



A lone, red elm leaf lies among a carpet of yellow and brown on the forest floor at Bur Oak Wildlife Management Area in Seward County. Photo by Eric Fowler.



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CRP
More Than Just
Pheasant Hunting

Bicycling
An Urban Nature Trail

Ducks on the Pond
A Mecca for Waterfowlers
Black Squirrels
COMMON OR UNCOMMON?



NEBRASKAland

Volume 85, Number 8, October 2007

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Cover: Retired wildlife biologist Dan Rochford of North Platte holds a sharp-tailed grouse he harvested from a CRP-MAP field in southwestern Nebraska. See story beginning on page 40. Photo by Rocky Hoffmann. **Opposite:** A small stand of aspen trees shows off the species's brilliant yellow fall color from a ridge overlooking Smith Falls in Cherry County. The area is one of many Nebraska state parks that have beautiful fall color. Photo by Eric Fowler.



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Greg Wingfield duct tapes dumbbells for dive weights to Michael Forsberg's feet.

A Bit of MacGyver

NEBRASKAland readers should know that Michael Forsberg is not full of hot air but truly practices what he preaches when it comes to using the tools of the trade in photographing the great outdoors.

His list of uses for duct tape in the August/September issue was extremely limited, as evidenced by this photograph taken last month when in pursuit of underwater images of Topeka shiners in the Flint Hills of Kansas.

But I suggest that he modify his recommendation to that of carrying a full roll ... a half roll is barely enough to attach dumbbells as dive weights. I think readers will also agree that Mike is not afraid of looking somewhat silly.

Greg Wingfield
 Alma, Kansas

Not so Cruel

When I saw the stories about the cruel treatment of dogs raised to be fighters and the greyhounds that are killed when they can no longer race, I was angry, hurt and disgusted with my fellow man.

Then I picked up the July issue of NEBRASKAland and read the story about the rescue of one little lamb. That entire crew of people risked life and limb and spent considerable time and effort to rescue one little

lamb.

Thank God for these kind and caring people. This story made me think that in spite of all the cruelty in the world, there just might be hope for the human race after all.

I enjoy your magazine very much and pass it on to my neighbors. Keep up the good work!
 J.B. Stupka
 McCook, Nebraska

Lake Zorinsky Cat

I have been a longtime subscriber of your magazine and thoroughly enjoy getting it each month. I am submitting a picture for your review. My brother, Bill Comba, was fishing Zorinsky Lake in Omaha last June with his daughter, Kylie, when he landed this catfish. He estimated the weight at over 60 pounds. He had Kylie snap this photo before he returned the fish to the water so it could grow and live to see another day. Bill owns Paul Davis Restoration & Remodeling in Grand Junction, Colorado, but we have family in Omaha and get back as often as we can to enjoy our family and friends. I hope you can use this picture.

Curt Comba
 Denver, Colorado



Bill Comba, of Grand Junction, Colorado, caught this catfish at Zorinsky Lake in Omaha last summer.

Photo Positives

This is a pat on the back for your photographers who take such fantastic

pictures – I look at them first when I get the magazine each month. Makes us appreciate our beautiful state of Nebraska.

Eleanora Houser
 Wilber, Nebraska



I enjoyed the photos in July's issue of the magazine, particularly the photo of Snake Falls. Thanks.

Gordon Coke
 via e-mail

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Nebraska Wildlife Crimestoppers 1-800-742-7627



The light goose season opens statewide on October 6 this year.

Commission Sets 2007 Waterfowl Seasons

The Nebraska Game and Parks Commissioners set 2007-2008 waterfowl, crow and falconry seasons at its August meeting in Ponca.

Nebraska's 2007 waterfowl, crow and falconry seasons and bag limits will be:

DUCKS

Low Plains Early: Oct. 6-Dec. 16 and Dec. 22-23

Low Plains Late: Oct. 20-Jan. 1

High Plains: Oct. 6-Dec. 16 and Dec. 22-Jan. 14

Daily Bag Limit: All areas – Conventional System.

Possession Limit: Twice the daily bag.

(Pintail and Canvasback Seasons – Low Plains Early and High Plains: Oct. 6-Nov. 13. Low Plains Late: Oct. 20-Nov. 27)

Daily Bag Limit: One pintail and one canvasback per day

Possession Limit: Twice the daily bag.

DARK GEESE

(Canada and brant geese)

East Unit: Oct. 20-Jan. 23

North Central Unit: Oct. 6-Jan. 18

Platte River Unit: Oct. 20-21 and Oct. 27-Feb. 6

Panhandle Unit: Nov. 10-Feb. 6

Niobrara Unit: Oct. 20-21 and Oct. 27-Feb. 6

Daily Bag Limit: Three geese.

Possession Limit: Six geese.

WHITE-FRONTED GEESE

Statewide: Oct. 6-Dec. 16

Daily Bag Limit: Two geese.

Possession Limit: Four geese.

LIGHT GEESE

(Snow, blue and Ross's geese)

Statewide: Oct. 6-Jan. 6 and

Jan. 26-Feb. 6

Daily Bag Limit: 20 geese.

Possession Limit: Unlimited.

LIGHT GEESE

CONSERVATION ACTION

All Zones: Feb. 7-Apr. 13

Daily Bag and Possession Limit: Unlimited.

CROWS

Statewide: Oct. 1-Nov. 15 and Jan. 20-Apr. 6

Special Public Health Hazard

Order: Nov. 16-Jan. 19

Daily Bag and Possession Limit: Unlimited.

FALCONRY

Statewide: Concurrent with duck season dates within zones and management units.

Daily Bag Limit: Three ducks.

Possession Limit: Six ducks.

Huskerland Muskie Hunters

The Huskerland Muskie Hunters and Nebraska Game and Parks Commission are jointly sponsoring the Muskellunge Angler Diary to gain valuable information regarding muskies caught in Nebraska.

Anglers fishing for muskie,

whether they catch a fish or not, should complete the online form at <http://www.mi53.org/systemupdate2/public/projects/Diary/card.html>, which will then be forwarded to the NGPC. For more information, contact Joel Klammer in Bassett at (402) 684-2921 or Daryl Bauer in Lincoln at (402) 471-7647.

2008 Refuge Photography Contest Opens Soon

The National Wildlife Refuge Association is looking for entries for its 2008 Wildlife Refuge Photo Contest.

Photographers may submit up to ten digital photos taken at a national wildlife refuge within the last two years, and the grand prize winner will receive a 2008 Toyota Highlander Hybrid. Submissions must be made between October 15, 2007, and December 15, 2007, and results will be announced next March. This year there will also be a youth category for the first time. For more information, visit www.refugenet.org.



Two-For-One Turkeys

Starting this fall in Nebraska, hunters may purchase two turkey permits, with two turkeys being allowed for each permit. Those permits may include two archery, two shotgun, or one of each. Landowners may also have two permits, with only one being a landowner permit.

An increasing Nebraska turkey

population has resulted in the liberalization of hunting regulations in recent years. In 2004, permits became unlimited in number and valid statewide. The shotgun season was lengthened in 2005 and shotgun and archery seasons were extended to the end of December in 2006. The new bonus tag is the Commission's latest effort to increase turkey harvest and reduce crop damage.

The archery turkey season is Oct. 1-Nov. 9 and Nov. 19 - Dec. 31. The shotgun season is Oct. 13 - Nov. 9 and Nov. 19 - Dec. 31. Permits can be purchased online at www.OutdoorNebraska.org or at commission offices located throughout the state.

Banquet to Raise Funds for Mule Deer

A banquet to raise funds for a newly created chapter of the national Mule Deer Foundation (MDF) will be held October 26, 2007, at the Red Willow Community Building in McCook.

The Frenchman Chapter of MDF was formed this summer by sportsmen, landowners, and wildlife professionals to help ensure the conservation of mule deer in the state. No mule deer remain in eastern Nebraska, and there appears to be recent population declines in portions of western Nebraska. The nonprofit conservation organization works closely with state and federal agencies by providing monetary and advisory support on conservation projects that benefit mule deer and other wildlife species.

For more information on the banquet and auction, which begins at 5 p.m., contact Brian Perks (bperks56@hotmail.com, (308) 697-3019), Chad Taylor (ctaylor@access-directwb.net, (308) 697-4005), or Scott Hampel – MDF Regional Director (shampel@muledeer.org, (303) 659-2088).

To learn more about the MDF, visit its web site at www.muledeer.org. ■

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Buy a Bigger Freezer This Fall

Hunters asked to voluntarily harvest more does before regulations require it.

Photos and text by Eric Fowler



With white-tailed deer numbers increasing along most rivers in Nebraska, including the North Platte River in Garden County, and in other locales, the Nebraska Game and Parks Commission is asking hunters to harvest more does this fall.

The Nebraska Game and Parks Commission is asking deer hunters to help themselves by harvesting more white-tailed does this fall. If they don't, game managers are already talking about other options to encourage, or even require, them to shoot more does in 2008.

"There's hardly a place in the state where we don't have a record number



Kit Hams

of white-tailed deer," said Kit Hams, the Commission's big game program manager. "Clearly harvest numbers show that the

population is increasing, and if we want to get it back to where it was three or four years ago, we need to shoot more does."

Unfortunately, the current whitetail doe harvest won't accomplish that goal in a herd that numbers approximately 300,000. For the past three years, antlerless deer have made up 39 percent of the total whitetail harvest, which for all seasons in 2006 was a record

53,322 deer. That's down from peak years, when does made up 45 percent of the kill, and has fueled a 30 percent increase in whitetail numbers since 2001. The biggest increases have been seen along the Platte, Republican, Missouri and Elkhorn rivers, and throughout much of eastern Nebraska.

Predators, disease and accidents, including collisions with vehicles, account for twice as much deer mortality as hunting, Hams said. But hunting is the only thing biologists can control. With that in mind, Hams wants an equal number of bucks and does killed in 2008, meaning hunters will need to harvest 13,000 more does than they did last year.

To help the cause, the Commission authorized an additional 6,000 permits for 2007, including 2,800 more antlerless season choice permits and added bonus tags to an additional 4,000 permits. Only four of the 18 deer management units and eight of the state's 93 counties are without season choice tags, and in 11 of the 16 season choice areas and one firearm unit, hunters receive a bonus antlerless deer tag with their permit. The Commission also made all tags either-sex in all but two firearm deer

management units. Other options being discussed for 2008 include more bonus tags, longer seasons and a deer meat donation program.

In 2006, approximately 89,000 hunters bought 123,000 permits, 30,000 more than were issued 10 years ago. But 2,000 permits went unsold last season and 70 percent of all hunters purchased only one permit. "We're already issuing about all of the permits that hunters will buy," Hams said. "The challenge for the future is to continue to recruit new deer hunters, especially those who are willing to take antlerless deer."

A number of factors figure into herd growth and the decline in doe harvest.

Whitetails are prolific: Adult does average two fawns each spring, half of them does. Doe fawns grow up and have their own young, which have their own young and so on. The result in an unmanaged herd is exponential population growth: The longer it goes unchecked, the faster it grows. Even with other mortality factors, Hams said Nebraska's whitetail herd would double every four years if no does were harvested.

Real men don't shoot does?: There are many types of deer hunters in

Nebraska. Some are meat hunters, who either want just one deer and take the first one they have a shot at, buck or doe, or buy several doe tags and fill their freezer with venison. At the other end of the spectrum are trophy hunters, who won't take a deer unless it's worthy of a trip to the taxidermist. In between are hunters who, for some unknown reason, can't bring themselves to shoot a doe. Instead, they shoot small bucks on opening morning and then show up at the check station and complain about not seeing any big ones. About 87 percent of all hunters who fill an either-sex deer tag shoot a buck.

Big buck bonanza: It's easier for hunters to hold out for a trophy buck these days because there are more of them. Fifty-four percent of the 33,000 whitetail bucks taken in 2006 were 2½ years old or older, up from 45 percent in 1997 and 32 percent in 1987. The increase is attributed to both a larger herd and increased hunter selectivity for older bucks. It could be even greater if hunters would pass on little bucks, let them live another year and shoot a doe.

Access: Some landowners don't allow hunting. Deer have a knack of finding these refuges. When they do, they flourish and neighboring landowners often feel the brunt of population growth through crop damage. And for those without connections, finding a place to hunt can be a daunting task, a byproduct of the shift from a rural to urban society.



High corn and soybean prices this year have made some landowners less tolerant of deer foraging in their fields.



The propensity of mature does to have twin fawns can lead to exponential growth in deer populations if hunters don't harvest enough antlerless deer.

Leasing: More and more land is getting tied up in leases and the best land is leased first. Hunters pay big bucks to shoot bucks and often don't see the value in letting the little guys walk or shooting does, although the Quality Deer Management philosophy spreading from southeastern portions of the United States is slowly changing that mentality. Having lots of deer is nice, but too many can destroy habitat and lead to a decrease in both body and antler size. Leasing can also leave individuals who had hunted that land for years looking for a new place to hunt.

Hunters come and go: Access and other issues, including people having less free time and more things to do in what little time they do have, contribute to the fact that only 28 percent of the state's deer hunters hunt at least four of every five years.

Help yourself: Three-fourths of the deer taken with landowner deer permits are bucks, so some landowners could do more to help their own cause. Those with serious

deer problems who haven't already should consider opening their land to anyone who wants to harvest a doe. They can even insist that those wanting to hunt bucks also take a doe, or even shoot the doe first.

Most landowners don't mind having deer on their farms. But with the high corn and soybean prices, some of that tolerance has eroded and the number of complaints to Game and Parks offices has increased.

Some landowners have been making an effort to cut the deer herd on their land. One near Tekamah had more than 100 deer harvested from his farm last fall, but doesn't think it even put a dent in the local population.

The Commission has taken many steps to increase doe harvest in the past decade, including issuing bonus and season choice tags and reducing the cost of antlerless permits for non-residents. It is now asking hunters, even begging, to be a bigger part of the deer management process before things get out of control, Hams said.

"Heaven forbid we reach the point where we limit the buck kill or we require doe kill," Hams said. "Other states have done it. Will we go there? I don't know, we'll see."

Use your bonus tags, Hams said. And if you have enough deer in your freezer already, find someone who doesn't. ■

Black Squirrels

AN UNCOMMONLY COMMON SQUIRREL OF NEBRASKA

By Jeff Kurrus

Throughout history, black squirrels were often thought of as a distinct species. However, they can actually be a variety of squirrel species, including the eastern fox and eastern gray squirrels of Nebraska.

Black squirrel sightings, at least in my life, have been rare. Growing up, I saw a limited number on hunting trips near Yahoo, Mississippi, and have only recently seen additional numbers near Omaha, Lincoln and Hastings. Yet with each person I have spoken with about these sightings, interest in their presence has been viewed with bipolar spectacles; either they are placed on a rock star pedestal and celebrated, or are seen as commonplace and altogether ignored.

Regardless of public response, however, there remains a lack of information

concerning their natural history in Nebraska, despite turn-of-the-century references to their local presence. In an October 1904 *Omaha World-Herald* article, a reader wrote to sportswriter Sandy Griswold: “On Friday last a farmer boy living four miles north of [Akota City] killed a pure black squirrel...It was just the size of a gray squirrel and exactly like one, only wholly black, and jet black at that.”

Griswold responded, “Black squirrels are a distinct and common species, that is; they were formerly common in Ohio, Indiana, Michigan, New York and Pennsylvania.” Black squirrels, however, are not a distinct species. They can be, in fact, part of a number of squirrel species throughout the world, including the Eurasian red squirrel, the North American red squirrel, the 13-lined ground squirrel, or a subspecies of various Southeast Asian tree squirrels. In Nebraska and other parts of North America, black squirrels could also include both the eastern gray and eastern fox squirrel. And even though 100 years have passed since Griswold’s response,

The black squirrel is celebrated as a cornerstone of the history of Council Bluffs, Iowa, as indicated by this collector’s plate.

there are still questions concerning this sometimes unique, and sometimes not so unique, mammal.

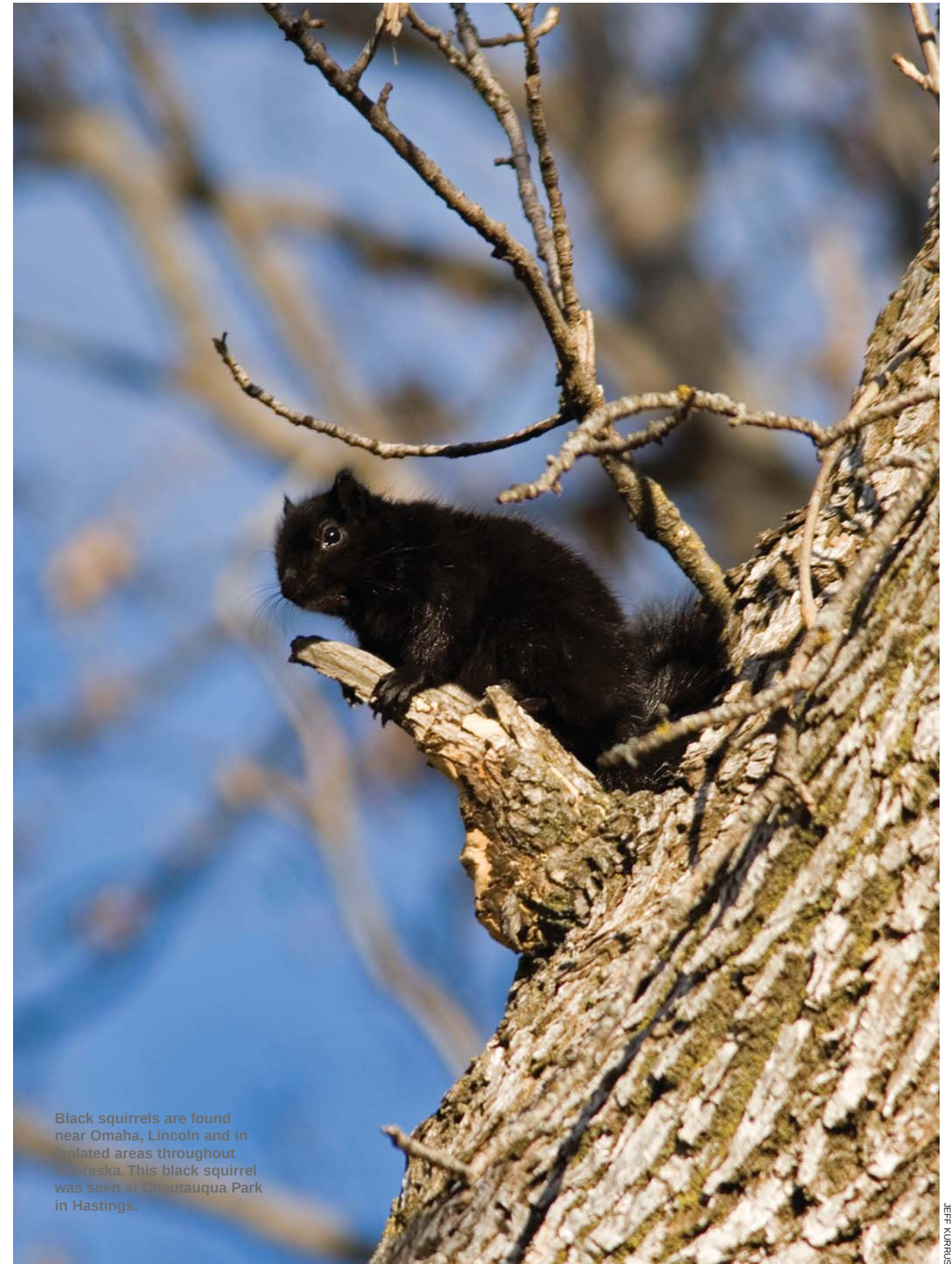
Why Black?

To understand this question, one must note the differences between “color phase” and “melanism,” and how each relate to black squirrel populations. “Color phase,” says Russ Benedict, biology professor at Central College in Iowa, “refers to any relatively common, alternative color pattern seen in a species, regardless of the specific color. For instance, the snow goose has two color phases – the ‘blue’ color phase and the white phase.

“Melanism is a specific mutation that leads to the overabundance of melanin, usually creating a black or very dark individual. Melanism is the opposite of albinism. So, while color phase and melanism are similar, they are technically different. Another way of thinking about this: if two individuals of the same color phase breed, their offspring will almost certainly have the same coloration. On the other hand, the very first melanistic individual in a population came from the breeding of two ‘normally’ colored parents.”

In addition to the theories surrounding whether or not a particular black squirrel is a color phase or a melanism, there are even more theories proposed regarding a number of black squirrel-related issues.

Most naturally occurring black



Black squirrels are found near Omaha, Lincoln and in isolated areas throughout Nebraska. This black squirrel was seen at Chautauqua Park in Hastings.

JEFF KURRUS



On Stone by W. E. Hitchcock

Drawn from Nature by J. J. Audubon, F.R.S., L.S.

Black Squirrel

Lith. Printed & Col^d by J. T. Bowen, Phil

COURTESY OF THE OLD PRINT SHOP

This drawing, originally in *The Quadrupeds of North America*, displayed the black squirrel as a distinct species.

squirrel populations (as opposed to introduced metropolitan populations) are found at northern latitudes or upper elevations, suggesting that the black color is adaptive in some way to low temperatures, said biologists S. Innes and D.M. Lavigne in a 1979 article in the *Canadian Journal of Zoology*.

These authors proposed that black squirrels not only lose less heat during the winter than the normally colored gray squirrels they were observing, but also have lower basal metabolic rates at cold temperatures than gray squirrels. Black squirrels, they claimed, are more energetically efficient than gray squirrels in the winter, requiring less energy to maintain constant body temperatures. Selective genetics, they argued, has given the black squirrel this survival advantage.

It has been reported by Richard Kiltie, from the University of Florida, that black squirrels were more common in frequently burned areas than those that did not burn frequently. It has also been theorized that black squirrels can survive better in urban environments than their rural counterparts, where they stand out much more to predators, especially birds of prey.

Yet, as Kent State professor Lowell Orr stated, "The theory that there would be less predation in an urban situation is credible but does not explain what the advantage of the black phase is in a metropolitan situation. Richard Thorington, who, along with Katie Ferrell, wrote the book *Squirrels: The Animal Answer Guide*, has tested the hypothesis that black squirrels are not run over by cars as often as grays in cities but has found no differences in mortality in the two color phases."

Since many theories concerning black squirrels read like back porch tales woven over morning coffee, it

should be no surprise that their origins in various regions of North America often read like folklore versus fact. Especially since there seems to be as many questions regarding their history, and subsequent spreading, as there are locations whose black squirrel populations are revered.

Folklore and Phenomenon

In a 2005 *Washington Post* article entitled, "An Exotic

Evolution," David

Fahrenthold reported that 18 Canadian black squirrels were released at the National Zoo in Washington, D.C. during

Theodore Roosevelt's presidency in 1902 and 1906. After reading the tag of a black squirrel tail that read "Cleveland Park, 1917," it was noted that the black squirrels had left

the National Zoo sometime between their turn-of-the-century release and 1917 and have since colonized Capitol Hill and crossed the Potomac River into Arlington.

In Marysville, Kansas, known by more than one city street sign as "Marysville, Kansas – Black Squirrel City," the Marysville Chamber of Commerce has explained their black squirrel arrival: "The most likely explanation involves a traveling carnival which passed through town in the 1920s and stayed for a few days in the city's park.

"Among the carnival exhibits was a cage full of black squirrels. One night a child opened the cage and the squirrels escaped." Since this date, black squirrels now represent 20 percent of Marysville's squirrel

population and, on August 28, 1972, the black squirrel was made Official Town Mascot by the Governing Body of Marysville. These days, they are abundant, and people are fined \$25 for



At the Black Squirrel Golf Club in Goshen, Indiana, it is said their population originated from Germany in the 1850s.



Many black squirrel populations in the United States, including that of Kent, Ohio, are said to have been transferred from London, Ontario.

Genetics

From Lowell Orr, Emeritus Professor of Biological Sciences at Kent State

The genetics of squirrel coloration has not been studied but there is no reason to believe it is anything different from other mammals. The mechanism is undoubtedly a multiple allele inheritance mechanism similar to that which controls the A, B, AB, and O blood types in humans. Alleles are contrasting genes at the same locus (point on a chromosome). Since chromosomes are paired each individual will have no more than two genes at a particular locus but there are a number of alleles floating around in the population that may make up those genes. There are three alleles in human populations controlling the A, B, AB, and O blood types. The normal genes for coat color in mammals are called agouti genes and produce hairs that are banded in color which cause the mammal to have a salt and pepper coloration, and allow the mammal to be camouflaged. Different agouti genes produce slightly different banding patterns. But some squirrels have a recessive non-agouti gene which causes the animal to be black if two of these genes are present. Thus, black color is controlled by recessive genes, not dominant genes. But if you look closely at our black squirrels (on Kent State's campus), many will have a brownish or reddish cast which means they have the non-agouti gene combined with an agouti gene in a heterozygous condition (Aa).

harming one since black squirrels, at least in Marysville, have the right-of-way on all streets, alleys, and railroad crossings.

In Kent, Ohio, Kent State University's Black Squirrel Festival is held each fall at and features an array of activities

including musical performers, photo and art contests, craft displays and a 4.2-mile Black Squirrel Run. Also in Kent is a pub, music company, gallery, radio station, and song entitled “The Black Squirrels of London” dedicated to these local celebrities. Sixteen black squirrels were originally introduced in 1961 by KSU’s groundskeeper after he had observed them in natural populations in London, Ontario. Since their introduction, they have spread throughout northeastern Ohio.

While these locations are most prominently known by black squirrel enthusiasts, they are far from being the only areas claiming their presence. A recent article by William C. Schuette entitled, “Reedsburg’s Black Squirrels,”

states that, along with Reedsburg, Wisconsin, “Princeton, New Jersey; Galesburg, Illinois; Detroit, Michigan; Lansing, Michigan and New Hartford, Connecticut are the only five places in the U.S. with a predominate population of black-furred squirrels.” Yet what does “predominate” actually mean?

For there is a long list of regions where these squirrels, as chronicled by web sites, books, and online forums, are said to inhabit, including western spots such as Black Forest, Colorado and San Jose, California; northern areas like Seabrook, New Hampshire and north central Minnesota; southern locales like Savannah, Georgia and Barksdale Air Force Base, Louisiana; and Midwestern cities including

Chicago, Illinois and Council Bluffs, Iowa, which hosts the annual Council Bluffs Black Squirrel Triathlon each summer and, according to Griswold, has had black squirrels since the turn of the century. “There is quite a number of black squirrels in the park over at Council Bluffs” (from *Omaha World-Herald*; October 16, 1904). Plus, with the rarity with which some black squirrel populations have occurred through the years, it has been recorded that some populations were completely eliminated by hunters wanting to take their trophies home with them after a day in the field.

Throughout North America, as already stated, there are number of squirrel species that could potentially be black. However, in Nebraska, black

populations will usually concentrate on Nebraska’s two most popular tree squirrel species, the eastern gray squirrel or the eastern fox squirrel.

Fox or Gray?

Despite many differences between eastern gray and eastern fox squirrels, they evolved as a distinct lineage of rodents approximately 36 million years ago. The common name of the squirrel can be traced back to the ancient Greeks, where the word “skiouros” used “skia” meaning shade and “oura” tail; thus “he who sits in the shadow of his tail” was recorded. Centuries later the French created a noun “esquirel,” from which the present name was derived.

Squirrels are commonly divided into tree squirrels, ground squirrels and flying squirrels. Both the eastern gray squirrel and the eastern fox squirrel are defined as tree squirrels, and have long, muscular legs used for leaping from branch to branch and long arms to grasp tree trunks.

They differ from ground squirrels because of their long, bushy tail, which they use for various functions including balance, sunshade, an umbrella, a blanket, a rudder when swimming and as a distraction tool to display against predators. Both species also use a series of barks for communication with other squirrels as well as warning calls against predators, who can range from foxes and coyotes, to raptors and snakes.

As far as individual differences are concerned, the eastern gray squirrel (*Sciurus carolinensis*), is probably the most common North American tree squirrel. It resides in den trees and leaf nests in deep forests near river bottoms, including the unbroken tracts of eastern hardwood and immense undergrowth found along the Missouri River in southeastern Nebraska near Indian Cave State Park. Their dorsal color of silver-gray blends in with the bark of beech, maple, and hickory trees it inhabits throughout its range while its ventral side is much lighter, an attribute known as counter shading.

This species averages 15 inches from head to tail tip and weighs about a pound. Grays often choose to live in oak-hickory and oak-maple-basswood forests near grasslands, yet they will

also range into the mixed deciduous-coniferous forests at the United States-Canada border. Their home range is from two to seven acres, with various individual squirrel ranges overlapping, and between two and 20 squirrels will inhabit a single acre.

Through their range, eastern gray squirrels are more tolerant of other squirrels than eastern fox squirrels when foraging and eat most notably, but not limited to, mast, including white oaks and beeches. The eastern gray squirrel, like its eastern fox counterpart, will scatter hoard food beneath the soil for later consumption burying several thousand nuts a year, namely from red and white oaks, with the ability to bury five acorns in less than 4 minutes.

They will initially feed on white acorns before the nuts germinate. Since a nut that germinates contains less energy for a squirrel, they will eat white acorns first. Squirrels will then bury red acorns due to their dormancy through the winter, allowing a reliable food source through these colder months.

The Nebraska Guide to Mammals states that eastern gray squirrels may live five to six years in the wild with some possibly reaching 12 to 15 years, while captive squirrels have been known to reach 20 years. However, a study conducted by Fred Barkalow at the University of North Carolina found that eastern gray squirrels living in a nonhunted population near the university campus had a 75 percent death rate before reaching their first birthday with an average life span of only 5 months. While females survived longer than males, only one female lived longer than 10 years.

Density numbers of eastern gray squirrels are controlled by changes in mast production. Gray squirrels, before their environments were so fragmented by humans, periodically reached such



JEFF KURRUS

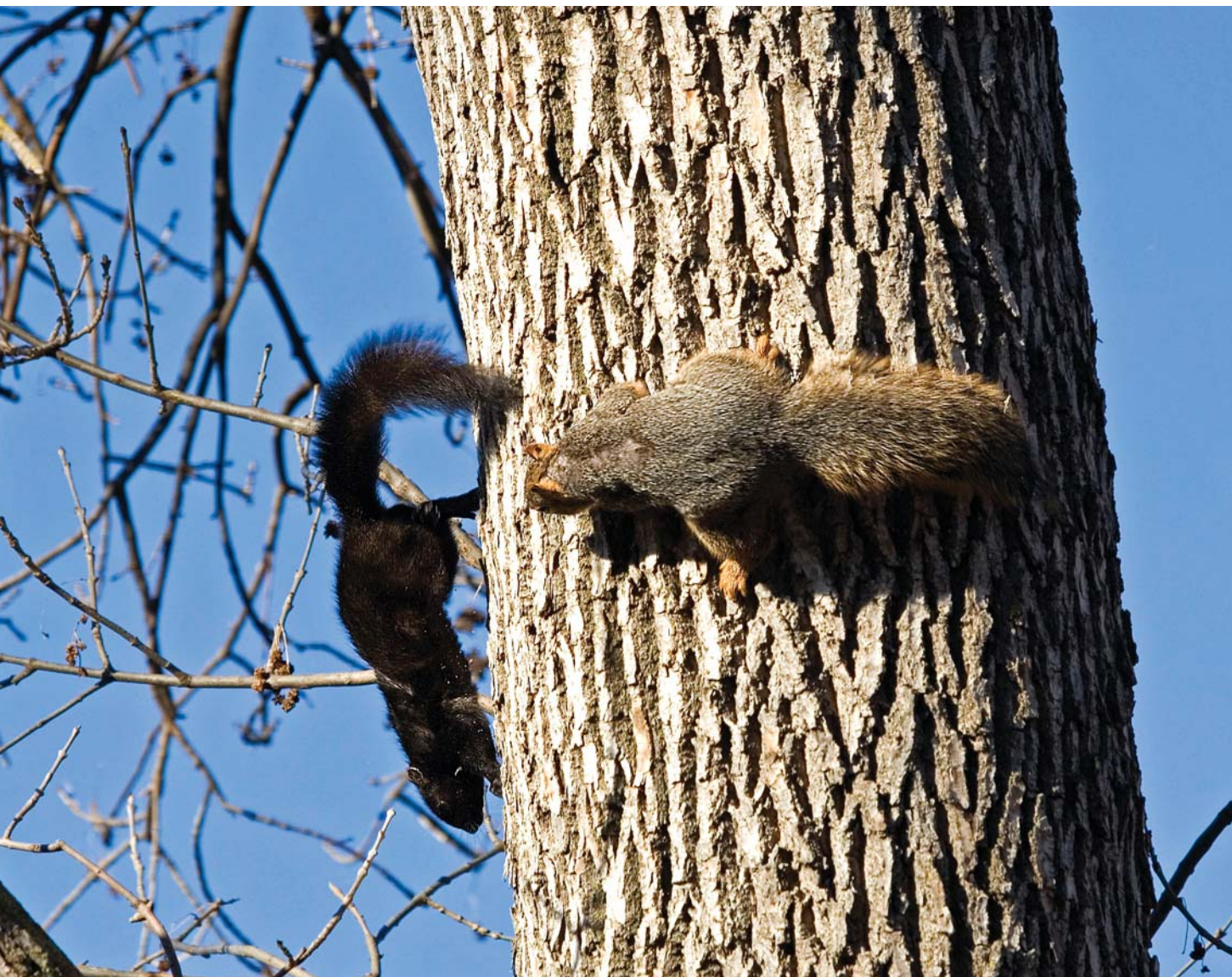


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The eastern fox squirrel (above), seen here at Two Rivers State Recreation Area (SRA), and the eastern gray squirrel (below), seen at Indian Cave State Park (SP), can be differentiated by their color. However, if the squirrel is black, they can be distinguished by their ear sizes.

high densities that mass migrations were triggered, as in the early 19th century and in October of 1968, when thousands of squirrels migrated in Tennessee, Georgia, and North Carolina following substantial nut production in 1967, a late frost and little nut production in 1968.

Eastern fox squirrels (*Sciurus niger*), which are rusty-yellowish, with sprinkles of white, yellow and black frequently found, reside in much of Nebraska, stretching from the Missouri River to the Panhandle. The “niger” is



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Throughout the country, black squirrels can be a color phase or a melanism of a number of squirrel species, including the eastern fox squirrel (pictured) or the eastern gray squirrel.

Little-known Squirrel Facts

While squirrels are one of the most abundantly viewed animals in Nebraska, there is a long list of facts concerning them that few people know. Here are a few:

- Squirrels have dichromatic color vision. They can differentiate red or green from other colors, but cannot distinguish red and green from each other.
- A squirrel's eyes are much more acute than humans. While human eyes have a small area of the retina where vision is most acute, squirrels see much sharper across their entire retina, which allows their peripheral vision to be much more effective than humans.
- Eastern gray squirrels and eastern fox squirrels can both turn their hind feet completely around when coming down a tree, aiding in their descent.
- While fox and gray squirrels do not hibernate, other animals in the squirrel family, including chipmunks, prairie dogs and marmots, do.
- Squirrels belong to the order of rodents, the family *Sciuridae*, and have existed for some 30 to 40 million years. giving rise to the 278 species currently assigned to the family.
- Inactive testes in gray squirrels will weigh 1 gram, whereas active testes will weigh 6-7 grams.
- 2.5 million squirrels are harvested each year by hunters in Mississippi, with an economic impact of \$12.5 million dollars annually.
- A squirrel's hearing range (63-56,000 Hz) is comparable with that of dogs, allowing them to hear higher pitches than humans.
- As noted in a study chronicled in *The National Audubon Society Field Guide to North American Mammals*, "Nuts buried by scientists conducting an experiment were recovered by squirrels at about the same rate as nuts they buried themselves, indicating that memory is not involved in nut recovery."
- Eastern fox squirrels have been known to leap to the ground from as high as 50 feet high in an effort to escape predators.
- A squirrel's teeth grow continuously. Their incisors will grow six inches per year, but stay short due to the constant wear they receive.
- The sweat glands of a tree squirrel are located on their feet, between the foot pads and on their paws between the toes. When hot or excited, a squirrel will leave wet tracks on a dry surface. This scent is also used to mark trees in their territory.
- It has been stated that W.K. Kellogg, of Corn Flakes fame, introduced black squirrels to Battle Creek, Michigan, after a trip to Canada in the early 1900s.

squirrels, weighing up to three pounds and measuring 19 to 28 inches in length, about half of which is their tail. They prefer the open forest with little understory vegetation, which makes them a staple in urban areas such as parks and residential neighborhoods. And while both species may be found together in many places, only the fox squirrel is likely to inhabit the narrow strips of bottomland forest of cottonwood, bur oak, ash, elm, and box elder that border streams in Nebraska.

Their home range is between 10 to 40 acres, with up to three squirrels living per acre, and they are much less social than the eastern gray despite showing the propensity to feed in common areas and den together during harsh winters. Since they often move long distances to reach foraging areas, some of which could be over a half mile or more apart, they are more susceptible to terrestrial predators due to their amount of time on the ground. Like eastern grays, they feed on a variety of mast but will also eat seasonal foods, including springtime buds and flowers, summertime insects, and autumn nuts and seeds.

This species of squirrel can maintain anywhere from three to 15 nests at the same time, which coincides with their much larger foraging ranges as compared to the eastern gray, whose number of nests usually ranges between one and one and one-half nests per squirrel. Eastern fox squirrels nest in the cavities of trees or build, similar to the gray squirrel, nests with twigs on high branches in late summer.

They typically live from four to seven years, although life expectancy at birth is less than four months. While both species are sympatric, breeding between these two species has never been confirmed despite there being observations of varied color forms of both the eastern fox squirrel and the eastern gray squirrel breeding within their own species.

A common sense approach will often prevail when analyzing black squirrels in an effort to distinguish between eastern fox squirrels and eastern gray squirrels. Seeing a large number of eastern fox squirrels in a park close to black squirrels will usually lead one to assume that the black versions are also eastern foxes, while analyses of habitat and foraging behaviors can also be

observed. Yet if there is still a level of indecision, or if one finds areas of the country where both species live, they should look at the ears of the squirrels. While smaller in body, the eastern gray squirrel will have much larger ears than the eastern fox, providing a distinguishing mark as to exactly what is being viewed.

Yet when one is viewing black squirrels, especially in and near Nebraska, there are still a number of questions that need to be answered. Did the Omaha population come from Council Bluffs, Iowa? And how did the Council Bluffs squirrels originate? Is the growing number of black squirrels in Lincoln due to lower predation or changes in mast production?

Is the story about a man cutting down a tree in Omaha that contained black squirrels, then transferring that tree to Hooper, Nebraska, the reason for their presence in that town and other towns? And how did the large number of Hastings black squirrels emerge? One story says that there was a railroad engineer who lived in Hastings and made frequent runs to

Marysville, Kansas. He liked the black squirrels he saw in Marysville, and subsequently trapped some and brought them back to Hastings, releasing them in his yard. Or how would one explain the black squirrels located at Two Rivers State Recreation Area near Yutan? I thought the black squirrel would be far less likely to survive any "natural" migration due to its lack of camouflage. So how did they arrive there? It is questions like these will continue to be posed as black squirrels appear and disappear from natural and urban areas around us.

Future of Black Squirrels

Accompanying each of these inquiries is a need to better understand black squirrels and the habitats that will sustain them. When viewing them, it is quite evident that they will usually not let onlookers get as close as their fox and gray squirrel brethren. At the same time, when pressured they will pin themselves to the bark of a tree in a failed attempt to hide. These are the behaviors that must be analyzed in the

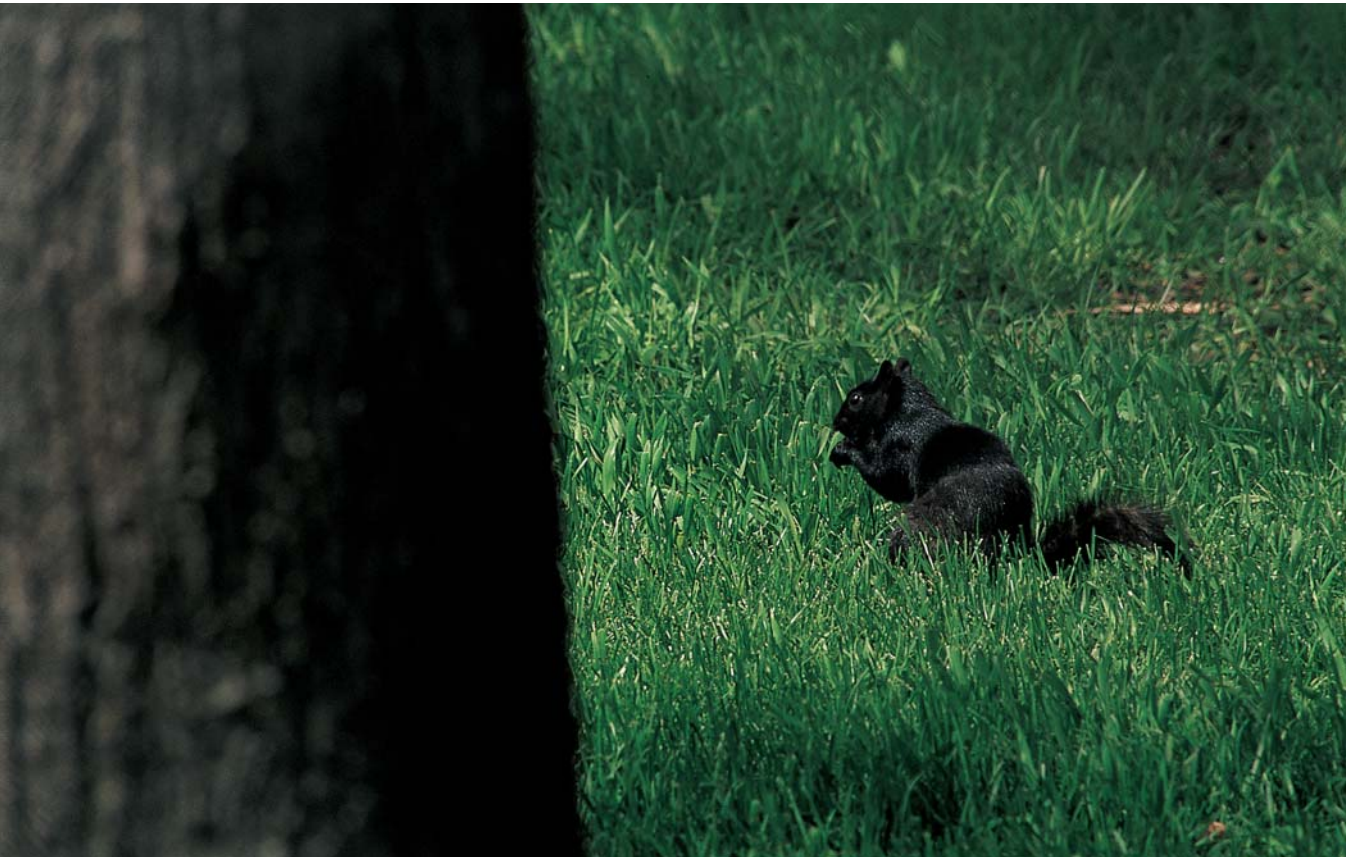
future so that we might learn more about how their coloration affects them and what environmental needs they will need to survive. Imported or exported, melanistic or color-phased, the black squirrel, whether an eastern gray, eastern fox, or other squirrel species throughout the world, is a unique mammal that needs much more research to see exactly how they fit into the natural world. Just think, many people have never seen a black squirrel before, while others welcome them into their yards on a daily basis. It should be science's job to find out why. ■

The author would like to note that the scientific information concerning black squirrels was taken from Dr. Richard Thorington and Katie Ferrell's book Squirrels: The Animal Answer Guide, The National Audubon Society Field Guide to North American Mammals, Peterson's Field Guides: Mammals, The Nebraska Guide to Mammals, The Washington Post, and interviews with Lowell Orr, from Kent State University in Ohio, and Russ Benedict, from Central College in Iowa.

Latin for "dark" or "black." Their habitat consists of the broad-leaved deciduous forests of the eastern United States and the pine forests of the south, excluding New England and the northern Great Lakes region, along river and stream corridors. In Nebraska, they live

in the woodland lots in the eastern part and the riparian communities along watercourses traversing the middle and western parts of the state.

Their range is farther west than the eastern gray squirrel, and they are the largest of the North American tree



When observing black squirrels, even in a recreation area setting, it is often difficult to get as close to them as normally colored squirrels.

Riding Through a Ribbon

By J.D. Brewer

West Papio Trail yields surprising rewards for this suburban bike commuter.

My legs ache as they push and pull in the predawn darkness, a cold, light autumn rain swirling out of the northwestern sky and into my squinting eyes, making it virtually impossible to see the winding concrete path ahead of me. My bike's feeble handlebar light fails miserably in illuminating anything other than the raindrops about to mercilessly strike my body.

Momentarily lowering my head to shake the rain from my face, I look up to see two dark shapes straddling the path thirty feet in front of me. The outlines are familiar – deer, large deer. I stop pedaling and coast nearer. No movement. I wonder if someone placed plaster statues on the path as a joke to rattle unsuspecting bicyclists. Coasting closer, there's still no movement until – just as my hands are clamping down on the brake levers – the “statues” jump, kicking my heart into overdrive at the same time.

Stopping my bike to let my heart resume its normal rhythm, I turn the handlebar light toward the ominous shapes still only a few yards away. Four eyes glow in the misty beam, reminding me of the jack-o-lanterns I carved the night before. Their characteristic tails are erect and nervously twitching back and forth – white-tailed deer.

Earlier in the year, in a lonely attempt to protest the high cost of gasoline and declare my independence from the automobile, I had become a bike commuter. As one would expect, there are advantages and disadvantages to scorning the automobile. Obvious disadvantages include inclement weather, broken roads and sidewalks, and drivers unaccustomed to sharing

roadways with stubborn bicyclists; however, I had mitigated most of the disadvantages (no control over the weather, obviously) by riding mostly on the concrete pathways that line a ten-mile stretch of West Papillion Creek.

As compensation for the inconveniences associated with bike commuting, I receive a number of benefits, including physical exercise and frequent early morning displays in the sky above me, such as spectacular sunrises, meteors or the starry carpet of the Milky Way. In addition, there is another unexpected benefit: The uplifting feeling I receive from viewing and interacting with the diverse wildlife population that resides along this narrow channel as it slices through West Omaha suburbia. Unbeknownst to most, if not all, the waves of motorized humanity that crash east in the morning and roar west in the afternoon, this remarkable ribbon of “natural” habitat shelters deer, beaver, raccoon, fox and countless rabbits and squirrels.

I wondered how this exceptional stretch of natural environment came to exist virtually under the noses and wheels of us suburbanites. My research, which included a trip into cyberspace and a handy map of Omaha's bike trails, told me that West Papillion Creek is a former prairie stream that flows through cornfields, subdivisions and under busy roadways. It begins north of Elkhorn, flows southeasterly to connect with the North Branch of the Papillion Creek near Dodge and 168th streets in west Omaha, then continues southeast to join with the Big Papillion Creek near Bellevue, eventually flowing into the Missouri River.

Biking along the narrow shoulder of the relatively straight channel, I imagine that West Papillion Creek now bares only a minor resemblance to its original appearance. I learned that its basic geomorphology originated in the early 19th Century as eastern Nebraska was settled and large tracts of land were cleared for farming. The clearing of the land created increased runoff, erosion of uplands, and gulling of floodplains and terraces. With the relentless growth of west Omaha came the sculpturing of the creek channel by engineers and geologists knowledgeable in flood control and soil stability. Their sole

purpose was to protect West Omaha's urbanization from erosion and flooding, so West Papillion Creek was born.

Occasionally, I stop my bike near the grassy edge of the creek and gaze across its span which varies from 75 to 200 feet, rim to rim. A narrower, deeper channel cuts through bottom of the primary watercourse and averages fifteen feet wide and eight feet deep. This smaller channel within the parent channel maintains a constant flow of water, although it diminishes during the warm months of summer and early fall, and during extended periods of drought. In the ghostly light of dawn, the equally

curious, though wary, masked face of a foraging raccoon often returns my gaze.

The slopes of the creek channel are grass-covered and, in parts, treelined with the occasional northern red oak, American elm and poplar, but more commonly found are cottonwoods, the Nebraska state tree whose white, tuft-covered seeds routinely fill the early Nebraska summer air like an unseasonable snowfall. In some locations, the trees, bushes and groundcover crowd together to provide me a therapeutic, and much needed, illusion of natural solitude in the midst of suburban sprawl.

Autumn is rapidly becoming a fond memory and the occasional morning frost signals the approach of winter as I continue to bike-commute. The falling temperatures and relentless prairie wind have turned my solo economic and social protest into an endurance contest. Unfortunately, my revitalizing encounters with the inhabitants of West Papillion Creek are less frequent as they wisely huddle in burrows, sheltered from the cold and the curiosity of a shivering bicyclist. ■

J.D. Brewer is a freelance writer that lives in the Omaha area.



J.D. Brewer, of Omaha, rides the West Papio Trail in west Omaha. A current map of Omaha area bike trails is available at the Papio-Missouri River Natural Resources District web site at papiionrd.org



BIGHORN

WILDLIFE MANAGEMENT AREA

PHOTOS AND TEXT BY BOB GRIER

THE SUNRISE VIEW FROM 600 FEET ABOVE Bighorn Wildlife Management Area located southeast of Crawford is spectacular – some of the sharpest knife-edge ridges in the entire Pine Ridge brightly colored by morning light and cutting upwards out the darker fabric of the Ponderosa pine forest.

Here and there less repetitive and even solitary horse tooth-shaped buttes and groupings of sandstone and marl rise to stand watch over deeply eroded canyons.

In the shaded reaches of the narrow canyons, inches-wide life-giving and life-sustaining streams of spring-fed water flow throughout the year. Their narrow, fairly straight courses teem with life – the north flowing stream’s mature cottonwoods and vibrant ash foliage, even cattails in places, are home to all sorts of birds. Sit quietly in the shade and soon a solitary rose-breasted nuthatch becomes several. Black-capped chickadees

appear as if from nowhere and a vibrantly colored yellow warbler lands in the streamside vegetation. Soon a young male red crossbill with tan and light red plumage joins the show.

Nebraska’s Pine Ridge is known for its diversity, but here on the nearly 1200-acre Bighorn WMA, diversity is double-parked. Narrow, sharply eroded rocky ridges dominate the skyline, each reaching varying heights but traveling basically in the same direction as do

the streams, which travel north before flowing under the undulating gumbo prairie of the Pierre Hills grasslands. The Bighorn WMA sits on the exposed northern flank of the Pine Ridge, looking out over intervening strips of fallow and winter wheat fields, out over the wider grasslands dotted with large and small ranches, across both distance and time towards South Dakota’s Black Hills. Even in the dry summer heat, the distant air hangs thick enough to



*The nectar of the shell-leaf penstemon's (*Penstemon grandiflorus*) flowers attracts American bumble bees, (*Bombus fervidus*) each spring and early summer.*

obscure details; the Black Hills some 60 miles north are revealed as a medium blue line painted along the horizon.

At the northwestern corner of Bighorn WMA stands little-known Barrel Butte, a single, vertical rock standing at the end of the line of larger, gnarled, twisted and pock-marked buttes. Barrel Butte was the source of the name for the area's re-introduced bighorn sheep herd – 49 bighorn rams and ewes live captured in Montana and released in January, 2005 – which thankfully dodged an early, hasty suggestion to name it the Bighorn bighorn herd.

The Barrel Butte bighorn herd, like the original Fort Robinson bighorn herd, the Cedar Canyon bighorn herd and the more recently re-introduced Hubbards Gap bighorn herd in the Wildcat Hills, is surviving, even thriving at times, yet is continually threatened by the simple echo of their species evolution in more pristine northern regions of the planet. Great predators – wolves, cats and bears – were present on their ancestral home and the bighorns adapted and survived. Missing for eons and uncounted generations of

bighorns in those arctic regions were the earlier forms of commonplace diseases that have little or no impact on domestic livestock but kill bighorn so quickly today.

Bighorns, wherever they are found, are rarely more than a few steps from protective slopes and rocky fortresses that easily defeat both ancient and modern adversaries but provide no protection at all against invisible organisms.

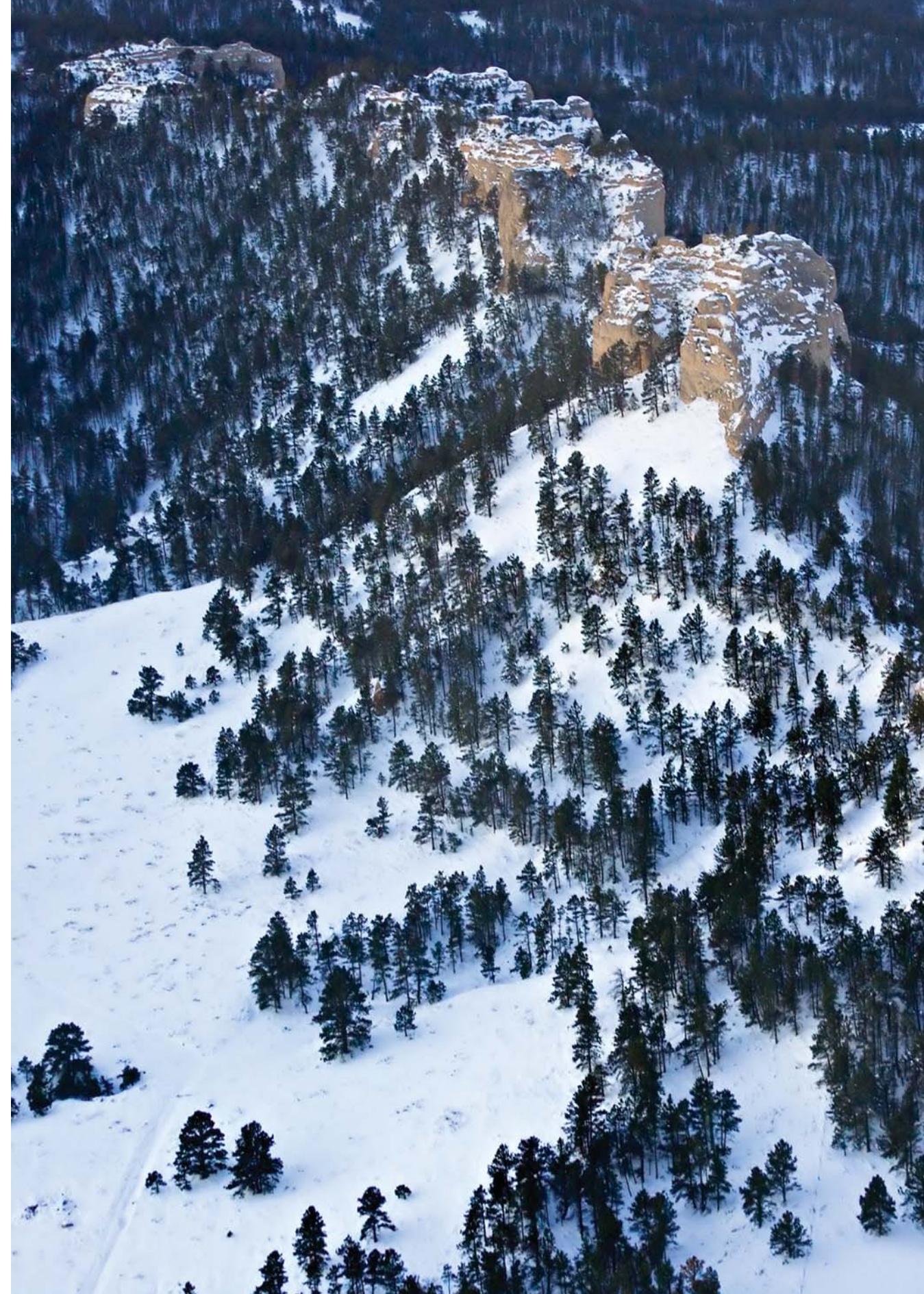
The live-trapped and translocated bighorns released on the Bighorn WMA suffered their share of accidents and stress-related fatalities following their release – bighorn biologists hope to encounter less than 10 percent losses due to capture injuries, stress and unforeseen accidents that accompany trap and trans-location efforts. Of the original 49, several bighorn were lost almost immediately, victims of collisions with fences and possibly capture and release injury. At least one traveled too many miles, joining a herd of domestic sheep and sealing its fate, since it could not be allowed to return to the bighorn herd.

Despite the early losses, the herd's

surviving adult ewes carried the future of the bighorns from Montana's Missouri River Breaks to Nebraska's Pine Ridge. Biologists and technicians documented 26 lambs born to the Barrel Butte herd during the spring and early summer of 2005 in the secluded crags and nearly unreachable heights of the Bighorn WMA and nearby escarpments.

Careful tracking and monitoring of the radio-collared adults and sightings reported by neighbors, other landowners and Commission personnel reveal a more general dispersion of the Barrel Butte bighorns than biologists have seen with Nebraska's other bighorn herds. Perhaps these are the "pioneering" sheep noted by bighorn researchers, sheep that travel to find their home ranges over extended tracts while others of their species remain within a few miles of release sites come hell or high water.

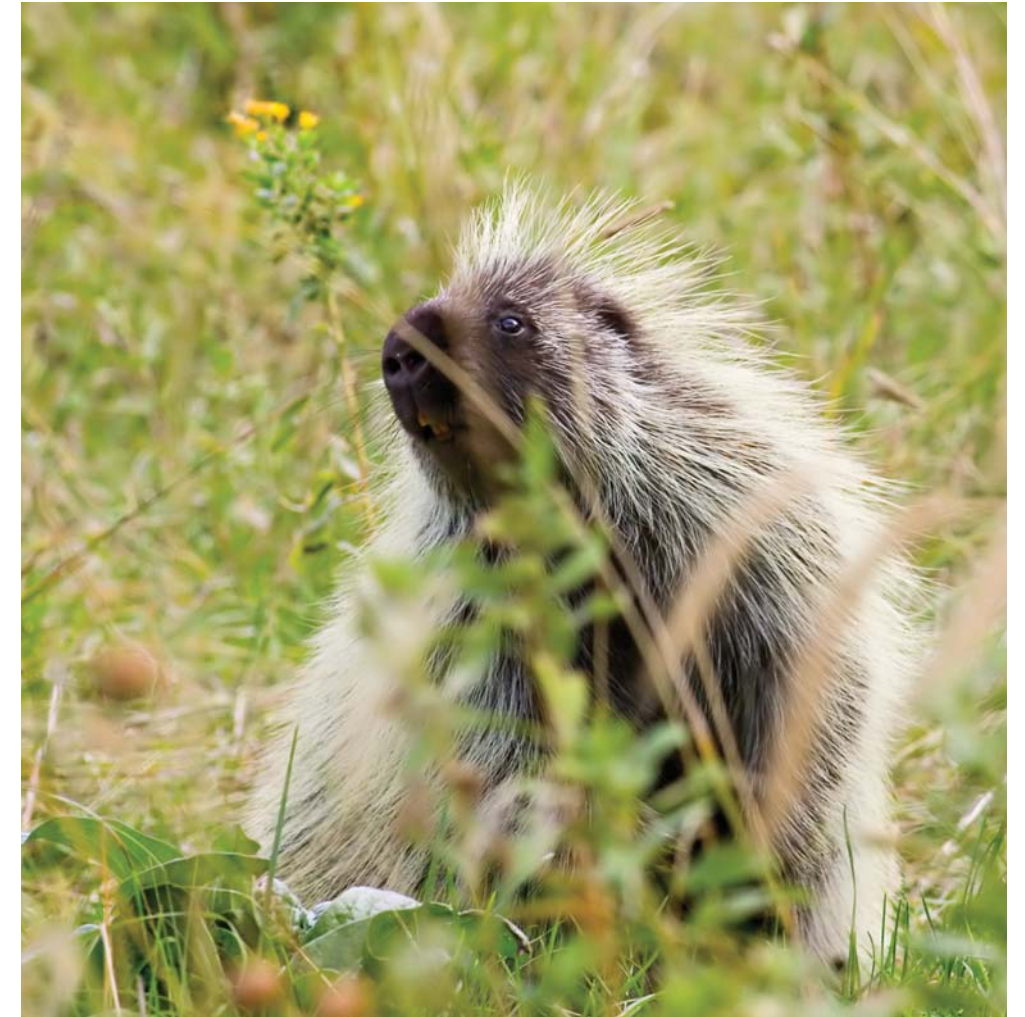
From their release on Bighorn WMA, small bands of bighorns currently range across the Pine Ridge, east to the vicinity of Chadron State Park south of Chadron and west to the Ponderosa WMA southeast of



Barrel Butte, located on Bighorn WMA's northwestern corner, stands at the end of rocky outcroppings. The Richardson Tract recently purchased by the Rocky Mountain Elk Foundation is located to the north and west of the butte.



*A late winter storm envelopes the Bighorn WMA in a blanket of snow as a white-tailed (*Odocoileus virginianus*) doe moves cautiously through the pine forest.*



*The common porcupine (*Erethizon dorsatum*) can be seen throughout the Pine Ridge, living up to eight years and weighing as much as 40 pounds.*



*The colorful berries of the American bittersweet, (*Celastrus scandens*), considered poisonous by the Sioux Indians, are often collected for ornamental wreaths and vases.*

Crawford. One ewe even traveled far enough northwest to join the Fort Robinson herd.

The scattered bands include ewes with their lambs traveling together after the annual spring and early summer lambing seasons, groupings of younger rams and ewes intermixing at times and smaller numbers of mature rams and even solitary full-curl rams, their horns well broomed off in battles meant to establish and maintain their dominance and right to breed. Many of the bighorn travel unseen for long periods of the summer and early fall before slowly, but purposefully, returning to the November and December breeding herds to begin the cycle of seasons anew.

The productive 2005 lambing season was followed by a less-rewarding one in 2006. That year's pre-breeding population included 55 sheep but

breeding success dropped, possibly because of the untimely death of a mature ram eventually found near the ewe band located near Chadron State Park. The results for the Barrel Butte herd was only ten confirmed lambs born during the spring and early summer of 2006.

For the most recent breeding season in 2007, the Barrel Butte herd was comprised of 61 documented sheep and to date, 19 lambs have been observed and biologists suspect that there may be additional births as yet unrecorded. The Barrel Butte herd's current population stands at about 80 bighorn sheep, and so far, the herd has escaped the deadly outbreak of pasturella pneumonia that cut in half the nearby Fort Robinson herd and the Cedar Canyon bighorn herd in the North Platte Valley between 2004 and 2006.

Following the bands of bighorn

sheep in the narrow chutes and alleyways formed by the parallel ridges and isolated, stand-alone buttes on the Bighorn WMA is fascinating and frustrating. Sliding down shaded, narrow slopes steep enough to require a seated or even reclined sliding position to slow the descent, testing each foothold before stepping on slippery pine needles and still trying to be quiet and fast enough to intercept the moving band of ewes and their lambs is challenging.

The ewes know you're following and their tracks become wider apart and their trail points upwards to the very bottom of the vertical cliffs. The terrain is theirs, their route can be a well-practiced feint and deception or more likely a direct line to the lofty places where they can stand above the two legged potential predator falling noisily further and further behind.

Lungs straining for air and legs tiring, you reach the top of ridge and take in the rugged topography that provides any one of a dozen notches and passes where the moving bighorns made their escape unnoticed.

A quick glance into the valley beyond confirms that the bighorns circled and climbed and may yet be moving steadily away. Climbing a few more steps, you reach the top of the skyline ridge and the nearly flat tabletop of rock with smaller pines provides a shaded overlook. The entire WMA to the north is visible, as are walls of buttes to the east and west.

Here or there a coyote, or even bobcat, track is seen and circling buzzards overhead and a magpie's startled takeoff into the air between the ridges hint that life and death are also part of the Bighorn's diversity.



Bighorn sheep (Ovis canadensis) live trapped on the northern rim of Montana's Missouri River were translocated to Bighorn WMA in 2005 and their population currently numbers about 80 rams, ewes and lambs.

Yet the beauty of the earlier descent and the following climb are rewarding. Each step reveals something new, a golden eagle flying near its nest site in a deep indent near the top of one of the rock faces or a prairie falcon's nearby nesting pocket similarly placed near the top of the towering rock face. The overhead falcons high-pitched alarm calls echo throughout the canyon, telling one and all of your presence.

From the top of the world the four directions all lead to a descent, so you take one more controlled and easier, into another deeply etched, north-south canyon. At the bottom is a shaded, grass-lined bubbling stream. Here the air is cooler, the shifting breeze moving through the trees carries the chirping of songbirds and a wall of musky odor. Deer, possibly elk, encamped through the heat of the day by the stream? Another step or two reveals five or six

mule deer only yards away, lying in the shade of several cedar trees or standing to feed in the open sunlight at the edge of the small, eroded ravine entering the stream's course. The herd doe has already spotted your movement and her alarm snort has the deer running in all directions. In a moment the stream bottom is quiet again.

The stream widens a bit here and there, its eroded banks providing protection for the cedars and smaller

trees out from under the canopy of aged cottonwood and tall pines. Colorful bittersweet berries on their vines are entwined in the branches near a sandy wall covered with hundreds of holes left by burrowing wasps. At the base of the sandy bank, a cottontail rabbit only a few feet away makes no effort to run, its pocketed and broken rockslide home offering protection just inches away.

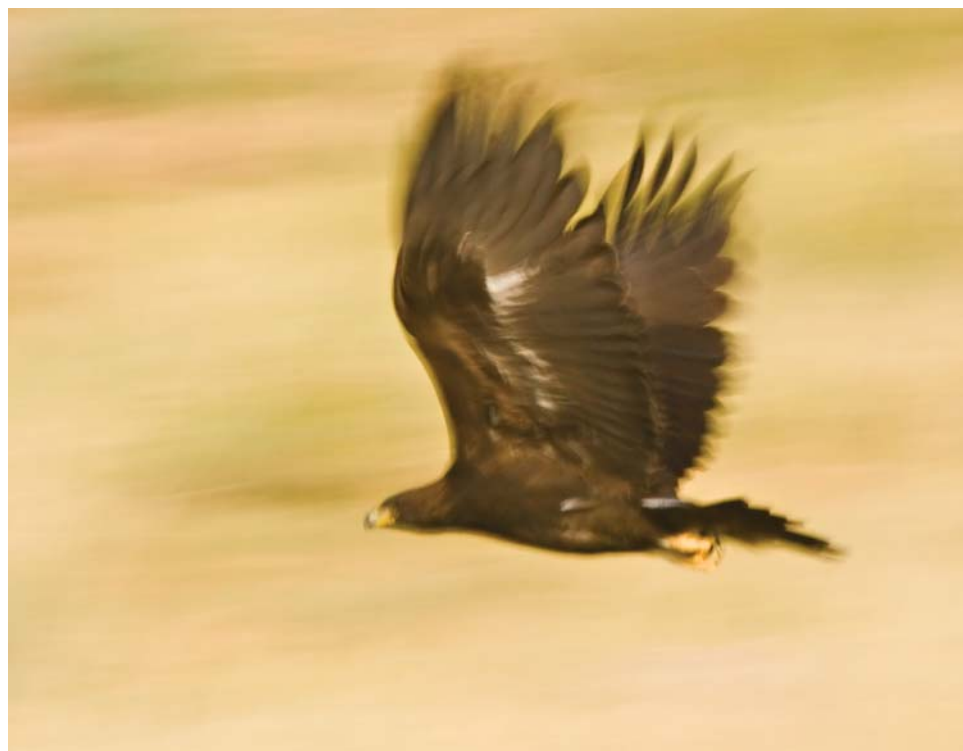
Undoubtedly earlier humans found

Bighorn WMA's watered canyons, protected and isolated valleys and skyline perches offered excellent hunting well suited to their survival. Near the top of a gentle incline on the first bench above the stream, a few fire-blackened rocks have eroded out of the bank. Closer inspection shows that the fire hearth was purposefully and carefully covered with rock logs, commonplace concretion pipes seen throughout the Pine Ridge and other

western Nebraska escarpments. The smooth white rocks are unburned and lay tightly together, hinting that perhaps this hearth was not meant to be found. Was this the camp of a fast moving, smaller group of early humans far from home or perhaps the escaping Northern Cheyenne running north and west from their infamous Oklahoma reservation in the mid-1870s? Maybe it was a small band of Crows hunting in Sioux country. Whatever the case, the Bighorn WMA



A resident of nearly all of North America, the male yellow warbler (Dendroica petechia) has rust-colored streaks on the breast while the female is entirely yellow.



Golden eagles (Aquila chrysaetos) nest on several of the vertical rock bluffs of the Bighorn WMA and their young, like the one shown here, usually take wing by July.

keeps its secrets close.

Bighorn WMA was established when the Nebraska Game and Parks Commission acquired approximately 900 acres in April 2003, followed by a second purchase of about 12 acres the following year. Most recently, the Rocky Mountain Elk Foundation purchased 250-acres, known as the Richardson Tract, on Bighorn WMA's northwestern corner. On the west side the WMA joins several thousand additional acres of public land in the U.S. Forest Service's pasture 10 and allotments in the West Ash Creek drainage.

Current public vehicle access into Bighorn WMA is located on the eastern boundary through a narrow, fenced trail road and corridor that crosses private land from the East Ash Creek county road. The lane ends at a maintained parking area on a hilltop overlooking most of the eastern side of the Bighorn WMA. Access onto the area beyond this parking lot is by hiking or horseback

only and a second access point may be added along the western edge of the area in the near future. The area's entire boundary fence is marked with the white, diamond-shaped WMA signs used by the Commission throughout the state, and the area is managed for wildlife, hunting and other outdoor recreation. Primitive camping is allowed but no open fires are permitted on the area.

Bighorn WMA's diversity – the mix of both rocky buttes, open slopes, grass parks and perennially flowing streams offers wildlife biologists and land managers significant opportunities to expand and enhance wildlife habitat on the area. Intense, short-term livestock grazing, controlled burning and other techniques will be used to attract, hold and produce both game and nongame species.

Bighorn WMA currently provides hunting and wildlife viewing opportunities for bighorn sheep, wild

turkey, elk and both mule deer and white-tailed deer, and the rugged, knife-edged buttes and shadowed canyons offers some of the very best of the Pine Ridge's scenic beauty. ■

For maps of the area, contact the Nebraska Game and Parks Commission or log on to the Commission's website at www.outdoornebraska.org.



The approximately 1,200-acre Bighorn WMA is located 1 mile east of Crawford on U.S. Highway 20, 8 miles east, 1 mile south and 1 mile east on Bethel Road, then 1 mile south on Bethel Loop Road. This WMA is open to hiking, horseback riding, hunting, fishing and other outdoor recreation.

FIELD GUIDE

By Lisa Knopp

An afternoon walk leads to the discovery of a new “green” leaf.

I was walking past the park, admiring the autumn leaves against the clear blue sky, when I heard the crescendoing whine of an emergency vehicle. Two children drawing with chalk in a driveway, two women standing near them and a man raking leaves in the next yard, all stopped what they were doing and looked in the direction of the siren. Suddenly the wails, horns, flashing lights and red were upon us. After the fire truck turned the corner, the siren stopped. In the distance, I heard another siren approaching. The women, the children, and the rake-carrying man passed me on the sidewalk. The air crackled with excitement.

I didn't join the parade. Something on the sidewalk stopped me. Or rather something drew my attention away from the near emergency and the fall foliage overhead and directed it to where I was about to step. On the edge of the sidewalk just before me was what appeared to be a leaf. It wasn't russet or gold like the other leaves.

Rather, it was the bright, spring green of a newly unfurled leaf. The leaf had fallen so that it was creased and folded along the main vein, and its smooth margins perched tentlike on the sidewalk. I bent down for a closer look.

From this green tent extended a pair of sweeping antennae and wispy legs. This wasn't a leaf, but a leaflike insect – beautiful, delicate and vulnerable. I had never seen such a creature and hadn't the broad, ready category to place it in as I would of had it been an unfamiliar beetle or butterfly. What was this creature? I drank in the dazzling, new green. Then I continued my walk, marveling that there really was something new under the sun.

When I returned home, I consulted my copy of the Audubon Society's Field Guide to North American Insects. I enjoy matching a specimen in hand – a wild flower, a moth corpse, a shed snake skin – with the photographs and descriptions of a field guide. But using a field guide to match my memory of what for me is a new species with the guide's photographs and descriptions is daunting and often fruitless.

The bird, plant or insect found in the field is seldom as bright and delineated as the one pictured. Nor are the details I remember that sure and constant.

With each page that I turn, I'm in danger of adding to my remembered image a feature that appears on the photographed specimen. For instance, each of the field guide insects that resemble my splendid, green tent-bug sit high on big, bent-back legs. While I did not observe that on my find, now I can't see my tent-bug without those powerful grasshopper legs. Conversely, features that I remember seeing but don't appear on the field guide model eventually fade or vanish. The wings that I saw on my tent-bug were larger than any green wings in the field guide. But with each photograph I study, with each description I read, they shrink a bit. When trying to identify a creature from memory, I've sometimes become so uncertain as to what I believe I saw that I either give up the search entirely or ask an employee at the county extension office or at the Chet Ager Nature Center to make the identification for me.

My tent-bug possessed features similar to those of some katydids. But I hadn't seen enough details to make a more precise identification than that. Now I wish that during those few minutes when I gazed upon my splendid green find, I had noticed the length of the antennae and the size and shape of the pronotum, the upper surface of the first thoracic segment, both of which are mentioned in the descriptions of most katydids. Now I wish that I had measured the wingspan with my fingers and noted whether the wings were double or single, spread or folded, stiff or pliable, scaly or velvety, lobed or tapered, veined or smooth, and where they attached to the body. Now I wish I had noticed the type of tree beneath which I found this creature and had scanned the area for other tent-bugs.

Perhaps there had been a bivouac of pitched tents nearby. In the presence of a less spectacular find, I would have had the presence of mind to look more carefully, more analytically, and so have remembered more. But in the presence of such a new and exuberant green, I was struck to the heart, bewitched, bedazzled. Perhaps this is what Christopher Columbus was up against when he first beheld the marvels of the “New” World.

The family to which katydids belong has about 4,000 species, about half of which are tropical. To say that I had seen a katydid was fuzzy and imprecise, like saying that the orchestra played classical music or that we ate ethnic food for dinner. Both of these communicate an experience in broad terms but fail to provide the particulars that would evoke a clear, precise picture of the experience. Had the music been composed by Mozart or Tchaikovsky? Was the food Mexican or Ethiopian? Had I seen an angular-winged katydid, the most widely distributed katydid in the U.S., a broad-winged katydid, whose vernacular name matched what I saw, or something else?

Perhaps something extraordinary was preventing me from determining exactly what type of katydid I'd seen. Perhaps I had chanced upon a species that wasn't common enough to be included among the 11 shown in my field guide. The field guide to grasshoppers, katydids and crickets that I borrowed from the library presented more choices, yet not one model displayed the large graceful wings that I'd seen. Perhaps I had seen a rarity, a rain forest dweller that somehow had been carried from its home and set down on the eastern edge of the Great Plains. Perhaps I had seen an aberration, an individual born with a beautiful deformity or mutation. Identifying a katydid that so departed from the norm required the studied, experienced eye of an expert. In truth, I'll never know precisely what I saw in the middle of the sidewalk on that late afternoon in early October in Eden Park in Lincoln, Nebraska.

The field guide tells me what most likely became of my katydid. By early October, the courtship serenade of the

Eden Park katydids (some eastern species actually say, “katydid,” but here they raise a chorus of hoarse or lisping chirps, ticks and clicks) had ended. The katydid that I observed had probably already mated and used her ovipositor, the stingerlike organ at the tip of her abdomen, to cut a slit in a leaf, twig, tree bark or the soil and there insert her flat, oval, tan or gray eggs. She and the other adult katydids die around the time of the first frost, leaving their eggs to overwinter and hatch the next spring. In the early spring, the pale wingless nymphs will emerge. Several molts later, my katydid's offspring will also possess new, exuberant green wings – a perfect camouflage, all of the field guides agree.

The one thing that I can say with certainty is that my splendid, green tent-bug's camouflage is not

always perfect. On a June day when the world outside was predominantly green, I might have walked right past my katydid if it was in the grass, on a tree or even on the sidewalk. But on a russet and gold afternoon in early October, when my katydid was poised in the middle of a gray sidewalk that runs south into the street over which a fire truck had recently passed and north past two tennis courts, both in use, a swimming pool, now closed, over a cement-lined creek aflutter with red-wing blackbirds, starlings, and mallards, and across a bicycle path where a pack of whippet-thin bicycles and bicyclists streak past, it was prominent, conspicuous, fully revealed, and on display. ■

Lisa Knopp is a teacher and writer who lives in Lincoln.



Ducks on the Pond

A Mecca for Waterfowlers

By Eric Fowler

Rivers and marshes get most of the glory in waterfowling circles. But farm ponds can provide some excellent shooting, and most Nebraskans will find one within a short drive of their back door.

Rad Dobson, Chad Engle and Kevin Fellows take aim at an early flight of ducks from their blind on the banks of a farm pond near Hallam in southern Lancaster County.



While no one has an exact count, there are at least 20,000 farm ponds in Nebraska, and there could be as many as 40,000. That's more lakes than Minnesota has, although one could say that's comparing apples to oranges. But if the exact number were in the middle of that range, it would mean there's a pond for each of the state's 30,000 waterfowl hunters.

Many of those hunters don't even think of a farm pond as a place they might put out a spread of decoys and try to shoot a duck or goose. Instead, they focus on rivers or marshes and

wetlands, venues more likely to provide that picture-postcard setting many envision.

Rad Dobson, Darrin Duffy and Chad Engle don't fit that mold. Duffy and Engle went to high school together in Lincoln, and Duffy and Dobson now work together. They started hunting together when they were fraternity brothers at the University of Nebraska – Lincoln, and pack up and head west from their Lincoln homes to their blind on the Platte River near Overton as often as they can. But in the nearly 20 years they've been chasing ducks together, they've learned that farm ponds can also be a mecca for

waterfowling. And while some hunters are sitting at home waiting for the first big push of mallards to arrive from the north sometime in November, the trio enjoy some excellent shooting on the 10-acre pond they've been hunting near Hallam since the early 1990s.

"From the middle of October on, there are better years, but until then, four or five guys can shoot a limit of ducks virtually every time we go," said Dobson. With the help of friends who get regular invites, the trio typically harvests more than 100 ducks and a few geese each fall, not bad for a neighborhood that barely registers on the list of Nebraska waterfowling

the majority of the bag. "I'm just not sure what it is about that pond. We'll see a lot of mallards and pintails, but it just doesn't seem like we're shooting big numbers of those ducks," Dobson said.

The size of the pond the trio hunts even makes it attractive to the diving ducks, including bluebills, redheads and canvasbacks. "Those are pretty fun, especially the bluebills. When those big groups come rocketing in there, sometimes it just sounds like a jet," Dobson said.

One hunt last October ended with

shoveler, mallard, teal, goldeneye and redhead in the bag. They could've had a canvasback or two if Duffy hadn't picked an inopportune time to rearrange decoys. And they passed on a flock of bluebills. "It's fun with all the different ducks," Duffy said.

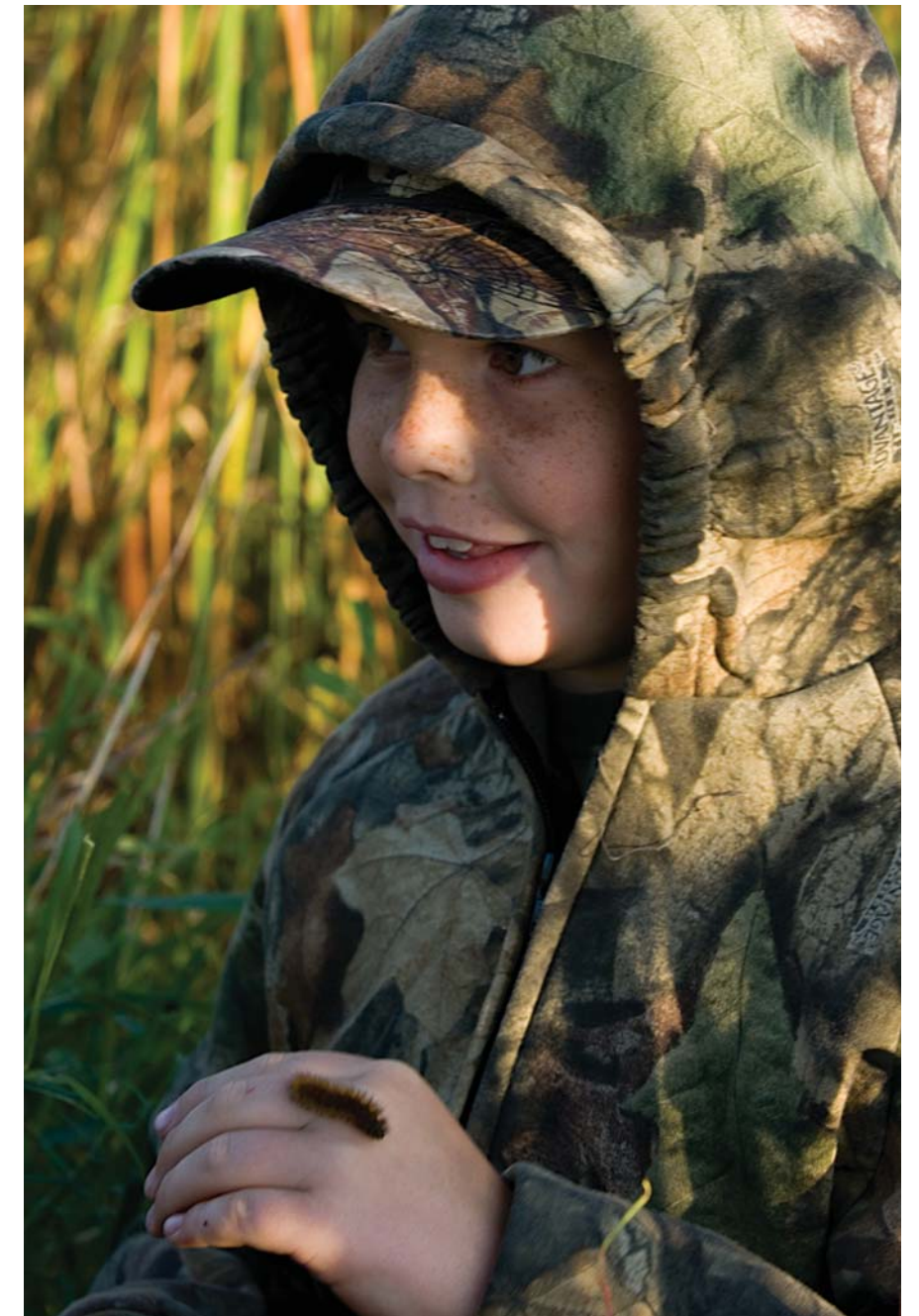
If the migration is at its peak and the weather is nasty, shooting can be good for mallards and snow geese. But the best luck for greenheads has come after the pond has frozen. The hunters have gone to great lengths to try to extend their season when this happens, including breaking ice and bringing in

hotspots.

The bag is always mixed, filled mostly with early migrators like teal, widgeon and gadwall. The early teal season in September is hit-and-miss, but last year was one of their best ever, adding more than 60 ducks to the bag. By late-October, gadwall and wigeon make up

ABOVE: Dobson and Engle scan the sky for ducks on a hunt in 2005, when dry weather sapped water from the pond they hunt.

RIGHT: Greyson Engle holds a woolly bear, better known in the scientific community as a Virginia tiger moth larvae, while on an opening day hunt.



pumps to spill water on top of it. “It can be pretty amazing on those days,” Dobson said. “But they can be pretty crappy days too. I’m never bringing my chainsaw down there again. It did work a lot faster when the ice was really thick, but you get wet. It’s kind of hard not to.”

An early freeze-up – early compared to most rivers anyway – is one of the main drawbacks of hunting farm ponds, just as it is for Sandhills lakes and Rainwater Basin wetlands. “We’ve had some years where we can only hunt until Halloween or so because we get froze out,” Dobson said. “Sometimes we’re lucky to make it to Thanksgiving.

Another factor that makes hunting ponds difficult is siltation. The lightest soils are the first to wash from crop fields in the watershed above any pond. Catching this silt and keeping it out of rivers and streams, therefore improving water quality, is one of the purposes of farm ponds. But when silt begins to pile up on the bottom of a pond, it

begins to tug at your boots, making wading extremely difficult. “If you stay in one spot too long, you get sucked into that stuff,” Dobson said. “Over the years, as we’ve gotten older, it’s kind of rough on the legs and the backs.”

When they began to hunt the pond, the group built their blind – a 10-man behemoth so big it was dubbed the Hallam Hilton – on the upper end. But the same storm that spawned the F4 tornado that destroyed Hallam on May 22, 2004, also dumped seven inches of rain in the area. The flush of water that came down the two creeks feeding the pond washed their blind all the way to the dam a quarter mile away and filled the upper end of the pond with silt.

Wading there was now impossible, forcing the group to move their blind to the middle of the pond’s southeastern shore. “It’s about the best wading in the whole pond,” Dobson said. “You can go out there and you’re only in a foot of silt versus being up to your knees.”

While hunters have abandoned the

upper end, their dogs must still venture up there to retrieve an occasional duck. When the water’s low, “it wears a dog out to retrieve a duck,” Duffy said. “Your dog is beat by the time he gets

back.”

Another challenge faced by those who hunt ponds is fluctuating water levels. A quick rise often follows a rain or snowmelt. When they hauled their blind in last October, they put it three feet from the water’s edge. When the men went back to retrieve it after the season, it was two feet into the water and frozen in the ice. Water levels can also fall several feet when the rains don’t. This group tucks their blind in the vegetation surrounding the pond, but for most of the 2005 season, it was more than 10 yards from the water’s edge. That left little of the emergent and submergent vegetation that is attractive to ducks and also limited shooting opportunity.

Lack of vegetation is one reason some farm ponds in Nebraska provide much better waterfowl hunting than others. But even some that look good aren’t. That is one reason this group is happy with their spot near Hallam: they’ve hunted plenty of other ponds where the bad days far out numbered the good.

ABOVE: Dobson, Engel and Darrin Duffy wait for the next flock of ducks to appear on a November morning.

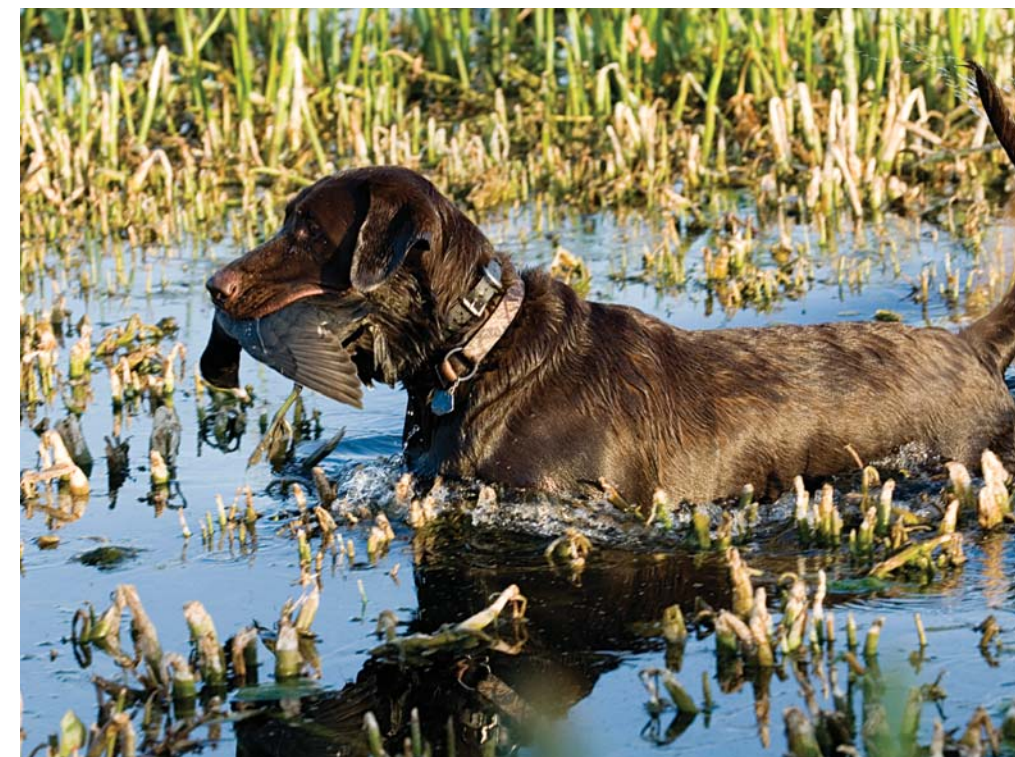
LEFT: With the moon setting to the west, Jeff Johnson picks out a duck from his side of the flock on opening day in 2006.

RIGHT: Ed, a chocolate lab belonging to Johnson, retrieves a coot, the first duck shot by Greyson Engel.

There are a few factors that may contribute to their success. First and foremost, there is plenty of water in the neighborhood. About 50 ponds five acres or larger, hundreds of smaller ponds and four of the Salt Valley Lakes are within 10 miles. Each water body might attract another duck that might fly by this group’s blind. Nice fall Saturdays, when anglers push ducks off the Salt Valley Lakes, or nasty ones, when the duck hunters push them off the lakes and ponds, might even be

some of the better hunting days. “We can tell when the guys have their boat blinds out because we see a lot more ducks on those days,” Duffy said.

The Big Blue River flows nine miles to the east, funneling ducks into the region that might just decide to stay a while. The pond is also just 40 miles from the eastern edge of the Rainwater Basin, a magnet for ducks that might decide to lay over on a southern Lancaster County farm pond on their way to or from the wetlands. Rainwater





Basin marshes full of water attract more ducks to the basin, and Duffy said those years are also better on their pond near Hallam.

Duffy, Dobson and Engle usually hunt only one day on the weekend. Occasionally they'll hunt both, but they rarely hunt weekdays. This gives ducks a chance to find and use the pond all week. And a few ducks on a pond are liable to attract more. "That helps us a lot as far as the number of birds we see," Engle said. "Because we're not here every day, they get to look at it all week without a spread and guys pounding on them."

When they do hunt, they're usually not out long. On a slow day, or a good one where bags are filled early, they will be picking

LEFT: Chad Engel helps his son, Greyson, flip through the pages of a waterfowl identification guide and identify a wood duck the party shot as Kevin Fellows looks on.

BELOW: Chad Engle and Rad Dobson pick up decoys after a late November hunt in 2005.

up decoys by 9 a.m. Rare is a day when they aren't home in time for lunch. "It's so close you sometimes get your limit before the wife and kids even get out of bed and still get home in a decent enough time that you can get your chores done around the house or go to football games," Dobson said.

With no rivers to cross or marshes to wade to get to the blind, it's also easier for the men to bring their sons to the pond. And with most of their hunts there coming early in the season, the weather is usually mild enough that a youngster's enthusiasm isn't dampened by a chill.

Engle brought his ten-year-old son, Greyson, to hunt opening day last season. The soybeans in the field next to the pond hadn't been harvested and they hadn't been able to haul their blind yet, so they just hunkered down in the vegetation along the bank. It was a bluebird day, and Greyson had as much fun playing with caterpillars and his Daisy Red Ryder BB gun as he did shooting his first "duck" – a coot that landed on the edge of the decoys and swam off, but not far enough that Greyson and Chad couldn't sneak within

shooting range. On a much cooler morning two weeks later, Greyson sat in the blind in front of the portable propane heater and thumbed through a duck identification guide to help identify the take, including a wood duck.

Dobson has brought his oldest son, five-year-old Jack, to the blind a few times and hopes to do so more often this year. Duffy's four-year-old, Boddy, has also been on a hunt. Getting the boys out of bed is the initial challenge, but not the only one, Duffy said. "We need them to get a little older where you can say, 'Here's a doughnut, now be quiet,'" he joked. But if that doesn't happen, home, TV and cartoons are only a half-hour drive away.

Farm ponds come without two challenges faced by waterfowl hunters elsewhere. In most cases, unlike rivers, large reservoirs and public marshes, there is no competition from other hunters for birds or hunting spots. Some of this trio's first hunts together were at public wetlands in the Rainwater Basin where on weekends they would often "go out there and stomp around for 40 minutes before you found a spot that wasn't already full of hunters," Engle said. "Everywhere you would get that looked nice, somebody would shine a flashlight at you."

And unlike rivers, there is no current to fight. "The decoys don't float away," Duffy joked. "The water going up and down on the river can be scarier. At least if you're stuck in the mud in a pond, the worst case scenario is you take your waders off and swim to the bank."

But the main thing that has kept these guys hunting ponds and led them to Hallam is convenience. Hunting there doesn't involve a long drive and motel bills like their trips to Overton. "Some years we hunt down at Hallam more than others," Duffy said. "If we have a chance to go to the river, we go to the river. But if we don't have the time, then we just go down to the pond. "That's all it is, opportunity. And it's an overlooked opportunity."

Of course, having plenty of chances to shoot a duck is a bonus.

"I'm glad I got up this morning," Dobson said on a hunt last October after making the most of one of his chances, downing three ducks from a flock in three shots. ■

Hunting Farm Ponds

Chances are good there is one within a short drive of wherever you live, but before you grab your decoys and head out the door, know that not all ponds attract ducks and provide good hunting. Collectively, however, the better ponds are "an important piece of the habitat in the state for ducks and for hunting opportunity," said Mark Vrtiska, waterfowl program manager with the Nebraska Game and Parks Commission.

Vrtiska estimates that 20 to 30 percent of the state's duck hunters utilize ponds, especially the larger ponds in eastern Nebraska. That still leaves plenty more ponds where hunters could find good hunting, especially opportunistic hunters who don't have an excess of time or money to invest in the sport. "If there's ducks on the pond and you want to go, then go," said Vrtiska. "Some ponds may not have ducks on them consistently every fall, but I make a habit of checking the ones I can hunt. And I've had some pretty good shoots on them."



Mark Vrtiska

Some basics of farm pond hunting:

- Find a pond: Do some scouting, either by driving backroads or looking at paper or online maps. Satellite photos available on many web sites, including the Commission's mapserver at www.OutdoorNebraska.org, are valuable tools. The best ponds have some aquatic vegetation. Once you find a place you'd like to hunt, contact the landowner for permission, a task that may require a plat map. Start your search in the fall, when you can see whether ducks, or hunters, are using the pond. A good choice has the former, not the latter.
- Hunt the flyway: Ducks might use an isolated pond in the middle of nowhere, but the best ponds will be located in the same neighborhood as rivers, reservoirs or wetlands that are frequented by ducks.
- Test the waters and the mud: Once you get permission, find the best place to deploy your spread well before the season opens. Put your waders on and test the bottom. Do this in the daylight and never do it alone. Many ponds, or at least portions of them, are loaded with silt and impossible to wade safely. That is an important consideration, especially if you don't have a small boat. Just ask anyone who's gotten stuck in the mud and had to slip out of their waders to get to shore.
- Get a dog: For the previously mentioned reasons, trying to retrieve birds on foot is risky business in farm ponds. The dog food and vet bills are worth it.
- No blind required ... or decoys: Be opportunistic. When you see ducks are using a pond, just throw out a few decoys if you happen to have them and hunker down in the weeds or cattails on the bank. Small ponds are also a good place to jump-shoot ducks, especially if the ducks are near the dam, which will easily conceal your approach.
- Don't overhunt it: Unless you have a prime piece of farm-pond real estate in a prime flyway, don't hunt it every day. Do so and your ducks will soon find a new home. Save it for weekends and an occasional weekday hunt.
- Make a bad pond good: Many farm ponds are used to water cattle and have little vegetation, meaning they also have little to offer ducks. Fence off all but a small a portion of the pond and the vegetation will recover. Offer to do the work for the landowner, who will benefit from improved water quality through increased weight gains in his livestock.
- Make a good pond better: When water drops, plant millet on exposed mud flats. If fall rains fill the pond and floods the vegetation, it will be irresistible to ducks.
- Start from scratch: Design your pond so water levels can be lowered to encourage the growth of smartweed and other vegetation and then raised to flood it.

For more on managing or building a pond to benefit waterfowl hunting or production, contact the Commission for a copy of *Nebraska Pond Management*, a new guide that includes tips on designing and managing farm ponds for both waterfowl hunting and production.



Much More Than Pheasants

By Rocky Hoffmann

“Hunters who look at CRP only as pheasant fields are missing some additional benefits of the program...”

— Dan Rochford, retired Nebraska Game and Parks Biologist

When Congress passed the Food Security Act of 1985, it created the Conservation Reserve Program (CRP), offering farmers a voluntary long-term cropland diversion plan. The program’s primary goal was to reduce erosion on susceptible land that had traditionally been farmed. The removal of land from crop production was coupled with recovery plantings of native grasses and backed by a per acre payment to landowners for enrollment of their land.

A national target enrollment of 45 million acres ushered in the program, and by 1990 farmers had already enrolled 34 million acres nationwide. Nebraska farmers have made a strong showing in the program, and by 2006, the Cornhusker State had 1.2 million acres enrolled on more than 15,000 farms. The current Conservation Reserve Program has been tabbed by many as the most significant federal program ever enacted on the Great Plains.

Pheasant hunters praised the program for its expressed goals, especially those directed toward the creation of wildlife habitat, and had a renewed vigor for their sport when the program was enacted. Hunters began finding more pheasants, and most success was associated with the newly planted fields of grass. Today’s orange clad hunters with eager hounds ply the blocked out seas of grass where crops once struggled and often lost to

Nebraska’s unpredictable weather.

Hunters support the use of tax dollars to pay for the Conservation Reserve Program, and their unselfish reward is merely the raucous outburst from a flushed rooster. Sweetening the pot is the current Management Access Program (MAP) that was established in Nebraska in 1997 and allows walk-on hunting on specifically enrolled CRP acres. Under CRP-MAP, a partners program of the Nebraska Game and Parks Commission, Pheasants Forever and the Nebraska Environmental Trust, landowners already enrolled in CRP may be paid an additional amount per



On southwestern Nebraska CRP-MAP acres, hunters often enjoy a mixed bag of pheasants and grouse.

acre for the entire CRP field for disking and planting legumes on 10 percent of the enrolled tract. The contract also stipulates that the entire tract be open to walk-in access for hunting and trapping during all legal hunting and trapping seasons. Disking tends to encourage the development of broad-leafed plants,

which are important to wildlife, and add to the diversity of the tract. Diversity in plant life results in a diversity of insect life...an important protein nutrient for young birds.

Retired NGPC wildlife biologist Dan Rochford of North Platte claims that hunters who look at CRP only as pheasant fields are missing additional benefits of the program, which, if taken advantage of, would afford them opportunities in these fields as early as mid-September. Rochford helped to initiate CRP and MAP in Nebraska and worked with state, federal and private land habitat programs until he retired in 2006. Now he finds gratification and a sense of accomplishment when he strikes out with shotgun to harvest some of the other crops that converted cornfields have to offer.

“One of the most overlooked opportunities in CRP fields in the western half of the state is hunting prairie chickens and sharp-tailed grouse. CRP fields at certain stages have provided excellent cover for these prairie grouse species,” Rochford said.

Prairie grouse are grassland species, and the conversion of some crops to grass is a habitat bonus for prairie chickens and sharp-tailed grouse. Of the grouse species, prairie chickens appear to have benefited most from the program. However, Panhandle area CRP-MAP acres primarily attract sharp-tailed grouse. In the southwest, prairie chickens are attracted to CRP fields, especially



Rochford and Rye admire a prairie chicken they combined on while hunting a CRP-MAP field in southwestern Nebraska.

The rifle deer season was in progress, and there were two deer hunters already in the complex of the quarter section CRP-MAP fields we had chosen to hunt.

when croplands or alfalfa are located nearby. Prairie chickens appear to thrive on a scattered diversity of grass, grain and alfalfa.

“Secondly, more and more hunters

are discovering that the tall grass of established CRP fields provide ideal bedding habitat for both mule deer and white-tailed deer, and many deer hunts could end on a successful note even at



Ralph Quick of North Platte jumped this trophy mule deer buck from the tall warm season grasses of a CRP-MAP field.



Rye picks up the scent of a lone prairie chicken in a CRP field edged by corn, a good combination for pheasant, quail and grouse.

midday in the middle of a quarter section of CRP,” Rochford said.

Rochford also said that it is not unusual to find quail in CRP, but he said that in most instances the types of CRP fields that attract quail also have tree and shrub plantings in the contract, are in the proximity of tree and shrub plantings, border grain crops or contain significant weedy areas.

“In the past, quail had a tendency to surprise me when they suddenly scattered from the tall grass, and most of the time, I’d be caught flat footed, never getting off a shot. I’ve started to associate the habitat components within a CRP field or immediately adjacent to the field that tend to attract quail, and I’ve begun to anticipate that pulse-raising flush of a covey. Now when I hunt CRP acres I’m more in tune to the possibility of quail,” said Rochford.

One day last November, Rochford parked his truck in a pull-off parking area established outside the boundaries

of a Keith County CRP-MAP field marked by yellow signs. I had accompanied him on the hunt, and he had selected a field he felt had great potential for prairie chickens as well as pheasants. The rifle deer season was in progress, and there were two deer hunters already in the complex of quarter section CRP-MAP fields we had chosen to hunt. Since there were several quarter sections involved, we felt comfortable hunting one of the quarters while remaining distant from the rifle deer hunters. They wore orange, we wore orange, and there certainly was plenty of room to spare.

On the drive up, Rochford talked about range conditions. Extreme drought, combined with grazing, had left no residual grass in the pastures. The stressed grass appeared almost white, having burned and frozen in the hostile Sandhill environment.

“Not much cover for grouse or anything else in these hills right now,”

Rochford remarked. “I’m certain that if there are any birds in this area at all, they will be on the CRP.”

Pivot cornfields adjacent to the CRP-MAP tracts were half picked, and Rochford pointed out several mule deer feeding in the picked portions of those fields.

“When the rest of the corn comes out, I’ll guarantee that there will be a lot of mule deer and white-tailed deer too holding in these CRP fields,” he said.

He guessed that a few deer had already moved into the grass as the corn was being harvested, and that the fellows with the rifles might have some success.

Not far into the hunt we jumped a doe and fawn whitetail, and as we crested the first hill, a small bunch of mule deer stood up from their beds and bounded off toward the west. The grass on the CRP was in excellent shape regardless of the dry conditions. Native

high plains grasses are extremely resourceful when it comes to water use. We also noticed a good supply of grasshoppers on this unusually warm November day. Only a couple of light freezes had occurred earlier, and the insulating qualities of the thick grass had preserved insect life unusually late into the season.

Traditionally, five species of warm season grasses are planted under CRP contracts. A good mix of switch grass, Indian grass, big bluestem, little bluestem and blue gramma is seeded into the retired crop fields. This mixture often varies from contract to contract with consideration given to regional climate and soil types. Sometimes trees and shrubs are also added to contracts. MAP upgrades require the planting and midcontract maintenance of alfalfa and clover on an interior parcel that comprises from 10 to 33 percent of the entire CRP tract.

For a field that was once irrigated by



Rochford and Rye take a breather by a relic windmill, an indicator that native grasses and grazing preceded the cornfields that have since been retired back to grass through the Conservation Reserve Program.

a center pivot, the tract that Rochford had chosen to hunt was extremely sculpted. As we made our way to the top of a hill, there was little wonder in our minds why this area was susceptible to erosion. Rochford was seeking the elevated portions of the field for a reason other than exercise. Once on top, he pointed out that the vegetation was shorter, more diverse and contained weeds and sunflowers. He pointed out some rose hips that had survived the plow and weren't suffocated by tall grass.

"If there are prairie chickens around, they will likely be found on these high spots where the vegetation is shorter," Rochford said.

He suggests that the same tactics be used for hunting pheasants in established CRP fields.

"Look for diversity, look for food, look for weeds. I always search out the sunflower patches in old CRP fields and head right for them. Pheasants will

visit these areas looking for sunflower seeds that have been scattered on the ground by wind."

With that profound statement, a rooster burst from just such a spot. Rochford brought him down quickly, and Rye brought him to hand. Rye is my four-year-old yellow Labrador that much prefers water sports but adapts well to upland hunts too.

"Well, this isn't what we came for but we'll take it," Rochford said. "Watch your dog, she's onto another bird right over there."

This time Rye had a nostril full of scent. She was circling radically and appeared confused as to where the bird was. I'd seen this behavior before with her and other dogs, and it always concluded with a bunch of grouse taking flight. I think what happens is that when a flock of grouse have been milling around in an area, they leave a confusing scent pattern that indicates a strong but vague path to success.

Rochford managed to beat Rye to the crest of the hill as a flock of grouse came up perfectly in front of him. Two birds were down when I came up over the crest. I kept Rye working in the grass, and as expected out came a straggler, which I put down for a third retrieve.

We spent most of midday working similar sites without success. Grouse hunting is such a needle in the haystack sport, but odds can be improved by hunting choice habitat areas instead of walking aimlessly about. Rochford suggested another approach.

"Let's work some of that area adjacent to the picked corn. It looks really good, and there are probably birds using the edge. We might find pheasants or chickens there...maybe even a covey of quail."

We found a lot of weeds, including sunflowers and Russian thistle. This was great cover in which a rooster pheasant or a lone adult male prairie

chicken might hide. Mature males are often found as single birds this time of the year. Walking around a circle of corn is a long hike, and to Rye's dismay, the weeds also contained some patches of sandburs. It doesn't take a dog long to recognize the bright yellow blades of sandburs and discover a path of avoidance. Two prairie chickens jumped from under Rochford's gun as we nearly completed the circumference. Had we decided to go the other direction from the beginning, Rochford would have completed his legal brace of three birds within a few yards. Such is grouse hunting.

I never had a shot at the second bird, but anymore a limit is just that, not a goal. We had decided to call it a complete hunt and head back to the truck when we heard a single rifle shot in the direction of another quarter of CRP-MAP. The deer hunters may also have had success.

Finally reaching our truck, we drove to where the other pickup was parked and found a couple of tired hunters off-loading a very nice mule deer buck from a two-wheeled cart. As is usually the case in deer hunting, Ralph Quick, the lucky hunter from North Platte, had shot the buck about as far from the vehicle as geometrically possible in the mosaic of old circles, active circles and triangular corners. Although I am certain it was tempting for the hunters to drive to the deer, they were aware of the foot traffic only rule, and they were also aware of how critically dry the grass was and the danger of starting a fire as a result of a hot catalytic converter.

Quick said that he and hunting partner David Bertram of North Platte had seen another impressive mule deer buck and a pretty good white-tailed deer buck as well during their hunt. There were still a few hours of sun remaining and they planned on heading out again for one more look in some grass that they hadn't visited earlier in the day. Persistence (a stubborn refusal to quit) pays benefits when deer hunting.

We bid them safe and good hunting and turned the vehicle toward North Platte. On the drive home, Rochford



Examination of crops is a good technique employed by hunters, which provides clues as to where to hunt grouse. The three crops from Rochford's grouse showed weed-seeds, sunflower seeds, rose hips, grasshoppers and field corn.

gave up some of his knowledge about southwestern Nebraska CRP-MAP fields as they might relate to grouse hunting.

"I've flushed grouse from at least one CRP field in nearly every county under my responsibility while working for Game and Parks. Probably the best MAP fields for chickens are found in Hayes County, where I've seen them on every established enrollment in the county. You might go there to hunt and not see a bird, but then again you will have a good opportunity for success. Grouse are very mobile, and they may be somewhere else at any given time, or you simply might not run into them on the field you are hunting because of the size of the field and the path you decide to take."

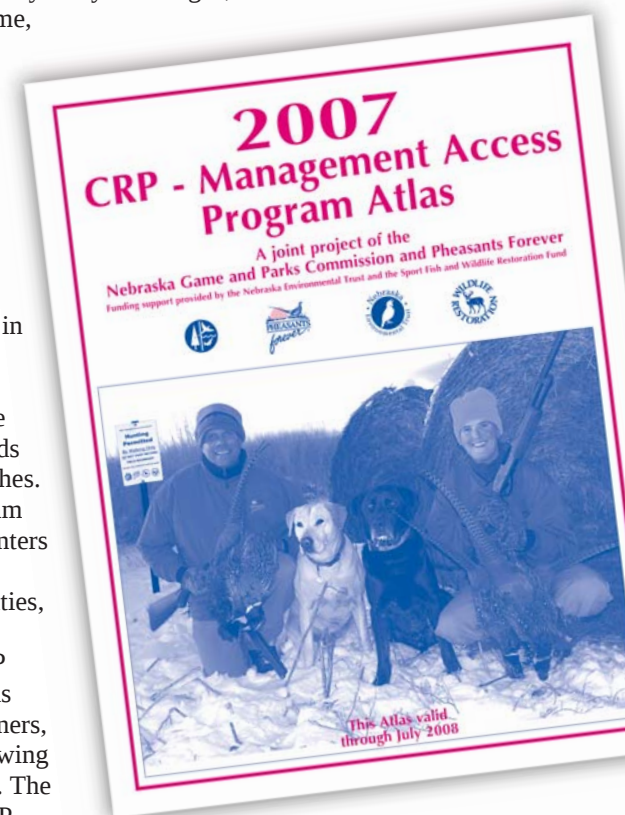
Rochford said that he enjoys hunting CRP fields for grouse early in the season when they are still in family groups. He said at that time of year they are less spooky, and a hunter can get right in the middle of a bunch before they jump. By mid-November, family groups begin to combine into large flocks and there are a lot more birds to get nervous as a hunter approaches.

The Management Access Program continues to be popular among hunters and landowners alike. As a pilot program tested in 1997 in 28 counties, the Nebraska Game and Parks Commission enrolled 20,000 MAP acres. A very positive response was received from hunters and landowners, and the program continued ... growing to 70,000 acres the following year. The hunter access portion of CRP-MAP will open approximately 180,000 acres of private land this year, while the management portion of this innovative program will improve the abundance of

habitat on these same acres. A valuable tool provided to the hunting public is the 2007 CRP-Management Access Program Atlas. The atlas is a compilation of individual county road maps that show all public hunting areas, federal, state and private and contains a wealth of hunting related information, including a basic guide to regulations.

CRP-MAP is an exceptional gift to hunters and wildlife alike. MAP is comprised mostly of large areas, well distributed throughout many counties, with specific wildlife management goals that go beyond the goals of CRP management..

"A hunter can take a MAP Atlas that the Game and Parks prints each year and go from one red block to another until he walks his legs off. There is no need to knock on doors or flag down combines for permission to hunt. Just follow the rules that are printed on the yellow signs," Rochford said. ■



The 2007 CRP - Management Access Program Atlas that locates nearly 180,000 acres of walk-in hunting is available at all Game and Parks offices and some permit vendors.

Nabbing Game Law Violators for 25 Years

Nebraska Wildlife Crimestoppers protects wildlife.

By Tom Keith

An organization started to give poachers their just rewards is celebrating its silver anniversary this year.

It's been a quarter-century since poachers first began to feel the pinch exerted through Nebraska Wildlife Crimestoppers (NWC), an organized, grassroots effort to put them out of business by using information volunteered by the public to identify, apprehend and prosecute poachers for game law violations.

The program is a cooperative effort of the Nebraska Wildlife Protector's Association (NWP) and the Nebraska Game and Parks Commission (NGPC). It was originally known as "Operation Game Thief," but its name was changed to Nebraska Wildlife Crimestoppers in July 2001 to better reflect its purpose.

The NWP sponsors the program. It is made up of a group of concerned citizens who handle fund raising and reward payment. NWP determines whether a reward will be paid in a certain case and, if so, how much.

The NWC program operates solely on donations from people interested in protecting wildlife from illegal poaching activity.

"Nebraska Wildlife Crimestoppers is funded through donations from private citizens, businesses and foundations, in addition to money raised at a semi-annual banquet," said Paul Pack, president of the NWP. "We occasionally receive money from the courts if the judge requires a defendant to pay a certain amount to the program in addition to the regular assessed fine. There are no tax funds involved. Our donations range in size from \$5 or \$10 to \$1,000, and we appreciate every penny. All of the money goes into the NWC program."

All donations to NWC are tax-

deductible for those who itemize their deductions on their federal income tax return. If you would like to contribute, send your donation to: Nebraska Wildlife Crimestoppers, P.O. Box 726, Broken Bow, NE 68822.

Since its inception in 1982, the program has accounted for \$98,117.51 in fines and court costs, 14 license revocations, 850 hours of community service, 60 days jail time, 1,185 days probation, \$6,100 paid to the NWC reward fund and \$208,445 in liquidated damages assessed to persons convicted of game law violations.

A total of 1,327 game violation investigations have been launched through the NWC program. Those investigations resulted in 806 arrests.

The animals involved in cases which resulted in arrests were: 652 fish, 411 deer, 13 antelope, 4 elk, 70 turkeys, 124 pheasants, 51 quail, 74 doves, 9 grouse, 186 ducks and geese, 6 swans, 11 rabbits, 3 squirrels, 166 raccoons, 19 muskrats, 8 mink, 11 beaver, 8 opossum, 3 bobcats, 1 eagle, 32 hawks and owls, 2 songbirds, 6 porcupine and 2 coyotes.

Investigations by NWC usually begin with a tip called in by the public on a toll-free telephone hotline. The information is relayed to conservation officers in the field who investigate the reports, arrest the violators and testify against them in court.

Persons reporting a violation are not required to give their name or appear in court, but they may be eligible for a cash reward. To date, a total of 334 rewards totaling \$45,690 have been paid for information.

If you witness or have knowledge of a game law violation, you are encouraged to call the NWC toll-free hotline, 1-800-742-7627. The hotline will be answered by a Game and

Parks Commission staff member from 8 a.m. to 5 p.m. Monday-Friday. After hours and on weekends and holidays, it is answered by the Nebraska Crimestoppers operator and information is relayed to a Commission conservation officer. ■

What Can You Do?

To report a violation, immediately call authorities with as much information as possible:

- What happened?
- Where and when did the violation occur?
- Describe the violator as completely as possible. Name and address (if known), physical description (weight, height, hair and eye color, clothing and any other pertinent information).
- Was the person armed or carrying a concealed weapon?
- Were firearms involved in the violation?
- Describe the vehicle - make, year, color, style. Include license number and any distinguishing feature such as dented fenders, etc.
- What animals or fish were involved, how many, and where are they now?
- Physical evidence - such as hides, entrails, guns, cartridge cases, knives and such.
- Will the illegal game or evidence be moved soon? If so, when and where to?
- Were there other witnesses? Give their names or descriptions.
- Any other information about the violation and suspect that you may have noted.

Callers to the Nebraska Wildlife Crimestoppers Hotline, 1-800-742-7627, may remain anonymous. When you call, a number is assigned, and all information and reward payments are processed under that number.

The Third Eyelid

Observations and oddities of the nictitating membrane.

By Jeff Kurrus

Since fish have fluid constantly cleaning debris from their eyes, their use of eyelids for this purpose is not needed. However, as animals have moved through evolutionary history from water to land, the eye has slowly evolved to include the eyelid and tear ducts, whose purposes were to help keep the eye clear and clean. Yet for an animal such as a bird that is often in constant motion, creating the potential for additional dryness and debris to interrupt the eye and cause temporary, if not more prolonged, blindness, another tool became necessary to aid in these visual dilemmas – the nictitating membrane.

A bird's eye is protected by three eyelids: The upper, which resembles that of humans; a lower lid that closes when the bird sleeps; and the nictitating (which means "blinking") membrane, which uses cartilage to sweep horizontally across the eye's cornea from the medial side.

The nictitating membrane, also known as the haw, is a thin, translucent third eyelid that is hinged at the inner side of the eye. It serves multiple functions, including keeping the eye clean and moist while also protecting it from wind, bright light and possible obstructions that could enter the eye.

Birds also use this membrane while swimming, flying or eating so that they can prevent any harm from being done to this essential sense without compromising their ability to use it. Predators such as the owl, for instance, cannot risk repeatedly blinking their eyes while on the hunt



The nictitating membrane of an American robin is revealed while eating cherries at E.T. Mahoney SP.

for small prey, yet also cannot risk harming their eyes while darting through woody, or even open, terrain. The nictitating membrane functions as goggles for these birds, while the additional moisture created by the membrane also aids their vision.

However birds such as the owl or the American robin are not the only animals that have nictitating membranes – reptiles and some mammals also have this protective covering. Aardvarks close their membrane when eating termites to keep from getting bitten; polar bears use their haw like sunglasses to filter ultraviolet light and prevent snow blindness, while also working as waterproof goggles in the salty, cold water; sharks use this

protective covering when biting to prevent injury against thrashing prey.

In some other animals, the nictitating membrane only appears if the animal is ill. A visible haw could be a symptom of dehydration, tetanus, enophthalmos, low body weight, microphthalmia, or an abscess near the eye in some animals including domestic cats and dogs.

The human eye also has the vestigial remains of a nictitating membrane known as the plica semilunaris. It's the crescent-shaped piece of skin folded permanently behind the fleshy "button" in the corner of the eye closest to the nose.

This membrane is just one more way an animal's body is adapted to the specific environment where it resides. Just like many birds' eyes are set more laterally on their head to prevent predator attacks from behind, the nictitating membrane serves a valuable

purpose for animals whose job it is to fly at high speeds in its hunting and evading efforts.

And while birds such as the American robin are not listed in the same hunting league as red-tailed hawks or peregrine falcons, it should still be noted that American robins can reach flying speeds of over 30 miles per hour. This is necessary considering some of their diet consists of insects, small birds and snakes.

Keep in mind, however, that while in certain situations a robin is the predator, it is also the prey for others, including a number of raptors, whose own nictitating membranes will be in use while chasing robins through the woodlots of Nebraska. ■

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The History of Ash Hollow

Ruts from emigrant wagon trains still remain.

By Bob Grier



BOB GRIER

Windlass Hill is located east of the historical park's visitor center and the wagon trails remain visible on the steep incline.

The majority of emigrants on the Oregon-California Trail passed through Ash Hollow, but there is ample evidence that the area attracted and held humans thousands of years earlier. Ash Hollow State Historical Park, located three miles east of Lewellen, preserves evidence of hunters pursuing mammoth and bison dating back to about 100 A.D. The area was also a noted campground used by Euroamerican emigrants during their westward migrations from 1841 to the linking of the transcontinental railroad in 1869.

The Robert Stuart party, exploring an easterly route from Fort Astoria on the Pacific coast to the United States, (then only a 36-year-old country of 18 states) spent the winter of 1812-1813 on the North Platte River just west of the current Wyoming-Nebraska border. Resuming their journey, Stuart's journal records the crossing of "a creek thirty yards wide" believed to be Blue Creek just west of Lewellen. "Three miles lower, another Branch joined the main stream from the south, it is thickly wooded a short distance from its mouth, but with what kinds we could not distinguish."

Mountainmen explorers, trappers and traders used the Stuart route in the 1820s and 1830s, and the first emigrant trains bound for the Pacific coast started west during the spring of 1841. The first large train, with 1,000 emigrants, including 130 women and 610 children, set out for Oregon from Independence, Missouri, during the spring of 1843, led by Presbyterian missionary and medical doctor Marcus Whitman. Travel on both the Oregon and California trails reached its zenith during the California Gold Rush, which occurred after the discovery of gold at Sutter's Mill in 1848. An

estimated 55,000 gold seekers traveled the overland route by 1850. The history of this period is greatly indebted to author Merrill J. Mattes. His research for *Platte River Road Narratives* and *The Great Platte River Road* found that about half a million emigrants used the Oregon-California Trail and the Mormon Trail on the north side of the Platte River. Mattes collected more than 2,000 diaries, journals and overland narratives, and excerpts are included in *Platte River Road Narratives*.

The emigrants' journals and diaries are replete with mention of hundreds of pioneer graves observed in Ash Hollow. Asiatic cholera stalked the Oregon-California Trail in the late-1840s and early 1850s, but only two grave markers in and near Ash Hollow remain to illustrate this tragic period of emigrant travel. Rachel Pattison's headstone in the cemetery at Ash Hollow tells how the 18-year-old girl became ill on the morning of May 19, 1849, and died at 11 that night. The other emigrant headstone is located on private land about a half-mile west of Pattison's marker.

The emigrant diaries also described the steep hill dropping into Ash Hollow that is known today as Windlass Hill, although there is no surviving record of a windlass or similar device being used to lower the wagons to the valley floor. Numerous wagon trails are still visible

on the sides of Windlass Hill. A paved hiking trail to the top of the hill and historical displays describe the steep descent.

Today, Ash Hollow State Historical Park offers a wealth of both early human and historical information, including displays and artifacts in the park's visitor center. From the visitor's center, a short trail leads to a building that protects Ash Hollow Cave where excavations have identified at least seven occupational layers dating back to about 100 B.C. Ash Hollow's visitor center is open from Memorial Day through Labor Day and at other times of the year by appointment. A valid Nebraska vehicle park entry permit is required and can be purchased at the park or from a nearby permit vendor. For more information and group tours, contact Ash Hollow State Historical Park, PO Box 70, Lewellen, NE 69147 (308) 778-5651, e-mail: ash.hollow@ngpc.ne.gov. ■



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Portraits from the Past



My aunts, Albie Tesar Rasmussen (left) and Helen Kratina Tesar, after a 1939 rabbit hunt near Tobias, Nebraska. Albie also had six brothers who all hunted, and many of their old pictures show rabbits. One had the caption "Ah boy, fried rabbit and cream gravy for supper tonight!"
— Sharon Tesar Johnson, Geneva, Nebraska



This photo was taken in 1959. The tall, good-looking gentleman on the left is Tom Wiese, who still lives in Omaha. The shorter and slightly less handsome gentleman on the right is retired and living in the Olympia, Washington area. In the late-1950s, many a daily limit was filled by this dynamic duo around the Wahoo, Weston and Brainard areas.

— Tom Wiese, Omaha, Nebraska



A good summer's day catch in 1952 at Lake Ericson. Pictured outside the family cabin, left to right, are W.H. Norton, his mother Catherine and father, W.W. Norton.

The Norton family, originally from Osceola, have a long history of love for Ericson. From the 1940s to the present, Nortons have maintained cabins at the lakes.

— Nancy S. Somermeyer, Nebraska City, Nebraska

Send contributions to: Portraits from the Past, *NEBRASKAland Magazine*, P.O. Box 30370, Lincoln, NE 68503-0370. Photos should show people enjoying Nebraska outdoor activities, such as camping, boating, hunting or fishing, and must have been taken before 1970. We will give priority to unusual photos or activities. When possible, please include a story about the photograph and identify the people, places and approximate date it was taken. Photos will be returned.



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