A PRELIMINARY BIRD INVENTORY FOR

COLIN-CORNWALL LAKES WILDLAND PROVINCIAL PARK,

NORTHEAST ALBERTA

By

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Prepared for:

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]

1.1 Background

As a species, we are utterly dependent for survival upon the "ecological (a.k.a. ecosystem or Nature's) services" (*cf.* Daily, 1997) provided free by the naturally-functioning ecosystems comprising Earth's biosphere. Ecosystems consist of complex networks of intimately interlinked species. Ultimately therefore, human well-being (defined in terms of our physical and mental health, and the economic health and ecological sustainability of our communities) demands the maintenance of natural levels of biological diversity – in all its various guises (Wilson, 1984, 1993; Gordon and Suzuki, 1990; Kellert and Wilson, 1993; Kellert, 1997; Daily, 1997; and many other authors).

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, 2002, in Colin-Cornwall Lakes WPP. Equivalent bird survey data from June-July 2000, and June-July 2001, are contained in Thomas and Carroll (2001) and Thomas (2003), respectively.

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

[1] Much of Sections 1.0 and 2.0 has been taken from Thomas (2003) and adapted for use in this report.

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 an avifaunal inventory for a newly-designated protected area, *viz*. Colin-Cornwall Lakes (CCL) Wildland Provincial Park, located in northeasternmost Alberta (Figure 1). Established in March 1998, the Park encompasses a 704 km² area within the central-eastern portion of the Kazan Upland Sub-Region, of the province's Canadian Shield Natural Region (*cf.* Bradley, 1978 a, fig. 3.0; Wallis and Wershler, 1984; Achuff, 1994; AEP, 1994, 1996; Anon., 2002; and see Figure 1).

Following fieldwork during the peak (June-July) of the 2002 breeding season, a provisional bird inventory was drawn up for the WPP. 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)) in the 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 the provisional bird checklist. This list, together with other pertinent materials, was then analysed in order to fulfil a supplementary objective*, i.e.,* evaluate the Park with respect to its most noteworthy avian features and conservation values, and identify related management issues and needs.

Indisputably, the results of this study constitute a considerable advance in our knowledge regarding not only the birdlife within Colin-Cornwall Lakes WPP in particular, but also that of the Kazan Upland Sub-Region as a whole. 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 the 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 this protected area's most significant ecological role. More research will clearly be needed then, to fully document all the bird species that regularly occur within the WPP.

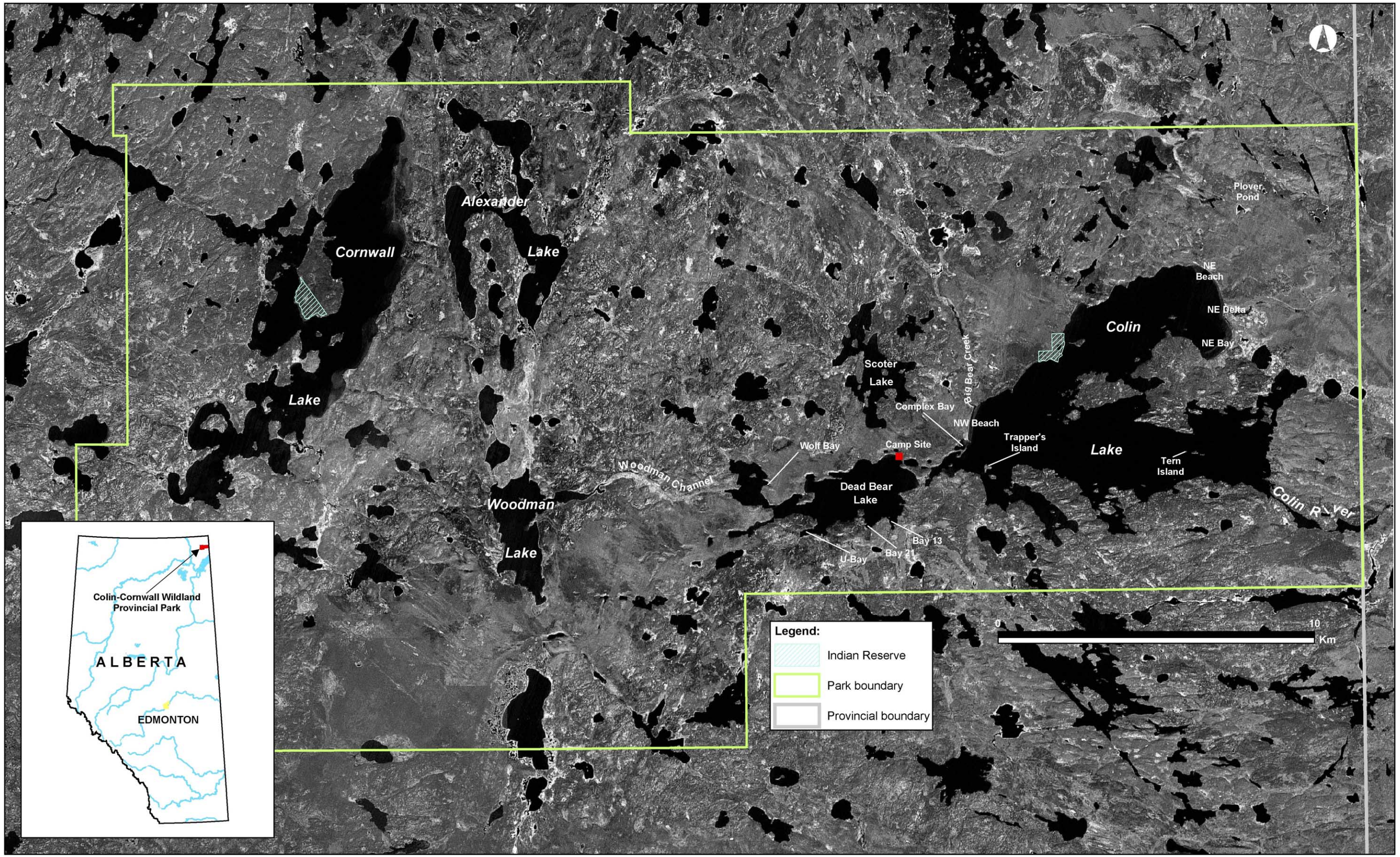

Figure 1: Location and selected geographic features (mentioned in the text) of Colin-Cornwall Lakes Wildland Provincial Park in NE Alberta.

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). Ornithological observations of relevance to the current study are contained in the expedition accounts of Preble (1908), Seton (1908), Harper (1915) and Eaton (1948). 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 (including, fortuitously, the Park) and/or, species (*e.g.,* Peregrine Falcon) 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.

E. Otto Höhn (1972) conducted pioneering ornithological fieldwork in the "Lake Athabasca Region" from 1969 to 1972. As defined by Höhn (1973, fig. 1), this Region includes the entire Kazan Upland (KU) of Alberta, together with part of Saskatchewan's Tazin Highlands faunal area. (Höhn [1972, 1973] incorporated Nero's [1963] avifaunal data for northwest Saskatchewan into his reports). Höhn (1972) visited Andrew Lake on July 10-14, 1970, and Leland Lake on July 5-8, 1971, where he recorded totals of 27 and 38 species, respectively (*cf.* Erickson and McGillivray, 1990, pp. 89 and 92). To date, the work by Höhn (especially his 1972 and 1973 reports) remains the most important contribution by an individual researcher, to our overall understanding of the KU avifauna.

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. Recorded upon these researchers' maps, from within the area now encompassed by the Park, are observations of both eagle species, Common Tern, Osprey and Common Loon. Without question, the existing ornithological study of greatest significance and utility to the current inventory project, is the section on birds within Wallis and Wershler's (1984) description and

analysis of the Kazan Upland Sub-Region's wildlife and vegetation. These authors' annotated checklist of KU birds is predominantly based upon the results of their own field research – undertaken (during July, 1983) in the Wylie Lake, Colin Lake and Woodman Lake areas – that they subsequently integrated with a review of relevant, available literature. In all, Wallis and Wershler (1984, pp. 61-66) list 124 "breeding or potentially breeding" species for the KU, of which 78 (*sic;* actual number = 79) were observed by them. Their (July, 1983) species totals for Colin, Woodman and Wylie lakes and their environs were 63, 51 and 49, respectively (*Ibid.,* p. 35). Wallis and Wershler's (1984) descriptions of the following 22 species contain specific references to either Colin or Woodman Lake and/or, the areas adjacent to them.

Horned Grebe	Mew Gull
Canada Goose	Arctic Tern
Gadwall*	Great Gray Owl
Greater Scaup*	Hairy Woodpecker
Lesser Scaup	Pileated Woodpecker
Hooded Merganser*	Common Raven
Sharp-shinned Hawk*	Cedar Waxwing*
Northern Goshawk	Northern Waterthrush*
Semipalmated Plover	Wilson's Warbler*
Killdeer	Western Tanager
Least Sandpiper	Clay-colored Sparrow

Their records of the seven species marked by asterisks apparently constituted the first for those taxa from the KU. In addition, Wallis and Wershler's (1984) nesting records for Semipalmated Plover and Mew Gull, were the first and second, respectively, to be documented within Alberta. (For further discussion of these authors' results, see Section 2.4).

From June 10-19, 1988, a multidisciplinary team from the Provincial Museum of Alberta conducted biological investigations at Andrew Lake (in the northeasternmost 'corner' of the Kazan Upland). They recorded a total of 66 bird species (*sic.*; actual number = 67) and obtained the province's second nesting record for Mew Gull (Erickson and McGillivray, 1990).

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. Another useful source of comparative data are the North American Breeding Bird Survey (BBS) routes run (in WBNP) near Ft. Smith and Peace Point by Dr. Mark Bradley.

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*; and 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 2002 Colin-Cornwall Lakes WPP biodiversity inventory project was conducted from June 6th - 14th and July 5th - 10th (both inclusive). The July session ended prematurely – with the evacuation of the study team – due to the approach of a forest fire. 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 Park in July. Nevertheless, members of this second expedition contributed a number of valuable avian observations that included several noteworthy records.

Access to and from the Park (from Ft. Smith) was by floatplane, while within the WPP we used combinations of motorized boat/canoe/inflatable, and foot travel. Our campsite for both sessions was located on the northeast shore of Dead Bear Lake (DBL; Figure 1).

Altogether, our ornithological studies in June involved 30 man-days of fieldwork; the latter was conducted by Bob Carroll, Wayne Nordstrom, Drajs Vujnovic and the author. For June and July combined, we amassed a total of 1,013 bird records. Within the WPP, 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, 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 WPP.) Once synthesized, and integrated with existing records from the literature, our June and July ornithological data sets were used to compile the annotated checklist presented below.

2.0 RESULTS

2.1 Introduction

The account of the Park's avifauna given herein follows the same two-part format used by Thomas (2003) in the previous report in this series. 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 the 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. The protected area's most significant attributes and values – from an avian conservation perspective – are briefly reviewed in Section 3.0.

2.2 Explanation of Checklist Format, 'Codes' and Abbreviations

Checklist Organisation: The Colin-Cornwall 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 this annotated checklist. As shown below, differences in typeface *etc.* are employed to indicate the record category to which each species belongs. Definitions of these five categories follow:

- Category 1. **American Robin:** Species definitely recorded by us (during June - July, 2002) within the Park.

- Category 2. **(American Robin):** Species previously recorded by others (principally Wallis and Wershler, 1984) within the area now circumscribed by the Park (*i.e.*, records derived from the literature).

- Category 3. American Robin**:** Species inferred to occur (or have occurred) within the Park based on 'indirect (physical) evidence' (*e.g.,* feathers, distinctive excavations in trees, etc.) found by us during June-July, 2002.

- Category 4. (American Robin)**:** Species inferred to have occurred within Colin-Cornwall WPP based upon 'indirect evidence' found by Wallis and Wershler (1984), within the area now circumscribed by the Park.

- Category 5. [*American Robin*]**:** Species whose occurrence within the 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, 2002 fieldwork follow the same 'standard' order / format. In the case of other workers' records, one or more components of this basic descriptive structure may have been omitted (due to the absence of appropriate information).

The first ornithological component of each Species Account 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 (if known) 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.

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 list 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 Park at this season (June-July), do in fact breed somewhere within its boundaries.

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.

NOTE: In the case of certain 'Category 1' species (*e.g.,* Horned Grebe), where Wallis and Wershler (1984) found a 'higher level' of evidence with respect to its breeding status in the Park than obtained by us in June-July 2002, their breeding status 'code' — for example: (Confirmed breeder [FL]) — is shown in parentheses following ours.

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 within the 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 Colin-Cornwall checklist (especially those obtained in June, 2002) 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; BC – Bob Carroll; GD – Gabe Durocher; TJ – Ted Johnson; DM – Doug Macaulay; WN – Wayne Nordstrom; RT – Richard Thomas; and DV – Drajs Vujnovic.

Abbreviations and Acronyms: For convenience and to save space, the species accounts for the Park employ numerous abbreviations and acronyms. Explanations of these follow:

- ABBA = The Atlas of Breeding Birds of Alberta (Semenchuk, 1992);
- AFWD = Alberta Fish and Wildlife Division;
- a.k.a. = also known as;
- am = *ante meridiem* (before noon);
- AOU = American Ornithologists' Union;
- BBS = The North American Breeding Bird Survey (*e.g.*, Peterjohn, 1994);
- *ca.* = *circa* (about);
- CCL = Colin-Cornwall Lakes;
- *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.*;
- DBL = Dead Bear Lake;
- DDT = dichlor-diphenyl-trichlorethane;
- *e.g.* = *exempli gratia* (for example);
- *et al.* = *et alia* (and others);
- *etc.* = *et cetera*;

- Ft. = Fort;
- *Ibid.* = *ibidem* (in the same reference);
- *i.e.* = *id est* (that is);
- incl. = inclusive;
- Is. = Island;
- km = kilometre;
- KU = Kazan Upland;
- L. = Lake;
- LBC = La Butte Creek;
- m = metre;
- N. = North (as in N. America);
- 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);
- p. = page;
- PAD = Peace-Athabasca Delta;
- pm = *post meridiem* (after noon);
- *pers. comm*. = personal communication;
- sec. = second(s);
- SRV = Slave River Valley;
- *sic* = quoted exactly;
- USFWS = United States Fish and Wildlife Service;
- *viz.* = *videlice*t (namely);
- *vs.* = *versus*;
- WBNP = Wood Buffalo National Park;
- WCBF = Western Canadian Boreal Forest
- WPP = wildland provincial park.

2.3 Annotated Checklist of Birds for Colin-Cornwall Lakes Wildland Provincial Park

NOTE:

1. The area covered by this checklist can be formally defined as consisting of: (a) all lands and waters circumscribed by the current legislated boundary of Colin-Cornwall Lakes Wildland Provincial Park and, (b) the airspace overlying same.

2. For the purposes of this report, informal names have been coined for a number of previously (officially) unnamed geographic features located within the WPP. These features (which are labeled on Figure 1) include: 'Bay 21' (on the SSE shore of Dead Bear Lake); Big Bear Creek; Dead Bear Lake (DBL; and see Note #3); North Woodman Island; NE beach and NW beach (both on Colin Lake); NE Colin delta; Plover Pond; Scoter Lake; Tern Island and Trapper's Island (both in Colin Lake); and Woodman Creek.

3. The unnamed, medium-sized lake immediately to the west of Colin Lake is herein called "Dead Bear Lake" (DBL). However, members of the 2002 study team applied several different names to this lake, such as: Esker Lake, Little Colin Lake, and West Colin Lake.

4. The geographic "directional terms" used in this report (*e.g.,* "central eastern") are those of Godfrey (1986, fig. 5, p. 14).

Species Accounts

- **LOONS (Gaviidae)**

Common Loon: Confirmed breeder [FL]: Common; Twenty-four records (20 visual, 4 aural) for a total of 45 birds (43 adults, 2 juveniles), representing *ca.* 32-34 different individuals. Except for two July (8th and 9th) observations from Colin Lake, our data pertain to the period June 6th - 13th, inclusive). Apart from two (separate) singles flying east over Dead Bear Lake (DBL), (both) on June 8th, visual records refer to birds on the water. All bar 3 of our records are for either Colin or Dead Bear Lakes – which support minima of 10-11 and 3-4 pairs, respectively. The exceptions are lone birds heard (June 7th) and seen (June 13th) on the large kettle pond immediately east of our campsite (Figure 1), and one noted on the southern arm of Scoter L. (June 12th). Breeding was confirmed on July 8th, when a pair, with two downy young, was observed on the north arm of Colin Lake (LA). 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, and the dearth of such features on Woodman Lake

may, in part, explain this species' apparent absence from that waterbody. During their July 1975 aerial surveys, Bishoff and Fyfe (1975) noted a pair and two individuals on Cornwall Lake. Wallis and Wershler (1984) found Common Loons to be "common on larger deeper lakes" of the Kazan Upland (KU). At Andrew Lake, Erickson and McGillivray (1990, p. 84) reported nests of this species to be "common on smaller islands" and, for the same location in July 1970, E.O. Höhn gave a density estimate of "about one pair per mile (*1.6 km*) of lakeshore" (*Ibid*., p. 92).

- **GREBES (Podicipedidae)**

Horned Grebe: Probable breeder [P], (Confirmed breeder [FL]); Uncommon; Six records (all for the period June 9-12, incl.) involving 4 or 5 individuals, as follows: one at the west end of Colin Lake (June 9th); a single bird on the first small kettle pond north of Woodman Lake (June 10th); one, presumably the same individual, observed on both June 10th and 11th, on a pond in the NE Colin delta; and a pair, noted during both the morning and afternoon of June 12th, on the eastern of the two small kettle ponds NW of our campsite. CI: Declining throughout its range in Alberta (AFWD, 2001). Comments: Confirmation of breeding within (what is now) the WPP, was obtained (July 9, 1983) by Wallis and Wershler (1984, p.61) who found a "pair with newly hatched young" on a kettle pond near Woodman Lake. Not encountered by Erickson and McGillivray (1990) at Andrew Lake, and no Kazan Upland records for this species are shown in ABBA (p. 38).

Red-necked Grebe: Possible breeder [H]; Rare; Five records, all of single birds, seen or heard over a two-day period in June, on DBL. June 7th: one seen offshore from our campsite (GD), and later one heard calling on DBL; June 8th: one calling (at 5:00 a.m.) from DBL; another (in mid-morning) heard from the southern shore ('Bay 21') of the Lake; and, at 4:30 p.m., one observed along the North shore of DBL, *ca.* 1.5 km W of our campsite. Conceivably, these records could all relate to a lone individual, but it is thought more likely that they involve two birds. The aural record from 'Bay 21' is interesting – because the vocalist appeared to be located south of DBL (perhaps on the small kettle lake closest to its central southern shore?). Comments: Höhn (1973) regards this and the previous species as "fairly common" summer residents of the Lake Athabasca region. Wallis and Wershler (1984) did not record it during their KU fieldwork, and Erickson and McGillivray (1990) found only one (June 11, 1988) at Andrew Lake.

- **PELICANS (Pelecanidae)**

  American White Pelican: No evidence of breeding [X]; Rare; Our lone record consists of two, seen flying over DBL, on July 10th. CI: NTM-F. Colonial nester. Sensitive to disturbance and environmental contamination (*e.g.,* pesticides). Populations have rebounded since the mid-1970s. Comments: There appear to be few KU records away from the Slave River Valley (SRV) migration corridor. This species' colony at the Mountain Rapids (a.k.a the "Slave River Rapids" [ABBA, p. 44] and the "Pelican Rapids" [Höhn, 1972]) of the Slave River ~3 km south of Ft. Smith, is one of the oldest known (established prior to 1789), and the northernmost, in North America (Pinel *et al*., 1991, p. 28). Presumably, any birds that overfly the WPP derive from this island colony.

- **HERONS (Ardeidae)**

  American Bittern: Possible breeder [H]; Rare (locally, Uncommon); Two records, both for June 13th, as follows: 1) at the NE end of the second small lake north of Woodman Lake, 3 heard "booming" (between 2:30 and 3:00 a.m.), from the fens flanking the creek flowing from Alexander Lake (DM, TJ); and 2) one observed in a marsh along Woodman Creek (Figure 2). CI: NTM-F. Area-demanding. Sensitive to disturbance. Declining due to habitat loss. Comments: Not reported by Wallis and Wershler (1984) nor Erickson and McGillivray (1990). ABBA (p. 47) has no Kazan Upland observations, and the region's first, confirmed breeding record for this species was obtained on July 14, 2001, in La Butte Creek WPP (Thomas, 2003).

- **GEESE, SWANS & DUCKS**

  Canada Goose: Possible breeder [H]; Fairly common; Sixteen records (14 visual) representing at least 505-557 individuals. Reported each day during the period June 7-13 (incl.), but no July records. Twelve of our reports involve birds in flight, with numbers ranging from a group of 3, up to a maximum observed flock size of 150-200 (the latter passed over our campsite at 9:45 p.m. on June 10th). In the 5 instances where flight direction was noted, four flocks were northbound and the other was headed northeastward. Of our two aural records, one concerns a flock (of unknown size) taking off noisily from DBL, at 2:00 a.m. on June 9th. In terms of their general location, our 16 reports break down as follows: DBL –10; Colin

Lake – 2; Scoter Lake – 3 (possibly all relating to the same flock); and, NE Colin delta – 1. "Several" birds noted at the latter site on June 11th, are believed to represent the only potential breeding individuals encountered in the Park. All other records probably involve non-breeding/sub-adult geese undertaking pre-moult (staging) movements. CI: Range expanding and numbers increasing in Alberta. Comments: Interestingly, Wallis and Wershler (1984, p. 61) only encountered a single adult within the WPP, at a kettle pond (herein termed 'Plover Pond'), NE of Colin Lake, on July 5, 1983. Erickson and McGillivray (1990) saw two flocks (of 7 and 10 birds) at Andrew Lake in June 1988.

Tundra Swan: No evidence of breeding [X]; Uncommon; Four records (3 of birds in flight, and one of probable remains) involving a total of 20 (live) individuals, as follows: June 7, 2 passing over DBL; June 8, from the southern shore of DBL, a flock of 17 and later, a single bird (beneath a flock of 32 Canada Geese), observed flying towards the NE; June 11, the remains (a pile of wing and body feathers) of an adult swan, believed to be this species, were found on the northwest shore of N. Woodman Island. Comments: These Arctic-bound swans represent late migrants. Inclement weather considerably delayed the spring movements of birds through Alberta in 2002 (*e.g.,* Koes and Taylor, 2002; Dolman and Bennett, 2003). An even tardier Tundra Swan lingered off the mouth of the Embarras River (PAD) on June 20th (Thomas, 2002, p.10).

Gadwall: Probable breeder [P]; Rare; Three records representing 5 individuals. On June 10, and again on June 13, a (presumably the same) pair was noted, in flight, over the small delta at the westernmost end of Colin Lake. Also on June 10th, two males and a female were present along the SE shoreline of Woodman Lake. CI: NTM-F. Numbers of this species have been increasing (from the mid-1950s to present) within northern Alberta as a whole (USFWS, 2001). 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 KU record. Erickson and McGillivray (1990) did not record this species at Andrew Lake. ABBA (p. 61) shows only a single sighting (in the Slave River Valley) for the entire Kazan Upland Sub-Region.

American Wigeon: Probable breeder [P]; Uncommon; Sightings on 4 different dates in June yielded a total of 6 individuals. Details are as follows: June 8, one male on Woodman Creek; June 9, a pair in the

'complex bay' on the NW shore of Colin Lake; June 11, one male at the head of 'Bay 21', DBL; and June 13, 2 males on the larger of the two small kettle ponds, E of our campsite. CI: NTM-F. Comments: Locally distributed on the KU, where it favours "shallow eutrophic lakes" according to Wallis and Wershler (1984). "Uncommon" at Andrew Lake (Erickson and McGillivray (1990). ABBA (p.62) shows several 'confirmed breeding' records for the KU. Fairly common at La Butte Creek, where breeding was confirmed in June/July, 2001 (Thomas, 2003).

Mallard: Probable breeder [P]; Fairly common; We amassed a total of 18 records (all visual; including 4 of birds in flight), for 8 dates in June (6-13, incl.) and 2 in July (8th and 9th), that involve at least 22-23 individuals, which break down as follows: 3 pairs, 6 males, 6 or 7 females, and 4 birds of undetermined sex. Eight reports pertain to lone individuals (6 male, 2 female). The largest group encountered was 4 or 5 females at the west end of Woodman Creek (June 11). Widespread: observed along Woodman Creek (9-10 birds); at the SE shore (several) and NE inlet of Woodman Lake; on Colin Lake and its shores (6 birds); on DBL (one male, and a pair); and described as "fairly common" in the NE Colin delta. One or 2 also sighted on Scoter Lake, and kettle ponds NW and E of our campsite. CI: Its North American populations are not as robust as those of most other dabbling duck species. Comments: The most common dabbler on the KU (Wallis and Wershler, 1984) and in the Park. Fairly common at Andrew Lake, where it nests (Erickson and McGillivray, 1990).

Blue-winged Teal: Probable breeder [P]; Rare; Three records, from 2 dates, involving up to 5 individuals, as follows: June 8, a pair on Woodman Lake; June 11, one female flushed along Woodman Creek, and a pair seen in the NE Colin delta. CI: NTM-O. Comments: Höhn (1973, p. 9) describes this species as "rare (*for the*) Slave River Valley" and "unknown further east." Not reported by Wallis and Wershler (1984) or Erickson and McGillivray (1990). ABBA (p. 58) indicates two 'confirmed breeding' records for the KU.

Northern Pintail: No evidence of breeding [X]; Casual; Our lone record consists of a male, observed on June 11th, in the NE Colin delta. CI: NTM-F. Miller and Duncan (1999) characterize this species' North American population as "struggling." Comments: Neither Wallis and Wershler (1984) nor Erickson and

McGillivray (1990), encountered it during their fieldwork. There are no KU records shown for this species in ABBA (p. 57).

Green-winged Teal: Possible breeder [H]; Uncommon; Eight records, spanning 5 dates (*i.e.,* June 7-10, incl.; and July 6), that concern a total of 9-11 individuals (*viz.:* 3 males, 4-5 females, and 2-3 birds whose sex was not determined). Observed in a narrow channel on the S side of DBL; on the westernmost bay of Colin Lake; at the S end of the long NW-SE oriented bay on the SW side of Colin; on the second small lake N of Woodman Lake; and on a kettle pond NW of our campsite. The largest number seen together was 3 (on June 8th, at the first of the above-listed locations). CI: NTM-F. Comments: This species was not recorded by Wallis and Wershler (1984) or Erickson and McGillivray (1990). ABBA (p. 55) indicates only one 'confirmed breeding' record for the KU outside the SRV and NSLA.

Ring-necked Duck: Probable breeder [P, T]; Fairly common; Ten records, involving about 17 individuals (comprising 3 pairs, 3 males, 2 females, and 6 other birds), from 6 dates in June (*i.e.,* 7th, 8th, 10th-13th incl.). Pairs were noted: on a pond in the NE Colin delta; on the smallest of the 3 kettle ponds E of our campsite; and in a narrow (inflow) channel on the S side of DBL. Birds were also seen on Woodman Lake, along Woodman Creek, on the S arm of Scoter Lake, and in the long bay on the SW side of Colin Lake. CI: NTM-F. Comments: Wallis and Wershler (1984) regard this duck as uncommon on the KU. They describe its preferred habitat (in the Sub-Region) as "kettle ponds, eutrophic lakes, and swampy stream channels." Our observations are in complete accord with their assessment. Erickson and McGillivray (1990) found only a single female of this species at Andrew Lake.

(Greater Scaup): No evidence of breeding [X]; Rare?; Included here on the basis of the following two records, made in 1983, by Wallis and Wershler (1984, p. 62): 1) July 7, "three males, two females on small kettle pond, just northeast" of DBL; 2) July 10, this species "comprised large portion of flock of 400-500 scaup, Woodman Lake." CI: Since the early 1980s, the total (Greater & Lesser) scaup population in North America has undergone a dramatic decline (Anon., 1999; Austin *et al.,* 2000). As Austin *et al.* (2000) put it: "the combined scaup population has declined significantly over the past 20 years, with widespread and consistent declines within surveyed areas of the western Canadian boreal

forest" (WCBF). These authors (*Ibid.,* p. 257) "believe that the most likely contributors to habitat changes leading to widespread scaup declines in the WBCF are climate change, fire and logging." Comments: Wallis and Wershler (1984) believed their records to be the first for the KU. Salt and Salt (1976, p. 56) considered this species "a rare transient" in Alberta, but it is now known to be an uncommon to (locally) fairly common, regular spring and fall migrant through the central and northern portions of the province. However, as elsewhere, our understanding of the status and distribution of Greater Scaup within Alberta has been hampered by the fact that, due to their overall similarity, differentiating Greater from Lesser Scaup is often problematic (*cf.* Kaufman, 1990, pp. 43-47). Based on current knowledge, given the date and numbers involved, Wallis and Wershler's (1984) July 10th record can only be described as extraordinary. The date seems far too early for the Colin Lake flock to represent a staging concentration of post-breeding birds, but perhaps in 1983 the species experienced a major breeding failure across its sub-Arctic nesting grounds. There are no unequivocal Alberta breeding records for Greater Scaup (*cf.* ABBA, p. 324).

Lesser Scaup: Probable breeder [P]; Common; Twenty-two records spanning 7 consecutive dates in June (7-13 incl.), plus a single report for July (6th). Considerable uncertainty regarding the degree of duplication among these records, is reflected in the minimum and maximum estimates of the numbers of individuals involved *i.e.,* 38 and 58, respectively. These totals break down as follows: 10-15 pairs, 3-4 males, 1 female, and 14-23 birds of unknown sex. Our observations were concentrated on Woodman Lake and its environs (including its E 'arm', both kettle ponds to its N, and Woodman Creek); the smaller kettle ponds NW and E of our campsite; the southern shore and W end of DBL; and the NE Colin delta. Scoter Lake, Big Bear Creek and the westernmost bay of Colin Lake also yielded one record apiece. The largest number seen together was four. CI: NTM-F. Undergoing widespread decline, but cause(s) uncertain (*cf.* Anon., 1999; Austin *et al.*, 2000; see previous species' account). Comments: In July 1983, "large groups and small flocks" of this species were present on Woodman Lake (Wallis and Wershler, 1984, p. 62). Regarded as "fairly common" at Andrew Lake by Erickson and McGillivray (1990, p. 84). ABBA (p.66) shows 'confirmed breeding' in two KU atlas squares.

Surf Scoter: Probable breeder [P, C]; Uncommon; Eight records, all of adults in breeding plumage, from 5 dates in June, for a total of between 25 and 31 individuals (25 is considered the more accurate estimate). Details of these sightings (excluding duplicate reports) follow. On the evening of June 6th, four (3 males, 1 female) flew past our campsite (on the NE shore DBL), and later (10:00 p.m.), the male of a pair swimming offshore from camp, was seen displaying; June 11: one male observed in flight over SE DBL, and a party of 5 males and 4 females noted in a small bay on the NE arm of Colin Lake; June 12: a group consisting of 5 pairs plus 4 males was present on the southern arm of Scoter Lake (several of these males performed courtship displays, see 'Comments' below). And, after 9:00 p.m. on June 13, a lone female was on DBL, off our campsite. CI: Scoter populations in western Canada are undergoing long-term declines (*e.g.,* USFWS, 2001). Comments: In Alberta, Surf Scoter courtship rituals are a rarely witnessed phenomenon. The males displaying on Scoter Lake (June 12) performed the following routine. After tilting their bills downward, they started bobbing their heads up and down, while simultaneously producing a "wuk"-type call. This escalated into the bill being rapidly (and repeatedly) dipped into the water, and culminated with the male chasing the female across the lake surface. Not recorded by Wallis and Wershler (1984), but considered "abundant" on Andrew Lake by Erickson and McGillivray (1990, p. 87) who saw "flocks of 25 to 30 birds in open water". There are only 3 or 4 confirmed breeding records of this species for the province (Pinel *et al.,* 1991, p. 64; ABBA, p. 68).

White-winged Scoter: Probable breeder [P]; Rare; Only two records, which both refer to the same group of 5 (a pair and 3 males) alternate (breeding) plumaged adults, located at the southern end of Scoter Lake, on June 12th. CI: This species undergoing a "significant long-term decline" (AFWD, 2001, p. 37). Comments: Erickson and McGillivray (1990) have no Andrew Lake reports. Wallis and Wershler (1984) did not include this species on their KU birdlist, but ABBA (p. 69) shows one confirmed breeding record for the Sub-Region.

Long-tailed Duck: No evidence of breeding [X]; Rare; Our lone record consists of 3 adults in breeding plumage (2 males, 1 female), observed amongst chunks of a disintegrating ice sheet on the S arm of Colin Lake, on June 9th (WN, BC). Comments: In North America, Long-tailed Duck was formerly known as "Oldsquaw" (*cf.* AOU, 2000, pp. 848-9). Höhn (1973) regards this species as a "scarce migrant" on

Lake Athabasca. The above-described record may be the first for the KU (away from the NSLA). Presumably, these 3 birds represent delayed migrants (*cf.* Koes and Taylor, 2002; Dolman and Bennett, 2003).

Bufflehead: Confirmed breeder [FL]; Common; Twenty-six records, 24 of which span 8 dates in June (*i.e.,* 6-8 incl., and 10-14, incl.), but only two were obtained (one on both the 6th and 8th) in July. Altogether, these records involve a total of at least 48 individuals, comprising 40 adults (13 pairs, 4 males, and 10 other birds of undetermined sex) and 8 young. Birds were observed on small kettle ponds – including those NW and E of our camp; Woodman Lake and Woodman Creek; along the NE, S and W shores of DBL; in the NE Colin delta, and on the S arm of Scoter Lake. Two active nests were located: a) in a dead Paper Birch at the western end of the Woodman Creek channel (June 11), and b) in a Jack Pine snag, on the shore of DBL, by our campsite (also June 11). On July 8th, a pair with 8 ducklings was present on Woodman Creek. The largest group of adults encountered was 7, on the first small kettle lake N of Woodman Lake (June 10). Only one bird (a male) was seen on Colin Lake itself (off the NW beach, on June 10th). CI: Cavity nester. Comments: This is the commonest diving duck species in the Park. Described as "uncommon" on the KU by Wallis and Wershler (1984), and "fairly common" at Andrew Lake (Erickson and McGillivray, 1990).

Common Goldeneye: Probable breeder [P]; Uncommon; Five June records that involve 11 individuals, comprising 1 pair, 5 males and 4 females. Details of these sightings are: June 7, 4 females in the westernmost bay of Colin Lake; June 10, 3 males along the SE shore of Woodman Lake, 2 males off the NW beach of Colin Lake, and I male observed in the NE Colin delta; the latter bird is assumed to have been one of the pair, found at the same site, the following day (June 11). CI: Cavity nester. Comments: Not found by either Wallis and Wershler (1984) or Erickson and McGillivray (1990), but described as a common summer (breeding) resident of the Lake Athabasca Region by Höhn (1973). This species and Mallard were the two waterfowl taxa most frequently encountered within La Butte Creek WPP during June/July, 2001 (Thomas, 2003).

Hooded Merganser: No evidence of breeding [X]; Rare; Two records, that probably relate to the same individual. On the morning of June 12th, a female-type plumaged Hooded Merganser was found on the eastern of the two small kettle lakes located NW of our campsite. Based upon its eye colour (light-to-medium brown) and bill colour (almost entirely yellow), this bird was identified (RT) as an adult female (*cf.* Sibley, 2000). Less than two hours later, a second 'female-type' individual was seen along the SW shore of the S 'arm' of Scoter Lake. This bird's bill was wholly orange-yellow except for a dusky tip to the upper mandible. Its eye colour could not be determined. Some observers felt that bird #2 was a male in first-year plumage. However, given the proximity of the two sites, differences in lighting conditions and viewing distance (between the two records), and the fact that bird #1 was absent when the kettle pond was re-checked at 2:00 p.m., the writer believes only a single, adult female was involved. CI: Cavity nester. This species appears to be gradually expanding its range in NE Alberta: for example, it is now suspected of nesting in Lakeland Provincial Park (Thomas, 2000b). A brief description/discussion of additional Canadian Shield records of this species is given by Thomas and Carroll (2001, pp. 21 and 29-30). Interestingly, Wallis and Wershler's (1984) observation of two females on Colin Lake (July 7, 1983) appears to have been the first record for the KU.

Common Merganser: Probable breeder [P]; Fairly common; Fifteen records (including 3 of birds in flight), 13 of which are from 5 dates in June (7-11, incl.), plus single reports for July 7 and 10. Our observations involve a total of at least 29 individuals, comprising 9 pairs, 5 females and 6 males. Widely distributed along/adjacent to rocky shores and smaller islands of Colin Lake and DBL. In fact, we have only two reports of birds away from these two lakes, *viz.*: one male, flying upstream, along Big Bear Creek (June 9) and a pair at the SE end of Woodman Lake (June 10). CI: Cavity nester. Comments: Considered common on large (KU) lakes by Wallis and Wershler (1984), and fairly common at Andrew Lake, where it is suspected to nest (Erickson and McGillivray, 1990). ABBA (p. 74) shows a 'confirmed breeding' record for the latter location.

Red-breasted Merganser: Probable breeder [P]; Fairly common; Twelve records, from 5 dates in June (6-9 incl., and 11), that involve some 23-25 individual birds. The latter total breaks down as follows: 7 pairs, 6-8 males, and 3 females. Favours rocky shores and islands throughout Colin Lake. Our 4 records

for DBL all concern birds in flight. Comments: Wallis and Wershler (1984) describe this species as fairly common on the larger lakes of the KU Sub-Region. Fairly common at Andrew Lake, where it is known to nest (Erickson and McGillivray, 1990, p. 87; ABBA, p. 75). In addition to the reports compiled for this and the previous species, 6 mergansers (species indeterminate) were observed in the easternmost bay of Colin Lake's N arm, on July 8th.

- **HAWKS AND EAGLES (Accipitridae)**

  Osprey: Confirmed breeder [ON]; Uncommon; Ten records – (9 visual, 1 aural) 7 from four dates in June (7, 8, 10 and 11), and 3 from two dates in July (7 and 8). On June 10, an active nest was discovered on the SE shore of Woodman Lake. Our other reports all involve single birds in flight, over the following locations: westernmost Colin Lake (two sightings of the same bird); southern DBL (5 records); the second, small kettle lake N of Woodman Lake, and (on July 8) Woodman Creek (one record apiece). In all likelihood, our records just involve the pair nesting at Woodman Lake or, at most, represent 3 different individuals. CI: NTM-O. Sensitive to disturbance and environmental contaminants. Decreasing. Comments: For the KU (based upon the surveys of Bishoff and Fyfe, 1975), Wallis and Wershler (1984) describe this species as "very local at large lakes". There is no evidence of it breeding at Andrew Lake, where it is "rare" (Erickson and McGillivray, 1990). Ours is one of only a handful of confirmed breeding records for Osprey on the KU (*cf.* Höhn, 1972, p. 8; Bishoff and Fyfe, 1975; ABBA, p. 79). Bishoff and Fyfe (1975) show two, 1971 occurrences of adults, to the NE of Woodman Lake's eastern 'arm'.

  Bald Eagle: Confirmed breeder [NY]; Common; Twenty-eight records, of which 24 span a 7-day period in June (6-12, incl.), while the remaining 4 stem from 3 consecutive days in July (7-9, incl.). Twenty-seven of our reports involve live birds, and these observations are fairly evenly split between: a) birds in flight (10 records); individuals perched within or adjacent to active nests (8); and birds perched (predominantly in lakeside trees) well away from occupied nests (9). (The other record concerns an old nest, situated on the SE shore of DBL.) Altogether, our records involve a total of *ca.* 30 different birds that include at least 5 pairs, 9-10 additional adults, and 10 subadults. The latter group comprised 2 juveniles, one first-summer bird, one second-year bird, and 6 individuals whose ages were not determined. The 5 active nests found by us were located on 'North Island', Woodman Lake; the SW

shore of DBL; the central-northern shore of Colin Lake; on an island in the NE bay of Colin's S arm; and an island near the centre of the southern shore of the aforementioned arm. On July 9th, the latter nest contained two large (non-fledged) eaglets (with both parents in attendance). Within the area we surveyed, Colin Lake (and its environs) represents the centre of this species' abundance (15 records), followed by DBL (5 records), Woodman Lake (4 records – although 3 pertain to the active nest on 'North Island'); and Scoter Lake (2 records for its S arm). One subadult was also observed along Woodman Creek. CI: Sensitive to disturbance and bioaccumulation of toxins. Population levels have rebounded in the post-DDT era. Comments: Wallis and Wershler (1984) described this species as "fairly common around lakes" on the KU, and state it nests on wooded islands. According to these authors, the Sub-Region supports the highest nesting density of Bald Eagles in Alberta, although Erickson and McGillivray (1990, p. 90) dispute this claim. Bald Eagles are also common (and nest) at Andrew Lake (*Ibid.,* p. 87). The PAD and its surrounding region represent another major, provincial stronghold for this species (Boyd, 1972; Thomas, 2002).

Northern Harrier: Confirmed breeder [DD]; Rare; Details of our three records are as follows: June 8, one flying over sedge/willow flats bordering Woodman Creek; July 8, a female observed in a fen/marshy area adjacent to Woodman Creek, exhibited agitated behaviour in response to the proximity of the observer, and was believed to be nesting nearby; also on this date, two birds were seen flying along Woodman Creek. It appears safe to assume these records all involve the same pair. CI: NTM-F. Sensitive to disturbance. Has declined significantly in Canada during the last decade (Dunn *et al.,* 2000). 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 summer of 1969-1971, inclusive. None were reported by Wallis and Wershler (1984) or Erickson and McGillivray (1990). ABBA (p. 81) has just a single 'possible breeding' record for the KU (from the SRV). The PAD seems to be a provincial centre of abundance for this species (Thomas, 2002).

(Sharp-shinned Hawk): Possible breeder [H]; Rare; Owes its presence on the Park checklist to Wallis and Wershler's (1984) record of one adult, at Colin Lake, on July 10, 1983. CI: NTM-F. Comments: Wallis and Wershler (1984, p. 62) believed their record to be the first for the KU, although Höhn (1972, p.

5; 1973, p. 11) already considered it a “scarce breeding bird of the region”. Erickson and McGillivray (1990) observed a territorial pair at Andrew Lake, but did not obtain further evidence of breeding. ABBA (p. 82) shows one ‘confirmed breeding’ record for the KU. This is one of the species we did not expect to ‘miss’ in the Park.

Northern Goshawk: Possible breeder [H]; Rare; Only two records, both involving single birds seen in flight on June 8th, over: 1) a bay on the NE side of DBL; and 2) Woodman Lake. CI: Resident. Sensitive to disturbance. Area-demanding; requires large tracts of intact, mature/old-growth forest. Declining due to on-going habitat loss. Comments: Höhn (1972) considers this species to be a scarce (breeding) resident of the Lake Athabasca Region. Not reported by Erickson and McGillivray (1990). A feather, believed to be from an immature goshawk, was found at Woodman Lake by Wallis and Wershler (1984, p. 62). Somewhat surprisingly, ABBA (p. 85) has no KU records whatsoever for this species away from the NSLA. A “Buteo-like” raptor carrying prey, glimpsed flying north over the small delta at the W end of Colin Lake (on June 13, 2003), was thought to belong to this, or the following, species.

Red-tailed Hawk: Possible breeder [H]; Rare; Two records: an adult, rufous-morph bird soaring over Big Bear Creek (June 9); and one heard overheard (but not seen), from a Black Spruce fen roughly “half-way” along Big Bear Creek (July 7th; LA). These records probably involve the same individual. CI: NTM-F. Has benefited from forest clearance/fragmentation. Comments: This species is characterized as being “very local” in occurrence on the KU by Wallis and Wershler (1984). Not observed by Erickson and McGillivray (1990). ABBA’s (p. 87) only ‘confirmed breeding record’ for the Sub-Region is from Ft. Chipewyan. Höhn (1972, p. 5) saw none at Andrew or Leland Lake in 1970 and 1971.

(Golden Eagle): No evidence of breeding [X]; Casual?; Included herein because one of Bishoff and Fyfe’s (1975, fig.3a) distribution maps (based on aerial surveys) shows two (1971) records of adult birds just N of Woodman Lake. (The data points are situated adjacent to the E shores of the first and second small lakes N of Woodman.) Unfortunately, the authors supply no further details concerning their observations. CI: Sensitive to disturbance. Area-demanding. Comments: Regarded as a “rare migrant” across the Lake Athabasca Region by Höhn (1972, 1973). Nests locally on cliffs in the SE part of the KU,

according to Wallis and Wershler (1984). ABBA (p. 89) has no Canadian Shield Natural Region breeding records of this species.

- **FALCONS (Falconidae)**

  American Kestrel: Possible breeder [H]; Rare; Three records, all from the Woodman Lake outflow area (*i.e.,* the western end of Woodman Creek), that probably involve the same individual. Details are as follows: 1) June 8, one female observed in an old (regenerating) burn in a mixedwood stand. A male may also have been present, but this was not confirmed; 2) June 10, a female was seen at the same location as on June 8; and 3) June 11, a bird (sex not ascertained) was perched in a Jack Pine snag, on a rocky knoll just N of the Woodman Lake outlet. Though suspected, no proof of breeding at this site was obtained. CI: Cavity nester. Based upon anecdotal evidence and the writer's field experience, this species is believed to be declining in central and northern Alberta. Comments: Described as the only widespread and common breeding (diurnal) raptor of the Lake Athabasca Region (Höhn, 1972). For WBNP, Soper (1942) considered this species "well distributed and evidently the commonest of the raptors (*sic*)". However, in June 2002, none were observed on the PAD (Thomas, 2002), and none were encountered in Fidler-Greywillow and La Butte Creek WPPs in June/July of the same year (Thomas, 2003). On the KU, Wallis and Wershler (1984) thought it uncommon, while only a single breeding pair was found by Erickson and McGillivray (1990) at Andrew Lake. ABBA (p. 90) however, has two records of 'confirmed breeding' for the Kazan Upland (away from the SRV and NSLA).

  Merlin: Probable breeder [P, T]; Rare; Seven records, from four dates in June and one in July, that involve a single pair (5 records) and one additional individual. Locations and other details of these records follow. June 6: one seen in a White Spruce/Paper Birch stand on the S side of the central kettle lake (of the 3), E of our camp; and, a male of the 'Taiga' (dark) race, seen/heard calling from the top of a spruce, on the point SE of our campsite. June 7: excellent views obtained, in mixedwood forest, on the ridge SE of camp, of a dark (Taiga) race female. June 9: one adult seen at the northeasternmost beach of Colin Lake; another (probably the same) bird was later noted flying over the Lake, offshore from the latter location. June 13: a distant bird was heard calling by observers on the E side of the largest kettle lake, E of our camp. And, July 7: one seen in conifer-dominated forest on the E side of DBL. CI:

Resident, although most northern Alberta birds appear to withdraw farther S in winter. Comments: Not mentioned by Wallis and Wershler (1984) or Erickson and McGillivray (1990). Höhn (1973, p. 12) labels it a "fairly rare" breeding resident of the Lake Athabasca Region, but lists no KU records away from the NSLA (Höhn, 1972, p. 10). No KU records of any kind are shown in ABBA (p. 91).

- **GROUSE & ALLIES (Phasianidae)**

Ruffed Grouse: Possible breeder [H]; Rare; Only two records: one seen in a mixedwood stand on the W side of the 'central' kettle lake (of the 3) E of our camp (June 6th); and one heard drumming in old-growth mixedwood forest, on the ridge SE of our camp, on the evening of June 7th. Quite possibly, these records involve the same (male) bird. CI: Resident. Populations exhibit 'boom and bust' cycles. Comments: Not encountered by either Erickson and McGillivray (1990) or Wallis and Wershler (1984). Considered "rare or absent" east of the SRV by Höhn (1973, p. 12). Soper (1942, pp. 46-47) states (for WBNP) that "birds of this latitude are in part migratory." ABBA (p. 101) has no 'confirmed breeding' records for the KU away from the SRV.

Spruce Grouse: Possible breeder [H]; Uncommon; Our 5 records of live birds involve a total of 6 individuals (*i.e.,* 2 males, 2 females, and 2 of indeterminate sex). Dates/details for these records follow. June 8: a male in young (post-fire) Jack Pine/Black Spruce forest, on the SE shore of DBL, and one bird in mixedwood forest on North Woodman Island; June 9: a female perched in a small birch behind the beach ridge, northeasternmost Colin Lake; July 8: one in a Jack Pine stand behind an ice-push ridge, NE Colin Lake; and, July 9: one male and a female observed in a mixedwood stand, in the Colin River area. In addition, on June 11, the remains of a predated bird were found in a spruce-dominated mixedwood stand, on the SE shore of Woodman Lake. CI: Resident. Comments: At least 5, KU, 'confirmed breeding' records for this species are shown in ABBA (p. 97). "Common" at Andrew Lake (Erickson and McGillivray, 1990). During the course of our surveys, we encountered numerous piles of fresh-to-old grouse droppings. Locations/habitats where such droppings were most commonly recorded, include: burned and unburned Jack Pine and Black Spruce stands and boggy areas along the S shore of DBL (June 8); burned and unburned Jack Pine forest, especially on S-facing slopes, between NE Colin Lake and Plover Pond (June 10); old-growth spruce forest N of the West Colin delta (June 13); and mixedwood

stands on islands in the S arm of Colin Lake (July 9 and 10). While most of these droppings (especially those in coniferous stands) are attributable to Spruce Grouse, some undoubtedly record the presence of the previous species.

- **RAILS & COOTS (Rallidae)**

  Sora: Possible breeder [H]; Fairly common; Twelve records (only 1 visual), from 5 dates in June (7-11, incl.), and one in July (7th), involving 12-14 individuals. Found in riparian and deltaic wetlands (sedge fens, cattail marshes). Most commonly recorded along Woodman Creek (at least 5 different birds), and in the NE Colin delta (3 or 4 birds) and W Colin delta (2 or 3). Single birds were also reported from the SE shore of Woodman Lake, along Big Bear Creek, and at the NE end of Colin Lake's S arm. CI: NTM-F. Comments: Though unproven, it appears certain that this rail breeds within the Park. For the KU, Höhn (1973) considers it an uncommon species that "probably breeds". Not recorded by Wallis and Wershler (1984), and described as "uncommon" at Andrew Lake (Erickson and McGillivray, 1990, p. 87). ABBA (p. 108) shows no 'confirmed breeding' records for the Kazan Upland.

  American Coot: Possible breeder [H]; Rare; Our lone record consists of two different birds, observed in the NE Colin delta, on June 11th. CI: NTM-F. This species' population and range in central and northern Alberta appear to be expanding. Comments: Not reported from the KU for Höhn (1972), Wallis and Wershler (1984), or Erickson and McGillivray (1990). ABBA (p. 109) has no breeding record for the Sub-Region away from the NSLA and SRV. Found to be "fairly common" in La Butte Creek WPP during June/July, 2001 (Thomas, 2003).

- **CRANES (Gruidae)**

  Sandhill Crane: No evidence of breeding [X]; Rare; One record: a single bird, heard calling from a wetland adjacent to DBL, on June 7th. CI: NTM-F. Sensitive to disturbance. Decreasing. Comments: Wallis and Wershler (1984) characterize this species' distribution on the KU as "very local". Within the Sub-Region, ABBA (p. 110) gives only one record – of possible breeding' – from the SRV. Höhn (1973) describes it as a "local summer resident" of the Lake Athabasca Region.

- **PLOVERS (Charadriidae)**

(Semipalmated Plover): Confirmed breeder [FL]; Casual?; On July 5, 1983, "three adults and at least one brood of downy young" were observed by Wallis and Wershler (1984, p. 63), upon the "sandy shores of (*a*) kettle pond" (termed 'Plover Pond' in this report), located *ca.* 2 km NE of the NE 'tip' of Colin Lake (Figure 3). CI: NTM-O. Comments: To date, breeding of Semipalmated Plovers has only been documented twice in Alberta. Wallis and Wershler's (1984) record represents the second of these occurrences – the first being at Grosbeak Lake in WBNP (Kuyt, 1982). Theirs also constitutes the lone report of this species from the Park. During a visit to Plover Pond on June 10th, the only shorebirds encountered comprised a pair of Spotted Sandpipers. Höhn (1973) regards this plover as a "fairly common migrant" in the Lake Athabasca Region (north of the Lake), and Wallis and Wershler (1984) describe it as being "very local and uncommon" on the KU.

(Killdeer): Confirmed breeder [ON]; Casual?; In an obvious reference to Plover Pond, Wallis and Wershler (1984, p. 21) state that "the only kettle pond with an extensive sandy shore has nesting Semipalmated Plovers and Killdeer". Their "Annotated List of Birds" for the Kazan Upland also indicates that "evidence for nesting" was found but, unfortunately, these authors supply no further details. We did not record this species in the Park during June/July, 2002. CI: NTM-F. Has undergone significant, wide-scale declines in Canada and the U.S.A. over the last 20-30 years (Gratto-Trevor *et al.,* 2001; Rodriguez, 2002). Comments: Described as "local and uncommon" on the KU by Wallis and Wershler (1984, p. 63), and "uncommon" at Andrew Lake where, in June 1988, 5 breeding pairs were present (Erickson and McGillivray, 1990, p. 87). The only 'confirmed breeding' record for Killdeer on the KU shown in ABBA (p. 115) is also from the latter Lake.

- **SANDPIPERS & ALLIES (Scolopacidae)**

Greater Yellowlegs: Possible breeder [H]; Uncommon; Seven records (5 visual, 2 aural), all of single birds, involving 3-6 different individuals, from 4 dates in June (*i.e.,* 8, 10, 11 and 13). These records are as follows: June 8, an adult in sedge/willow flats alongside Woodman Creek; June 10, one in a marsh at the W end of Woodman Creek; also on June 10th: one feeding along the narrow sandy shore, on the E side of Colin's NE bay; one heard near the mouth of the NE Colin delta; and one on the NE beach of

Colin Lake; June 11, one seen in the NE Colin delta area; June 13, one heard in the small delta at the W end of Colin Lake. Our four records from NE Colin Lake may well relate to a single bird. All vocalisations ascribed to this species (including those of an individual observed calling), consisted of loud "tew" notes, typically given in a rapid series or 'phrase' of three. CI: NTM-O. Comments: Described as a "fairly common though local" summer (breeding) resident of the Lake Athabasca Region by Höhn (1973), "fairly common" on the KU (Wallis and Wershler, 1984), and "uncommon" at Andrew Lake, where apparently territorial birds were observed (Erickson and McGillivray, 1990). ABBA (p. 119) has two KU records of 'confirmed breeding'.

Lesser Yellowlegs: Possible breeder [H]; Uncommon; Four records, obtained over a 3-day period in June (9-11, incl.), that may involve a total of up to 16 individuals. Details of these records are as follows: June 9, one feeding at the S end of the NW beach of Colin Lake; June 10, one seen flying along the shore of the second small lake N of Woodman Lake; also on June 10, a party of 9 was feeding along a bulrush-dominated shoreline, on the W side of Woodman Lake; and, on June 11, this species was found to be "fairly common within suitable habitats," in the NE delta area of Colin Lake. CI: NTM-O. Has declined significantly in North America over the last 30 years (Rodriguez, 2002). Comments: The 9 birds observed together at Woodman Lake on June 10th, are presumed to represent a group of late migrants (*cf.* Koes and Taylor, 2002; Dolman and Bennett, 2003). This species is "local and uncommon" on the KU according to Wallis and Wershler (1984). Erickson and McGillivray (1990) noted pairs at Andrew Lake, but found no nests. Four 'confirmed breeding' records for this species are shown on the KU by ABBA (p. 120). In addition to the above-listed reports, on June 7th, a yellowlegs was heard calling at the small lake (SW of the tip of the long SE-trending bay) adjacent to the SW side of Colin Lake. This bird's specific identity was not determined.

Solitary Sandpiper: Probable breeder [P]; Rare; Three records, all from either June 7th or 8th, involving 3 or 4 individuals. June 7: one adult on a Beaver dam, at the outflow from the small lake located SW of the elongate bay on the SW side of Colin Lake; June 8: a pair observed in the sedge marsh bordering a narrow inlet, on the SSW shore of DBL; and, on the same date, in approximately the same location, one (probably a member of the afore-mentioned pair) was seen flying over a Leatherleaf/Labrador Tea bog.

CI: NTM-O. Lays its eggs in the abandoned nests of tree-nesting songbirds (*e.g.,* American Robin). Populations in parts of Canada may be declining. Comments: Wallis and Wershler (1984) consider this species "local and uncommon" on the KU. ABBA (p. 121) has only two 'confirmed breeding' records for the Sub-Region.

Spotted Sandpiper: Confirmed breeder [FL]; Common; Seventeen records (3 aural): 16 from a 6-day period in June (7-12, incl.) plus a lone July report (see below), involving a total of *ca.* 31 individuals (that includes at least 7 pairs). Widely distributed, generally favours sandy beaches, rocky islands and shorelines of the larger lakes, although one pair was found at Plover Pond (June 10). Colin Lake represents its centre of abundance (5 pairs, and 8 other individuals), followed by DBL (1 pair, 5 other birds). Three were noted together on the shore of North Woodman Island, and one was heard at Scoter Lake. On June 9th, one of 4 pairs present on the NW beach at Colin Lake; was observed mating; and on July 9th, an adult accompanied by one chick, was noted on the rocky shore of an island, near Colin Lake's southeastern shoreline. CI: NTM-O. Undergoing a significant decline in Canada (Gratto-Trevor *et al.,* 2001). Comments: Recorded in the Park (at Plover Pond) by Wallis and Wershler (1984, p. 21), but inadvertently omitted by them from their KU birdlist. Erickson and McGillivray (1990) thought it "fairly common" at Andrew Lake, but found no proof of nesting.

*[Sanderling]***:** No evidence of breeding [X]; Rare; On June 10th, a flock of 9 probable (breeding plumaged) Sanderling (correct size, head colour, wing stripe, *etc.*), were watched briefly as they flew northward over the NW beach of Colin Lake (RT, DV). Although the identification of these shorebirds is believed to have been correct, given the brevity of the sighting and lack of confirmation, we believe it prudent to regard the occurrence of this species in the Park as "hypothetical." CI: NTM-F. Decreasing in Canada (Gratto-Trevor *et al.,* 2001). Comments: Not included on Wallis and Wershler's (1984) avifaunal list for the KU, and our record is probably one of the few for the Sub-Region away from the NSLA. Höhn (1973) regards this species as a "fairly rare migrant" in the Lake Athabasca Region. From June 6-8 (incl.) 2001, four flocks of between 4 and 18 birds were observed on Bustard Island in Lake Athabasca (Thomas, 2003).

Semipalmated Sandpiper: No evidence of breeding [X]; Rare; A single record, that is both highly interesting and unusual. On June 9th, a flock of about 95 individuals was observed upon the large disintegrating raft of ice (Figure 4), on the S arm of Colin Lake (WN, BC). The birds appeared to be feeding on (chilled) Chironomids 'trapped' on the irregular surface of the ice sheet. Presumably, this form of foraging behaviour by peeps, is a rarely-observed phenomenon in Alberta. CI: NTM-O. "Recent large declines (for unknown reasons)" noted across Prairie Canada (Gratto-Trevor *et al.,* 2001). Comments: Not listed for the KU by Wallis and Wershler (1984), but Erickson and McGillivray (1990) saw a group of 4, on a small rocky island in Andrew Lake.

(Least Sandpiper): No evidence of breeding [X]; Rare; A single occurrence is known for the Park: on July 10, 1983, Wallis and Wershler (1984, p. 63) recorded one on the shore of a "wooded island (*in*) Woodman Lake" (*i.e.,* N. Woodman Is.?). CI: NTM-F. This species is also experiencing a significant decline in Canada (Gratto-Trevor *et al.,* 2001). Comments: The bird observed by Wallis and Wershler (1984) undoubtedly represents a southbound migrant. Höhn (1973) describes this peep as a "fairly common migrant" in the Lake Athabasca Region. For other Kazan Upland records, see Wallis and Wershler (1984) and Thomas (2003).

White-rumped Sandpiper: No evidence of breeding [X]; Rare; Our lone record involves a party of about 12, associating with the afore-mentioned Semipalmated Sandpiper flock (Figure 4), on the disintegrating ice sheet in the S arm of Colin Lake, on June 9th (see above). CI: NTM-O. According to Gratto-Trevor *et al.* (2001), this sandpiper is undergoing a significant decline in Canada. Comments: Reputedly a "fairly common migrant" across the Lake Athabasca Region (Höhn, 1973), this species was not recorded by either Wallis and Wershler (1984) or Erickson and McGillivray (1990).

Baird's Sandpiper: No evidence of breeding [X]; Rare; Only one record: on June 9th, an individual was identified amongst the flock of peeps gathered on the previously-described, raft of 'rotting' ice, in the S arm of Colin Lake (WN, BC). CI: NTM-O. Comments: Höhn (1973) also considers this species to be a "fairly common migrant" within the Lake Athabasca Region. Not included on Wallis and Wershler's (1984) KU checklist, and there appear to be very few records for the Sub-Region away from the NSLA.

Wilson's Snipe: Probable breeder [T, C]; Fairly common (locally, Common); About a dozen reports (evenly split between aural and visual records), from four dates in June (7, 8, 10 and 11), involving between (at least) 11 to 15 different individuals (the latter figure is probably more accurate). Twelve birds were heard (and, in several cases, seen) "winnowing" (*i.e.,* performing display dives) overhead. At least 3 were heard calling from a perch and, in one interesting case (at the NE Colin delta, on June 10th) an individual gave the characteristic "krek-krek-krek" 'perched call' whilst in flight. Almost half our records were obtained from the NE Colin deltaic wetland complex, with the remainder divided among various wetlands: a) around the margins of DBL, b) flanking Woodman Creek, and c) at the westernmost end of Colin Lake. CI: NTM-F. This species is declining significantly in Canada (Gratto-Trevor *et al.,* 2001). Comments: Described as "local and uncommon" on the KU by Wallis and Wershler (1984). Erickson and McGillivray (1990) did not record it at Andrew Lake. Only one KU 'confirmed breeding' record for this species is shown by ABBA (p. 129). Formerly lumped with Common Snipe, it has only recently been recognized as a separate species (AOU, 2002).

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

Bonaparte's Gull: Possible breeder [H]; Uncommon; Four records, from three dates in June (6, 10 and 11), involving at least 11 (and possibly up to 13) individuals. June 6: 4 on NE DBL, offshore from our camp; June 10: one seen flying over the second small lake N of Woodman Lake; June 11: at 5:20 pm, a party of 6 (2 adults in near-alternate plumage, and 4 subadults in 'first winter' plumage) was on DBL, to the W of our campsite; 3 hours later, 2 adults in alternate (breeding) plumage were feeding ('dipping' for insects) over DBL, offshore from camp. CI: NTM-F. Colonial nester. Sensitive to disturbance. Uniquely among gulls, often nests in conifers (*e.g.,* Black Spruce), usually near "small muskeg lakes" (ABBA, p. 133). Comments: "Uncommon" on the Kazan Upland (Wallis and Wershler, 1984). ABBA (p. 133) shows three 'confirmed breeding' records for this species in the Sub-Region.

Mew Gull: Possible breeder [H], (Confirmed breeder [NE]); Uncommon; Seven sightings, 4 in June (10th and 11th) and 3 from a three-day period in July (7-9, incl.), that involve a total of about 10 different individuals. The June records all concern adults in alternate plumage, as follows: June 10, one flying off NE beach, Colin Lake; June 11: one associating with the above-described group of 6 Bonaparte's Gulls

on NE DBL; at *ca.* 7:50 pm, 3 flew past our camp and, at 8:30 pm, 3 other (or the same?) adults were 'dip-feeding' (*i.e.,* picking insects from the surface film, whilst in flight), with 2 Bonaparte's Gulls, offshore from our campsite. Records from July are: one at the W end of DBL (July 8); 2 adults on rocks, at the E end of Colin Lake's S arm (July 9); and 2 on rocks in the long, SE-trending bay, on the SW side of Colin (July 10). CI: Colonial nester. Sensitive to disturbance. Comments: To date in Alberta, there have been only three documented instances of nesting by this species, *viz.*: 1) at Colin Lake (Wallis and Wershler, 1984); 2) at Andrew Lake (Erickson and McGillivray, 1990); and 3) on an island in the Slave River, at La Butte Creek WPP (Thomas, 2003). Wallis and Wershler (1984) obtained the first such record for the province on July 11, 1983, when they found a "nest with pipped egg on tiny island" (*sic*) "at the southeast arm" of Colin Lake. They (*Ibid.*) consider Mew Gulls to be "local and uncommon" on the larger lakes of the KU.

Ring-billed Gull: Possible breeder [H]; Uncommon; Five records, all for Colin Lake, from a three-day period in June (9-11, incl.), that involve a total of about 37-42 individuals. Report specifics are as follows. June 9: 3 adults on the disintegrating ice sheet, on the S arm of Colin; 4 on the beach, or in the water, at Colin's NW beach (no age details given); a group of 27 adults in alternate plumage, observed along the central-NW shore of Colin Lake; June 10: a party of 7, at least one of which possessed a tail band (*i.e.,* was a second-year bird), feeding, on Colin's NW beach; and, June 11: one on rocks, along the shore of the Lake's N arm. CI: NTM-F. Colonial nester. Sensitive to disturbance. In common with much of North America, numbers in Alberta have increased significantly in the post-DDT era. Seems to be more tolerant of human proximity, and to have adapted more rapidly to a wide range of anthropogenic food sources (*e.g.,* garbage dumps, fast-food restaurants, *etc.*), than the province's other gull species. Comments: It is worth noting that Soper (1942, pp. 56-57) failed to find this species in WBNP! Höhn (1972, p. 28) rated it as "common on Lake Athabasca." In July 1970, Höhn saw a few daily at Andrew Lake, but Erickson and McGillivray (1990, pp. 87 and 92) did not encounter it there. For the KU, Wallis and Wershler (1984) describe this species as an "uncommon visitor to larger lakes". Surprisingly, ABBA (p. 135) has no KU breeding records north of Lake Athabasca.

California Gull: No evidence of breeding [X]; Rare; Only two records, both for June 9th, involving 2 or 3 individuals, as follows: one overhead at NW beach, Colin Lake; and later, two seen along the N shore of Colin. One (and possibly both) of the latter individuals had a tail band, *i.e.,* was probably a second-summer bird. CI: Colonial nester. Sensitive to disturbance. Comments: Although quite common on Lake Athabasca (where it has several breeding colonies) in summer (Höhn, 1972, 1973; Thomas, 2003), this species is clearly far less frequently encountered on the KU than Ring-billed Gull. Wallis and Wershler (1984) characterize Californias as "scarce" in the Sub-Region, and there are no reports for Andrew Lake (Erickson and McGillivray, 1990). No KU observations or breeding records for this species, away from the NSLA, are given by ABBA (p. 136).

Herring Gull: Confirmed breeder [NE]; Fairly common; Thirteen records, 11 spanning a 6-day period in June (6-11, incl.) plus 2 for July 9th, that probably involve 11-12 individuals. Nine of these records are from Colin Lake, with two apiece from Woodman Lake and DBL. The largest number seen together was two. On the 6 occasions when age was noted, the birds concerned were all adults in alternate (breeding) plumage. Three of our records involve evidence of nesting, as follows: 1) on June 9th, a nest in the process of construction was noted on "Tern Island" in the S arm of Colin Lake; 2) also on June 9th, a nest containing 3 eggs, was discovered on the island immediately to the E of Tern Island; and, 3) when this same (#2) nest was revisited on July 9th, the incubating adult flushed to reveal just a single egg. CI: NTM-F. Colonial nester (typically). Sensitive to disturbance. Has declined in Canada during each of the past three decades (Dunn *et al.,* 2000). Comments: Wallis and Wershler (1984) consider it the "commonest gull species" of the KU. Erickson and McGillivray (1990) found it "common" at Andrew Lake and both they, and Wallis and Wershler, note this species' predilection for nesting in small numbers, on small, rocky islands in the Sub-Region's larger lakes. Soper (1942) described this gull as a "locally abundant breeding bird" in WBNP, and Höhn (1973, p. 16) termed it a "common summer resident" of the Lake Athabasca Region. However, recent bird survey work in NE Alberta suggests that the Herring Gull population of this Region may be declining and/or, has undergone a change in distribution (*cf.* Thomas, 2003).

Sabine's Gull: No evidence of breeding [X]; Rare; One record: on June 9th, off the central-N shore of Colin Lake, a flock of 15, alternate-plumaged adults (Figure 5) was observed (RT, DV) at close quarters, as they fed (both on the water, and in flight) on hatching Chironomids ("fish flies"). CI: NTM-O. Colonial nester. Comments: Uncommon in the province. What few data are available, suggest that small numbers of this species (regularly ?) pass through the Ft. Chipewyan area, during the second week of June (*cf.* Höhn, 1970; Thomas, 2002, 2003). Ours appears to be the first KU record of Sabine's Gull away from the NSLA.

Common Tern: Confirmed breeder [NE, NY]; Fairly common; Twelve records, from 4 dates (June 7, 9 and 10; July 9), involving a minimum of 30 (and possibly up to 43) adult individuals plus 12 young (Figure 6). All our observations (though widely distributed) concern Colin Lake. Birds were observed: in direct flight (3 records); fishing (2); perched on rocks or islets (4); courtship feeding (1); and engaging in nesting activities (2). On June 9th, a (presumed) male was watched presenting a fish to his mate, who was sitting near the top of a spruce snag (at the W end of Colin). Also, on this date, nests under construction (no eggs) and 12 adults were present on a small island (herein named "Tern Island"), in the S arm of Colin. Counts made at Tern Island a month later (July 9th) tallied: 15 nests, 12 chicks, 12 eggs, and 25 adult birds. Also noted were one dead chick and a predated egg. CI: NTM-O. Sensitive to disturbance. Colonial nester. Declining over parts of its range. Comments: Wallis and Wershler (1984) viewed this species as "uncommon" on the KU, but Erickson and McGillivray (1990, p. 87) found "breeding pairs common on small rocky islands" at Andrew Lake. During the course of their aerial surveys (in July 1975), Bishoff and Fyfe (1975, p. 7) observed about 15 "breeding pairs" of Common Tern at Cornwall Lake. ABBA (p. 139) shows only one record of 'confirmed breeding' (at Andrew Lake) for this species on the KU.

(Arctic Tern): No evidence of breeding [X]; Casual ?; On July 5, 1983, Wallis and Wershler (1984, p. 63) sighted "at least two" adult Arctic Terns (feeding with Common Terns and gulls) close to the NE shore of Colin Lake. During the present survey (June 7th), a tern, tentatively identified as this species, was briefly observed as it flew past Trapper's Island (at the W end of Colin Lake). Although a number of this bird's fieldmarks, and its overall 'jizz' were consistent with Arctic Tern (RT), this record should be regarded as

hypothetical. CI: NTM-O. Colonial nester. Sensitive to disturbance. Comments: Regarded as a "scarce summer visitor" to the KU by Wallis and Wershler (1984). This species is a comparative rarity in Alberta (*i.e.,* reported in the province on a less-than-annual basis). Some of the relevant data for NE Alberta are briefly reviewed by Thomas (2002, 2003). To date, the only confirmed provincial nesting records for this species are from the Athabasca Dunes Ecological Reserve, *ca.* 60 km SSE of Ft. Chipewyan (Thomas and Carroll, 2001).

- **OWLS (Strigidae)**

Northern Hawk Owl: Possible breeder [H]; Rare; a single record: one observed at the top of a Black Spruce snag, in an old burn, adjacent to the western end of the Woodman Creek channel (June 8th). CI: Resident. Irruptive. Comments: Considered "scarce" on the KU by Wallis and Wershler (1984), who observed one at Wylie Lake on July 2, 1983. There are no breeding records, or sightings of this species, shown for the Sub-Region *in* ABBA (p. 149).

(Great Gray Owl)**:** No evidence of breeding [X]; Casual; Included here on the basis of Wallis and Wershler's (1984, p. 64) statement that (during July, 1983) they found a feather, believed to belong to this species, in a large bog adjacent to Woodman Lake. CI: Resident. Irruptive. Comments: Neither this, nor the previous species, was encountered at Andrew Lake by Erickson and McGillivray (1990). ABBA (p. 153) has no Kazan Upland records for this species.

Boreal Owl: Probable breeder [?P, T]; Rare; Six records (all aural), for 5 dates in June (8, 9, 10, 12 and 13), of one (and possibly two, see below) calling from mature mixedwood forest, on the 'terrace' above (N of) our campsite, on the NE shore of DBL. Attempts to observe the calling bird(s) were unsuccessful, and the information outlined below was compiled by the writer whilst lying in his tent. Calling times per date were as follows: June 8th: 12:15 am to 2:30 am; June 9th: 1:55 am to at least 2:35 am; June 10th: 1:30 am, and again that evening at 10:15 pm; June 12th: 10:00 pm and 11:00 pm; and, June 13th: *ca.* 2:00 am. At times, on both June 8th and 9th, there seemed to be a second bird calling simultaneously (? duetting). From within my tent it proved impossible to confirm this, because the closer bird ("primary singer", ? male) moved around a great deal and/or, was highly ventriloqual. On June 8th, the owl seemed to call

"incessantly", and periods of continuous calling lasting at least half an hour were noted. Each individual "call" usually consisted of a rapid, two-part, 5-note 'phrase' that can be rendered as : "poopoo…poopoopoo". On June 8th, both calls and inter-call pauses lasted for 1-2 sec. (typically 2 sec. each). Call length was the same on June 9th, but the intercall spacing was slightly longer. CI: Cavity nester. Resident. Can be irruptive. Old-growth forest dependent. Range contracting in response to forest loss/fragmentation. Comments: No Canadian Shield Natural Region records for this species are given in ABBA (p. 156). Wallis and Wershler (1984) have no reports for the KU of Alberta. Höhn (1972) considers it a "scarce" breeding resident of the Lake Athabasca Region. There are relatively few summer records of Boreal Owl for the province.

- **NIGHTJARS (Caprimulgidae)**

  Common Nighthawk: Probable breeder [P, C]; Uncommon; Nine records (6 aural, 3 visual), for 5 dates in June (6-9 incl., and 11), that probably involve (at most) 6 individuals (including at least one pair). All bar one of our records concern birds heard and/or, seen in the general vicinity of our camp (and the ridge to its SE) on the NE shore of DBL. The exception is our June 8th observation of a roosting pair, flushed from deadfall, in a young (post-burn) Jack Pine stand, on the SE side of DBL. All the birds we heard performed display dives (which generate a distinctive 'vrooh' sound), but 2 of these individuals also gave the species' characteristic "peent" call. These various vocalizations were generally heard between 7:00 pm and 2:00 am. CI: NTM-O. Is undergoing a significant, long-term decline across the Prairie Provinces (based on BBS data, *cf.* Dunn *et al.,* 2000). Comments: Listed as "uncommon" for the KU as a whole (Wallis and Wershler, 1984). "Common" at Andrew Lake in June, 1988 (Erickson and McGillivray, 1990), and also considered common in the Lake Athabasca Region by Höhn (1973). For the KU, ABBA (p. 159) indicates 'confirmed breeding' in 3 atlas squares, and 'probable breeding' in 3 others.

- **KINGFISHERS (Alcedinidae)**

  Belted Kingfisher: Probable breeder [P]; Uncommon; Six records (2 aural, 4 visual) for 3 dates in June (6, 8 and 10), plus a single July (9th) sighting, that involve a total of 5-6 different individuals. Our four reports from June 6th (3) and June 8th (1) concern an apparently territorial pair, suspected of nesting in a steep, sandy, lakeshore bank located *ca.* 0.8 km west of our NE DBL campsite. However, efforts to find a

nesthole were unsuccessful, and breeding could not be confirmed. Based upon the following observations, at least one, and possibly up to three pairs were also present on Colin Lake. On June 10th, a pair flew over Colin's NW beach and, the same day, one male was seen in flight at the mouth of the NE Colin delta. Another individual was observed along the Colin River on July 9th. CI: NTM-F. Nests in holes in river (or other) banks. Undergoing a significant, long-term decline in North America (Rodriguez, 2002). Comments: "Uncommon and local" on the Kazan Upland (Wallis and Wershler, 1984), and reported as uncommon at Andrew Lake (Erickson and McGillivray, 1990). No 'confirmed' KU breeding records for this species are shown by ABBA (p. 167).

- **WOODPECKERS (Picidae)**

Yellow-bellied Sapsucker**:** No evidence of breeding [X]; Casual; On June 11th, two old examples of this species' distinctive workings (sap wells), were observed in Paper Birch snags (1 standing, 1 fallen), at two sites within mixedwood forest, on the SE shore of Woodman Lake. CI: NTM-F. Cavity nester. Possible keystone species in the Boreal Forest (*cf.* Ehrlich and Daily, 1988). Comments: Considered "local and scarce" upon the KU by Wallis and Wershler (1984, p. 64), who documented old workings on a birch by Wylie Lake. Höhn's (1972, p. 35) discovery of a nest containing young (July 6, 1971) at Leland Lake, and an active nest found (July 9, 2001) in La Butte Creek WPP (Thomas, 2003), appear to be the only 'confirmed' KU breeding records for this species outside the SRV (*cf.* ABBA, p. 169).

[*Downy Woodpecker*]**:** No evidence of breeding [X]; Rare ?; One possible record: on June 8th, a small woodpecker, believed to be this species, was glimpsed (DV) and heard (DV, RT) briefly, in mixedwood forest along the margin of a narrow valley, adjoining 'Bay 21' on the S shore of DBL. CI: Cavity nester. Resident. Comments: Höhn's (1973, p. 19) assessment of this species' status in the Lake Athabasca Region as "fairly common" seems overly optimistic. Soper (1942) obviously regarded it as quite scarce within WBNP. Wallis and Wershler (1984) do not list any KU records for Alberta although, according to Höhn (1972, p. 37), Shortt 'collected' one at Ft. Chipewyan in early June 1945. During three (June/July) bird surveys conducted in Canadian Shield WPPs over the previous three years (2000-2002, incl.), only one definite record of this species (from S of Lake Athabasca) was obtained (Thomas and Carroll, 2001; Thomas, 2003; this report). ABBA's (p. 171) only record for this woodpecker from the KU Sub-Region,

consists of a single observation at Andrew Lake. It is considered "hypothetical" for the Park, pending a confirmed record.

Hairy Woodpecker: Confirmed breeder [CF, NY]; Uncommon; Six records: two for June 7th, three from June 9th; and one on June 13th. In total, 7 adult birds were observed, but all our sightings clearly relate to just two pairs. On June 7th, an individual (sex undetermined) was seen in a regenerating birch and Jack Pine stand (old burn) on the SW shore of DBL, and on June 13th a pair was found at the same location. Our other 4 records are clustered at Colin Lake's NW beach (1), and around the 'complex bay' immediately to its SW (3). Both birds of the pair occupying this territory were observed carrying food. On June 9th, the male – carrying a large white grub – was watched (RT) entering a nest hole in a mature Jack Pine snag, standing just inland (W) of the back-beach ridge (NW Colin beach). The sounds of begging young were heard coming from the cavity. CI: Resident. Cavity nester. Area sensitive. Mature/old-growth forest dependent. Comments: Remarkably, ours appears to be the first confirmed breeding record for this species from Alberta's KU Sub-Region. Wallis and Wershler (1984) cite a (mid-July, 1971) record by Höhn from Leland Lake, and report finding "possible old work" in old-growth forest near Woodman Lake. Considered "rare" at Andrew Lake by Erickson and McGillivray (1990).

Three-Toed Woodpecker: Probable breeder [P]; Rare; Our sole record consists of a pair, observed in a coniferous stand near the mouth of the narrow, elongate (WSW-ENE oriented) bay, at the SW end of DBL, on June 13th. CI: Resident. Irruptive. Cavity nester. Dependent upon old-growth coniferous or conifer-dominated mixedwood forest. Comments: Neither Höhn (1972, p. 37) nor Wallis and Wershler (1984) have any records specific to the KU of Alberta. Höhn (1973, p. 19) lists it as an "uncommon resident" of the Lake Athabasca Region that "probably breeds". ABBA (p. 173) gives no breeding records or observations for this species from the KU.

[*Black-backed Woodpecker*]**:** No evidence of breeding [X]; Rare ?; No direct observations of this species were made in the Park during June/July, 2002. Its placement on this checklist is based upon our confidence that a majority of the many examples of tridactyl woodpecker work (Figure 7) we encountered in the WPP (see 'Comments' below), is attributable to Black-backeds. However, pending a documented

occurrence of one or more of these birds at Colin-Cornwall, this species should be regarded as "hypothetical" for the Park. CI: Cavity nester. Resident. Irruptive. Black-backed Woodpeckers are habitat specialists that require areas of post-fire, early successional stage forest in which to breed (*e.g.*, Murphy and Lehnhausen, 1998). Comments: Apart from 'possible breeding' in one SRV atlas square, ABBA (p. 174) has no KU records for this species. Overall, Soper (1942) found it to be scarce within WBNP, but somewhat commoner in early winter *vs.* summer. Wallis and Wershler (1984) have a single KU observation *i.e.,* of one female, seen by them at the edge of a recent burn, near Wylie Lake on July 4, 1983.

During the period June 6-13 (incl.), we recorded at least 10 examples of the characteristic workings *i.e.,* "redbarking" (*cf.* Thomas, 2000a) of tridactyl woodpeckers in a variety of burned and unburned forest types throughout the areas we surveyed. Relatively fresh work was noted in: a) live, mature mixedwood stands N of camp (June 6th); b) live, old-growth stands of White Spruce and Spruce-dominated mixedwood forest E and SE of our campsite (June 6, 7 and 13); c) live and burned submature Jack Pine/Paper Birch forest S of Scoter Lake (June 12); d) live and burned, mature mixedwood stands on the SE shore of Woodman Lake (June 11); and e) in tracts of burned Jack Pine forest between NE Colin Lake and Plover Pond (June 10). Although most redbarking of live and dead spruces within the old-growth forest NE of the E end of DBL is probably attributable to Three-toed Woodpeckers, similar extensive workings in burned coniferous stands are interpreted as evidence of foraging by Black-backeds (Figure 7; see above).

Northern Flicker: Confirmed breeder [ON]; Fairly common; About 18 records (13 visual, 5 aural): 16 from 7 dates in June (6-11 incl.; and 13), plus one for both July 8th and 19th, involving a total of up to 16-17 individuals. Our largest cluster of reports (7) is from the tract of old-growth spruce and spruce-dominated forest N and NW of the western 'tip' of Colin Lake. We also have several records from mixedwood forest stands along Woodman Creek (particularly around its outflow from Woodman Lake), and single records from mature mixedwoods: along the NW, N and SE shores of DBL; at Plover Pond; on N Woodman Island; on Trapper's Island (Colin Lake); and near the mouth of Big Bear Creek (Colin Lake). On June 10th, a pair was found nesting in an old birch, within open Aspen/Paper Birch forest at the

NW end of Woodman Lake. All our sightings were of the expected 'Yellow-shafted' race. CI: Cavity nester. Undergoing a gradual, significant, long-term decline across Canada (*e.g.,* Dunn *et al.,* 2000). Comments: Withdraws from the northern part of its range (including NE Alberta) in winter. This is the most widespread and frequently encountered woodpecker on the Kazan Upland. Away from the NSLA, ABBA (p. 175) shows 'confirmed breeding' for three atlas squares within the Sub-Region.

Pileated Woodpecker**:** No evidence of breeding [X]; Rare; No observations of actual birds, but 5 records (for June 6, 7, 12 and 13) of this species' distinctive workings (Figure 8). Four of these reports relate to the impressive stands of old-growth White Spruce and spruce-dominated mixedwood located NE of the NE shore of DBL (*i.e.,* to the E and SE of our camp). Here, excavations were found in spruce snags and a live Aspen. Our other example involves workings in a live (*ca.* 13m high) Jack Pine at the edge of a burn, just S of Scoter Lake. Except in the case of the aforementioned Aspen, all cavities noted had been excavated at the bases of the trees in question where, presumably, the birds were foraging for Carpenter Ants (Figure 8). CI: Resident. Cavity nester. A keystone Boreal species. Area-demanding, forest interior/old-growth forest specialist. Some populations declining due to forest destruction/fragmentation. Comments: Wallis and Wershler (1984) found "possible old work in old forest" at both Woodman Lake and Colin Lake. Höhn (1972, p. 35) states it is "quite scarce" in the Lake Athabasca area. ABBA (p. 176) has only one record (of 'possible breeding') for the KU.

- **FLYCATCHERS (Tyrannidae)**

Olive-sided Flycatcher: Probable breeder [T]; Fairly common (locally, Common); Twenty-two records (19 aural, 3 visual): 20 from 7 dates in June (7-12 incl., and 14) plus single reports for July 7th and 8th, involving about 18 or 19 different individuals. Centres of abundance included the central-S and SSW shore of DBL (7 records); Woodman Creek (4 records) especially the area at its western end; and the WNW shore of Colin Lake and Big Bear Creek (3 records piece). Birds were also reported from the SW and SE shores of Woodman Lake, and between the S end of Scoter Lake and the two small kettle lakes NW of our camp. Favoured habitats were old burns (regenerating Jack Pine/Paper Birch, Jack Pine/Black Spruce, and mixedwood stands) and Black Spruce bogs. One was also heard in a submature mixedwood stand. On June 9th, one of several birds encountered along Big Bear Creek, gave this

species' rapid "pip"-ing call whilst perched on a snag. CI: NTM-O. In Canada over the last 30 years, this species has undergone a significant decline (Dunn *et al.,* 2000) and the same is true for North America as a whole (Rodriguez, 2002). Soper (1942, p. 67) remarks on this species' preference for "brulé country (*i.e.,* burnt over forest) adjacent to green timber". Comments: Considered "uncommon and local" on the KU by Wallis and Wershler (1984), but found to be "common" at Andrew Lake by Erickson and McGillivray (1990). Away from the NSLA, ABBA (p. 178) has only two 'probable breeding' records for this species on the KU.

Western Wood-Pewee: Possible breeder [H]; Uncommon; Five records (4 from June, 1 for July), all aural, involving 3 or 4 individuals. On both June 8th and 10th, one was heard (at the same location) in a regenerating mixedwood stand (old burn) at the W end (Woodman Lake outflow area) of Woodman Creek. Also on June 8th, a bird was singing in a mature/old spruce-dominated stand (with some Aspen), on the NE shore of DBL, *ca.* 1.5 km W of our camp. Finally, on both June 9th and July 7th, an individual (? the same bird) was calling along Big Bear Creek from (in the case of the July record) a partially burned stand of Jack Pine. CI: NTM-O. Has been declining in Canada over the last decade (Dunn *et al.,* 2000). Comments: Pinel *et al.* (1993, p. 17) characterize this species as "rare and local in extreme northern Alberta". Wallis and Wershler (1984) give no KU records for the province, but Erickson and McGillivray (1990, p. 88) have two aural records (? of the same individual) "in Aspens" at Andrew Lake. ABBA (p. 179) has a 'possible breeding' record for one KU atlas square.

[*Yellow-bellied Flycatcher*]**:** No evidence of breeding [X]; Rare ?; On June 9th, in the extensive Black Spruce bog immediately W of NW Colin beach, an unseen bird gave a single, Least Flycatcher-type song (DV). Such bogs are prime habitat for Yellow-bellied Flycatchers, but Leasts (in NE Alberta) typically occur in mature/old Aspen or Aspen-dominated stands, or mixedwoods with a significant deciduous component. Differentiating these two Empids on the basis of their songs can sometimes be problematic, but in NE Alberta, Yellow-bellieds give a 'tch-leep' song that is slower and burrier than that of Least Flycatcher, with longer pauses between the songs (Thomas, 2000b). Given the strong probability that the 'mystery singer' was a Yellow-bellied, several attempts were made (on different days) to find the bird, without success. As a result, the occurrence of this species within the Park must be treated as

"hypothetical". CI: NTM-O. Comments: The current distribution and status of this species across the Sub-Region is unclear. No Canadian Shield Natural Region breeding records or observations of this flycatcher are shown within ABBA (p. 180). Höhn (1973) regards it as a "rare summer resident" that "probably breeds" in the Lake Athabasca Region.

Alder Flycatcher: Probable breeder [T]; Fairly common; Nineteen records (15 aural, 4 visual), from 6 dates in June (7-11 incl., and 13) involving at least 13-14 individuals. No July records. Found in a range of damp habitats including Tamarack/alder/sedge fens and deciduous shrubbery/thickets (willows, alders) along lakeshores and watercourses, as well as in regenerating birch/Jack Pine and mixedwood stands (old burns), and (in one instance) a lake margin deciduous stand. Centres of abundance were the NE Colin delta (6 records), the SE (5 records) and SW (3 records) shores of DBL, and along Woodman Creek (3 records) – particularly around its W end (Woodman Lake outflow area). CI: NTM-O. Comments: Regarded as "fairly common" in the Lake Athabasca Region by Höhn (1973), but only as "local and uncommon" upon the KU by Wallis and Wershler (1984). Erickson and McGillivray (1990) considered it "common" at Andrew Lake (in June 1988), which is also the location of ABBA's (p. 181) only 'confirmed' KU breeding record for this species.

Morphologically, Alder Flycatcher is very similar to Willow Flycatcher – with which it was formerly lumped as "Traill's Flycatcher". Typically, these two species are identified on the basis of their different songs and calls: Alders sing a harsh "reeBEEa" while the song of Willows is usually transcribed as (a burry) "FITZbew" (*cf.* Dickinson, 1999; Sibley, 2000). During the course of our fieldwork, at two separate locations (on the SW and SSE shores of DBL), a total of 2 or 3 individual (presumed) Alder Flycatchers were heard giving odd, Willow-type or 'mixed' Willow/Alder songs. The bird(s) along a watercourse at 'Bay 21' (SSE DBL) were heard singing a variety of atypical songs, transcribable as "pureTITZ" and "FITZbure". Interestingly, Mlodinow and Tweit (2002, p. 479) describe two instances (from Washington State in early July, 2002) of individual flycatchers giving "both Alder-and Willow-type calls" and, in another case, a "Traill's" that gave "a bewildering variety of calls and songs".

Least Flycatcher: Possible breeder [H]; Rare; Two (aural) records from a single location: on both June 8th and June 10th, one (assumed to be the same) individual was heard in a regenerating mixedwood stand (old burn), at the W end of Woodman Creek (Woodman Lake outflow area). CI: NTM-O. Some population declines in Canada over the last decade (Dunn *et al.,* 2000). Comments: Abundant in WBNP, but progressively less common eastward across the Lake Athabasca Region (Höhn, 1972, 1973). Not mentioned by Wallis and Wershler (1984) or Erickson and McGillivray (1990). ABBA (p. 183) has no confirmed breeding records for the KU, and only one record (of 'possible breeding') for the Sub-Region, away from the NSLA and SRV.

Eastern Kingbird: Possible breeder [H]; Uncommon; Three records, from two dates in June, involving up to about half-a-dozen individuals. One, presumably the same bird, was seen in cattails at the W end of Woodman Creek (Woodman Lake outflow area), on both June 8th and 11th. On June 11th, this species was reported to be "fairly common" at the 'NE Colin delta' wetland complex, where "quite a number" were observed "in suitable habitat". CI: NTM-O. Some declines noted in Canada over the last decade (Dunn *et al.,* 2000). Comments: Wallis and Wershler (1984) did not record it on the KU. Considered "uncommon" at Andrew Lake by Erickson and McGillivray (1990), who observed two birds there in June, 1988. For the Lake Athabasca Region, Höhn (1973) rated it as a fairly common (breeding) summer resident. Somewhat surprisingly, ABBA (p. 191) gives only three (one 'possible', one 'probable' and one 'confirmed' [on the NSLA]) breeding records for the KU.

- **VIREOS (Vireonidae)**

Blue-headed Vireo: Possible breeder [H]; Rare; Only three records (2 aural, 1 visual), each involving a different individual, from two dates in June. On June 8th, one was observed in a Jack Pine/Paper Birch stand, on the NW shore of DBL; on June 10th, two birds were singing, in submature Jack Pine forest, on opposite sides of Plover Pond. CI: NTM-O. Typically, an old-growth coniferous forest-dependent species. Comments: Described as an "uncommon summer resident" (of the Lake Athabasca Region) that "probably breeds", by Höhn (1973). Not reported by Erickson and McGillivray (1990). "Local and uncommon" on the KU where, according to Wallis and Wershler (1984, p. 65), it favours pine-birch-spruce

forest on slopes and pine-alder stands. No KU breeding records for this vireo are shown in ABBA (p. 242) away from the NSLA or SRV.

Philadelphia Vireo: Possible breeder [H]; Rare; Our lone record consists of a single bird, heard singing in a Paper Birch/Aspen stand, at the E end of Colin Lake's S arm, on June 9th (WN, BC). CI: NTM-O. Has suffered substantial losses of its wintering habitat. Declining. Comments: Höhn (1972, p. 44) reiterates Soper's (1942) 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, with experience, fairly easy to identify (*cf.* Thomas, 2000b, pp. 24-25). As for the previous species, ABBA (p. 244) has no breeding records for the KU away from the NSLA and SRV.

Red-eyed Vireo: Probable breeder [T]; Uncommon (locally, Fairly common); Nine records (8 aural, 1 visual), from a 4-day period in June (11-14 incl.) and 3 dates in July (6, 8 and 10), involving a total of 9 individual birds. Apart from two 'clusters' – each of 3 records – in the areas: a) surrounding the two kettle ponds NW of our camp, and b) W and NW of the western 'tip' of Colin, we have single reports for the SE shore of Woodman Lake, the SW side of DBL, and the N arm of Colin Lake. This species was encountered in a variety of forest types, including: mature Aspen forest, with or without an understorey of Paper Birch; semi-open Jack Pine/Paper Birch stands, and regenerating Paper Birch/Jack Pine forest (old burn); and submature Aspen/Jack Pine mixedwood with an understorey containing Paper Birch and Black Spruce. CI: NTM-O. Area sensitive. Comments: The Boreal Forest's most indefatigable vocalist! One of the most abundant songbirds in WBNP (Soper, 1942), and "common" in the Lake Athabasca Region (Höhn, 1973). For the KU, Wallis and Wershler (1984) list it as "local and uncommon"; Erickson and McGillivray (1990) also characterize it as "uncommon" at Andrew Lake, where both they and Höhn (1972, p. 43) recorded 3 individuals (in June 1988, and July 1969, respectively). Away from the NSLA and SRV, ABBA (p. 245) shows breeding records (both 'probable') for only two KU atlas squares.

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

Gray Jay: Confirmed breeder [FL]; Fairly common; Seventeen records (6 aural, 11 visual): 16 spanning a 7-day period in June (7-13, incl.), and one for July 7th, that involve a total of 24 individuals (15 adults, 6 juveniles, and 3 birds of undetermined age). There were 4 (widely separated) sightings of family groups, the largest of which – on the SSW shore of DBL (June 11th) – consisted of two adults and two 'sooty' juveniles. The greatest number of adults observed travelling together was three. Most of our records were obtained in two areas *i.e.,* along and adjacent to: a) the southern shore of DBL (7 records), and b) the WNW shore of Colin Lake (between the mouths of Big Bear Creek and the Colin/DBL connector channel; 6 records). We also have single records for: along Woodman Creek; near the S end of Scoter Lake; an island in the S arm of Colin; and the small lake SW of Colin's SW shore. Birds were noted in a variety of habitat-types including: Black Spruce bogs; lakeside tracts of mixedwood forest; a regenerating Jack Pine stand (old burn); an open, old-growth White Spruce stand; Jack Pine/Paper Birch forest; and on NW Colin beach. CI: Resident. Declines noted across Canada in last decade (Dunn *et al.,* 2000). Comments: A "common" KU species (Wallis and Wershler, 1990), though Erickson and McGillivray (1990) thought it "uncommon" at Andrew Lake. On the KU, ABBA (p. 200) indicates 'confirmed breeding' in six atlas squares (3 along the NSLA).

Common Raven: Confirmed breeder [NY]; Fairly common; Thirteen records (5 aural, 8 visual), 12 from 7 dates in June (6-11, incl., and 13), and one for July 6th, involving a total of about 10-12 individual adults and two juveniles. Birds were encountered along or adjacent to the NE and SE shores of DBL and the WNW shore of Colin Lake; along Woodman and Big Bear Creeks, and at Trapper's Island (Colin Lake). A nest containing two young (attended by one adult) was observed in a lakeside tree, on the N shore of Colin (near the Lake's western 'tip'), on June 10th. CI: Resident. Comments: Considered "local and uncommon" upon the Kazan Upland by Wallis and Wershler (1984, p. 64) who (in July, 1983) noted "a small flock of adults and immatures" frequenting part of the Colin Lake shoreline. Erickson and McGillivray (1990) also found it "uncommon" at Andrew Lake. Outside Ft. Chipewyan, ABBA (p. 206) has 4 'confirmed breeding' records for this species on the KU.

- **SWALLOWS & MARTINS (Hirundinidae)**

  Tree Swallow: Confirmed breeder [NB]; Fairly common; Eighteen records (4 aural, 14 visual): 15 from a 5-day period in June (7-11 incl.), and one (each) from July 7, 9 and 10. These reports involve a total of at least 23 individuals (including a minimum of 4 pairs). A majority of our records concern birds in flight. This species' centres of abundance within the area we surveyed were: a) the outflow from Woodman Lake/Woodman Creek channel area (7 records) and, b) the NE Colin delta (where it is "fairly common in suitable habitats"). It was also encountered along Big Bear Creek (3 records); on the SSW shore of DBL (2 records) and NW and SE shores of Woodman Lake (one record apiece); and at Plover Pond (a pair, on June 10th). At NW Colin beach on June 9th, a pair was observed gathering nest materials (beach ridge grasses). The female of this pair was much browner than is typical (*cf.* Sibley's [2000, p. 367] "drab adult female"). Tree Swallows were found in riparian areas and various wetlands, Black Spruce bogs, lakeside mixedwood stands and old burns. CI: NTM-O. Cavity nester. Has benefited from bluebird nest box programmes. Comments: Described as "common" in the Lake Athabasca Region by Höhn (1973), but only as "local" for the Kazan Upland by Wallis and Wershler (1984). Reported as "common" at Andrew Lake (in June, 1988) where several pairs were observed nesting in dead Aspens (Erickson and McGillivray, 1990). Breeding has been 'confirmed' in 3 atlas squares on the KU outside the SRV (ABBA, p. 194).

- **CHICKADEES (Paridae)**

  Black-capped Chickadee: Possible breeder [H]; Rare; A single record. On June 7th, one was heard calling from deciduous shrubbery adjacent to the WNW shore of Colin Lake. CI: Resident. Cavity nester. Comments: Wallis and Wershler (1984) do not list any occurrences of this species for the KU of Alberta. For WBNP, Soper (1942, p. 71) noted the existence of "peculiar fluctuations" in the relative abundance of this chickadee "from place to place and at different times". Erickson and McGillivray (1990, p. 90) who did not record it at Andrew Lake, comment that "there are obviously distributional gaps in the northern part" of the species' range. ABBA (p. 207) has no 'confirmed breeding' records of Black-capped Chickadee on the KU.

Boreal Chickadee: Probable breeder [P]; Uncommon; Seven records: 6 from 4 dates in June (6, 7, 9 and 13), and one for July 10th. These records involve a total of *ca.* 13 individuals. On June 6th, "several" were heard and/or, seen in the vicinity of our camp, on the NE shore of DBL. "Several" were recorded (on both June 7th and 9th) in mixedwood forest on Trapper's Island (Colin Lake); and, at this location on June 7th, one was believed to have entered a cavity in a Paper Birch snag, but this could not be confirmed. The largest number seen together was a group of 6 (on June 13th) in an open, old-growth White Spruce stand, N of the westernmost 'tip' of Colin Lake. On July 10th, one was heard and seen in mixedwood forest along Big Bear Creek. CI: Resident. Cavity nester. Habitat specialist: old-growth conifer forest-dependent. Has undergone significant declines across Canada over the past three decades (Dunn *et al.,* 2000). Comments: Although Höhn (1973) terms it a "common" resident of the Lake Athabasca Region, Wallis and Wershler (1984) regard it as "uncommon" on the KU, while Erickson and McGillivray (1990) list this species as "rare" at Andrew Lake. There appear to be no 'confirmed' KU breeding records for this chickadee (ABBA, p. 209).

- **NUTHATCHES (Sittidae)**

Red-breasted Nuthatch: Possible breeder [H]; Uncommon; Five records, all aural, from 4 dates in June (6, 7, 8 and 13), involving 4 or 5 different individuals. Single birds were heard in mixedwoods adjacent to our camp (NE DBL; June 6th); in old-growth White Spruce forest SE of our camp (June 7th); and in mature mixedwood forest E of the largest of the 3 kettle ponds E of our campsite (June 13th). In addition, two were calling in a mixedwood stand, adjacent to the NW shore of DBL, on June 8th. CI: Resident. Cavity nester that requires patches of standing dead and diseased trees (Steeger and Hitchcock, 1998). Irruptive. Dependent on old-growth conifer-dominated forest. Comments: Variously described as "fairly common" (in the Lake Athabasca Region), "scarce" (on the KU) and "rare" (at Andrew Lake) by Höhn (1973), Wallis and Wershler (1984), and Erickson and McGillivray (1990), respectively. ABBA (p. 210) shows 'possible breeding' records for this species along the NSLA and SRV, but breeding has yet to be confirmed in any of the KU Sub-Region's atlas squares.

- **WRENS (Troglodytidae)**

  Winter Wren: Probable breeder [T]; Rare; Four records, all of singing single birds, for June 6, 7 and 13, involving two or three different individuals. On June 6th, one was heard in old-growth White Spruce, on the E side of the central of the three small kettle lakes located E of our campsite. The following day, a bird was singing on the SW side of the afore-mentioned lake. Another (or possibly the same) individual was heard in an open stand of old-growth White Spruce, on the ridge N of the small delta in westernmost Colin Lake, on June 13th. Also on this date, one was reported from conifer forest near the mouth of the narrow, WNW-ESE oriented bay on the SW side of DBL. CI: An old-growth forest-dependent species. Comments: Höhn (1973, p. 22) suggests this species does not occur in the Lake Athabasca Region to the east of WBNP. Not mentioned by Wallis and Wershler (1984) or Erickson and McGillivray (1990), and considered "largely absent" in "extreme northern Alberta" by Pinel *et al.* (1993). ABBA (p. 215) has no breeding records or observations from Alberta's Canadian Shield Natural Region. Ours may therefore be the first KU records for this species away from the SRV corridor.

- **KINGLETS (Regulidae)**

  [*Golden-crowned Kinglet*]**:** No evidence of breeding [X]; Rare?; Twice on the evening of June 7th, in the impressive tract of old-growth White Spruce forest on the ridge SE of our camp (NE shore of DBL), high-pitched calls – believed to be those of a small party of Golden-crowned Kinglets (DV) – were heard issuing from the tree tops. Unfortunately, the birds in question were never sighted and their identity was not unequivocally confirmed. Thus the occurrence of this species within the Park is currently designated "hypothetical". CI: Habitat specialist: dependent on old-growth coniferous forest. A minority of the provincial population is resident, but the vast majority of northern Alberta birds are migratory. Comments: Considered a rare summer visitor (that probably breeds) in the Lake Athabasca Region by Höhn (1973). Not listed by Erickson and McGillivray (1990) or Wallis and Wershler (1984). Pinel *et al.* (1993, p. 66) state that "this species appears to be absent from much of the far north due to a lack of suitable old-growth coniferous forest". There are records for Ft. Chipewyan (Höhn, 1972) and a location 12 miles to its northeast (Soper, 1942). ABBA (p. 219) indicates 'possible breeding' in two atlas squares just S of Ft. Smith (in the SRV), but has no KU records.

Ruby-crowned Kinglet: Confirmed breeder [NB]; Common; Forty-four records (90% aural), from an 8-day period in June (6th-13th, incl.), that involve about 50 individual birds. The majority of our records are concentrated adjacent to the NE and SE shores of DBL, in an area that includes the lands: a) E and SE of our camp (*i.e.,* W and NW of the W end of Colin Lake) and, b) between our campsite and the SW shore of Scoter Lake. Other significant locations include Trapper's Island (Colin Lake; 4 records); the NE Colin delta and its environs (4 records); North Woodman Island; the SW shore of DBL, and the island in NW DBL. Reported from a wide variety of (mostly coniferous or conifer-dominated) forest-types, including: old-growth White Spruce; mature and old-growth Black Spruce; Black Spruce/Tamarack bogs; Black Spruce/Jack Pine; Jack Pine/Paper Birch, and mature Aspen/White Spruce mixedwood stands. On June 7th, one on Trapper's Island was seen gathering nest material (TJ), and a courting pair was observed at close range (1-2m off the ground), within old-growth White Spruce forest, SE of our camp. CI: NTM-F. Comments: Höhn (1973) thought it "common" in the Lake Athabasca Region, whereas Wallis and Wershler (1984) assessed it as "fairly common" on the KU, and Erickson and McGillivray (1990) found it "uncommon" at Andrew Lake. Surprisingly, ABBA (p. 220) shows breeding as 'confirmed' in only one KU atlas square away from the SRV and NSLA. This was the third-commonest songbird (after Chipping Sparrow and Yellow-rumped Warbler), that we encountered in the Park.

- **BLUEBIRDS & THRUSHES (Turdidae)**

Swainson's Thrush: Probable breeder [T]; Common; Twenty-eight records (all bar one, aural): 26 from two 4-day periods in June (6-9 incl., and 11-14, incl.) plus two for July 7th, involving a total of about 30 individuals. Found in a wide range of forest-types, including: old-growth White Spruce; Black Spruce; mature Jack Pine/Black Spruce/Aspen; Black Spruce/Paper Birch; pine/birch; pine/alder; pine/Black Spruce; submature mixedwoods; and mixed live and (recently) fire-killed Black Spruce (with an understorey of submature birch and pine) stands. Unusually for the Park (but *cf.* Thomas, 2002, p. 40), one was also heard in alder/willow/birch scrub, at the E end of Colin's S arm (on June 9th). The main body of our records was located adjacent to the NE, SE and SSE shores of DBL, particularly the areas extending NW and SE from our camp – to Scoter Lake and the W Colin delta, respectively. Other sites for which we obtained (1 or 2) records are Trapper's Island, the NW bay of DBL, and the west end of Woodman Creek. Apart from the typical 'wit', and less common, querulous 'kveeh' calls, one bird calling

near camp on June 6th, gave a number of odd, 'pwee' or phwee' call notes. Also, near camp on June 9th, one bird was singing at 2:15 am. CI: NTM-O. Forest-interior specialist. Comments: This is the commonest of the 3 thrush species that regularly occur on the KU. Wallis and Wershler (1984) rated it "locally common" in the Sub-Region, while both Höhn (1973) and Erickson and McGillivray (1990) describe it as "fairly common" (in the Lake Athabasca Region, and at Andrew Lake, respectively). ABBA (p. 227) has no 'confirmed breeding' records for the KU away from the SRV.

Hermit Thrush: Confirmed breeder [NE]; Fairly common; Eleven records (9 aural): 9 from 5 dates in June (8-11 incl., and 13), and one each for July 8th and 10th, involving a total of 10 or 11 individuals. Our reports are clustered along: a) the central-S, SW and NW shores of DBL (7 records in total) and, b) Big Bear Creek (2 records, concerning 5 or 6 birds). There is a single (July 8) record for Woodman Creek. On June 10th, a nest containing 3 eggs was found in open, mature Jack Pine forest, between the NE shore of Colin Lake and Plover Pond. The nest, which consisted of a deep cup woven from grass, was situated on the ground beneath a straggly, leafless, alder bush. This species was also encountered in lakeside stands of mixedwoods, and regenerating (post-burn) Paper Birch/Jack Pine forest. CI: NTM-O. Forest-interior specialist. Comments: As for the previous species, Höhn (1973, p. 22) characterizes this thrush as a "fairly common summer resident" (that breeds) in the Lake Athabasca Region. On the KU it is also reported as "fairly common" (Wallis and Wershler, 1984), but was "uncommon" at Andrew Lake in June 1988 (Erickson and McGillivray, 1990). The only KU atlas square showing 'confirmed breeding' is located adjacent to the NSLA (ABBA, p. 228).

American Robin: Possible breeder [H]; Fairly common. Fourteen records (11 aural, 3 visual): 12 spanning a 4-day period in June (8-11, incl.), plus one (each) for July 8th and 10th, involving a total of *ca.* 16-17 individuals. Geographically, our reports form two general clusters located: a) along the central-S, SW and NW shores of DBL (5 records in total) and, b) in the Big Bear Creek (3 records) - NW Colin Beach (also 3) area. Single records were obtained along Woodman Creek, on the NW shore of Colin, and S of the NE Colin delta. The most birds seen together was two – on two occasions, one of which concerned two males observed fighting, in the Black Spruce bog, W of NW Colin beach (June 9th). CI: NTM-F. Comments: Höhn (1973) contends that this species is a "fairly common" breeder throughout the

Lake Athabasca Region. However, our June-July, 2000 (Thomas and Carroll, 2001) and 2001 (Thomas, 2003) surveys suggest the existence of substantial "holes" in this species' distribution across northeasternmost Alberta. Described as "local and uncommon" on the KU (Wallis and Wershler, 1984), but "fairly common" at Andrew Lake (Erickson and McGillivray, 1990). ABBA (p. 229) indicates breeding has been 'confirmed' for this species within several KU atlas squares.

- **WAXWINGS (Bombycillidae)**

  Cedar Waxwing: Possible breeder [H]; Rare; One record: on June 9th, two were flycatching from streamside snags, along Big Bear Creek. CI: NTM-F. Comments: On July 7th, an unidentified waxwing was observed flycatching in an area of Bog Birch/Reed Grass adjacent to Big Bear Creek. This individual is assumed to have been one of the above-described birds. Interestingly, on July 5, 1983, Wallis and Wershler (1984, p. 65) saw two Cedar Waxwings "flying over (*a*) swampy channel (*at*) Colin Lake". They regard this species as "scarce" on the KU. Erickson and McGillivray (1990) found Bohemian Waxwings at Andrew Lake, but not this species. Höhn (1973) lists Cedar Waxwings as an uncommon (breeding) summer resident of the Lake Athabasca Region. There appear to be no 'confirmed breeding' records for the KU (ABBA, p. 238).

  [**NOTE**: Wallis and Wershler (1984, p. 35) imply that they observed Bohemian Waxwing in "wetlands" (*Ibid*., p. 21) adjacent to either Colin and/or, Woodman Lake during July 1983. However, since these authors supply no confirmatory details, this species has been omitted from the present birdlist for the Park.]

- **WOOD-WARBLERS (Parulidae)**

  Tennessee Warbler: Possible breeder [H]; Fairly common; Eighteen records (90% aural): 15 from 4 dates in June (10, 12, 13 and 14), and one per day on July 6, 7 and 10, which in total, involve about 14 or 15 individual birds. All our records (bar one from Big Bear Creek, on July 10th) are located within a NW-SW oriented, 0.8 km-wide, strip of land running from the DBL-Colin Lake connector channel/ W Colin delta area, to just S of the southern end of Scoter Lake. Birds were recorded from a diverse assemblage of forest-types, including stands of: mature Aspen; old-growth Black Spruce; mature Aspen/Black

Spruce; old-growth White Spruce and White Spruce-dominated mixedwood; submature Paper Birch/Black Spruce; Jack Pine/Paper Birch with an alder understorey; and submature Aspen/Jack Pine-dominated mixedwood forest. CI: NTM-O. Spruce Budworm specialist. Irruptive. Declining. Comments: The first Tennessee Warblers appeared in our study area (and began singing) on the afternoon of June 10th. In 2002, due to adverse weather conditions, the spring migration of many Alberta species was delayed (Koes and Taylor, 2002; Dolman and Bennett, 2003). Francis and Lumbis (1979, p. 219) give the spring, first-arrival date of Tennessee Warblers at Ft. MacKay as May 13th. With allowance for the extra distance involved, it is clear that Tennessees were up to three weeks late reaching their Colin-Cornwall WPP breeding territories in 2002. Regarding the 'Lake Athabasca area', Höhn (1972, p. 45) describes this species as the "most abundant warbler and quite generally distributed". It is considered "locally common" on the KU (Wallis and Wershler, 1984) and "fairly common" at Andrew Lake (Erickson and McGillivray, 1990). KU breeding records are concentrated along the SRV and NSLA (ABBA, p. 246).

Orange-crowned Warbler: Probable breeder [P]; Fairly common; Sixteen records (two-thirds aural): 14 spanning 8 consecutive days in June (7-14, incl.) plus two for July 7th, involving at least 17 individuals. Found in a wide range of habitat types, including: submature Jack Pine/Paper Birch/Black Spruce forest growing on rock slopes; lakeshore shrubbery (1 record); a mature Aspen stand (1 record); a Tamarack/alder/willow swamp (1 record); a tract of Black Spruce/willow along a watercourse; and a variety of young forest types (*e.g.,* Jack Pine; birch/pine; and Aspen/Jack Pine – with a Black Spruce/Paper Birch understorey) regenerating after burns. Apart from 7 records located along the southern shore of DBL, we have records for the NE shore of Colin Lake (2), the shores of Woodman Lake (2), the NW shore of DBL (1), and two reports from the area between the N side of DBL and the southern end of Scoter Lake. CI: NTM-F. Comments: Although ABBA (p. 247) shows no records for this species (on the KU) away from the SRV and NSLA, Wallis and Wershler (1984, p. 65) characterize it as "common" within the Sub-Region, "in pine-birch stands, especially on slopes, and in older burns".

Yellow Warbler: Confirmed breeder [NB, CF]; Common; Twenty-five records (evenly split between aural and visual reports): 22 spanning 6 dates in June (7-11 incl., and 13), and 3 from two dates in July (8 and 9). In all, these records involve about 36 different individuals. At least 3 pairs were seen. On June 7th, a

bird on Trapper's Island (Colin Lake) was observed gathering nest materials (TJ), while on July 8th, on one of the larger islands at the NE end of Colin, an individual was seen carrying food (LA). This species was encountered on at least 6 different islands (5 in Colin Lake, plus North Woodman Island): we have 6 records from Trapper's Island alone. It was found to be common within and adjacent to the NE Colin delta, and at the westernmost end of Colin Lake (5 records). The only other (minor) concentration of reports comes from the W end of Woodman Creek (the Woodman Lake outflow area; 3 records). Habitats favoured by this species include: deciduous shrubbery along lakeshores; riparian willow thickets; mature stands of mixedwood and Paper Birch on islands and lakesides; and areas of young (regenerating) mixedwood and deciduous scrub in old burns. CI: NTM-O. Comments: Given the above-described distribution of our records, it is worth noting that, for the KU, Wallis and Wershler (1984, p. 65) regard this species as "characteristic of wooded islands in lakes (one to two pairs an island), but very local along swampy stream channel shrubbery". Erickson and McGillivray (1990) report it as "fairly common" at Andrew Lake. Surprisingly, ABBA (p. 249) shows no 'confirmed breeding' records for the Sub-Region away from the SRV.

Magnolia Warbler: Probable breeder [P]; Rare; Three records (two for June, one in July) involving 4 different birds. On June 8th, a male was heard and seen singing in a young Paper Birch and Black Spruce stand, with abundant deadfall (*i.e.,* a regenerating burn), on the east side of DBL's southeastern bay. A short time later, on the west side of the same bay, another singing male was observed, in a young (post-burn) tract of Jack Pine/birch/Black Spruce forest characterized by numerous snags, and several wet areas supporting willow thickets. Finally, on July 9th, a pair was found in a dense stand of young Tamarack, adjacent to a creek-side marsh, at the NW end of Woodman Lake (LA). CI: NTM-O. Believed to be declining. Comments: Listed by Wallis and Wershler (1984) as "local and uncommon" for the KU. Höhn (1973) also describes its distribution in the Lake Athabasca Region as "local". ABBA's (p. 251) only KU 'confirmed breeding' record is for a NSLA atlas square.

Cape May Warbler: No evidence of breeding [X]; Rare (? Casual); Three records, all of which involve the same male, observed singing in a mature/old, open stand of Black Spruce (and later, in conifer-dominated mixedwood forest), on Trapper's Island (Colin Lake) on June 7th (twice) and 9th. CI: NTM-O.

Spruce Budworm specialist. Dependent on old-growth coniferous forest. Declining due to substantial habitat losses on both its wintering and breeding grounds. Comments: For WBNP, Soper (1942) considered this species "fairly common" but "conspicuously local in distribution". "Local to rare" in the Lake Athabasca Region according to Höhn (1973), but not listed for the KU by Wallis and Wershler (1984). ABBA (p. 252) has no Cape May records of any sort for the entire Canadian Shield Natural Region.

Yellow-rumped Warbler: Confirmed breeder [NB]; Common; Fifty-one records (± evenly divided between aural and visual reports): 48 spanning an interval of 9 consecutive days in June (6-14, incl.) and one on each of 3 days in July (6, 9 and 10), involving at least 67 individual birds. Fairly common-to-common and widely-distributed throughout the majority of the area surveyed. Found in a broad range of forest-types, including: old-growth White Spruce, mixedwood and Black Spruce stands; mature mixedwood and deciduous (Aspen/Paper Birch) stands; submature pine/birch/Aspen/spruce mixedwoods; recently burned lakeside tracts of spruce forest (and older burns); plus, reported from forested islands/islets, riparian areas/deltas, and Black Spruce/Labrador Tea bogs. Our main 'cluster' of records lies within an 'L'-shaped area, extending SSE (along the WNW shore of Colin Lake) from Big Bear Creek to the DBL-Colin connector channel and from there, running NW along the NE shore of DBL to the SW end of Scoter Lake. This species was also recorded in good numbers along the NE shore of Colin, especially within the NE Colin delta, and on the SW side of DBL. We have reports from 5 islands or islets in Colin Lake (including Trapper's Island) and the island in NW DBL, and from the SSE shore of DBL and NW shore of Woodman Lake. On both June 7th and June 13th, (different) birds were observed carrying nest materials. Four males foraging together in a WNW Colin (lakeside) recent burn (June 7th) are presumed to have been late migrants. All birds sighted were of the expected 'Myrtle' race. CI: NTM-F. Comments: This is the most abundant, breeding warbler species in northern Alberta's Boreal Forest as a whole. Adjudged "common" on the KU by Wallis and Wershler (1984) "particularly in older spruce and pine woods". It is "the most abundant warbler" of the Andrew Lake area (Erickson and McGillivray, 1990). Oddly, for WBNP, Soper (1942, p. 79) regarded it as a rather scarce, local breeder (but an abundant migrant). ABBA (p. 253) indicates 'confirmed breeding' in seven KU atlas squares. This species and Chipping Sparrow are the two commonest passerines found in the Park.

Palm Warbler: Possible breeder [H]; Uncommon; Six records (4 aural, 2 visual): 5 from four dates in June (8, 9, 10 and 13) and one for July 10th, involving a total of 7 or 8 individuals. Dates/details are: June 8, one seen singing from a tall snag in an old burn (containing a mosaic of young Jack Pine, and patches of mature Black Spruce – that survived the fire), on the SSE shore of DBL. In terms of its plumage details, this was a 'classic' western race bird (*cf.* Sibley, 2000, p. 441); Also on June 8, "several" were heard in shrubbery and forest adjacent to the NW end of Woodman Lake, and in a treed fen that borders the creek entering the Lake; June 9, one heard in an alder/birch/willow stand at the E end of Colin's S arm; June 10, a bird, singing and flycatching from a snag, was observed in the Black Spruce bog W of NW Colin beach. This individual attracted interest because its chest and upper belly were bright yellow, hence it exhibited a plumage pattern intermediate between those of 'typical' western and eastern race end members (*Ibid.*); June 13, one singing from the forested ridge overlooking (N of) the W Colin delta area; and, on July 10, one was heard in a mixedwood stand, along Big Bear Creek. CI: NTM-O. Comments: For the Lake Athabasca Region, Höhn (1973, p. 24) regards this species as a "fairly common" breeder. On the KU, Wallis and Wershler (1984) consider it "fairly common" in young, second-growth forest (regenerating burns) and Black Spruce-Tamarack bogs. "Uncommon" at Andrew Lake (Erickson and McGillivray, 1990). No 'probable' or 'confirmed' breeding records are shown in ABBA (p. 257) for the KU.

Northern Waterthrush: Probable breeder [P,T]; Fairly common; Fifteen records (two-thirds aural), spanning a 5-day period in June (7-11, incl.), that involve at least 13 individuals, plus several additional birds (not counted) in the NE Colin delta. One pair was observed (June 7). Almost half our records are 'clustered' at the W end of Colin Lake: 5 along the Lake's WNW shore between the DBL-Colin connector channel and the S end of NW beach, and one apiece from Trapper's Island and the island to its SE. This species was reported (June 11th) as "fairly common" in the NE Colin delta and its vicinity. Our other records were obtained from an island and the shore at the E end of Colin's S arm, along the NW shore of Colin, and on North Woodman Island. Birds were encountered in streamside and lake edge, deciduous (alder-birch-willow) scrub/understorey/brush/thickets, and deciduous shrubbery around the margins of islands. CI: NTM-O. Comments: Wallis and Wershler (1984) found this species "very local and uncommon" and believed their record(s?) from "north of Woodman Lake" to be the first for the Sub-

Region. “Rare” at Andrew Lake, where (in June, 1988) Erickson and McGillivray (1990) heard only one. ABBA (p. 263) has just a single record (of ‘possible breeding’ at Andrew Lake) for the KU away from the SRV.

[*Mourning Warbler*]**:** No evidence of breeding [X]; Casual; On June 12th, in old-growth White Spruce-dominated mixedwood forest on the NE shore of DBL (*ca.* 0.5 km S of our camp), a singing warbler was heard by 4 observers, who provisionally identified it as a Mourning Warbler (albeit one with a somewhat unusual song). No satisfactory views of this bird – which repeatedly changed its singing post – were obtained. The tape recording made of this warbler was accidentally erased the next morning. Pending a confirmed record therefore, the occurrence of this species in the Park must be designated “hypothetical”. CI: NTM-O. Area sensitive. Decreasing. Comments: Höhn (1972, p. 48) follows Soper (1942) in regarding the PAD 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 warbler – a ‘possible breeding’ occurrence at the Ft. Chipewyan townsite. In June/July, 2001, at least 6 individuals of this species were found at La Butte Creek WPP (Thomas, 2003).

Common Yellowthroat: No evidence of breeding [X]; Casual; Only a single record: on July 8th, one male was observed in streamside willow scrub, along Woodman Creek. CI: NTM-O. This species underwent a significant decline in North America during the period 1966-1993 (Rodriguez, 2002). Comments: Not listed as a KU species by Wallis and Wershler (1984). Thought to breed in “the southern half” of WBNP and (*at Ft.*) “Chipewyan” by Höhn (1973, p. 25) who states that there are “none further east”. ABBA (p. 267) has no KU breeding records away from the NSLA and SRV.

Wilson’s Warbler: Probable breeder [T]; Uncommon; Four records (3 visual, 1 aural), all for June, involving a total of four individual birds. Dates/details are as follows: June 7, one observed in a young (post-fire) Paper Birch/Jack Pine stand, near the mouth of the elongate, narrow (WSW-ENE aligned) bay on the SW side of DBL. Two birds were noted at the same location on June 13th; June 8, one male seen in willows (growing along a watercourse), on the SSE shore of DBL; and June 9, one heard singing in

alder/willow/birch scrub, at the E end of Colin Lake's S arm. CI: NTM-O. Comments: Described as "scarce" on the KU by Wallis and Wershler (1984, p. 65), who found one "singing in extensive willow-dwarf birch" along Woodman Creek. Apparently, their record was the first for this warbler from the Sub-Region (*Ibid.*). Away from the Ft. Chipewyan/NSLA area, ABBA (p. 268) shows 'possible breeding' in just a single KU atlas square.

- **TANAGERS (Thraupidae)**

  Western Tanager: Possible breeder [H]; Uncommon; Seven records (6 aural, 1 visual), from 4 dates in June (6, 7, 8 and 13), involving 4 or 5 separate individuals. Details for these records (excluding duplicate reports) are: June 6, one heard (and later seen) in mature mixedwood forest near our camp, NE DBL; June 7, two heard singing, from 'delta bay', (at the westernmost end of) Colin Lake; June 8, one heard on the SE shore of DBL; June 13, one singing in an old-growth White Spruce stand to the N of 'delta bay'; later that morning, another (or the same?) bird was heard in a stand of mature Spruce/Aspen/Jack Pine/Paper Birch mixedwood, E of the largest kettle lake located E of our camp. CI: NTM-O. An old-growth forest-dependent species. Declining in some parts of its North American range. Comments: "Scarce" on the KU according to Wallis and Wershler (1984, p. 66), who reported "one singing on the west shore of Colin Lake" on July 11, 1983. Erickson and McGillivray (1990) did not encounter this species at Andrew Lake. However, ABBA (p. 271) has one 'confirmed' and two 'probable' breeding records for the KU away from the NSLA and SRV.

- **SPARROWS & ALLIES (Emberizidae)**

  Chipping Sparrow: Confirmed breeder [NE]; Common; Forty-three records (23 aural, 20 visual): 39 spanning 9 consecutive days in June (6-14, incl.) plus four from a three-day period in July (6-8, incl.), that involve a total of approximately 70 individual birds. Our reports are widely distributed around the shores of DBL (with the largest cluster located E and SE of our camp) and along the WNW shore of Colin Lake. This species was common along Woodman Creek, and fairly common in the NE Colin delta and adjacent to the NE bay of Colin's S arm. We also have records for Trapper's Island (and a smaller island in Colin) plus North Woodman Island, the NW and SE shores of Woodman Lake, and the SW shore of Scoter Lake. Forest types favoured by this sparrow in the Park include Aspen/White Spruce-dominated old-

growth mixedwood, open stands of White Spruce old-growth, mature stands of various kinds of mixedwood adjacent to lakeshores, and Black Spruce bogs. Birds were often observed foraging in riparian willow thickets, lakeside shrubbery, and young, deciduous and Jack Pine growth in old burns. On June 14th, a nest of this species containing 4 eggs, was discovered in lakeshore scrub, adjacent to our campsite (BC). CI: NTM-F. Has declined in Canada over the past two decades (Dunn *et al.,* 2000). Comments: This was the most abundant passerine species recorded by us within the WPP. It is the most common and widely-distributed sparrow species in the Boreal forests of northern Alberta. Designated as "common" on both the KU, and at Andrew Lake, by Wallis and Wershler (1984) and Erickson and McGillivray (1990), respectively. 'Confirmed breeding' is indicated for 7 KU atlas squares (including four along the NSLA) by ABBA (p. 277).

(Clay-colored Sparrow): Possible breeder [H]; "Uncommon"; Included here on the basis of Wallis and Wershler's (1984, p. 66) report of finding this sparrow (which they characterize as "very local and uncommon" on the KU), in an extensive tract of dwarf birch-willow, adjoining the channel of Woodman Creek. Unfortunately, these authors supply no further details – such as how many birds were present, date found, *etc.* CI: NTM-O. Declining in Canada (Downes *et al.,* 2000, p. 55). Comments: ABBA (p. 278) has no KU breeding records for this sparrow away from the NSLA and SRV.

Savannah Sparrow: Possible breeder [H]; Rare; Two June records, involving two different individuals, as follows. June 8: one observed in a sedge/grass fen adjacent to the NNE 'tip' of Woodman Lake; June 10: one heard in a fen alongside the creek at the NW end of Woodman Lake. CI: NTM-F. Comments: For the Kazan Upland, Wallis and Wershler (1984) list this species' status as "local and uncommon". Erickson and McGillivray (1990) recorded only one individual at Andrew Lake in June, 1988. Apart from 'probable breeding' in one SRV atlas square, ABBA (p. 283) has no KU data for this species.

Le Conte's Sparrow: Probable breeder [T]; Uncommon (locally, Fairly common); Four records (3 aural, 1 visual): three from two dates in June (8 and 11), plus one for July 8th, that involve at least 7 individuals. All our records are from the extensive wet, sedge/grass flats, with scattered willow bushes, that border the main channel of Woodman Creek (Figure 2). On June 8th, two were heard at the west end (Woodman

Lake outflow area) of Woodman Creek. At least 5 different birds were singing along the western third of this Creek on June 11th, and excellent views were obtained of one such individual. On July 8th, this sparrow was reported as being "common in fens and marshes" along Woodman Creek. CI: Wetland-dependent in the breeding season. Comments: Wallis and Wershler (1984, p. 66), who believed their (1983) records to be the first for the Sub-Region, describe this species as "local and uncommon" upon the KU. Not reported from Andrew Lake (Erickson and McGillivray, 1990). Of the four 'possible breeding' records shown for the KU in ABBA (p. 286), only one is not situated along the SRV or NSLA.

Fox Sparrow: Possible breeder [H]; Rare; Three aural records: one apiece for June 9th and 10th, and July 9th; each involving a single (different) bird. On June 9, one was heard along Big Bear Creek (Figure 9), singing a 'complete' song (*i.e.,* with the characteristic two-note flourish at its end). The following day (June 10), one singing an attenuated (six-note) song, was present in the Black Spruce bog NE of our camp. Lastly, on July 9th, an individual was heard in a mixedwood stand, on the S side of the first lake E of the 'mouth' (outflow) of the Colin River. Comments: Höhn (1972, p. 55) assumed this species to be a "scarce local breeding bird" within the Lake Athabasca area. However, its status and distribution across the Kazan Upland require clarification. Wallis and Wershler (1984) also consider it "scarce" in the Sub-Region. On July 2nd and 3rd, 1983, they noted one singing at a site near Wylie Lake – this apparently constituted the first record for the KU (*Ibid.*). This sparrow was "fairly common" at Andrew Lake in June, 1988 (Erickson and McGillivray, 1990, p. 89). Outside the SRV, there is just a single KU record (of 'possible breeding', at Andrew Lake) for this species, in ABBA (p. 288). All Soper's (1942) WBNP specimens were of the "Red" or "Taiga" Fox Sparrow (*iliaca*) (*cf.* Rising and Beadle, 1996).

Song Sparrow: Probable breeder [T]; Common; Twenty-one records (two-thirds aural): 17 from 6 dates in June (7-11 incl., and 13) and 4 from three dates in July (8, 9 and 10), involving about 22 different birds. The distribution of this species within the Park – regarding a combination of both geography and preferred habitat – is especially interesting (*cf.* 'Comments' section below). Almost half our records (10) are from wooded islands or islets *i.e.,* various islands in Colin Lake (7), North Woodman Island (2), and the island in NW DBL (1). Another 5 concern narrow promontories ('pseudo-islands' ?) along the WNW shore of Colin Lake. Of the remaining 6 reports, 4 pertain to riparian environments *viz.*: adjacent to the main

channel of NE Colin delta (2), Big Bear Creek (1) and Woodman Creek (1). Lastly, we obtained single records from both the W and NW shores of Woodman Lake. Along creeks and lakeshores, birds were encountered in deciduous shrubbery including, in the case of several promontories, scrubby regrowth following burns. Around the margins of islands, birds occurred in deciduous shrubbery, plus Black Spruce, mixedwood, and White Spruce (within an old [partial] burn) forest. CI: Has declined in Canada over the past decade (Dunn *et al.,* 2000). Comments: 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). Half our records conform to this pattern. Despite the abundance of (apparently) suitable habitat (*e.g.,* willow thickets) at La Butte Creek, the only Song Sparrow recorded during our June/July, 2001 survey was from a small island in Darwin Lake, outside the WPP (Thomas, 2003). Why this should be the case remains unclear. Wallis and Wershler (1984) believed their records to be the first for the KU. At Andrew Lake, where this sparrow is "fairly common", it also shows a preference for wooded islands but, on occasion, occurs along the lakeshore in "shrubby willows" (Erickson and McGillivray, 1990, p. 89). ABBA's (p. 289) only 'confirmed' KU breeding record is from the NSLA.

Lincoln's Sparrow: Possible breeder [H]; Fairly common; Fourteen records (11aural, 3 visual): 12 spanning a 5-day period in June (7-11, incl.) and one (each) for July 7th and 10th, that involve a total of *ca.* 18 individuals. Habitat-types in which this species was encountered (figures in brackets = number of records), include: streamside (4) and lakeside (2) shrubbery – especially willows; a variety (*e.g.,* Black Spruce; willow; Leatherleaf/Labrador Tea) of bogs (4); and a birch-alder-willow swamp (1). One bird was also seen foraging on NW Colin beach. Our records were obtained at the following (general) locations: the SE and central-southern (5) and NE (1) shores of DBL; along Big Bear Creek (3); near/on NW Colin Beach (2), adjacent to the SW shore of Colin Lake (2); and at the W end of Woodman Creek (Woodman Lake outflow area) (1). CI: NTM-O. Comments: This sparrow is a "fairly common" breeder in the Lake Athabasca Region according to Höhn (1973, p. 27), and "common in swampy situations along stream channels" on the KU in the opinion of Wallis and Wershler (1984). Erickson and McGillivray (1990) found it "fairly common" at Andrew Lake in June, 1988. A record of 'probable breeding' at the latter location, is ABBA's (p. 290) only KU record for this species, away from the SRV and NSLA.

Swamp Sparrow: Probable breeder [C]; Common; Twenty-five records (*ca.* half aural): 19 from 6 dates in June (7-11 incl., and 13) and 6 from 3 dates in July (7, 8 and 10), that involve at least 40-42 different birds. Found inhabiting a variety of riparian (fluvial and deltaic) environments, and wetlands in proximity to lake margins. Birds were commonly encountered in streamside and lakeside shrubbery – especially willows; sedge/grass/willow flats (fens and marshes) bordering stream channels; and fens and marshes adjacent to lakeshores. Centres of abundance within the area we surveyed were Woodman Creek (including the Woodman Lake outflow area); Big Bear Creek; the area encompassing the DBL-Colin connector channel and W Colin delta; the NE Colin delta, and the diverse wetlands adjoining the central-S and SE shores of DBL. Single records (each of "several" birds) were also obtained from appropriate habitat a) between the SW shore of Colin Lake and the small lake to its SW and, b) near the NE shore of Colin's S arm. On June 8th, a male was observed performing song flights, near the SSE shore of DBL. CI: Wetland-dependent during the breeding season. Comments: Unanimously described as "fairly common" in the Lake Athabasca Region (Höhn, 1973, p. 27), on the Kazan Upland (Wallis and Wershler, 1984), and at Andrew Lake (Erickson and McGillivray, 1990). The only KU 'confirmed breeding' record shown in ABBA (p. 291) is for a NSLA atlas square.

White-throated Sparrow: Possible breeder [H]; Common; Thirty-two records (20 aural, 12 visual): 27 from 6 dates in June (7-11, incl., and 13), and 5 from a 4-day period in July (7-10, incl.), involving a total of about 38-40 individual birds. This sparrow is widely-distributed within the Park and utilises a broad range of habitat-types. It was commonly encountered in streamside shrubbery (including willow thickets). Birds were also found in dense patches of deciduous-dominated scrub/young forest, growing on burned-over tracts of former Black Spruce, Jack Pine/birch and mixedwood stands that are in the early stages of (post-fire) regeneration. Records were also obtained from stands of (unburned) mature mixedwood and deciduous forest, Black Spruce fens and areas of alder/birch/willow scrub, adjacent to lake margins. Centres of abundance for this species were: the NE Colin delta; along Woodman Creek (and the Woodman Lake outflow area); along the central-southern and SW shores of DBL; and the area circumscribing the W Colin delta and Colin-DBL connector channel. Birds were also reported from the WNW and NW shores of Colin Lake; the NE and SE ends of Colin's S arm; the NW and SE shores of Woodman Lake; and along Big Bear Creek. Given the distribution of Song Sparrows within the WPP (see

above), it is worth noting that a single 'white-throat' heard on North Woodman Island (June 11), represents our only, 'non-mainland' record for this species. CI: Has been undergoing a significant, long-term decline, particularly in the northern portion of its (Canadian) breeding range (*cf.* Downes *et al.,* 2000; Rodriguez, 2002). Comments: The voice of Canada's Boreal mixedwoods. Together with Chipping Sparrow, it is the most widespread and common sparrow of Alberta's Boreal forests. Listed as "common" for the Lake Athabasca Region by Höhn (1973, p. 27), although he failed to find it at Andrew and Leland Lakes in 1970 and 1971, respectively (Höhn, 1972, p. 55). "Local and uncommon" on the KU according to Wallis and Wershler (1984, p. 66), who describe their records of this species as the first for the Sub-Region. Erickson and McGillivray (1990) found this sparrow "fairly common" at Andrew Lake (in June, 1988), where they "regularly" recorded it in "heavy deadfall". ABBA (p. 292) has a total of three 'confirmed breeding' records for the KU – all located in the SRV (1) or along the NSLA (2).

White-crowned Sparrow: No evidence of breeding [X]; Rare ?; One, observed in shoreline shrubbery, at the NW beach of Colin Lake on June 11th, constitutes our lone record (BC, WN). CI: NTM-F. Comments: This bird is presumed to represent a late migrant (*cf.* Koes and Taylor, 2002; Dolman and Bennett, 2003). White-crowned Sparrow is a common spring and fall migrant through Alberta's Boreal Forest Natural Region. Wallis and Wershler (1984) did not record this species during their (July, 1983) KU fieldwork, and termed it "apparently rare in northern Alberta". However, Höhn (1973) states it is a "fairly common" summer resident (that breeds) in the Lake Athabasca Region, and Erickson and McGillivray (1990) also regarded it as "fairly common" at Andrew Lake in June, 1988. Adding to the confusion concerning the status of this sparrow in NE Alberta, is the fact that ABBA (p. 294) possesses only a single record for it, (of 'probable breeding' at Andrew Lake) from the entire Canadian Shield Natural Region.

Dark-eyed Junco: Probable breeder [P]; Common; Twenty records (60% aural): 16 spanning a week in June (7-13, incl.), and 4 from three dates in July (7, 8 and 10), involving a minimum total of 26 individual birds (that includes at least 3 pairs). Favours regenerating burns, containing mixtures of young trees (*e.g.,* Jack Pine), abundant deadfall, deciduous shrubbery, and patches of the original stand (*e.g.,* Black Spruce) that survived the fire. Also, found in Jack Pine and Jack Pine/alder stands, mixedwood forest

bordering streams and lakeshores, and open, old-growth White Spruce stands. Only one bird was observed on an island (Trapper's Island, on June 9th). One of the 3 pairs seen, was foraging on NW Colin beach (June 9th). On June 11, a female on the ground in a regenerating burn (on the SSE shore of DBL), became agitated (gave repeated alarm calls) when approached, and may possibly have had a nest nearby (not confirmed). All our records are scattered within the western 'half' of the area we surveyed. This species was encountered along the southern shore of DBL (5 records); adjacent to the WNW shore of Colin (3), and NE (3) and central-N (1) shores of DBL; on the SW shores of Scoter (1) and Woodman (1) lakes; along riparian corridors, *viz*. Big Bear (1), Woodman (1), and the DBL-Colin connector (1) creeks; and on Trapper's Island (1) in Colin Lake. CI: Some populations in the northern portion of its Canadian range appear to be declining (Downes *et al.,* 2000, p. 56). Comments: All individuals observed were of the expected 'Slate-coloured' race. Considered a common summer resident/breeder by Höhn (1973, p. 27). Soper (1942) remarks that in "extensive tracts" of WBNP it is "very scarce or absent", which Höhn (1972, p. 53) attributes to its dislike of "marshy" habitat. Wallis and Wershler (1984) described it as being "fairly common in old pine and pine-spruce, and old and recent burns" on the KU. Reported as "uncommon" at Andrew Lake (Erickson and McGillivray, 1990). ABBA (p. 295) shows 5 'confirmed breeding' records of this species for the KU.

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

  Red-winged Blackbird: Probable breeder [P, T]; Uncommon (locally, Fairly common); Nine records (8 visual, 1 aural): 7 from three dates in June (8, 10 and 11), and one apiece for July 7th and 8th. At least 10 different individuals were observed, but the total number encountered in the Park is uncertain, because several of our reports are non-quantitative (see below). Birds were found – primarily in cattail marshes, but also in streamside shrubbery and treed fens – in two main areas, namely: a) along Woodman Creek, especially at its W end (the Woodman Lake outlet channel) and, b) adjacent to, and within, the NE Colin delta. Two pairs and a female were recorded at the W end of Woodman Creek on June 11th. This species was assessed as "common" along Woodman Creek and in the NE Colin delta on June 11th and July 8th, respectively. On July 7th, a single bird was observed in cattails along Big Bear Creek. CI: NTM-F. Has been declining in Canada over the past two decades (Dunn *et al.,* 2000). Comments: This is now the blackbird species most likely to be encountered across the Kazan Upland. Wallis and Wershler

(1984) considered it “local and uncommon” in the Sub-Region, but Erickson and McGillivray (1990) found it to be “fairly common” in cattail marshes (and a confirmed breeder) at Andrew Lake. ABBA (p. 299) has one additional record of ‘confirmed’ breeding for the Sub-Region.

The identities of the 5 blackbirds comprising a flock seen flying northwestward, high above the W Colin delta on June 7th, could not be determined.

- **FINCHES (Fringillidae)**

White-winged Crossbill: Possible breeder [H]; Uncommon; Three records, from different dates in June, involving 4 individuals (but see ‘Comments’, below), as follows: June 7, one male observed in a spruce stand, on the shore of the long (NW-SW oriented) bay on the SW side of Colin Lake; June 8, one heard in a White Spruce stand (old [partial] burn), on the island in NW DBL; and June 10, two feeding in a Black Spruce, near the mouth of the main NE Colin delta channel. CI: Irruptive, but presumably, some reside year-round in the region (*cf.* Höhn, 1972, p. 52). Comments: On June 7th, a small flock of crossbills, believed to be this species, flew over the small lake located SW of the above-described bay on the SW side of Colin. Wallis and Wershler (1984) list this crossbill as “uncommon” on the KU. ABBA (p. 313) gives only two records for the Sub-Region: both of ‘possible breeding’ in SRV atlas squares.

Pine Siskin: Possible breeder [H]; Fairly common; Ten records (± all, visual and aural): 8 spanning a four-day period in June (6-9, incl.), and one each for July 7th and 8th. Most of our reports are non-quantitative and so the total number of individuals encountered is uncertain. However, these records involve at least 14 different birds, plus “a flock” overflying the E end of Colin’s S arm (June 9th), and “several flocks” seen around our camp (NE DBL) on July 7th. A précis of our other records follows. June 6: “several” near our camp; June 7: two on the WNW shore of Colin Lake; June 8: “several” in White Spruce (an old [partial] burn) on NW DBL island; June 7 and 9: on both dates, at least 3 were in mixedwoods on Trapper’s Island; June 8: one flying over the SSE shore of DBL; and, July 8: “several” along Woodman Creek. CI: Irruptive. Vacates the KU during winter. 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”. Wallis and Wershler

(1984) did not record it on the KU in July, 1983; nor is it listed for Andrew Lake by Erickson and McGillivray (1990). The lone KU record for this species shown by ABBA (p. 315), is of 'probable breeding' in a NSLA atlas square.

2.4 Colin-Cornwall Lakes Checklist: Summary and Discussion

Summary: The Colin-Cornwall Lakes checklist comprises a total of 118 species representing 32 bird families. Five different categories of avian records were used to compile this list. Short definitions of these categories (*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, 2002)	101
2. (Previously recorded, by others, within the WPP)	8
3. (Presence in Park inferred from 'indirect evidence' found in June-July, 2002)	2
4. (Presence in Park inferred from 'indirect evidence' found by previous researchers)	1
5. (Hypothetical for the WPP)	6
TOTAL =	118

Seven of the eight 'Category 2' species reported from the Park were found by Wallis and Wershler (1984); they are: Greater Scaup; Sharp-shinned Hawk; Killdeer; Semipalmated Plover; Least Sandpiper; Arctic Tern; and Clay-colored Sparrow. The eighth species, Golden Eagle, was recorded by Bishoff and Fyfe (1975). Our two 'Category 3' species are Yellow-bellied Sapsucker and Pileated Woodpecker, while the Park's lone 'Category 4' species is Great Gray Owl (*cf.* Wallis and Wershler, 1984). Finally, the six species whose occurrence within the WPP is currently designated "hypothetical", are: Sanderling; Downy Woodpecker; Black-backed Woodpecker; Yellow-bellied Flycatcher; Golden-crowned Kinglet, and Mourning Warbler.

In terms of their various 'classes' of Breeding Status and Abundance (*cf.* Section 2.2), the 118 species composing the CCL checklist break down as follows:

Breeding Status [No. of Species (% of Species Total)]			Abundance [No. of Species (% of Species Total)]		
No evidence	27	(22.9)	Casual	9	(7.6)
Possible	36	(30.5)	Rare	45	(38.1)
Probable	34	(28.8)	Uncommon	28	(23.7)
Confirmed	21	(17.8)	Fairly Common	22	(18.6)
			Common	14	(11.9)

The Park birdlist (N=118) can also be subdivided according to its component species' residency/migratory status:

Status	No of Species (% of Species Total)	
Winter Visitors	0	(0)
Residents	17	(14.4)
Short-distance Migrants	30	(25.4)
Neotropical Migrants (NTMs) – Facultative	33	(28.0)
Neotropical Migrants (NTMs) – Obligate	38	(32.2)
Total NTMs	71	(60.2)

Due to the timing of our and Wallis and Wershler's (1984) fieldwork, these values are biased toward resident birds and summer visitors that breed in the WPP. However, despite the incomplete nature of the Park checklist, it is worth noting that the above-listed proportions of Residents and NTMs are more-or-less equivalent to those of many other northern Alberta avifaunas, as well as the Boreal Forest avifaunas of Alberta and Canada as a whole (*e.g.,* Thomas, 1994, 2003). The comparatively small number of resident species is attributable to the length and severity of KU winters. At least 9 of the species on the CCL checklist are considered "irruptive" (*cf.* Koenig, 2001), *i.e.,* their numbers (in a given area/region) can vary greatly – particularly in winter – according the availability of food and/or, in response to weather conditions (*cf.* Thomas and Klauke, 2001). These species are: Northern Hawk, Great Gray and Boreal Owl; Three-toed and Black-backed Woodpecker; Red-breasted Nuthatch; Tennessee Warbler; White-winged Crossbill, and Pine Siskin.

Splitting the Park's complete birdlist (N=118) 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	19	(16.1)
Waterbirds	16	(13.5)
Shorebirds	12	(10.2)
Landbirds	71	(60.2)

Thirteen of Colin-Cornwall's Landbird species are water or wetland-dependent (especially) during the breeding season (*e.g.,* Belted Kingfisher and Red-winged Blackbird). Adding them to the Park's list of Waterbirds changes the two group's totals to: Waterbirds = 29 (24.6%); Landbirds = 58 (49.1%).

With respect to their risk status, no birds listed by COSEWIC (2002) as Endangered, Threatened, or Species of Special Concern appear on the present Park checklist. However, 15 CCL species, namely: American Bittern; American White Pelican; Bald Eagle; Black-backed Woodpecker; Cape May Warbler; Common Nighthawk; Golden Eagle; Great Gray Owl; Horned Grebe; Northern Goshawk; Osprey; Pileated Woodpecker; Sandhill Crane; Western Tanager and White-winged Scoter, are classified as "Sensitive" (*i.e.,*……."may require special attention or protection to prevent if from becoming at risk") by Alberta's Fish and Wildlife Division (AFWD, 2001).

Discussion: Over the past three years (2000-2002, incl.) bird inventories have been undertaken in six WPPs in NE Alberta (Thomas and Carroll, 2001; Thomas, 2003; this report). Of these parks, the bird list for CCL boasts the largest number of both species and families (the next highest is La Butte Creek, with 101 species and 30 families). Although we expended more effort birding in CCL, and were able to draw upon the results of Wallis and Wershler's (1984) previous study, the species richness of CCL's birdlife is genuine and reflects the diversity and productivity of the habitat-types contained within the Park (*cf.* Section 3.0). Indeed, CCL's present species total is only six less than the 124 listed by Wallis and Wershler (1984) for the KU as a whole. Comparisons with other NE Alberta checklists (*e.g.,* Soper, 1942,

1950; Höhn, 1972, 1973; Thomas, 2002) suggest that the number of bird species recorded from this WPP will eventually total at least 160.

The fieldwork conducted in CCL during June-July, 2002, yielded numerous ornithological records of note which, together with a brief explanation of their significance, are listed below. (In the following descriptions, the letters KU = the Kazan Upland Sub-Region of Alberta; SRV = the Slave River Valley; and, NSLA = the North Shore of Lake Athabasca.)

- American White Pelican: rarely recorded on the KU away from the SRV corridor.
- American Bittern: rare on the KU.
- Gadwall: a KU rarity outside the SRV.
- Northern Pintail: very rare on the KU away from SRV and NSLA.
- Surf Scoter: provincially uncommon; courtship display rarely observed in Alberta.
- White-winged Scoter: quite rare on the KU away from NSLA.
- Long-tailed Duck: potentially the first KU record away from NSLA.
- Hooded Merganser: may be only the second record for the KU.
- Osprey: one of a handful of KU 'confirmed breeding' records.
- Northern Harrier: very rare on the KU (away from SRV).
- Red-tailed Hawk: rare on KU outside SRV and NSLA.
- Merlin: rarely recorded on KU.
- Ruffed Grouse: appears to be rare on KU away from SRV.
- American Coot: extremely rare on KU outside SRV corridor.
- Sandhill Crane: rare in summer on KU, away from NSLA.
- White-rumped Sandpiper: first KU record away from NSLA?
- Sanderling: rarely recorded on KU away from NSLA.
- California Gull: a KU rarity outside the NSLA and SRV.
- Sabine's Gull: apparently the first KU record away from the NSLA.
- Northern Hawk Owl: rarely reported from the KU.
- Boreal Owl: possibly the first 'interior' KU record; rarely reported in Alberta during the summer.

- Downy Woodpecker: rarely reported from the KU.
- Hairy Woodpecker: first 'confirmed breeding' record for the KU.
- Three-toed Woodpecker: rarely recorded on the KU.
- Philadelphia Vireo: very rare on the KU outside the SRV.
- Winter Wren: may be the first KU record away from the SRV.
- Cedar Waxing: a KU rarity.
- Golden-crowned Kinglet: very rare on the KU outside the SRV.
- Magnolia Warbler: rarely recorded on the KU away from the SRV and NSLA.
- Cape May Warbler: now very rare on the 'interior' KU.
- Mourning Warbler: very rarely reported from the KU outside the SRV and NSLA.
- Common Yellowthroat: believed to be the first KU record away from the SRV/NSLA.

On the negative side of the balance sheet, the 2002 field team experienced several notable and unexpected avian 'misses' in Colin-Cornwall. (Species we expected to miss included winter visitors, and most spring migrants that breed in the Arctic and/or, sub-Arctic.) Apart from their seven 'Category 2' species, there were five other species recorded by Wallis and Wershler (1984) on the KU (in July, 1983), that we expected to find at CCL but did not, namely: Eastern Phoebe; Bohemian Waxwing; Rusty Blackbird; American Redstart and Red Crossbill. (The first three of these were also encountered by Erickson and McGillivray (1990) in June, 1988, at Andrew Lake.) It should be noted here that Wallis and Wershler (1984, p. 35) **did** observe Bohemian Waxwings within what is now the Park. However, since they provide no location or other details, it was decided not to include this species on the CCL checklist, until confirmation of its occurrence is obtained.

Our failure to record Rusty Blackbird is worrisome because BBS data indicate it has undergone a precipitous, widespread decline (of about 90%) over the past three decades (Greenberg and Droege, 1999). Anecdotal evidence suggests the northern Alberta population of this species has also decreased dramatically during the same period.

In addition to the three species mentioned above, Erickson and McGillivray (1990) list eight others that we failed to record, *viz*.: Sharp-shinned Hawk; Cooper's Hawk (vagrant to the KU); Killdeer; Parasitic Jaeger; Great Crested Flycatcher (vagrant on the KU); Barn Swallow; Blackpoll Warbler, and Common Grackle. Of these, we believed there was a possibility of finding Blackpoll Warbler, Killdeer, Barn Swallow, Parasitic Jaeger and Common Grackle in the Park, and a good chance of recording Sharp-shinned Hawk.

Höhn (1972) considered Great Horned Owl to be "the commonest owl" of the Lake Athabasca Region. However, neither we, Wallis and Wershler (1984), nor Erickson and McGillivray (1990) encountered this species, suggesting it may be scarce and/or, patchily distributed on the KU outside the SRV (it is present at La Butte Creek WPP; Thomas, 2003).

3.0 Conservation Features and Issues

Colin-Cornwall Lakes WPP was established to preserve one of the most geologically and hydrologically diverse portions of Alberta's Kazan Upland Sub-Region. This protected area contains many important natural heritage features including a broad spectrum (in terms of their size, trophic class and origin) of water bodies, and a diverse assemblage of wetlands and forest-types. Colin Lake, Woodman-Alexander lakes, Cornwall Lake and their environs have all been recognised as provincially significant ESAs (Environmentally Significant Areas). Within the context of the KU, the Colin Lake area's "kettle wetlands" and south-facing grassy slopes are unique, and the Park as a whole contains the Sub-Region's best examples of fluvio-glacial sand plains (AEP, 1996; Anon., 2002). The Woodman-Alexander "wetland-stream complex" is also considered "one of the most diverse" on the KU (*Ibid.*).

CCL Park supports a diverse avifauna. Wallis and Wershler (1984, p. 36) attributed the abundance and species richness of the Woodman-Colin lakes area's songbird populations to the diversity of its vegetation cover. Important habitats for birds in the parts of the WPP we surveyed, included: the NE Colin delta and Woodman-Alexander wetland complexes; the wetlands bordering Woodman and Big Bear creeks (Figures 2 and 9, respectively); the islands in the larger lakes (especially Colin); and the spectacular tracts of old-growth White Spruce and White Spruce-dominated mixedwood forest on the 'triangle' of land 'separating' DBL and Colin lakes. Such forest is very unusual in the Park and these superb, biologically-

rich stands presumably owe their continued existence to the presence of natural fire barriers along their N (kettle ponds), SW (DBL) and SE (Colin Lake) flanks.

From a bird conservation perspective, some of the Park's most significant ornithological attributes are as follows:

1. The first (of the 3 existing) and second (of the only two) provincial breeding records for Mew Gull and Semipalmated Plover, respectively, were documented in the Park (Wallis and Wershler, 1984).
2. Many species on the CCL checklist are KU rarities (*cf.* Section 2.4).
3. Islands in both Colin and Cornwall Lake support colonies of Common Terns (Bishoff and Fyfe, 1975; this report), plus other breeding waterbirds (*e.g.,* Herring Gull, Common Loon) that are sensitive to anthropogenic disturbance.
4. Fifteen species on the CCL list are considered "sensitive" by AFWD (2001; *cf.* Section 2.4).
5. On the basis of current knowledge, the Park apparently possesses the most species-rich and diverse avifauna on the Kazan Upland.
6. The Park supports a number of breeding raptors *e.g.,* Bald Eagle, Osprey, Northern Goshawk and Northern Harrier that are sensitive to human disturbance. And,
7. Woodman-Alexander lakes area constitutes a regionally significant waterfowl staging site. Woodman Lake itself has hosted the largest concentration of staging Greater Scaup ever reported from Alberta (*cf.* Wallis and Wershler, 1984).

Currently, hunting, fishing and trapping take place within CCL. However, the cumulative environmental impacts of these activities upon the Park and its avifauna are unknown and, at present, essentially unmonitored. Sport fishing 'lodges' (consisting of cabins) are located on small Mikisew Cree First Nation Reserves at both Colin and Cornwall Lake. In terms of numbers of persons involved, and its potential environmental impacts (*e.g.,* disturbance of birds nesting on islands), fishing appears to be the most significant of these land uses. Plans to expand sport-fishing operations in the Park (Anon, 2002, p. 32) should be subject to an EIA (Environmental Impact Assessment), as should any proposals by Parks and Protected Areas to develop facilities/infrastructure (*e.g.,* trails, campsites, *etc.*) within the WPP.

To date, Colin-Cornwall's best protection has been its comparative remoteness (distance from population centres; relatively difficult access) and geology (no oil and gas deposits; thin soils preclude industrial forestry operations). This Park is a priceless part of the province's natural heritage. Maintaining its present high degree of ecological integrity and intactness should be 'Parks and Protected Areas' management/planning priority.

Forest fires have been common within the Park and have profoundly affected the nature and distribution of its 'upland' habitat types; therefore, to forego fire suppression in the WPP (Anon., 2002, p. 24) is an ecologically sound practice. However, as noted by Wallis and Wershler (1984, pp. 19-20): "Since the turn of the last (*19th*) century, the incidence of forest fires in the Kazan Upland has increased dramatically, coinciding with increased human activity in the region". The writer would thereby argue, that through intelligent planning (absence of facilities/infrastructure) and consideration of localised fire suppression, Parks and Protected Areas should strive to prevent a human-caused fire from destroying the old-growth forests situated 'between' DBL and Colin Lake.

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.

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Figure 2: Aerial view (looking SE) of central portion of Woodman Creek channel and its adjoining wetlands. (PHOTO: W. Nordstrom).

Figure 3: View west across 'Plover Pond', NE of Colin Lake, June 10th, 2002. (PHOTO: Richard Thomas).

Figure 4: Part of a flock of over 100 'peeps' foraging upon a disintegrating ice sheet, S arm of Colin Lake, June 9th, 2002. (PHOTO: Wayne Nordstrom).

Figure 5: Three of a flock of 15 adult Sabine's Gulls on the N arm of Colin Lake, June 9th, 2002. (PHOTO: Richard Thomas).

Figure 6: Common Tern chick at the Tern Island Colony, S arm of Colin Lake, July 9th, 2002. (PHOTO: Wayne Nordstrom).

Figure 7: Fairly fresh, presumed Black-backed Woodpecker workings, on a Black Spruce snag just NW of our DBL campsite, June 6th, 2002. (PHOTO: Drajs Vujnovic).

Figure 8: Relatively fresh Pileated Woodpecker excavations in a White Spruce snag, in the old-growth stand SE of our DBL campsite. (PHOTO: Drajs Vujnovic).

Figure 9: View (taken ~1 km N of its mouth) upstream along Big Bear Creek. Channel-side vegetation here is dominated by Black Spruce and willows. (PHOTO: Richard Thomas).