



Winter in the Harney Basin is a Quiet Time Full of Anticipation

During these colder months wildlife, plants and humans hunker down to await spring

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Photography by Rancher Susan Doverspike

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For some, winter is a time to be endured until warmer weather arrives. For others, winter is a time to slow down, stay warm and contemplate and work toward what comes next.

In the Harney Basin, these colder months with less daylight offer a quieter respite from the noisy spring when numerous birds stopover in the green wet meadows or the warm summer days where mosquitoes abound, and carp are active in Malheur Lake.

During the winter, ranchers feed cows, shovel snow and break ice as needed. Plants go dormant. Resident birds feed and pair off while fish may aggregate in icy water trying to survive until warmer weather arrives.



Winter on the ranch

Harney County rancher Mitch Baker said it's hard to be philosophical about the winter weather when it can make your routine of feeding and caring for your cows that much harder, but there are aspects of it he enjoys.

Baker brings his cows home in the fall when he and his family process and wean the calves. The calves are fed and vaccinated and held until Nov. 1. The rest of the cows are then turned out into their fall/winter pastures. By Thanksgiving weekend, he must start feeding their main bunch of cows with hay they put up

during the summer. "That's an everyday thing until the middle of April when we quit feeding," he said.

If there is a big snowstorm, he might have to use a Cat to plow out places in which to feed the cows. "With that comes problems because you've got your cattle in trenches where you've plowed the snow out. Your feed ground gets pretty messy," he said. "When it starts thawing out and everything is full of water, you're using more hay because they're tromping it in the ground. Some of your hay is used for bedding instead of them consuming it."

For the Bakers, with winter also comes the first calves of the season. The first-calf heifers [a heifer is a young cow that has not had a calf yet] must be checked fairly regularly to make sure they don't have issues when calving. "It's an enjoyable time too because you go up every morning, and it's like an Easter egg hunt. There are

new ones here and new ones there. It's a refreshing time," he said. "It's also stressful to try and make sure you're keeping them safe and making sure they survive."

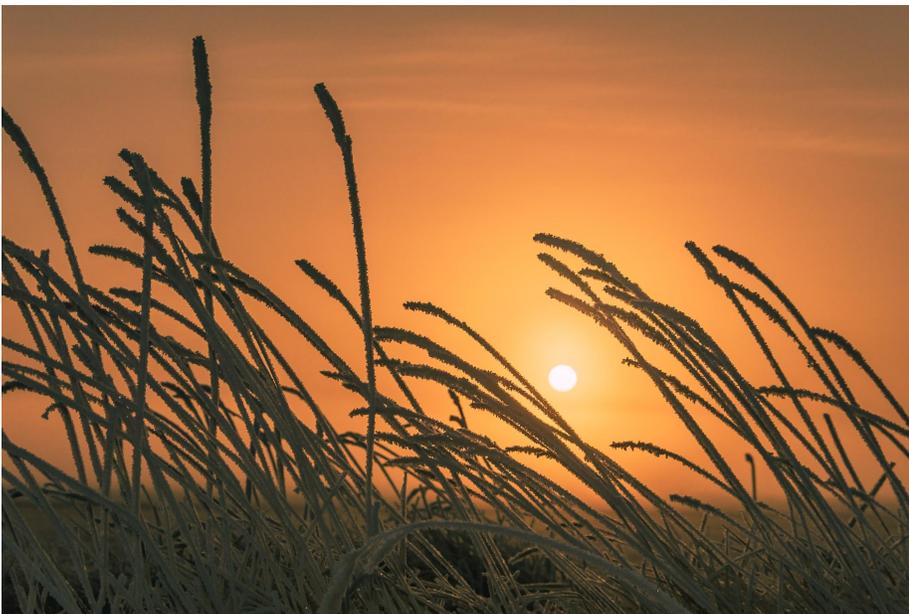
Baker said that his family's ranch is closer to the foothills surrounding Burns and as a result, his ranch sees a bit more snow than the ranches in the valley. Mitch admits that he doesn't find the winter routine to be the most pleasant. "When you're out there day in and day out, whether it's raining, snowing, sleeting or a blizzard, after a while, it really gets to wearing on you and soon you're looking for spring to come any time," he said.

The dormant life of plants

Tony Svejcar, a consultant for the Harney Basin Wetlands Collaborative and a retired rangeland scientist and research leader with the U.S. Department of Agriculture, said the plants in the basin's wet meadows are dormant during the winter and are basically trying to hang on until spring when temperatures warm up. "They are trying to store as much of their carbon as they can," Svejcar said. The meadow grasses have fine root systems and only draw water from three or four feet down in the ground. "When they are dormant, they don't do much," Svejcar said. It's similar to animals hibernating, it's a means of energy conservation.

When the snow piles up, it benefits the meadow plants, which include native sedges and rushes as well as reed canary grass and meadow foxtail. Svejcar noted that even with six to eight inches of snow on the ground, the soil below is not frozen. "The soil temperatures are high, usually in the 30s or low 40s Fahrenheit," he said. That heat comes up to the surface and the snow serves as a good insulator. "When you have snow out on the

meadows, it actually works pretty well as a blanket of insulation to the extreme temperatures we see in Harney County but the plants are largely not impacted by winter climate stress because they are totally dormant," Svejcar said.



Svejcar works with Esther Lev, who is also a wetlands consultant for the Harney Basin Wetlands Collaborative. They are developing a seasonal calendar that will highlight important factors concerning the wet meadows and flood irrigation season by season. "Seasons are something that we all interact with," she said. Seasons determine when we change over to wearing heavy coats and boots in the

winter or when we start to germinate our seeds in the spring. "Seasons rule our lives and change our activities of what we eat and what we do," Esther said. "The wintertime is that period of time where everything is just nestled up. It's sleeping, and it's just getting ready to make its next move."

It is a time of waiting for precipitation to come whether it be rain or snow and wondering how much will fall. Lev likes the uncertainty of the season. "It's quiet with a certain unknown anticipation but you know that sometime, who knows what day it's going to be, but spring is going to come and that's when everything is going to be green, and there's going to be all this activity," she said. "It's quiet, with a little suspense."

Birds wintering in the basin

Teresa Wicks is the Eastern Oregon Field Coordinator for the Portland Audubon Society and agrees that the quiet is something that is notable in the basin in the winter. "In the spring in the wet meadows there are birds

talking from May through September. You hear the adults singing and you hear young in the nests, so it's this really long period where there is a lot of noise almost everywhere you go in the Harney Basin," she said. "Then in the winter, it's kind of magical to go out and to sometimes not hear anything other than the wind."

Because of the Harney Basin's elevation, there are some birds that migrate from northern elevations to overwinter in the basin. Rough-legged hawks populate the basin only in the winter. Come spring, they migrate north.

Many different types of waterfowl overwinter in the basin. However, Wicks noted, they are much fewer in number than the migratory birds that stopover on the floodplain in the spring. The birds that do stay here congregate in places such as the sewage ponds where the water doesn't freeze over. Mallards, Northern

shovelers, common goldeneyes, and American widgeon are a few species that do stick around the basin in low numbers.

There are also resident trumpeter and tundra swans. "They don't tend to be as close to town, and they'll just be on the refuge wherever they can find open water," Wicks said of the swans.

While they are trying to survive by eating whatever food is available, there is also some courtship going on. Wicks said that unlike many other birds, waterfowl molt into their breeding plumage during the fall, and the winter is when they begin to pair up.



Food availability is the determining factor when it comes to whether a bird stays or leaves. "If they can't access food because the water is all frozen, then they're going to move on. If they can access food, then they will stick around as long as there's food available," Wicks said.

In addition to the rough-legged hawks and resident waterfowl, Wicks said that mountain chickadees and dark-eyed juncos are birds that nest in the forest and overwinter in the basin. "Toward the Warm Springs Reservoir, we do tend to get more birds that nest at alpine level during the winter," Wicks said. "They don't migrate south; they just migrate down in elevation. Hundreds of gray-crowned rosy finches can be found in the winter in some of the lower elevation hills in the basin."

Malheur Lake in the winter

Malheur Lake is home to masses of invasive common carp, but what these fish do during the wintertime is largely a mystery, says Malheur National Wildlife Refuge fish biologist James Pearson. That is why the refuge will conduct a two-year radio telemetry study to look at what the fish are doing during the winter months as well as the rest of the year. "We want to know not only what they are doing in the winter but what they are doing around the year and at different lake elevations," Pearson said. "When the lake is large, where do they go? When the lake is small, where do they go?" He noted that this study will help the refuge manage the carp population.

In general, carp metabolic rates go down during the winter because of the lower temperatures. As a result, they slow down and eat less and live off their fat reserves that were built up during the summer.

In smaller, deeper lakes in the Midwest, Pearson said the carp aggregate, or gather in groups, during the winter. Once the temperature reaches 50 degrees Fahrenheit they start to group up about a few feet under the ice on the surface of the lake. It is not known precisely why they do this, but experts hypothesize that it is a predator defense mechanism. Muskrats and river otters are fast, which put the carp at a disadvantage during the winter. "They call it the 'million eyes hypothesis' in which the carp get together and they watch each other's back," Pearson said. In the Midwest, this aggregation behavior can last more than a month.

The conditions at Malheur Lake are a bit different as it is a much shallower body of water where much of the lake is not even a few feet deep. Pearson anticipates that the radio telemetry study will reveal much about carp behavior in the basin. "Hopefully over the next two years, our carp telemetry project will help us understand if they do that, or if maybe they move into the rivers to do this aggregation behavior, or if maybe they don't have this aggregation behavior at all," he said.

During the winter, the submergent and emergent plants in and around the lake dieback and put their energy into the roots as they go dormant to await warmer temperatures to signal the time when they will send up new shoots.

The ultimate size of the lake relies on the snowpack derived primarily from Steens Mountain, Pearson noted. "On a good snowpack year, we can expect the lake to increase roughly about 14,500 - 17,000 acres in the spring," Pearson said. This inundates the vegetation and provides bird habitat. On the other end of the spectrum, during years when there is a low snowpack, it has the reverse effect. "During low water years, we still get a flush of water in the spring but it's much less. The evapotranspiration, the way in which water leaves Malheur Lake, can overwhelm the water that's flowing into Malheur Lake, and the lake starts shrinking very quickly," Pearson said.



In general, wintertime in the Harney Basin is a time of dormancy for plants, survival for wildlife and hard work for ranchers as they plow snow, break ice and feed cows. But it is also a time of quiet suspense as spring is anticipated; there is the birth and renewal as calves are ushered into the world and anticipation for the thousands of migrating birds that will arrive come spring to rest and refuel for their long journeys.

Rancher Baker said calving was one of the few joys of winter. "You watch them go from not moving around very much and then they

become playful and are ripping around all over the fields. It's kind of fun to watch," he said.

Since 2011, the Harney Basin Wetlands Collaborative is finding ways to improve the aquatic health and sustainability of Malheur Lake and wild, flood-irrigated wet meadows across the Harney Basin. This effort is led by a diverse group of stakeholders, including local ranchers, conservation organizations, the Sovereign Nation of the Burns Paiute Tribe, government agencies, technical experts, scientists, area residents, nonprofit partners, and others who share a love and concern for the Harney Basin. For more information about the HBWC go online to highdesertpartnership.org.

This article is provided by High Desert Partnership; a Harney County nonprofit convening and supporting six collaboratives including the Harney Basin Wetlands Collaborative.

