



Harney Basin Through the Seasons

From bitter cold winter nights to blazing hot summer days, the ebb and flow of the seasonal cycle drives the basin's inhabitants to move in turn.

By Lauren Brown
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In the Harney Basin, the seasons provide cues for when ranchers move cows, when birds stay or migrate, when fish spawn and when plants grow. It's a cycle that repeats year after year, and yet subtle changes in the weather can turn a promising hay harvest into a poor one. People and critters in the Harney Basin adapt to the changing seasons as their survival depends on it.

"Seasons are something that we all interact with," says Esther Lev, a wetlands consultant for the Harney Basin Wetlands Collaborative. 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," Lev says.

Winter



Winter in the basin for many ranchers means bringing the cows closer to home, where they can be fed daily. Harney County Rancher Mitch Baker brings his cows home in the fall to process and wean the calves. The calves are fed and vaccinated and held until Nov. 1. The rest of the herd is then turned out into their fall/winter pastures. By Thanksgiving weekend, he must start feeding their main herd with hay they put up during the summer. "That's an everyday thing until the middle of April when we quit feeding," he says.

Photo by rancher Susan Doverspike.

For the Bakers, with winter also comes the first calves of the season. The first-time heifers must be checked 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 says. "It's also stressful to try and make sure you're keeping them safe and making sure they survive."

During the winter, the plants in the basin's wet meadows are dormant. 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. 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, noted that even with six to eight inches of snow on the ground, the soil below is not frozen. "The ground temperatures are high, usually in the 40s or low 50s," he says. That heat comes up to the surface and the snow serves as a good insulator.

Winter is a time of quiet anticipation. While there are birds that overwinter in the basin, it's nothing compared to the activity that will take place with the spring migration. For those who venture out into the wetlands or the desert in the winter, the lack of bird song is notable. Teresa Wicks, the Eastern Oregon Coordinator for the Portland Audubon Society, says many different types of waterfowl overwinter in the basin and 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 stay in the basin in low numbers. There are also resident trumpeter and tundra swans.

Malheur Lake is home to masses of invasive common carp. 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. During the winter, the submergent and emergent plants in and around the lake dieback and put their energy into the roots as they go into hibernation mode to await warmer temperatures to signal the time when they will send up new shoots.

Spring

Rancher Baker welcomes the spring with open arms because the warmer weather makes working outside more pleasant. While he is still feeding cows in the spring, he is also prepping pastures and fields for the summer. Manure and hay can build up in the pastures, so Baker uses pasture harrows to drag his fields. Irrigation ditches are cleaned out and fences are inspected for snow or wildlife damage. Baker says he also attends bull sales to purchase replacement bulls. In addition, calves must be branded, and cows must be vaccinated before they are turned out onto their summer range, which Baker says usually happens around April 15. While there is much to do, Baker enjoys seeing everything come alive in the spring. "You watch your calves grow and you watch the grass and your fields grow. It's a pretty enjoyable time," he says. "Everything goes from dormant and dry in the winter, and you watch the whole landscape start to blossom."



Photo by rancher Susan Doverspike.

For plants in the basin, spring is the crucial season that determines how much growth will occur. Warmer temperatures and the flow of surface water combine to create an opportunity for growth. Svejcar notes that spring is when soil temperatures start to rise and the growing points in many plant species will burst bud. The soil moisture is high enough that once the temperatures come up, those perennial meadow grasses are going to start growing whether they get surface water or not. If the surface water is present, the grasses will continue to grow and produce enough hay to harvest. "But if

they don't get that free-flowing surface water, there doesn't tend to be enough production later in the season to harvest," Svejcar says.

The spring growth in the Harney Basin takes place in a short time period between late April and early June because the high desert climate doesn't usually provide much precipitation during the summer months. "This is the period when we have the water and we have the warmer temperatures, and that's when everything goes nuts from a growth standpoint," Svejcar says.

While plants are growing like crazy, the bird population explodes as the Harney Basin transforms into a bird thoroughfare as it is a major stop for migrating birds on the Pacific Flyway. Many birders come to the Harney Basin to see the large



flocks of Ross' and snow geese in March and April. High concentrations of cranes and waterfowl are also coming through at that time. In early April, the long-billed curlews arrive as well as other shorebirds. The white-faced ibis also arrive in large numbers starting in mid-April.

In May, after the geese and waterfowl have moved on, the songbirds will arrive. Wicks notes that mid-May is a good time to view woodpeckers, songbirds and rare warblers in the basin, and many birders visit the basin over Memorial Day weekend to see these migrants.

An illustration of the Pacific Flyway and Harney Basin's location along this bird migration aerial highway.

In early spring, the ice covering Malheur Lake begins to crack and melt. This is also when the lake begins to expand in size thanks to snowmelt from Steens Mountain. The carp, which have been overwintering in the lake and the lower Blitzen River, begin to feed and their activity increases. The feed is better in areas of the lake that are newly inundated with snowmelt or surface water. As the fish get bigger and stronger, they start to look for spawning habitat. The redband trout that overwinter in the lower Blitzen River also

spawn in the spring, however, they will swim upstream seeking cooler water.

Summer

When summer finally arrives in the basin, most residents welcome the warmer weather. However, the temperatures can go from pleasant to scorching in a heartbeat. The summertime is busy for ranchers and farmers who are busy moving cows, raising crops and cutting hay in preparation for the colder months. Wildlife rear young, birds nest and fish are simply trying to beat the heat to survive the warmer temperatures.

Rancher Baker says he feels the summer season for him starts in May when he turns the cows out to their summer pasture. Meadows are irrigated and fences and fields are tended to. "We transition to getting all the haying equipment ready around the middle of June, and that follows all the way through into the middle of August, putting up hay and taking care of that," he says. During that time, they must also move cows around to different pastures and check to make sure there is enough water for them to stay healthy. Calves are sold through a video market in mid-July but stay on the summer pasture until September when they are brought back to the ranch and weaned. They are fed for another 30 days and then shipped by the first of November.

By the end of July, plants that populate the wet meadows in the basin have reached peak growth and are going dormant. In a normal water year, producers can manage the water on their lands so that one area can dry out and be hayed, while the water stays on other areas to be hayed later in the season. Svejcar says when the water drops early, and everything



dries out at once, it can be difficult to keep up with the plant cycle to cut all the necessary acres before they lose forage quality.

Photo of cut hay at Mitch Baker's ranch.

The fish in the basin must adapt to the change in weather or face the consequences. The redband trout that overwintered in Malheur Lake and then migrated upstream to spawn in the spring, are now looking for the ideal habitat to ride out the summer. This means seeking out water that is cold and clear with good overhead cover and lots of prey

for them to eat.

The carp that populate Malheur Lake have also spawned and are actively looking for food. The carp use a suction feeding technique in which they suck in sediment from the lakebed and retain the macroinvertebrates while expelling the sediment back into the water column. As a result, they are seeking out the soft substrate usually found in the lower gradient, lower elevation areas of Malheur Lake and the lower stretches of the Blitzen and Silvies rivers.

While many birds migrate through the Harney Basin in the spring, some will breed and stay for the summer. This includes prairie falcons, golden eagles and many different raptors. Ferruginous hawks and Swainson's hawks both overwinter in Argentina but breed in the Harney Basin in the summer.

"Bobolinks come here to breed, and when their young are fledging in late June or early July, you'll start seeing pretty big flocks of them on the refuge. Then they will get ready to leave in late summer or early fall," Wicks says.

Nighthawks also come to the basin to nest. "They are what we call a crepuscular species, so they're out mostly around dawn and dusk, foraging for insects that come out around then," Wicks says. "When you see them in the air, they move almost like bats. It's not a predictable flight pattern and part of that is because they're chasing insects."

Wicks says that even though the spring migration puts the Harney Basin on the map in terms of birding, the summer months can be just as rewarding for birders. "The basin is a really, really important place for a lot of nesting birds, especially birds that need willows and wetlands," Wicks says. "I regularly try to tell people that the Harney Basin is still a great place to bird in the summer, and we still have a good diversity of birds, you just have to know where to find them."

Fall

As the days slowly get shorter and the temperatures start to dip, the Harney Basin welcomes fall.

On the ranch, Baker says there are lots of projects that must be completed before winter arrives. Much of the work revolves around the cattle, which he brings back closer to home. The calves are weaned and fed until November when they are shipped. Other fall projects include fixing corral fences, cutting juniper, ditch work, removing river fences and culvert maintenance.



Lev says fall in the basin is a time when things are starting to shut down and prepare for the dormancy of winter. “There’s a lot of brown in the landscape but if you look around the homesteads – the trees around the homesteads and around riparian areas where you have cottonwoods and ash, there’s bright colored leaves,” she says. While the deciduous trees are shedding their leaves, the plants in the wet meadows have gone dormant.

Photo of the fall colors at the Eastern Oregon Agricultural Research Center.

Svejcar says that in a normal year during the fall, the basin might get one last shot of rain in September, which provides a little green up going into winter. “Plants will set a few leaves, and they’ll get optimistic for a brief period. Then the reality of winter hits with the short days and colder weather,” he said.

Over the course of a normal year, Malheur Lake will grow in the spring and then decrease in size over the summer and into the fall. In years where there is a drought, the lake will shrink considerably stranding carp who failed to stay in deeper water. This can also force carp and trout to take refuge in the Blitzen River.

For shorebirds, the fall migration in the Harney Basin sees its peak in September. Species of shorebirds that often turn up are long-billed dowitcher and red-necked phalaropes. Smaller shorebirds such as western sandpipers and least sandpipers also fly through the basin in the fall.

Natural beauty and wonders abound in all four seasons in the Harney Basin. As the cycle of seasons marches on, so do the humans, plants and animals that call the basin home.

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