
NWT/NUNAVUT BIRD CHECKLIST SURVEY

NEWSLETTER

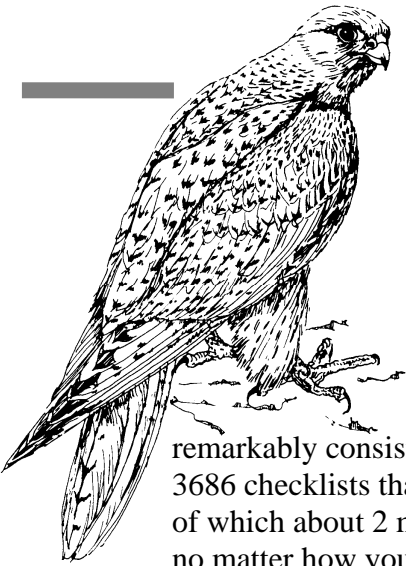
APRIL 2000

A program coordinated by the Canadian Wildlife Service since 1995

SUBTLE NAME CHANGE, SAME GREAT SURVEY

The official creation of Nunavut last April prompted us to change our name, which had suddenly left out over half of the area where we gather information. The new name is a bit of a mouthful, but it is the best option to properly describe the survey.

We had another successful year. We received 297 checklists for 1999, remarkably consistent with the returns we've had in the past three years. Our database now contains 3686 checklists that have about 35,000 observation records. Participants have recorded 2.6 million birds, of which about 2 million are Thick-billed Murres. Its an extremely impressive database of observations, no matter how you do the math.



ITS ALL ABOUT PEOPLE (AND BIRDS)

The Checklist Survey owes its success to volunteers and partner organizations; we get no new data if no one fills out the checklists. Below is the list of those who sent in checklist cards in 1999 (including data collected in other years). Our sincere thanks! We only listed the contact person, but we also thank the rest of the people who helped collect the data as secondary observers. Our apologies for any misspellings.

<i>Karel Allard</i>	<i>Patricia Baldwin</i>	<i>Jamie Bastedo</i>	<i>Mike Beauregard</i>
<i>Mila Beauregard</i>	<i>Gilbert Billard</i>	<i>Christian Bucher</i>	<i>Carl Burgess</i>
<i>Eric Chernoff</i>	<i>Chirs Doupe</i>	<i>Anthony Gaston</i>	<i>David Geale</i>
<i>Grant Gilchrist</i>	<i>Linda Graf</i>	<i>Ed Jones</i>	<i>Amanda Joynt</i>
<i>Andrew Lawrence</i>	<i>Trevor Lucas</i>	<i>Craig Machtans</i>	<i>Peter Middleton</i>
<i>Michael Norton</i>	<i>Joachim Obst</i>	<i>Damian Panayi</i>	<i>David Pelly</i>
<i>Susan Polischuk</i>	<i>James Richards</i>	<i>Richard Staniforth</i>	<i>Paul Stubbing</i>
<i>Douglas Tate</i>	<i>Eric Tull</i>	<i>Leslie Wakelyn</i>	<i>Charles Whitelaw</i>
<i>Dave Wilderspin</i>	<i>Kerry Woo</i>	<i>Gerry Wright</i>	<i>Brian Zawadzski</i>

HISTORY REVISITED

The Survey received funding in 1999 to continue compiling data collected during previous ornithological studies and add it to the database. This year we are completing data entry for the Slave Geological Province and adding data from other areas of the mainland, such as near the Anderson and Horton Rivers. Next, in response to renewed interest in petroleum exploration in the Beaufort Delta, we will shift our attention to historical bird records from that region. We have already compiled >200 Checklists from this work and expect several hundred more.



FOCUS NAHANNI NATIONAL PARK RESERVE - THE CHECKLIST SURVEY IN ACTION

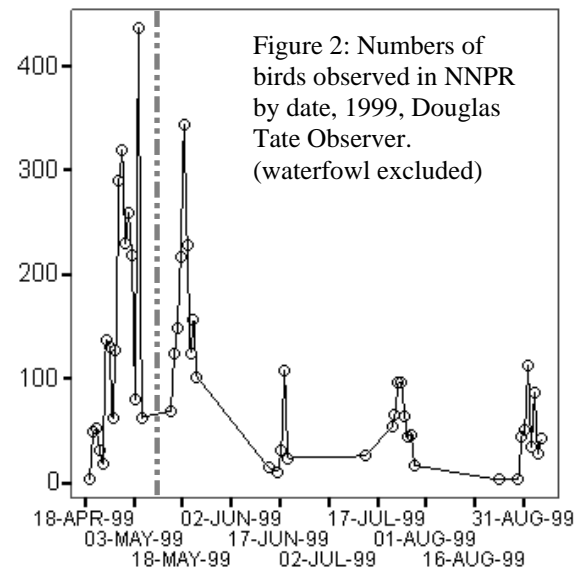
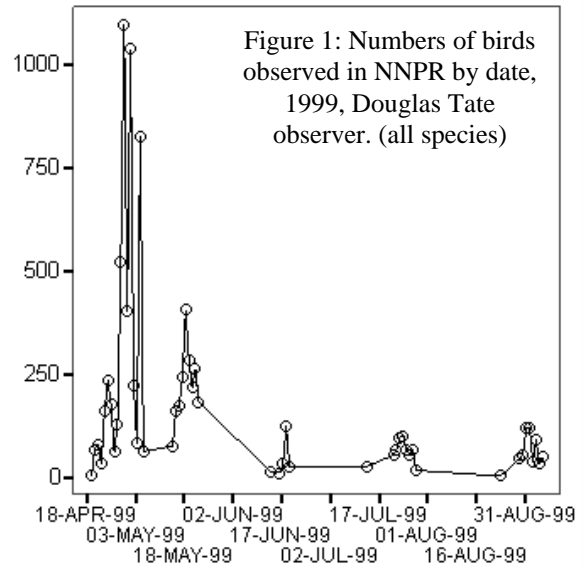
Nahanni National Park Reserve (NNPR) has been a participant in the Checklist Survey since the program's inception. Like other National Parks in the north, NNPR adopted the survey methodology as a way to meet the Park's needs to monitor bird populations and to participate in a widespread monitoring scheme. Each year park staff spend considerable periods of time in the park and they complete checklist forms during that time.

This year we used some of the Checklists to provide another example of what Checklist Survey data can tell us about northern birds. In the case of NNPR, there is a substantial amount of high quality data to analyze. The Park surveys are usually completed by one person (with or without assistance), and are conducted on consecutive days which provides a more detailed record than would be obtained from an area where only one or a few checklists were returned for a year.

We took NNPR Checklists from 1999 and analyzed the timing of spring migration through the park. Figure 1 shows a prominent peak in migration at the end of April/early May. This peak marks the main pulse of waterfowl moving through the park (mostly Canada Geese and Greater-White Fronted Geese). The graph also shows a second peak around mid-May that is more evident in Figure 2.

Figure 2 was made by excluding waterfowl from the counts, revealing the migration timing of other species. There are still two peaks evident, though now similar in magnitude. The first peak, left of the gray dashed line, represents a pulse of early migrants. Species in this group included Dark-eyed Junco, Bohemian Waxwing, Sandhill Crane, American Robin, Yellow-rumped Warbler, Rusty Blackbird, American Pipit, American Tree Sparrow, Ruby-crowned Kinglet and Bald Eagle.

The pulse to the right of the dashed line in Figure 2 is later migrants. They include most of the gulls, Orange-crowned Warbler, Blackpoll Warbler, Yellow-bellied Sapsucker, Say's Phoebe, Swainson's Thrush, Wilson's Warbler, Lincoln's Sparrow and Tree Swallow.

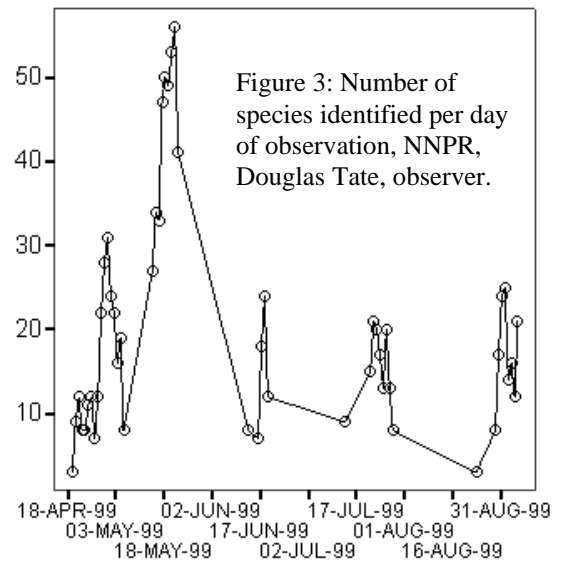


The number of species identified during the spring is another interesting aspect of the migration ritual. Figure 3, on the top of the next page, tells an interesting story. The first 9 days of spring observation usually tallied 12 or fewer species. Over the next three days, the number of species increased to over 30, and then tapered off. This minor peak coincided with the waterfowl migration and the arrival of other early migrants described in Figure 2. The next period of observation encompassed the major richness peak during late May. There were no observations from May 7-14, and then checklists were started again on May 15th. In the next few days, the number of species went from about 30 to nearly 60. The lack of observations from May 24 to June 13 does not allow us



to determine when the peak actually tapers off (the last observation day may be a spurious drop). However, in subsequent observation periods (breeding and post-breeding), the number of species observed appears to average ~20 per day.

In summary, even one year of consistent observations can provide interesting information on aspects of bird biology, in this case migration. We did not make this analysis completely rigorous by adjusting each day's totals (species or numbers) for length of observation, weather conditions or other variables that would further refine our conclusions. However, the Checklist database contains all these variables, making more detailed analyses possible.



STILT SANDPIPER BREEDING DISTRIBUTION

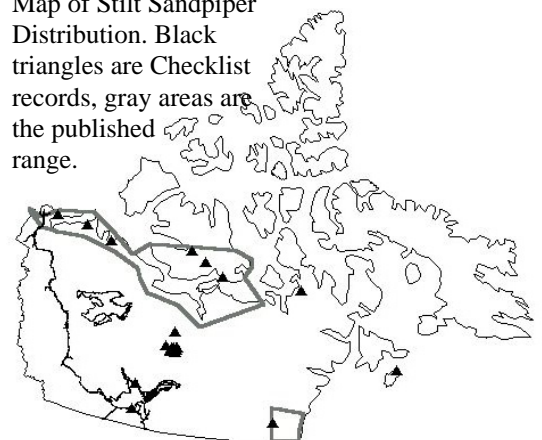
Last year's newsletter showcased distributions of 4 species based on checklist returns. This year we wanted to make a more detailed examination of a single species. We selected the Stilt Sandpiper, and queried the database for breeding season (June 1st to July 10th) records. We then sketched in the distribution for the species as published in the *Birds of Canada* (2nd edition) by Earl Godfrey.

The result is presented on the map below. The published breeding range for the species extends along the mainland arctic coast west of the Queen Maud Gulf area through to Alaska and up onto the southern portion of Victoria Island. The species also breeds along the western shores of Hudson Bay north to near Rankin Inlet.

Several of the records in our database provide confirmed breeding evidence well east and south of the areas demarcated in the *Birds of Canada*. The record east of the range along the arctic coast is in the Rasmussen Lowlands, where nests and young were found. The records clustered north of Great Slave Lake are from the site of the BHP Ekati mine. Fledged young and nests with eggs were found on several occasions. The record from Hudson Bay was on Coats Island, but the species was observed without any indication of breeding or suitable breeding habitat. The two records on either side of Great Slave Lake are likely migrating individuals in spite of the date limitations we placed on the data.

Based on our data, it is reasonable to assume that the breeding distribution of the Stilt Sandpiper extends further east and south than was previously thought. How far in each direction is the question.... is the range actually continuous with the Hudson Bay coastal records? We don't have any records between the areas to make such

Map of Stilt Sandpiper Distribution. Black triangles are Checklist records, gray areas are the published range.



.....continued on the next page



..... STILT SANDPIPER (FROM PAGE 3)

inferences. The area without records includes the Thelon River Valley, which has published bird lists. A cursory review of published lists from that region (such as two articles by Christopher Norment *et al.* in the Canadian Field Naturalist) reveals no records for the Stilt Sandpiper. Local naturalists are not aware of any records in the area either, so for now there is no evidence to suggest the two parts of the range are actually continuous.

It is critical to make sure that records are reliable whenever statements are made about range extensions. In the case of the Stilt Sandpiper, the breeding records beyond the typical range are from reliable observers, are well documented and/or have been substantiated by similar observations nearby.

One great value of the Checklist data is for documenting observations beyond published limits, helping us refine our understanding of range boundaries, expansions or contractions. Therefore, if you observe any bird outside of the published range in your field guide, please make sure your observation is well documented in the Comments section of your Checklist. We are accumulating quite a few "out of range" records. Unfortunately, many of them cannot be considered a reliable record because they do not have adequate supporting documentation.



REVISED CHECKLIST FORMS

We revised our survey forms again, to correct a number of small errors. Spelling mistakes have been fixed (we never seem to get them all) and a number of species have been added. Broad-winged Hawk and Canada Warbler were two of the species added; they are being seen regularly in the extreme southwest NWT. The newest forms accompany this newsletter, and will also be available for download off of our web page before the birding season starts.

THE YEAR AHEAD

The upcoming milestones for the Checklist Survey for the next year include:

- Completing a preliminary analysis of the database to determine strengths and weaknesses of the data and to determine what needs to be changed. Colleagues in Ottawa/Hull will be completing this work.
- Completing the current phase of historical data collection and entry.
- Updating the web page with the new name and some new material
- Investigating opportunities to make our master database function better to improve. We need to improve our ability to respond to information requests and keep contact information organized and current.



QUESTIONS? SUGGESTIONS? PLEASE CONTACT US!

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