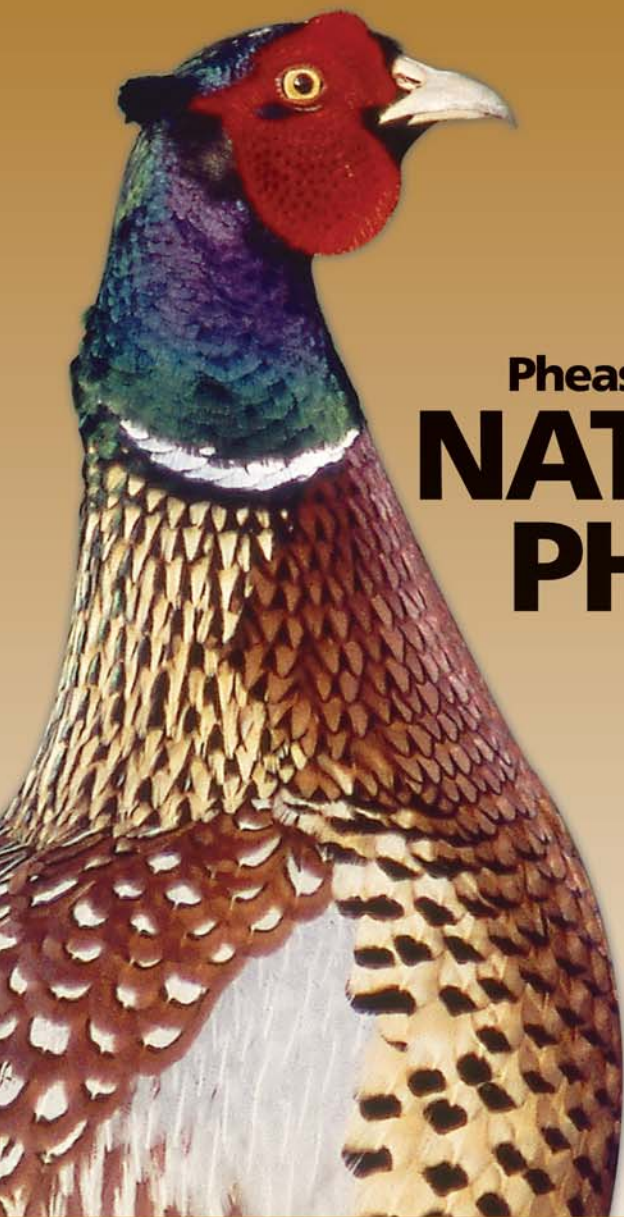




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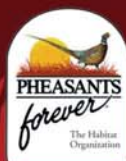
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NEBRASKAland

December 2010



INSIDE

Rabbit Hunting • Pygmy Nuthatches • Canning Venison
Box Elders • Opossums • Spilling Oil in Nebraska
How Plants Survive Winter • Whoops!

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NEBRASKAland

Volume 88, Number 10, December 2010

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Dustin Favinger thought his basset/beagle mix was simply a running companion, but she turned out to be much more. TEXT AND PHOTOS BY JEFF KURRUS

20 Snow and Ice

Winter fun can be found at both city and state parks all across the state. BY PASQUALE MINGARELLI

22 How Plants Survive the Winter

Unable to migrate or seek shelter, plants have to rely on other methods to survive Nebraska's cold, harsh winters. TEXT AND PHOTOS BY CHRIS HELZER

26 The Smallest Nuthatch

The pygmy nuthatch may be one of our best indicators of a healthy pine forest. TEXT AND PHOTOS BY MICHAEL FORSBERG

28 Box Elder - The Poor Man's Maple

Unappreciated by some, the box elder is sustenance and home for a host of creatures. TEXT AND PHOTOS BY JON FARRAR

34 Surviving "Stupid"

Even though theirs is an old species, opossums are not one of the brightest animals walking the earth. BY JON FARRAR

36 Whoops!

Everyone makes mistakes, and biologists are no exception. Here are some examples of why you should not mess with Mother Nature. TEXT AND PHOTOS BY ERIC FOWLER

42 Spilling Oil in Nebraska

Even though the recent oil spill in the Gulf of Mexico may have seemed to be a million miles away, it could affect birds found in our state. TEXT BY JEFF KURRUS, PHOTOS BY JOEL SARTORE

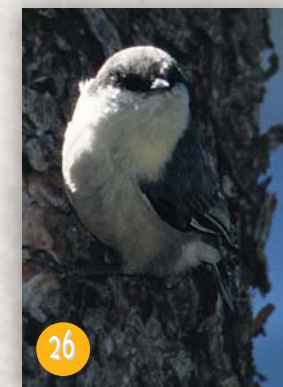
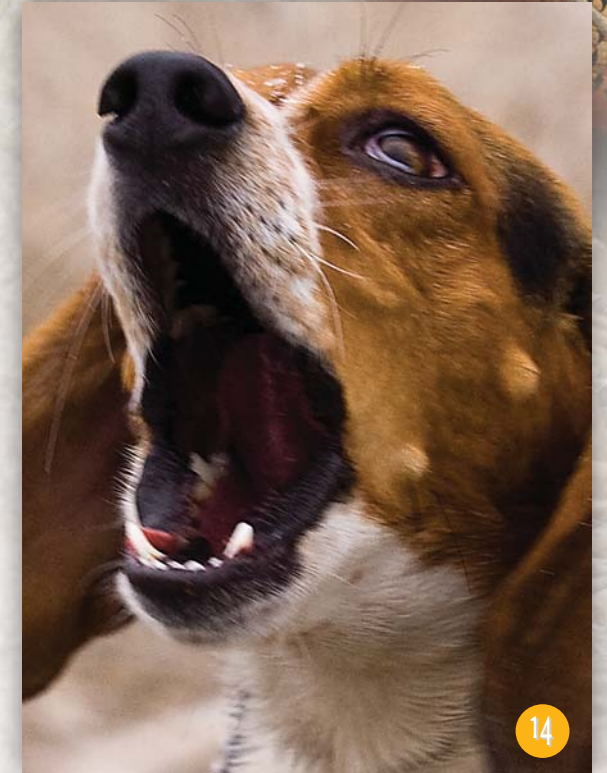
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Cover: Frozen stalactites of water round the edge of an ice hole on a Lancaster County stream. Photo by Chris Helzer.

Opposite: A lone white-tailed doe crosses a trail at Wehrspann Recreation Area in southeastern Omaha. Photo by Jeff Kurrus.

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November Portraits Black Hunters

Regarding my “Portraits from the Past” submission last month, I’ll bet a lot of people didn’t know that there were black hunters in Nebraska back in the 1940s.

We were too young to know what these guys did for a living but they were well-heeled. They wore the best and carried the best. They usually hunted squirrels and kept them in their vest game pockets. We had both Shell Creek and Taylor Creek running through our farm, so there were more than enough small game in those areas. Once they entered the area along the creeks we never saw them until they came out to go home.

They were also traders. During the war, people had what they had. These guys would bring things (I remember a bucket of Karo and sugar) and would take back poultry, eggs, etc.

Furthermore it must have been a 90 mile drive from Omaha, usually in a Woodie.

I’d be interested in hearing any feedback that you get from my submission.

Thanks again,
Marvin Konopik
Las Vegas, Nevada

Kurrus Kudos

Hello Jeff (Kurrus):
Now I understand the behavior of the black squirrel I saw last Thursday (October 14) as I was driving my truck on Clark Street in Creighton. He scampered onto the street, stopped, then stood straight up in the middle of the road. I slowed, then stopped as he did not move. After six to eight seconds, he ran to the curb, up a tree

and looked back.

He was obviously checking to see if “it was Kurrus coming!”

I saw another black squirrel the previous week near Main Street on a lawn. Again he allowed me to approach within 25-30 feet, then scampered across the street and into a tree. They are looking for you, and they want to make sure it is “Kurrus.”

Appreciated your article on barn swallows. Growing up on the farm we alway had swallows nesting in our barns. I recall a swallow nest immediately above the stanchions where we milked cows by hand. One day my mother felt something crawling in her hair while milking. We thought it was lice from the swallow nest directly overhead, but it could have been swallow bugs, something we never heard of.

Thanks for the informative articles which make *NEBRASKAland* such a pleasure to read.

Bruce Block
Creighton, Nebraska



Unusual Box Butte Catch

I caught the fish in the attached picture at Box Butte Reservoir on October 30, 2010. We had no idea what it was until contacting the Nebraska Game and Parks Commission and did not know that any of these fish were in Box Butte. We were told it is a European rudd. It weighed about three pounds and was 12 inches long. Thought that you might like to see it.

Dennis Gregory
Gering, Nebraska

Daryl Bauer, Fisheries Outreach Program Manager for the Nebraska Game and Parks Commission, responds: “European rudd have been present in the state for years. Box Butte seems to have our “best” population, but they have been found in a lot of

other waters. They are closely related to our native golden shiners.

There was a time when rudd were commonly sold as bait. Usually the bait shops marketed them as “rosy red shiners” or something similarly creative. Of course, it was an easy transfer from minnow bucket to many of our waters. Baitfish regulations were eventually tightened and the rudd market shut down, but rudds are present in some of our waters and may always be present.”



Thanks

I just wanted to send in this picture of my pronghorn and thank the Nebraska Game and Parks Commission for giving me this opportunity. I tried for four years to receive this permit and it was worth every day. It was my first pronghorn hunt, this buck may make Boone and Crockett, and the meat is excellent.

Thanks again for the hunt of a lifetime.
Larry Rahe
Lincoln, Nebraska

NEBRASKAland Visitor Letters

We want to thank all 36 readers (this month’s will be much easier to find) that sent e-mails and letters for last issue’s visitor, a twice-stabbed stink bug on page 41 (see page 13 for the winner, rules and this issue’s hint). Here are just a few of the many wonderful responses we received:

On page 41 you will find “the bug” on my, Angela McDermott, upper right arm! We had a great hunt! Thank you for the great pictures and story!
Angela McDermott
Grand Island, Nebraska

Found it! The visitor is a beetle of some sort on page 41 on Angela’s right shoulder.

I love your magazine! The first thing

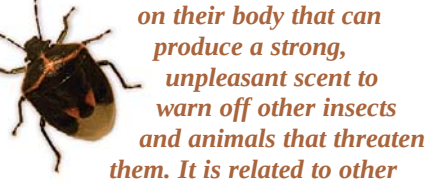
I do when we get our monthly copy is look for the visitor and then go back and read all your wonderful articles. Keep up the great work and the great stories!

Vicki Loomis
Burbank, South Dakota

Either Angela McDermott’s camo jacket comes with a neat camo mark, or there is a STINK BUG on her shoulder.

I found two different genus and species names, so we will leave it at Two Spotted Stink Bug.
Well hidden! Great fun, thanks!
Solveig Knott
Grand Island, Nebraska

The Twice-stabbed Stink Bug (Cosmepepla lintneriana) is a very small, colorful plant pest which can be found in a wide variety of habitats, from fields to gardens. Its common name comes from the two red spots on its lower back. This stink bug can be found from early spring through fall, feeding on the sap of a many different plants. Stink bugs have glands on their body that can produce a strong, unpleasant scent to warn off other insects and animals that threaten them. It is related to other stink bugs found in Nebraska, including the equally colorful Harlequin bug (Murgantia histrionica) and the larger Green Stink Bug (Acrosternum hilare).



Special thanks to Julie Van Meter, State Entomologist, Nebraska Department of Agriculture.

*Send your comments to:
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P.O. Box 30370
Lincoln, NE 68503
or e-mail doug.carroll@ngpc.ne.gov. Please include your postal address and telephone number. Letters may be condensed and edited for clarity. Photographs are welcome and will be returned.*

Story and photo submissions can be sent to the same address. Include a self-addressed stamped envelope for mailed submissions. The publisher assumes no responsibility for unsolicited material.

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A Winter Reading – Steve Edwards' *Breaking Into the Backcountry*

Kelsea Nore

Normally when someone keeps me up past my bedtime, I am slow to forgive. However, I gladly forfeited several hours of sleep in order to finish reading Steve Edwards' *Breaking Into the Backcountry*

(University of Nebraska Press). The book is, above all things, a homage to discovery. The author's memoir of seven months of near-solitude is an exploration of not only the magnificent, open land of southwestern Oregon, it is also

an examination of the innerself. Edwards sees both with tenderness and enthusiasm.

Working as a caretaker on a homestead near the Rouge River (a prize he won in a writing contest), Edwards has time to both write and think. And, as described in several of his beautifully written chapters, fish for steelhead trout. Lucky guy. The author certainly rhapsodizes on his experience (who wouldn't?), but never without humor and honesty. This very likable book is available through the University of Nebraska Press web site and local bookstores such as the Indigo Bridge Bookstore in Lincoln. You can also visit Edwards' web site at <http://stevedwardswriter.blogspot.com/>.

Was Last Winter Really That Cold?

Patrick Mainelli

Is it possible that every year you will hear at least one person insist that, "Last winter was the worst we've ever had"? Somewhere during all those deliriously warm days between March and October, most of us seem to intentionally forget how every winter in Nebraska is actually rather awful. Last winter did seem especially nasty, but was it really?

Statewide we experienced a slightly colder winter than usual; in general, four to six degrees below the recorded average. December, however, was particularly frigid and will go down as the eighth coldest on record in Lincoln.

Snowfall amounts were on par with the last century of records, but eastern counties did experience some significant blizzards. Omaha enjoyed 88 days of snow-covered ground, and by early January, 21 inches of the stuff had piled up. The panhandle town of Dalton was lucky enough to receive the heaviest snowload of the state – 81 inches.

December's weather was certainly severe by almost all measures but the following months were rather average, and despite some significant extremes many records refused to fall. Lincoln dropped to -15 F this year, but in January 1974 temperatures reached -33. Norfolk endured 55 inches of snow last year, but in 1983 they watched more than 86 inches fall down. Finally, Omaha had its share of low temperatures last winter but it really was nothing compared to Christmas 1983, when the town shivered through 203 hours below zero.

Upcoming Events

Here is a list of upcoming outdoor events across Nebraska. For more information about these and other events, click on the calendar at www.OutdoorNebraska.org.

December 1-31

• **Muzzleloader Deer Hunting – Statewide**
Shooting Hours: 30 minutes before sunrise to 30 minutes following sunset.
Contact: Kit Hams (402) 471-5442
kit.hams@nebraska.gov

December 3

• **Christmas at the Bowring – Bowring Ranch SHP, Merriman**
Reservations are required: meal tickets must be purchased. A park entry permit is required. 8 a.m. to 9 p.m.
Contact: Diane Burress 308-684-3428
diane.burress@nebraska.gov

December 4

• **16th Annual Historical Christmas Dinner – Fort Robinson State Park, Crawford**
Reservations are required for this event. A park entry permit is required. 6 to 9 p.m.
Contact: Michael Morava 308-665-2900
ngpc.fort.robinson@nebraska.gov

December 24 and 25

• **Christmas Eve and Christmas Day Holiday Buffets – Mahoney State Park, Ashland**
The Christmas Eve buffet is all day, the Christmas Day breakfast buffet runs from 7:30 to 10 a.m., and the Christmas Day buffet runs 11 a.m. to 6 p.m. Adults are \$13.95 and Children (10 and under) are \$6.95 each. A park entry permit is required.
Contact: Brian Schmidt 402-944-2523
ngpc.mahoney@nebraska.gov

December 31

• **New Year's Eve Buffet – Mahoney State Park, Ashland**
The New Year's Eve buffet will be served from 5 to 8 p.m. Adults are \$13.95 and Children (10 and under) are \$6.95 each. A park entry permit is required.
Contact: Brian Schmidt 402-944-2523
ngpc.mahoney@nebraska.gov



Outdoor Message Plates

Jason Obermiller of Loup City is always hunting something, be it deer, turkey, sheds, antelope, elk or whatever else gives him a reason to get outside, and he actually finds time to be a high school science teacher when he's not afield. Seeing his passion, his wife came up for the idea for his license plate.

If you have a unique message plate you would like to share, or know someone who does, e-mail a photo (.jpg format only, please) of it to Eric.Fowler@Nebraska.gov, along with your name and hometown, how long you've been active in your hobby and how long you've had your message plate.



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Farm Bill Wildlife Biologists

These biologists are available through a partnership with the Nebraska Game & Parks Commission and the Natural Resources Conservation Service and offer landowners one-stop-shopping for technical assistance on the available conservation programs and incentives in the state. Landowners may contact them for site visits and program enrollment options.

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For further information visit www.NebraskaPF.com

A Look Back - Winter 1953

Jeff Kurrus

I read up to page 5 of the Winter 1953 edition of *Outdoor Nebraska* before deciding that this particular issue would be the focus of this month's "A Look Back." On that page there is an illustration of two native Americans eagle hunting, with both hunters in pits and one reaching up through the brush covering his hole to grab and kill the eagle. For me, this illustration and its accompanying article entitled "Indian Hunting" was enough to justify spending a few more minutes perusing through this issue.

While flipping through the pages, I discovered that the Indian article wasn't alone in being part of great content. I read pieces on gun maintenance, an announcement on the opening of Enders Reservoir, and a reprinted article from *Outdoor Life* "What's Good Fishing Weather?"

In addition, in "Find the Violations," readers were instructed to read a fictitious letter written from a Nebraska resident to his hunting partner in Michigan, and then note the game violations chronicled in the letter. After the letter, *Outdoor Nebraska's* editors noted the violations and readers were encouraged to compare their list with the editors, providing an entertaining learning tool for hunters.

To read "Indian Hunting" go to NebraskalandMagazine.com and click on "A Look Back."



Deer Antler Options

Patrick Mainelli

Last hunting season, *NEBRASKAland* asked readers to share ideas for ways to creatively use antlers. The consensus: the only limit to an antler's use is your own imagination. Possibilities range from the everyday to the elegant; drawer handles made from polished burrs, cross-sections turned into bolo tie clips, and enormous Gothic antler chandeliers. While most hunters could spend a lifetime in the woods and never accumulate enough calcium to reproduce some of these more ambitious achievements; with the right combination of imagination and power tools you'd be surprised what you can create.

Shed antlers, or those harvested late in the season, are best suited for creative projects. Young antlers, particularly those still in velvet, are especially soft and porous and should be boiled for up to thirty minutes to promote hardening. Active blood vessels in velvet antlers will likely

produce a red stain that can be neutralized by soaking the antler in bleach and water. For a glossy finish, antlers can be sealed with a polyurethane glaze or polished with linseed oil.

An easy starter project for antler artists is a wall-mounted, multipurpose hanger. Simply drill antlers to a piece of wood and hang it on the wall. If you find an antler that balances solidly on a table you can make a unique cribbage board. Sand down any broad surface of the antler and drill the appropriate number of peg-sized holes. Using a spade drill bit, bore a small cavity in the base of the antler and plug it with a cork for peg storage. If you're feeling ambitious, try making some antler pens like the beautiful pair seen here made by reader Lynn Cordell. For a "how-to" on writing with antlers and for more photos and ideas visit the *NEBRASKAland* blog site at: afieldandafloat.com.

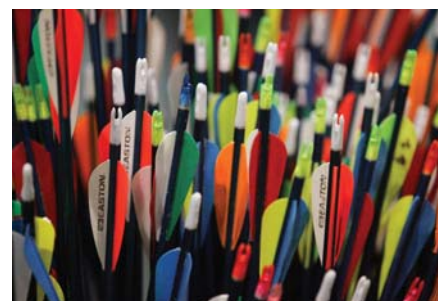


PHOTO BY MARK DIETZ

PHOTO BY JEFF KURRUS

See You Out There ... But Where?



Do you know where this Nebraska photograph was taken? See answer at the bottom of page 13.

Bluebirds of Nebraska

Elizabeth Mack

Although Nebraska is on the western edge of the eastern bluebird's (*Sialia sialis*) range, sightings are becoming more common where nesting boxes have been introduced. Like its larger cousin, the robin, the male eastern bluebird has an orange breast and white belly, but is known for its strikingly sky blue head, back and tail. The female's coloring is less remarkable, with fainter grey-blue tail and wings. Bluebirds are not city dwellers, preferring rural areas of open fields with short-grass prairie or mowed areas where they can easily feed on insects on the ground.

Populations were on the decline due to nesting problems, losing much of their habitat to housing and industrial development. Also, Bluebirds like to nest in pre-existing tree cavities or rotting fence posts, which have been replaced with metal posts. But with the introduction of new nesting locations, the species is making a comeback. Over 200 monitored nest boxes can

now be found at Nine-Mile Prairie as well as several Nebraska State Parks including Ponca, Platte River, Mahoney, Schramm, Niobrara, and Ashfall State Parks.

Bluebird nesting boxes are often targeted by house sparrows, so placing a Bluebird nesting box outside of urban areas by sheds or barns will bring the most success. A bluebird box should never have a perch, as perches attract sparrows and wrens. Avoid mounting Bluebird boxes on trees or fence posts to avoid predators, although they need a fence line or tree branches fairly close to their nests to perch on while searching for food. The entrance hole should be about five feet off the ground.

If bluebirds are not common in your area, it may take a season or two for Bluebirds to find your box, but once they find a good nesting area, they generally return year after year.



PHOTO BY JON FARRAR



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Is a Milkweed a Weed?

Kimberly Stuhr

Not long ago, the common milkweed (*Asclepias syriaca*) – a tough survivor of the vanishing tallgrass prairie – was the bane of many a farmer’s existence. It’s not welcome in crop fields, so by definition it is a weed in those areas. However, although hardly any of these deep-rooted “weeds” grow in corn and soybean fields today because of the increased use of herbicides, the common milkweed still carries a stigma from its days as a field pest.

Today some of this native perennial’s tufted seeds are landing on friendlier territory. Butterfly gardeners and other conservation-minded folks sing the plant’s milky-sapped praises. The U.S. Department of Agriculture offers this enticing quote about the common milkweed: “This is a wonderful horticultural plant for landscaping to attract butterflies (particularly monarchs), whose numbers are declining and migratory routes changing due to lack of appropriate habitat.”

The history of this sometimes invasive species, combined with the fact that “weed” is actually part of its name, makes it difficult for some to value the common milkweed, especially those who have fought them on muggy summer mornings while walking beans. The good news is that in addition to the common milkweed, there are at least 10 other milkweed species native to Nebraska, at least one of which is suitable for every habitat in our state.

While some of these species can be purchased commercially, others must be started from seed collected from wild plants. Most are well mannered and make fragrant, colorful additions to garden or home landscaping plantings, as well as being valuable additions to prairie restoration projects. All of these provide food for butterflies as well as other important, pollinating insects.

So, is the common milkweed a weed? It depends on which way the wind blows, but perhaps milkflower would be a more appropriate name.



Common milkweed

PHOTO BY JON FARRAR

Hunting Spot Names

Jeff Kurrus

While many hunting and fishing spots have common names, including “The Honeyhole,” “The Creek,” and “the Draw,” many more named by countless others have much more unique titles. A quick roundtable discussion with

NEBRASKALAND Magazine

staff led to many others from our personal time afield: Two-shot Hill, The Boy Scout Lake, the Highway Stand, The Widowmaker, One-fish Lake, the Kater Woods, Werewolf Ruins, Wanza’s and Joshua Tree.

Now it’s your turn. Do you have a “Honeyhole?” We’d like to know. We’d also like to know if you have any unique place names that only you and your hunting and fishing partners would know. Email me at jeff.kurrus@nebraska.gov with your location names and I’ll put together a list so you can see how similar, and how very different, your hunting locale names are from others.



The “Ground Blind.”

PHOTO BY JEFF KURRUS

Shitepokes

Jon Farrar

In my Loup River duck hunting story that ran in the November 2010 issue of NEBRASKALAND, I mentioned some old-time hunters shot “shitepokes” on sight because “they eat fish.”

Not long after that issue was mailed, we received a note from Shirley Sawyer of McCook, who wrote that the article was the first time she knew of the word being used outside of her family. “My brother, ‘Sonny’ Leo Simanto from North Platte, gave me that nickname when we were kids,” she wrote. Well, since shitepokes are one of my favorite topics, Shirley’s note was enough to spawn a few words about them.

The word “shitepoke” used to be commonly used to describe long-legged wading birds, particularly **green herons** and **bitterns**, but other herons and egrets as well. To unravel the origin of the word and avoid making the censors blush, “shite” in German means the same as the “s-word” for feces in English. Because this magazine is published in English and it is slightly less alarming, I will use the German word in what follows. The second part of the name, ‘poke,’ is from French and translates as a pouch, bag, or sag; hence the old admonition against “buying a pig in a poke,” meaning to buy something unseen. So, put the meaning of the two words together and one arrives at “shite-bag.” This is almost without doubt in reference to the habit of wading birds, in fact many bird species, emptying their bowels before taking flight; perhaps in fright, perhaps to lighten their load.

Interestingly enough, many water-feeding birds have a similar habit – when Mother Nature calls, they scurry to dry land to void their bowels. This may seem to be no more than a matter of not wanting to foul one’s dinner table, but it likely has greater implications – some internal parasites cycle through more than one host; an example being one that completes its lifecycle only after passing through a snail and the gut of a shorebird such as an avocet. Some animal behaviorists have speculated one reason shorebirds leave the water to void their bowels is to break the life cycle of such parasites.



American bittern

PHOTO BY JON FARRAR

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Officer's Notebook

A Case of Mistaken Identity

It was the opening day of the firearm deer season and so far it had been a typical opener with a handful of calls regarding people road hunting, trespassing, etc. Don't get me wrong – I still say that for the number of hunters we have out during the deer season, the number of complaints is relatively small, but we have always have a few folks who want to bend the rules.

Anyway, I returned home well after sundown on that opening Saturday, said "hi" to the family and sat down to a cold supper. Of course the phone immediately started ringing, as it always does when I sit down during the deer season. This particular caller was a guy I'd met several times over the years who owned a nice piece of ground in the western part of my patrol area. He'd been sitting in his treestand that afternoon when a vehicle drove past, turned around and headed back the other direction. Thinking that some road hunters had probably spotted a deer to shoot at, he got down and headed towards his pickup in case they did shoot onto his property so he would be able to "have a few friendly words" with them before they left.

Sure enough, about the time he got to his truck, he heard shots and saw three people standing on the road, shooting onto his land. Before he could get to their location, however, they noticed the approaching vehicle, got "happy feet" and quickly

took off in their vehicle like they were in the space shuttle. Although he was unable to get a license plate number to go with the vehicle's description, the landowner surprisingly noticed a somewhat damaged cell phone laying on the road where they had been shooting.

I met him the next day and although the screen didn't work, the rest of the phone did. After some discussion of what to do next, we decided that since this had happened in an area folks refer to as "the Bohemian Alps" and a lot of the residents still talked with heavy accents, the shooters might be apt to believe an "old country" farmer had found their cell phone. So with that, I hit the green "send" button, put on my best Bohemian/Czech accent and waited for someone to answer. When they did, I told them I had found this phone laying on a gravel road and wanted to return it to its owner. They said they knew the owner and would have them meet me a few hours later.

Laughing, I hung up the phone and told the landowner I thought they had bought my story. When we did meet a few hours later, I think the phone's owner was very surprised to see an old Bohemian Alps farmer wearing green pants and a gray shirt with a badge on it!

– Mike Luben, Conservation Officer, Colon



A Belated Pumpkin Cheesecake

Kelsea Nore

In the October edition of *NEBRASKAland* I promised you a future recipe for pumpkin pie cheesecake and planned to use it for a blog on afieldandafloat.com. However, Carroll and Kurrus decided that the magazine itself was a more fitting place for my wonderfully easy pumpkin pie cheesecake, which you will find below.

Crust: (or feel free to buy a pre-made one)
1 cup crushed graham crackers
½ stick butter, room temperature
¼ teaspoon ground ginger
¼ cup crushed pecans (if desired)

Mix ingredients well and press into bottom of pie pan. Bake for 7-8 minutes at 400 degrees. Remove from oven and

set aside.

Filling:

1 cup of pumpkin puree
½ stick butter, room temperature
Two 8 oz. packages of cream cheese, softened
¼ teaspoon salt
1 teaspoon cinnamon
½ teaspoon nutmeg
½ teaspoon cloves
½ cup powdered sugar

Combine the pumpkin, butter, and cream cheese in a mixer, beat until smooth. At a reduced speed, add your spices (salt, cinnamon, nutmeg, and cloves). Add the powdered sugar slowly and beat until the ingredients are thoroughly mixed. Pour the mixture into the prepared crust. Cover and let



the cheesecake cool in the refrigerator for at least six hours.

To read Nore's puree recipe from the October 2010 *NEBRASKAland*, go online to NebraskalandMagazine.com.

PHOTO BY JEFF KURRUS



Safe Ice

Patrick Mainelli

Warm July mornings in the boat are nice, but many fishermen will tell you things don't really get fun until the lakes freeze over. Here's a little ice-wisdom and a few safety tips for when that day comes.

The first ice of winter is generally the strongest and most reliable of the season. That said, there is no time when safety on the ice is a "sure thing." Daryl Bauer, Fisheries Outreach Program Manager for the Nebraska Game and Parks Commission, says at least three inches of solid ice is needed before you venture onto a body of water.

Interestingly, that cold, hard surface we ice fish on is actually floating on still liquid water. Dropping a lure through eight inches of frozen H₂O to open water beneath is made possible by a circumstance very rarely found in nature: Water is less dense in its solid form than its liquid form, allowing the frozen layer to float above the unfrozen. The first crystals of ice to form on any body of water are tiny floating discs only 2- to 3-mm in diameter. The water cools and these crystal discs grow in size, eventually taking on a hexagonal shape and growing together. When a continuous sheet of ice has formed across the surface of a lake, the water begins to freeze downwards. As the ice thickens its appearance goes from transparent, to gray, to white and finally deep blue.

To be sure you're on safe ice, carry

an auger and drill a hole every few yards as you move across the water, measuring the thickness each time. Bauer also recommends bringing along an ice chisel or "spud bar" to get a more tactile sense of the ice: "You can use that tool to strike the ice as you walk along, and by doing that you will be able to 'feel' and listen as the ice chisel strikes." Large objects in the ice, such as docks or tree limbs, will absorb and hold heat from the sun, potentially thinning surrounding ice, so use caution. Slightly warmer temperatures can also thin ice in a matter of days; so be sure and test for thickness every time you head out.

Once you've decided it's safe to fish, a few simple precautions go a long way in the case of an unexpected fall-through: Ice-fishing with a friend is always a good idea, and each person should carry a pair of easily accessible ice-picks, attached to each other by a rope, to help climb out of the water in the event of an accident. Keep an extra pair of dry clothes on hand in case you get wet and change into them quickly to avoid hypothermia. Bauer recommends a propane heater or fire to help dry and warm the skin.

Whether you're itching to start pulling panfish up through freshly drilled holes, or just want a closer look at one of nature's more unique phenomena, bundle up this winter and get out there! Visit www.iceteam.com for comprehensive ice fishing forums and resources, or visit Bauer at afieldandafloat.com for all his fishing insights.

Turpin Time

Dick Turpin

One of the best things I ever bought was one of those shrink wrappers ... really saves that meat and adds life to that meat in your freezer. But one thing you want to be careful of is when you go to thaw this, be sure to poke some little holes in it. You can start to see the air relieve and what that does there is when that meat starts to thaw it'll let that pressure go out the bag and doesn't draw that moisture out of the meat so it saves those good flavors ... keeps them in there. So when you go to thaw this out, poke some holes in that sack and give that meat a little relief. ■



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NEBRASKAland Visitor Winner and Hint

Last issue's winner of the *NEBRASKAland* Visitor drawing was Pat Schemmer of Valentine, Nebraska, who found the **twice-stabbed stink bug** on page 41.

Readers are encouraged to contact *NEBRASKAland* within 10 days after this issue's publication with the correct page number and name of this issue's "Visitor" – a bug found in Nebraska that just happened to find its way onto one of the pages of our publication.

We will then gather the correct entries and draw one to win a **new** *NEBRASKAland Magazine* mug. To enter each month, write: **NEBRASKAland Visitor 2200 North 33rd Street, Lincoln, NE 68503.**

Or e-mail:

Tim.Reigert@Nebraska.gov with "Visitor" in the subject line of the message.

HINT: This issue's visitor is not on page 3, 5, 13 or 33.

Runners run. That's what they do. Whether during a patch of Louisiana humidity that would make most Nebraskans melt, or during a Nebraska winter that would make most Cajuns shiver.

When longtime runner Dustin Favinger purchased his sneakers-on-the-road pal Beru (Bay for short), a basset/beagle mix, he found out his companion could not only run, she could hunt. "That was the first time I ever heard the dog bark," Favinger said, describing one of his initial neighborhood runs through Cozad with his new partner, "and we had owned her for six months. I had no idea." Bay had left Favinger's side on a dead run toward a rabbit, and incandescents flickered in her owner's head.

"I started taking her out soon after that day, just letting her run where I thought rabbits might be." Favinger admitted, however, that it took her

awhile to get what she was supposed to do. "She was a little gun-shy at the beginning, but after a half dozen trips with a .22, I was able to get her past that. Then, all of a sudden, it just clicked."

Instinct takes over for many hunting dogs – while formal training is often recommended, there are many fine hunting dogs that have never been professionally trained. When he first started taking her hunting, Favinger tried not to get his hopes up too much about the possibility of having a good rabbit dog just because Bay's dad was half beagle/half basset and her mom was entirely beagle. While registered breeds are recommended by most, Favinger's \$100 dog slowly proved to be very worthy in the field.

Last year, during his first full season hunting behind Bay, Favinger shot 100 rabbits on public and private lands near Cozad. When fishing with his wife during the summer months on the Interstate 80 lake system before the fall hunting season, Favinger would

also take Bay along. "As soon as we got out of the boat onto land from the leash," he said, "she'd start howling at rabbits. I quickly learned those WMAs were an untapped resource."

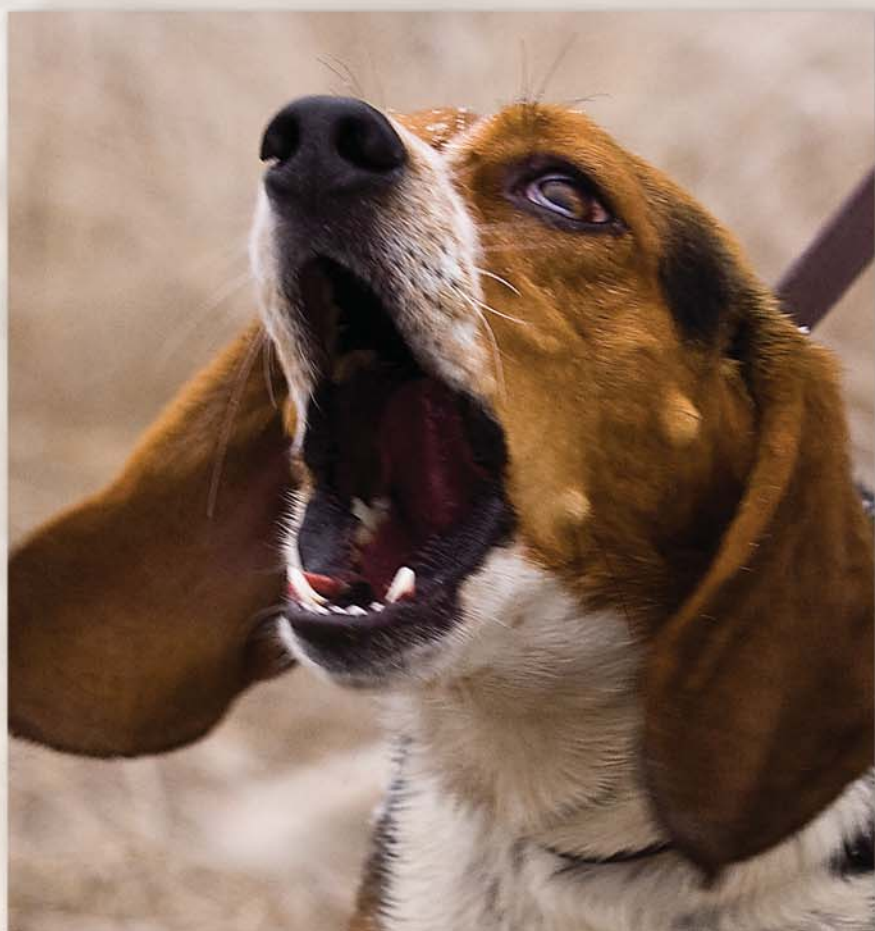
In a 10-mile stretch stretch both east and west of Cozad, there are nine wildlife management areas (WMAs) that provide more than 1,200 acres of public land to rabbit hunt. Many of these spots have a great population of bunnies.

Unlike many rabbit hunters, who hunt with multiple dogs and a multitude of other hunters, Favinger and Bay often hunt alone or with just one other person. Working heavily covered areas, including overgrown fencerows, brush piles, weed patches and plum thickets, Bay relies almost exclusively on her nose to find prey (see "A Dog's Nose" on page 19). "If that's not working," he said, "I'll look for spots where rabbits have eaten the bark off of little saplings during the fall and winter. Finding rabbits is as simple as finding these saplings."

When jumped, rabbits usually flee using a zig-zagging running pattern. They can reach speeds up to 18 miles an hour using back legs twice the length of their front legs. Because they usually make their way back to where they started, most rabbit hunters, including Favinger, wait for the dog to run the bunny back in their direction. Favinger is able to keep track of Bay because she barks constantly once she scents a rabbit. This system usually works well unless there happens to be so many rabbits that the dog repeatedly jumps a new one before running back the first, which can often happen on many of Nebraska's WMAs. It's a good problem to have.

With so many rabbits, Favinger positions himself in a location where the rabbit can get a considerable lead on his dog so he can take safe shots. Aside from this point, Favinger just turns her loose and lets her hunt. "It's taken longer for me to learn how to hunt her than for her to learn to hunt," he said.

In the end, Favinger said, instinct has taken over on most of Bay's hunts. Because runners run, whether after rabbits in the neighborhood or in a WMA plum thicket. That's just what they do. ■



BAY, FAVINGER'S BASSET/BEAGLE MIX, barks after smelling a rabbit at a WMA near Cozad.

Running Bunnies

Text and photos
by Jeffrey Kurrus



"Everyone wants permission to hunt pheasants, ducks and deer," Favinger said, "but no one wants to chase rabbits. So when I ask a landowner about rabbits, they usually don't even think about telling me no. 'We got tons of rabbits,' they tell me. And they're usually right."

Regulations

Nebraska's rabbit season lasts from September 1 through February 28. The daily bag limit for this liberal six-month period is seven and the possession limit is 28. Rabbits are usually taken, as in Favinger's case, with a .22-caliber rifle or a small bore shotgun such as a .410 or 20-gauge loaded with 6- or 7½-size shot.



BAY SEARCHES FOR rabbits through underbrush on public land in central Nebraska. As she runs, Favinger positions himself near the rabbit's original location in an attempt to get a shot.



Cooking Bunnies

Shooting a bunch of rabbits requires the hunter to eat a lot of rabbits. Here are a couple of Favinger's favorite recipes.

1) After removing both the hind and front legs, separate the meat from the bone and cut into stew meat-sized pieces. In a sauce pot add meat, one can of chunked pineapple with juice, pepper, one cup of water, and little bit of Italian dressing. Let simmer until the meat is cooked thoroughly (the meat ends up white like chicken). In another sauce pan, prepare white rice, then add the rice to the rabbit/pineapple mixture along with one can of sweet tender peas and one can of sweet corn or hominy. Add salt and a little more pepper to taste, and serve.

2) Separate the meat into chunks. Place the pieces in a sauce pan and cover with one cup of teriyaki sauce, one can of orange juice concentrate, one cup of water and a pinch of ginger. Simmer until meat is thoroughly cooked. Remove meat, wrap in maple or pepper bacon, then fry until bacon is cooked thoroughly. Serve with your favorite sides.



Food for the Masses

"The cottontail is the most important single game animal in the United States," wrote Wilford L. Miller in *Wildlife of the Prairie*, 1975. Researchers have found that one female cottontail (*Sylvilagus floridanus*) can give birth to at least 35 offspring per year, and can theoretically produce a family of 350,000 rabbits in five years. During the breeding season, which can last from early spring to early fall in Nebraska, a female can have seven litters. A cottontail's gestational period lasts 26 to 28 days, and breeding can occur immediately following birth.

However, life doesn't necessarily last long for rabbits. Studies show that 75 to 85 percent will die within their first year. They are killed by rain, starvation, disease and predators, including foxes, coyotes and badgers.

Cottontails are born in shallow ground nests made from plants and fur. They are born hairless, with closed eyes and ears, and are nursed for two to three weeks by the female, during which time they also begin to hop from the nest. They are self-sufficient after one month, and multiple studies have shown that between 35 and 54 percent of cottontail females breed their first year.

The eastern cottontail is the world's most common cottontail and can be found from the east coast to the Great Plains and from Canada to South America. Fossilized rabbit remains date back 50 million years in both Asia and North America. In the United

States, cottontails were an important food and clothing source for Indians, but populations flourished during post-settlement, when forests were cleared and large predators, including wolves and cougars, were eliminated.

Ranging from reddish brown to gray throughout the entire year, rabbits are very adaptive, and they seek out heavy cover near open spaces – fencerows, plum thickets, brush piles and tangled thickets. They feed on a variety of foods at night, including bark, twigs, flower buds and garden fare. They are also known for re-digesting their own feces, a behavior known as coprophagy.

In Nebraska, while there was an absence of other rabbit hunters while I was with Favinger, there are a few people still hunting them. According to Commission upland game program manager Jeff Lusk, last year approximately 8,000 rabbit hunters harvested 56,000 rabbits, a harvest larger than both squirrels and prairie grouse.

However, this is pheasant country, and it is much more common to see orange vests and pointers than truckbeds full of beagle boxes, like many pick-up trucks down South. Considering this point, the 2006 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation noted that among small game hunters, rabbits were pursued more nationwide than all other small game, including ducks, geese, pheasants, squirrels and dove, with nearly two million people hunting on 21 million days and killing between 30 and 50 million rabbits.

Despite their abundance, rabbit populations fluctuate on local levels. Re-forestation, fencerow farming and herbicide use contribute to some local population declines. However, because of their prolific reproduction, numbers are stable throughout Nebraska and North America, a fact that will remain as long as rabbits have the necessary habitat to support them.



JOHN JAMES AUDUBON'S "GREY RABBIT," COURTESY OF ART.COM.

A Dog's Nose

To gain proper respect for a dog's olfactory ability, dog-book author Stanley Coren writes: "Inside the nose of humans and dogs are bony scroll-shaped plates, called turbinates, over which air passes. A microscopic view of this organ reveals a thick, spongy membrane that contains most of the scent-detecting cells, as well as the nerves that transport information to the brain." In humans, this membrane is about one square inch and has approximately 5 million scent receptors, while the membranes on a dog's nose can be as large as 60 square inches, and a beagle can have 225 million receptors.



FAVINGER SPENDS MOST of his rabbit hunts on public land, like Darr Strip WMA east of Cozad. When hunting these spots as well as other private land, Favinger wears hunter's orange in case other hunters are using the area. Most of the time, however, he has these spots entirely to himself.

For more photographs from Favinger's rabbit hunt last winter near Cozad and tips on how to skin a rabbit, go to NebraskalandMagazine.com.

Snow and Ice

By Pasquale
Mingarelli



Opposite: One experienced ice skater shows her friend the ropes at E.T. Mahoney State Park's Activity Center.
Above: Drew Correll (left) and Alice McQueney sled down one of the toboggan runs at the park.

*I*t happens each winter throughout the state – when the snow begins to fall, kids of all ages flock to the perfect sledding hill in town. Usually it's an unofficial place where kids gather, such as Tornado Hill in Grand Island, but it may be an officially designated sledding hill, such as Gering's Northfield Park or Deadman's Canyon in Valentine.

Many other city parks across the state are known for their wintertime slopes: Kearney has Cotton Mill, Chadron has Wilson, Lincoln has Pioneers, and Omaha has Memorial Park. Many state parks also offer good winter fun, and the toboggan runs at E.T. Mahoney State Park near Ashland offer some of the best sledding facilities found anywhere in the state.

Those looking to enjoy a winter day with skates underneath them instead of sleds or tobaggans can find many public facilities to enjoy. Holmes Lake in Lincoln will have a designated ice-skating area as soon as sufficient ice develops, while the city of Norfolk floods a basketball court at Berry Hill Park. Near Valentine, kids often skate at the nearby Valentine National Wildlife Refuge and at Mill's Pond. In Chadron, the ice rink of choice is at Wilson Park, and in Omaha, thousands of people visit the ConAgra Foods ice rink near the Old Market. And of course, there is also ice skating at E.T. Mahoney SP, setting the family up for a perfect day of sledding and skating just minutes from the metro area. ■

PHOTOS BY JEFF KURRUS

How Plants Survive the Winter

Text and photos by Chris Helzer

Many birds and animals – even some insects – have the option of migrating or seeking shelter when winter comes to Nebraska. Plants, however, don't have that option, and must have other methods to withstand winter's frigid cold temperatures. Here are a few of the ways that plants survive Nebraska winters.

During frigid Nebraska winters, humans and other animals can either find shelter or migrate to warmer places, but plants are pretty much stuck where they are. If they are well prepared, most plants can simply retreat within themselves and survive until spring. However, doing so is more complicated and difficult than it might seem at first.

There are two significant challenges to plants during the winter: low temperatures and a lack of available moisture. Temperature is important primarily because the formation of ice crystals inside living plant cells destroys those cells.

Plants have to either protect or abandon their living tissues during cold weather. Precipitation levels are typically low during winter months anyway, but very cold temperatures can also freeze whatever water is in the soil, making it unavailable. The water inside the stems of plants can freeze too, shutting down the plants' vital circulation systems.

Herbaceous Plants

Herbaceous plants are non-woody plants with stems and leaves that die back to ground level at the end of the growing season. They may be annuals, biennials or perennials. Both above and below ground parts of annual plants die at the end of their first and only growing season. The survival strategy for annuals is to make as many seeds as possible, disperse them so that at least some land in hospitable places, and ensure the seeds are built to withstand cold temperatures. Biennials do not flower and produce seeds until their second growing season, after which the plants die.

Perennials – herbaceous plants living at least two years – deal with winter's challenges by producing seeds and allowing their above-ground parts to dieback: the living tissue of the plant essentially retreating underground as roots or bulbs that send up new stems and leaves the following spring. Herbaceous perennials in this dormant state are well



Illinois bundleflower seeds sit loosely in their pods. Hard seed coats help protect the seeds from winter temperatures.



A leafless oak tree stands alone on a rural farm. One of the ways that deciduous trees survive Nebraska winters is by dropping their leaves each fall to minimize water loss and damage from freezing temperatures.

adapted to the lack of available moisture because they don't have to support leaves and stems. While it is important for these plants to flower and produce seeds and/or rhizomes, the first priority is to build and maintain root mass and buds to ensure that they can survive the next winter and have the energy reserves to start growing again the following year. In difficult years, such as during drought or when intensively grazed, perennial plants will often enter dormancy to avoid depleting those reserves.

Woody Plants

Trees and shrubs deal with winter a little differently than herbaceous plants because woody plants retain and protect their above-ground structures rather than retreating beneath the ground. Most Nebraska trees and shrubs are deciduous and drop their leaves in the fall. Leaves are a major source of water loss and are also difficult to protect from cold



Snow caps the now dead flowers of round-headed bush clover while its living tissue safely survives winter beneath the ground.



While aesthetically pleasing, hoarfrost, snow and ice can create deadly conditions for plants that are inadequately prepared for winter. Below: When autumn arrives, chlorophyll in green plant leaves breaks down, allowing other colors in the leaf to be revealed.



temperatures. Like many other processes in plants, leaf drop is stimulated by changes in photoperiod (day length). As fall progresses and nights get longer, the green chlorophyll in the leaves begins to break down, revealing the other colors (yellows, reds and browns) that are always present in leaves but are typically masked by large amounts of chlorophyll. Abscission layers between the leaves and twigs are formed to create a line of separation between the two structures. Scar tissue develops within that space to prevent water loss, and the leaf drops as a result of wind and gravity.

Coniferous trees and shrubs, such as junipers and pines, shed some leaves (needles) each year, but also retain many of them through the winter. Conifers need special adaptations to help protect those remaining leaves from cold and to reduce water loss. These needles have a thick, waxy coating called cutin that greatly reduces water loss. They can also close their pores (stomata) very tightly to prevent air and water from entering or leaving the leaf. A process called acclimation, discussed below, also helps protect the needles from the cold.

Keeping their needles can be an advantage for conifers because they keep photosynthesizing late into the fall and even during warm periods in the winter. However, those needles are also a liability because of the water loss and maintenance costs associated with keeping them. In addition, needles can make conifers more susceptible than deciduous trees to damage from heavy snows and strong winds.

Whether or not they drop their leaves, all trees go through a process of



Conifers trees, such as this eastern red cedar, rely on a thick waxy coating on their leaves to prevent winter desiccation.

acclimation, which is somewhat similar to hibernation in animals. The “killing temperature” of trees is the temperature at which ice crystals form inside cells, killing them. Acclimation is a series of chemical and physical changes at the

cellular level that helps prevent cells from freezing. One result of the chemical changes is that the freezing point of cells is reduced slightly so that water outside cells freezes before the cells themselves do. When water freezes, a small amount of heat energy is produced. In this case, that heat energy actually helps nearby cells remain unfrozen, and the temperature of twigs can actually rise slightly as this happens.

Another important result of acclimation is that cell walls become more permeable, making it easier for water to move in and out of the cell. As ice crystals form in the pore spaces between cells, water from inside the cells is attracted to those crystals and can migrate out of the cells. As a result, cells become even less susceptible to freezing until the freezing temperature is reached. Each species of tree has its own killing temperature, and that temperature plays a large role in determining the geographic range within which that tree species can survive.

Before it can transport water, a conifer first has to obtain water whenever possible. Snow cover that thaws or prevents the ground from freezing can make this much easier. However, when the soil does freeze, the tree can’t get water from the soil and has to rely on its own internal reserves.

Transportation of the water occurs mainly through tubes of cells in the xylem layer of the tree. Conifers have special ways of preventing the cells in the xylem from bursting in freezing weather, so that whenever outside temperatures warm enough to allow it, water can be transported through those tubes. Deciduous trees, in contrast, lose their ability to transport water through the xylem after those cells freeze, and have to grow new cells the next spring in order to begin transporting again.

Spring Growth

Regardless of their strategies for surviving the winter, spring brings opportunities for plants to restart their growth. Seeds that beat the odds and end up in favorable locations germinate and establish new plants. Perennial plants grow new shoots and leaves from their buds. The buds of herbaceous plants are all below the ground, and new spring growth emerges through the dead stems from the previous year. In contrast, the buds of woody plants are above-ground, and new growth starts up right where last year’s growth stopped.

As soon as they begin that spring growth, plants immediately start getting ready for the next winter. Whether they try to maximize seed production, grow next year’s buds, or just build root reserves, preparation is the key to survival. Because, as we all know, it’s going to be a long winter. ■

Chris Helzer has been a contributor to NEBRASKALAND since 1995 and is author of the book The Ecology and Management of Prairies, published by the University of Iowa Press.

Chris is Program Director of The Nature Conservancy’s Eastern Nebraska Project Office in Aurora managing about 5,000 acres of Conservancy land. He hibernates for much of the winter, but emerges each spring – hungry and cranky – to resume life above ground.



The Smallest Nuthatch

By Michael Forsberg

The diminutive pygmy nuthatch, one of four nuthatch species found in North America, may be one of our best indicators of a healthy pine forest.

A few years ago, I was on a hike in Gilbert Baker Wildlife Management Area in Nebraska's Pine Ridge with Wayne Mollhoff, friend and tireless coordinator of the Nebraska Breeding Bird Atlas Project – a multi-year effort designed to collect and update information on all wild bird species breeding in Nebraska.



Above right: Short but powerful legs spring a pygmy nuthatch from its cavity nest to an adjoining branch in a ponderosa pine tree. Above: At only four inches long and weighing less than half an ounce, the pygmy nuthatch is the smallest of the four nuthatch species found in North America.

Mollhoff was in search of nomadic flocks of pinyon jays – dusty blue-colored corvids of pine woodlands whose range leaks into the western Panhandle of Nebraska. As we walked up an unmarked trail under the forest canopy, however, his attention was diverted. Mollhoff paused and pointed to a cluster of still standing but mostly dead ponderosa pines, likely victims of a lightning strike some years past.

"You ever seen a pygmy nuthatch?" he asked.

"A what?" I said.

"In this group of trees is a nesting colony of pygmy nuthatches. If you sit here quietly you'll see them."

In Nebraska, we have resident white-breasted nuthatches and red-breasted nuthatches from the boreal forests of Canada almost always show up at our feeders in the winter, but I had never heard of a pygmy nuthatch. Intrigued, I settled in.

Over the next hour I watched these tiny, stout birds flit among the canopy, scramble up and down tree trunks searching for insects, hop in and out of half dollar-sized holes with bits of bark and moss to line their nest cavities, and even band together to scold and eventually mob a squirrel and run it out of their territory.

Nuthatches are forest songbirds, with blue-gray to slate colored backs and whitish underparts. They derive their name from their habit of wedging seeds or insects in a crack and hacking it open with their bills. Their compact bodies are characterized by large heads, long pointed bills, compressed wings, square tails and short, powerful legs with long claws. Unlike woodpeckers, which use their stiff tails as braces to climb up trees, nuthatches use only their feet and can climb headfirst up or down a tree trunk with ease.

The pygmy nuthatch (*Sitta pygmaea*) is one of roughly two dozen nuthatch species worldwide, and one of four species found in North America. They live in healthy, long-needled pine forests. Their range stretches across the mountains of the western U.S. from British Columbia to southwest Mexico.



Clusters of standing dead trees (called "snags") in mature and old growth ponderosa pine forests, such as this one in Gilbert-Baker Wildlife Management Area in Sioux County, provide key habitat for the pygmy nuthatch.

It is a common species in the Colorado Rockies, but in Nebraska the pygmy nuthatch is at the eastern limit of its range, with small breeding populations found only in the Pine Ridge and Wildcat Hills of the Panhandle. Unlike many other forest songbirds, the pygmy nuthatch is considered sedentary and does not migrate, remaining in its nesting and foraging territories year-round.

Like all nuthatches, the pygmy is a cavity nester. Its habitat requirements are old growth or mature ponderosa pine forests with open canopies, relatively undisturbed by logging or other development, with a good collection of "snags" (standing dead trees or live trees with dead sections) critical for their survival. In these snags they are able to excavate their own cavities, which they depend on for both nesting and roosting.

Pygmy nuthatches are highly social and live within extended family groups. Monogamous, they mate for life. During the nesting season, the adult pair can take 3-6 weeks to excavate a cavity together and collect soft material such as moss and feathers to make a simple nest. Once finished, the male provides food and protection for the female over the next several weeks as she incubates 5-9 eggs and broods the chicks, but he often does not work alone: In the pygmy nuthatch world, young males from the previous year's brood often help the adult male find food and feed and protect the female and her young at the nest until the chicks fledge. These apprentices will even roost together in the nest cavity with the female and her brood at night.

Pygmy nuthatches forage almost exclusively in pine trees, eating a variety of insects and seeds. When food is plentiful, they cache their surplus in crevices or on the underside of bark on trunks or branches.

After fledging, pygmy nuthatch families form post-breeding flocks. During the cold winter months, these flocks often roost communally in a single cavity to conserve body heat. As many as 170 pygmy nuthatches have been counted at a single cavity roost.

Pygmy nuthatch populations are considered secure, but that does not mean they are not vulnerable. Because of their habitat requirements, scientists have called them an indicator species and use the presence of pygmy nuthatch populations as one barometer for forest health across the west. If pygmy nuthatch populations are strong, then the forest is likely healthy and other associated species are healthy too.

Yet as many ponderosa pine forest habitats decline and massive pine bark beetle infestations spread across the West, their future is uncertain. Scientists will be watching carefully how this intriguing species and other forest birds respond. ■

When not hiking across a prairie, kayaking down a river, or sleeping in his photo blind, Michael Forsberg lives in Lincoln with his wife Patty and his two daughters, Elsa and Emme.



Box Elder

The Poor Man's Maple

Text and photos by Jon Farrar

Although called a weedy, short-lived, insect- and decay-prone seed-machine with weak wood, the box elder is sustenance and home for a host of creatures. They can climb to over 60 feet tall in eastern states but on the Great Plains are squatty and sprawling.

For those of us with contrary natures, there is a perverse appeal in plants and animals most people find unattractive, unappealing, or in general see no need to exist at all. In the animal world that would include cormorants, common water snakes, and bats. In the plant world, at least among native plants, would be the much maligned box elder tree. Few people even know the box elder; and most of those who do consider it a weed tree – sprawling, broken-down, with wood not good for anything at all. But if you come to know it, the tree has its charms.

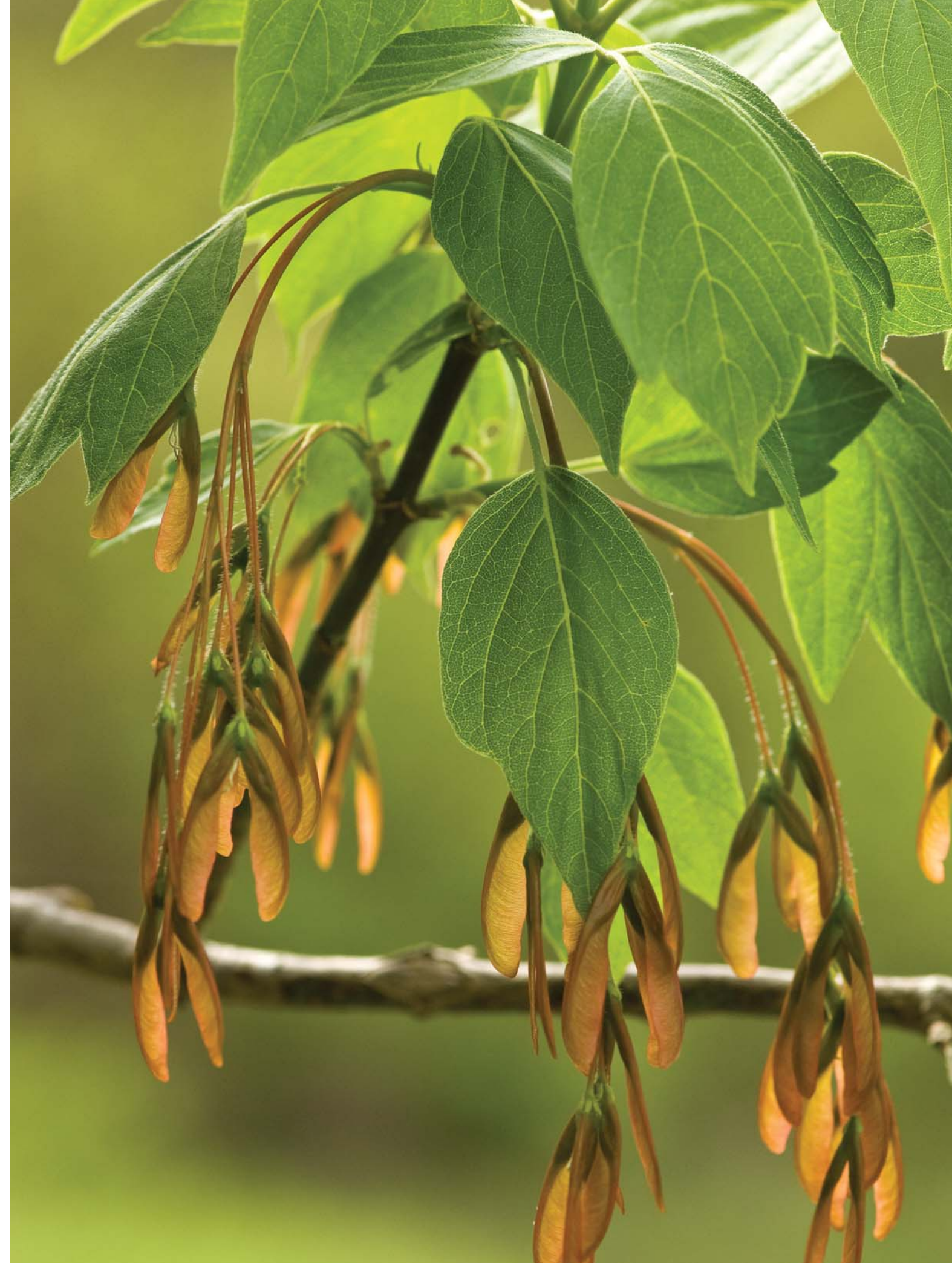
My appreciation for the box elder came early in life. Mrs. Conard (as a kid, I never knew her first name as in those times children called adults by their last names with a Mr. or Mrs. in front of it, but later I found out it was Laura) was an occasional babysitter of me. In her yard was a

sprawling box elder, probably near three feet in diameter a foot above the ground. About five feet above the ground the tree had branched. Long before I knew the tree, one of those branches had broken at the Y, and a hollow had rotted out and filled nearly to the top with wood chips and the largest white grubs I'd ever seen. The hollow had the perfect slope and width to accommodate my boyish rump. The cavity became my stagecoach seat, and equipped with a whip crudely fashioned from a piece of broom handle with a rope nailed to it, I drove my stage hell-bent-for-election through the make-believe rocky gorges of New Mexico day after day, pursued by six-gun-shooting bandits. This was, of course, decades before interactive video games and Wii; barely in the age of westerns on television. But even if your rump is too wide to fit in a box elder cavity and play stage driver, there are other reasons to admire this tree.

Box elders (*Acer negundo*) are maples, closely related to more familiar species such as sugar maples and silver maples found in cities and towns. It is the most widely distributed of all American maples, with a range of nearly three million square miles extending from coast to coast and from southern Canada to Guatemala. Across its range it is known by many common names, including ash-leaved maple, cut-leaved maple, three-leaved maple, black ash, stinking ash, sugar ash, maple ash and water ash. Prior to settlement by Euroamericans, box elders on the Great Plains were mostly found along waterways. Settlers quickly recognized they were hardy, adaptable, resistant to both drought and prolonged cold, quickly provided much desired shade and firewood, and were readily available as seedlings. Under the Timber Culture Act of 1873, settlers were allowed to file on 160 acres of land and eventually own it if they planted and cared for 40 acres of trees (later reduced to 10 acres) within eight years (an additional five years was later allowed). Box elders were extensively planted under that program, and as street

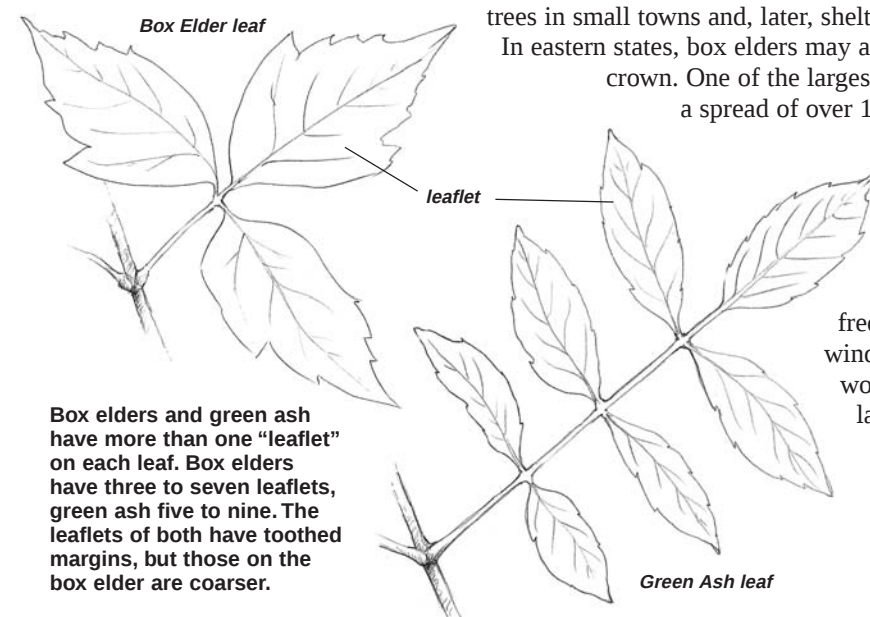


House wrens and other cavity-nesting birds are drawn to the box elder's broken and decaying branches. Opossums and raccoons use the hollowed branches as den sites.





Settlers found box elders to be free and quick to provide shade. The box elder above outlived the house along the Niobrara River.



Box elders and green ash have more than one “leaflet” on each leaf. Box elders have three to seven leaflets, green ash five to nine. The leaflets of both have toothed margins, but those on the box elder are coarser.

trees in small towns and, later, shelterbelts.

In eastern states, box elders may attain heights of 60 feet or more with a spreading crown. One of the largest on record is in New York and stands 75 feet tall with a spread of over 100 feet; hardly the box elder that Nebraskans know.

On the Great Plains, a box elder rising over 40 feet in the air is a magnificent specimen. More often, especially when isolated and not forced to compete and climb among other trees to reach sunlight, they are squatty in form and branch near the ground. The wood is weak and lower branches frequently break and fall under a coating of ice or strong winds, particularly if their cores have been weakened by wood rot. But box elders are a tenacious lot – these large, recumbent branches are often still fed by the roots and send up a confusion of new, small, vertical branches. Box elder wood is soft (about one-half the strength and stiffness of sugar maple wood), nearly

useless as lumber, but acceptable as firewood if nothing else is available.

Box elders are sometimes confused with green ash trees. The trunks of both have fissured surfaces (the ridges of box elder said to be broad and rounded, while those of the ash are narrow and flat-topped). The leaves of each can also add to the confusion. Both have more than one “leaflet,” what most lay people would call “a leaf,” on what botanists call the actual “leaf.” True leaves will all be most evident on new growth emerging from the previous year’s growth. Box elders have three to seven leaflets, green ash five to nine. The leaflets of both trees have toothed

margins, but those on the box elder are coarser and more deeply cut than those on the green ash. Once the true leaves of each are compared, identification becomes quite simple. Box elders are the only North American maple with compound leaves, a leaf divided into smaller leaf-like leaflets.

Male and female flowers are produced on drooping stalks on different trees in early spring. From mid-summer on, the seeds are another giveaway of the identity of the two trees – those of box elder are borne in the characteristic, plump-seeded and broadly winged maple pairs children toss into the air to watch whirligig down like helicopters.

An intriguing characteristic of box elders has been noticed by botanists where



Wood rats along the Niobrara River frequently build their stick and bark houses around sprawling and hollowed trunks of box elders.



Because of their sprawling growth habit, box elders are prone to break under heavy snows or high winds, but the recumbent branches often remain alive and send up new branches.



they are found under harsh growing conditions along streams: Most of the trees near the stream are females, while those farther away, and often on higher ground, are males. They speculate such sorting is useful to the species in that the females producing heavy crops of seeds have enhanced access to water, and that the pollen shed by males on higher ground is more inclined to drift down to fertilize the female flowers.

Further evidence the box elder is a true maple, albeit an unclaimed orphan of the family, is that its sap can be tapped to make a “poor-man’s maple syrup.” Indian tribes in the northwest, where no other maples were native, collected sap in bark troughs and boiled it with hot rocks to make sugar. In his studies of medicinal and food plants used by northern Great Plains Indian tribes in the early-1900s, particularly those used by the Omaha tribe of Nebraska, ethnobotanist Melvin R. Gilmore noted that the sap of box elder was traditionally used to make sugar; and that a charcoal made by burning the wood was used by the Dakota and Omaha for “ceremonial painting of the person and for tattooing.” Some western tribes gathered the bark of box elders, soaked them in “swamp mud” until black, and then used the inner bark for basket making.

Box elders were well known to native people, and still today, for the “box elder mushrooms” often found growing on them, although the bract-like, edible fungus is not

“Box elder mushrooms” are considered delicious by many, but are not limited to this tree species alone.

restricted to that species of tree alone. In fact, the scientific name for them is *Pleurotus ulmarious*, and the species name *ulmarious* translates as “of the elms.” These white, shell-like fruiting bodies often grow from wounds on box elder trees and mature in about 10 days. The flesh of these fungi is considered delicious. Although typically sought and gathered in the early autumn, they might be found throughout the growing season when conditions are conducive to their growth. They are prime when the gills are pure white with no trace of browning. As with all wild fungi, identification should be certain before eating.

Although much maligned by humankind, the lowly box elder is an important tree for wildlife. Its mature seeds are food for many creatures, particularly squirrels and grosbeaks. Cavities where small branches have broken away from the trunk are used by a variety of woodpeckers, chickadees, house wrens, swallows, nuthatches, kestrels, small owls, wood ducks and other cavity-nesting species. Where a larger branch breaks from the trunk, wood rot often leads to hollows, some eventually extending through the trunk itself, creating den sites for small mammals. Raccoons seem to prefer hollows higher on the tree, opossums in large branches lying on the ground, and wood rats build stick and bark houses around the bases of broken-down box elders.

Fussy horticulturists who demand esthetic perfection in trees have called box elders a weedy, short-lived, insect- and decay-prone seed machine with weak wood. Most of that may be true, but they have a rightful place in the natural scheme of things, certainly for wildlife, and are useful in providing quick shade when planted among more long-lived tree species. Because of their squatty and spreading growth habit, box elders are the most accessible of trees for kids to climb or use for a tree house or even for a make-believe stagecoach seat. If thrown to the ground by a runaway team in the course of being chased by bandits, the fall will usually be short and harmless if from a box elder. ■

Boxelder Bugs

Many of us grew up calling them “Democrat bugs.” Apolitical youngsters called them stink bugs, one of quite a number of bugs called “stink bugs” that, when crushed, emit a foul odor. Boxelder (yes entomologists make it one word) bugs (*Boisea trivittata*) are true bugs, meaning they belong to the scientific order *Hemiptera*; characterized by having evolved a proboscis sheathed within a “beak” or “rostrum” allowing plant tissue to be pierced and plant fluids sucked out. Adults are about ½-inch long, mostly black with reddish-orange wing veins creating a geometric, arrowhead-shaped, pattern on the back when the wings are folded. They have red eyes. Nymphs look much like adults but are bright red.

Originally native to the southwestern U.S., boxelder bugs expanded their range north and east as box elder trees were planted on farms and in cities. Boxelder bugs share their name with the box elder because the tree’s soft tissue – particularly young and tender seeds – is one of their principal food items. To a lesser degree, they also feed on other maples, ash and some fruit trees. They do very little damage to their host trees.

Boxelder bugs are best known for their habit of gathering in large numbers in sunny locations, such as the south sides of buildings in spring and fall. As the weather cools in the autumn, they seek warm places to overwinter such as forest litter and buildings.

Although a nuisance indoors, they are harmless other than leaving feces residues. The best control is sealing the infested buildings. Boxelder bugs may emerge from hiding on warm winter days but typically not until the warm days of spring. Eggs are laid on host plants in late spring.

Nicknames such as Democrat bugs apparently first appeared in the late-1800s. In about 1900 they were sometimes referred to as “McKinley bugs,” even though President McKinley was a Republican; suggesting any party affiliation could be assigned to the bugs to suit the speaker. The name Democrat bug apparently stuck during the 1930s Depression and presidency of Franklin Roosevelt, when it was inferred that Democrats, like boxelder bugs, gathered only in warm, sheltered places on sunny days. Another explanation often assigned was that the bugs, like Democrats, only showed up at election times, spring and fall. Most of these latter-day references, of course, came from Republicans.



Boxelder bugs feed on the soft tissue, particularly seeds, of the box elder tree.

Surviving “Stupid”

Text by Jon Farrar
Photo by Jeff Kurrus

Numerous words have been used to describe the opossum – ugly, stupid, plodding, foul-tempered, smelly – but perhaps the word best summing up this animal is incongruous. Almost everything about the animal seems out of place in time and space.

Opossums are marsupials, one of the oldest living orders of mammals on earth. There are 100 species of marsupials in the Americas, most living in South America. Australia has the most species of marsupials, about 200. The Virginia opossum (*Didelphis virginiana*) found in Nebraska is the only North American marsupial and is more closely related to kangaroos, wallabies and koalas than any other mammal found here.

Compared to other orders of mammals, marsupials are the most primitive in nearly all regards. The foremost peculiarity of marsupials is there are no placenta attached to and nourishing young in the mother’s womb. The small, blind, deaf, naked young leave the female reproductive tract only 12 to 14 days after being conceived. At this stage they are approximately the size of raisins – 16 would fill a teaspoon. No more than embryos using rudimentary front legs and clawed fingers to move, they crawl to an external, flapped pouch (appropriately called the marsupium) on the female’s belly, with the mother playing little, if any, role in this migration. There they attach to teats, which swell in their tiny mouths and help hold them in place. More young may be born than the mother has teats to feed. Some wander astray and vanish while moving to the pouch, others arrive to find all the teats claimed. When about 60 days old the young detach from the teats, but may continue to nurse. When they leave the pouch they clamber onto the mother’s back where they cling until old enough to travel independently. Young opossums are usually independent when 90 to 100 days old. Opossums lead solitary lives, except for the time young are with the female. Mating is uncomplicated and businesslike.

Labeling opossums stupid is not without justification. Their brain cavity is small compared to other mammals roughly their size. One mammalogist wrote that opossums are “playing with about a third of a deck.” But lack of intelligence apparently does not always translate into being unsuccessful – the fact that opossums have inhabited the earth for at least 85 million years suggests their life strategy has been better than that of many other mammals, a good share with larger brains.

Opossums are prolific, with both sexes reaching sexual maturity when less than a year old. Usually six to nine young are born per litter, and two litters can be raised each year, one in mid-winter and another in late-spring.

Another part of the opossum’s success can probably be

attributed to their catholic feeding habits – most anything an opossum finds it will eat. Important food items in their diet include, but are not limited to, carrion, vegetables of any sort, nuts, insects and other invertebrates such as worms, fruits, eggs and small vertebrates such as mice and lizards. Urban opossums are exceedingly fond of much of what we put in our garbage cans.

While opossums are well known for “playing possum,” that is not their first line of defense when threatened. Instead, they hump up, bare their 50 spiny teeth lining a rather impressive but pointy maw, drool, hiss and make a clicking sound similar to that issued by males when courting. If that fails to deter the threat, an opossum may, but not always, enter a catatonic state and appear dead, but not before defecating and emitting a rank greenish ooze from its anal glands. This strategy seems to defy logic, as presumably a predator’s intent is to first render the opossum dead and then consume it. No plausible explanation exists for the strange behavior – it’s just possum nature. Apparently not many hungry predators are fooled, as a two-year-old opossum in the wild is the exception. The survival strategy of the opossum seems to be the prolific production of new opossums.

Opossums are not known to be territorial, and are nomadic wanderers through any habitat that will support them. While they may be found anywhere in Nebraska, they are most common in woodlands, particularly along streams. They will “hole-up” in about any cavity they can access, including storm sewers in cities, but seem to prefer hollow logs on or near the ground.

Opossums have extended their range northward in recent times and seem to prosper in an incredible variety of environments. They were not native in the far west, but were introduced during the 1930s, probably as a source of food during the Depression, and rapidly expanded northward into Oregon and Washington. On the Great Plains they extend north across the eastern half of South Dakota and into the southeastern corner of North Dakota. Ecologists speculate this expansion occurred because of the reduction in the number of opossum predators. Expanding northward does come at a price, however, as northern opossums not uncommonly have shortened tails and ears from frostbite.

The opossum’s common name—Virginia opossum—is a reference to the first written report describing the animal by English explorer Captain John Smith, in what today is the state of Virginia in 1612. His description was brief: “An Opassum hath a head like a Swine, & a taile like a Rat, and is of the Bignes of a Cat.”

Seems the enduring opossum has never had the respect it rightly deserves for its long-term success. ■

Neither cute nor particularly intelligent, opossums do have one thing going for them – they know how to survive.



WHOOPS!

INVASIVE SPECIES SOMETIMES INTRODUCED BY UNLIKELY SUSPECTS

Text and photos by Eric Fowler

It has happened to all of us. With good intentions, we do something that doesn't work out quite like we planned. Sometimes we know right away that we messed up. Sometimes it takes years.

Not even fish and wildlife managers can escape that humbling fact of life. If you want perfect examples from both fronts, here they are: the common carp and the eastern red cedar. In years gone by, both were widely "planted" by Nebraska's fish and wildlife managers, who at the time thought they were doing the right thing. As it turned out, however, it wasn't, and today the state's current crop of biologists spend a good portion of their time working to control them.

Those are just two of many species that have been introduced into Nebraska's wilds that, upon further review, have caused us to say "whoops."

GOOD FISH, BAD FISH

Of the 110 species of fish currently swimming in Nebraska's waters, 25 weren't found here historically. Anecdotal evidence suggests that only cutthroat trout were native to Nebraska, yet brook, brown and rainbow trout have been stocked by Nebraska Game and Parks Commission biologists to provide sportfishing opportunities in rivers, streams and reservoirs. Some, like wipers and alewives, were stocked to fill unnatural habitat created by reservoir construction. Others, including three species of Asian carp, swam up the Missouri after escaping fish farms.

Many other introduced species, including chinook salmon, didn't survive.

One introduction biologists wish they could erase from the history books happened before their grandparents were born. The common carp, native to Asia and cultured in Europe, was brought to the United States in 1872 by a Californian who began selling them for food. In 1877, the U.S. Fish Commission expanded that effort, importing carp from Germany and stocking and distributing them throughout the country. The Nebraska Fish Commission joined that effort soon after its creation in 1879, and by 1881 it had 1,500 carp in hatchery ponds and was stocking them in rivers, streams, natural lakes and ponds throughout the state.

"The German Carp will be the most successfully cultivated of any fish adapted to our waters," read the Commission's 1883 annual report. They were right on that point, but not another made in the 1886 report – "carp are, no doubt, the poor man's fish of the future and are sure to become an important item on the bill of fare of those who eat fish as food and not as a luxury."

As is the case with many non-native species of flora and fauna found in the United States today, carp were championed by European immigrants who didn't want to leave everything they loved in the old country. Apparently, however, they left the old country in search of better tasting fish, because carp never gained widespread acclaim here. Not even dubbing them

"patriotic protein" in a campaign to increase consumption of carp when a substitute for meat was needed in World War I, or a similar "Carp for Victory" campaign in WWII, could convince most folks to make it a regular part of their dinner menu.

Maybe people's disdain for carp began when, even before the start of the 20th century, they saw the introduced fish rooting up vegetation and muddying the waters of their favorite fishing hole, reducing water quality to the detriment of bass, bluegills and other native game fish. The 1896 Fish Commission report

NEBRASKA'S INFILTRATORS?

SPECIES	TOTAL	EXOTIC	INVASIVE
Birds	454	5	4
Plants	2,051	487	9*
Mammals	95	3	3
Fish	110	25	14
Amphibians/Reptiles	60	3	3
Mussels/Crustaceans	38	3	3

*Nine non-native plants are so invasive they are considered noxious in Nebraska. For more information, visit the Nebraska Invasive Species Project web site at <http://snr.unl.edu/invasives/index.htm>.



Cedar rows planted on a grassy ridge at Grove Lake Wildlife Management Area near Royal provided a seed source that helped cedars spread throughout adjacent grasslands and the oak-forested draws.

But little Mouse, you are not alone, In proving foresight may be vain: The best laid schemes of mice and men Go often askew, And leave us nothing but grief and pain, For promised joy!

— Excerpted from “To A Mouse,” a poem written by Robert Burns in 1785 after turning up a winter mouse nest on his farm

mentions that “Carp have been subjected to much criticism in recent years by anglers and sportsmen ...”

In 1926, *Outdoor Nebraska*, the predecessor of *NEBRASKALAND Magazine*, included the following tidbit: “Ever since the Game and Fish Department was created in 1901, spasmodic efforts have been made to remove coarse fish from our waters with varying degrees of success... While we will likely never see the time when coarse fish will be entirely eradicated, periodical seining under

careful supervision will at least keep the carp and other obnoxious fish under control.” The tide had turned, but the damage was already done.

“You shake your head now, but back then it was state of the science,” said Daryl Bauer, Commission fisheries outreach coordinator. “They were convinced they were doing the right thing.”

Work to control carp continues today, but even when biologists use rotenone to kill off all fish in lakes where carp dominate, a common practice in lake

rehabilitation projects nationwide since the 1930s, carp often return. Sometimes they are brought by an unwitting angler — rare is the case when a seine full of shiners doesn’t contain a young-of-the-year carp that end up in an angler’s bait bucket. When that angler dumps his unused bait into the lake at the end of day to “feed the fish,” the clock starts ticking on that lake’s useful life, which is why the use of live baitfish is banned at most rehabilitated lakes.

“Life would be a lot simpler for fisheries managers if we didn’t have carp,” said Dave Tunink, assistant administrator in the Commission’s fisheries division. “They destroy the habitat of most game shoreline species like bass, bluegill and crappie. We would have a lot more lakes with better quality panfish, especially in the Sandhills, without them.”

There are many other examples around the country of introduced species affecting native species, including the Columbia River in Washington, where walleye introduced in the mid-1900s now grow big and fat at the expense of native trout and salmon. More recently,

in the late-1980s, North Dakota biologists began importing zander, Europe’s version of the walleye, simply because it grew bigger.

The American Fisheries Society now has a stocking protocol that boils down to this: Does a native already fill the need? “Walleye don’t get to be 40 pounds like zander, but we don’t need to bring in another exotic,” said Tunink. That policy and outcry from anglers quashed the zander program.

WEED TREES

Unlike the problems caused by invasive fish, which are often hidden in the depths, those caused by invasive plants are right there for everyone to see. But that doesn’t mean everyone sees the problem staring at them from the roadside or a distant hillside.

That is certainly the case with eastern red cedar trees. Cedars are native to Nebraska. Historically, however, periodic wildfires kept them out of the prairies, which made up 98 percent of the state. With fires now controlled, cedars have crept or even exploded into the state’s grasslands, displacing wildlife and, at a direct cost to livestock producers, the



The common carp’s ability to muddy water is obvious when they are spawning in the shallows. Most of the year, however, the bottom feeders do their work out of sight.

amount of grass available to cattle.

The funny thing is, wildlife biologists and countless other resource professionals helped fuel the spread of this tree. From the 1960s into the 1980s, row after row and mile after mile of cedar trees were planted on Commission wildlife and park lands. Biologists were simply using the playbook the experts handed them, which read that creating edge would benefit the wildlife species they

wanted to propagate: white-tailed deer, pheasants, turkeys and quail.

“We planted a helluva lot of them in our day,” said Jeff Hoffman, assistant administrator in the Commission’s Wildlife Division. “Back then, edge and interspersed were good. So we planted every other terrace to cedars to break up the grasslands, but it wasn’t the best thing to do.”

The cedars made great habitat ... for a few years. But when they grew up,

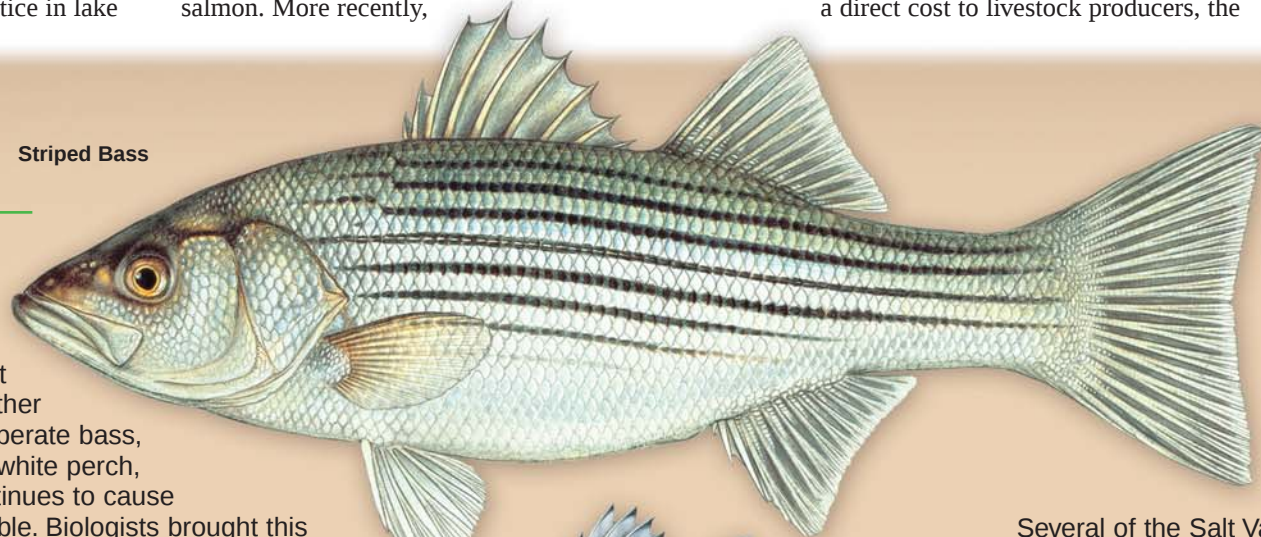
FISHY SITUATION

While carp may have been the first mistake made by fisheries biologists in Nebraska, they were not the last.

Striped bass, a fish once only found in freshwater in the United States when it went on its annual spawning runs up coastal rivers from the Atlantic Ocean, were stocked in Lake McConaughy from 1969 through 1978. While they did indeed provide a unique trophy fishery, the voracious predator also contributed to a crash in the lake’s gizzard shad forage base, took a good chunk out of the lake’s rainbow trout population, and were banned from future stockings in 1981. While stripers weren’t supposed to be able to reproduce in inland waters, biologists believe they did, but rarely enough that most of those fish have fallen to the hook or old age.

Ironically, at the same time striped bass were being banned, a hybrid cross between the striped and white bass, commonly known today as a wiper, was just beginning. Things have worked out much better for that fish, which continues to be stocked in larger reservoirs throughout the state.

Striped Bass



Yet another temperate bass, the white perch, continues to cause trouble. Biologists brought this fish, native to the Atlantic coast, to Nebraska in 1964 in hopes of improving fisheries in several lakes in the Sandhills that were too alkaline to support most game fish. By accident, those fish were stocked into Wagon Train Lake and soon they had spread to other Salt Valley Lakes around Lincoln.

On the east coast, white perch grow to 10 inches and are favored game fish and tablefare. But in Nebraska, the highly prolific fish soon overpopulate a lake and

White Perch



Mel Smith and other anglers pursued trophy striped bass during their reign at Lake McConaughy.

become stunted. Not only do they out-compete game fish for food, they also have an appetite for fish eggs, including walleye.

Several of the Salt Valley lakes have been renovated to remove the fish, some more than once. But the fish persist in several, including Branched Oak, Wagon Train and Pawnee, and the pest appears to be here to stay.

At Branched Oak, biologists are trying to make the most of the situation by stocking the lake with every top-tier predator they can, including flathead catfish, walleye and wipers, hoping that those fish will eat their way through the white perch population and improve things for other fish while growing to trophy size themselves, an effort that has met some success.



PHOTO BY ROCKY HOFFMANN



Contractors working at Branched Oak Wildlife Management Area used heavy equipment to pull eastern red cedars like weeds, which the trees had become 40 years after they were planted on the area for wildlife habitat. To improve grassland habitat, more than 20 miles of planted trees were removed as part of the Focus on Pheasants initiative.

they simply sliced large expanses of grasslands into small ones. Biologists have since learned that many grassland bird species prefer larger blocks of habitat, and that tall trees make great perches for hawks and other birds of prey that like to dine on grassland birds. They also learned that without prescribed fire, seeds from those cedar rows will expedite cedar expansion into the adjacent grasslands, and that having row after row of cedars makes it harder to carry out a prescribed fire.

So now, at great expense, the Commission is tearing out as many of those cedar rows as possible, and clearing grasslands where they have spread. As part of its Focus on Pheasants initiative, more than 20 miles of tree rows, mostly cedars, were removed at Branched Oak WMA. Each year, hundreds to thousands of cedars and other invasive trees are sheared or ground on other wildlife management areas around the state, and prescribed burns are conducted to ensure trees sprouting from the seeds left behind don't become someone else's problem 20 years from now. And if fire happens to destroy a tree row, so be it.

Some are quick to point out that much of this work is being done to improve habitat for pheasants, which are themselves an exotic. For the most part, however, pheasants are an exotic that have filled another unnatural niche: the vast expanses of cropland that replaced vast grasslands, displacing native prairie grouse.

The Commission isn't the only guilty party in the spread of cedars, or the only one busy controlling them. Cedars were widely used in windbreaks on farmsteads. While they are easy to grow and serve this purpose well, the practice has created numerous seed sources in places there were none, and from there, cedars have spread. And while many natural resource agencies, conservation groups and landowner consortiums have declared war on cedars, some still continue to promote them for use in windbreaks or wildlife cover.

A PLACE FOR EVERYTHING

For as long as man has been moving around this world, he has been moving plants, animals and all

things natural with him, sometimes intentionally, sometimes by happenstance. "Pretty" plants like purple loosestrife were brought to the United States as an ornamental and now choke many rivers in Nebraska and elsewhere. Zebra mussels hitched a ride in ballast water on ships bound for the Great Lakes and now infest many waters throughout the United States at a great cost to utilities. Sometimes, the introductions are real head scratchers, like the European starling, which was brought here in 1890 as part of a plan to introduce to the U.S. all birds found in the works of Shakespeare. True story.

More than \$120 billion is spent each year in the United States to control invasive species, often non-natives that crowd out native plants and animals.

That fish and wildlife management has been part of the problem is not lost on the current crop of biologists. But the trade still hasn't completely overcome the urge to try to make things better. Natural Heritage biologists with the Commission have worked with fisheries biologists on plans that say where trout should or shouldn't be stocked. That effort is meant to keep

trout out of spring-fed Sandhills streams where they could certainly do well but could also wipe out threatened and endangered native species such as the northern redbelly dace and Topeka shiner.

"We're in the thick of the battle to fight invasives and at the same time we're introducing some," said Rick Schneider, heritage program manager.

While many hard lessons have been learned about the effects introduced exotics can have on natural communities, introductions continue. They include a few exotic beetles and weevils that have been released in recent years in an attempt to control, ironically, exotic plants like musk thistle and purple loosestrife. While intensive testing has preceded these releases, no one knows for sure if these insects will keep eating only what they're supposed to eat when they are released. A rare, native thistle has been affected by insects released to control invasive musk and Canada thistle, both non-natives.

"What's going to be worse, letting these exotic species take over or a having few native species impacted by control?" Schneider said. "It isn't clear cut. But it is clear that invasives are the number two concern for species viability (behind habitat loss)."

Which species are invasive also isn't clear cut, but the Nebraska Invasive Species Project is working on developing such a list. "It's tricky," said Kari Decker, head of the project, who said their goal is to spread the word about invasives and make stopping the spread of species there is still a chance of controlling.

The side of human nature that is always trying to fix things and make them better drives the movement of species into habitats where they don't belong. Many old sayings are applicable here, including "the grass is always greener on the other side." But we are often short-sighted, not thinking about the long-term consequences these actions might have on native species. People need to remember another old saying: "A place for everything, everything in its place."

Keep that in mind when you're planning your garden, stocking your pond or working your land. There's nothing wrong with native flora and fauna. ■

HABITAT DO OVERS

Cedars aren't the only invasive plant the Commission has introduced and is now fighting to control. *Sericea lespedeza*, a woody legume also known as Chinese bush clover that was imported from eastern Asia, was planted throughout the eastern U.S. for livestock forage, wildlife food and habitat and for erosion control from the late-1800s through the mid-1900s. As it turns out, it's not great as forage or wildlife food, and because of its propensity to take over pastures and choke out desirable species, it's now a noxious weed in some states, including Kansas, and on Nebraska's watch list.

"It was touted 30 to 40 years ago as good quail food," said Hoffman. "Now we're trying to get rid of it."

Sericea lespedeza is found in eight counties in southeastern Nebraska. Where it was planted on wildlife management areas, biologists spray the plant each year. Eradication is a long, drawn-out effort with a plant that is a prolific producer of seeds that remain viable for 20 years or more.

Smooth brome grass is another problem plant. Native to Europe, it was brought to the U.S. in late-1800s as forage crop and for erosion control. Once established, the sod-forming, cool-season grass soon chokes out nearly all native grasses and forbs, creating a monoculture that is poor wildlife habitat. Yet it was spread far and wide when the Conservation Reserve Program, a program that now includes wildlife habitat as one of its purposes, was launched in 1985. "They planted every seed they could get a hold of," said Hoffman. "It was cheap and it grew fast and well."

Commission biologists have always favored warm-season grasses on its wildlife areas, but it still battles brome on lands where it was present when they were acquired or where it has spread from adjacent private lands. Restoring private grasslands dominated by brome to more diverse habitat has been the focus of programs the Commission sponsors or is part of. Controlling brome is costly and eliminating it nearly impossible.



Commission wildlife biologist Travis Kopf sprays invasive *Sericea lespedeza* at Wagon Train Lake near Hickman.

SPILLING OIL IN NEBRASKA

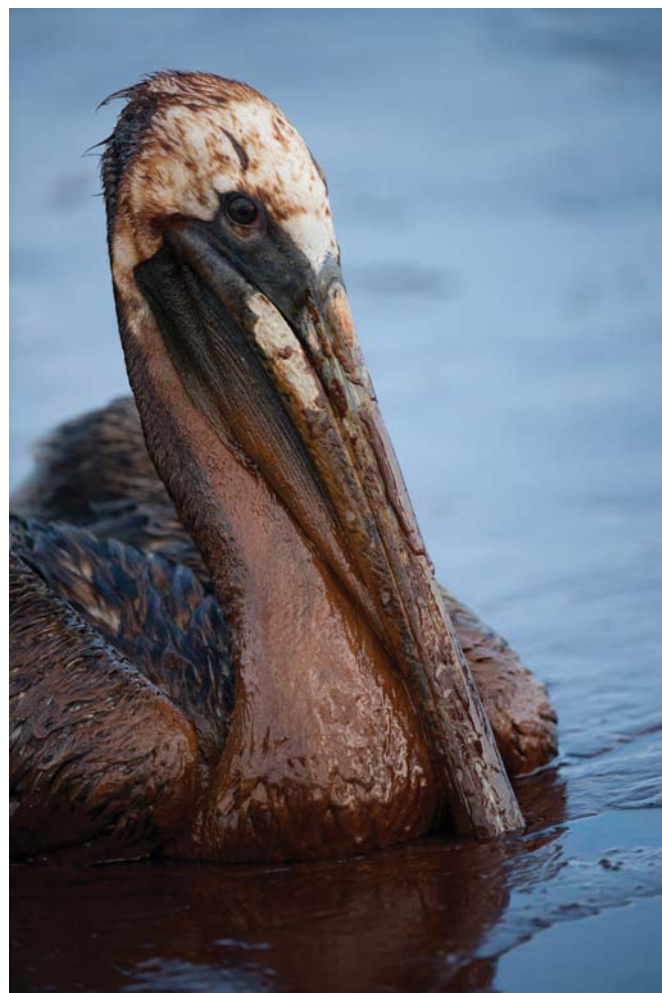
With black smoke billowing from a surface burn, skimmer boats and supply vessels work the spill site off the Louisiana coastline. Nobody knows how much oil remains on the bottom of the Gulf, but experts feel the amount could be enormous. Dispersants were used by BP at the wellhead on the seafloor, preventing much of the oil from rising to the surface.

How the Gulf of Mexico disaster can adversely affect birds migrating through the Great Plains.

Text by Jeff Kurrus

Photos by Joel Sartore

To many Nebraskans, the Gulf Coast oil spill, which began following the blowout of BP's Deepwater Horizon drilling rig on April 20, 2010, seems a million miles away. However, it's hard to ignore a catastrophe that, according to *National Geographic*, has leaked more than 205 million gallons of oil into the Gulf of Mexico. It's even harder to ignore when one considers how many bird species that migrate through Nebraska could be affected.



A severely-oiled brown pelican on Queen Bess Island in Barrataria Bay last June. Unable to fly, this bird was easily captured and taken to a rehab center. Months after the well was plugged, oil continues to wash up along the Gulf Coast.

"Louisiana coastal wetlands winter a relatively high percentage of North America's dabbling ducks," said Nebraska Game and Parks Commission waterfowl biologist Mark Vrtiska. "While most of the birds that come through Nebraska end up on the Texas Gulf Coast, there are many wigeon, pintails, gadwall, teal and shovelers that use the Louisiana coastal wetlands."

Another species that could be affected is the piping plover. "We banded a piping plover in 2008 on the Lower Platte River that was re-sighted the following winter on Raccoon Island in Louisiana," said Joel Jorgensen, the Commission's nongame bird program manager. "That area is right where the oil spill is and it is very worrisome."

However, earlier estimates suggest that south Texas's Aransas National Wildlife Refuge, winter home for the world's whooping crane population, has been unaffected. "At our location neither whooping cranes or blue crabs, the whooper's primary food, have shown any signs of oil contamination," said USFWS Whooping Crane Coordinator Tom Stehn. "We really dodged a bullet. The currents have kept everything north and east of Aransas." Because whooping cranes typically have two chicks per year,



only one of which usually survives, this positive news is paramount to this species' survival. An event as catastrophic as an oil spill in whooping crane habitat could devastate their already limited numbers.

And while we will see the disastrous effects of this catastrophe for years to come, the whooping crane news is at least one reason to smile. If only for a brief second. ■

Joel Sartore, who lives in Lincoln, is a contributing photographer for *National Geographic Magazine*, speaker, and author of *RARE: Portraits of America's Endangered Species*. To see more of his photographs from the Gulf oil spill disaster, visit nationalgeographic.com and search Oil Spill Photographs.



A Near-Death by Hunting

Another good reason to never hunt alone.

By Jeff Kurrus

That morning, I took a picture of one of Dustin Owens's Labradors making a pheasant retrieve following a flush and shot. Seconds after the photo, we were congratulating ourselves, hoping that one downed bird would lead to two, two to three, and so forth. Minutes after our congratulations, however, we were more concerned with keeping Dustin alive.

We were hunting a patch of private land north of Humphrey. It was our one free day of the week to hunt and we had decided that hunting in miserable conditions was better than not hunting at all. Less than 10 degrees, a 20-mile-per-hour wind and two-foot-deep snowdrifts greeted us when we stepped out of the truck.

Still we trudged through deep cover with his two Labs. We jumped a couple of birds early, killing one, and continued through the field of CRP grass until we saw a small patch, less than a hundred yards long and only a few rows wide, of milo. We decided that I would make a quick walk through the milo while Dustin stayed down in the field.

Minutes later, with Dustin and his dogs out of sight, I stopped walking. While I have never had a bird flush during one these pauses, more experienced pheasant hunters have repeatedly relayed stories of birds jumping during these times.

I didn't see or hear a bird when I stopped, but I did hear a faint yell, nearly a moan, of some sort coming from Dustin's direction. I took a couple of more steps, listened again, then bolted in a dead run down the hill after hearing his attempted scream.

Hearing muffled screams of my name has happened to me once before while hunting. The other time, I ran across a cut bean field, flipped over a hidden barbed wire fence and found my friend's father hanging from a spindly tree limb, both of his legs bent in the wrong direction. This situation



A picture perfect pheasant retrieve from one of Owens's dogs was a good start to what nearly turned out to be a very bad day.

was just as dire.

All I could see upon finding Dustin was his head and two arms. The rest of him was underwater, having fallen through an iced-over creek. Hanging onto the side of the snowy creek bank, ice was already forming in his wet hair as his dogs repeatedly licked his face. He gasped each time they did, as if he were drowning.

I threw my equipment down into a snowbank, including camera and loaded shotgun, and reached for him. "I can't get out, I can't get out," he moaned. When our hands first touched, I felt myself slipping toward him as he lunged toward me. I shook him loose and he fell back deeper. If I was going to get him out, my feet had to be more firmly planted.

"Don't grab me until I tell you to, hear me?" I said, sitting down and anchoring my heels in the snow and ice. "Alright," I said, and grabbed him as I leaned back.

He climbed from the creek, wheezing, snorting and gasping for breath. "I got to go," he moaned, tears forming and freezing instantaneously as he took off for the truck.

I grabbed our equipment, at least what I could find, and followed him across the field toward our vehicle. Because the snowdrifts were so high, he was going to have to walk out himself – we would have buried our truck if I had to use it, and I would have buried both of us trying to carry him out.

Less than 100 yards into the walk, he yelled, nearly incoherent, "Where truck?"

He wasn't in good shape, but I kept talking to him after finally catching up. He walked with his head down, following a path we had walked earlier. "How much farther?" he asked.

We were still more than a half-mile from the truck. "Couple hundred yards," I said.

By the time we got there, his clothes were completely stiff. He stripped down naked on the side of the gravel road and put on a set of dry clothes he had in the cab. Then he sat in his truck, shivering, as I drove toward Humphrey.

After about a half-hour, I was beginning to realize how much worse this could have been. In the grand scheme of hunter survival, we weren't

I took a couple of more steps, listened again, then bolted in a dead run down the hill toward Dustin after hearing his attempted scream.

even on the radar – there was no animal attacks, we were not lost in the remote wilderness and we weren't fighting an electrical storm while crossing Lake Erie.

But he would have died if we weren't hunting together. He wasn't getting out of that creek by himself – while I had walked that upper milo field for nearly 10 minutes before hearing him, he had been trying to get out of the creek for almost nine. He had fallen in shortly after I left, but I didn't hear him until it was almost too late.

"I guess we're done for the day," he said, finally regaining his senses as we pulled into town proper.

"Do you want to be done?" I asked. He paused briefly. "What do you have in mind?"

A few moments later, we were sitting

in a hole-in-the-wall laundry mat, eating fresh-made sandwiches from the local market and waiting for Dustin's clothes to dry so we could hunt the afternoon. We even bought a \$10 hair dryer to work on his boots.

We didn't fire a shot during the afternoon hunt; but we didn't get wet either. We did, however, find a few moments late in the day to take the afore-mentioned photograph or two, and to reflect, even if just in each of our own minds, just how lucky we had been that day.

We always have a good reason to bring a partner along in our outdoor pursuits – the beauty of the outdoors, after all, is best shared with others – but the safety aspect of not hunting alone is one best not ignored. ■



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Deer in a Can

Here's a "new" way to enjoy venison.

By Patrick Mainelli

In the coming months, some of Nebraska's more skilled hunters might find themselves overwhelmed with a bounty of deer meat. If freezer space is limited, some venison lovers will be looking for alternative ways to preserve their feast. Canning meat is a less than common option, but its convenience and unique taste are big incentives for breaking out the pressure cooker.

Unlike frozen meat, canned venison can be used at a moment's notice. *NEBRASKAland* reader Doug Kapke suggests piling it between some bread for a quick box-lunch, and Kim Schilousky recommends rolling the meat in flour and pan-frying it for an easy dinner. You can also add canned deer to soups, chilis or casseroles.

If this year's deer is a very mature doe or buck, the meat may not be gourmet material, but canning is an excellent way to return some of the moisture and tenderness to older meat. A range of brining options can also introduce new flavors – reader Elaine Tipton suggested adding a soy and ginger sauce, and many readers find that some slices of onion and a few cloves of garlic at the bottom of each jar make for especially savory meat.

Several other *NEBRASKAland* readers also shared their advice on the art of canning, and there seems to be a pretty consistent formula floating through Nebraska's kitchens. Below is a well tested recipe submitted by Barbara Goracke that seems to be in line with what many of Nebraska's hunters and chefs find works best.

Equipment needed:

Large pressure cooker and canning jars (quarts or pints)
Jar rings and flats
Sharp knives for de-boning and cutting the meat

Ingredients:

Fresh (unfrozen) venison
Beef tallow (optional)
Canning salt
Beef bouillon cubes

Using dishwasher, sanitize and dry canning jars. Remove the bone and excess fat from the hind quarters of your deer and cut the meat into 2" (approx.) chunks. Soak the meat for one hour in brine water (one tbsp. salt per quart). Rinse.

Fill jars with meat chunks and a chunk of beef tallow, leaving 1 1/4" of space below the bottom ring of jar. (Use one chunk of tallow for pint jars and and larger chunk or two smaller pieces for quart jars).

Add:

1 tsp. salt (pints and quarts)
1 beef bouillon cube for pint jars, 2 for quart jars

Wipe the top of each jar with a damp cloth. Place a jar flat and ring on each jar. Screw jar ring on tightly to secure the seal.

Place your pressure cooker on the stove and pour in 1 to



PHOTO BY STEVE CHARE

Canning venison is a great way to have this savory meat "ready."

2 quarts of warm water into the cooker. Place jars into the cooker and attach the lid, turning it until locked into place. Be sure the petcock valve (small valve on lid) is wide open. Turn the stove on and watch for steam to come from the petcock. Allow the steam to flow from the petcock for approximately 10 minutes to eliminate all air pockets and then close it. The amount of time and pressure needed to safely cook the meat varies depending on the elevation and type of pressure gauge being used. University of Nebraska-Lincoln food scientist Dr. Julie Albrecht recommends pint jars be cooked for 75 minutes and quart jars 90 minutes. Dial-gauge pressure cookers should register 11 pounds of pressure at 0 to 2,000 feet of elevation, 12 pounds at elevations between 2,001 and 4,000 feet, and 13 pounds for 4,001 to 6,000 feet. The same cooking times apply when using a weighted-gauge pressure cooker, but the amount of pressure used should be 10 pounds for 0 to 1,000 ft of elevation and 15 pounds for higher elevations.

At the completion of the timing process, turn stove off and wait until the pressure recedes to zero. Open the petcock valve to release any steam, then use jar tongs to place the jars on a rack to cool. Do not remove rings from hot jars. You will hear a small pop or ping from each jar, ensuring they are sealed.

Some chefs prefer to skip the beef bouillon and tallow, resulting in a more natural deer flavor. You can also brown the meat in a small amount of fat and water before canning, as reader Rob Hams suggests, and place the entire mixture in the jar. Successfully canned venison can be enjoyed for at least year.

For more advice on canning deer, consult the "Becoming an Outdoor Woman" cookbook or visit our blog at afieldandafloat.com. ■



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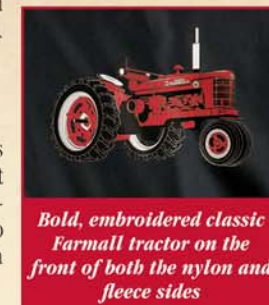
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▲ This photo was taken of my grandfather, Lloyd Frank of Kearney, in 1938. At the time he was chief of police (1933–1942) and later served as sheriff of Buffalo County from 1946 to 1966. Never known to be “on the take,” he was caught red-handed with this gift of catfish from the Platte River!

– Bill Torrance, Naples, Florida

▼ In the November 2007 issue of NEBRASKALand, I saw something familiar – my grandfather Wallace Brown as a little boy in a Portraits from the Past submission by Fred Egley of Norfolk. I recently found this image, taken in the early 1950s at Johnson Lake, of my Grandpa Brown (left), and, I believe, Bob Eldridge. The two are shown with a nice catch of northern pike, something you don’t see on Johnson Lake these days. I never met Grandpa Brown (he passed away long before I was born) but I spent many summer days on Johnson in search of a stringer like this!

– Joe Remmenga, Lincoln, Nebraska



◀ This top photo is of my dad (with shotgun), and myself when I was 15. It was taken in 1937 on our ranch south of Chambers in Garfield County. Pheasants and chickens were plentiful back then. As a kid I was the bird dog and the bag limit was five, which I saw my dad stand in place and bring down many times. With chickens, he would wait for a cross and get two with one shot. The car is a 1933 Chevy and Dad is holding a Stevens 12-gauge pump that I still have and is over a 100 years old. I am pushing 89 now and have lots of great memories from hunting Nebraska fields and hills with good friends.

The other picture was taken in 1950 when deer hunting in Nebraska was new. My nephew (left), Dean Petersen of Herman, and I drew permits for an area near Chadron that was open to deer hunting. We obtained a guide and hunted on his land. He told us not to cross the fence as that was Chadron State Park land. At that time it was all mule deer – whitetails came later. Mine deer checked in a 206 pounds field dressed, and was seven years old. I still have the head mount.

Keep up the good work for the next generation

– Wesley Howe, Fremont, Nebraska

Send contributions to: Portraits from the Past, NEBRASKALand Magazine, P.O. Box 30370, Lincoln, NE 68503-0370. Or e-mail to tim.reigert@nebraska.gov. Photos should show people enjoying Nebraska outdoor activities, such as camping, boating, hunting or fishing, and must have been taken before 1980. 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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