egg Island colony has been intermittent. They write: "Caspian Terns nested with California Gulls and Herring Gulls on an island in Lake Athabasca near Fort Chipewyan as late as 1952; *recent investigations have been unable to find evidence of nesting*, although the species is still present in the area" (emphasis added).
- The Caspian Tern entry in Francis and Lumbis' (1979) annotated checklist for their Alberta Oil Sands study area, reads as follows: "Breeding populations of Caspian Terns are restricted to the Peace-Athabasca Delta and Lake Athabasca. A colony of 40 to 60 pairs nested on Egg Island in Lake Athabasca. There are unsubstantiated reports of a few pairs nesting on an island in Frezie Lake." These authors supply no date for their population estimate.
- Weseloh and Cocks (1979, p.212) visited Egg Island on 15 June, 1977. They counted 47 Caspian Tern nests (most containing 2 eggs; range of 1-3 eggs) and 59 Terns on and around the Island. Weseloh estimated "a maximum of 100 pairs of California Gulls." They found one active Herring Gull nest and "only nine" individuals of that species.
- Within one photograph – taken during his visit to Egg Island on July 4th, 1984 – Wallis (1984) counted "90+ Caspian Terns." He also noted the presence of "hundreds of California and some Herring Gulls."
- The *8th Annual Report of the Advisory Committee on Wilderness Areas and Ecological Reserves* (Anon., 1992, p.15) contains the following data regarding the Caspian Tern breeding colony on Egg Island:
    - 1987 - 84 nests
    - 1988 - 101 nests
    - 1989 - 75 nests
    - 1990 (July 12th) - 75 eggs and 46 chicks (number of actual nests not given). Assuming an average of 2 eggs/young per nest (*cf*. Weseloh and Cocks, 1979) yields a total of 60+ nests, but this figure appears to be an underestimate, since 150-200 adult birds were recorded during this visit.
- G.R.A. (Rainer) Ebel is cited by Weseloh and Cocks (1979, p.214) with reference to two other purported Caspian Tern colonies in the Lake Athabasca area: one at Beartooth Island "near the mid-west end" of the Lake, and the other on the northwest shore of "Frezie Lake" which "may be located" east of the mouth of Jackfish Creek (Richardson Lake). Rainer Ebel (*pers. comm.,* April 3, 2002) believes Beartooth Island to be located near the eastern end of Burntwood Island. Interestingly, B. Wilk describes his 1952 visit to the tern colony as being to an island which "at the time was known as

Burntwood Island" (Weseloh and Cocks, 1979, p.213). This raises the intriguing possibility that Wilk may have visited an island other than Egg Island. Exacerbating the confusion is the fact that the only "Beartooth Island" found on the many Lake Athabasca maps examined by the author, is located just east of the Saskatchewan border, off Greywillow Point! (Höhn, 1973, fig. 3).

- A young Caspian Tern, flying with its parents, was seen at the mouth of the Birch River (Lake Claire, PAD) by E.R. Kuyt on August 8th, 1977 (Pinel *et al.*, 1991, p.161).
- Wallis and Wershler (1984, p.63) state that Caspian Terns have "been reported from the Charles Lake area (Bishoff and Fyfe)". In fact, Bishoff and Fyfe (1975, p.7, figure 5) recorded two Caspian Tern individuals from an unnamed lake near the Cambrian Fire Tower. The location of their sighting is shown correctly by Bradley (1978a) on her 'Figure 7.0'.
- In the *Atlas of Breeding Birds of Alberta* (Semenchuk, 1992, p.138), the map for Caspian Tern shows two "confirmed breeding" locations in Lake Athabasca. One is Egg Island and the other refers to a sighting by Lynne Dickson of two Caspian Terns at Sand Point (W. Nordstrom, *pers. comm.,* April 4, 2002), one of which was carrying food.
- Finally, on June 16th, 2002, a pair of Caspian Terns engaged in courtship feeding, was observed at the mouth of the Prairie River, on the west shore of Mamawi Lake (Thomas, 2002, p.27). The increasing number of sightings of this species in the PAD has been attributed to a 'spill over' effect resulting from the population expansion at its Egg Island colony over the past two decades (*Ibid.*).

Conservation issues relating to Egg Island Ecological Reserve are addressed in Section 3.3, below.

2.8 Fort Chipewyan and Vicinity

While staying at Ft. Chipewyan, and traveling upon Lake Athabasca en route to Fidler-Greywillow WPP, the June 2001 ornithological team kept a record of all the birds they encountered. Although incidental to the primary goals of this inventory project, these observations form a small but useful contribution to our knowledge of bird distribution in the region. The nature and significance of the most interesting of these records are outlined below:

Snow Goose: One injured adult, seen attempting to hide, on a cliff NE of Ft. Chipewyan (NSLA) on June 6th, 2001. A different, (healthy) adult was noted off Bustard Island, the following day. Late migrant.

Surf Scoter: At least two adults seen on L. Athabasca, en route to BSI, on June 6th. Uncommon in Alberta. ABBA (p.68) shows only one 'confirmed breeding' record for the province.

Peregrine Falcon: A total of 3 adults and two (WN) or possibly three (DV) nest sites, observed on NSLA cliffs, NE of Ft. Chip., on June 6th. The cliffs of the PAD – Ft. Chip. – NW shore of Lake Athabasca area comprise the stronghold for this species' provincial breeding population, which has been monitored since 1971 (Bradley, 2001). In the Ft. Chip. Study Area, the number of territorial pairs has fluctuated between 10 and 12, since 1996 (*Ibid.*).

Sabine's Gull: One breeding plumaged adult was with a flock of 15-20 Franklin's Gulls, hawking insects over Ft. Chip., on June 10th (RT). This species passes through the Ft. Chip. area, in small numbers, during the second week of June (*cf*. Höhn, 1970). Uncommon in the province.

Mourning Dove: A single adult was recorded in the Ft. Chip. townsite on June 9th and 10th (DV, RT). According to local resident Scott Flett (*pers. comm.*, June 9th, 2001), the bird had "been present all week." This species breeds in the southern 'half' of the province. Our record is the second for Ft. Chip., the first being that by Jung (1930) on June 11, 1928. Vagrant. Mourning Doves have also strayed to NWT, the Yukon and Alaska (Sibley, 2000).

Black-billed Magpie: Two were seen in the Ft. Chip. townsite on June 17th (RT, WN). According to Soper (1942) this species first reached the PAD in early February, 1936. It is a beneficiary of urbanization and forest clearance/fragmentation.

Common Raven: Ravens are indeed common within and around Ft. Chip. During June 2001, a number of what appeared to be very old birds were seen. These individuals possessed larger (and more 'hooked') bills than average, and were characterized by patches of silvery-grey feathering on their upper wing surfaces. Their vocal repertoires were remarkable, even by this species' amazing standards.

Cliff Swallow: An occupied, solitary nest of this species was observed under the eave of a small, Alberta Government building (Figure 8) on June 6th. The identical nest-site was also being used in June, 2002 (RT). Although no exhaustive literature searches have been attempted, this example of solitary nesting appears to be a very unusual practice for this swallow (*cf.* Brown and Brown, 1995).

European Starling: At least one starling was seen in the Ft. Chip. townsite on June 9th. According to Höhn (1956), this introduced species "only became common in the Edmonton district ….during the late 1940's." Soper (1942) does not mention it in his account of the avifauna of WBNP. Höhn (1956) recorded the first potential nesting of this species within WBNP, on May 25, 1955.

Orange-crowned Warbler: Several were noted within the Ft. Chip. town limits on June 17th (RT, WN). Here, and in both WPPs, this species' preferred habitat was submature, aspen/black spruce/paper birch/jack pine forest growing on the flanks of knob-like Shield (granite and/or, gneiss) outcrops. ABBA (p.247) has no records for the Kazan Upland away from Ft. Chip. and the Slave River Valley.

Savannah Sparrow: A substantial population of this species was present in the large marsh, NW of the Town Dock in Ft. Chip. on June 17th, 2001 (RT, WN). Its centre of abundance within the region is the PAD. ABBA (p.283) has no Kazan Upland records away from the Slave River corridor.

House Sparrow: No House Sparrows were observed by us during our sojourn in Ft. Chipewyan. This is noteworthy because on Sept. 3rd, 1976, Ebel (1977) counted 250 within the townsite, a number he considered "high?" for "an isolated community." Residents believe this species first arrived in Chipewyan aboard river barges (*cf*. Höhn, 1972, p.49). It appears the original population may now be extirpated.

3.0 Conservation Features and Issues

3.1 Fidler-Greywillow Wildland Provincial Park

What renders Fidler-Greywillow WPP unique with respect to Alberta's existing parks system, is the fact that it encompasses a combination of islands within Lake Athabasca and a portion of the Lake's northern shore. This Park serves to protect an excellent diversity of Canadian Shield habitats. Currently, the single most significant ornithological site in the Park is the islet near the NE shore of BWI, that supports a nesting colony of 500+ pairs of gulls. In more general terms, other areas important for birds within the WPP are its Lake Athabasca shorelines, islands and islets; variety of forest types and wetlands; and its dune margin habitats. Sandy and muddy shoreface flats serve as feeding areas for waterbirds, Sandhill Cranes, migratory and breeding shorebirds and other species. Rock platforms (Figure 9) are used by loafing waterfowl and waterbirds, rock cliffs can furnish nest sites for ravens and possibly peregrines, and rocky islets may host nesting gulls and terns.

Nesting colonies, islands and islets, all shoreline environments, and raptor (*e.g.*, Bald Eagle) nesting sites are especially vulnerable to human disturbance. Presently, camping occurs at a few favoured spots and, if visitation levels were to increase in future, local cumulative impacts could be severe. Potential disturbance of nesting species, and issues relating to habitat damage and the disposal of human wastes adjacent to Lake Athabasca, mean that camping on islands should be banned – preferably entirely, but definitely during the breeding season. Elsewhere, a "no trace" camping regime would greatly enhance the ecological sustainability of this recreational activity. Expansion of the NSLA portion of the Park southwestward to include Lapworth Point, and northeastward to the Saskatchewan border, would secure additional high quality shoreface and backshore habitats, plus a number of islets used by nesting gulls and terns.

3.2 La Butte Creek Wildland Provincial Park

La Butte Creek WPP was established to preserve an excellent example of an ecologically-rich, Kazan Upland riparian system with its attendant, diverse wetland and forest habitats. What renders LBC unique within the current provincial, protected areas system, is that its lower reach is subject to a hydrological condition common in the PAD known as "hydraulic damming" (Dr. Kevin Timoney, *pers. comm.*, June 2002), whereby high water levels in the Slave River serve to reverse La Butte Creek's flow direction and promote flooding. Such overbank flow events act not only to replenish flood basin wetlands, but also result in the deposition of sediment to form symmetrical, channel margin levees. These levees support distinctive, narrow strips of balsam poplar/aspen-dominated "gallery forest," flanked on both its proximal and distal margins by deciduous shrub (mostly willow) thickets (Figures 10 and 11). The composition, structure and riverside location of these gallery forests, coupled with the Park's proximity to the bird-rich Peace River Lowlands, and the Slave River Valley (a regionally significant, north-south, avian migratory corridor), means they support a diverse avifauna (by Shield standards) containing many species (*e.g.*, Black-and-white, Canada and Mourning Warblers; Rose-breasted Grosbeak, *etc.*) that are rare, or absent, across the bulk of

the Kazan Upland. The same is true for the wetlands (*e.g.,* 'Duck Lake') bordering the lower and middle reaches of LBC, which host Kazan Upland rarities such as Eared and Pied-billed Grebes, Ruddy Duck, and Yellow-headed Blackbird. These wetlands and LBC's gallery forests represent the Park's most important habitat assets from a bird conservation standpoint.

Hunting and trapping now occur within LBC. Park visitation related to activities other than these is believed to be minimal. Thus, as with Fidler-Greywillow, this WPP's remoteness serves as its greatest protection from potential anthropogenic threats to its ecological integrity. Continuation of bear-baiting within the Park should be reviewed with respect to potential injury to non-hunters who use the Park.

3.3 Egg Island Ecological Reserve

Tiny Egg Island is undoubtedly the site of greatest individual significance, from a provincial bird conservation perspective, in the entire Lake Athabasca-Kazan Upland region. It is also extremely vulnerable to human disturbance. Egg Island's continued integrity and protection derives chiefly from its comparative isolation/remoteness, together with its designation as an Ecological Reserve. The apparent cessation of egg-gathering activities by Native peoples (at this and adjacent nesting colonies on Lake Athabasca islands; R. Ladouceur, *pers. comm.*, June 2001) needs to be verified. Because of its status as by far the largest Caspian Tern breeding colony in Alberta, this site should be subject to annual monitoring as a matter of course.

3.4 Concluding Remarks

The protected areas described in this report are a priceless part of Alberta's natural heritage. Their present high degree of ecological integrity and intactness is due primarily to their distance from large urban centers and their geology (no oil and gas, thin soils). There is no room for complacency, however. Fort McMurray's affluent population is growing exponentially. Should an all-season road be constructed linking McMurray and Chipewyan, visitation rates for these sites (with their attendant environmental impacts) would skyrocket, virtually 'overnight'.

In 1961, Francis Harper presciently wrote: "It is obvious that the amelioration of climate since about 1915 has been shifting the boundaries of life zones northward in western Canada" (Nero, 1963, p.25). If current predictions concerning the on-going rate of global warming in western Canada, and its likely impacts upon the Boreal Forest, prove to be accurate (*cf*. AEP, 1998, pp.9-15), then the above discussion will ultimately be rendered completely moot.

4.0 Acknowledgements

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The Shield wildland parks' biodiversity inventory programme was conceived and organized by the Parks and Protected Areas Division, and included the input of both the Alberta Natural Heritage Information Centre in Edmonton and crucial regional staff (*e.g.*, Ted Johnson – the Area Planner of the Northeast Region). I am grateful to Ted for facilitating my participation in this interesting and important work.

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Figure 4: Aerial view of "Duck Lake" (La Butte Creek WPP) and its associated wetland complex. (PHOTO: Drajs Vujnovic).

Figure 5: General view of Egg Island, June 11th, 2001. (PHOTO: Drajs Vujnovic).

Figure 6: Close-up view of part of Egg Island, showing nesting Caspian Terns and California Gulls. (PHOTO: Drajs Vujnovic).

Figure 7: Caspian Tern nest on Egg Island, June 11th, 2001. (PHOTO: Drajs Vujnovic).

Figure 8: Solitary nest of Cliff Swallow, Ft. Chipewyan, June 21st, 2002. Inset: note head of bird in nest. (PHOTO: R. Thomas).

Figure 9: View towards SW across rock platform east of Fidler Point, NSLA. (PHOTO: Richard Thomas).

Figure 10: View upstream along lower reach of La Butte Creek. Channel is flanked by Aspen/Balsam Poplar 'gallery forest'. (PHOTO: Richard Thomas).

Figure 11: Aerial view of 'gallery forest' along lower reach of La Butte Creek. Waterbody visible in upper left is "Duck Lake". (PHOTO: Wayne Nordstrom).