Although the birds bring me to Malheur, I am also drawn by the place itself, the crisp scent of sage on the air; the crack of a late summer lightning bolt, the golden beauty of slanting sun on rimrock. I have been delighted by chance encounters with a family of coyotes, a badger, a porcupine, and a scorpion. The birds are just one part of the magic.

One of my most vivid experiences at Malheur came after a long day
of birding, as I contentedly made my way home into the setting sun. I spied a couple of short-eared owls some distance from the car. I stopped to watch. One owl left the group and glided silently in front of me, turning its head and fixing me with a steady gaze. That’s Malheur for you. Even when you think you’ve seen it all, there is always one more surprise waiting around the bend.

Noah Strycker; Writer and Photographer
One of the crown jewels of the National Wildlife Refuge System, Malheur National Wildlife Refuge protects a vast complex of habitats in Oregon’s high desert. The Refuge is famous for its tremendous diversity and spectacular concentrations of wildlife. With more than 320 bird species and 60 mammal species, Malheur is a mecca for birdwatchers and wildlife enthusiasts.

People have been drawn to Malheur’s abundant wildlife and natural resources for thousands of years. When unregulated market and plume hunting began to decimate populations of migratory birds, President Theodore Roosevelt stepped in to stop the slaughter. In 1908, he designated Malheur “as a preserve and breeding ground for native birds.”

Today, Malheur National Wildlife Refuge consists of more than 187,000 acres, a tremendously important source of wildlife habitat. The Refuge represents a crucial stop along the Pacific Flyway, and as a resting, breeding and nesting area for hundreds of thousands of birds and other wildlife.

Malheur is a part of the National Wildlife Refuge System, a network of over 540 refuges set aside specifically for fish and wildlife. Managed by the U.S. Fish & Wildlife Service, the System is a living heritage, conserving fish, wildlife and their habitats for generations to come.
Spring

Spring is the most spectacular season at Malheur and in the surrounding areas. Over 130 species of birds arrive to nest on the Refuge, while others stop to rest and refuel for their migration further north. In late March or early April, a few spring migrants begin to arrive in large flocks such as swans, Northern Pintails, sandhill cranes, and White-fronted, Snow and Ross’ Geese. During this early spring period, the majority of birds can be found on the Silvies Floodplain and Sage Grouse begin displaying on their strutting grounds. By April, the majority of waterfowl and shorebirds arrive and songbird numbers peak in late May. May is a time to see large variety of birds and most “rare” bird species arrive from mid-May to mid-June. Pronghorn Antelope and Mule Deer fawns are also born at this time.

Summer

As the flurry of migration settles, most local birds are raising their young and are often quiet. Early summer is a good time to see waterfowl with their broods and many waterbirds such as grebes, pelicans, and White-faced Ibises can also be seen foraging in wetlands. Most “rare” bird species and Bobolinks are also visible. Early fall migrant shorebirds begin returning to use shallow water and mud flats areas, and their numbers peak in August with the increased numbers of waterfowl. Summer visitors should also prepare to enjoy an Oregon landmark, Steens Mountain, and the Historic Sod House Ranch (open August 15 – October 15) to witness eight remaining buildings of the 1880s era of Peter French.
Fall

Activity increases again with the fall migration. The fall “vagrant season” is long, with unusual birds appearing from early September through October, with September being the best all-around peak time. One of the highlights of fall is when Greater Sandhill Cranes “stage”, or gather, before migrating to wintering grounds from September through November. Large number of Mule Deer move onto the Refuge in October and large bucks are visible during their rut from late October through November. By late November, most migrating birds head south for the winter, but lucky visitors may view large flocks of swans. Fall colors are also abundant and beautiful this time of the year.

Winter

Winter is the quietest season at the Refuge and offers an opportunity for visitors to experience solitude. Although most ponds freeze over, some remain open, providing food and water to wintering wildlife. Many mammals and a variety of raptors, including eagles and hawks, winter on the Refuge. Most songbirds have moved south for the winter, but some sparrows remain. Careful observers may find sparrows and Snow Buntings among the Horned Larks. As migration initiates in Spring, migratory birds begin returning starting with swans and Northern Pintails, and followed by large flocks of sandhill cranes and White-fronted, Snow and Ross’ Geese.
Different habitats bring different wildlife viewing opportunities. Birds and other wildlife need several types of habitat for food, shelter, and raising young. Management of these varying habitats are key anchors in meeting the needs of migratory and breeding birds and other wildlife.

Malheur Lake is one of the largest inland marshes in the United States varying dramatically in size from 500 to 110,000 acres. It receives water from the Blitzen and Silvies Rivers, and predominantly influenced by snowpack on Steens Mountain to the south and the Blue Mountains to the north. During high waters, the water will connect to Mud Lake. Common emergent species in Malheur Lake include various sedges and rushes supporting mixed colonies of ibises, egrets, Franklin’s Gulls, and Western Grebes. There is little direct management of these lakes, including Harney Lake.

Harney Lake is deeper than Malheur Lake and water often enters through Silver Creek. When the lake is full it supports extensive stands of wigeongrass and high numbers of waterfowl. However, Harney Lake dries up completely during dry periods, shifting from a hypersaline lake to a dry salt flat. At higher salinities, it supports an abundance of brine shrimp and brine flies, an important food sources for many birds.

Seasonally wet meadows provide foraging, resting, and nesting habitat for a variety of waterbirds, waterfowl, shorebirds, and neotropical migrants. Meadows undergo a number of manipulations to ensure desired vegetation structure, including flood irrigation, prescribed fire, haying and grazing.

Marshes ideally provide nesting cover and limited open-water feeding areas for waterfowl and marsh birds. This habitat is generally located adjacent to ponds and experiences shallower flooding depths ranging from 6 inches to 3 feet and typically occurs from late winter/early spring through July. Flooding and drawdowns are common strategies to maintain healthy meadows.
Ponds provide food resources for diving and dabbling ducks and support Greater Sandhill Crane roosting and nesting. Emergent plants related to ponds provide nesting and escape cover for broods and molting birds. Often ponds are dried to enable submergent plants to grow.

Upland habitats include sagebrush, salt desert scrub, and dunes. Common upland plants like sagebrush, greasewood, and Great Basin wildrye provide habitat for ground nesting migratory birds, landbirds, and a diverse variety of mammals. Prescribed fires are used to encourage growth of native grasses for nesting.

The Refuge annually plants 70 – 100 acres of winter wheat, rye, oats, and spring barley to support Greater Sandhill Cranes during fall “staging”, or gather, and other wildlife, such as pheasants, geese, dabbling ducks, and deer. Planted grains complement wetland foods, especially after the ground freezes.

Did You Know...

...Malheur Lake was once capable of annually producing over 100,000 waterfowl and ranked as one of the most productive waterfowl areas in North America. The lake also once played a much more significant role in the Pacific Flyway for migratory birds. In the early 1950s, the negative impacts of Common Carp became noticeable and the productivity of lakes has been far from optimal since.
For thousands of years, people have been drawn to Malheur’s abundant wildlife and natural resources, and the Refuge is committed to protecting these resources of plants, animals, and human interactions with each other and the landscape over time.

9,800 Years Ago
Earliest Evidence of People

Harney Basin contained a huge lake that covered 255,000 acres. These early inhabitants used plants and animals found along the edge of this vast lake and in the surrounding uplands. Hunters used spears to hunt large game animals, such as bison, and it was around this time that twined bags, mats and burden baskets, and trays began to appear in the archaeological records.

3,500 Years Ago
Early Villages

Small villages were built along the edges of lakes, marshes and the river. Unfortunately, the inhabitants of this village were forced to abandon their homes when volcanic cinders from an eruption at Diamond Craters blanketed the landscape.

Following a dry period, moist conditions returned, bringing an abundance of resources to lakes, marshes, and uplands, and attracting many people. This may be the period of most intensive use of resources in the Harney Basin. Villages of mat-covered shelters called wickiups sprang up along virtually every pond and marsh. The descendants of these people, the Wada’tika – Northern Paiute of the Harney Basin – occupied the area when the first Europeans arrived.

1,400 Years Ago
Northern Paiute Indians

Burns Paiute elders recall the continuation of a seasonal round into historic times. They talk about gathering plants, hunting, and fishing as foods became abundant in the lakes, marshes, rivers, and the uplands. Spring was a time for gathering roots and fish, which they dried and stored away. Tui chub were harvested in Harney and Malheur lakes, and salmon were procured from the Malheur River. In the summer
they traveled around their territory, gathering seeds and berries and hunting game. Fall was also a time for hunting waterfowl, jackrabbit, bighorn sheep, and antelope. Families came together in the fall for communal antelope and rabbit drives. Fall was also an important time for collection of plant materials to be used for manufacture of sandals, baskets, and clothing during the winter. During the winter they retrieved their supplies of dried food and erected houses of tule (bulrush) mats near springs in the wetlands around Malheur, Mud, and Harney lakes. While the rest of their territory lay frozen, the wetlands offered fresh plants, waterfowl, and mammals to supplement their stored food.

Did You Know...

...The term Wada'Tika refers to the Paiutes living in the Harney Basin and literally means “wada eaters”. In the autumn, they harvested the tiny black seeds of wada, a plant that grows along the shores of the lakes.

...Many of these important resources are still harvested today by the Burns Paiute Tribe at a variety of locations in the Harney Basin. Members of the Tribe continue to harvest important plants on the Refuge as they seek to sustain and share their cultural traditions of basket weaving, and tule mat and duck decoy construction with tribal youth.
In 1826 French-Canadian fur trapper Peter Skene Ogden led a large expedition of trappers from the Hudson's Bay Company into the Harney Basin. The fur trappers were looking for beaver, river otter, and other fur-bearing animals. They encountered Northern Paiute Indians camped along the shore of the lakes. The Hudson’s Bay Company frequently expected local tribes to supply food for their large expedition groups. Unfortunately, the Paiutes were entering the winter season after a very unproductive summer and were unable to help the explorers with food.

The 1845 Meeks Wagon Train represented the next major entry of non-natives into the area. Nearly 800 pioneers followed Stephen Meek across Oregon’s high desert, who claimed that he knew a shorter route to the Willamette Valley. As the wagon train entered the Harney Basin, their primary concerns were finding water and feed for their livestock. They camped along Malheur and Harney lakes but found that the water, because of its alkaline nature, was not fit for humans or animals. The ill-fated wagon train eventually made their way to The Dalles, but not before suffering from the deprivations of the high desert.

In September 1853, the “Lost Wagon Train” led by Elijah Elliot, seeking a shorter route to the Willamette Valley, followed the route of the Meeks Wagon Train into the Harney Basin. Upon entering Harney Basin, Elliot decided to detour around the south side of Malheur Lake and continued around Mud and Harney lakes until they reached the springs in the Double-O area. Many members of the wagon train believed they were hopelessly lost, but riders from Central Oregon eventually located the wagon train many miles west of the Double-O area and led them to safety.
In 1872 Peter French with 1,200 head of cattle, six Mexican vaqueros, and a cook headed to Oregon from California under the direction of Dr. Hugh Glenn to begin building a vast cattle empire. Once he entered the lush Blitzen Valley, French’s search for land was over. French continued to acquire land over the next 25 years using not only the Homestead Act, but also the Swamp Land and Desert Acts. French eventually managed a ranch that encompassed the Blitzen, Diamond, and Catlow valleys. The valleys underwent a transformation from more natural conditions attributed to pre-European contact to the highly altered landscape of today with construction of roads, ditches and impoundments. Land disputes between French and other settlers led to French’s murder in 1897. The land was reorganized and sold through several companies before the ranch was sold to the U.S. Government.

Did You Know...

...The lack of available food and a scarcity of fur-bearing animals around Harney and Malheur lakes led Ogden to write the name “Malheur,” the French word for misfortune, on his maps of the area. From that time on, the area would be identified as Malheur Lake.

...Many local landmarks received their names during military expeditions. Harney Lake received its name in 1859 in honor of General William S. Harney. Steens Mountain is named after Major Enoch Steen, who led an expedition to survey a military road through the area in 1860.

...Many early bird observations were recorded in military journals from the expeditions in the late 1850s. This information would later attract feather hunters to the area and eventually bring about the establishment of the Refuge.
In the late 1880s, plume hunters were decimating North American bird populations in the name of fashion. The hunters were collecting breeding feathers for the hat industry. Shorebirds and colonial nesting birds suffered the most as hunters targeted large flocks, injuring birds indiscriminately and orphaning chicks. In an era when an ounce of breeding feathers was worth more than an ounce of gold, it’s not surprising that plume hunters sought to make a fortune by hunting birds on Malheur Lake.

On a trip to Harney County in 1908 to photograph nesting birds on Malheur Lake, wildlife photographers William L. Finley and Herman T. Bohlman learned that most of the birds had been killed in 1898 by plume hunters. After 10 years the bird population had still not recovered. Outraged by their observations, they presented the situation to fellow members of the Oregon Audubon Society and approached President Theodore Roosevelt with the proposal. The “Lake Malheur Reservation” was established on August 18, 1908. Roosevelt set aside unclaimed government lands encompassed by Malheur, Mud, and Harney lakes “as a preserve and breeding ground for native birds.”

The drought years of the 1930s had a profound effect on the “Lake Malheur Reservation”. Malheur, Mud and Harney lakes water levels shrank with the decrease in flows from the rivers and creeks that fed the lakes. William L. Finley again played an integral part in the purchase of the Blitzen Valley which was added as an addition to the bird reservation in 1935 with funds designated for national unemployment relief (e.g., the Civilian Conservation Corps (CCC)). The purchase included acquiring the water rights for waters flowing from Steens Mountain.

Control of the Blitzen River allowed the bird reservation to restore water to Malheur Lake by releasing water held behind ranch dams.
In an effort to revive America with the Great Depression in 1933, President Franklin Delano Roosevelt created the CCC. Three CCC camps were hosted on the Refuge and left behind an incredible legacy of infrastructure that remains today. Some projects undertaken and well recognized today are the four stone buildings at Refuge Headquarters, Refuge roads, dikes and pond impoundments.

The newly established “Lake Malheur Reservation” was the nineteenth of 51 wildlife refuges created by Roosevelt during his tenure as President. At the time, Malheur was the third refuge in Oregon and one of only six refuges west of the Mississippi.

George M. Benson served as the Refuge game warden, and later agent, beginning in 1918. Preferring the title of “refuge protector,” Benson not only enforced hunting and trapping laws at Malheur, but he also banded many waterfowl, often with the help of local children. With his wife Ethel, Benson eventually moved into the old ranch house that once stood in the large cottonwood grove at Benson Pond and the Refuge decided to honor Benson by building a little museum named George Benson Memorial Museum located at Refuge Headquarters in 1953.
The Refuge Headquarters and Visitor Center is located 32 miles south of Burns, Oregon. From State Highway 205, follow signs to the Refuge.

The Refuge is open daily from sunrise to sunset. The Visitor Center is open Monday through Friday 8:00 am to 4:00 pm, and staffed with volunteers most weekends.

The Visitor Center is a good starting point for your visit. Knowledgeable volunteers are available to provide information and answer questions, and a good selection of educational items can found in the Nature Store. Visitors can experience the museum with nearly 200 mounted bird specimens and view a variety of wildlife in the trees and shrubs, and on the pond.

The 42-mile auto tour (Center Patrol Road) offers prime wildlife viewing and interpretive opportunities on the Refuge. Your vehicle is an excellent observation blind. Self-guided auto tour brochure and media are available.

Hiking, bicycling and cross-country skiing provides views of wildlife habitat and allowed only on designated roads and trails shown on this map. Refuge trail brochure is available.

With more than 320 species of birds and 60 species of mammals, the Refuge offers prime wildlife viewing. Bird and mammal checklists are available.

The Refuge has a variety of locations with interpretation panels to orient and provide visitors information about the area.

The Refuge offers opportunities and guidance to teachers and educational groups for outdoor classroom activities. Call for information.

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**Knox Ponds**
Barbara Wheeler USFWS Volunteer
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<thead>
<tr>
<th>Fishing and Hunting</th>
<th>Fishing and hunting are allowed only in designated areas shown on Refuge maps and by Refuge regulations. Fishing and hunting brochures are available.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refuge Roads</td>
<td>Motorized vehicles and horseback riding are allowed only on designated roads shown on this map. Horseback riding is not permitted on East Canal Trail.</td>
</tr>
<tr>
<td>Boating</td>
<td>Non-motorized or electric boats are allowed on Krumbo Reservoir, except when ice is present at the boat launch, and allowed in designated hunt areas during the Malheur Lake hunt seasons.</td>
</tr>
<tr>
<td>Dogs</td>
<td>Dogs must be kept on leash while on the Refuge, except in designated hunt areas during the hunt seasons.</td>
</tr>
<tr>
<td>Weapons</td>
<td>Possession of weapons follows all State regulations on the Refuge. Discharge of weapons outside of the hunt seasons are prohibited.</td>
</tr>
<tr>
<td>Prohibited Activities</td>
<td>All-terrain vehicles (ATVs), camping, fires, swimming, and collecting natural objects such as plants, animals, minerals, antlers, and objects are prohibited.</td>
</tr>
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Malheur National Wildlife Refuge
36391 Sodhouse Lane
Princeton, OR 97721-9523
541/493-2612

U.S. Fish & Wildlife Service
Pacific.fws.gov

Nationwide refuge information
1-800-344-WILD

Visitors with disabilities may be reasonably accommodated upon request, and/or receive an alternative format publication.

Oregon Relay Service
TTY 1 800/735 2900
Voice 1 800/735 1232

March 2015