

**Alaska Department of Fish and Game
State Wildlife Grant**

Grant Number: T-3 **Segment Number: 1**
Project Number: 4.12
Project Title: Assessing the value of Alaska state lands for an imperiled species,
the Rusty Blackbird
Project Duration: April 1, 2008 – June 30, 2011
Report Period: April 1, 2008 – March 31, 2009
Report Due Date: June 30, 2009
Partner: Alaska Department of Fish and Game

Project Objectives:

OBJECTIVE 1: Identify habitat types important for supporting high Rusty Blackbird densities and reproductive success.

JOB/ACTIVITY 1A: Identify sites that have high potential for supporting breeding Rusty Blackbirds (i.e., wetlands with open water and tall shrubs or trees), and that are accessible by road or boat, or easily on foot.

JOB/ACTIVITY 1B: Conduct surveys at selected sites for presence of Rusty Blackbirds.

OBJECTIVE 2: Identify structural and floristic features selected for nest sites within territories and how these are linked to reproductive success.

JOB/ACTIVITY 2A: Record data on characteristics of nest microsites.

JOB/ACTIVITY 2B: Record data on characteristics of nest areas and habitat.

OBJECTIVE 3: Identify factors limiting reproductive success such as low rates of mate pairing, high densities of predators, low egg viability, or high rates of nest predation.

JOB/ACTIVITY 3A: Intensively monitor nests for data on reproductive success.

JOB/ACTIVITY 3B: Estimate distances to birds and potential nest predators to correct our counts of each species for incomplete detectability.

OBJECTIVE 4: Determine if concentrations of contaminants in eggs and nestlings are at levels of concern.

JOB/ACTIVITY 4A: Analyze nestling blood samples from a random subset of 10 nestlings (5 Anchorage area, 5 Fairbanks area) for mercury. Other samples of blood will be archived for future analyses.

JOB/ACTIVITY 4B: Collect and sample unhatched eggs for contaminants.

OBJECTIVE 5: Determine the incidence of avian influenza among Rusty Blackbirds.

JOB/ACTIVITY 5A: Collect feces from nestlings and test for avian influenza.

OBJECTIVE 6: Determine linkages between breeding and wintering populations using stable isotopes.

JOB/ACTIVITY 6A: Collect feathers, measure stable isotope ratios, and compare with similar samples collected across the species' range to establish linkages between breeding and wintering populations.

Summary of Project Accomplishments:

OBJECTIVE 1:

JOB/ACTIVITY 1A:

We used satellite images and aerial photographs, combined with GIS layers of wetlands and infrastructure to identify and select survey units based on habitats where rusty blackbirds were likely to occur. In study areas which had been surveyed in previous years, we determined to focus efforts on survey units in which Rusty Blackbirds were detected previously.

- We identified the likely habitats through a review of the scant habitat information available on the species' nesting preferences in Alaska (Steve Matsuoka, unpublished report).
- We identified locations where rusty blackbirds have been known to occur in the past by reviewing all previous records of rusty blackbird observations as compiled by the Alaska Natural Heritage Program, (University of Alaska Anchorage) and the Alaska eBird Portal (Alaska Department of Fish and Game, Audubon, and Cornell Lab). We put out a general call for past and present rusty blackbird observations to local birding groups such as the "Mat-Su Birders," and collected the dates and locations of all available observations.
- We reviewed satellite and aerial photographs (including free images available through sources such as Google Earth ®) of potential study sites around south-central Alaska and other parts of the state (Kenai Peninsula, Anchorage Bowl, Matanuska-Susitna Valley, Tetlin National Wildlife Refuge, Copper River Delta, Yukon Flats National Wildlife Refuge, Minto Flats).
- A review of the above information demonstrated that the types of wetlands occupied by rusty blackbirds differed according to local geography. We determined that survey units would be defined and selected differently in various study areas. In study areas consisting of uplands with discreet and isolated wetlands, survey units would be all freshwater bodies and wetlands with emergent vegetation (especially those > .5 ha) plus a 75-m buffer around each. In study areas consisting mostly of floodplains and nondiscreet waterbodies and wetlands, survey units will be defined by 500-m x 500-m grids that are covered by >20% freshwater bodies or wetlands with emergent vegetation.

We selected specific study units based on the above processes in the following six study areas:

- Yukon Flats National Wildlife Refuge, near Fort Yukon, Alaska (YUK)
- Tanana Flats at Fort Wainwright, Fairbanks Alaska (TAN)
- Tetlin National Wildlife Refuge, near Tok, Alaska (TET)
- Nancy Lakes State Recreation Area, near Willow, Alaska (NAN)
- Ft. Richardson and Elmendorf Air Force Base, Anchorage, Alaska (ANC)
- Chugach National Forest, Copper River Delta, near Cordova, Alaska (CRD)

We convened or attended several meetings to isolate specific hypotheses and determine the research objectives necessary to understand and reverse the decline of this species of concern.

- We attended two meetings of the International Rusty Blackbird Technical Working Group (IRBTWG) to refine and coordinate research needs and objectives. The first IRBTWG meeting was held at the 4th International Partners in Flight Conference in McAllen, Texas, February 13-16, 2008; the second at the Powdermill Avian Research Center, October 8-12, 2008.
- December 11, 2008 we convened a meeting in Anchorage among Alaska cooperators and stakeholders to agree on research priorities and probable study sites.

January 2009: I wrote the coordinated study plan for Rusty Blackbird research in Alaska.

February- March 2009: I developed the specific project protocols for the Alaska research.

January-March 2009: I coordinated research activities and personnel needs with collaborators and I began purchasing equipment.

JOB/ACTIVITY 1B:

All other Objectives and Job Activities are addressed in the course of field work, which did not commence until April 2009, which is after the end of this current reporting period. Accomplishments towards meeting these objectives will be reported during the next reporting cycle.

OBJECTIVE 2:

JOB/ACTIVITY 2A:

No progress.

JOB/ACTIVITY 2B:

No progress.

OBJECTIVE 3:

JOB/ACTIVITY 3A:

T-3-4.12 Rusty Blackbird
FY09 Annual Performance Report

No progress.

JOB/ACTIVITY 3B:

No progress.

OBJECTIVE 4:

JOB/ACTIVITY 4A:

No progress.

JOB/ACTIVITY 4B:

No progress.

OBJECTIVE 5:

JOB/ACTIVITY 5A:

No progress.

OBJECTIVE 6:

JOB/ACTIVITY 6A:

No progress.

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