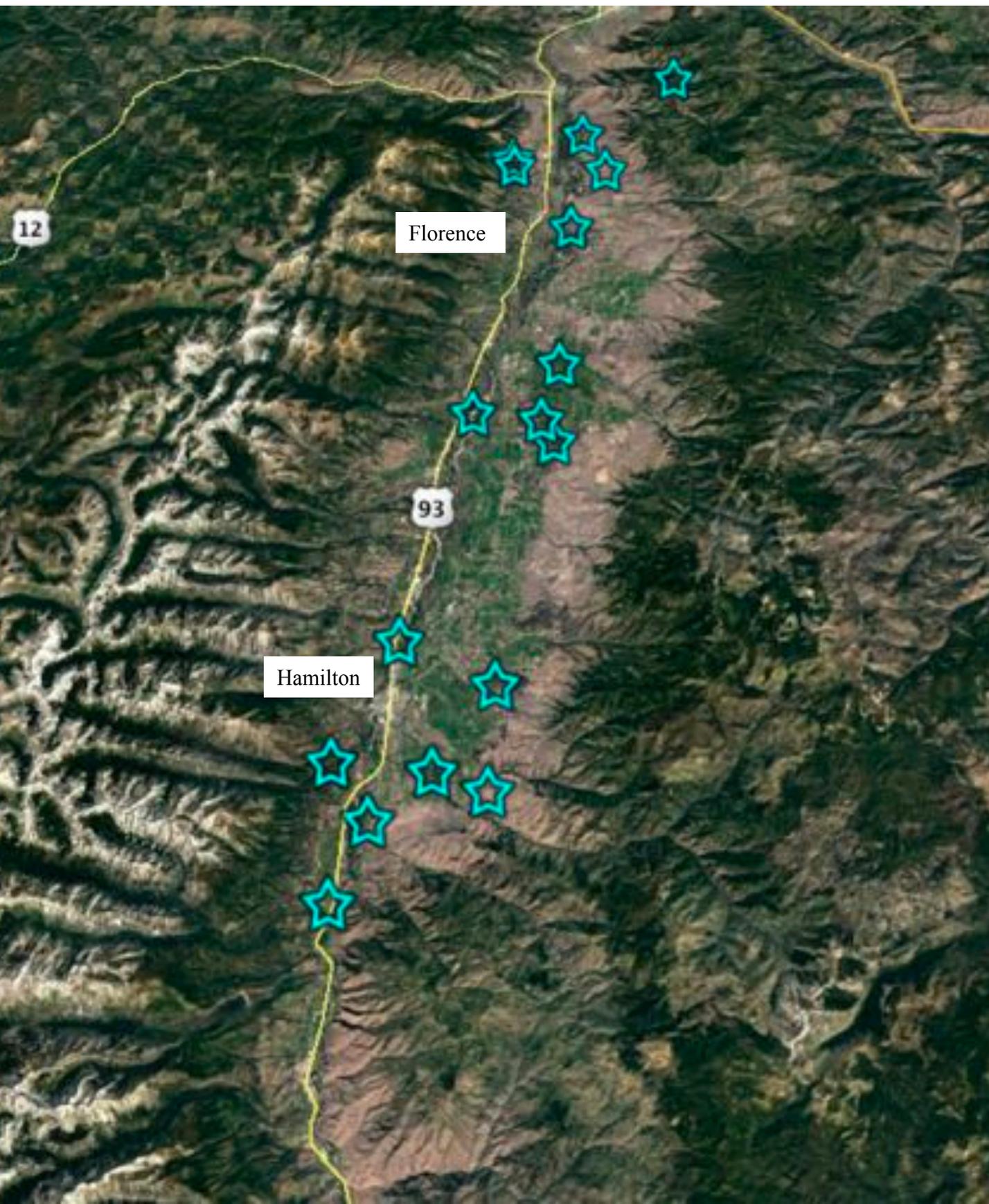


Bitterroot Valley Winter Eagle Project
Spring 2019 Update
Eric Rasmussen
5/3/19



Study Area

During the winter of 2018-2019 we placed cameras at 17 locations on private lands throughout the Bitterroot Valley, stretching from the Miller Creek drainage southeast of Missoula to the confluence of Lost Horse Cr. and the Bitterroot River, south of Hamilton.



Our sites vary in terrain, ranging from the Bitterroot floodplain up into the foothills of the Sapphire and Bitterroot Mountains. We see consistent eagle visitation at all sites.



Carcass Collection

We collected and set 228 white-tailed deer, 11 mule deer, and two elk this winter. Once again, we owe many thanks to the Montana Department of Transportation for helping us with roadkill collection efforts.



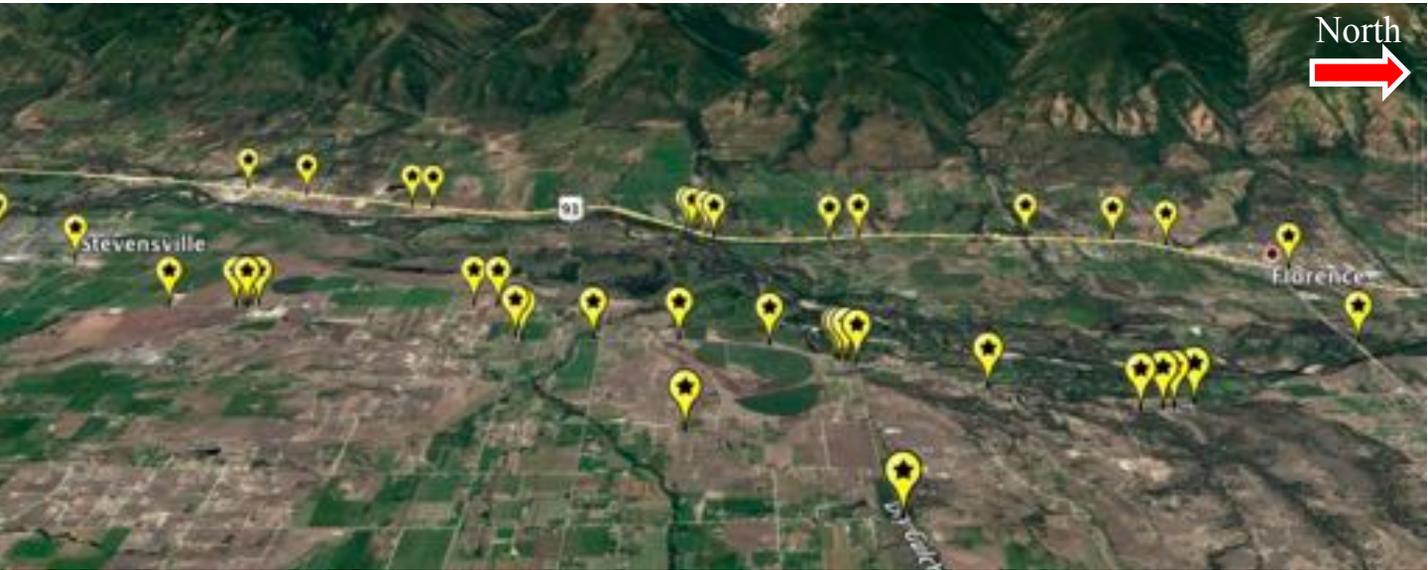
Snow was scarce the first half of the winter, making for easy and safe roadkill collection along the two main Bitterroot Valley highways. At certain high-risk areas, we often found two or three deer within sight of each other.



Heavy snow and cold temperatures made the end of winter especially difficult for ungulates. Roadkill remained abundant *and* we collected winter-killed deer from private properties when alerted by landowners.



We picked up 134 roadkill animals along Bitterroot roadsides. When combined with the roadkill we picked up at the Department of Transportation transfer station, at least 241 ungulates died on Bitterroot roadways this winter.



Zooming in we can see areas of high risk for deer/vehicle collisions. From Florence, south to Stevensville, both highways had numerous concentrations of roadkill near agricultural areas and certain creeks (above).



The Eastside highway south of Stevensville to Bell Crossing contained the most roadkill in the valley (middle).

Roadkill was scattered in the Hamilton area, with the exception of Skalkaho Rd. (lower left)



Eagle Re-sights

After three years of project implementation, we've seen a big increase in eagle re-sightings.



Despite fewer sites this year, we documented nearly three times as many marked eagles as the first two years combined. The season started strong in the Sapphire Mountains' foothills. We detected three marked Golden Eagles and one Bald Eagle, all remarkably at the same location within two weeks. Golden Eagle "295" had not been seen for nearly three years after RVRI captured her as a third year female on the MPG Ranch on 12/23/15.



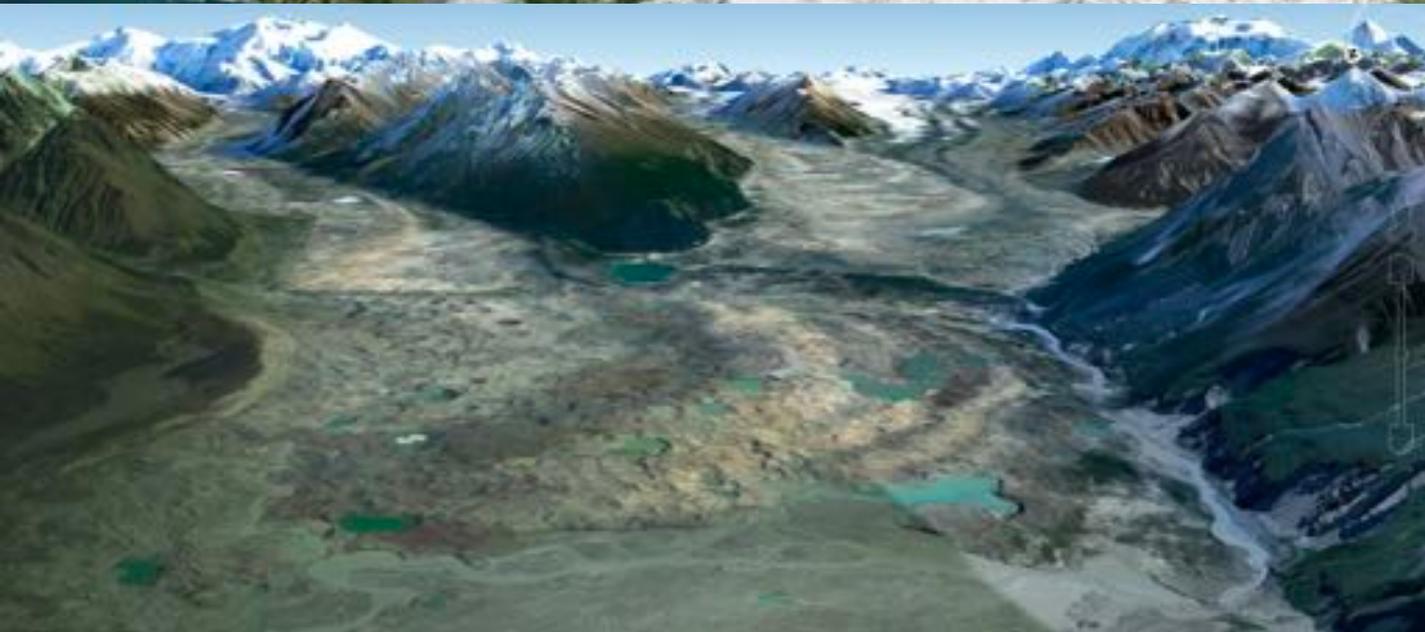
One day later we detected a Golden Eagle with a satellite transmitter. We identified the eagle “Nico”, a fourth-year eagle captured by RVRI in the foothills of the Bitterroot Mountains, west of Victor, on 2/8/18.



Nico's migration route follows the Golden Eagle "Highway". Traveling north in the heart of the Rockies, Nico is now on the edge of the Yukon Territory and Southeast Alaska.



Perhaps Nico will remain in this remote area near Kluane National Park of Canada and the Wrangell-St. Elias National Park.



Eagle-eye view of Nico's current location.

At this same site, we also detected Golden Eagle "390", one of the few eagles captured by RVRI on the MPG Ranch during fall migration. They captured him as a hatch-year eagle on 9/20/18.



We also re-sighted Bald Eagle #48 at this site. RVRI captured it on 2/28/18 as an adult in the Bitterroot foothills west of Victor.



RVRI captured the adult Bald Eagle “Relish” on 1/18/19 near Hamilton. We detected it on a camera trap eight days later near Florence. The transmitter data tells us that between February and the end of March, Relish flew north into British Columbia—then back down to the Missoula area. By early April, Relish migrated straight to the beginning of the Mackenzie River in the Northwest Territories where it currently stays (map image below).



Other Wildlife Detections

We continued detecting other raptor species at the carcasses, especially when snow depth increased. A Red-tailed (right) and Rough-legged Hawk (left) share a meal at opposite ends.



Great-Horned Owls show up regularly at numerous stations.



93 inHg ↑ 8 11°F 02/14/2019 04:19AM SKAL2

Coyotes and Black-billed Magpies clean up every last piece of a carcass.



26.60 inHg - 8 22°F 03/09/2019 01:52PM BELL1

Mammalian scavengers also get a share of the carcasses. A Mountain Lion chases off a Magpie (top). A Red Fox pauses during a meal to examine the hillside above (middle). An American Marten (bottom) likely heard the camera click at the right moment.



Citizen Science

We currently have over 5,000 Citizen Science volunteers on the Zooniverse.org website to help us classify the captured images.



1 person is talking about Western Montana Wildlife right now.

Join in

WESTERN MONTANA WILDLIFE STATISTICS

81% Complete

5,065

Volunteers

543,793

Classifications

79,292

Subjects

64,581

Completed Subjects

WORDS FROM THE RESEARCHER



To help with the Bitterroot Valley Winter Eagle Project click "Get Started". If you're new to classifying images in a Zooniverse Project please explore the

ABOUT WESTERN MONTANA WILDLIFE

The MPG Ranch promotes conservation through restoration, research, education and information sharing. For more information, please see our website.

Current partners on the Bitterroot Valley Winter Eagle Project:



EXTERNAL PROJECT LINKS

- Montana Field Guide
- FAQ
- Bitterroot Audubon
- Raptor View Research Institute
- BitterrootAudubon/



Western Montana Wildlife

ABOUT CLASSIFY TALK COLLECT RECENTS LAB

Keep those eyes peeled: legs bands in this dataset! 🦅🦉
If you see a band, use the tags #rystal_band or #colored_band or where can we see what you've found!



25.14 inHg | 31F | 02/26/2018 11:48AM SUL A1

TASK TUTORIAL

Looks Like

Adult Bald Eagle	Deer	Bobcat
Immature Bald Eagle	Elk	Domestic Cat
Adult Golden Eagle	Horse	Raccoon
Immature Golden Eagle	Horse	Skunk
Unknown Eagle	Cow	Weasel
Hawk	Wolf	Other Small Mammal
Owl	Coyote	Human
Crow/Raven	Fox	Unknown Animal
Black-billed Magpie	Domestic Dog	No Animal
Other Bird	Mountain Lion	

Showing 26 of 29

Done

Bitterroot Valley Audubon volunteers launched into a new citizen science project counting Bald Eagles near calving fields. Each surveyor tallies the different plumage/age categories of eagles and enters data into eBird.

CHECKLIST 554249489

Tue 26 Mar 2019 10:55 AM

Birch Creek - BAEA/calving survey  Ravalli County, Montana, United States

Mel Holloway

Traveling Complete 

 2  1 hr, 13 min  5.24 mi

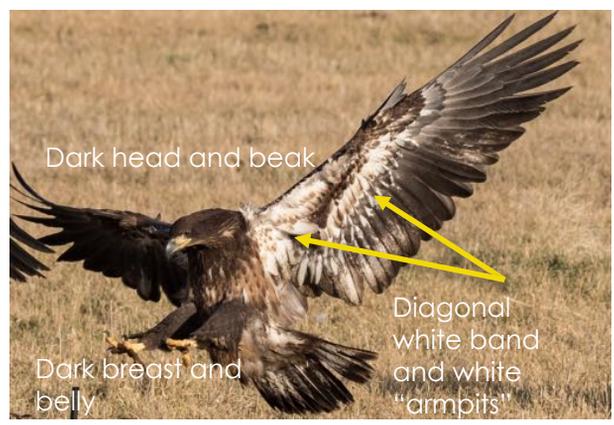
 13 Species observed +1 other taxa

- 86 Canada Goose *Branta canadensis*
- 11 Mallard *Anas platyrhynchos*
- 8 Rock Pigeon (Feral Pigeon) *Columba livia* (Feral Pigeon)
- 72 Eurasian Collared-Dove *Streptopelia decaocto*
- 7 Bald Eagle *Haliaeetus leucocephalus*
 - Basic 1 x 4
 - Basic 2 x 2
 - Definitive x 1
- 15 Red-tailed Hawk *Buteo jamaicensis*
- 1 Red-tailed Hawk (Harlan's) *Buteo jamaicensis harlani*
- 1 Rough-legged Hawk *Buteo lagopus*
- 3 Northern Flicker *Colaptes auratus*
- 2 Black-billed Magpie *Pica hudsonia*
- 16 Common Raven *Corvus corax*
- 3 Mountain Bluebird *Sialia currucoides*
- 108 European Starling *Sturnus vulgaris*
- 83 Red-winged Blackbird *Agelaius phoeniceus*



Defining the approximate age of Bald Eagles based on plumage characteristics is notoriously difficult. We put together a montage of photos so the volunteers have a reference guide.

Juvenile



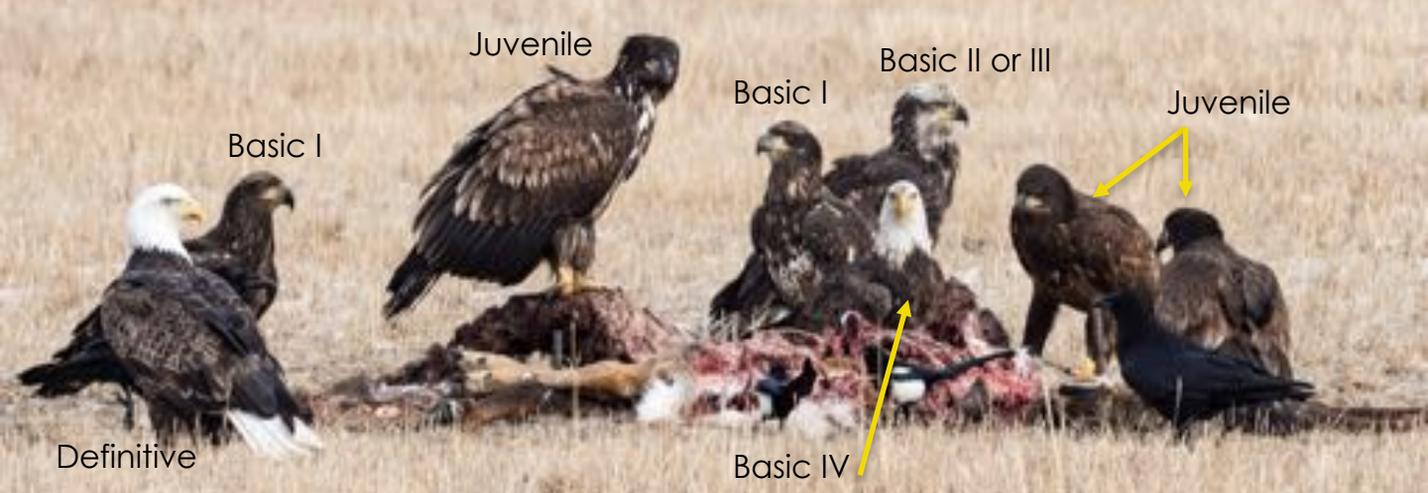
Basic I



Basic IV



Photos courtesy B. Garten & E. Shuttleworth



This project would not have been possible without the hospitality of many private landowners throughout the Bitterroot Valley.



Staff involved on this project include:

MPG Ranch:

Kate Stone
Eric Rasmussen
Troy Maier
Mike McTee

Raptor View Research Institute:

Rob Domenech
Adam Shreading
Jack Toriello
Mary Scofield
Brian Busby
Danny Stark



Photo courtesy M. Falivene