

# Boreal Partners in Flight 2010 Project Summaries



## About this Report

This report summarizes activities related to monitoring, research, and education conducted on land birds in each of the 5 Bird Conservation Regions (BCRs) in Alaska (Figure 1). Within each BCR, projects are organized by category of work, including monitoring, research, and education. This report compiles voluntarily submitted work, and does not necessarily represent a complete annotation of all land bird work conducted in 2010. Persons wishing to cite results from these summaries are asked to contact the identified lead author (or contact person) for permission, and most current results. The meeting notes from the 2010 annual BPIF and Alaska Raptor Group meeting are included as an appendix.

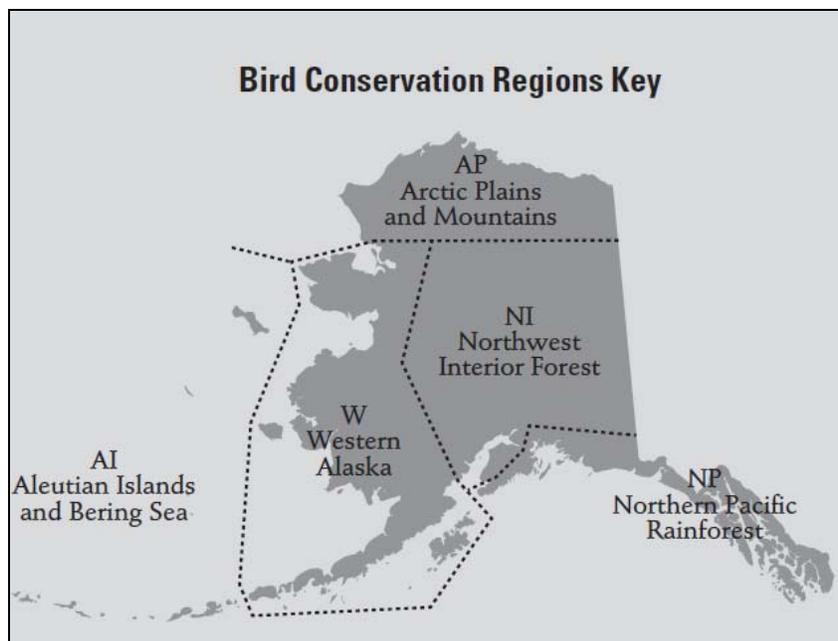


Figure 1. Bird Conservation Regions (BCRs) in Alaska.

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## **BIRD CONSERVATION REGION 1 – ALEUTIAN ISLANDS & BERING SEA**

Compiled by Susan Savage from reports by:

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<sup>1</sup>Alaska Maritime NWR, 95 Sterling Highway, St. 1, Homer, AK 99603

### *Monitoring:*

- Beach passerine transects were conducted and annotated bird lists were compiled at Aiktak, Buldir, St. George, and St. Paul islands by Alaska Maritime Refuge staff.
- Nearshore boat surveys were conducted at several Aleutian Islands. Raptors were included in counts and location of bald eagle nests noted (landbirds were noted as present but not focus of boat survey work; Alaska Maritime staff).
- A Christmas Bird Count was completed at Unalaska/Dutch Harbor.

### *Research:*

- Habitat surveys directed primarily at Aleutian Cackling Goose resulted in a vegetation map and report (authors G.V. Frost et al.) for the Near Islands (BCR 1; USAF, work conducted by ABR, Inc.).

### *Education / Outreach:*

- Park Ranger aboard approximately 6 trips of the Tustumena ( $\geq 2$  formal presentations for passengers; Alaska Maritime staff).

## **BIRD CONSERVATION REGION 2 – WESTERN ALASKA**

Compiled by Susan Savage, from reports by:

Susan Savage<sup>1</sup>, Peter Bente<sup>2</sup>, Robin Corcoran<sup>3</sup>, Matthew Moran<sup>4</sup>, Christine Peterson<sup>5</sup>, Kristine Sowl<sup>6</sup>, Michael Swaim<sup>7</sup>

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<sup>7</sup>USFWS - Togiak NWR, PO Box 270, Dillingham, AK 99576

### *Monitoring:*

- Nine Breeding Bird Survey Routes were completed: Dillingham (Togiak staff), King Salmon (Alaska Peninsula staff), 2 on Kodiak (C. Trussell of Kodiak College and R. MacIntosh with Kodiak NWR support), and five on the Nome road system (ADF&G staff).
- Two Alaska Landbird Monitoring Survey were completed: Alaska Peninsula/Becharof (2 attempted, 1 completed – Alaska Peninsula NWR sponsored ABO staff), Kodiak (1 – Kodiak NWR sponsored Alaska Bird Observatory staff).
- Beach passerine transects were conducted and annotated bird lists were compiled at Chowiet Island.
- Nearshore boat surveys were conducted at several islands along the south side of the Alaska Peninsula.
- Monitoring Avian Productivity & Survivorship (MAPS) site was initiated at Refuge headquarters on the Buskin River State Recreation Area. The site serves both to provide information on landbird productivity on Kodiak and as an outreach tool in the community.
- Six Christmas Bird Counts were completed: Bethel (sponsored by USFWS staff), Cold Bay (sponsored by Izembek staff), Dillingham (sponsored by Togiak staff), King Salmon (sponsored by Alaska Peninsula/Becharof NWR), 2 at Kodiak (supported by Kodiak NWR including use of the research boat Ursa Major II).
- Two North American Migration Counts (May 2010): Dillingham and King Salmon (sponsored by Togiak and Alaska Peninsula/Becharof staff, respectively)
- One Fall North American Migration Count (September 2010): Bethel (sponsored by Yukon Delta NWR).

- Habitat surveys directed primarily at Aleutian Cackling Goose resulted in a vegetation map and report (authors G.V. Frost et al.) for the Near Islands (BCR 1; USAF, work conducted by ABR, Inc.).
- Bald Eagle Monitoring: Alaska Peninsula (Sponsored by Alaska Peninsula/Becharof NWR and Migratory Bird Management with support from Kodiak NWR staff and Izembek NWR).
- Cliff-nesting Raptor Inventory on the Southern Seward Peninsula (ADF&G, Bente & Sheffield).
- Raptor First Aid and Transport / collection of carcasses (Alaska Peninsula/Becharof, Kodiak, and Togiak NWRs). Kodiak had a record 33 mortalities and 19 injured/sick birds sent to Bird TLC this year.
- Enter historic incidental bird observations: Alaska Peninsula/Becharof NWR seasonal staff entered the remainder of incidental avian observations from the Refuge and Migratory Bird Management projects on the Alaska Peninsula into a database maintained at the Refuge. The formatting of these for e-Bird submission was begun.

*Education / Outreach:*

- Alaska Migratory Bird Calendar Contest: Alaska Peninsula/Becharof NWR staff visited six schools in Bristol Bay and Lake and Peninsula Boroughs. Izembek NWR contacted five schools and conducted another outreach event for children in Cold Bay that couldn't otherwise participate. Togiak NWR staff visited local public schools to encourage participation. Yukon Delta NWR had more than 500 entries for Alaska Migratory Bird Contest.
- Great Backyard Bird Count was sponsored by the staff at Togiak NWR.
- In cooperation with the Refuge Friends group, the Yukon Delta NWR conducted 10 community bird walks in Bethel.
- Staff at Togiak NWR presented information on migratory birds at Dillingham Elementary and led an outdoor bird walk.
- Gyrfalcon project: In cooperation with Travis Booms of ADF&G and the University of Wisconsin at Stevens Point, the Yukon Delta NWR had a Subarctic Ecology Field class which centered around Gyrfalcons nesting in the Ingakslugwat Hills. Dr. Bob Rosenfield taught the class with Travis Booms. There were 10 students from Stevens Point for 10 days and 1 ANSEP and 1 ANSEP-bridge student for 5 days. The students were joined by a free-lance journalist, who is writing articles on the project for High Country News and National Wildlife Magazine.
- Weekly episodes of Bristol Bay Field Notes were completed and broadcast on the local radio station, KDLG (Togiak NWR).

## **MONITORING AVIAN PRODUCTIVITY AND SURVIVORSHIP (MAPS).**

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<sup>1</sup>1390 Buskin River Road. Kodiak, AK 99615-6851 (907) 487-2600.

In the summer of 2010, Refuge biologist Robin Corcoran and volunteers established a Monitoring Avian Productivity & Survivorship (MAPS) Program near Refuge Headquarters on the Buskin River State Recreation Area. MAPS is a nation-wide program established in 1989 to monitor landbird survivorship and productivity through mist netting and banding. The Refuge initiated the program to complement the two road-side Breeding Bird Surveys conducted annually on Kodiak and to connect the public with conservation issues through bird banding.

We banded 259 birds representing 16 species. Some birds were captured more than once during the season which brought the total number of birds handled to 351. The most common species captured were Wilson's warblers, hermit thrushes, and fox sparrows.

Our cooperators from the community included Cindy Trussell, biology professor at Kodiak College, and Rich MacIntosh, a retired biologist with NOAA Fisheries, who was instrumental in establishing the Breeding Bird Survey Routes on Kodiak. Most mornings we had three to five volunteers helping us with the banding process including the Kodiak Refuge Youth Conservation Corps participants.

### *Issues:*

- Kodiak Airport Draft Environmental Impact Statement is expected to be released for both public and agency review in fall/winter 2010. Kodiak Airport has two runways with insufficient Runway Safety Areas (RSA). Alternatives include runway expansion on the north side of the airport that would impact the mouth of the Buskin River, important salmon, wintering waterfowl, and landbird habitat.
- Internet connectivity has driven several projects in Western Alaska. USFWS is writing an EA for development by GCI of transmission towers at Togiak NWR and in other areas of western Alaska. Another project to route a submarine cable around the Alaska Peninsula is also in the works.
- Hard Rock Mining: The Platinum Mine recently changed hands and an Environmental Assessment is being written regarding impacts on Togiak NWR. The mine site includes subsurface properties of the Refuge between Goodnews and Chaguan Bay. Activity continues with the Pebble Mine (potentially the largest gold & copper mine in North America; straddling the upper Kvichak and Nushagak drainages) which is still in the pre-feasibility and pre-permitting stages.
- The Omnibus Public Land Management Act of 2009 was signed into law on March 30, 2009. As directed in the Act, an EIS is currently being drafted to evaluate the impacts of a proposed land exchange between USFWS and the State of Alaska and the King Cove Corporation for the purpose of constructing a single-lane gravel road between the communities of King Cove and Cold Bay, Alaska through the Izembek Wilderness portion of Izembek National Wildlife Refuge. The EIS for this project is expected to be released for public review in summer 2011.

- **Renewable Energy Development:** Multiple entities are considering the development of alternative energy to save money, reduce the carbon footprint, and/or supply energy in remote areas where other options are limited. The following projects have come to the attention of BCR 2 members. Naknek Electric Association is drilling a well for geothermal energy development along Pike Ridge. The envisioned development will include transmission lines to multiple villages in the Bristol Bay region. Environmental compliance for only the drill sight at this time is being completed. Alaska Peninsula and Izembek NWR completed environmental compliance in preparation for installation of several wind generators in the vicinity of refuge complex buildings. Izembek began installation in fall of 2010 and Alaska Peninsula/Becharof turbines are being installed in spring of 2011. As of spring 2010 the following villages are exploring the feasibility of, or in the process of installing, wind generators: Nome, Sand Point, St. George, King Cove, Nikolski, and False Pass. Several villages have already installed generators: Port Heiden and Perryville. The Donnelly mine is exploring the feasibility of generating power for their operation using wind. The Air Force is exploring placing wind generators at three remote radar sites: Cape Newenham, Cape Rozmanof, and Cape Lisburne (BCR 3).
- Climate change monies will be tied to federal and state “adaptation plans.”

## **PROJECT SUMMARIES – BCR 2**

### *Research*

#### **BIRD MOVEMENT STUDY FOR PROPOSED WIND FARM AT USAF CAPE NEWENHAM LONG RANGE RADAR SITE, SPRING-FALL 2010**

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This study was conducted at the USAF Cape Newenham LRRS to determine potential effects of a small wind farm on migrating and breeding birds using the area. The study was conducted during spring and fall migration periods and the peak summer breeding period of seabirds during 2010. The objectives of the study were to: use visual sampling to observe the movements of bird species near the proposed wind farm; measure movement rates, direction and location of movement, flight behavior, and flight altitudes of bird species flocks in relation to the proposed wind farm; survey areas around towers and other tall structures occurring on the LRRS property for evidence of current bird mortality; and evaluate the collision potential for bird species at the Cape Newenham LRRS during spring, summer, and fall.

#### **ARCHIVING HISTORIC BIRD CHECKLISTS FROM SOUTHWEST ALASKA’S NATIONAL PARKS INTO eBIRD AND AVIAN KNOWLEDGE NETWORK DATABASES.**

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As part of a National Park Service funded project, the Alaska National Heritage Program compiled historical incidental bird observations recorded in Southwest Alaska Network (SWAN) parks and entered them into a publically accessible archival database. These data were primarily comprised of bird checklists from field camps, ranger logs, and visitor observation cards that only existed as hard copies in files so they were at risk of being lost if not properly archived. *eBird* and the Avian Knowledge Network (AKN) are two national databases used by professional and amateur birders for archiving bird data from across the western hemisphere. The goals of this project were to compile historical bird records from 5 park units in southwest Alaska and enter these records into an archival database (*Alaska eBird* or AKN) where they could be publicly accessible. A total of 8,704 observations were archived for 183 avian species, including 32 species of conservation concern, from 82 unique data sources. Observations spanned the time period from 1919 to 2004. Four new bird species were added to park checklists and 23 had their species status upgraded from probably present to present. Additionally, a user's guide was created describing how to enter bird observations into the *eBird* database. Currently, the Alaska Natural Heritage Program is working with SWAN parks to compile and format their land bird and marine bird survey data for entry into AKN.

**BIRD CONSERVATION REGION 3 – ARCTIC PLAINS AND MOUNTAINS**

(No reports submitted)

# **BIRD CONSERVATION REGION 4 – NORTHWEST INTERIOR FOREST**

## **PROJECT SUMMARIES – BCR 4**

### **LANDBIRD UPDATE FROM TETLIN NWR, ALASKA 2010**

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#### **First Arrivals/Spring Migration Phenology**

Tetlin Refuge has recorded spring (first) arrival dates for migrants passing through the Upper Tanana Valley since 1982. These phenological data are generally derived from incidental observations from refuge staff and reports from the local community. This year we were very fortunate to receive a notebook of observations made by a native elder in the village of Tanacross. The notebook contained detailed entries on the seasonal movements and behaviors of a number of birds that occur in the village. We copied and reviewed his notes and in some cases revised our first arrival records.

While recording first arrival data is relatively simple in approach, it has a number of drawbacks that make it difficult to quantify relationships between the timing of migration and climate or other environmental variables. As an alternative, we designed a spring phenology route in 1999 to systematically record the status and abundance of birds during migration. We drive a route with predetermined stops several times a week during April and May. Effort is estimated by recording total survey time and mileage similar to the Christmas Bird Count (CBC). Our phenology route was run 24 times between 31 March and 27 May and observations were recorded for 85 species. Our effort was expanded this year to include some plants, frogs, and invertebrates as part of a cooperative project with the National Phenology Network. The methodology for this effort incorporates fixed plots and we set up these plots to overlap with our phenology route.

#### **North American Migration Count (NAMC)**

The NAMC tallies all birds observed by species within a predefined area on the second Saturday in May. In this way it is similar to the CBC; however, the NAMC is conducted on the same day throughout the continent to provide a "snapshot" of the progress of spring migration. We conduct the survey to bolster our spring phenology efforts and provide additional outreach opportunities for International Migratory Bird Day. We conducted our 19<sup>th</sup> annual count on 8 May with four parties tallying 11,710 individuals (of which 10,825 were Sandhill Cranes) and 58 species within our count area (GMU 12). Highlights included a pair of Gadwall and a Gyrfalcon.

#### **Breeding Bird Survey (BBS)**

Tetlin Refuge has participated in the BBS program for 21 years and is presently covering four routes in the Upper Tanana Valley. The same observer has been running these routes since 1999.

A few new species were encountered during this year's survey including Western Wood Pewee (Slana), and Fox Sparrow (Northway). High counts include: 3 Northern Hawk Owl (Fairplay), 94 Swainson's Thrush (Tower Bluffs), 37 Gray-Checked Thrush (Fairplay), 29 Varied Thrush (Slana), and 34 Orange-Crowned Warbler (Fairplay).

### **ALMS/Off-Road Point Counts**

Off-Road Point Counts (ORPC) routes were established on the Refuge in 1994 as part of a regional pilot project to determine the feasibility of using ORPC to monitor trends in landbirds on large roadless areas. Seven routes were randomly established within the major habitat types on the Refuge. After the refinement of the ALMS program we adjusted our protocols to mesh with the new ALMS protocols, and continued to conduct our counts and contribute our data to the statewide effort each year. This year we reduced the number of points on the Northway Road transect in half (from 28 to 14), eliminating every other point, because of two primary factors. One reason was because of construction which re-routed the road around the airport, thereby making some points inaccessible. The second was because the points have always been too close together; we have always been able to hear and see some the same birds from multiple points because the habitat is so open. We successfully completed our 17<sup>th</sup> year of point counts in June.

### **Raptors**

Tetlin Refuge has collected raptor nesting territory occupancy and productivity data in GMU 12 in the Upper Tanana Valley annually since 1991. Observations of Bald Eagle (*Haliaeetus leucocephalus*), Osprey (*Pandion haliaetus*) and American Peregrine Falcon (*Falco peregrinus anatum*) nests accounted for more than 91% of 458 observations made to 191 nests of 9 raptor species in 141 nesting territories in 2010. Aerial surveys for Bald Eagles and Osprey were completed between 20-21 May for occupancy and 20-26 July for productivity. River and ground based surveys on foot for Peregrine Falcons were conducted between 19 April-15 June for occupancy and 3-29 July for productivity. Most raptor nests were located along rivers and wetlands within the habitats that sustain their prey.

In 2010, Bald Eagle occupancy and success were lower than expected ranges (61.9%;  $\bar{x} = 65.8\% \pm 3.2$ ; and 41.0%;  $\bar{x} = 50.8\% \pm 5.8$  respectively; 1991-2009 mean  $\pm$  95% C.I.) for 63 nesting territories surveyed ( $\bar{x} = 55.5$ ). Productivity equaled the long term mean (0.64 young per occupied nest;  $\bar{x} = 0.64 \pm 0.09$ ), while mean brood size was higher than expected (1.56 young per successful nest;  $\bar{x} = 1.26 \pm 0.07$ ).

Osprey occupancy and success were higher than expected in 2010 (79.4%;  $\bar{x} = 75.0\% \pm 2.6$  and 70.4%;  $\bar{x} = 58.9\% \pm 5.1$  respectively; 1986-2009 means  $\pm$  95% C.I.) for 34 nesting territories surveyed ( $\bar{x} = 34.9$ ). However, productivity and mean brood size were lower than expected ranges (1.00;  $\bar{x} = 1.12 \pm 0.12$  and 1.42;  $\bar{x} = 1.90 \pm 0.12$  respectively).

Bald Eagle and Osprey populations in GMU 12 appear to be relatively stable and no management actions beyond continued annual monitoring are planned.

In 2010, Peregrine Falcon occupancy (90.0%;  $\bar{x} = 88.3\% \pm 5.3$ ; 1991-2009 mean  $\pm$  95% C.I.) was average for 20 nesting territories surveyed ( $\bar{x} = 10.3$ ). Success (53.3%;  $\bar{x} = 86.4\% \pm 5.9$ ), productivity (1.20;  $\bar{x} = 2.21 \pm 0.30$ ) and mean brood size (2.25;  $\bar{x} = 2.56 \pm 0.24$ ) were all much lower than expected. Both success and productivity were the second lowest recorded since 1991. Mean dates were estimated for Peregrine Falcons using nestling ages (n = 18) for egg laying (H-33 days =  $\bar{x} = 17$  May 10, range 13-24 May 10), hatching (H= $\bar{x} = 19$  June 10, range 15-26 June 10) and fledging (H+40 days =  $\bar{x} = 29$  July 10, range 25 July-5 Aug 10), and were less than one day later than the 2003-10 means. The number of known falcon territories has increased from three to 24 since 1991, with 2 new territories added in 2010 as this nesting population continues to expand. The refuge will continue annual falcon monitoring with no further management actions.

### **Statewide Quincennial Trumpeter Swan Survey**

Staff from Tetlin NWR and Migratory Bird Management (MBM) surveyed 16 maps of the Upper Tanana Valley around the Refuge in August 2010. This was the first year that MBM did not conduct a complete census, but only a subsample. However, we still finished a complete census of our usual area. Numbers of swans in pairs and single swans, 1156 and 121 respectively, were the highest ever. Numbers of broods and cygnets, 124 and 409 respectively, were down from 2005, but higher than any other previous year. Average brood size was 3.3, lower than the long-term average of 3.7. We had significant and lengthy flooding on the Refuge this summer from both above average precipitation and extended warm temperatures, which caused the Chisana and Nabesna rivers to overflow their banks for much of the summer. The low brood numbers were likely caused by the seemingly never-ending rain, causing the nests to be flooded out and/or chick mortality from hypothermia.

### **Fall Migration Banding Station**

The fall of 2010 marked the 18<sup>th</sup> year of operation for our fall migration banding station. Birds were banded from 30 July through 27 September to obtain data on species composition, fat deposition, age and sex composition, and seasonal patterns of abundance during fall migration in the Upper Tanana Valley. We banded 1616 birds of 28 species this year, and recaptured 138 birds of 17 species. These numbers are below our long-term average of 2209 birds/32 species (new captures) and 209 birds/17 species (recaptures), and our 4th lowest year. The low numbers were likely because of the large number of rainy days when we did not band, and large fires around Tanacross during the spring may have also been a factor in the unusual numbers that follow. Unusual species banded this year included one Chipping Sparrow and one Hairy Woodpecker. We caught record high numbers of Hermit Thrushes (70;  $\bar{x} = 26$ ); unusually low numbers of Slate-colored Juncos (385;  $\bar{x} = 593$ ), Ruby-crowned Kinglets (177;  $\bar{x} = 313$ ), and Yellow Warblers (10;  $\bar{x} = 70$ ); and record low numbers of American Tree Sparrows (15;  $\bar{x} = 44$ ). This was the first year that we did not catch any Black-capped Chickadees, although our average for them (12) is generally low, and it was the second year we did not catch any Yellow-shafted Flickers.

## **Christmas Bird Count (CBC)**

The 24th annual CBC was completed by refuge staff and local citizen scientists on 14 December. Near average temperatures and reasonable conditions provided a nice day and an ample number of participants. We counted average numbers of the “usual” species with the exception of boreal chickadees whose numbers were quite low relative to recent years. Highlights included a Bald Eagle (first ever for count day) and a Northern Hawk Owl (2<sup>nd</sup> ever). We also participated in the Statewide Wild Bird Deformity Survey and instructed participants and feeder watchers to look for abnormal bills on all the birds they observed. No deformities were observed on any birds.

## **LANDBIRD UPDATE FROM FORT WAINWRIGHT - DONNELLY TRAINING AREA (DTA)**

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## **Breeding Bird Survey (BBS)**

Donnelly Training Area (DTA) has participated in the BBS program since 2000. A total of 25 species, (461 individuals), were detected during the 2010 Donnelly Dome BBS. White-crowned Sparrow (19%), Dark-eyed Junco (13%), and Fox Sparrow (11%) were the most numerous species detected.

## **Alaska Landbird Monitoring Survey (ALMS)**

Two ALMS plots were established at DTA in 2006. Both have been surveyed every other year. Data from 2010 was unavailable by deadline.

## **Cavity Nesting Ducks**

In 2000, a duck nest box project was initiated on DTA. The purpose of the project was to encourage cavity nesting waterfowl to take residence on local lakes, and provide educational and aesthetic value to boaters and outdoor enthusiasts on military lands. The waterfowl species targeted by this project are Bufflehead and Common Goldeneye. Currently, there are 25 boxes on 8 lakes in DTA that are checked for signs of occupancy from the summer before in March or April. Seventeen boxes were utilized by waterfowl in 2009 as evidenced by eggs, eggshell fragments and down.

## **Ruffed Grouse Drumming Surveys**

A Ruffed Grouse drumming survey was initiated along Meadows Road on DTA in 2003. A second survey route was added at Gerstle River Training Area (GRTA) in 2009. Methods are consistent with state and national survey techniques. Each route was run the recommended four times in 2010. Grouse were heard at seven points along the DTA route and at two points along the GRTA route. Data was compiled and incorporated into ADF&G’s Upland Game Report submitted annually by W. Taylor. All bird species heard during the survey are recorded.

### **Sharp-tailed Grouse Lek Surveys**

Surveys for Sharp-tailed Grouse congregating at lek sites have been conducted at DTA since 2001. Data is contributed to ADF&G's small game survey database and disseminated in an Upland Game Report submitted annually by W. Taylor. In 2010, 2 to 22 grouse were seen at six different leks. Four of the leks were surveyed in previous years. Two were discovered this year during a Sharp-tailed grouse habitat use study (see below).

### **Willow Ptarmigan Surveys**

A Willow Ptarmigan survey route was set up on DTA in 2009. Methods are consistent with state survey methods. This route was completed four times. Willow Ptarmigan were recorded at three different points during the survey. Data was compiled and incorporated into the Willow Ptarmigan population status in Interior Alaska as part of ADF&G's Upland Game Report submitted annually by W. Taylor.

### **Osprey Nest Management**

Prior to 2009, it was unknown if Ospreys nested on DTA. However, Doyon Utilities reported a nest on a power pole between OP and Meadows Roads that summer. The nest was monitored until two chicks fledged. The adult pair also began construction of an alternate nest near Bolio Lake. The pair began building the alternate nest shortly after a new power line was constructed to the Lake. A nesting platform was erected near there by Doyon during the following winter. However, when the pair returned in the spring of 2010 they nested at the original site. The nest was monitored throughout the summer until the adults and two juveniles departed. A nesting platform was then erected adjacent to the power pole with the active nest. Anti-nesting devices were also attached to nearby active power poles to discourage nesting. Nest observations will continue in 2011.

### **Sandhill Crane Migration Monitoring**

Sandhill Cranes migrate through the Delta Junction area, including DTA, each spring and fall. Numbers have been estimated at 150,000 – 200,000. Breeding has not been documented in the area. Cranes often roost on gravel bars of the broad and braided glacial rivers in the area. A portion of the Delta River is an impact area used by the US Army and US Air Force. Monitoring efforts were begun in 2010 to determine numbers of Sandhill Cranes using the Delta River, location of roost sites, and timing of use to interpret the potential for conflict with military operations.

In 2010, sixteen surveys documented 2,600 cranes using the Delta River in September. Methodology will be refined in 2011 and spring surveys will be incorporated to get better estimates of crane use of the Delta River. Data will contribute to developing management guidelines for military operations in the area.

### **Upland Sandpiper Breeding Surveys**

Upland Sandpipers are a relatively common breeder on DTA and occupy a wide range of habitats from regenerating burns and subalpine low scrub to mowed fields. Opportunistic observations of breeding activity (displaying and/or broody adults) have been recorded since 2000. In 2010 a field crew was available to focus more intensively on Upland Sandpipers than in the past. They documented evidence of four breeding pairs in June

and three broody adults in July. The broody adults represented different birds than the four breeding pairs seen in June. Survey efforts will be increased during 2011.

### **An Avian Habitat Assessment for the Koole Lake Region, Donnelly Training Area West**

An assessment was conducted in summer 2010 to investigate avian habitats near Koole Lake in the northwest corner of DTA. The project was initiated to aid in making conservation recommendations in advance of the potential development of the Alaska Railroad (ARR) extension from Fairbanks to Delta Junction. The survey effort spanned three weeks in June. Point counts using distance estimation were employed. Two observers and two assistants visited 176 sample points. Habitat data using the Viereck classification (to level IV) were collected at all sample points. A total of 34 bird species were detected (1,401 individuals). Three species represented 61% of the total individuals including Dark-eyed Junco (28.2%,  $n=394$ ), Swainson's Thrush (18.1%,  $n=253$ ) and Yellow-rumped Warbler (15.1%,  $n=210$ ). Other species of interest included several Chipping Sparrows detected in riparian forest and scrub habitats along the Little Delta River, one observation of a Tennessee Warbler singing in the same area and habitat (new to DTA), several Rusty Blackbird pairs breeding at Koole Lake, and one detection of Blackpoll Warbler in hardwood forest. White spruce and white spruce/hardwood habitats on hillsides near Koole Lake contained higher densities of Townsend's Warbler and Varied Thrush than have been found elsewhere on DTA.

The majority of the study area was black spruce muskeg habitat. Black spruce habitats contained 63% of the count points. The proposed ARR route would impact predominantly black spruce habitats. Few Species of Concern were detected in these habitats and impacts would be expected to be minimal. Recommendations are to avoid riparian wetlands and hillsides.

### **Whimbrel nesting investigations**

A colony of Whimbrels have been observed in the vicinity of Donnelly Dome since 2000. Birds arrive in early May and no birds have been observed after early July. Twice weekly surveys were conducted during a 12-week period in 2009 and 2010. No nesting activity was observed. Surveys will continue in 2011.

### **Waterfowl Surveys**

Waterfowl surveys were conducted weekly from early May through late October. Surveys documented spring and fall migration, species composition, and broods on road accessible lakes on DTA-East. Data collected will be used to identify an ideal survey period for both breeding and non-breeding waterfowl, and for broods; identify critical waterfowl habitat used for migration, nesting, brood-rearing, and molting. Surveys will continue in 2011.

### **A Raptor Nest Inventory for Donnelly Training Area**

This project was conducted to inventory raptor stick nests on DTA. The primary goal was to identify and determine occupancy of eagle nests for protection under the Bald and Golden Eagle Protection Act (BGEPA). The secondary goal was to locate, determine occupancy, and species use of other raptor nests for compliance with the Migratory Bird Treaty Act (MBTA).

An aerial survey was flown in March, 2010 and followed ADF&G (2005) protocols. Transects were flown at ½ mile latitudinal intervals at 300' – 500' above ground level. Global Positioning System (GPS) locations were recorded for all nest structures and mapped using Geographic Information System (GIS) software. Site-specific habitat characteristics were collected including tree species and size, location of nest in the tree, and surrounding habitat type.

A total of 2083 transect miles were flown. Fifteen nests were documented. Nest locations were opportunistically relocated during June and July to determine occupancy, species, and confirm habitat. We identified one Bald Eagle nest and one new Peregrine Falcon nest. Both species are considered Priority Management Species by the Fort Wainwright Ecosystem Management Team and are addressed in the US Army's Integrated Natural Resource Management Plan (2007). Nest locations were added to DTA's nest database and will be monitored annually. Results including nest locations were also sent to USFWS .

### **Pilot study of non-agricultural habitat use by sharp-tailed grouse in eastern interior Alaska**

A cooperative 1-year pilot project was initiated in spring 2010 between the Alaska Department of Fish and Game and US Army Alaska to investigate nesting and brood rearing habitat use by Sharp-tailed Grouse (*Tympanuchus phasianellus caurus*) on Donnelly Training Area outside Delta Junction, Alaska. Grouse were captured in walk-in style traps placed at leks in April and May. The two main leks were in subalpine scrub and 10- year post-fire aspen regeneration. Forty-six individual grouse were captured (32 males and 14 females). Necklace style radio transmitters were deployed on 16 males and 12 females. Grouse locations were recorded via telemetry and flushes 1-5 times per week from June through September. Seven nests (1 re-nest after abandonment) were located. Nest success to hatching was 86% whereas brood success ( $\geq 1$  chick fledging) was 50% by 15 September. Vegetation type and visual cover were described from each nest and grouse location and from random points. Data analysis to determine habitat use is ongoing.

### **LANDBIRD UPDATE FROM FORT WAINWRIGHT TANANA FLATS TRAINING AREA (TFTA) AND YUKON TRAINING AREA (YTA), ALASKA**

Amal Ajmi<sup>1</sup>

<sup>1</sup>Department of the Army, Directorate of Public Works, IMPA-FWA-PWE (Ajmi) 1060 Gaffney Road #4500, Fort Wainwright, Alaska.

### **Breeding Bird Survey (BBS)**

FWA has participated in the BBS program since 1982. A total of 24 species, (448 individuals), was detected during the 2010 Little Salcha BBS. Yellow-rumped Warbler (23%), Swainson's Thrush (12.5%), and Orange-crowned Warbler (15%) were the most numerous species detected.

### **ALMS/Off-Road Point Counts**

FWA has participated in ALMS since 2006. Two ALMS plots have been successfully established in the YTA. A total of 19 species, (208 individuals), was detected during the 2010 ALMS. Dark-eyed Junco (21%), Orange-crowned Warbler (15%), and Yellow-rumped Warbler (12%) were the most numerous species detected.

In 1998, the Alaska Bird Observatory studied the distribution of landbirds among habitats on the TFTA and YTA at Fort Wainwright. With increasing demands on these training areas, we decided to resample the point counts and vegetation for changes in habitat and species composition. The 2010 season focused on re-sampling the Tanana Flats Training Area (TFTA). We re-surveyed 366 points in the TFTA and 52 points in the YTA. Over 70 species, (2854 individuals), were detected between May 25<sup>th</sup> and June 23<sup>th</sup>.

Swainson's Thrush (9%), Lincoln's Sparrow (8%), and Orange-crowned Warbler (7%) were the most numerous species detected in TFTA; Wilson's Snipe (16%), Blackpoll Warbler (7%) and Fox Sparrow (7%) were the most numerous species detected in YTA.

### **Cavity nesting Ducks**

In 2000, a duck box project was initiated on Fort Wainwright, Alaska. The purpose of the project was to encourage cavity nesting waterfowl to take residence on lake and river systems, and provide educational and aesthetic value to boaters and outdoor enthusiasts on military lands. The waterfowl species targeted by this project, are the Bufflehead, *Bucephala albeola*, Barrow's Goldeneye, *Bucephala islandica*, and Common Goldeneye, *Bucephala clangula*. Prior to the 2007 season, the purpose of the project was to determine usage. Nesting success was secondary information and not considered quantifiable. Currently, there are a total of 16 boxes placed on FWA. Fourteen boxes were utilized by waterfowl in 2010 as evidenced by eggs, eggshell fragments and down.

Indicated Breeding Pair (IBP) and Brood surveys were initiated at Fort Wainwright in 2009. Surveys were begun to evaluate the productivity of water-bodies on military lands in interior Alaska. Multiple surveys were conducted in 2009, over the course of fourteen weeks, to determine the optimum survey periods for future years. Our 2009 study determined that the most favorable time period for IBP was between 3 May and 6 June; optimal survey dates for Broods were determined to be between 12 and 18 July (Miller and DuBour, 2009). 2010 results for IBP and Brood surveys for Fort Wainwright water-bodies in the Yukon Training Area and the Main Cantonment area resulted in 15 Breeding Pairs, and 24 Broods being detected. We feel that these numbers are the result of low and incomplete sampling efforts in 2010. Survey efforts will be increased in 2011.

Miller, M. and A. DuBour. 2009. 2009 FWA Waterfowl Productivity: Technical Report Fort Wainwright, Alaska. USAG-AK FWA Natural Resources.

### **Ruffed Grouse Drumming Surveys**

Ruffed grouse surveys were initiated along Quarry Road Yukon Training Area (YTA) in 2003. Methods are consistent with state and national survey techniques. Survey routes consist of ten stops spaced roughly a mile apart along a roadway in habitat favoring Ruffed Grouse. At each stop, the observer listens for a period of four minutes, and records drumming and direction to the grouse. Any sighting should also be documented and recorded. It is best to conduct counts during peak drumming periods, usually in the

early morning and late evening, roughly ½ hour before sunrise and 2 hours before sunset. Date, time, temperature, wind, and rain should all be documented. Surveys should be conducted during periods of calm or light winds (< 20 km/h) and precipitation minimal. The route was run four times between April 28<sup>th</sup> and April 29<sup>th</sup>. Ruffed grouse were detected at 4 stops. Data was compiled and incorporated into the Ruffed Grouse population status in Interior Alaska as part of the Upland Game report submitted annually by W. Taylor.

### **2010 Tanana Flats Training Area Raptor Nest Inventory**

This project proposed to collect baseline information identifying the presence of raptor nests in the Tanana Flats Training Area (TFTA). The primary goal of the project was to identify the location of eagle nests along with site-specific habitat characteristics such as tree species, location of nest in the tree, size of tree and surrounding habitat type. The objectives of this project were:

1. Determine the location of raptor nests in TFTA, Alaska,
2. Based on nest characteristics, determine which nests are bald eagle constructions,
3. Document nest tree and surrounding habitat characteristics, and nest placement,
4. Quantitatively analyze nest tree and habitat associations, and
5. Provide ADFG & USFWS with nest locations and nest tree and surrounding habitat characteristics.
6. Provide nest location information for future study of occupancy and species use.

The primary issue that this project addressed was adding much needed baseline information to the TFTA database. The timely collection of this information will enable land managers to make appropriate decisions when responding to ongoing and future development of the training area.

A total of 49 nests were identified and documented during the 2010 aerial surveys. Thirty-three nests were located on military lands. Of the thirty-three nests on TFTA, 7 nests were occupied. Three nests were occupied by raptors, 1 Bald Eagle (single adult), one Bald Eagle (pair of adults), and one Great Gray Owl (single adult); 4 nests were occupied by Common Ravens.

The Tree species most selected for nesting was Quaking Aspen, *Populus tremuloides*; Balsam Poplar, *Populus balsamifera*, was the second most utilized tree. Estimated nest tree height from the ground ranged from 30' to 80', mean = 52'. Nest height from the top of the tree averaged 12.5'. 84% of all nests were considered to be in good condition and 16% in marginal.

### **Ospreys**

Osprey nesting on Fort Wainwright has been documented since 2005. Annually, a pair of Osprey will build a stick nest on the tallest power pole above the Chena River just off the departure / arrival path of Ladd Army Airfield. Limited observations began in 2006; time spent observing increased in 2007. In 2009, plans were set in motion to replace the nesting power pole, and attempts were made to deter nesting. Two pairs of Osprey were detected in 2009 and one pair successfully fledged a chick despite repeated attempts to deter nesting. Nesting platforms were placed by Doyon Utilities in fall 2009 to provide

nesting habitat after the power poles were replaced. In 2010, two pair of breeding Osprey “took” to the platforms; the East Nest Pair (ENP) successfully fledged 4 chicks; a total of 200 hours, (105 visits) were spent in observation. The West Nest Pair (WNP) successfully fledged 3 chicks; a total of 212 hours, (113 visits) were spent in observation. Observations took place between May 12<sup>th</sup> and September 24<sup>th</sup>. Behavioral information including time spent incubating, brooding, and perching were taken for both male and female osprey as well post fledging behavior of the family unit prior to permanently leaving the natal area in late September. Male and female ospreys share incubation and brooding of their young (Poole, 1989). This was verified during 2010 observations. Both female osprey spent significantly more time at both activities; **ENP Incubation:**  $t(60) = 8.983$ ,  $p = (1.05E-12)$ , **ENP Brooding:**  $t(17) = 3.99$ ,  $p = (0.0009)$ . **WNP Incubation:**  $t(58) = 3.509$ ,  $p = (0.0009)$ , **WNP Brooding:**  $t(19) = 4.72$ ,  $p = (0.0001)$ . These observations are consistent with Poole, 1989.

The nest appeared to be the focal food transfer point during the entire summer, even after fledging had occurred. Fish delivery and transfer were never observed occurring anywhere but at the nest during the entire 2010 season. Post-fledging, the chicks continued to use the nest as the food transfer site. Young ospreys often rely on their parents for food at least 10 – 20 days after fledging (Poole, 1989). The nest can be critical for food transfer until young have attained adequate fishing skills. The fledglings utilized the structure until they departed in late September.

Reactions to anthropogenic disturbances were documented in 2010 at both nests. Trimper et al. (1998) measured anthropogenic disturbances in the form of low-level jet aircraft noise. Their study found that Osprey behavior did not differ significantly between pre- and post- overflight periods, however, Osprey did react strongly to other raptors, and humans entering the area. In 2010, disturbances ranged from fixed-winged planes (both turbine and jet), rotary aircraft, jet boats, trains, motorized vehicles (trucks, motor bikes and four-wheelers) to walkers with and without dogs. In all observed disturbance bouts, the female ospreys were the most distressed by people on foot near the nest site (38%), followed closely by avian disturbances at or near the nest site (32%). The males however were most distressed by avian disturbances (57%) followed by the near presence of humans (28%). Responses were defined as a change of agitation level. Agitation levels were based on calling and posture. Reactions ranged from calling and movement in the nest, calling and flight to the nest from a nearby perch, and / or calling and temporary abandonment of the nest. Poole (1981), studied human disturbance on breeding Osprey and found although Osprey showed strong reactions to human activity at or near the nest; the disturbance in itself did not contribute to overall nest failure.

In the future we hope to expand this monitoring to a live feed system for educational purposes in the community and to discover and document nesting activities not seen from the ground.

Poole, A.F. 1981. The Effects of Human Disturbance on Osprey Reproductive Success. *Colonial Waterbirds*, (4), 20-27.

Poole, A.F. 1982. Breeding Ospreys Feed Fledglings That Are Not Their Own. *The Auk* (99)781-784.

Poole, A.F. 1989. *Ospreys A Natural and Unnatural History*. Cambridge University

Trimper, P.G., Standen N. M., Lye L. M., Lemon D., Chubbs T. E. and G.W. Humphries. 1998. Effects of Low-Level Jet Aircraft Noise on the Behaviour of Nesting Osprey. *Journal of Applied Ecology*, (35) 122-130.

## **ASSESSING THE STATUS OF DECLINING RUSTY BLACKBIRDS AT TETLIN NATIONAL WILDLIFE REFUGE**

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Tetlin National Wildlife Refuge is one of six sites in a collaborative study of the ecology of the Rusty Blackbird (*Euphagus carolinus*) coordinated by the Wildlife Diversity Program at the Alaska Department of Fish and Game in Alaska. This project was initiated to investigate potential causes for the dramatic 90% decline of the species, and to determine if there are demographic deficits incurred in this state which may be involved in driving the overall decline. The study examines basic breeding season ecology and productivity; demographic rates that regulate population size; dietary partitioning between adults and young; mercury burdens of adults and chicks; migratory connectivity; genetic population structure; and social organization and mating strategies of this poorly understood species. 2010 was the first year of this three year study at Tetlin NWR. We surveyed all previous known Rusty Blackbird breeding areas, as well as the margins of all water bodies deemed reasonably accessible by road, canoe, and by foot within the Refuge, including Scottie and Desper Creeks, and numerous lakes along the Alaska Highway. Due to the time constraints imposed by a very brief breeding season (~30 days from nest building to fledging), the travel time and distance involved, and/or access difficulties, it was not possible to survey all sites identified from remote images as suitable nesting habitat. With access to motor boats and helicopters or small fixed-wing aircraft, the total surveyed area could be greatly expanded in future years. A crew of four field technicians began surveys 17 May, noted the locations of all Rusty Blackbirds, identified territorial pairs, and searched for nests. While surveys continued throughout the season, a core number of nests were identified for continued productivity monitoring and more intensive study. In all, we surveyed 75.21 km of shoreline along 45 waterbodies, and encountered between 98 and 123 individual adult blackbirds, and found 31 nests. We monitored 25 territorial pairs. Average clutch size was 4.5 eggs, with 117 eggs were laid in 26 nests (one re-nest) with an average clutch size of 4.5 eggs. 101 eggs hatched (86%), and 86 chicks fledged (74%), with an overall productivity of 3.4 (fledged chicks/nesting female), and overall nest success of 77%. Clutch initiation ranged from 7 May to 10 June, with the 12 May the median lay date, and 8 May the mode. Ninety eight (98) blackbirds were captured, banded and sampled: 41 adults (22 male; 19 female) and 57 chicks. We collected several biological samples from all captured birds. We collected blood for genetic analyses, to determine methyl mercury burdens, and for analyses of stable isotopes of C and N for insight into diet. One feather from each adult was collected

for further mercury analyses, and one feather and a small cutting of one claw was taken for deuterium isotope analysis to help determine migratory connectivity.

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**INVESTIGATING BREEDING SEASON ECOLOGY AND MIGRATORY CONNECTIVITY OF THE RAPIDLY DECLINING RUSTY BLACKBIRD (*EUPHAGUS CAROLINUS*) IN ALASKA.**

Investigators (*alphabetical*):

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Terry Chesser, Smithsonian Institution, National Museum of Natural History

Sam Edmonds, Acadia University, Biodiversity Research Institute

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Steve Matsuoka, U.S. Fish and Wildlife Service, Migratory Bird Management

April Harding Scurr, Humboldt State University

David Shaw, Alaska Bird Observatory

Susan Sharbaugh, Alaska Bird Observatory

David Tessler, Alaska Department of Fish and Game, Wildlife Diversity Program

This abstract is intended to provide an overview of a large collaborative effort, not take credit for the excellent work of individual researchers whose specific projects may also appear here in the BPIF annual summary or elsewhere.

The Rusty Blackbird has suffered one of the steepest declines of any bird in North America, having declined by 90–98% since 1966. The species continues to decline by a rate of 5%–12% per year range-wide, including a 5% decline per year in Alaska. The World Conservation Union (IUCN) considers it to be facing a high risk of extinction in the wild and has included the Rusty Blackbird on its Red List of Threatened Species. Despite mounting concern, the factors responsible for the continuing decline of this species have yet to be identified, and conservation efforts are impeded by a general lack of basic life history information. This migratory species breeds in the boreal wetlands of the Northeastern United States, Canada, and Alaska, and winters primarily in the eastern U.S. from the Great Lakes south to the Gulf of Mexico. Linkages between specific breeding and wintering areas remain unknown, as do many other basic aspects of Rusty

Blackbird ecology. A number of potential causes for the decline have been hypothesized, including: environmental mercury exposure, breeding habitat loss, boreal wetland drying, historic and ongoing blackbird control programs, wintering habitat degradation, acid rain, disease, and increased competition with other blackbird species. Depending on the mechanisms involved, any of these factors or some combination of them might be responsible for driving the decline of the Rusty Blackbird by acting to decrease adult survival, depress juvenile recruitment, and/or diminish productivity.

This project represents a coordinated effort at five geographically distinct breeding sites in Alaska (Yukon Flats National Wildlife Refuge, near Fort Yukon; Tanana Flats at Fort Wainwright, Fairbanks; Tetlin National Wildlife Refuge, near Tok; Joint Base Elmendorf Richardson and Anchorage Coastal Refuge, Anchorage; and Chugach National Forest, Copper River Delta, near Cordova), to investigate those hypotheses relevant to the management of this species in Alaska, and to determine if there are demographic deficits incurred in this state which may be involved in driving the overall decline.

This multi-year project investigates a variety of parameters and how they may vary between years and study sites, including: productivity (nest, hatching, and fledging success); other demographic parameters that regulate population size (over-winter survival, adult survival, natal philopatry, breeding site and mate fidelity); mercury concentration (in the blood of adults and chicks); migratory connectivity (using a combination of miniature “geolocator” data recorders and analyses of deuterium isotopes in toenail and feather samples); dietary differences between adults and chicks, and between breeding and wintering adults (through analyses of stable isotopes of carbon and nitrogen in the blood of adults and chicks); invertebrate prey availability, invertebrate mercury burdens, potential genetic differences between putative eastern and western populations; and the social structure and mating strategies of this poorly understood species using genetic and behavioral methods. In 2010, we monitored over 100 territories, and banded and sampled over 100 adults and 200 chicks.

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## **LANDBIRD MONITORING UPDATE FROM WILDLIFE DIVERSITY PROGRAM, ALASKA DEPARTMENT OF FISH AND GAME**

David Tessler<sup>1</sup>

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### **ALMS – Alaska Land Bird Monitoring System**

In June of 2010 we surveyed one new Alaska Landbird Monitoring Survey (ALMS) plot in Denali State Park between Byers Lake and the Chulitna River.

### **Breeding Bird Survey Routes**

We repeated Breeding Bird Survey routes on state lands adjacent to the Lake Louise Road and the Glenn Highway near Glenallen, AK, and along the Petersville Road, near Trapper Creek, AK. We intend to begin monitoring one or two additional BBS routes per year.

## **BIRD CONSERVATION REGION 5 – NORTHERN PACIFIC RAINFOREST**

(Melissa Cady – BCR Coordinator)

Gwen Baluss<sup>1</sup>

<sup>1</sup>Juneau Ranger District, Tongass National Forest, 8510 Mendenhall Loop Road, Juneau, AK 99801

### *Monitoring*

#### **BBS Routes (YRD and JRD)**

Yakutat and Harlequin lake routes completed.

#### **Alaska Landbird Monitoring Survey (ALMS)--Forest-wide participation**

This was the eighth year of implementing this point count protocol on the Tongass NF. The USFS continues to be a leader in this statewide effort. Seven ALMS surveys were planned this year on the Tongass as a whole. Five blocks were successfully counted with visits to all or nearly all accessible points. The weather prohibited full counts on two blocks. Another block, normally counted in odd years, was visited in July to complete the habitat work. Personnel from four Ranger Districts contributed. All are within Bird Conservation Region 5. Data were compiled and sent to the USGS Alaska Science Center for future analysis.

### *Education / Outreach*

#### **International Migratory Bird Day (JRD)**

This is an annual event in Juneau. We demonstrated songbird banding at the Juneau Community Garden for about 35 adults and very attentive children.

#### **Sea Week Bird Walks (JRD)**

Gwen Baluss birded with multiple school groups as part of this week-long series of courses for 4th and 5th grade students with naturalists and professionals in the biological sciences.

#### **Crystal lake Day Camp (JRD)**

Bird-banding demonstration for the 5th grade attendees of this FS sponsored summer nature-study camp.

#### **Educational Programs (YRD)**

The Yakutat community birding and ecotourism project continued: work continued on an informational website and brochure highlighting bird-watching opportunities, and an area species checklist. Internet posting and publication was realized in 2010. Planning began for a birding festival in Yakutat in 2011.

#### **Southeast Alaska Bioblitz**

The public and scientists joined for a 24-hour survey of all life forms found in a target area near Juneau. FS personnel and volunteers lead bird walks and had a bird banding station as part of the intensive bird inventory.

### *Research*

#### **SPECIES ASSESSMENT OF THE PRINCE OF WALES SPRUCE GROUSE**

Michelle Kissling<sup>1</sup> and Sarah Schoen<sup>1</sup>

<sup>1</sup>USFWS, 3000 Vintage Blvd., Suite 201, Juneau, Alaska, 99801

The USFWS completed a Species Assessment for the Prince of Wales Spruce Grouse in September 2010. The assessment reviewed available life history information, habitat use, and, potential threats in southeastern Alaska. The assessment can be downloaded at: <http://alaska.fws.gov/fisheries/fieldoffice/juneau/candidate.htm>.

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#### **A PILOT PROJECT TO INVESTIGATE MIGRATORY CONNECTIVITY IN THE RUSTY BLACKBIRD (*EUPHAGUS CAROLINUS*) USING GEOLOCATORS .**

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<sup>3</sup>Smithsonian Institution, National Zoological Park, Washington, D.C.;

<sup>4</sup>U.S. Fish and Wildlife Service, Migratory Bird Management, Alaska Region.

Migratory connectivity and non-breeding season movements are very poorly understood for the Rusty Blackbird. This lack of information hinders efforts to discern the factors driving the species' dramatic decline, and limits understanding of how demographic deficits incurred during one life history phase may present themselves in other parts of the range and annual cycle. We initiated a pilot study in 2009 to investigate the large-scale annual movements of Rusty Blackbirds breeding in the Anchorage vicinity using archival light-level geolocators. These geolocators record ambient light-levels, which are used to estimate gross geographic position: latitude is derived from the approximate lengths of day and night, and longitude from the absolute time of local mid-day and midnight. Accuracy of longitude is the same throughout the year, but latitude is most precise at solstices and is unusable around equinoxes. Location estimates are also affected by shading from climatic conditions (e.g., clouds, fog), as well as the animals' behaviors (e.g., incubating or flying) and habitats they use (e.g., field or forested).

Because geolocators must be recovered (i.e., the birds recaptured) to retrieve the data, they are most appropriately deployed on birds demonstrating strong breeding site fidelity and survival across years. We selected Anchorage for this pilot study because preliminary data (Matsuoka) suggested about a 70% probability of re-encountering an individual adult Rusty Blackbird marked in this area the following year. We selected the

British Antarctic Survey (BAS) model Mk10s geolocator because it was the only device capable of recording location data through an entire annual cycle that is small enough to deploy on Rusty Blackbirds (~55 g). The Mk10s weighs 1.2 g and the attachment harness (a synsarcum leg-loop harness modified by Luke DiCicco from Rappole and Tipton 1991) is approximately 1-1.5g, making the mass of the total package under 2.5g, or between 4.1-4.5% of published body mass. Our initial study plan was to deploy approximately 20 units in 2009 and another 20 in 2010, with recapture efforts staged in 2010 and 2011.

In 2009 we successfully deployed geolocators on 17 adult Rusty Blackbirds. In some cases, both pair members were instrumented, and all birds outfitted with geolocators were alive and doing well when last spotted July. Nearly every pair with one or more instrumented adults successfully fledged chicks. Unfortunately, only three of these 17 (18%) birds were seen again in 2010: two females and one male. Although we cannot know for certain why so few of the instrumented birds were encountered in 2010, we felt there was sufficient justification for suspending further geolocator deployments.

Migration routes and timing were similar among the three recovered individuals: all departed their breeding grounds in Anchorage by mid-September and stopped for approximately one month (19–28 Oct to 19–28 Nov) in southern Saskatchewan, North Dakota, South Dakota, or Iowa. The birds all reached the most southern extent of their migration routes between 21–30 Nov, 71–83 days following departure from their breeding grounds. Wintering locations occurred in the vicinities of southern South Dakota, Kansas, and Arkansas, which encompassed a gradient of 10° of latitude and 7° of longitude. Estimated migration distance from breeding sites to centers of core wintering areas ranged 4,400–5,550 km ( $\bar{x}$  = 4,923 km).

Spring departure dates occurred in late-March to mid-April with the southernmost wintering bird departing earliest. Female A and Male C stopped in northwestern Alberta for one week before continuing to Anchorage. Female B migrated through this same area, but spatial data do not indicate that the bird stopped. All three birds followed similar routes during spring migration that approximately matched autumn migration routes and arrived to their Anchorage breeding grounds 29 April–6 May. Duration of spring migration ranged 17–40 days.

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## **STATEWIDE – BCRS 1-5**

### **ALASKA GAP ANALYSIS PROJECT – AVIAN DISTRIBUTION MODELLING**

Tracey Gotthardt<sup>1</sup>, Falk Huettmann<sup>2</sup>, Sanjay Pyare<sup>3</sup>

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Alaska recently became the final state in the country to implement a USGS-funded Gap Analysis Project (GAP). Designed to identify biodiversity hotspots and regions important to wildlife that lack protection, the Alaska GAP project aims to map known occurrences and model projected distributions of 435 terrestrial vertebrate species across the state, including 290 avian taxa. In preparation for species distribution modeling, we compiled over 1.6 million occurrence records from 650 unique data sources, developed watershed-scale seasonally relevant range maps for each target species, and populated a habitat-associations database that cross-walks species habitat descriptions from the literature to ecological systems from the LANDFIRE map legend. This third year of the project, our efforts are focused on modeling the predicted distribution of terrestrial vertebrates across their range in Alaska using a combination of deductive and inductive modeling techniques. Deductive models use land cover data to predict a species' distribution based on habitat associations. Inductive models predict a species distribution based on environmental parameters at known points of occurrence. Final distribution maps will be an intersection of these two independently derived models, delimited by range limits of the target species. We aim to complete draft distribution models by August 2011 and conduct a thorough expert review during fall 2011.

### **MERCURY AS A CONTRIBUTING STRESSOR IN THE POPULATION DECLINE OF THE RUSTY BLACKBIRD (*EUPHAGUS CAROLINUS*)**

Sam T. Edmonds, Acadia University, Wolfville, NS, Canada;

David C. Evers, BioDiversity Research Institute, Gorham, ME;

Daniel A. Cristol, Institute for Integrative Bird Behavior Studies, Department of Biology, College of William and Mary, Williamsburg, VA;

David F. Tessler, Wildlife Diversity Program, 333 Raspberry Road, Anchorage, AK 99518. Phone: (907) 267-2332; Email: [david.tessler@alaska.gov](mailto:david.tessler@alaska.gov)

Claudia Mettke-Hoffman, School of Natural Sciences and Psychology, John Moores University, Liverpool L3 3AF, United Kingdom;

Luke L. Powell, School of Biology and Ecology, University of Maine, Orono, ME;  
Andrew J. McGann, Institute for Integrative Bird Behavior Studies, Department of  
Biology, College of William and Mary, Williamsburg, VA;  
Jacob W. Armiger, Institute for Integrative Bird Behavior Studies, Department of  
Biology, College of William and Mary, Williamsburg, VA;  
Oksana P. Lane, BioDiversity Research Institute, Gorham, ME;  
Patti Newell, Warnell School of Forestry, University of Georgia, Athens, GA;  
Kathryn Heyden, Kentucky Department of Fish and Wildlife Resources, Frankfort, KY;  
Nelson J. O'Driscoll, <sup>1</sup>Acadia University, Wolfville, NS, Canada.

Limited knowledge of the Rusty Blackbird has hindered discerning the causes for the species' dramatic 90% decline, but hypotheses include environmental mercury contamination as a contributing factor. This study examined mercury levels in blood and feather samples collected from Rusty Blackbirds on breeding grounds in Alaska and in the Northeast U.S. and Canadian Maritimes, and on wintering grounds in the Atlantic Coastal Plains, Ohio River Valley, and the Mississippi Alluvial Valley. Blood Hg concentrations in the Northeast/Maritimes were 3-26x those of the other regions, with an average of 1.06ppm and a maximum of 3.42ppm in a male breeding in Nova Scotia. While blood Hg levels in Alaska were lower than those in the Northeast/Maritimes, they were higher than all wintering regions, averaging 0.36ppm, with a maximum of 1.11ppm in a female breeding near Fairbanks. Feather Hg concentrations in the Northeast/Maritimes were approximately 5x those of the other regions, averaging 19.2 ppm with a maximum of 52 ppm in northeast Vermont and northern Nova Scotia. In Alaska, total-Hg in feathers was considerably lower, with an average of 1.27ppm and a maximum of 5.27ppm. Approximately 30% of the Rusty Blackbirds sampled in the Northeast/Maritimes and 11% of those sampled in Alaska had blood Hg concentrations that exceeded the current lowest observed adverse effects levels (LOAEL) for mercury toxicity in songbirds, suggesting mercury may be a contributing stressor for this declining species.

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## Boreal Partners in Flight and Alaska Raptor Group Meeting Notes

**WHEN:** Monday November 15, 2010

**LOCATION:** Captain Cook Hotel, Anchorage, Alaska.

Attendee	Affiliation	Contact	PIF List	Raptor List
Melissa Cady	USFS, Tongass National Forest	<a href="mailto:mncady@fs.fed.us">mncady@fs.fed.us</a>	yes	yes
Carol McIntyre	NPS	<a href="mailto:Carol_McIntyre@nps.gov">Carol McIntyre@nps.gov</a>	yes	yes
Ruth Gronquist	BLM	<a href="mailto:ruth_gronquist@blm.gov">ruth_gronquist@blm.gov</a>	yes	yes
Steve Kendall	USFWS	<a href="mailto:steve_kendall@fws.gov">steve_kendall@fws.gov</a>	yes	yes
Caroline Van Hemert	USGS/UAF	<a href="mailto:cvanhemert@usgs.gov">cvanhemert@usgs.gov</a>	yes	
Melanie Flamme	NPS	<a href="mailto:melanie_flamme@nps.gov">melanie_flamme@nps.gov</a>	yes	yes
April Harding Scurr	ABO	<a href="mailto:aprilbird@gmail.com">aprilbird@gmail.com</a>	yes	
Susan Sharbaugh	ABO	<a href="mailto:ssharbaugh@alaskabird.org">ssharbaugh@alaskabird.org</a>	yes	yes
Sue Guers	ABO	<a href="mailto:sguers@alaskabird.org">sguers@alaskabird.org</a>	yes	yes
Michelle Michaud	BPIF	<a href="mailto:michellemichaud@gmail.com">michellemichaud@gmail.com</a>	yes	yes
Jack Wiles		<a href="mailto:wilesmichaud@msn.com">wilesmichaud@msn.com</a>	yes	
Lynn Fuller	PCJV	<a href="mailto:lynn_fuller@pcjv.org">lynn_fuller@pcjv.org</a>	yes	yes
Mary Rabe	ADFG	<a href="mailto:mary.rabe@alaska.gov">mary.rabe@alaska.gov</a>	yes	yes
Nate Berg	USFWS	<a href="mailto:nathan_berg@fws.gov">nathan_berg@fws.gov</a>	yes	yes
Hank Timm	USFWS	<a href="mailto:hank_timm@fws.gov">hank_timm@fws.gov</a>	yes	yes
Debbie Nigro	BLM	<a href="mailto:dnigro@blm.gov">dnigro@blm.gov</a>	yes	yes
Travis Booms	ADFG	<a href="mailto:travis.booms@alaska.gov">travis.booms@alaska.gov</a>	yes	
John Shook	ABR	<a href="mailto:jshook@abrinc.com">jshook@abrinc.com</a>	yes	
Matt Kirchhoff	Audubon Alaska	<a href="mailto:mkirchhoff@audubon.org">mkirchhoff@audubon.org</a>	yes	yes

Attendee	Affiliation	Contact	PIF List	Raptor List
Cara Staab	BLM	<a href="mailto:cstaab@blm.gov">cstaab@blm.gov</a>	yes	yes
Colleen Handel	USGS	<a href="mailto:cmhandel@usgs.gov">cmhandel@usgs.gov</a>	yes	yes
Katie Aitken	Environment Canada/CWS	<a href="mailto:katie.aitken@ec.gc.ca">katie.aitken@ec.gc.ca</a>		
Erica Craig	Aquila Environmental	<a href="mailto:aquila_environmental@acsalaska.net">aquila_environmental@acsalaska.net</a>		
Marian Snively	ADFG	<a href="mailto:marian.snively@alaska.gov">marian.snively@alaska.gov</a>	yes	
Kristine Sowl	USFWS	<a href="mailto:kristine_sowl@fws.gov">kristine_sowl@fws.gov</a>	yes	
Amal Ajmi	US Army	<a href="mailto:amal.ajmi@us.army.mil">amal.ajmi@us.army.mil</a>	yes	
Jim Johnson	USFWS	<a href="mailto:jim_a_johnson@fws.gov">jim_a_johnson@fws.gov</a>	yes	
Peter Bente	ADFG	<a href="mailto:peter.bente@alaska.gov">peter.bente@alaska.gov</a>	yes	yes

## AGENDA

<b>8:00-8:15</b>	Melissa Cady	Welcome and Introductions
<b>8:15-9:00</b>	Carol McIntyre	Raptor Group Meeting
<b>9:00-9:15</b>	Colleen Handel	ALMS update
<b>9:15-9:30</b>	Steve Matsuoka and Melissa Cady	Landbird Plan, History and Overview
<b>9:30-10:00</b>	Iain Stenhouse and Colleen Handel	The NEW Landbird Plan; Progress report and discussion on Part I
<b>10:00-10:15</b>	Break	
<b>10:15-10:30</b>	Steve Kendall and Jim Johnson	The BCR3 Landbird Plan – A template for Part II
<b>10:30-11:15</b>	Melissa Cady, Steve Matsuoka, and Matt Kirchhoff	Where to from here? Planning for Part II
<b>11:15-11:30</b>	Melissa Cady	Wrap-up and elections (Co-chair)

## **Raptor Group Meeting**

The mission of the Alaska Raptor Group is to promote research, monitoring, education, and management to assure the conservation of raptors in the state. Some of the important objectives of the group have been to identify current issues, facilitate management and conservation, provide expertise, and facilitate communication about raptors. The current Steering Committee consists of: Steve Lewis (Chair, FWS), Travis Booms (ADFG), Erica Craig (Aquila Environmental), Carol McIntyre (NPS), Laura Phillips (NPS), John Shook (ABR, Inc.), and Denny Zwiefelhofer (FWS, retired). The Alaska Raptor Group presented their new logo.

Short-eared Owls have been experiencing a significant population decline (70% over the past 40 years). There is no good trend information for Alaska; elsewhere the population trend is estimated from the Breeding Bird Survey and Christmas Bird Count programs. There was a symposium on this species at the last raptor meeting, but nothing has evolved from it. A Short-eared Owl Conservation Committee has been formed and they are trying to identify work that can be done both locally and continentally. They have drafted a letter to the Conservation Committee of the Raptor Research Foundation to identify research needs relative to conservation issues continentally. BirdLife International currently has the species listed at the level of least concern, and the Conservation Committee may need to petition them to change the status of this species.

The Steering Committee drafted a letter to the Alaska Board of Game regarding the designation of Snowy Owl as an unclassified game species. The proposal to take Snowy Owls off of the list of unclassified game animals failed, so the species will continue to have no season or bag limit, but the birds can't be sold. Justification for keeping on the list has been that very few are being taken, but this could also be used to justify taking them off the list. If we submit another proposal or letter, we should separate out the subsistence issue from regular harvest issue. No wildlife biologists in the state know of any significant take in any management unit, but there is some concern that Short-eared Owls (which are not on the list for allowable take) could be mistaken for Snowy Owls.

There is a current Alaska Raptor Group effort entitled the "Raptor Data Legacy Initiative," which pertains particularly to cliff-nesting species. Raptor legacy (long-term) data need proper stewardship. Such data, which often reside only in file cabinets or on hard drives, are in danger of being lost. Few are backed up and archived in a formal manner. The Alaska Raptor Group would like to find opportunities for long-term data storage and for access to historic and ongoing raptor monitoring data for scientists to do meta-analyses. The primary efforts needed are to (1) coordinate survey methods and data collection procedures so that they are comparable statewide, (2) provide storage for and access to long-term data from raptor surveys, and (3) implement a statewide monitoring strategy for cliff-nesting species. The Group put together a questionnaire for biologists across the state to summarize the current statewide raptor survey efforts, identify methods, and identify data gaps, etc. They will be making calls soon to collect results of questionnaires. There is some concern within the Group that, as raptor biologists near

retirement age without publishing their data, the data may be lost. However, most biologists are somewhat protective of their data, so it may not be easy to compile data into a single archive. There is an additional effort to get authors together to publish available data, perhaps in a special issue of the *Journal of Raptor Research*.

The Group decided that raptors should be included in the new Alaska Landbird Conservation Plan.

There is a general lack of information for Golden Eagles in areas of Alaska outside of Denali National Park and Preserve. Conservation issues vary across the range of the species and there is some disagreement as to what the biggest issues are. The species is now on BLM's Sensitive Species List, and the agency is currently funding surveys along the Dalton Highway in Alaska and in other states. FWS has a technical group working on conservation issues and data gaps.

### **Alaska Landbird Monitoring Survey (ALMS)**

Colleen Handel and Susan Sharbaugh provided an update of the ALMS program, a cooperative statewide program established to monitor population trends of landbirds and other birds across roadless areas of Alaska. In 2010, participants conducted surveys at 610 points across 38 plots. Many of these were conducted by trained roving crews from the Alaska Bird Observatory through a cooperative program funded by the Alaska State Wildlife Grant Program. Alaska Bird Observatory's roving crews are available to help with ALMS surveys across the state. They are wide open for slots for people to send observers this and next year. This program has worked out well so far, particularly for those land management units that do not have staff with the expertise required to conduct the surveys. In this cooperative program, the Alaska Bird Observatory provides trained observers and the participating land management unit covers logistical costs to establish new sampling plots. To date, ALMS has completed distance-sampling surveys at more than 1,500 points across 88 plots statewide, encompassing over 27,000 detections of birds. The program has compiled an additional 95,000 detections of birds at 2,500 points across 310 plots in other locations using point counts with non-distance-sampling methodology. Data from these programs are being analyzed for population trends and have been incorporated into the Alaska GAP program for analysis of distributional patterns through the Alaska Natural Heritage Program.

### **Alaska Landbird Conservation Plan**

#### *Current Status*

The first edition of the Alaska Landbird Conservation Plan was written in 1999. Although Boreal Partners in Flight has long recognized the need to revise it, the process was hampered by the lack of time any single individual had to rewrite and format the document. We formed a small subcommittee to guide the process and decided to follow the general model used for the recently completed Alaska Shorebird Conservation Plan. The primary members of this subcommittee are: Colleen Handel (Chair, USGS), Melissa

Cady (FS), Matt Kirchhoff (Audubon Alaska), Steve Matsuoka (FWS), Carol McIntyre (NPS), Mary Rabe (ADFG), Susan Savage (FWS), Terry Schick (ABR, Inc.), Susan Sharbaugh (Alaska Bird Observatory), and Dave Tessler (ADFG).

The shorebird plan consists of two major parts—a broad introduction to shorebird species and issues across Alaska followed by a more detailed treatment for each of the five Bird Conservation Regions (BCRs) in the state. Although several individuals contributed to compiling information and writing sections of the shorebird plan, the Alaska Shorebird Group funded a small contract for an independent contractor to do the final editing and formatting so that the conservation plan would be cohesive in content, consistent in writing style, and professional in appearance.

Following the shorebird model, we recently obtained funding from key agencies (FWS, USGS, and ADFG) to develop a small contract with Iain Stenhouse, formerly with Audubon Alaska and now with BioDiversity Research Institute, to write Part I of the revised landbird plan. The first draft of Part I was completed November 1 and comments are due back to Iain on December 15. The basic layout of Part I was presented at this meeting and discussion by the members of BPIF ensued about (1) organization of Parts I and II, (2) identification of priority species, (3) treatment of subspecies, and (4) assignments of future tasks to ensure completion of the entire landbird conservation plan.

### *Organization of Parts I and II*

The first draft of Part I follows the same basic layout as Part I of the Alaska shorebird plan and includes the following sections: introduction, conservation issues in Alaska, landbird species priorities in Alaska (including brief species accounts for those with high priority scores), and conservation strategies for Alaska. Part II is envisioned to embody more detailed treatments of these topics for each BCR.

We had a fair amount of discussion about what parts of the plan belong in Part I vs. Part II. Part II, which will be written at the BCR level, seems to be better suited to discussions of habitat, specific conservation issues, and specific conservation actions. Identification of species priorities should be broken down at the BCR level as well, particularly because of the vast differences in species assemblages, ecosystems, and conservation issues across the BCRs. Thus, the decision was made to remove the discussion of species priorities from Part I and to include instead a broader discussion of the diversity of landbirds in Alaska and our level of responsibility for them relative to continental populations.

We had further discussion about how to proceed with Part II and made the following decisions: (1) Each BCR would have a volunteer leader who would coordinate efforts of sub-teams of local experts to compile information needed to write their section of Part II (see below for leaders). (2) The section for each BCR would be limited to about five pages of text. (3) We would modify a template already developed by Steve Kendall (for BCR 3) that would then be followed by all BCRs to assure uniformity in content and structure. (4) We would then attempt to garner funding for an independent contractor to

combine each of the five BCRs into a cohesive and polished Part II of the landbird conservation plan. (5) We would like to have at least Part I and perhaps the initial version of Part II published in a polished, printed form for distribution. Both documents would also be available on the BPIF website. Part II would be updated more frequently than Part I to reflect changes in conservation issues, priorities, and actions.

### *Identification and Treatment of “Priority Species”*

A significant amount of discussion was devoted to what criteria, if any, should be used to identify “priority species” in Alaska. The initial draft of Part I included a section on priority species using the continental Partners in Flight assessment process, which employs a scoring system of various criteria (population size, breeding distribution, nonbreeding distribution, threats to breeding, threats to nonbreeding, and population trend) to rank species for vulnerability at regional and continental scales. To assess regional importance, additional criteria are also incorporated that reflect the relative density and percent of the population occurring in a region. Continental combined scores can range from 4, for species whose populations are widespread, numerous, and increasing, to 20, for a species of the very highest conservation concern. Species on the Continental Watch List include those with scores  $\geq 14$ . An additional group of species was listed in the North American Landbird Conservation Plan as Stewardship Species on the basis of the proportion of each species’ global population occurring in North America. These two categories can be further implemented at the biome or BCR level.

Alaska has only 6 species with a continental score of  $\geq 14$ : Sooty Grouse, Black Swift, Rufous Hummingbird, Olive-sided Flycatcher, Smith’s Longspur, and McKay’s Bunting. In the draft plan for Alaska, species with scores of  $\geq 12$  were identified as of high importance, which increased the state list to 14 species. An additional 11 species were identified as Stewardship Species for Alaska, based on having  $\geq 25\%$  of the global population in the state. Discussion of these two lists revolved around two primary issues: (1) the data upon which the scores were based are highly suspect in some cases (particularly for estimates of population size), and (2) using these scores is not likely the best way to set priorities for conservation action for landbirds in Alaska. In addition, it was decided that since the BCRs within Alaska are so diverse in terms of species assemblages, ecosystems, and conservation issues, priorities at the species level should be best identified within each BCR. Thus, it was decided that identifying priority species for Alaska, based on criteria yet to be determined, should appear in Part II of the Alaska Landbird Conservation Plan rather than in Part I. At most we should include in an appendix of Part I a list and perhaps brief species accounts for those Alaskan species with high continental scores.

It was decided that more thought needs to be given to how species are identified as high priority and for what purposes such rankings should be used. In addition to the criteria used for Continental Watch List and Stewardship Species, other criteria might include: (1) usefulness as indicators of climate change or some other ecological stressor; (2) lack of knowledge about the status of a species, particularly those for which Alaska supports a high proportion of the breeding range or population size; and (3) species at the periphery

of their range, which might be good indicators of changes in avifaunal distribution. This topic will be addressed within each BCR as Part II of the plan is written. Lists for different purposes (conservation, monitoring, research) are valuable for land managers so they will be an important part of Part II. After BCR-specific lists have been compiled, they can be synthesized to determine Alaska-wide strategies.

There was further discussion about whether the Alaska plan should include tables with estimates of breeding population size. These estimates are based on Breeding Bird Survey data (which have very limited and biased coverage in Alaska) along with a series of correction factors, which themselves are highly controversial. cursory review of these estimates for Alaska suggested high levels of inaccuracy, at least for several species. Thus, it was decided that these population estimates should not be included in the document or used for determining any rankings.

### *Inclusion of Subspecies*

Alaska supports a relatively large number of subspecies with restricted ranges. Based largely on Gibson and Kessel's work (1997, *Western Birds* 28:45–95), Iain identified a total of 120 subspecies of landbirds that likely occur in Alaska, among which 80 have substantiated evidence. Subspecies with restricted ranges or endemic occurrence within Alaska are likely of greatest conservation concern; these have largely been identified and discussed in the Alaska Wildlife Action Plan. Most of these are island endemics such as Prince of Wales Spruce Grouse, and subspecies of Song Sparrow and Rock Ptarmigan in the Aleutian Islands and other isolated areas. We agreed that subspecies of particular conservation concern should be identified and discussed in Part II because most are geographically restricted within BCRs. An overview of this issue will be given in Part I.

### *Assignments*

- Interested members should review and provide feedback by December 15 on the first draft of Part I to Colleen Handel, who will synthesize comments and provide guidance to Iain Stenhouse for revision.
- A representative of the Alaska Raptor Group (Carol McIntyre/Steve Lewis) should write a paragraph for the introduction of Part I describing the general diversity of species, ecological concerns, and importance of Alaska for this group of landbirds.
- Other taxonomic groups (e.g., grouse and ptarmigan) that should be addressed separately should be identified and similar paragraphs written.
- Everyone should look for sources of funding to complete Part II of the plan. Pacific Coast Joint Venture funding may be available soon, and might be considered suitable for this effort. Members should also look inside their agencies and develop proposals or agreements and get them in place so that if money appears late in the fiscal year they will be ready to take advantage of it.

- Part I should be a polished document to \*advertise\* our efforts so we can use it to procure funds to finish Part II.
- We should make connections with the new Landscape Conservation Cooperatives so that our conservation planning efforts can inform their process for determining priorities. Perhaps we should compose a letter from BPIF?
- Leaders for the BCR sections that will appear in Part II have been identified below. These people will not do all the writing, but have agreed to take the lead in guiding sub-teams of local experts in developing their sections of the document. These leaders will examine the outline Steve Kendall developed for BCR 3, provide suggestions for revision, circulate suggestions to other leaders, and come to a consensus on the structure, length, and content to be included in Part II. Leaders will then coordinate collection of the information needed to write paragraphs for their BCRs.
  - Jim Johnson for BCR1
  - Susan Savage and Kristine Sowl for BCR 2
  - Steve Kendall for BCR 3
  - Susan Sharbaugh for BCR 4
  - Melissa Cady for BCR 5
- The goal is to have the entire plan completed by January 2012.

**Elections:**

Michelle Michaud was elected to replace Melissa Cady as BPIF Co-chair to serve with Matt Kirchhoff for 2011.

*Minutes compiled by Melissa Cady and Colleen Handel.*