

I hope you will find the information furnished in this report useful. Because of my tardiness in collating sections of the report, I have included two workshops that were held in February of 1999. Also, I am providing an updated participant directory on the BPIF web site. For any comments or questions about Boreal Partners in Flight contact: Brad A. Andres, U.S. Fish and Wildlife Service, Nongame Migratory Bird Management, 1011 East Tudor Road, Anchorage, AK 99503; ph: 907-786-3378; fax: 907-786-3641; e-mail: Brad_Andres@fws.gov

BOREAL PARTNERS IN FLIGHT WORKSHOP AGENDAS

December 7-11, 1998, Anchorage, Alaska

Monday, 7 Dec. Natural Resource Education Colloquium
10 am - 12 pm Room 221, USFWS Regional Office, 1011 E. Tudor

Review and discussion of recent meetings/conferences including the National Association for Interpretation (bring information and ideas to share) and the USFWS Refuges environmental education workshop.

Monday, 7 Dec. Bird Education Kit Orientation
1 - 5 pm Conference room, ARLIS (Agencies Library) 3150 C St. (west side)

Stop by and acquaint yourself with the numerous education kits that are now available for birds. Bring your favorite bird education activity to share with others.

Monday, 7 Dec. Landbird Migration Monitoring Workshop
12 - 5 pm Gordon Watson Conference Room, U.S. Fish and Wildlife Service
Regional Office, 1011 East Tudor Road

12:00 pm Introduction and purpose of workshop.

12:10 pm Update on national efforts toward standardization of migration monitoring in the U. S. and Canada.

12:30 pm Review status of stations through case study questionnaire (format previously sent to banders, about 20-30 minutes each).

2:20 pm Break.

2:40 pm Open discussion of techniques, use of new Pyle, operation, and bander training.

- 4:10 pm Draft set of new recommendations and identify potential new sites.
- 5:00 pm Adjourn.
- Tuesday, 8 Dec. Boreal Partners in Flight
- 8:30 am Welcome and introductions — Brad Andres, Chair, Boreal PIF.
- Inventory, Monitoring, and Research*
- 8:40 am Updates on national, international, and western regional monitoring programs and Internet resources — Brad Andres, USFWS.
- 8:50 am Landbird monitoring strategy for Refuges in Alaska — Brad Andres.
- 9:00 am 1997 and 1998 Breeding Bird Survey in Alaska — Brad Andres.
- 9:10 am Ground and aerial assessment of vegetation covertypes along Alaska BBS routes — Paul Cotter, Brian Browne, USFWS.
- 9:30 am Breeding Bird Inventories of Alaska Army National Guard training areas — Diana Brann, USFWS.
- 9:50 am Distribution and relative abundance of landbirds in the lower Yukon River watershed — Chris Harwood, Yukon Delta NWR.
- 10:10 am Breeding Bird Inventory of Yukon-Charley National Preserve — Shelli Swanson, National Park Service.
- 10:30 am Break.
- 10:50 am 1998 off-road point count program — Colleen Handel, USGS-BRD.
- 11:10 am Surveys of songbirds during a spruce bark beetle outbreak on the Kenai Peninsula — Ellen Lance, Chugach NF.
- 11:30 am Habitat Selection of Passerines in Interior Alaska — Anna-Marie Benson, Alaska Bird Observatory.
- 11:50 pm Habitat-based point count surveys on Fort Richardson — Brian Browne.
- 12:00 pm Lunch.
- 1:20 pm Synopsis of Alaska migration monitoring workshop — Brad Andres.

- 1:30 pm Banding database program — Keith Larson, Tetlin NWR.
- 1:50 pm Review of new Pyle criteria for aging and sexing — Keith Larson.
- 2:10 pm Request for 1998 banding efforts in Alaska — Brad Andres.
- 2:20 pm Effects of road disturbance on landbird communities on the Kenai peninsula — Todd Eskelin, UAA.
- 2:40 pm Breeding Bird Surveys on Research Natural Areas in the Tongass National Forest — Matt Stotts, Julie Melton, USFWS.
- 3:00 pm Break.

Information and Education

- 3:20 pm Update on national, international and regional information and education efforts — Heather Johnson, USFWS.
- 3:40 pm Update on Department of Defense PIF efforts — Gene Augustine, U. S. Air Force.
- 3:50 pm *Cats Indoors!* — Brad Andres.
- 4:00 pm Anchorage's International Migratory Bird Day 1998 and plans for IMBD '99 — Heather Johnson.
- 4:20 pm The 1998 North American Migration Count — Brad Andres.
- 4:30 pm Thayer Birding software as an educational tool — Paul Cotter.
- 4:50 pm Adjourn.

Wednesday, 9 Dec. Boreal Partners in Flight

Communication

- (8:00 am) Open time for viewing BPIF website.
- 8:30 am Improvements of the Boreal Partners in Flight website and establishment of an e-mail distribution list for BPIF news — Colleen Handel.

9:20 am General discussion on the synthesis and distribution of information, and specific assessment of information on habitat use by breeding landbirds and further information needs— Brad Andres.

10:30 am Break.

Conservation Plan

10:50 am Status of Colville River Bird Conservation Area — Dave Yokel, BLM.

11:00 am What's the Watchlist? — Brad Andres.

11:10 am Alaska Raptor Management Plan — Philip Schempf, U. S. Fish and Wildlife Service.

11:30 am Integrating Partners in Flight into natural resource plans — Brad Andres.

11:40 am Way out west -- Findings on the frontier — Brian McCaffery, Yukon Delta NWR.

12:00 pm Lunch.

1:20 pm Working session for Biogeographic Regions. Determine how to implement elements of the conservation plan in the region.

3:10 pm Brief reports.

3:30 pm Break into technical groups.

Information and education — Work on information and education needs that can be accomplished across the entire state (concrete and doable).

Monitoring — Discuss implementation priority and the notion of clusters of land units to accomplish broad scale monitoring objectives.

4:50 pm Brief reports.

5:00 pm Adjourn.

INVENTORY, MONITORING, AND RESEARCH

BREEDING BIRD SURVEY

Brad A. Andres, U. S. Fish and Wildlife Service

Because of the departure of several observers from the state, coverage of BBS routes in 1998 was somewhat less than 1997. At the time of this report, many routes have been filled and I suspect that coverage will be maintained around 80 routes. We still have some problem of maintaining observer consistency on routes (Fig. 1) and observers have not been consistent in running routes every year (Fig. 2). We should strive to improve these aspects of the program.

On the following pages, I have calculated the mean number of birds recorded on routes in two general areas -- coastal (southeastern and southcoastal) and in interior (southwestern, western, central, northern). Depicted are the mean for all routes, the mean on routes where the species was recorded ($y > 0$), and the proportion of routes where the species occurs. This information might be useful for comparisons among southern and northern-interior populations.

MIST-NETTING AND BANDING

Anna-Marie Benson, Alaska Bird Observatory

Following the BBS summary is a summary of banding activities in Alaska in 1998.

MIGRATION MONITORING

We convened a workshop at the Boreal Partners in Flight meeting to review migration monitoring in Alaska. In recent years, migration banding efforts have increased across the U.S. and Canada and standardized methods are being recommended. Station operators were sent a questionnaire prior to the meeting that reported on various aspects of their operation and results were presented at the workshop. Overall, operation of stations in Alaska is consistent year to year and mortality rate of captured birds is well below accepted standards. Few stations, however, had developed operations manuals and were encouraged to do so. Stations also need to be staffed with experienced personnel.

One of the main topics of discussion was the clustering of stations to test the assumption of the constancy in the proportion of birds captured at a station from year-to-year. It was suggested that a possible experimental design for this problem would be to position three stations within five miles of each other in similar habitat. All three stations would be operated during a 2-3 week period around the peak of migration for several (≥ 3) years. Proportional capture rates would then be compared among stations and among years. Sites that were suggested for this study included: Alaska Peninsula NWR, Tetlin NWR, Fairbanks, and Anchorage. Thorough analysis of weather effects on capture rates could shed some light on this issue.

Because of the above concern, it was recommended that no new long-term stations be initiated. However, opportunistic migration banding could occur to document species and age composition of migrants at a particular site.

We also decided to try to synthesize migration information across Alaska for the following species: Wilson's Warbler, Yellow Warbler, Orange-crowned Warbler, Swainson's Warbler, Yellow-rumped Warbler, American Tree Sparrow, Savannah Sparrow, Slate-colored Junco. Station operators were to (should) send Colleen Handel an ASCII file that contained site, year, species, age, total number captured, total net-hours, banding window. All information would be from a window when about 90% of captures of a species were made at the site (species-specific).

We also discussed having on workshop on a single, or group of, species that summarizes all we know about the bird(s) next year. We tossed around some ideas but did not settle on a single approach. Because I can not find my notes on our discussion, I would appreciate any recollections of this discussion or other thoughts on this topic.

RESEARCH AND MONITORING PRIORITIES FOR THE NORTHWEST BOREAL FOREST

Paul Cotter, U. S. Fish and Wildlife Service

Approximately 75 people from Yukon, British Columbia, Alberta, and Alaska representing government and NGOs attended a two-day workshop in Whitehorse (February, 1999). Wendy Nixon and Mike Gill of the Canadian Wildlife Service hosted the meeting. The objectives were 4-fold:

- 1) review and assess our current state of knowledge regarding boreal forest ecology and traditional ecological knowledge (TEK) in the Boreal Northwest,
- 2) identify gaps in our knowledge of boreal forest ecology in the region,
- 3) discuss ongoing, short-term and long-term priorities for fulfilling research and monitoring needs, and
- 4) promote cooperation and collaboration of governments, researchers, First Nations and communities on research and monitoring initiatives in the Boreal Forest.

Alaskan participants included:

Paul Cotter, USFWS, MBM-Anchorage
Mary Beth Cook, Wrangell-St. Elias NP
Carl Mitchell, Wrangell-St. Elias NP
Jennifer Allen, Wrangell-St. Elias NP
Fred Dean, Boreal Forest Council/UAF
Knut Kielland, UAF
Shelli Swanson, Yukon Charley NP
Anna Marie Benson, Alaska Bird Observatory

On day 1, three researchers presented data and updates of ongoing long-term and large-scale boreal forest research. Presenters were: 1) Dr. Charles Krebs - The Kluane Boreal Forest Project, 2) Dr. Susan Hannon - Wildlife ecology in the boreal forest of Alberta, and 3) Dr. Knut Kielland - Ecological cascades following moose herbivory at the Bonanza Creek Long-term Ecological Research Station

After presentations, we split into break-out groups for the afternoon to discuss the matrices which were prepared prior to the meeting by the organizers. The matrices were designed to assess the current state of knowledge on an array of topics within 4 major categories: 1) wildlife and vegetation (landscape level), 2) wildlife and vegetation (site-specific level), 3) aquatic systems, 4) natural disturbance.

Groups 1 and 2 ranked the state of knowledge and identified gaps on 7 topics (life history, habitat requirements, population trends, distribution and movement of populations, herbivore and

predator/prey dynamics, other ecological relationships, and taxonomic inventory) for 17 taxa (e.g. forest songbirds, insectivores, vascular plants). Although designed to be independent, there was little difference between the 2 groups on how each topic was addressed. Rankings, however, did differ between groups.

Groups 3 and 4 performed a similar function. Their matrices were different; they included many physical processes occurring in the boreal forest (e.g. nutrient cycling, permafrost, climate, etc.). The aquatic group did, however, discuss the importance of wetlands and their wildlife resources and identified these areas as priority research topics (this included surveys for waterbirds-shorebirds and loons, especially).

On day 2, break-out groups continued ranking the state of knowledge and identified priority research needs. Results pertinent to Boreal Partners in Flight follow:

- 1) Despite differences in rankings for population trends and population distribution and movement of forest songbirds between groups 1 and 2, the groups agreed that these were priority research needs throughout the boreal cordillera and taiga plains ecozones.
- 2) Shorebirds and other waterbirds using the boreal forest for breeding and migration were identified as needing more research and monitoring effort.
- 3) Mapping vegetation patterns and distribution throughout the boreal forest (including fire, insect, and timber effects) were recognized by all groups as being critically important to understanding and assessing research needs and issues. The surprising lack of information in Alaska concerning this has become apparent in the writing of the Landbird Conservation Plan. The Yukon seems to be farther ahead in their forest mapping program.

The objectives of the meeting were quite broad so specific products are few. However, this was the first attempt to bring together researchers and interest groups from a variety of disciplines together to discuss issues facing the boreal forest. It will facilitate greater exchange between Canada and Alaska. A proceedings of the meeting is currently being prepared. No details were discussed, but most agreed that future meetings should occur.

This group has a very broad scope; they are attempting to include all aspects of boreal forest ecology and management. The most positive results of the meeting was the alignment of this group and the Boreal Forest Council, the information exchange across national, provincial, and territorial boundaries, and the recognition that the group must eventually develop and realize specific goals. There was a strong call to create a stronger coalition which would increase funding opportunities and increase interest from universities and other resource agencies.

INFORMATION AND EDUCATION

NORTH AMERICAN MIGRATION COUNT

Brad Andres, U. S. Fish and Wildlife Service

Between 3 and 11 May, 114 individuals, in nine groups, conducted North American Migration Counts. During this period, we recorded 165 species. As last year, the Kachemak Bay group lead the state with 119 species. On their count, they recorded a single Eurasian Wigeon and seven Upland Sandpipers. Observers at Cape Peirce recorded 13,000 Black Brant on 10 May. The Attu count certainly offered some interesting species (e.g., Common Pochard, Hawfinch).

Red-throated Loon	Oldsquaw	Spotted Sandpiper
Pacific Loon	Black Scoter	Whimbrel
Common Loon	Surf Scoter	Hudsonian Godwit
Horned Grebe	White-winged Scoter	Marbled Godwit
Red-necked Grebe	Common Goldeneye	Ruddy Turnstone
Fork-tailed Storm-Petrel	Barrow's Goldeneye	Black Turnstone
Double-crested Cormorant	Bufflehead	Surfbird
Pelagic Cormorant	Smew	Semipalmated Sandpiper
Red-faced Comorant	Common Merganser	Western Sandpiper
Great Blue Heron	Red-breasted Merganser	Least Sandpiper
Tundra Swan	Bald Eagle	Pectoral Sandpiper
Whooper Swan	Northern Harrier	Rock Sandpiper
Trumpeter Swan	Sharp-shinned Hawk	Dunlin
Gr. White-fronted Goose	Northern Goshawk	Short-billed Dowitcher
Emperor Goose	Red-tailed Hawk	Long-billed Dowitcher
Brant	Rough-legged Hawk	Common Snipe
Canada Goose	American Kestrel	Red-necked Phalarope
Green-winged Teal	Merlin	Parasitic Jaeger
Mallard	Peregrine Falcon	Long-tailed Jaeger
Northern Pintail	Ring-necked Pheasant	Black-headed Gull
Northern Shoveler	Ruffed Grouse	Bonaparte's Gull
Gadwall	Spruce Grouse	Mew Gull
Eurasian Wigeon	Sharp-tailed Grouse	Herring Gull
American Wigeon	Sandhill Crane	Glaucous-winged Gull
Common Pochard	Black-bellied Plover	Glaucous Gull
Canvasback	American Golden-Plover	Black-legged Kittiwake
Redhead	Pacific Golden-Plover	Sabine's Gull
Ring-necked Duck	Semipalmated Plover	Caspian Tern
Tufted Duck	Black Oystercatcher	Arctic Tern
Greater Scaup	Greater Yellowlegs	Aleutian Tern
Lesser Scaup	Lesser Yellowlegs	Common Murre
Common Eider	Wood Sandpiper	Pigeon Guillemot
Steller's Eider	Solitary Sandpiper	Marbled Murrelet
Harlequin Duck	Wandering Tattler	Kittlitz's Murrelet

Tufted Puffin
Rock Dove
Great Horned Owl
Northern Hawk Owl
Short-eared Owl
Northern Saw-whet Owl
Rufous Hummingbird
Belted Kingfisher
Downy Woodpecker
Hairy Woodpecker
Three-toed Woodpecker
Black-backed Woodpecker
Northern Flicker
Hammond's Flycatcher
Skylark
Tree Swallow
Violet-green Swallow
Cliff Swallow
Gray Jay
Steller's Jay
Black-billed Magpie
Northwestern Crow

Common Raven
Black-capped Chickadee
Chestnut-backed Chickadee
Boreal Chickadee
Red-breasted Nuthatch
Brown Creeper
American Dipper
Golden-crowned Kinglet
Ruby-crowned Kinglet
Mountain Bluebird
Gray-cheeked Thrush
Swainson's Thrush
Hermit Thrush
American Robin
Varied Thrush
Yellow Wagtail
Black-backed Wagtail
American Pipit
Bohemian Waxwing
Northern Shrike
Orange-crowned Warbler
Yellow Warbler

Yellow-rumped Warbler
Wilson's Warbler
American Tree Sparrow
Savannah Sparrow
Fox Sparrow
Song Sparrow
Lincoln's Sparrow
White-crowned Sparrow
Golden-crowned Sparrow
Dark-eyed Junco
Lapland Longspur
Rustic Bunting
Snow Bunting
Rusty Blackbird
Brambling
Gray-crowned Rosy-Finch
Pine Grosbeak
White-winged Crossbill
Common Redpoll
Hoary Redpoll
Pine Siskin
Hawfinch

1998 International Migratory Bird Day Bird Count Participants

Anchorage — 58 species

Brad Andres (compiler)
Diana Brann
Brian Browne
Jay Carlisle
Paul Cotter

Colleen Handel
Sarah Hamilton
Owen Hughes
Heather Johnson
George Matz

Attu Island — 33 species

Donna Balch
Larry Balch
Bob Berman
Ed Borowik
Walter Chuck
Terry Doyle (compiler)
Al Driscoll
Eli Elder
Steve Heinl

James Huntington
Cindy Lippincott
Bob O'Brien
Jerry Rosenband
Tim Stevens
Gary Stitzinger
Joe Swertinski
Paul Sykes
Mike Toochin

Bethel — 37 species

Bernice Albright
Clarence Albright
Chris Harwood (compiler)

Marianne Madle
Dave Martens
Jane Nesser

Cape Peirce — 32 species; Rob MacDonald (compiler) and Missy McClaran

Cordova — 88 species

Brad Andres (compiler)
Emily Becker
Dana Bruden
Jim Corven

Nathan Senner
Stan Senner
Kelly Weaverling
CRD Shorebird Festival Participants

Denali National Park/Healy — 44 species

Michelle Ambrose
Land Cole
Nan Eagleson
Carol McIntyre-Hander (compiler)
Liz Hudson

Theresa McTntyre
Pat Owen
Ed Vorisek
Tom Walker

Dillingham — 60 species

Andy Aderman
Katherine Carscallen
Vern Carscallen
Eric Holland
John Moran

George Nelson
Joanne Nelson
Misty Daye Wagers
Carol Wilson (compiler)

Galena — 43 species

Buddy Johnson (compiler)
Heather Johnson
Mike Spindler

Kim Ueeck
Laree Ueeck
Eugene Williams

Glenallen Area — 61 species

Janissa Balcomb
Laurie DeWispelaere (compiler)
Althea Hughes
Daniel Hughes
Kathy Liska
Debbie Lorence
Ruth McHenry

Carl Mitchell
Lee Penwell
Kenneth Roberson
Edmond Roberts
Vicki Rood
Kyle Rood
Ruth Ann Warden

Kachemak Bay — 99 species

Edgar Bailey
Sera Baxter
Amy Bollenbach
Alix Chartier
Dale Chorman
Beth Cummings
Willy Dunne
Nina Faust (compiler)

Rose Faust
Rich Kleinleder
Jere Murray
Sandy Murray
Leslie Slater
Toby Tyler
Anne Wieland
Dick Wyland

King Salmon — 67 species

Corey Adler
Bob Blush
Ken Convery
Rod Cyr

Jeff Foster
Dick Russell
Susan Savage (compiler)
Melanie Spies

Tok — 69 species

Amal Ajmi (compiler)
Jeff Kowalczyk
Keith Larson
Herbert Paul

Robert Schulz
Hank Timm
Richard Voss

OUTREACH AND EDUCATION

Heather Johnson, U. S. Fish and Wildlife Service

Sue Bonfield is our National Outreach/Education Chair for PIF; . She can be reached at the Colorado Bird Observatory (303) 659-4348

The big project for her this year has been to coordinate the IMBD celebration, nationally, through the Colorado Bird Observatory.

This year, they will be highlighting 10 conservation issues, with 10 bird species representing those issues. Each issue/bird had a different person working on the booklet, and it was reviewed by several folks. The whole packet was also reviewed by educators.

The new Guide to Migratory Bird Education Resources is available through ABA Sales (1-800-634-7736).

Kids For Saving the Earth, out of Minnesota, wants to be involved with PIF this year. They want to develop a packet that would be a “where is Waldo” kind of a scavenger hunt through different web pages on birds. It would include questions for each of the different web sites that has specific information about the goals, focus, etc. for that site. Tesa Hill at kseww@aol.com is in charge at Kids for Saving the Earth.

Sue Bonfield has a new activity packet for educators that would be great for this region. Teachers can choose to have one sent a month or have the whole packet at once. It has one on:
What is a bird.
What is in a name
What is habitat
Etc. in Both English and Spanish

Colorado Bird Observatory has the packet on Birds in Hand and Field and a new one on Bald Eagles. The Birds in Hand and Field will be revised this next year, so get comments to Sue Bonfield if you want anything changed. Call Sue Bonfield if you are interested (see above).

Birders Exchange - Paul Green from ABA has kindly offered to send packets of equipment to folks who are on their way to Latin America or Russia. The packets will include scopes, binoculars, etc. for the students at schools or through NGO's. See me if you have a contact down there and plan to travel and we'll get you set up with some equipment. There is a simple form that goes with it, and we'll have to do one for each separate trip.

Alaska News

A new shorebird kit has been developed for the ARLIS library. There are three kits which should make it easier for shorebird sister schools to access materials to compliment the curriculum.

The Song Bird Blues Trunk has been moved to ARLIS as well. It will still be available statewide. To borrow a kit from ARLIS, call (907) 272-7547.

The Shorebird Sister Schools Program curriculum is complete and available through Circumpolar Press, in Homer. Call 1-877-210-2665 if you would like to purchase a copy.

The shorebird satellite broadcast field trip video is available through the National Conservation and Training Center. It was done at BomBay Hook National Wildlife Refuge and is titled "Shorebirds Running on Empty". To find out more about this video, and other Fish and Wildlife Services videos, contact Sharon Howard at the National Conservation and Training Center, (304) 876-7494.

Poster - A new Alaska poster is being produced on neotropical migratory songbirds. Brad Andres is the contact on this and is currently working with the artist to finalize this product.

Web Pages - The Web page for Alaska Partners in Flight was done by BRD, USGS and is terrific (Thanks Steve M.!!) Access PIF at <http://abscweb/wr.usgs.gov/research/bpif/index.html>. There is a link off the main page on education that highlights many of the good programs going on around Alaska.

The Alaska Bird Observatory has been very busy with many new excellent education resources and programs. The new CD-Rom of Alaska bird calls/songs will be available soon and is a great resource. A new teacher packet was developed called "Boreal Forest Songbirds of Alaska". It is a terrific resource for those of us doing classroom presentations, field trips, and other programs with students. To get a copy, call (907) 451-7059 or check out their web page at <http://www.ptialaska.net/~birds1>. Another wonderful outreach opportunity is a summer bird education camp they are teaching. Thanks to everyone at the Bird Observatory for all your wonderful hard work, innovative ideas, and super resources.

Within the education break-out group during the PIF meeting, the group decided not to develop any products this year. We have had many good ideas discussed, with lots of enthusiasm and no funds. Each year we get together and realize that no one was able to come up with the resources to develop the products suggested. What we concentrated on this year was developing International Migratory Bird Day Festivals and other smaller scale festivals or gatherings for locals to learn and get excited about birds and their associated conservation issues. We discussed utilizing the resources already available more effectively. For next year, we discussed having individuals plan on putting in for grant opportunities or base funds to begin working on new products, programs or other resources. This way, when we meet to discuss ideas, everyone will have a better idea of how feasible each idea is.

Thanks to everyone for your hard work and great ideas. If anyone has ideas for pre or post outreach and education workshops during next years PIF meeting, contact me at (907) 786-3367 or by E-mail at heather_johnson@fws.gov.

SOUTHCOASTAL REGION

During the 1998 Annual Meeting of Boreal Partners in Flight, members of the Southcoastal Regional Working Group discussed a number of conservation issues facing populations of landbirds in the region. Members agreed that the management and conservation of landbirds in the region should be guided by a unifying goal: to maintain landbird populations that are reproductively viable and widespread in their distribution. They then identified the primary conservation and management issues that threaten the viability and broad distribution of landbirds in the region. These include direct alterations of habitat due to forest disturbance and development of wetlands, and direct and indirect effects associated with the construction of roads. Next, they identified species of birds that would be negatively affected by these specific impacts. For each potential impact we identified indicator species, whose presence or absence could be used to measure the health of affected habitats and whose populations could be monitored using existing programs. Lastly, we discussed ways of soliciting public assistance to monitor populations of Rufous Hummingbirds in Prince William Sound, a species of particular concern because of declining population sizes elsewhere within its range.

Forest Disturbance—Disturbances of boreal and coastal forests by spruce beetle infestations, natural and prescribed fires, and logging are of special concern because of their potential to modify the composition, structure, and successional stages of forests over large geographic areas in Southcoastal Alaska. These were treated as a group rather than separate issues because the habitats affected are shared among the three types of disturbances. Furthermore, fire and logging have been prescribed as methods to quell the effects of the spruce beetle infestations.

Although forest disturbance by spruce beetle infestations and logging have been at the forefront of discussions on the management of forests in Southcoastal Alaska, historically fire has had a large influence on the composition of forests in the regions. In the past 15 years alone, about 13,000 acres of forests have burned on the Kenai Peninsula. Furthermore, the increase in dead and downed spruce resulting from the current spruce beetle epidemic may be increasing fire hazard over a large portion of the region. Members of the group felt that fire warrants more attention as a factor affecting populations of landbirds in the region. Indicator species that are potentially affected by spruce beetle infestations, logging, and fire:

Northern Goshawk	Black-backed Woodpecker	Ruby-crowned Kinglet*
Spruce Grouse	Three-toed Woodpecker*	Golden-crowned Kinglet*
Great Horned Owl	Hairy Woodpecker*	Gray-cheeked Thrush*
Western Screech Owl	Olive-sided Flycatcher*	Bohemian Waxwing
Boreal Owl	Chestnut-backed Chickadee*	Townsend's Warbler*
Great Gray Owl	Boreal Chickadee*	Red Crossbill
Northern Saw-whet Owl	Brown Creeper*	White-winged Crossbill
Northern Hawk Owl	Steller's Jay*	Pine Grosbeak

* Species that could be monitored by expanding coverage of the Alaska Off-road Breeding Bird

Survey to appropriate habitats.

Loss of wetlands.—Development of wetland habitats was viewed as a growing concern in the regions due to increasing urbanization in Anchorage, on the Kenai Peninsula, and in the Matanuska/Susitna Valley. The Southcoastal Working Group viewed this as a special concern because losses of wetland habitats are typically permanent in nature. Indicator species that are potentially affected by loss of wetlands:

Short-eared Owl	Hudsonian Godwit*	Blackpoll Warbler*
Lesser Yellowlegs*	Olive-sided Flycatcher*	Rusty Blackbird*
Greater Yellowlegs*	Gray-cheeked Thrush*	
Common Snipe*	Bohemian Waxwing	

*Species that could be monitored by expanding coverage of the Alaska Off-road Breeding Bird Survey to appropriate habitats.

Road construction.—This includes the direct disturbance of landbird habitat from development of the road corridor and indirect disturbance due to increases in the recreational use of areas made accessible by roads. The group partitioned indirect effects between upland and coastal intertidal habitats. Indirect effects of road development on upland habitats were related to increased disturbance by ATV and snow machine use. Indirect effects on coastal shoreline habitats were related to increases in recreational use of shorelines in Prince William Sound resulting from construction of the road to Whittier. Indicator species that are potentially affected by changes in habitat resulting from road construction:

Northern Goshawk	Gray-cheeked Thrush*	Golden-crowned Sparrow*
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Indicator species that are potentially affected by increased recreational access to upland (u) and coastal shoreline habitats:

Pigeon Guillemot**	Black Oystercatcher**	Varied Thrush*
White-tailed Ptarmigan (u)	Northwestern Crow	

*Species that could be monitored by expanding coverage of the Alaska Off-road Breeding Bird Survey.

**Species that are monitored by U.S. Fish and Wildlife surveys of marine birds in Prince William Sound.

Rufous Hummingbird.—The Rufous Hummingbird occurs uncommonly in coastal habitats of Southcoastal Alaska. This species' population appears to be declining in the southern portions of its range but the status of the population in Alaska is unknown. Current monitoring programs in Alaska are not obtaining adequate samples to determine population trends for this species.

Members of the Southcoastal Working Group discussed developing a feeder count program for

monitoring regional populations of Rufous Hummingbirds. The species has been observed to frequent sugar-water feeders throughout its range. A Feeder Watch program would solicit the help of local community members in Prince William Sound to conduct feeder counts during the spring and summer months. Counts would be conducted in a standardized manner so that populations could be monitored across years. Members of the working group felt the program would help determine the population status of the species in the region and also instill public awareness of the conservation problems facing migrant landbirds in Alaska.

CENTRAL REGION LANDBIRD MONITORING MEETING

10 February 1999

U.S. Fish and Wildlife Service Conference Room, Fairbanks

Alan Brackney, Arctic National Wildlife Refuge

Major Conclusions/Agreements:

- The meeting was convened on the consensus that a sampling plan for monitoring landbirds was needed that integrated all conservation units and agencies.
- The Boreal Partners in Flight Central region was divided into 2 or more parts with the Eastern Central Unit containing the Arctic NWR (in Part), Gates of the Arctic NP (in Part), Kanuti NWR, Yukon Flats NWR, Yukon Charley Preserve, Tetlin NWR, and associated BLM, State and private lands. A map is under construction showing the boundary. The Unit essentially incorporates the Middle Yukon Drainage.
- A random sample of 20 4-township sample units will be selected within the area.
- Each sample unit will contain a cluster of 3 Off-Road-Point Count Routes (12 points per route).
- Current routes will be integrated into the plan by substitution for a randomly selected route based on a set of substitution rules. Each cluster is statistically equivalent to a BBS route and an attempt will be made to integrate the two systems analytically.
- Clustered routes will be located so as to cut across habitat gradients.
- If possible, new routes will be sampled annually for 3 years and biannually thereafter.
- The same observer should run each route for a minimum of 5 surveys.
- If we get Canadian interest in joining the effort, the boundary will be extended into

- the West Central Yukon and additional sampling clusters will be selected in that area.
- Barbara Boyle will construct the maps and do the generate the random sample.
 - Alan Brackney will write up the sampling plan for review.
 - The plan will be fully implemented in 2001.

SOUTHEASTERN REGION

Brad Andres, U. S. Fish and Wildlife Service

Below are three projects undertaken by Migratory Bird Management - Anchorage in southeastern Alaska over the last two years. Focus was on small landbirds.

Research Natural Areas Bird Inventory

Migratory Bird Management, Anchorage, (MBM) completed a breeding bird inventory of 11 Research Natural Areas (RNA) on the Tongass during 1997 and 1998 (in cooperation with the Forest Sciences Laboratory, Juneau). Data collected included bird point counts, bird relative abundance and breeding status, vegetation covertype classification, and vegetation structure. Birds were counted at 187 points and area search methods were used at each site. Density (birds/point) were calculated for each RNA and for overstory covertypes. Point count data are available electronically and final reports/manuscripts will be available by August 1999.

Alaska Army National Guard Local Training Area Bird Inventories

In 1997 and 1998, MBM surveyed 11 sites in Southeastern Alaska to document the status and abundance of breeding birds on Local Training Areas (LTA) of the Alaska Army National Guard. Most LTAs were on Native Corporation or State of Alaska land. Surveyed sites included: Juneau, St. James Bay, Haines, Angoon, Hoonah, Sitka, Kake, Petersburg, Wrangell, Craig, and Ketchikan. Data consists of lists, by site, of species, their relative abundance, and their breeding status. A final report should be available by June 1999.

Black Swift Status Review

The Black Swift is listed as a priority species, by Partners in Flight, in 7 of 12 western states. Because of their habitats of nesting on inaccessible cliffs, little is known about their breeding status in Alaska. In 1997, Migratory Bird Management, Anchorage (MBM) funded Jackie Canterbury to search for swift colonies in the Misty Fjords area. A manuscript of the results of her fieldwork and the literature review is in preparation.