

Raptor View Research Update: Eagle Trapping
January 9, 2013
Adam Shreading

We captured 8 Golden Eagles and 7 Bald Eagles between 11/29/12 and 1/7/13. We took a blood sample from each eagle to test for lead. On January 6, a Golden Eagle tested at 39.2 µg/dl; the highest value so far recorded at MPG Ranch. On January 6, a Golden Eagle tested at 39.2 µg/dl; this value is higher than that of any eagle captured on the MPG Ranch. The average value for Bald and Golden Eagles tested this season was 19.8 ug/dl. Last year the average was 18.5 ug/dl.

Table 1. Blood/lead levels of 15 eagles captured this winter. Stages of exposure include: Background (0-10 µg/dl), sub-clinical exposure (10-60 µg/dl), clinical exposure (60-90 µg/dl), and acute toxicity (90+ µg/dl).

Date	Species	Age	Sex	Blood Lead Levels (µg/dl)
11/29/2012	GE	Second Year	F	16.8
12/4/2012	GE	Hatch year	M	34.3
12/9/2012	GE	Fourth Year	M	25.3
12/13/2012	BE	After Third Year	F	15.7
12/13/2012	BE	After Fifth Year	F	4.2
12/14/2012	BE	Hatch Year	M	21.4
1/1/2013	BE	After Fifth Year	F	25.8
1/2/2013	GE	After Fifth Year	M	23.6
1/2/2013	BE	Second Year	F	7.9
1/3/2013	BE	After Fifth Year	F	20.8
1/3/2013	GE	Second Year	F	19.9
1/5/2013	GE	Second Year	M	12.6
1/6/2013	BE	Second Year	M	14.7
1/6/2013	GE	Second Year	M	39.2
1/7/2013	GE	After Fifth Year	F	14.5



Blood is drawn from the brachial vein of this Golden Eagle.



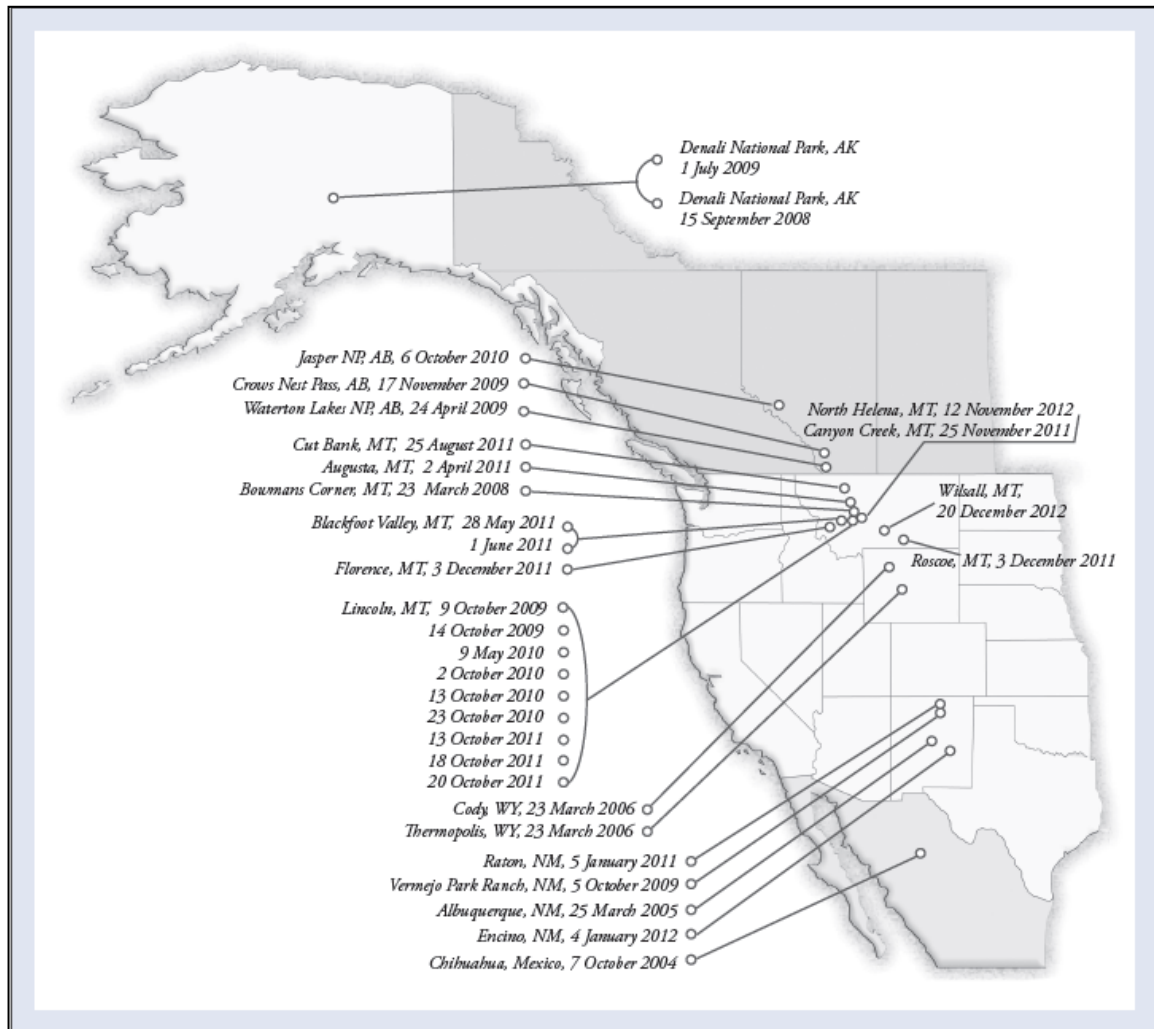
The first adult Bald Eagle captured in 2013.

Wing loading, a relationship between weight and wing/tail surface area, is a key aerodynamic feature of flight. Lightly wing-loaded raptors such as Northern Harriers exhibit a slow, buoyant flight with a hunting strategy characterized as searching. These raptors commonly hunt and fly in an energy efficient manner, and don't require great speed to capture their prey. Other raptors, known as attackers, are heavily wing-loaded. These powerful, high-speed flyers such as the Gyrffalcon and Merlin, employ a direct pursuit style of hunting, often aimed at a swift, larger-bodied (relative to their size) prey species. To understand where Bald and Golden Eagles fit in along this spectrum, we measure their mass and the surface area of their flight feathers.



The grid of the wing board allows us to determine the surface area of each eagle's wings and tail.

In addition to testing blood, we outfit young Golden Eagles with wing tags so they may be individually identified from a distance. We recently encountered two Golden Eagles that were wing-tagged last winter (wing tags C-166 and C-168). Both birds fed at our baits. C-166 was an after second year male captured February 15, 2012; C-168 was a third year unknown sex Golden Eagle captured March 2, 2012. We will install cameras at our baits in the next couple days and we hope our number of reencounters will increase.



Wing tags have increased our number of reencounters by nearly 300%. This map shows the locations of all Raptor View Research Institute's wing tag resightings as of January 2012.

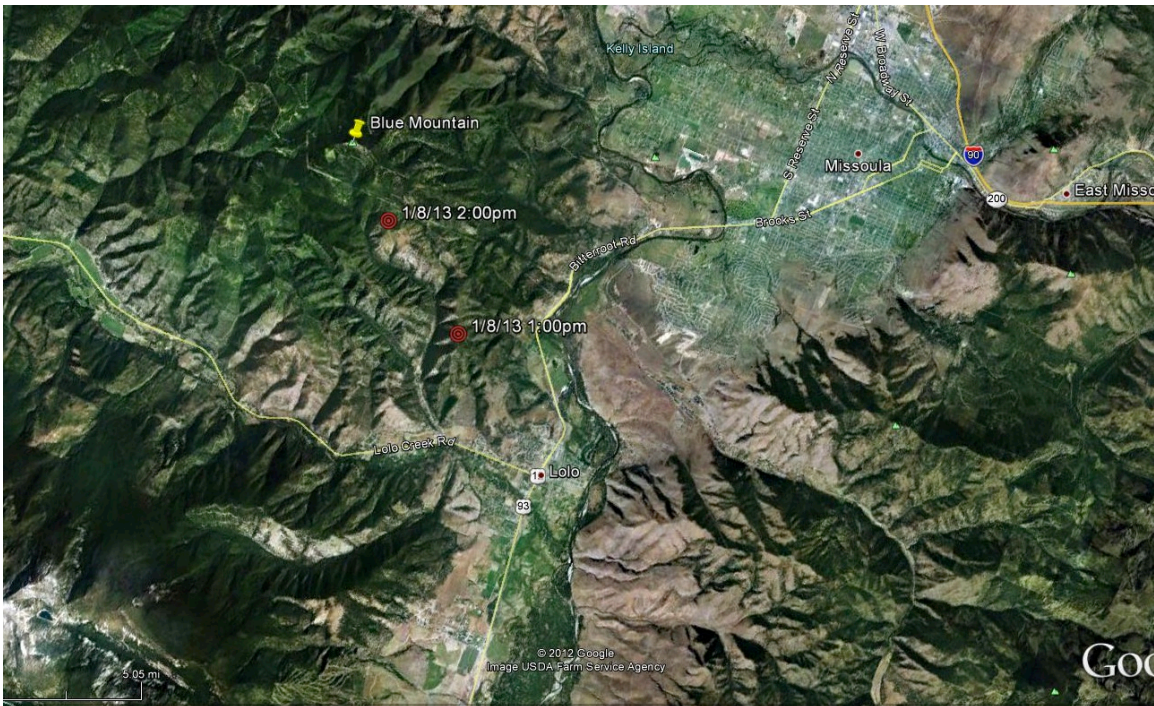
We outfitted both adult Golden Eagles captured this winter with GPS satellite transmitters. This brings the number of adult Golden Eagles with active transmitters in the Bitterroot Valley up to four. We hope to have twelve individuals outfitted by winter's end. Each GPS unit provides up to 16 locations per day for each bird and may last until 2015. Movement data will contribute to an analysis of wintering Golden Eagles' habitat use in the Bitterroot Valley. We await the first data transmission from the new transmitters –an update of the Google Earth network link will appear in the next few days.



An adult male Golden Eagle outfitted with a GPS satellite transmitter, and ready for release.



We captured this adult female Golden Eagle on 1/7/13. Tyler feeds her chunks of deer carcass prior to release



A day after her release, the female Golden Eagle was located in the Blue Mountain area northwest of Lolo.