



Newsletter of the Malheur Wildlife Associates, Friends of Malheur National Wildlife Refuge  
*... Keeping the Needs of Wildlife First ...*

Volume 4, Number 2

September 2007

**Malheur Wildlife Associates**  
*an affiliate of the National Wildlife Refuge Association*

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The Malheur Wildlife Associates is an independent, non-profit 501(c)(3) corporation committed to:

- Conserving, enhancing, and restoring fish and wildlife habitat and cultural history in the Harney Basin through the support of Malheur National Wildlife Refuge staff and programs.
- Assisting the Refuge in providing wildlife-dependent educational and recreational opportunities while enhancing public knowledge and appreciation of the Refuge mission.
- Advocating for support of the Refuge and the National Wildlife Refuge System.

*Terri Grimm, Graphic Designer*

**What's Been Happening**

*Patty Bowers, Newsletter Editor*

Spring 2007 at Malheur Refuge brought birders in large numbers, as it was one of the best years ever for vagrant migrants. Unusual species stopping by for a visit included a summer tanager, magnolia warbler, and scissor-tailed flycatcher.

The summer season at Malheur has been warm and dry. Once again, fires started by lightning strikes have made huge impacts in the Harney Basin. Although fires on the Refuge have been minimal, the Egley Fire burned more than 140,000 acres north and west of Burns and Hines, and several families had to evacuate their homes for a short time. Several other fires have occurred throughout Harney County since early June.

If you haven't already done so, stop by and check out the new interpretative panels 100 yards south of the Ag Research Center along Hwy 205, at the Narrows, along the East Canal, and along the Blitzen River near P Ranch. MWA time and/or dollars have helped make most of those projects happen. Consider also trying out the auto tour route with the newly revised script available at Refuge Headquarters or from: <http://www.fws.gov/malheur/AutoTourRoute.pdf>

The MWA Board is planning projects with Refuge staff, including the Russian olive control project set for September 21-22. See the related article

on page 2. Plans are also underway for restoration work along fire-damaged Mud Creek on the east side of the Refuge. See the related article on page 3.

The Board has also been wrestling with a difficult issue—the future of the organization. See the article on page 7 and consider helping us with this important work.

Come visit soon. We look forward to hearing from you.



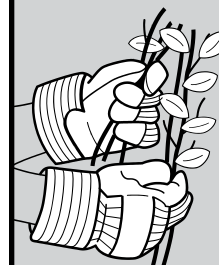
**Work Party  
 Volunteers Needed**

*Alice Elshoff, MWA Chair*

Join us for a work party, one or both days of Sept. 21-22. We'll enhance wildlife habitat by treating the invasive, non-native Russian olive trees that are invading very important wetland areas on Malheur Refuge. Bring a pair of work gloves and a small, sharp, hand axe to slash into the cambium layer of the Russian olive trees. Boots or old sneakers that can get wet may also be helpful. We'll supply the transportation around the Refuge.

Tent or RV under the elms and use the Orchard House kitchen and bathroom facilities. Please bring your own breakfast and lunch items and something to add to an evening potluck for both nights. We'll provide the main dish each night.

Space is limited to the first 10 people who sign up. Contact Alice Elshoff (541-495-2322 or [calice@highdesertair.com](mailto:calice@highdesertair.com)).



## Meet The Staff - Jess Wenick, Rangeland/Habitat Specialist

Alice Elshoff, MWA Chair

The groundwork for the career that Jess would eventually choose was laid during the summers of 1990 and 1991, when he worked on Malheur Refuge with the YCC (Youth Conservation Corp). One of the tasks that Jess and other hardy teenagers tackled was repairing boundary fences that had been destroyed by the previous year's flooding. But what began to interest Jess was the wildlife work being done by then Refuge Biologist, Rick Vetter. Sensing Jess's interest, Rick became a sort of mentor and Jess was hooked. Jess received his Bachelor of Science degree from Eastern Oregon College and went on to earn a Masters Degree from Oregon State University.

## Russian Olive – Alien Visitor – Problem Child

Rose-Marie Muzika and Jil M. Swearingen, PCA Alien Plant Working Group

Russian-olive (*Elaeagnus angustifolia*) is a small, usually thorny shrub or small tree that can grow to 30 feet in height. Its stems, buds, and leaves have a dense covering of silvery to rusty scales. The leaves are egg or lance-shaped, smooth margined and alternate along the stem. At three years of age, plants begin to flower and fruit. Highly aromatic, creamy yellow flowers appear in June and July, later replaced by clusters of abundant silvery fruits.

Native to southeastern Europe and western Asia, Russian olive is found primarily in the central and western United States as well as in the east. In the West, Russian olive occurs mainly in the Great Basin Desert region at 800-2000 feet elevation and is also abundant in riparian zones of the Great Plains.

First cultivated in Germany in 1736, Russian olive was introduced into the United States in the late 1800s, and was planted as an ornamental. It subsequently escaped into the wild. Until recently, the US Soil Conservation Service recommended Russian olive for wildlife planting and windbreaks.

Jess landed a job with the Burns Paiute Tribe working as a rangeland specialist on two properties purchased with money from the Bonneville Power Wildlife Mitigation Program. He soon became the Wildlife Program Manager and in 2003, joined the staff at Malheur Refuge.


Jess is happiest when he can escape his desk and work in the field, mentally and physically wrestling with the serious problems of invasive vegetation, which is plaguing Malheur Refuge as well as much of our western landscape.

In his private life, Jess volunteers for work projects in Mexico, seeing this as a small but important way to improve global relations. He also hosted an Ecuadorian exchange student in his home for a year and recently enjoyed a visit to Ecuador as a guest of



Alice Elshoff

Jess Wenick demonstrates use of a GPS for a weed mapping project.

this student and his family. Jess lives in Burns and has spent the last year training a new puppy. 

Russian olive is found along streams, fields, and open areas. Seedlings are tolerant of shade, and it thrives in a variety of soil and moisture conditions, including bare mineral substrates.

Russian olive can out-compete native vegetation, interfere with natural plant succession and nutrient cycling, and tax water reserves. Because Russian olive is capable of fixing nitrogen in its roots, it can grow on bare mineral substrates and dominate riparian vegetation where overstory cottonwoods have died. Although Russian olive provides a plentiful source of edible fruits for birds, ecologists have found that bird species richness is actually higher in riparian areas dominated by native vegetation.

Establishment and reproduction of Russian olive is primarily by seed, although some vegetative propagation also occurs. The fruit of Rus-

sian olive is a small, cherry-like drupe that is readily eaten and disseminated by many species of birds.

More information about Russian olives is available from the Malheur Refuge (541-493-2612) or: <http://www.nps.gov/plants/alien/fact/elan1.htm>



**Malheur Refuge is beginning an intensive effort to control Russian olives within its boundaries. Consider joining us for the work party on Sep 21-22. We need your help!**



Photo: Wayne Bowers

Russian olives can outcompete native vegetation.

## Recruitment Brunch and Tour

*Bill Rentwick, MWA Board Member*

Members of the Malheur Wildlife Associates board and Malheur Refuge staff hosted a recruitment event at Malheur Refuge on Saturday, May 5, 2007. Several current and potential members enjoyed a delicious brunch, followed by a short program about the Refuge and the activities of the Malheur Wildlife Associates in support of the Refuge. A tour of Boca Lake and portions of the Blitzen Valley was followed by lunch along the Blitzen River near the P Ranch. During the tour several management issues were discussed, with technical background provided by Refuge staff.



Photo: Patty Bowers

Rick Roy describes the management of Boca Lake to potential MWA members.

The tour was a great familiarization opportunity for potential new members from out of the area and a refresher for those familiar with Refuge projects, policies, and history. It was encouraging to witness new "blood"

and energy interested in involvement with the long-term viability and operations of Malheur National Wildlife Refuge. We hope our new members will provide enthusiastic participation in MWA activities in the years to come.



## Fire and BAER

*Carla Burnside, Refuge Archaeologist*

Fire season arrived with a vengeance this year. In coordination with the Bureau of Land Management, the Refuge requested assistance from the Department of Interior's Burned Area Emergency Response (BAER) Team to analyze and propose stabilization and restoration of lands within burned areas. As a result of this analysis, the Refuge obtained Emergency Stabilization and Restoration funds to begin working on habitat restoration within the burned areas using specifications identified by the BAER Team.

Several new employees joined the staff to implement this work. Ed Gheen is leading the team as the Implementation Leader. Louise Zerique, a biological technician, is using a GPS to map various aspects of the fire and transforming this data into maps using ArcMap. Wes Abplanalp recently joined the team to assist with vegetation monitoring and other tasks. Several specific tasks have already been completed by the team or by contractors under the direction of the team. A total of 11.5 miles of boundary fence were rebuilt to exclude livestock from the burned areas. An additional 4.75 miles of temporary fence was constructed to keep trailing livestock out of 69 acres of reseeded uplands, and 3,800 acres have been sprayed for noxious weeds. The team will also monitor the results of these activities.

Ed will prepare a report outlining the effectiveness of these treatments and a proposal for additional funds to continue needed treatments.

As the team became familiar with the various burned areas, they realized that two riparian areas in the Grandad Fire area adjacent to the East Canal were severely impacted by the fire. Mud and Bridge Creeks provide redband trout habitat, and the state sensitive Columbian spotted frog has also been found in both creeks. As a result, restoration of these two riparian areas has taken on increased importance. In early June, Chris Hoag, a wetland plant ecologist for the Natural Resources Conservation Service, conducted an assessment of Mud Creek to determine the extent of the fire damage and impacts on the creek.

A variety of treatments have been proposed for Mud Creek to restore the riparian zone to viable wildlife habitat that will benefit the trout and frogs

and improve other wildlife uses as well. These treatments include seeding severely burned areas with native grasses, planting potted shrubs and aspen trees already purchased and waiting for fall planting, reshaping steep banks along the upper portion of the creek, and using many of the dead juniper in the canyon as revetments along the base of steep banks. Most of these treatments will be accomplished without the use of mechanized equipment because of the inaccessibility of the area and a desire to minimize impacts within the canyon.

The Refuge hopes to recruit MWA volunteers for various portions of the riparian restoration, especially planting of shrubs and trees this fall. If you're interested in volunteering for this project please let Alice Elshoff (calice@highdesertair or 541-495-2322) know that you would like to participate.



Photo: USFWS

The 2006 Mud Creek fire damaged much of the riparian vegetation.

## Saga of the Trumpeter

Gary Ivey, MWA Vice Chair

Snow-white trumpeter swans present a spectacular sight. With a wingspan of more than seven feet and a height of about four feet, the trumpeter swan (*Cygnus buccinator*) ranks as the largest native waterfowl species in North America. Once near extinction, trumpeter swans are still recovering from excessive harvest in the 19th century, primarily by the fur industry. Swans were shot for their meat, feathers and skins and were marketed here and in Europe. Their body feathers were used for pillows and mattresses and their flight feathers as quills for pens. Their skin, with the feathers removed and the down intact, provided the highest value, as it was used as "powder puffs" in the makeup industry.

By 1930, less than 300 birds were known to be alive in North America and most of these were in the Centennial Valley in southwestern Montana. Centennial Valley was preserved to save these swans with the establishment of Red Rock Lakes National Wildlife Refuge. In the late 1930s, biologists decided to expand the distribution of trumpeters by moving them to other western national wildlife refuges, including Malheur. In the 1950s, a larger population of trumpeters was discovered in Alaska. And in the 1970s, several midwestern states began trumpeter restoration

programs. Today, populations have recovered and there are almost 35,000 trumpeters in North America. However, the Oregon population has not fared well.

Swans brought to Malheur were fed during winter until the early 1970s to help them survive harsh winters. Unfortunately, feeding taught them to stay in this harsh environment and compounded problems, which have limited their population growth. Birds essentially stayed on the Refuge year round, and the Refuge population filled the available habitat in the early 1980s when about 30 pairs nested at Malheur.

The record flood of the mid-1980s allowed exotic carp to invade important swan wintering areas, and the carp depleted the swan's aquatic plant foods. This caused a crash in Oregon's trumpeter population, which was reduced to a total of 19 birds. Malheur Refuge began working with the Oregon Department of Fish and Wildlife (ODFW) in the late 1980s to help the Malheur birds find better wintering

sites and to expand their breeding range in Oregon. This program was achieving moderate success, but progress was stalled at the turn of the 21st century because of a lawsuit about listing trumpeter swans as an endangered species. The lawsuit has been settled and Malheur staff is again working with ODFW and The Trumpeter Swan Society to develop a more aggressive program to restore trumpeters and expand their range in eastern Oregon.



Photo: Gary Ivey

A family of trumpeter swans relaxes at Malheur Refuge.

Malheur Wildlife Associates will use our resources to help with this effort.

For more information about trumpeter swans, including tips on identification, check out The Trumpeter Swan Society's webpage: <http://www.trumpeterswansociety.org/>



## Donner und Blitzen Redband Trout Study

Carey Goss, Refuge Liaison

Redband trout, a species recently petitioned for federal listing, have lost significant amounts of historic habitat and are now restricted to small remnants of quality habitat. In cooperation with Malheur National Wildlife Refuge (MNWR), the Oregon Department of Fish and Wildlife (ODFW) and Oregon State University (OSU) are investigating spawning migrations and seasonal movements of redband trout in the Donner und Blitzen River and Malheur Lake.

The study will take place over a two-year period and will involve tracking redband trout with implanted radio and PIT tags. Matt Anderson,

OSU graduate student, with his assistant Kelley Klopp, recently spent the summer trapping redband trout and implanting tags. Anderson will visit the area throughout 2007 and into 2008, using telemetry to track movements of the redband trout.

"There are important things anglers need to remember," said Anderson. "It is illegal to kill or keep radio-tagged fish; however there are no restrictions on PIT tagged fish." PIT tags may be located in the body cavity or in the dorsal sinus. If a PIT tag is found, Anderson asks anglers to

return the PIT tag to the ODFW office in Hines, OR with a description of the location where it was recovered.

Since 1998, Malheur NWR, in coordination with ODFW, has focused its redband trout restoration efforts on improving fish passage, water diversion screening, carp control and habitat restoration as well as population monitoring.



Photo: Richard Grost

## Carp Barrier Project Projected to Restore 9,000 Acres

Carey Goss, *Refuge Liaison*

"If we build it, will it come?"

asked Dennis Benton, Harney County Gypsum LLC, during an onsite pre-bid meeting for the Narrows Carp Barrier Project. Benton was referring to the lack of water in Malheur Lake at Malheur National Wildlife Refuge (Malheur NWR). And, the water did come during the beginning of the construction phase.

The Narrows Carp Barrier Project is projected to restore up to 9,000 acres of wetlands on Mud Lake by prohibiting adult common carp, an invasive non-native fish, from entering Mud Lake when Malheur Lake expands as the result of significant runoff from the Blitzen and Silvies Rivers.

When inundated with water, Mud Lake was at one time dominated by sago pondweed, a type of submerged aquatic vegetation. Sago pondweed is an extremely important food source for migrating and breeding birds and supports large numbers of aquatic invertebrates, which are especially important to young water birds.

Since the introduction of carp in the 1900s, sago pondweed has been eliminated or severely reduced as a result of carp spawning and feeding activities, impacting a major food source for various birds throughout Mud and Malheur Lakes.

Carp spawn in shallow water and in huge schools. The thrashing of large numbers of adult carp uproots vegetation and causes fine sediments to become suspended in the water column. In addition, carp feed much like a vacuum cleaner, sucking up fine sediments and filtering out aquatic invertebrates and vegetation. These activities reduce photosynthesis and the vegetation dies. A carp's diet is also similar to that of an egg-laying hen mallard, creating a potential for direct food competition.

"Carp are like hogs in water," said Benton, who was awarded the contract. "The community is aware how destructive they are and the project was developed to restore Mud Lake."

The construction of the project, designed by Ducks Unlimited, consists of compacted fill and rip-rap barrier

with several screened culverts on the west side of the Narrows Bridge on Highway 205. The culverts allow free movement of water, but the screens prohibit all but the tiniest carp from entering Mud Lake. Ducks Unlimited also provided contract oversight.

Rick Roy, Malheur NWR Supervisory Biologist acknowledged that the screens are not 100% effective in preventing the tiniest carp from passing through. "It was never our intent to totally eradicate carp, only to control them so they are background noise and not the conductors."

Based on work performed in the marshes along the Great Salt Lake, carp begin to cause serious declines in wetland quality at around 200 pounds per acre. If carp biomass is kept below this level, the wetland quality should be acceptable. "The goal of the project is to prevent adult carp from entering Mud Lake to spawn and feed," said Roy.

From Malheur NWR past experiences with drought and poisoning efforts, a wetland only produces about two to three years of benefit before carp re-invade and begin to make an impact. By preventing adult carp from entering Mud Lake, the wetland would get more benefit for longer periods, approximately six to seven years. By this time, Mud Lake will likely be heading toward another drought cycle eliminating any carp that pass through the screen.

"We are depending on the drought to restart the clock," emphasized Roy. "What makes these wetlands so pro-

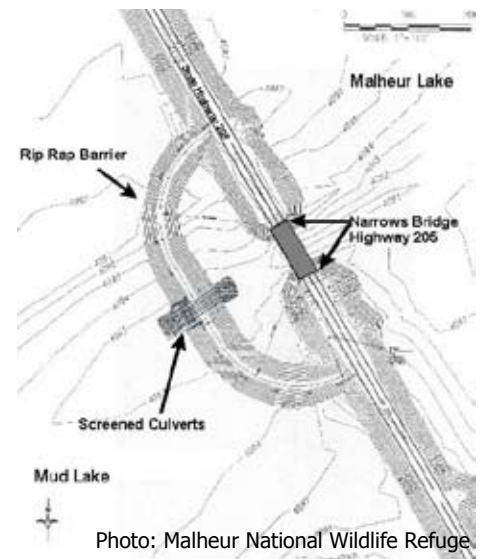


Photo: Malheur National Wildlife Refuge

The carp-control project, designed by Ducks Unlimited.

ductive is the fact that they do experience frequent drought and drying."

The project was made possible by funding and support of Ducks Unlimited, Harney County Soil and Water Conservation District, North American Wetlands Conservation Council, Oregon Department of Fish and Wildlife, Oregon Department of Transportation, Oregon Hunters' Association, Oregon Watershed Enhancement Board, and the U.S. Fish and Wildlife Service.

For more information about carp control efforts, please contact Malheur NWR at 541-493-2612.



Photo: Malheur National Wildlife Refuge

The completed carp-control barrier extends into Mud Lake, west of Hwy 205 at the Narrows bridge.

# Celebrating 100 years

## Happy Birthday Malheur Refuge

*Carla Burnside, Refuge Archaeologist*

Each year many of us gather with family and friends to celebrate our birthdays, but this rarely happens at Malheur Refuge. On August 18th of every year, the Refuge quietly grows a year older without much fanfare. This year, as Malheur Refuge turned 99 years old, many of us began reflecting upon the passage of time and how this has affected the Refuge.

When Theodore Roosevelt created Malheur Bird Reservation in 1908, the first Model T Fords were rolling off production lines in Detroit, the first horror film (*Dr. Jekyll and Mr. Hyde*) premiered in New York City, and Orville Wright made the first one-hour-long airplane flight. In the quiet southeastern corner of Oregon where Malheur, Mud and Harney Lakes were designated as a bird reservation, August 1908 signaled the end of the indiscriminate killing of colonial nesting birds for their feathers and the beginning of a new era of conservation.

The Refuge has experienced many changes and has grown considerably since those early days. In 1935 the Blitzen Valley (65,000 acres) was added to Malheur Bird Refuge, doubling the size of the land base and providing a stable source of water, the Blitzen River, for Malheur and Mud Lakes. In 1942, an additional 14,000 acres in the

Double-O area were added, bringing a greater variety of wildlife habitats into the fold.

Between 1935 and 1942, Malheur Refuge experienced its most rapid era of construction and modification. Two Civilian Conservation Corps (CCC) camps were established on the Refuge in 1935 and 1936 as part of President Franklin Roosevelt's New Deal (a series of programs to provide relief, recovery and reform to the American people during the Great Depression). The CCC constructed the Center Patrol Road and a series of ponds (Benson, Knox, Dredger, Buena Vista and Boca Lake), which today provide wildlife viewing opportunities for visitors and habitat for the wide variety of wildlife using the Refuge. They also brought electricity and phones to much of the Blitzen Valley, surveyed and constructed the current alignment of Highway 205, and modernized the water delivery system in the Blitzen Valley.

The beginning of World War II brought considerable change to the country and the era of construction at Malheur Refuge came to an end. However, wildlife using the Refuge continued to flourish and increase even though turmoil was common elsewhere. As the war ended and Americans began focusing again on the resources available in their own backyard, the Refuge began to provide more recreational opportunities for

visitors. Krumbo Reservoir was constructed with a campground and other visitor facilities, and a new museum was built at Refuge headquarters to hold taxidermy mounts of bird species found on the Refuge. The previously little-visited Refuge now became a destination for Audubon Society trips, college biology classes and other wildlife enthusiasts.

Passage of the National Wildlife Refuge Administration Act in 1966 provided guidance for the administration of refuges and required that proposed uses on refuges must be "compatible" with refuge purposes. Over the next several decades, Malheur Refuge would see changes in management emphasis and increasing participation by the public in planning efforts. Throughout all of these changes, the birds and other wildlife at Malheur Refuge continued to rest, nest and forage for food in the habitats protected by the Refuge.

As Malheur turns 99, our thoughts turn to how we will celebrate that magical 100th year. Refuge staff members are already planning for this landmark event. Our centennial celebration will officially kick off at the John Scharff Migratory Bird Festival, April 4-6, 2008. Special exhibits, tours and speakers will focus on Malheur Refuge. A book about the history of the Refuge will also be unveiled during the festival. A special celebration is planned for September 2008 (after the mosquitoes have abated) and will include an employee reunion, public events, tours and much more. The Refuge will also have special exhibits about the centennial in the museum and at various locations around Harney County. So mark your calendars and plan to join us for this momentous occasion. 

## Bald Eagle Soars Off Endangered Species List

*US Fish & Wildlife Service*

*Division of Migratory Bird Management*

After nearly disappearing from most of the U.S., the bald eagle is now flourishing and no longer needs the protection of the Endangered Species Act. The nation's symbol has recovered from an all-time low of 417 nesting pairs in 1963 to an estimated high

of 9,789 breeding pairs today, and will be removed from the list of threatened and endangered species.

To ensure that eagles continue to thrive, the U.S. Fish and Wildlife Service will work with state wildlife agencies to monitor eagles for at least five years. If it appears that bald eagles again need the protection of the Endangered Species Act, the Service can propose to relist the species. The Service is also making the draft post-

delisting monitoring plan available and is soliciting public comment for 90 days.

The bald eagle first gained federal protection in 1940, under what was later named the Bald and Golden Eagle Protection Act. The law curbed illegal hunting and shooting of eagles for their feathers, but they soon fell victim to another threat: DDT. The

*continued on page 8*

# MWA At A Crossroads

Alice Elshoff, MWA Chair

Looking back over eight years of accomplishments, I am amazed at the special contributions this small, up-start group has made to Malheur Refuge. As advocates for special projects, we have had a big impact on educational outreach to the public, through the placement of interpretive signs, the securing of safe off-road parking for wildlife viewing, and the production of our auto tour guide. Because of the generosity of our members we have given direct financial aid to the Refuge when needed. We have contributed many hours to growing, planting and seeding wildlife cover and forage, and to the removal of noxious weeds. We could do these things because of the dedication of a few terrific local folks with a passion for wildlife and the Refuge system. Now we are asking for help.

Different refuges across the nation make different contributions to the National Wildlife Ref-

uge System. Those near large urban areas with their visitors' centers and boardwalks excel at creating a constituency of people knowledgeable, willing and able to advocate for the needs of wildlife. Malheur and other rural refuges with large landscapes that are traditional homes for wildlife see their most important contribution differently. These Refuges strive to protect and enhance habitat in perpetuity for the benefit of our rich heritage of wildlife for it's own sake and for the enjoyment of generations yet to come.

Malheur has so much potential, not only as a benefit to wildlife but also as a resource

that can connect the community and individuals in a great cause. MWA would like to be a part of that, but to continue we must have some help. We are in need of at least two new board members who would have the time and willingness to step up and help us make this Refuge the best it can be. When you feel dismayed at the news of current events in



## National Wildlife Refuges: Wildlife's Best Friend

National wildlife refuges are places in the United States where wild creatures can get what they need to live—food, water, shelter, and space. On national wildlife refuges, the needs of wildlife come first.



the world, we offer a way to become involved in something positive, enjoy a sense of community, benefit wildlife in perpetuity and have fun at the same time. I know there is energy for this out there—please give us a call.



## Membership Form

2007

Annual dues:

- \$10 Individual
- \$20 Family
- \$50 Donor
- \$200 Patron
- \$500 Life Member

I prefer to receive my newsletter by:

- Snail Mail
- Email

Type of Membership:

- New
- Renewal

Name: \_\_\_\_\_  
Last
First
Middle I.

Mailing Address: \_\_\_\_\_ Phone: \_\_\_\_\_

\_\_\_\_\_ Email: \_\_\_\_\_  
City
State
Zip

Mail this form with check to: Malheur Wildlife Associates  
 36391 Sod House Lane  
 Princeton, OR 97721

I am interested in hearing about work parties via email. Please add my email address to the project notification list.



Photo: Rick Vetter

Widespread reproductive failure and a precipitous decline in numbers followed. As a result, the bald eagle was protected in 1967 under the precursor to the Endangered Species Act. The eagle continued to be protected when the Endangered Species Act of 1973 was enacted.

The legal protections given the species by these statutes, along with a crucial decision by the Environmental Protection Agency to ban the general use of DDT in 1972, provided the springboard for the Service and its partners to accelerate recovery through captive breeding programs, reintroductions, law enforcement efforts, protection of habitat around nest sites and land purchase and preservation activities.

The bald eagle will continue to be protected by the Bald and Golden Eagle Protection Act and Migratory Bird Treaty Act. More information available from: <http://www.fws.gov/migratory-birds/baldeagle.htm>



widespread use of the pesticide DDT after World War II caused eagle populations to plummet towards extinction. When DDT washed off into waterways, it was absorbed by aquatic plants and animals. When eagles ate contaminated fish, they would then be poisoned. DDT prevented the proper formulation of calcium necessary to produce strong eggshells. Consequently, the thinned eggshells cracked when an adult bird tried to incubate them.

## Bald Eagles at Malheur Refuge and in the Harney Basin

*Gary Ivey and Carey Goss*

The first eagle reported within the Harney Basin was in 1877 by Colonel Bendire at Fort Harney. Surveys within the Basin have been somewhat regular since the 1940s. An interagency group (Oregon Department of Fish and Wildlife, Malheur Refuge, U.S. Forest Service, and Bureau of Land Management) has completed surveys since 1978. Although numbers vary annually according to winter conditions and availability of prey, about 200-250 bald eagles commonly use the Basin during the winter. During harsh winters, dead deer or cattle can provide a significant portion of their food, followed by waterfowl, some fish, and jackrabbits. Two hundred sixty-three eagles were counted on March 16-17, 1992, which is one of the highest survey results on record.



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This newsletter is published biannually by the Malheur Wildlife Associates for the benefit of its members. Copies are also made available to refuge visitors and through various other outlets.

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