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Region 2 Wildlife Quarterly

February 2020

Red-tailed Hawk in Grass Valley, January 2020

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Region 2, 3201 Spurgin Road, Missoula MT 59804, 406-542-5500

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Region 2 Wildlife Staff

Matthew Bertellotti, Wildlife Management Areas Maintenance, 406-542-5500
Liz Bradley, Wildlife Biologist, Missoula-West, lbradley@mt.gov, 406-542-5515
Julie Golla, Wildlife Biologist, Upper Clark Fork, jgolla@mt.gov, 406-563-2531
Scott Eggeman, Wildlife Biologist, Blackfoot, seggeman@mt.gov, 406-542-5542
Eli Hampson, Cougar and Bear Management Specialist, 406-542-5508
James Jonkel, Bear and Cougar Management Specialist, jajonkel@mt.gov, 406-542-5508
Kendra McKlosky, Hunting Access Coordinator, kmcklosky@mt.gov, 406-542-5560
Rebecca Mowry, Wildlife Biologist, Bitterroot, rmowry@mt.gov, 406-363-7141
Tyler Parks, Wolf-Carnivore Management Specialist, tylerparks@mt.gov, 406-542-5500
Molly Parks, Wolf-Carnivore Management Technician, 406-542-5500
Tyler Rennfield, Hunting Access Resource Specialist, trennfield@mt.gov, 406-542-5510
Torrey Ritter, Wildlife Biologist, Nongame, torrey.ritter@mt.gov , 406-542-5551
Brady Shortman, Wildlife Management Areas Maintenance Sup, bshortman@mt.gov 406-693-9083
Adam Sieges, Wildlife Management Areas Maintenance, 406-693-9083
Shawn Smith, Wildlife Management Areas Maintenance, 406-693-9083
Mike Thompson, Regional Wildlife Manager, mthompson@mt.gov, 406-542-5516
Bob White, Wildlife Management Areas Maintenance, 406-542-5500
Statewide Research Staff Housed at Region 2 Headquarters:
Nick DeCesare, Wildlife Biologist, Moose Research Project, ndecesare@mt.gov, 406-542-5500
Ben Jimenez, Research Technician, bjimenez@mt.gov, 406-542-5500

Communication & Education Division:
Vivaca Crowser, Regional Information & Education Manager, vcrowser@mt.gov, 406-542-5518

The Region 2 Wildlife Quarterly is a product of Montana Fish, Wildlife & Parks; 3201 Spurgin Road; Missoula 59804. Its intent is to provide an outlet for a depth of technical information that normally cannot be accommodated by commercial media, yet we hope to retain a readable product for a wide audience. While we strive for accuracy and integrity, this is not a peer-refereed outlet for original scientific research, and results are preliminary. October 2015 was the inaugural issue.

Nothin' Personal

The Rough-legged Hawk does merely what it's wired to do: hunt voles. And, while it may be hard to classify the scraps from its meal (above) as to genus and species, we can be fairly confident that they are of a meadow vole (left). Happy ending: It's unlikely that the hawk ate this particular vole; the hawk was photographed in January on Deschamps Lane, while the meadow vole was photographed last spring at Council Grove State Park, a few miles away.

The vole (above) never had much of a chance. According to Marks et al. (2016):

> *Voles mark their runways with urine and feces that are visible in ultraviolet light. The vision of many diurnal birds extends into the ultraviolet spectrum, and results of a recent experimental study suggest that Rough-legged Hawks use vole scent marks as cues to identify profitable hunting areas (Koivula and Viiatala 1999). Indeed, they probably can assess vole numbers across large areas simply by flying over and looking for scent marks.*

Reference Cited:

Marks, J.S., P. Hendricks and D. Casey. 2016. *Birds of Montana*. Buteo Books, Arlington, Virginia.

Grass Valley . . .

. . is located northwest of Missoula between I-90 and the Clark Fork River.

Rough-legged Hawks breed in northernmost North America and winter all across the conterminous United States, except the Southeast. Their distribution in Montana varies from winter to winter depending on vole availability.

For Rough-legged Hawks to flourish in winter, they need fields with dense vegetation and leaf litter to support vole populations, as well as open space sufficient for hunting and avoiding excessive disturbance.

In winter, numerous hawks and eagles gather in Grass Valley to hunt small mammals in fields and pastures from perches atop fences, pivots and power poles.

The scenes on this page and the following page were photographed over the past couple of winters along Mullan Road (between the old pulp mill and Frenchtown) and Loiselle Lane, in the heart of Grass Valley.

Red-tailed Hawk

Red-tailed Hawks share Grass Valley with Rough-legged Hawks in winter.

While Rough-legged Hawks (previous page) specialize in hunting voles, Red-tailed Hawks hunt a variety of small mammals, from voles to rabbits, and birds as large as pheasants.

In January, we've routinely observed dozens of hawks—Rough-legged and Red-tailed—hunting in Grass Valley on any given afternoon.

Owing, in part, to their broad diet, Red-tailed Hawks may be found in Grass Valley and across Montana year-round, while the more specialized Rough-legged Hawk finds its niche in Montana only in winter.

When driving Mullan Road from Missoula toward Frenchtown, observations of hawks increase markedly north of the old pulp mill.

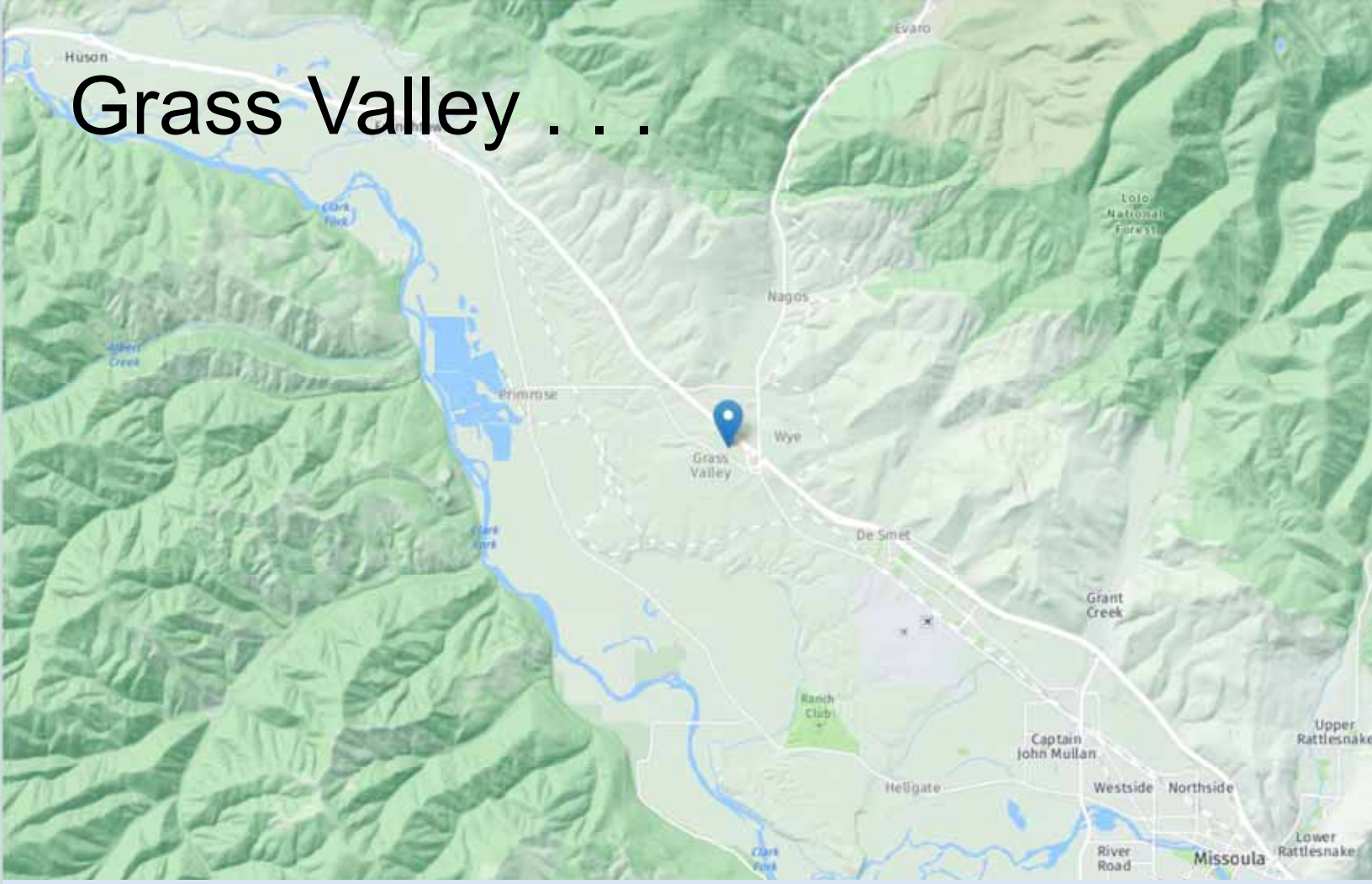
Red-tailed Hawks in Grass Valley may not be the same individuals in summer and winter. As with Bald Eagles, Red-tailed Hawks may migrate out of Grass Valley to winter farther south, and may be replaced by Red-tailed Hawks migrating from the north to winter in Grass Valley.

Hayfields, pastures and tall grass/brush along ditches and fence lines increase in acreage between the old pulp mill and Frenchtown. Combined with expansive open spaces for airborne hunting and maneuvering, this makes Grass Valley exceptional winter habitat.

Council Grove . . .

. . . State Park (pictured), plus Kelly Island and Erskine Fishing Access Sites are FWP-owned properties that conserve critical riparian habitat along the Clark Fork River on the western fringe of Grass Valley.

Grass Valley . . .



. . . is less a settlement than a landscape—a landscape populated by people with longstanding lifestyles and land stewardship practices that foster the wildlife resources we all appreciate. On the map (above), Grass Valley is broadly delineated by the light green color, more specifically that portion lying west of I-90, from Missoula (lower right of the map) to Huson (upper left). In the picture (below), an immature bald eagle perches on a pivot in January, flanked (out of the picture) by several hawks. Grass Valley is one place among many examples of agriculture supporting wildlife.

Important Bird Areas Program

The Montana Audubon Society recognizes approximately 25,000 acres in Grass Valley as the Clark Fork River-Grass Valley Important Bird Area (IBA), one of 37 IPAs so designated in Montana. According to Montana Audubon:

Long-term conservation of birds and their habitats is a major goal of Montana Audubon. Central to this goal is the Important Bird Areas (IBA) Program which is a global initiative to identify, monitor, and protect a network of sites critical for the conservation of birds. Since 1995, the National Audubon Society has taken the lead in implementing the IBA Program in the US, and Montana Audubon administers the program in Montana.

IBAs are part of a conservation strategy that focuses attention on key habitats and bird species. The concept is simple: to identify and compile an inventory of areas that sustain healthy populations of birds (usually species of conservation concern), and then focus conservation efforts on these sites so that their qualities can be maintained. Habitat conservation is then achievable through acquisitions or easements, establishing voluntary best practices or management agreements, or through other protective measures. IBA designations are not legally binding.

https://mtaudubon.org/birds-science/iba/

The unusual abundance of Lewis's Woodpecker (right and above at Council Grove State Park) makes Grass Valley an IBA of Continental priority.

Clark Fork River-Grass Valley IBA

Again, according to Montana Audubon:

The Clark Fork River-Grass Valley IBA encompasses about 35 km of river corridor and adjacent uplands between Missoula and Huson. The site supports a high diversity of birds, including a number of species of conservation priority. Habitats include cottonwood gallery forests, riparian willows, various wetland types, grasslands, woody draws, and agricultural crops and pasture lands. Most of the land within the IBA is privately owned.

More than 230 species of birds have been documented in the area since the late 1990s. Species of Continental concern that nest here include Bald Eagle, Peregrine Falcon, White-throated Swift, Lewis's Woodpecker, Red-naped Sapsucker, and Willow Flycatcher. The number of Lewis's Woodpeckers that we detected (41 pairs per year for two years) exceeds the threshold needed for the site to qualify as an IBA of Continental significance, and the number of Red-naped Sapsuckers (24 and 34 pairs) approaches the threshold. Given that we surveyed less than half of the riparian cottonwood forest, we estimate that the entire IBA supports at least 80 pairs of Lewis's Woodpeckers and more than 60 pairs of Red-naped Sapsuckers.

Great Blue Heron at Council Grove State Park.

In addition, significant numbers of transient shorebirds use the area as shown by a 7-year shorebird survey (2000-2006) conducted at the settling ponds on the Smurfit-Stone Container Corporation plant near Frenchtown. The survey documented 28 species; maximum counts on a given day ranged from 81 to 306 in spring and 117 to 1,300 in fall. Sizable numbers of waterfowl also use the IBA year-round. At the Smurfit-Stone plant, 500 to 1,500 ducks and geese occur regularly, with peak numbers exceeding several thousand birds during migration. https://mtaudubon.org/birds-science/iba/

Grass Valley Postscript

It wouldn't seem like the *Wildlife Quarterly* without elk. In this case, elk pose a management issue in the hayfields in Grass Valley and on Mullan Road. Great Horned Owls perched regularly along Loiselle Lane in the winter of 2018-19.

Falcons

A Merlin (above) and a Peregrine Falcon (below) spice up any birder's outing. Both were photographed at Council Grove State Park in 2019.

Dusky Grouse Research

FWP Region 2 contains the highest density of high-quality Dusky Grouse habitat of any FWP Region in Montana, according to preliminary findings in the first of four years of research by FWP and Montana State University (MSU).

The question still to be pursued by researchers in this study is whether the habitat is fully occupied by grouse.

Dusky Grouse along Rock Creek Road on September 9, 2018

Formerly known as Blue Grouse, Dusky Grouse are common in Montana, and are the largest of the three species of mountain grouse, alongside Ruffed and Spruce Grouse. Common though they may be, their numbers are thought to be lower in Region 2 than in the mid-twentieth century, when credible anecdotal reports indicated that “a hundred” blues at a time could be flushed from mid-to-late fall habitats on ridgelines in the Sapphire Mountains.

Habitats have changed dramatically since the mid-1900s, owing to forest management, fire suppression, wildfires, weed spread, roads and increased human settlement, among other possible factors, and can be expected to continue changing more rapidly in the future. While it is encouraging to read in a preliminary report by Dr. Lance McNew and graduate student Elizabeth Leipold (MSU), and Claire Gower, Howard Burt and Lorelle Berkeley (FWP) that Dusky Grouse habitat remains in the present day, we lack practical methods for surveying grouse population trends over time.

The researchers tried new survey methods for Dusky Grouse across FWP Region 3 (Bozeman area) in 2019. Their methods proved promising, but perhaps too time-consuming. They estimated that FWP staff would have to survey about 500 independent sites in a given spring to obtain a reliable population estimate for Region 3. So, more work is needed to increase efficiency, and another 3 years of research are planned to further refine survey methods.

Work on the Dusky Grouse project is expected to move into Region 2 this year, and we look forward to getting a better handle on Dusky Grouse populations than we’ve ever had before.

Dusky Grouse on the Blackfoot-Clearwater Wildlife Management Area on September 1, 2018

Below: On May 3, 2019 a male Dusky Grouse blocked Rock Creek Road, causing FWP biologist Julie Golla to stop her vehicle. Upon stepping outside she was attacked—what else would you call it?—by the bird.

Above: After Julie determined that the grouse was in no need of further assistance, her own prognosis remained in doubt. How would she get into her truck with a belligerent grouse attached? As with other conflicts that FWP staff encounter, she allowed time for the grouse to vent its disapproval, defusing the situation. Eventually, the bird let go.

Habitat Enhancement

On September 3, 2017 the Ridge Ridge Fire blew up, making a run across the slopes of Morrell Mountain to Monture Creek, as seen from the Blackfoot-Clearwater Wildlife Management Area.

One Year After

On August 11, 2018 the Ridge Ridge Fire was home to birds that have pecked and peeled flakes of bark to access the beetles beneath, and a flush of regrowth blanketed the forest floor.

Two Years After

On August 27, 2019 a female elk collared on the Blackfoot-Clearwater Wildlife Management Area in the winter of 2018 is captured on a trail camera in the Lolo National Forest. Researchers like technician Cullen Flynn (right) set trail cameras to gain information on elk habitat selection in response to the fire.

FWP staff are often asked if we are doing anything to make public lands more attractive for elk, in hopes that more elk will use public lands and fewer elk will use ranchlands. Can natural habitat on public lands compete with irrigated alfalfa on private lands?

Covering some 160,000 acres of elk summer-fall habitat on the Lolo National Forest, the Rice Ridge Burn offers an ideal field laboratory for developing an answer to this question.

Managers look at it this way: If the ultimate habitat treatment on public land doesn't attract elk, then what kind of treatment ever would? And, if elk do respond to this treatment, what components are used most by elk and how can they be replicated by managers in the future? Somehow, we have to distill a treatment that humans would never dare prescribe into component pieces that are safe to replicate.

A research technician on the project (Jonathan Karlen) identifies and clips vegetation in a burned forest to measure elk forage quality and quantity (above). Lauren Snobl (pictured below with FWP research technician Ben Jimenez) is the graduate student on this elk project, working on her masters degree under Dr. Josh Millspaugh at The University of Montana.

Blackfoot-Clearwater Elk Project

Dr. Kelly Proffitt, FWP Research Biologist

September 27, 2019

Project Purpose

The purpose of the Blackfoot Clearwater elk project is to evaluate the effects of a large-scale wildfire on elk forage, distributions, and demography. The study area includes the annual range of the Blackfoot-Clearwater elk population.

More than 80% of the elk summer range burned during a wildfire in August and September 2017. Fire severity varied across the 160,000-acre burn, with the majority of the approximate 200,000-acre elk summer range being burned by low, mid, and high severity fire.

Elk in this population use a mixture of public and private lands during the summer and fall and shifts in elk distribution towards increasing use of private lands have occurred in the last 15 years.

It has been the goal of wildlife managers and land managers in the area to implement forest restoration projects on the publicly owned portions of elk ranges to encourage elk to remain on public lands throughout the late-summer and fall seasons. However, before these forest restoration projects were implemented, these large-scale wildfires dramatically altered the habitat. This opportunity to evaluate post-fire effects of large-scale wildfire on elk summer range is unique and results will be widely applicable to elk management throughout this region of the Rocky Mountains.

Our objectives are to evaluate the effects of low severity and high severity wildfire on elk forage abundance and quality and elk distributions during the summer and fall. We expect results will be widely applicable to elk and land management throughout this region of the Rocky Mountains. Results of this work will be used to provide wildlife and land managers with recommendations regarding the effectiveness of wildfire on improving elk forage quality and potentially altering elk distributions.

Results to Date

In December 2018 and February 2019, we collared 19 adult female elk. The collars are satellite-linked to allow location and mortality data to be collected remotely. Collars are programed to collect 6 locations per day and collect a minimum of 2-years of data. We are monitoring location data to evaluate elk movements and distributions.

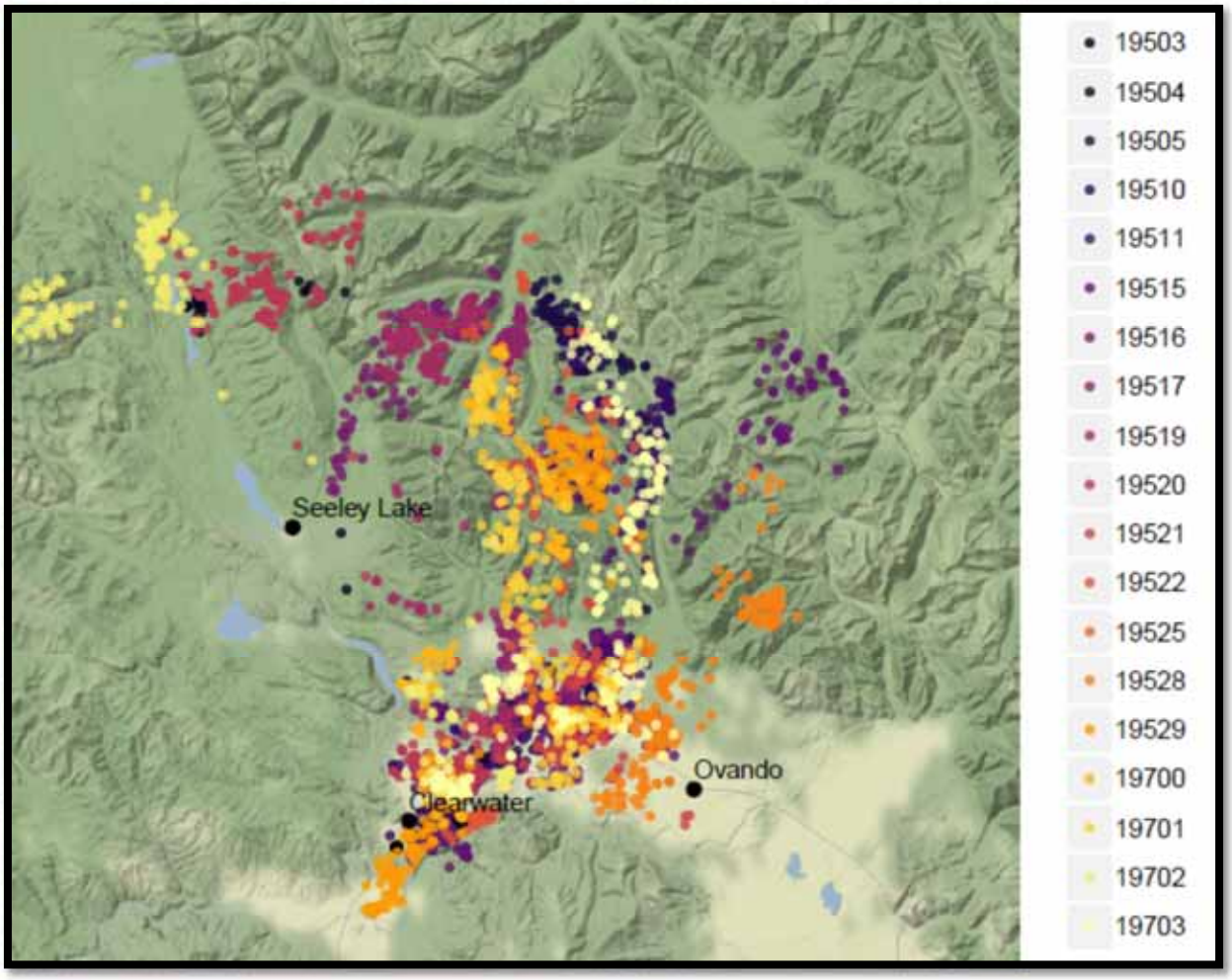
Project Update

Ben Jimenez, FWP Research Technician

January 24, 2020

During December 8-10, 2019, we captured, collared, and sampled 40 adult (≥ 2.5 years old) elk on and around the Blackfoot Clearwater WMA. We captured all animals using a combination of helicopter netgunning and darting. As of now, all 40 GPS collars are functioning as expected, giving us a total of 51 active collars in the study area, each programmed to collect a GPS location every hour for 2 years.

Elk grazing on the Blackfoot-Clearwater Wildlife Management Area and Reinoehl Conservation Easement in January 2020, including a radioed adult female. The map below depicts the locations of elk that were radioed as part of the Blackfoot-Clearwater Elk Project through September 2019; each color represents the locations of a particular radioed elk, identified at right.



An idyllic scene in a remote setting, up the East Fork of the Bitterroot in January 2020, turned into an educational experience, if not ridiculous. As we parked and watched, a cow and calf moose walked onto the highway, blocking the path of the only other vehicle on that stretch of road at that hour. The cow began licking and eating along the road edge, which schoolbooks might readily dis-

-miss as displacement behavior; i.e., behavior that merely passes the time until some disturbance, like a passing vehicle, goes away. However, the cow settled-in after the vehicle was gone, dropping to its knees for a long bout of feeding, and it continued consuming road salt until growing a salt mustache of satisfaction (below). Add moose to the list of ungulates attracted to road salt.

East Fork Bitterroot, January 2020

Find the Quarterly online at fwp.mt.gov/ regions/r2/WildlifeQuarterly