ALASKA RAPTOR GROUP @ BOREAL PARTNERS IN FLIGHT & ALASKA BIRD CONFERENCE, CORDOVA 6 DECEMBER 2016
Alaska Raptor Group

Thirty-one raptor species, including 18 species of diurnal raptors (Orders Accipitriformes and Falconiformes) and 13 species of owls (Order Strigiformes), have been documented in Alaska, 23 of which are known to breed within the state. For conservation purposes, Boreal Partners in Flight categorizes raptors as "landbirds," along with songbirds, woodpeckers, and birds from several other families, because of their strong associations with terrestrial habitats. Many raptors are migratory or nomadic, spending nearly half their lives outside of Alaska, often in rapidly changing habitats. Resident species face unique challenges including the cascading effects of a rapidly warming and changing climate.

While raptors share many traits with other landbirds, their life history characteristics and the different methods used to study raptors set them apart. Raptors are apex predators in many of the ecological systems in which they occur, often at the top of complex food chains. However, learning about the status and trends of raptor populations is challenging, often requiring specific methodologies that do not transfer to other landbirds. Alaska is a land of extremes and its raptors emulate that diversity; therefore, conserving Alaska's raptor legacy will require a diversity of conservation strategies.

The Alaska Raptor Group was formed as a subcommittee of Boreal Partners in Flight in April 2008 to provide specific guidance on the study, management, and conservation of Alaska raptors and their habitats.

Mission statement
To promote the conservation of Alaska raptors and their habitats.
Specific objectives

Identify current and emerging conservation, management, and research issues concerning Alaska raptors throughout their year-round ranges.

Facilitate the development and implementation of Alaska raptor monitoring, research, and conservation programs.

Identify and implement effective methods for communicating the status of Alaska raptors, results of studies, and management and conservation issues.

Participation

Membership in the Alaska Raptor Group is voluntary and open to everyone. The Alaska Raptor Group includes representatives from a wide variety of public and private entities that support the conservation of raptors and their habitats.

Alaska Raptor Metadata Database

The Alaska Raptor Group recognizes the rich and long history of raptor research and survey efforts in Alaska, dating back to the middle of the last century. Collectively, these data represent a massive shared investment of time, money, and effort. However, the value of historical and current raptor projects is reduced if others are not aware of this work.

Therefore, the Alaska Raptor Group is asking all of you who conduct raptor research, monitoring, or surveys within the state of Alaska to share your metadata with others by entering the basic who, when, where, what, and why of your projects in the Alaska Raptor Metadata Database. This includes both past and present projects. The metadata contained in the database will then be available for general use to assess what has been done in the past and help guide future priorities and research. The database will also be a useful, straightforward means to summarize all raptor-related field projects that occurred within the state, annually.

NO ACTUAL SURVEY DATA OR RESULTS ARE REQUESTED. The database will only accept information about who conducted the work, where and when it was conducted, etc.

To submit your metadata, please email Chris Barger (chris.barger@alaska.edu) to obtain a user login and password. Then go to the Alaska Raptor Metadata Database site and complete the form.
What we have been doing
 “Stoops” – species action plans
 Metadata database development
 Alaska Wildlife Action Plan
 PIF Western Working Group meeting
 Steering committee changes (2 yr cycle)
  • Added Melissa Burns, resigned Laura Phillips, Jim Johnson
  • New chair: Carol McIntyre. Secretary: Chris Barger
  • Now at large: Travis Booms, M. Burns, Steve Lewis, John Shook, Denny Zwiefelhofer
 Projects
 New members: Carol_McIntyre@nps.gov
Raptor Stoop

- A species action plan:
  - To highlight issues of concern
  - To present conservation actions
- Goal is to have one for each raptor within Alaska.
- As each is finalized, present on website; update as necessary.
- Use as a vehicle for updating the Management Plan for Alaska Raptors
- Call for comments from YOU coming soon!
Username: Chris
Password: Raptors
Normal Data submission

I still need to Okay a new submission before you will see it online…

Links

- Submit metadata
- View all submitted metadata
- Download metadata
ARG Metadata Database for Alaskan Raptor Projects

Links

- Submit metadata
- View all submitted metadata
- Download metadata

Allows user to look at all Metadata and filter the database . . .
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**Search:**
ARG Metadata Database for Alaskan Raptor Projects

Links

• Submit metadata
• View all submitted metadata
• Download metadata

Download entire dataset – will soon add filters to allow download…
Coming soon – Updated database (we just got this operational)
And filter options for download!

Please provide feedback so I can make useful changes!!
AK Raptor Pubs 2015–2016

- **Bruggeman et al. 2016.** Multi-season occupancy models identify biotic and abiotic factors influencing a recovering Arctic Peregrine Falcon population. Ibis 61-74.
AK Raptor Pubs 2015–2016


Ritchie, R., D. Payer, and A. Wildman (ms. accepted w/rev. Arctic).

- 34 long-term areas (> 5 yr)
- 40, 35, 30+, etc yrs
- PEFA, BAEA, GOEA, GYRF
Selected Raptor Projects

- GOEA pop. estimate SC AK—UAF, NPS, USFWS
- Lead poisoning—AK DF&G
- Raptors and lake-bluffs NPRA—BLM/ABR
- Nesting raptors, Upper Kobuk—WHPacific/ABR
- Nesting raptors, Black River—BLM/ABR
- Raptor nests and detectability—USFWS/ABR
- Long-term raptor papers on Colville and Yukon—(Swem and Ambrose)
BALD AND GOLDEN EAGLE MOVEMENTS, STEVE LEWIS, USFWS
Bald Eagle Movement Strategies

- Part of Ph.D. dissertation by Rachel Wheat
- 4 Movement strategies:
  - Breeder = year-round residents
  - Localized = year-round residents that are not breeding; floaters
  - Migratory = regular seasonal movements between separate winter and summer ranges
  - Nomadic = irregular movements with little inter-annual consistency; wanderers
- Paper submitted to Movement Ecology
Golden Eagle Carry-over Effects

- Identifying linkages between conditions of non-breeding areas and reproductive success of migratory Golden Eagles
- Denali National Park and Preserve, Alaska (DNPP)
- Cooperative research project with Carol McIntyre (NPS), Todd Katzner (USGS), and Steve Lewis (FWS).
- Movement tracks of 21 Golden Eagles marked to date in DNPP.
GOLDEN EAGLE, UAF/AK DF&G
Spring Migrating Golden Eagles Captures at Gunsight Mnt
Currently 1 grad student (Joe Eisaguirre – UAF)

Main Goals
1) Identify migration routes, wintering areas and habitats
2) Assess potential energy development in areas used by eagles
3) Quantitative assessment of migration and summer habitat usage
2014, 15 PTT Deployed
- 10 adults, 5 sub-adults

2015, 23 PTT Deployed, 34 total captures
- 22 Adults, 1 sub-adult

2016, 15 PTT Deployed, 20 total captures
- 11 adults, 4 sub-adults

53 Total PTTs Deployed, 69 GOEA captured
No Future Plans For Captures in 2017
ROUGH-LEGGED HAWK, (SUPPORT FROM AK DF&G)
• Jeff Kidd – main PI
• 52 Total Deployments on Breeding and wintering grounds
• 75,000+ GPS points
• Potential work for motivated Grad student?

2016 Fall migration from RLHA captured in Nome
All GPS points from RLHA to date (GSM ptts)
Spring migration from birds captured on Wintering grounds
GOLDEN EAGLES IN
DENALI, MCINTYRE, NPS,

- Metrics measured annually at 90 nesting territories in Denali:
  - Territory occupancy
  - Females laying eggs
  - Nesting success
  - Fledgling production
  - Nesting phenology
Data collected using two systematic aerial surveys and additional ground-based surveys

- First surveys conducted during incubation to document occupancy and breeding activity
- Second surveys during late brood rearing to document success and production

- Territory occupancy is stable.
- Variation in proportion of females that lays eggs.
- Variation in nesting success.
- Variation largely explained by abundance of food (snowshoe hare and willow ptarmigan) on breeding grounds during pre-laying period.
Long-term decline in the probability of females laying eggs (McIntyre and Schmidt 2012).
Trends and Follow Up Research

- Conducting research focused on identifying drivers of this trend including:
  - Carry-over effects
  - Influence of intruders in territories
  - Landscape changes on breeding and wintering grounds
Next few years

- Continue monitoring work

- Complete analyses:
  - Explore variation in occupancy and breeding success across study area
SEWARD PENINSULA GYRFALCON, PEREGRINE FUND (AK DF&G)
Gyrfalcon Research and Conservation
The Peregrine Fund
Western Alaska
Focus on Gyrfalcons

- Arctic resident
  - Breeds 55°N to 82°N
- Dietary specialist
- Vulnerable to climate change

Liebezeit et al. 2012
Research into diet and climate change

Photography captures the diet, 2014 – 2015

- # nests = 23
- # photos = 780,000
- # prey items = 2,009 (99% ID’d)
Research into diet and climate change

% Biomass 2014

% Biomass 2015
Some territories are better than others
- Occupied more often, produce more young

WHY are some territories better?

HOW might changes to Gyrfalcon habitat affect their populations?

Partners:
Alaska Dept. Fish and Game
Falconers can play an important role
On the Radar

- Wind turbines in AK
- Wind turbines in migration corridors and wintering areas (GOEA telemetry)
- Lead poisoning
- Rapid landcover change (GYRF, GHOW)
- Rapid climate and weather changes (Colville River)
- Vent covers on outhouse stacks TWS(AK DF&G, NPS)
Membership is open

- New members:
  - Carol_McIntyre@nps.gov
  - alaska.usgs.gov/science/biology/bpif

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