Alaska Department of Fish and Game
Division of Wildlife Conservation

Endangered Species
Research Final Report

Abundance, Timing, and Demography of Neotropical Migratory Birds During Migration; and Preliminary Study of Olive-sided Flycatchers in Alaska

by

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FINAL REPORT (RESEARCH)

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Project Title: Monitoring Neotropical Migratory Birds in Alaska

Study Title: Abundance, timing and demography of neotropical migratory birds during migration; and preliminary study of olive-sided flycatchers in Alaska

Period Covered: 1 July 1992-30 June 1993

SUMMARY

In June 1992, funding became available to support studies of neotropical migratory birds, including ongoing migration studies and a new reconnaissance study of olive-sided flycatchers, a species recently accorded Category II status under the federal Endangered Species Act.

The migration monitoring study at Creamer's Field Migratory Waterfowl Refuge in Fairbanks is a cooperative long-term effort of the Alaska Bird Observatory and the Alaska Department of Fish and Game. In spring 1993, beginning the second year of the project, 425 individual birds of 27 species were captured and banded in 43 days and 10,242 net hours of effort. Eighty-six percent (365) of the individuals captured were neotropical migrant birds.

Olive-sided flycatchers were searched for along six Breeding Bird Survey routes in the Tanana and Copper River drainages; and in a variety of sites in Denali National Park. Nesting territories were most frequently located in coniferous forest habitats in association with water courses. Singing diminished in late June, and aural detections were uncommon from then until mid- to late July when call notes were heard.

Key Words: Alaska Bird Observatory, Creamer's Field Migratory Waterfowl Refuge, migration monitoring, mist netting, neotropical migrant landbirds, olive-sided flycatcher.

CONTENTS

BACKGROUND

Long and short-term declines of migrant landbirds have been well documented in the eastern United States and Canada (Finch 1991). The species undergoing the largest declines are long-distance migrant species that winter in neotropical Central and South America (Finch 1991). Recent analyses of population trends of migrant landbirds suggest that species breeding in North American regions other than the eastern U.S. and Canada are also experiencing declines. The species undergoing population declines include flycatchers, thrushes, wood warblers, and others (Sauer and Droege 1992). Alaska is an important portion of the breeding range of several species of boreal forest landbirds that are declining in other portions of their geographic range in North America. One species in the Alaska Region, the olive-sided flycatcher (*Contopus borealis*), was recently listed as a Category II species under the federal Endangered Species Act for consideration for threatened status.

In conjunction with the international *Partners in Flight* Neotropical Migratory Bird Conservation Program, an Alaska *Partners in Flight* working group has recently been

organized. This Alaskan group is composed of federal and state agencies, conservation organizations, independent bird research groups, and concerned individuals. Alaska *Partners in Flight* provides coordination and direction for local projects so that a comprehensive statewide monitoring and research program can be formed from the individual efforts of the many partners.

Monitoring of neotropical migrants in Alaska will be accomplished through several methods. The Breeding Bird Survey (BBS) is the primary monitoring technique in most of North America, and this road-based method will be used as much as possible, but is of obviously limited use in the many roadless areas of Alaska. Off-road point counts will supplement the BBS where they are logistically feasible. Mist netting studies of breeding birds (MAPS: Monitoring Avian Productivity and Survival) are identified as a more intensive method for use at selected sites. Migration studies will be used at a few selected locations to monitor abundance and productivity from a larger geographic base.

The Alaska Bird Observatory (ABO), in cooperation with the Alaska Department of Fish and Game, established a monitoring study at Creamer's Field Migratory Waterfowl Refuge in Fairbanks, Alaska. The ABO has been conducting studies of migrant landbirds in central Alaska using systematic mist netting and banding since 1989. In 1992, ABO sampled 3,300 individual birds of 39 species at Creamer's Refuge. Two-thirds of the species and 75% of the individual birds captured were neotropical migrants. This project at Creamer's Refuge is the only spring and fall migration study in the state, and the only monitoring project that encompasses a broad cross-section of the boreal forest, the dominant physiographic region in Alaska.

OBJECTIVES

The study objectives for neotropical migratory birds in 1992 were to:

1. Monitor the abundance, timing and demography of neotropical migrants using systematic mist netting and banding.

2. Initiate preliminary field studies of olive-sided flycatchers to gather basic natural history information on the species in Alaska.

STUDY AREA AND METHODS

Migration Monitoring

The migration study site includes approximately 15 ha of boreal forest, shrub and wetland habitats on Creamer's Field Migratory Waterfowl Refuge in Fairbanks,

Alaska. An established array of 20-35 mist nets were used to capture birds. All birds were banded with standard U.S. Fish and Wildlife Service aluminum leg bands. A series of data were collected from each bird, including age, sex, wing chord and tail length, weight, fat status, breeding condition, and molt.

Olive-sided Flycatchers

Olive-sided flycatcher territories were searched for on BBS routes along the Denali, Richardson, Steese, and Tok Cut-off Highways; and at several sites in Denali National Park and Preserve. Active sites were located by listening for singing males. Habitat characteristics, breeding phenology, and other information were collected at locations where olive-sided flycatchers were found or had been reported in previous years surveys.

RESULTS

Only preliminary results are presented at this time. More complete results will be presented in future reports.

Migration Monitoring

Mist nets were operated on 43 days during spring migration between 25 April and 12 June 1993 for 10,242 net hours. Four hundred twenty-five individual birds were captured and banded, of which 365 (or 86%) were neotropical migrant species (Table 1). The most commonly captured neotropical migrants were the yellow-rumped warbler, Wilson's warbler, orange-crowned warbler, Swainson's thrush, and yellow warbler.

Olive-sided Flycatcher

Twenty nesting territories of olive-sided flycatchers were identified by locating singing males. Preliminary habitat analysis indicates that territories are predominantly situated in coniferous forests of white or black spruce and most were found in canyons or adjacent to creeks or streams. Singing by males continued through June, but detectability declined markedly in early July. By mid- to late July, olive-sided flycatchers were detectable by call notes, apparently uttered between adults and young. One attempt at using playback of tape recorded songs suggested that capture in mist nets may be possible by luring in territorial males.

CONCLUSIONS AND RECOMMENDATIONS

Migration monitoring of neotropical migrant birds by mist netting continued for its second year at Creamer's Refuge in 1993. Like any long-term monitoring program, only through consistent, continued effort will sufficient data be amassed to adequately reflect population trends. Therefore, it is improper to attempt any between-year comparisons at this early stage in the study.

Initial efforts at locating and gathering information on olive-sided flycatchers indicate that it will be possible to gather adequate information for statistical analyses and that field methods applied to similar species should work with olive-sideds. With a longer lead time to prepare for the upcoming field season, a better planned and designed study will take form.

ACKNOWLEDGMENTS

The Alaska Bird Observatory was responsible for the bulk of the effort towards completion of this field season's work. Tom Pogson, Director of the ABO, was ably assisted by his staff, Todd Eskelin and Jeff Bouton. Thanks also to the many wonderful volunteers who make the ABO and Creamer's program possible.

LITERATURE CITED

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Table 1. Birds capture in mist nets and banded between 25 April and 12 June 1993 at Creamer's Field Migratory Waterfowl Refuge.

Species	Number Banded
Sharp-shinned Hawk*	3
Solitary Sandpiper*	3
Northern Flicker	1
Hammond's Flycatcher*	13
Alder Flycatcher*	11
Black-capped Chickadee	1
Boerial Chickadee	1
Ruby-crowned Kinglet	1
Swainson's Thrush*	43
Gray-cheeked Thrush*	12
American Robin	36
Varied Thrush	1
Orange-crowned Warbler*	50
Yellow Warbler*	27
Yellow-rumped Warbler*	95
Blackpoll Warbler*	8
Northern Waterthrush*	14
Wilson's Warbler*	52
American Tree Sparrow	1
Lincoln's Sparrow*	5
Fox Sparrow*	4
Savannah Sparrow*	15
White-crowned Sparrow*	10
Golden-crowned Sparrow	1
Rusty Blackbird	3
Common Redpoll	12
White-winged Crossbill	2
Total birds banded	425
Number of species	27
Number of days banding	43
Number of net hours	10,242

* = neotropical migrant species