



# Montana Fish, Wildlife & Parks

## Elk Brucellosis Project—May/June Update

A total of 9 pregnant, brucellosis seropositive elk were outfitted with vaginal implant transmitters (VITs) during the January 2012 capture. VITs are expelled during an abortion or birthing event, and a change in the signal pulse rate alerts biologists that the VIT has been expelled (i.e. an abortion or live birth event has occurred). After the VIT is expelled, biologists locate the VIT and search the area for evidence of an abortion or live birth event. We retrieved the last of the 9 VITs on June 13<sup>th</sup>. Since the VITs were deployed in January, we confirmed two abortions and 6 live births. One female died in April, and was pregnant at the time of death. We attempted to verify all live calves by locating them either on the ground or from the air. All but one of the assumed live births was a cow observed with a calf or nursery group of cows and calves. Cow elk #13 was the last cow to give birth and a live calf is yet to be confirmed, but no evidence of an abortion was observed at the birth site. Birth sites were located within the Centennial Valley, the upper Ruby River drainage, or in Idaho.

All of the VITs were retrieved within 5 days of being expelled and most were retrieved within 48 hours. Tissue samples from the two aborted calves revealed one testing positive for brucellosis and one negative. The soil sampled beneath the negative calf tested positive for the presence of the brucella bacteria. A final report will be produced and distributed when all the laboratory results are received.

Thirty-three of the 35 radio-collared animals were located from the air on Friday, June 15<sup>th</sup> (Figures 1 & 2). One seronegative elk has been missing since capture, and we were unable to locate one additional seronegative elk during this flight. All of the other collars were transmitting on “live” mode during the flight. One seropositive elk was heard on “live” mode on the north side of the Centennial mountains, but we were unable to get an exact location.

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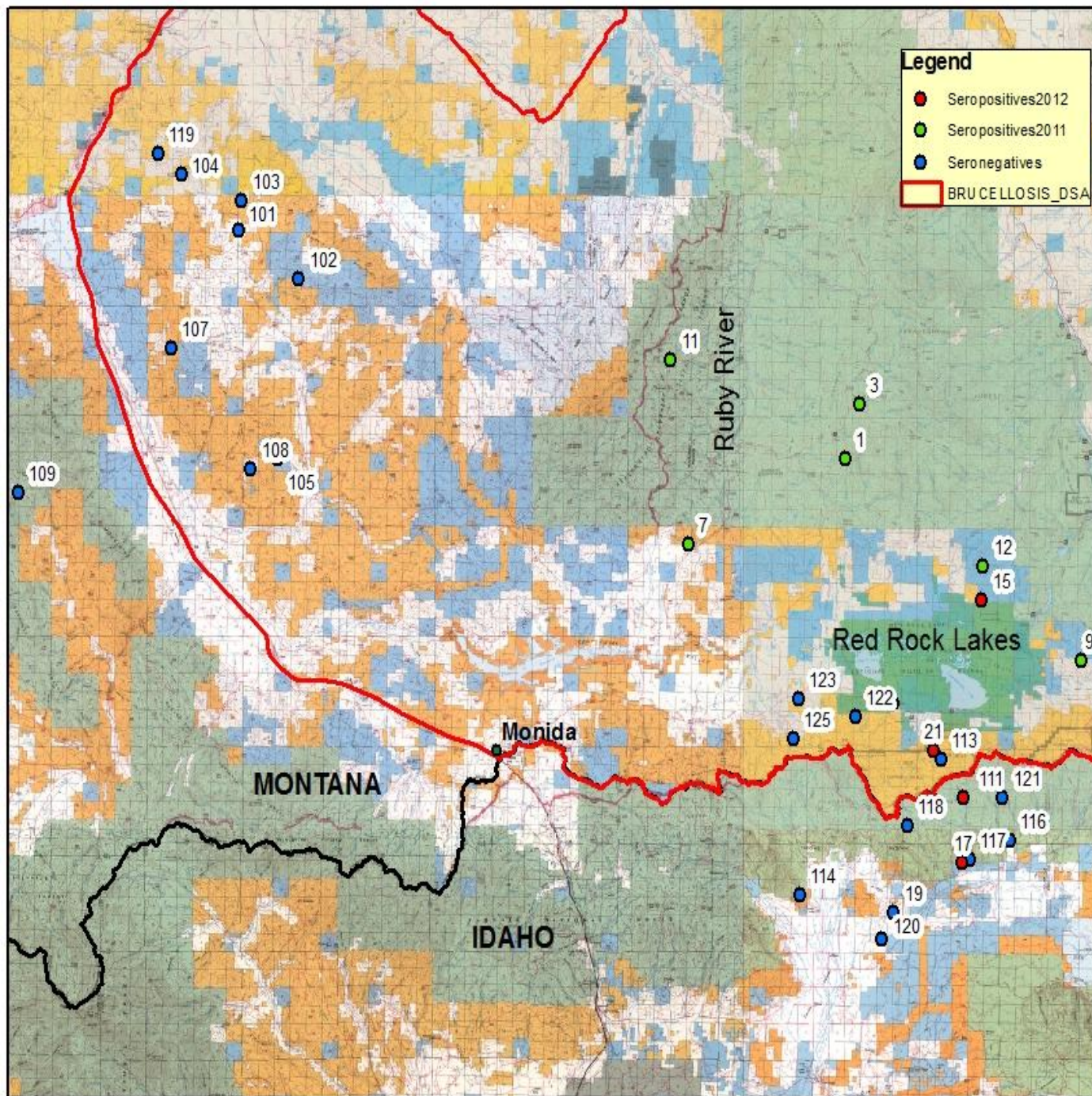


Figure 1. All collared elk located during the 6/15/12 monitoring flight. Seropositive elk captured in 2012 are shown in red and seropositive elk captured in 2011 are shown in green. Seronegative elk, all captured in 2012, are shown in blue.



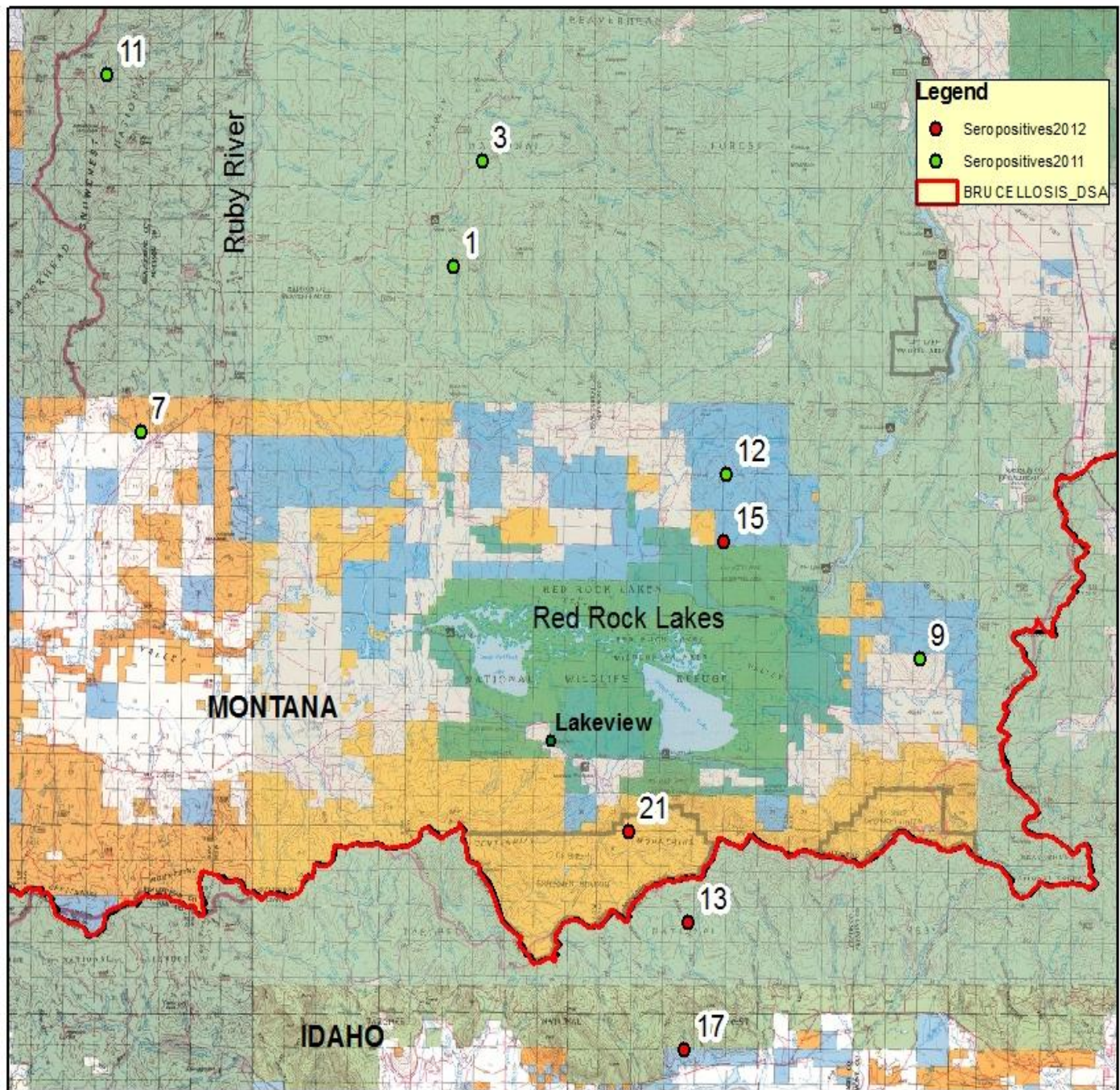


Figure 2. All seropositive elk collared during 2011 in the Ruby/Blacktail area are shown in green, and seropositive elk captured in the Sage Cr/Little Basin Cr area are shown in red. Animal numbers 1 and 17 aborted their calves between mid-April and early May. Animal numbers 11, 12 and 124 were not pregnant at the time of capture. Animal 124 is not shown because an exact location was not recorded during the flight. Animal numbers 3, 7, 9, 15 and 21 gave birth to live calves or were observed in nursery groups suggesting a calf was present. Animal number 13 gave birth but a live calf has yet to be confirmed. No evidence of an abortion event was observed at the birth site.

Table 1. Thirty elk were captured and collared in 2012, and an additional 7 brucellosis seropositive elk from year 1 of this study were also recaptured and collared

<b>ID #</b>	<b>Capture Area</b>	<b>First capture year</b>	<b>Serostatus</b>	<b>Pregnancy status</b>	<b>Most recent location</b>
1	Ruby	2011	Positive	Pregnant	West Fork Cabin/Gravellies
3	Ruby	2011	Positive	Pregnant	West Fork Cabin/Gravellies
5	Ruby	2011	Positive	Pregnant	Mortality Martin Cr/Ruby River
7	Ruby	2011	Positive	Pregnant	Long Creek/Gravellies
9	Ruby	2011	Positive	Pregnant	Alaska Basin
11	Ruby	2011	Positive	Open	Timber Creek/Snowcrest Mtns
12	Ruby	2011	Positive	Open	W. of Elk Lake/Gravellies
13	Little Basin Cr/ Sage	2012	Positive	Pregnant	E. Fork Sheridan Cr/Centennials
15	Little Basin Cr/ Sage	2012	Positive	Pregnant	W. of Elk Lake/Gravellies
17	Little Basin Cr/ Sage	2012	Positive	Pregnant	N. of Sheridan Res/Centennials
19	Little Basin Cr/ Sage	2012	Negative	Pregnant	S. of Centennials/Idaho
21	Little Basin Cr/ Sage	2012	Positive	Pregnant	Odell Creek/Centennials
101	Clark Canyon	2012	Negative	Pregnant	Sheep Cr/Blacktail Mtns
102	Clark Canyon	2012	Negative	Pregnant	Cattle Creek/Blacktail Mtns
103	Clark Canyon	2012	Negative	Pregnant	Sheep Cr/Blacktail Mtns
104	Clark Canyon	2012	Negative	Pregnant	Gallagher Mtn/Blacktail Mtns
105	Kidd Exit	2012	Negative	Pregnant	Big Spring Gulch/Blacktail Mtns
106	Kidd Exit	2012	Negative	Pregnant	Mortality 2/24/12 Clark Canyon
107	Kidd Exit	2012	Negative	Pregnant	N. Buck Creek/Blacktail Mtns
108	Red Rock Exit	2012	Negative	Pregnant	Spring Gulch/ Blacktail Mtns
109	Red Rock Exit	2012	Negative	Pregnant	McBride Cr/Tendoys
110	Red Rock Exit	2012	Negative	Pregnant	Missing
111	Little Basin Cr/ Sage	2012	Negative	Pregnant	Taylor Creek/Centennials
112	Little Basin Cr/ Sage	2012	Negative	Pregnant	Mortality 3/27/12 Lima Reser.
113	Little Basin Cr/ Sage	2012	Negative	Pregnant	Odell Creek/Centennials
114	Little Basin Cr/ Sage	2012	Negative	Pregnant	W. Camas Creek/Idaho
115	Little Basin Cr/ Sage	2012	Negative	Pregnant	Missing
116	Little Basin Cr/ Sage	2012	Negative	Pregnant	Taylor Creek/Centennials
117	Little Basin Cr/ Sage	2012	Negative	Pregnant	N. of Sheridan Res/Centennials
118	Little Basin Cr/ Sage	2012	Negative	Pregnant	W. Dry Creek/Centennials
119	Little Basin Cr/ Sage	2012	Negative	Pregnant	Gallagher Creek/Blacktail Mtns
120	Little Basin Cr/ Sage	2012	Negative	Pregnant	S. of Centennials/Idaho
121	Little Basin Cr/ Sage	2012	Negative	Pregnant	Taylor Creek/Centennials
122	Little Basin Cr/ Sage	2012	Negative	Pregnant	Humphry Creek/Centennials
123	Little Basin Cr/ Sage	2012	Negative	Pregnant	Tipton Creek/Centennials
124	Little Basin Cr/ Sage	2012	Positive	Open	N. Side Centennial Mtns
125	Little Basin Cr/ Sage	2012	Negative	Pregnant	Winslow Creek/Centennials