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Volume 98 • No. 3
April 2020

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sits on a tree limb in Lancaster County.
Photo by Chris Masada.

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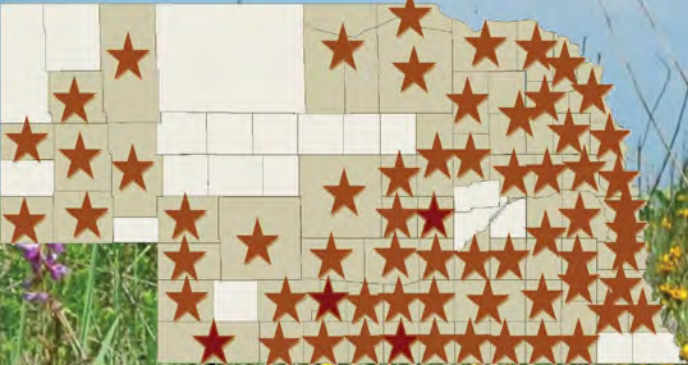
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Please include your postal address
and telephone number. Letters may be
condensed and edited. Photographs are
also welcome.



BOOMING GROUNDS

A sharp-tailed grouse performs its courtship dance at a lek near Hay Springs on an April evening.

PHOTO BY JUSTIN HAAG

EARLY SEASON GOBBLERS

By Todd Mills

Keep these tips in mind for early season gobblers.

Do Your Homework

Early season gobblers can be tough. Do you know where they eat, sleep, strut and travel each day? If you answered no to any of those questions you need to scout harder. They’ve just split up from winter groups so getting in their way may be your best shot.

Trick the Hens

Early season toms are anxious to breed and can stay with hens most of the day. That makes them less susceptible to calling and decoys. Focus on fooling the hens. If you can get them interested, chances are a tom might just follow. An older hen can be territorial, so focus your efforts on ticking her off.

Decoy Set-Ups and Calling

Be careful that you don’t overcall this time of year. Since they’re traveling in larger numbers, sounding like the real thing can be a challenge. Don’t be afraid to go “big” with your decoy setup. Sometimes it’s the more the merrier for April birds.

Be Patient

You’ve heard it before but never is having patience more relevant than hunting early season turkeys. Your window of toms being alone this time of year is shorter. Stick and stay if you have birds in the area. If you’ve done your homework chances are you might have a bird make a mistake. Younger toms get anxious and will sometimes break off looking for the “lucky break” with a hen.

Todd Mills is a former Avian-X and Mossy Oak pro staffer who divides his outdoor time between hunting waterfowl and turkeys.



PHOTO BY JEFF KURBUS

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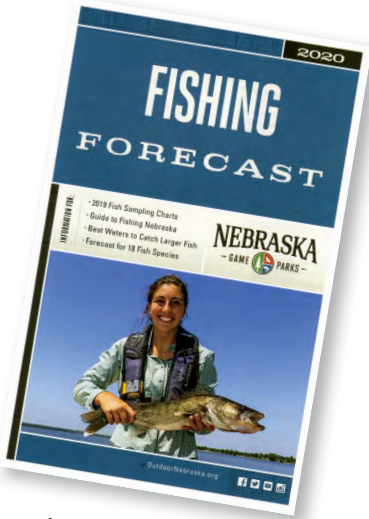


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ADDITION TO 2020 FORECAST

By Jeff Kurrus



I feel like reading Nebraska’s fishing forecasts are like studying algorithms. As an angler, I’m always trying to maximize the use of this information, and I continually evaluate what updates have been added. Here is the main addition in the 2020 version.

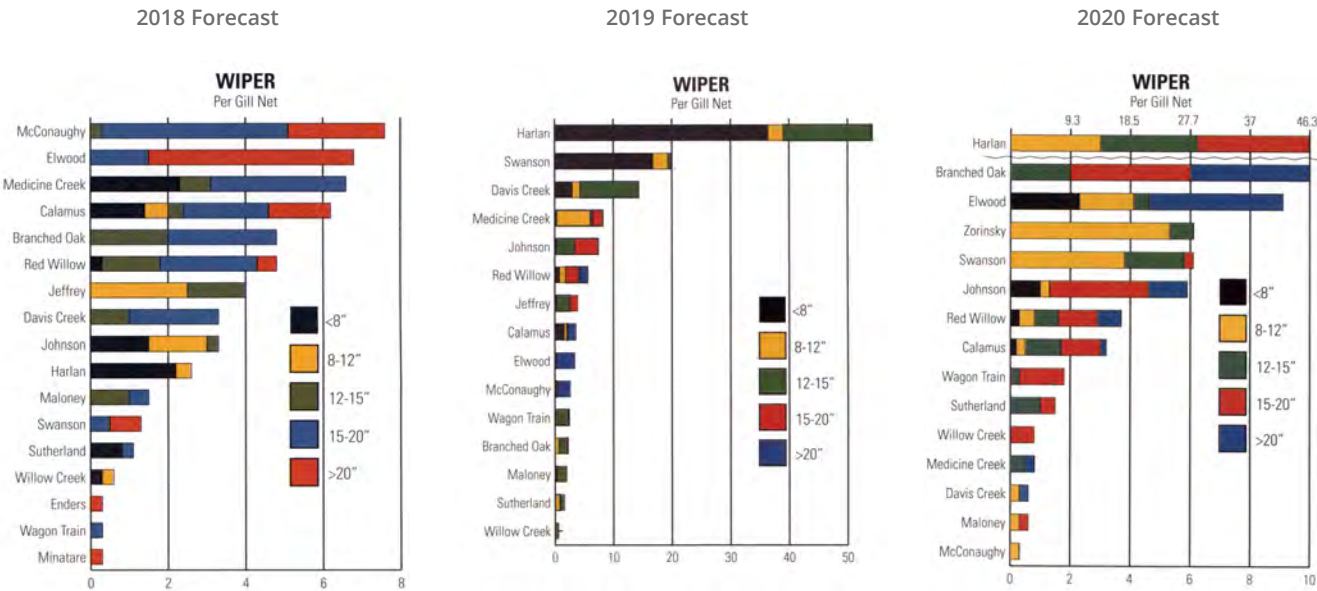
A newly created line – a squiggly line of sorts – can be seen in spots on the 2020 Nebraska Fishing Forecast. When you see this line, the lake(s) sampled above it on the chart adheres to the numbers located at the top of the chart. Every lake below this squiggly line is measured by the numbers at the bottom of the chart. For example, in the 2020 forecast, Harlan County Reservoir had the highest number of wipers surveyed per gill net at 46.3, as seen by the numbers at the top of the graph. Branched Oak, in a distant second place, surveyed 10, as seen by the numbers at the bottom of the graph.

Some other notes to consider:

- Pay attention to the scale at the bottom of each chart. In each of these below, the range differs. This becomes especially important if you think that just because your favorite lake is lower on this year’s chart than last year’s chart, it obviously surveyed less fish. Watch the numbers.
- Also make sure you observe the color differences on the graphs, especially when comparing different years. While blue might mean a certain length this year, the same doesn’t necessarily apply next year.
- When these lakes are surveyed also matters, and survey results can be related to recent rainfall, water turbidity and other environmental factors. I always evaluate Sandhills

lakes differently than the rest of the state. While they rarely, if ever, survey high numbers of bass because of their vegetation and clear water, they are some of our state’s best largemouth fisheries.

- Watch for new lakes. These will usually be at the top of the list of fish surveyed, but most fish will be small. Give them a couple of years, though, as these lakes will soon be your favorites to fish.
 - Year to year, some lakes are consistent producers. Wehrspann consistently has a lot of crappies, but it also has a lot of smaller fish. In another example, Merritt is a tremendous fishery for multiple species, and a trip to Merritt is always worth your time, regardless of the survey results. Plan on fishing these waters every year and learning them as best as you can.
 - Finally, anglers should remember these forecasts can be extremely helpful when planning a fishing trip. Just from the 2020 forecast alone, I would take my young son bass fishing at Flanagan way before I would at a lake like Wehrspann, even though I personally like to fish Wehrspann. From the chart, Flanagan surveyed more than 800 largemouth bass per hour. That’s how I plan to get a newcomer interested.
- At the end of the day, you have to try these waters out yourself. To get a jumpstart on your research, visit OutdoorNebraska.org/fishingforecast.



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PHOTO BY JEFF KURRUS

SLEEP-IN TURKEYS

By Jarrod Spilger

While some states have noon or 1 p.m. closures during spring turkey season, Nebraska is one of several states that allow all day hunting. Yet few turkey hunters take advantage of this opportunity.

That’s because most hunters like to be in the woods at first light. After all, nothing beats calling in an old gobbler shortly after fly down and tagging out just as the sun is rising. However, things don’t always go as planned. Hens roosted nearby will often steal your gobbler away, leading him in the opposite direction. Sure, he may gobble at your calls, but he’s not about to leave the live hens right in front of him for a mysterious lover in the bush.

Fortunately, the day’s best hunting is still ahead. I frequently hit the woods around noon or shortly thereafter. By then, most hens have abandoned their suitors to go lay eggs and tend to their nests, leaving gobblers lonely and vulnerable.

Set up near a shaded daytime loafing area or sunlit strutting zone as confirmed by tracks and feathers. A few yelps on a box or mouth call is usually all it takes to fire up a mid-day gobbler. Once you’ve got his attention, make a few soft clucks and purrs on a slate call to seal the deal. Then get ready, because he’ll often come in silent to investigate this new girl on the block. Leave the decoys in the truck, though. You want to keep him searching and guessing until it’s too late.

I’ve bagged numerous afternoon gobblers over the past 30 years, and you can bag some, too. Sleep in this season and have a leisurely breakfast (or even lunch). There’s still plenty of time to enjoy success in Nebraska’s spring turkey woods.

Jarrod Spilger is an outdoor writer, hunter and dog lover from Grand Island.



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SPRING SEASONS RUN
MARCH 25 – MAY 31, 2020



PHOTO BY JENNY NGUYEN-WHEATLEY

INSTANT POT WALLEYE CIOPPINO

By Jenny Nguyen-Wheatley

Servings: 4

Prep Time: 10 minutes

Cooking Time: 30 minutes

Ingredients:

- ½ to 1 pound of boneless, skinless walleye fillets
- 1 pound of live mussels
- Half a medium onion
- 1 small fennel bulb, with decent fronds (leaves) intact
- 1 shallot
- 1 tablespoon of olive oil, plus extra
- 4 cloves of garlic, minced
- 2 tablespoons of tomato paste
- ½ cup of Chardonnay white wine
- Dash of red pepper flakes
- 16 ounces of clam juice
- 1½ cups canned diced tomatoes, undrained
- 1 cup of water
- 1 bay leaf
- Kosher salt, to taste
- Crusty bread and butter

1. Slice off the root end of the fennel bulb and chop white and light-green parts. Reserve the fronds (green feathery, leafy parts) for later; you can

discard the green stems. Chop onion and shallot.

2. Select the “sauté” setting on the Instant Pot and add oil. When heated, add chopped fennel, onion and shallot with a pinch of salt. Sauté for about 5 minutes or until onion turns translucent, stirring frequently.

3. Next, add tomato paste, minced garlic and red pepper flakes. Sauté for about 1 minute. Then add the white wine and scrape the bottom of the pot to release brown bits. Allow the mixture to bubble for a couple minutes.

4. Cancel the “sauté” setting. Add the canned diced tomatoes, clam juice, water and bay leaf. Follow the instructions on your Instant Pot to close the lid and prepare it for pressure cooking. Set the cook time to 15 minutes.

Meanwhile, wash mussels and remove any beards. If there are any mussels that are open, set them on the counter and see if they close. If they don’t close after a few minutes, discard them as they are likely dead. If needed, remove skin and stray bones

off walleye fillets.

5. Follow your machine’s instructions to depressurize the pot once cooking is completed. Carefully uncover the lid and set the machine to “sauté” to bring it to a boil. At this time, season the broth to taste with kosher salt. When the broth starts boiling, add the mussels and stir gently. Just when you see them beginning to open, gently add the walleye fillets. Ladle hot broth over the fillets to cook them.

Do not mix and stir the stew vigorously as the fish will break. As soon as all the mussels open and the fish turns opaque, turn off heat. Try not to overcook the mussels – the meat will shrink.

6. Discard bay leaf and season broth to taste again. Ladle the soup, fish and mussels into bowls. Discard any mussels that don’t open – they’re dead and will make you sick. Drizzle olive oil on top, season with freshly cracked pepper and garnish with roughly chopped fennel fronds. Serve immediately with crusty bread and butter.

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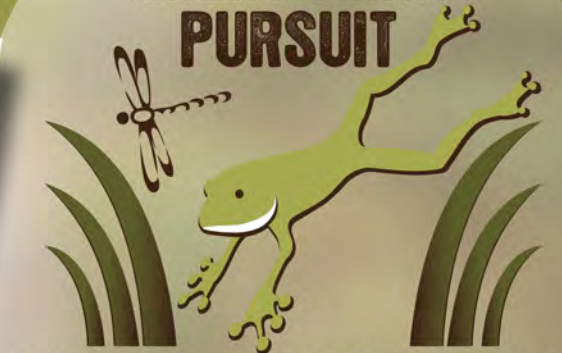
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NEBRASKA
– GAME PARKS –

TAKE A KID HUNTING

By Jarrod Spilger

There’s no nobler cause than introducing a youngster to Nebraska’s great outdoors. Many children, both girls and boys, seem to have an almost innate interest in hunting. Here are some things to remember when taking a kid hunting.



With turkey calls in hand, Richard Johnson and his son Nolan of Gretna scout for birds in Cass County.

Start Out Small

Most kids want to immediately hunt deer, but that may not be the best choice. The November firearm season is often cold, and there are many other hunters afield. Instead, think smaller and warmer. September doves are a great introductory quarry. The weather’s nice and there are usually plenty of birds. Ditto for October squirrels, since they are often quite vocal and readily available. Spring gobblers are another good bet. Warmer weather and the excitement of both calling to turkeys and hearing them respond combine to create a memorable hunt.

Use a Blind

Kids tend to fidget, and a blind will help conceal any movement, especially at the moment of truth when they go to raise their gun. It’ll also provide shelter from the elements. The pop-up blind is probably the best thing that ever happened to youth hunting.

Use the Right Gun

Don’t start youngsters with too much gun. Conversely, don’t give them too little gun, either. Many kids begin their shooting careers with a full-choked, single-shot .410. However, small payloads and tight chokes can be something of a handicap. A lightweight 20-gauge may be the better choice. It provides sufficient firepower for everything from doves to ducks to turkeys, yet won’t overpower the shooter. If the kid is big enough, a 12-gauge will also work, provided you don’t subject them to magnum loads. Mossberg makes a large variety of youth shotguns in all three of these gauges.

While shotguns are versatile, nothing beats the low-recoiling .22 rifle for introducing new shooters to guns. Plus, it can also be used to successfully hunt squirrels and rabbits.

Pack Snacks

Growing boys and girls get hungry – frequently. If you want them to stay in the blind all day (or at least for a few hours), you’ve got to bring food along. Granola bars, Rice Krispies Treats and juice boxes will keep them happy and attentive. Remember, hunting is supposed to be fun. With the right preparation, that jumpy little kid sitting next to you in the blind may just turn out to be your best hunting buddy someday.

To submit photos for the Take ‘Em Hunting campaign, which runs through May 31, visit OutdoorNebraska.org/takeemhunting.

Jeanette Smith is pictured with a harvested tom turkey in Lancaster County.



PHOTOS BY JEFF KURRUS

A 50-inch Minimum

Muskies at Merritt Reservoir

By Jeff Kurrus

Merritt Reservoir has long been one of Nebraska's top fishing destinations. Merritt is an irrigation reservoir, but unlike

some others, it fills every year because of the ample flow of the Snake River. It consistently has great water quality and abundant prey fish. And with this



Suicide Duck
Photo courtesy of
muskyshop.com

OTHER MUSKIE WATERS

Since 2010, muskies have been stocked in the following waters. They are grown at an advanced size of 12-14 inches and stocked in the spring of their second year.

- Calamus – Up to 50"
- Cottonwood-Steverson – Up to 50"
- Crescent – Stocked
- Elwood – Up to 50"
- Enders – Up to 45"
- Fremont 20 – Unknown
- L.E. Ray Lake – Up to 45"
- Merritt – State-record size
- Mormon Island West – Up to 45"
- Sandy Channel – Unknown
- Timber Point – Up to 35"
- Wagon Train – Up to 45"
- Zorinsky – Up to 40"



PHOTO BY DARYL BAUER

year's adoption of a 50-inch minimum for what many consider to be Nebraska's greatest fish, the muskellunge, Merritt has entered rarefied air as a trophy fishery.

"Merritt has alewives, white suckers and various panfish," said fisheries biologist Daryl Bauer of the Nebraska Game and Parks Commission. "There are plenty of groceries for big muskies."

Bank fishing from the dam has become a popular pastime for many anglers just after ice-out, as alewives are in shallow water and pre-spawn muskies are hungry. "Muskies don't spawn as early as walleyes or northern pike," Bauer said. "But they'll feed a lot before, going to bays and coves and trying to spawn."

Coincidentally, walleyes are in the same areas, and fish survey crews will often encounter muskies while doing walleye egg collections near the dam in April. To catch these fish, anglers will fan cast these open water areas with muskie lures – insanely large big brothers of bass and walleye tackle with names like Dirty Dancer, Hawg Wobbler, Double D and Suicide Duck. It is a test of patience, as every muskie angler knows.

"We've had days where we've caught multiple fish," said Bauer. "And we've had days when we don't see a fish all

day long."

Such is the life of a muskie angler. However, if you are not a traditional muskie angler – or are tired of casting these physically demanding lures, you can always go smaller. "If fishing smaller tackle keeps you in the game longer, this can work to your advantage," said Bauer. "Also keep in mind that smaller tackle may match the size of the baitfish a little better."

As the spring continues, anglers can still bomb the banks at Merritt with muskie tackle until summer begins. As the dog days return, there will be more open water baitfish, and muskies will pull away into that deeper water. At this time of the year, most of the muskies will be caught by walleye anglers trolling crankbaits. With the state record muskie at 52 inches now and the new 50-inch minimum, it's obvious Nebraska anglers aren't going to put many fillets of this species on the table. Muskie anglers will surely agree that is not why they want to catch one, though, and the new regulation will help protect the resource.

With Merritt's water quality and ample food, it is Nebraska's muskie capitol. So plan at least one long day in the Sandhills this spring casting for this trophy fish. Bring your big tackle, and your bigger net, and prepare for the fish of a thousand casts – knowing that it only takes one bite for your first state record fish. 

Daniel Bauer of Valentine holds a master angler muskie from Merritt.

Platte River Water Trail

Story and photos by Eric Fowler



The canoe and kayak access point on Decker Creek at Platte River State Park serves as a stopping point on the water trail between Schramm Park and Louisville state recreation areas.



Lied Platte River Bridge is part of the MoPac Trail in Cass and Sarpy counties. It will be part of a yet-to-be-completed hike-bike trail connecting Lincoln and Omaha.

I've paddled many of the state's rivers, mostly during the past 20 years creating stories on the state's water trails in this magazine. But until 2018, I hadn't floated the Platte, despite living a mere 30 miles from its course. By then, my wife, Theresa, and I had owned kayaks for five years, but we mostly paddled lakes around our home in Lincoln.

On this day, it wasn't long before we asked ourselves why we'd waited so long to float the Platte.

The Nebraska Game and Parks Commission has long promoted a 70-mile

water trail on the Platte between Fremont and Plattsmouth. Under the Commission's Venture Parks initiative, new access points were developed on the Lower Platte at Schramm Park and Louisville state recreation areas, and a stop midway at Platte River State Park, making a 6-mile section of the trail, located within an hour of more than half of the state's 1.9 million residents, more user friendly.

The Platte River begins nearly 900 miles west of this section of the water trail, on 12,000-foot-high peaks high in the Rocky Mountains of Colorado. Its north fork, the North Platte, flows into Wyoming and turns east, entering the Nebraska Panhandle near Henry. The South Platte flows northeast through Colorado and into Nebraska near Big

Springs. The two forks join at North Platte to form the Platte, which ends just 16 miles below the trail where it meets the Missouri River.

Through most of Nebraska, the river flows through a valley so broad it might be imperceptible to some. By the time it reaches Schramm Park, its valley is narrow, bordered by picturesque wooded bluffs that rise from one bank or the other, providing a scenic backdrop that adds to the experience on this water trail.

The Platte is a braided river, with many small channels winding between its high banks, constantly shifting the sand and gravel that make up its bed and forming expansive sandbars. It typically flows at between 2 and 3 miles per hour in this reach, so paddling only enough to keep on course you

When to Float

Water levels in the Platte River vary widely throughout the year and can often be too high to float safely or too low to make the trip enjoyable.

Greg Wagner, a Game and Parks public information officer in Omaha, says as a general rule, if you don't see any sandbars, the river is too high to float, and if you see more sandbars than water, your trip might be more walking than paddling.

Joel Jorgensen, a Game and Parks biologist who has spent many summers surveying least tern and piping plover nests on the river, has another tool that is useful for those who don't live near the river and want to check flows before they make the drive. He watches the U.S. Geological Survey stream gauge on the Platte at Louisville closely when determining when to go on the river. Jorgensen says ideal flows for paddling are between 7,000 and 12,000 cubic feet per second. Flows below 5,000 cfs are too little, and those above 16,000 cfs require extreme caution. When they top 18,000 cfs, he avoids the river.

A link to the USGS site, where you can zoom in and select that stream gauge from a map of all gauges in Nebraska, as well as other information on Game and Parks water trails, can be found at OutdoorNebraska.org/watertrails.

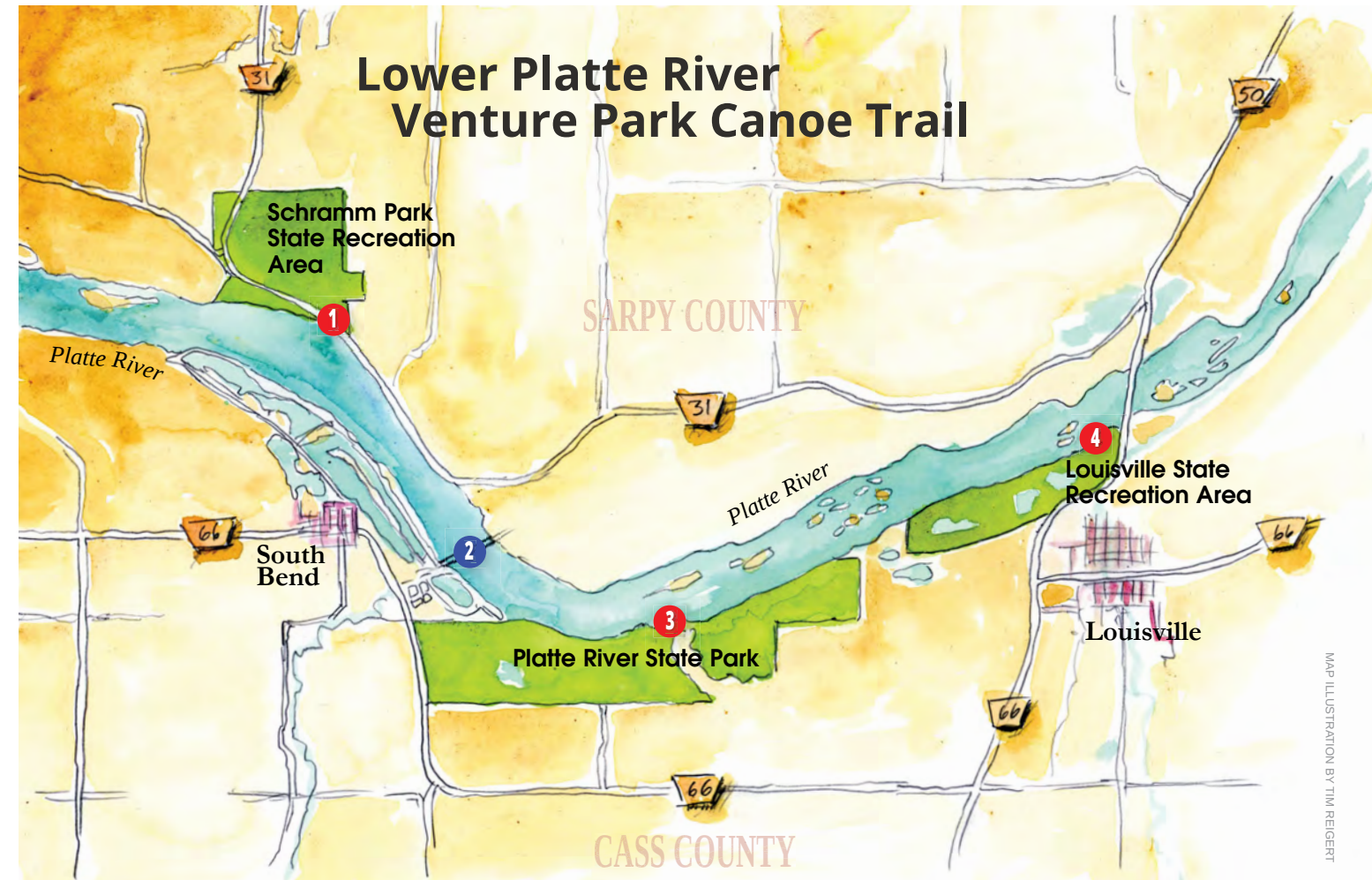
The water trails page includes safety and general rules for a float trip. A few highlights:

- Always wear a life jacket.
- The surface of the water is open to public use, but you must have permission from the adjacent landowner to stop on a sandbar or the bank, or even touch the stream bed. Where necessary, you may portage around obstacles or walk your boat through shallow water.
- Wear proper clothing and be prepared to get wet and wear shoes to protect your feet, and take dry clothes for after the trip.
- Protect yourself from the sun with sunscreen, sunglasses, a hat and long-sleeve shirt and pants.
- Carry insect repellent.
- Pack water and stay hydrated.
- If you capsize, avoid the downstream side of your canoe or kayak.
- There are no dams on this section of the Platte River or any Game and Parks water trail. When floating other rivers on your own, however, avoid these obstacles at all cost. Never float over low-head dams, which have dangerous undercurrents below them and are known to some as "drowning machines."



PHOTO BY ERIC FOWLER

The new access point at Schramm Park State Recreation Area includes a graded bank and parking off Highway 31. It is part of the Venture Park Initiative and a water trail linking Schramm, Platte River State Park and Louisville SRA.



MAP ILLUSTRATION BY TIM REIGERT

1 Schramm Park State Recreation Area – This new launch is located off Highway 31 on the north bank of the Platte River. Parking is available. **2 Lied Bridge** – This former railroad bridge that now serves as a hike-bike trail is located 1.5 miles below the launch at Schramm. It is currently closed for repairs following the 2019 flood. **3 Platte River State Park** – Located 2.9 miles from the launch at Schramm, this new stop on the water trail offers paddlers a place to take a break and have a picnic. It is located a short distance up Decker Creek on the south bank of the Platte. **4 Louisville State Recreation Area** – The end of the trail is located on the south bank of the river at the east end of the SRA, 2.8 miles below Platte River State Park. This new area features a canoe and kayak launch, boat ramp and parking.

could expect the trip from Schramm to Louisville to take three hours or less.

The redesigned section of the Platte River Water Trail begins on the southeastern corner of Schramm, where a new parking lot and launch were developed on the south side of Highway 31 and opened in 2016. Flooding in March 2019 damaged the launch, and the river drops off fairly quickly from the bank, but it is usable. Game and Parks staff is looking at ways to improve the site.

The river flows southeast from Schramm. About 1.5 miles below the park, it passes beneath the Lied Bridge, a former Rock Island Railroad line that is now part of a hike-bike trail that will eventually link trails in Lincoln and Omaha. Paddlers need to choose their route carefully under this bridge as its pilings often collect trees and other debris that should be avoided.

About one-half mile below the bridge, the river turns to the northeast. Another mile downstream, paddlers can turn up

Decker Creek, pass under the Burlington Northern Railroad bridge, and take a break at the new stop at Platte River State Park. The bank of the creek has been graded and surfaced with gravel, and a sidewalk leads to a picnic area for paddlers and others to use. Because of the distance from the nearest park road, the site wasn't built to be a put in or take out point. But anyone wanting to wheel their canoe or kayak down an maintenance road can do so.

From Platte River State Park, the river continues to the northeast. In just under 1½ miles, paddlers will reach the western edge of Louisville SRA. Here, they might opt to pitch a tent and spend the night in the River View Campground, which is accessible from the river, albeit by a steep bank. The end of the Platte River water trail is another mile downstream at the east end of the park. This new canoe and kayak access point, boat ramp and parking area opened this spring, a year later than planned thanks to damage caused by flooding last March that has since been repaired.



Morgan Zurek of Louisville (front) and Jenny Nguyen-Wheatley of Omaha carry a kayak at the Louisville State Recreation Area canoe and kayak launch.

Shuttling vehicles between Schramm and Louisville is a quick, 7-mile trip along Highways 31 and 50. The Platte River Water Trail had continued beyond Louisville to Schilling Wildlife Management Area at Plattsmouth, but flooding in 2019 washed out the access point and roads leading to it. Another option for an extended daytrip exists, however. Paddlers can launch at Catfish Run WMA on Highway 6 east of Ashland and float 2 miles down Salt Creek to its mouth at the Platte, which is 3.8 miles above the launch at Schramm. Other upstream access points include Two Rivers SRA near Venice and Platte River Landing near Valley.

Paddling the river can be a challenge, however, if you don't know how to read a river and stay in the main channel, especially when flows are low. Choose the wrong course and your float trip will become much longer as you drag your boat back to deep water.

On this reach, however, staying in deep water isn't difficult. While the main channel can shift at any time, it typically follows the left bank south from Schramm, moves to the center of the river above the Lied Bridge, and, after the river

turns to the northeast, follows the right bank to Platte River State Park. From there to Louisville, the channel may cross to the north bank and back a time or two, but it is typically deep enough to float along the south bank.

The amount of water in the river varies widely throughout the year, a factor that can also affect float times. Numerous dams have changed the historic flows in the river. Today, it is typically highest in May and June, but runoff from heavy rains can push flows to dangerous levels during any month. From July until the irrigation season ends in September, flows are lower when the diversion of surface water and groundwater pumping, for agriculture and municipal use, is at its peak. In dry years, the river may be too low to float (see page 26).

But on a summer day, a trip down this section of the Platte River is well worth the effort. And when conditions are right, there is little effort required at all, leaving plenty of time to soak in the scenery and some sun. [N](#)

Be sure to pick up next month's issue to learn about big plans for the Kearney Water Trail.

Parks on the Trail

SCHRAMM PARK SRA

South of Gretna on Highway 31. Located on the site of the state's first fish hatchery, which is now a museum. Features the new, state-of-the-art Schramm Education Center, formerly known as the Aksarben Aquarium, which includes interactive exhibits about Nebraska's aquatic and terrestrial ecosystems. The park also offers more than two miles of trails in the wooded bluffs and picnic areas.



PHOTO BY JENNY NGUYEN-WHEATLEY

Students explore the aquariums at Schramm Education Center.



PHOTO BY JEFF KURRUS

Crawdad Creek at Platte River State Park.

PLATTE RIVER STATE PARK

West of Louisville on Highway 66. Features new "glamping" cabins and other cabins, a new RV campground, restaurant, fishing pond, paddleboats, spray park, Crawdad Creek, shooting range, horseback rides, observation towers and 17½ miles of trails, including 4½ miles in a new mountain bike area.

LOUISVILLE SRA

Located on the south edge of Louisville off Highway 50. The park features RV and tent campgrounds on five sandpit lakes for fishing and swimming, a new floating playground, picnic areas and two miles of trails along the river.



PHOTO BY JEFF KURRUS

The floating playground at Louisville State Recreation Area.

Outdoor Nebraska

By Renae Blum

Ah, spring. Whether the weather cooperates or not, there's much to enjoy about being outdoors this month. For more information on the events listed below, visit Calendar.OutdoorNebraska.gov. 



LAKE WANAHOE AND RECREATION AREA
PHOTO BY ERIC FOWLER

Enter the Take 'Em Fishing challenge

Starting now | Statewide

The next time you go fishing, bring someone who's never fished before and enter the Take 'Em Fishing challenge. Not only will you gain a new fishing buddy, you'll be registered to win prizes. Learn more at OutdoorNebraska.org/TakeEmFishing.



A MONARCH BUTTERFLY NECTARS ON PURPLE CONEFLOWER
PHOTO BY ERIC FOWLER

Start planning a pollinator garden

Throughout the month | Statewide

This month, start thinking about your budget and where, when and what to plant. Most pollinator plants are full-sun, some will grow bigger than others, and some are better suited to different areas of the state. Visit pollinator.org/guides for suggestions. Make sure the species you choose produce pollen and nectar and will provide flowers throughout the growing season.



PATTERNING A SHOTGUN AT CLEAR CREEK HUNTING LODGE
PHOTO BY JENNY NGUYEN-WHEATLEY

Pattern your shotgun for spring turkey season

Throughout the month | Statewide

It's a good idea to make sure the shotgun shell load you want to use this turkey season works well in your shotgun, throwing out a uniform pattern of pellets. Use a turkey target, safe backstop and eye and ear protection. Start at 20-25 yards and move back as you feel comfortable, checking for holes and looking at the density of the pattern.

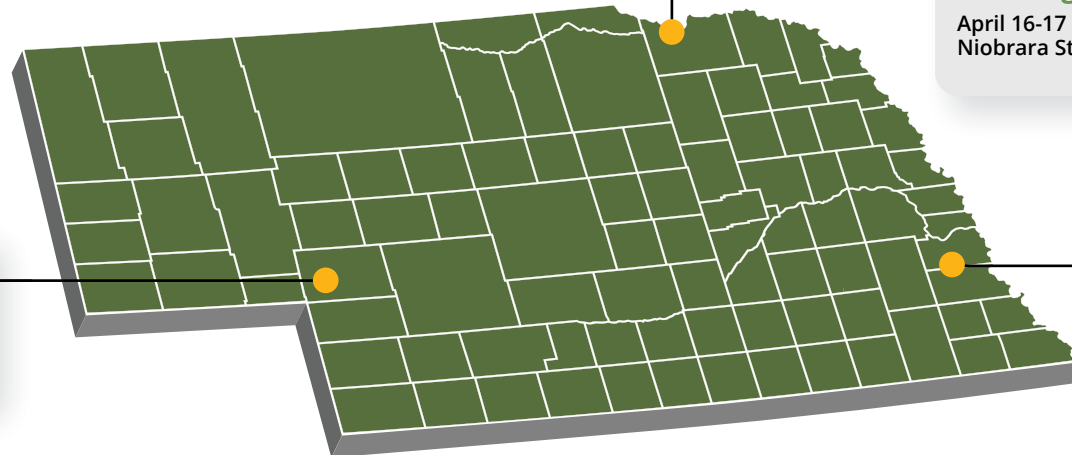


GREATER PRAIRIE CHICKEN ON THE VALENTINE NATIONAL WILDLIFE REFUGE
PHOTO BY ERIC FOWLER

View grouse courtship dances

Throughout the month | Western and central Nebraska and some southeastern locations

Strutting, stamping, leaping and whirling – greater prairie-chicken and sharp-tailed grouse courtship displays are sights to see. Males also utter a deep cooing call, referred to as “booming,” that may be heard a mile away. Viewing opportunities include free, self-guided blinds on public land and guided blind visits packaged with lodging and/or breakfast.



Nebraska Game and Parks Commission meeting

April 16-17
Niobrara State Park

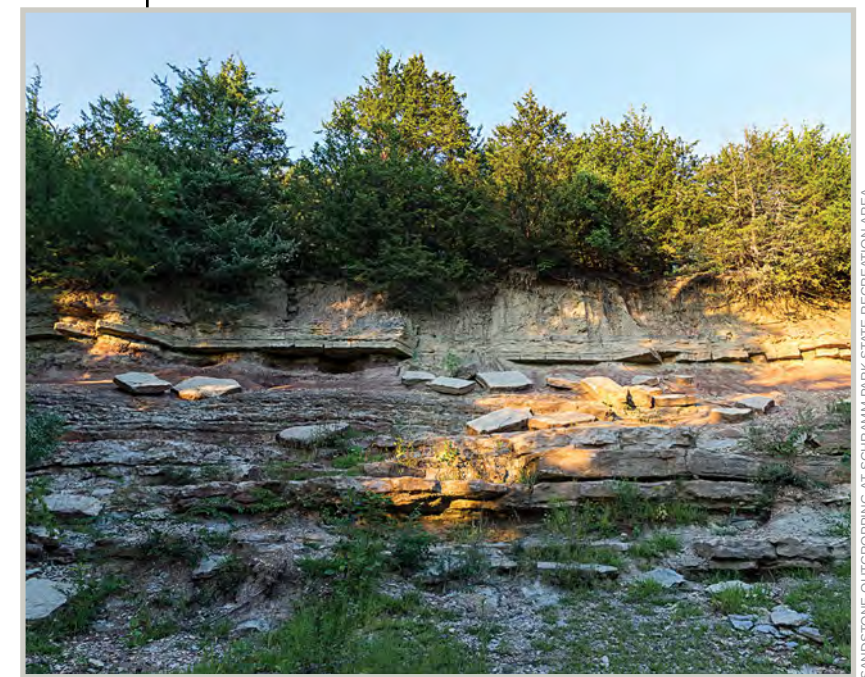
Bird Walk

April 17
Lake McConaughy State Recreation Area

Attend 'Reading the Rocks'

April 4, 10 a.m.-2 p.m.
Schramm Park Education Center

Rocks that outcrop at Schramm Park State Recreation Area display millions of years of history. Come explore what these rocks can teach us alongside expert geologists, who will be on-site from 10 a.m. to 2 p.m. Find your own fossils in the outcrop and explore hands-on learning stations where you can examine rocks and fossils.



SANDSTONE OUTCROPPING AT SCHRAMM PARK STATE RECREATION AREA
PHOTO BY JEFF KURRUS

The Pine Ridge Special

Story and photo by Justin Haag

Step away from ordinary equipment to fly-fish Nebraska's trout streams.

Let's get this out of the way early. When looking for fly-fishing advice, you might want to go elsewhere.

Mind you, I have fly-fished many times, but when it comes to getting serious about catching fish, a spinnerbait or can of nightcrawlers is usually involved.

My fly-fishing dates back to the 1990s when I was gifted a rod-and-reel combo package. As with

all fishing, it was fun. Too often, though, I ended up with a wad of line at my feet and frequent instances of both rod and line becoming snared in overhanging branches. After a little dabbling, I always retreated to spinning gear.

The Nebraska Trout Slam, which challenges anglers to catch a rainbow, brook, cutthroat and brown from the state's waters, inspired me, though. Because I am fortunate enough to live in the Pine Ridge, billed as Nebraska's only region where all four species can be caught, I figured I should add to the challenge by catching them with a fly rod.

My fly-fishing skills, or lack of them, are often to blame, but I attribute many of my problems to the nature of the streams I fish. While high on aesthetic value, they are not what I would call beginner-friendly. Whenever on one, I am reminded of the words written by the late Pat McManus, the famed humorist for *Outdoor Life*, as he was distinguishing a "creek" and a "crick."

"First of all a creek has none of the raucous, vulgar, freewheeling character of a crick," McManus wrote. "If they were people, creeks would wear tuxedos and amuse themselves with the ballet, opera, and witty conversation; cricks would go around in their undershirts and amuse themselves with the Saturday night fights, taverns, and humorous belching. Creeks would perspire and cricks, sweat. Creeks would smoke pipes; cricks, chew and spit."

Whether or not our pretty streams deserve such categorization, their narrow turns, overhanging branches and encroaching vegetation pose some special considerations for gear and have surely triggered many a swear word from anglers. After a sizable dose of struggle, I began looking for tips.

For fly-fishing small streams in tight quarters, the experts recommend a light outfit. That is, short rod with light line. Unfortunately, I did not find such a configuration from local retailers. Seems fly rods sold in beginner kits are designed for casting long distances with length of about 9 feet and heavy line. They work well for ponds and rivers, but are overkill and cumbersome for getting around small streams.



Tiger Trout (*Salmo trutta* × *Salvelinus fontinalis*) and Vintage Automatic Fly Reel at Soldier Creek Wilderness Area in Sioux County.

My chosen rod became the fiberglass Eagle Claw Featherlight. Available at just 6 feet, 6 inches it works about as well as one could hope for battling the brush. Both its cork handle and \$25 price tag, much less than most other fly rods, are attractive features.

Another great suggestion unearthed from my research is the automatic fly reel. While fly-fishing purists may scoff at anything with "automatic" in the name, this is surely the most attractive part of my set-up. Upon a lever pull with the trigger finger, a spring-loaded mechanism quickly spools a pile of slack line piled at your feet – a pile that, as previously mentioned, is sure to become tangled in the tall vegetation characteristic of a "crick."

A few manufacturers produce automatic fly reels, but the reviews of new products are less favorable than merchandise of yesteryear.

Martin of Mohawk, New York, became the leader in automatic reels in the mid-1900s. Available in both upright and horizontal configurations, the reels came in a variety of sizes and models. On eBay, I found the Martin No. 47 – with patent numbers registered in 1939 and 1942 – for \$20.50. Capitalizing on their ingenuity, the company used the same winding mechanism on similar-looking items labeled "dog

exercisers."

When ol' 47 arrived on my doorstep, I admired its hefty metal build – not an ounce of plastic to be found on an attractive forest green and chrome body. I spooled it with some three-weight floating line, added a tapered leader and gave it a cast. It is hard to imagine that the reel worked any better in 1950 than it does today.

The package's true test, though, came during its first venture up the middle fork of Soldier Creek in March 2018. There, in a small pocket of water in the shadow from pretty rocks, the first of several brook trout fell victim to this set-up. The joy of succeeding with my new-slash-old "Pine Ridge special" surely matched what I experienced upon catching my first fish with a Zebco spincast in the 1970s.

One parting tip from a struggling fly angler: As with most endeavors, practice pays. Casting a fly rod is a fun thing to do with targets and obstacles, and no trout to spook, in the backyard. Especially work on the roll cast, which will help you get below those snag-inducing branches.

Whether or not I am qualified to give advice for fly-fishing will always be debatable, though. Regardless, a few adjustments to my approach has certainly made my hikes up the creek – or, crick – more enjoyable. 🍷

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Automatic *Reels*



Model 27 Two Strip-
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90 ft. of size 6 line.

Model 28 Four Strip-
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If you have never used a Martin Automatic, now is your chance to do so. And when you learn how effortlessly it takes care of slack line, how it enables you to make more and better casts, how it adds sportsmanship to your fishing, you will never be without one again.

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1. Smooth, non-reflecting exterior offers no projections to snag line.
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7. Spring release instantly removes tension without revolving the line spool.
8. Light enough in weight for your lightest rod.

1945 print ad for a Martin Model 27 and 28 Fly-water Automatic Fishing Reel.

Lichens

How Fungi Became Farmers

Story and photos by Gerry Steinauer

Most people have seen lichens, those green, gray or yellow growths on the bark of trees, the shaded side of old sheds or on rocks down by the creek, but few take notice of them. If they do, many assume they are a plant, moss, fungus or who knows what.

Lichens are none of the above, and are instead a strange living partnership between a fungus and one or more alga species that look (and act) like a single species. Viewed in another light, they are fungi that have taken up farming using algae.

Lichens first appeared in the fossil record nearly 400

million years ago, and the union of fungi and algae has occurred several times over evolutionary history. Today, more than 19,000 known species live in habitats ranging from the frozen poles to steamy tropical rainforests, from bone-dry deserts to rocky mountaintops. They come in an amazing array of colors, sizes and forms.

The Organism

Most people are familiar with the mushroom-forming fungi, but the majority of lichen-forming fungi belong to the



Lichens grow on a variety of substrates, mainly rock, soil, bark and wood. Above, several species of foliose lichens grow on a partially-shaded, old barn door in southeastern South Dakota.



Desert firedot lichen (orange-colored), a crustose species, covers a sandstone outcrop in the dry Wildcat Hills of Scotts Bluff County.

less familiar cup fungi, which includes the molds and rusts, but also the delicious morel. The algal partners are mainly green and blue-green algae, single-celled organisms that contain chlorophyll for photosynthesis.

When a lichen-forming fungus comes in contact with the appropriate type of alga, it envelops the alga cells. Once the cells are captured, the fungus undergoes a transformation, forming a thallus, the main body of the lichen. Depending on the lichen species, the alga cells either form a layer near the upper surface or are dispersed throughout the thallus.

The main growth forms of lichens are crustose, foliose and fruticose. Crustose lichens, which are the most common type in our region, are flat and crust-like, and adhere tightly to their substrates such as rock or bark. The less common foliose lichens are leaf-like and spreading and adhere more loosely to their substrates. Fruticose lichens, uncommon in our region, are often upright and shrubby or hang in long narrow strands, mainly from trees.

In the past, lichenologists thought the partnership between a fungus and an alga was mutually beneficial. They now believe that, in many cases, it is more of a parasitic



Hooded sunburst lichen grows on the bark of an ironwood tree in moist deciduous woodlands in the central Niobrara River Valley in Brown County.



Shade-tolerant foliose lichens, including cracked ruffle lichen (large, gray species on the left), hoary rosette lichen (small gray species) and sunburst lichens (yellowish green species), cloak a Dakota Sandstone boulder in oak woodlands in Jefferson County. Dakota sandstone boulders located in nearby prairie support more heat- and drought-tolerant crustose lichens.

relationship, in which the fungal partner is the principal beneficiary, extracting and using sugars from the algae produced through photosynthesis. Put more simply, the fungi might be enslaving the algae for food production (typically fungi obtain their food by decomposing organic matter). Strangely, algal cells, when confined within a lichen, become leaky and exude sugars for the fungus to absorb.

The algae do receive something out of the bargain, mainly a relatively safe place to live within the lichen where they are

protected from direct sunlight and herbivory and provided a more consistent supply of water.

Habitats

Lichens grow on a variety of substrates, mainly bark, wood, rock and soil, but also a few peculiar ones such as tortoise shells and the backs of particular insects. Most species are restricted to specific substrates. Some bark-inhabiting

lichens, for example, will grow only on oaks whose bark is rough and acidic, while others will grow only on the bark of young silver maples which is smooth and less acidic. Others are found only on the highly resinous bark of coniferous trees, such as pines.

Many rock-inhabiting lichens grow only on calcareous rocks, such as limestone and marble, while other species inhabit only non-calcareous, but silicate-rich, granite and schist. Still others grow only on loosely textured sandstone



A pixie cup lichen, a fruticose species, grows on a downed log in a spring-branch canyon on the central Niobrara River Valley in Brown County. The trumpet-like formations are stalks topped with disc-shaped ascomata, reproductive structures.

that retains moisture, while some species are restricted to iron or other metal-rich rocks. Interestingly, the latter species can often tolerate metals, such as copper, that kill other organisms.

Lichens, which have no mechanism to prevent desiccation, survive on exposed rocks and other extreme habitats by drying out and not photosynthesizing during periods of extreme heat, cold or drought. In arid climates, such as deserts, they often subsist only on dew, capturing what little moisture there is each night and photosynthesizing until mid-morning when the lichen dries out. Because conditions for optimal photosynthesis may not last long each day, most lichens grow slowly, often only a few hundredths of an inch per year. On the flipside, they have long life spans. A map lichen growing in the Arctic is estimated to be 8,600 years old, making it one of the Earth's oldest living organisms.

Reproduction

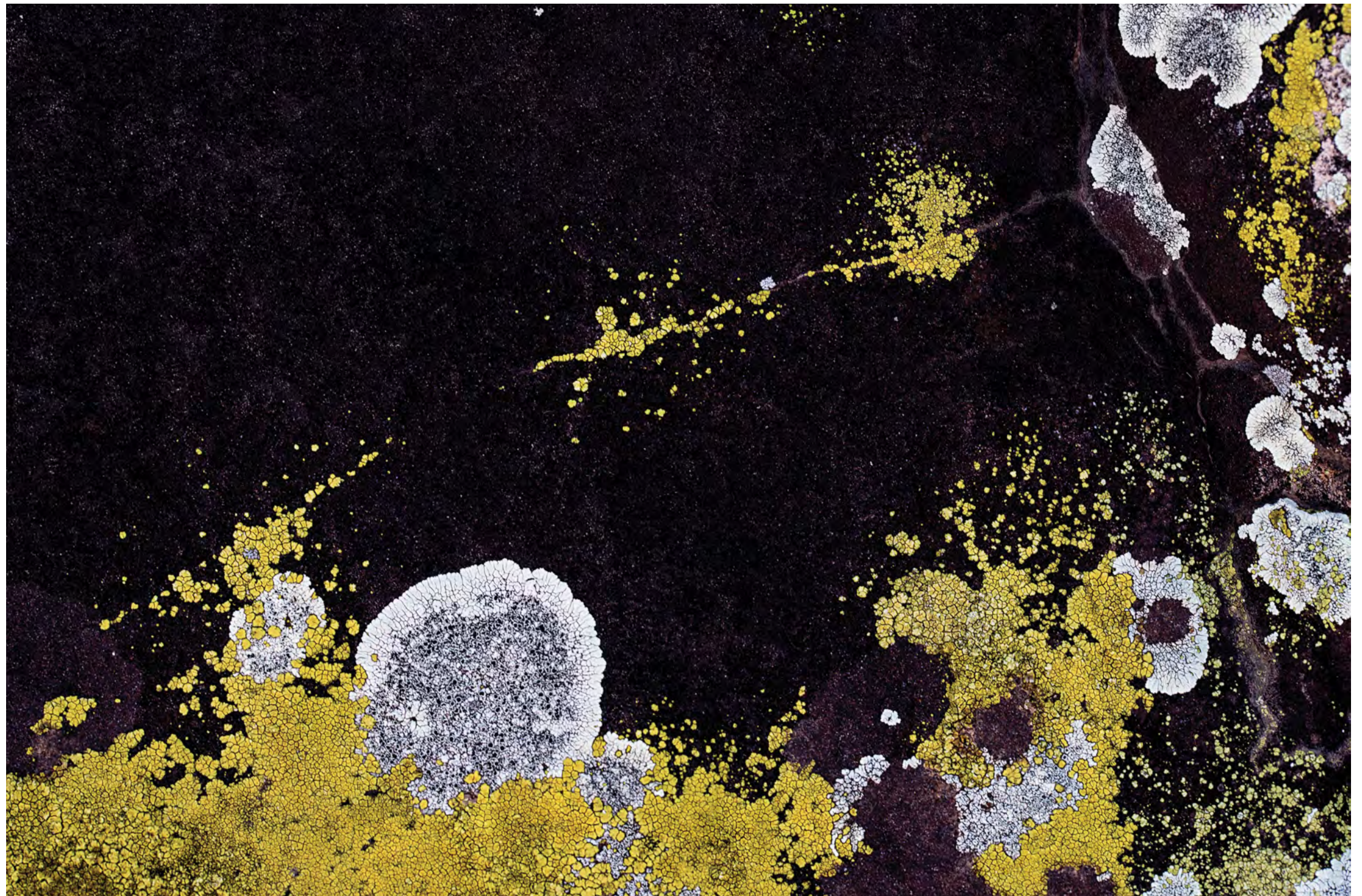
Lichens reproduce sexually and asexually (vegetatively). As for the latter, dry lichens can simply break into fragments that are wind dispersed and, if they land on a suitable substrate, resume growth when moisture returns. Many lichen species also have specialized outgrowths containing both alga and fungus cells designed to break off and form new lichens.

In lichens undergoing sexual reproduction, spores are usually produced in open disc-shaped or closed dome-shaped structures called ascomata. During sexual reproduction, only the fungus is reproduced, and the young fungus must find and capture the appropriate alga for a new lichen to form. This is a chancy event, and may explain why lichens put more stock in the less risky, asexual reproduction.

Color

Lichens come in an array of colors. Those growing in exposed, somewhat dry habitats are often brightly-colored, commonly red or orange. The green algae in these lichens can be damaged by excess sunlight, and the colorful pigments, located near the lichens' surface, protect the algae from strong

light. A lichen's color also helps regulate its temperature, thus optimizing photosynthesis. Polar and alpine lichens, for instance, tend to be dark-colored, which aides in the absorption of sunlight, warming the lichens, whereas the light color of most desert lichens reflects sunlight, cooling them. Lichens lacking pigments typically express the color of their algal cells, which range from bright green to dull olive.



The crustose golden moonglow lichen (white) and gold cobblestone lichen (yellow) pattern a Sioux Quartzite (darker color form) glacial boulder located in tallgrass prairie in Jefferson County. Both species are commonly found on Sioux Quartzite.

Diversity

Approximately 5,600 lichen species are known from the continental United States and Canada with roughly 1,110 of these occurring in the Great Plains. In North America, lichen diversity is richest in the moist and shaded eastern deciduous forests; the rugged and diverse Rocky Mountain region; and the cold, northern forests and peatlands. Roughly 350 species are known from Nebraska. For comparison, 700 species have been documented for Wyoming and 500 species for the forest-rich Missouri. Since the year 2000, however, biologists have documented more than 100 new species for our state. These collections were gathered mostly from the western pine escarpments and the cool, moist, central Niobrara Valley. Many more species are certainly awaiting discovery.

Lichens are notoriously difficult to identify, often requiring



Elegant sunburst lichen graces a marble tombstone (date of death 1911) in a prairie cemetery in southeastern South Dakota.



Golden moonglow lichen grows on a Sioux Quartzite glacial boulder in Jefferson County. The color of this lichen ranges from whitish (see photo on page 39) to grayish depending on the thickness the powdery covering on its exterior, which is probably related to exposure.

chemical tests and microscopic inspection to key them to the species level. Unfortunately, very few biologists have lichen expertise, which limits our ability to survey for them.

Ecology

Though small in stature, lichens play critical roles in nature. In arid regions, such as the Great Basin, for instance, soil crusts formed in part of lichens help stabilize soils, and lichens containing nitrogen-fixing algae enhance soil fertility. In alpine and boreal regions and areas of the Plains, where lichens are abundant, they help conserve soil moisture, reflect heat and weather and break down rocks, the initial stage in soil development. In areas of Canada, restorationists now establish lichens in recently burned

forests to enhance soil quality and to increase the success of tree plantings.

Lichens are used by a variety of wildlife as food, shelter and nesting. Locally, hummingbirds and peewees both use lichens to camouflage their nests. Lichens compose roughly 90 percent of the caribou’s diet and are also eaten by mule and white-tailed deer, mountain goat, moose, possibly pronghorn, squirrels, chipmunks and numerous insects. Native Americans also used lichens as food, as well as medicine, clothing material, dyes and tanning agents.

Because lichens absorb most of their nutrients and water from the air, rainfall and dew, they are especially sensitive to air pollution. In or near cities or industrial sites, they can accumulate lethal amounts of heavy metals, sulphur and other compounds and their presence or absence is

an indicator of air quality. In addition, most lichens are extremely sensitive to changes in precipitation, and climate change can be indicated and tracked by monitoring lichen community composition.

Lichens are evolution at its most creative and most practical. Through eons, nature has spun two unique life forms, fungus and alga, into one. The resulting organisms now span the Earth fulfilling crucial ecological roles and impinging beauty upon the land. Unfortunately, lichens are little known and poorly understood by most people, so next time you are out and about in the great outdoors, take notice of them. 

Gerry Steinauer is a botanist for the Nebraska Game and Parks Commission. Caleb Morse, Kansas University, identified the lichens shown in the photographs.

A Dugout Flood

By David L. Bristow, History Nebraska

Imagine yourself as a pioneer living in a hole in the ground. Now imagine that floodwater is rising toward the ceiling. Welcome to rural Boone County in 1873.

The sod house is iconic of Nebraska's frontier period, but many pioneers started out in an even simpler form of housing – the dugout. Historian Everett Dick described how to build one in his 1975 book *Conquering the Great American Desert*. In short: dig a rectangular hole into a hillside or a ravine. The open side should face east to catch the morning light and so that snow will blow away from the door. Enclose the open front with a wall of logs or sod. Leave a space for a

door; a window is optional. Roof the hole with “poles, brush, hay, and earth.”

Your house will be cheap, quickly built, cool in summer and warm in winter. It will also be cramped, dark, dirty and full of every critter in the ground. But it will do until you plant your first crop and have time to build a proper soddy or frame house.

Depending on their location, dugouts had a more serious drawback. Many settlers dug them into a high bank beside a creek, where you had a steep slope plus water and timber nearby.



“Keeps Bachelors Hall,” wrote photographer Solomon Butcher of these men near Ansley, Nebraska, in 1888. History Nebraska RG2608-0-1397



Photo labeled “Our Home,” near McCook, 1890s. H. W. Cole Collection, History Nebraska RG3464-0-3

John Turner dug such a house in Boone County. A neighbor told him the spot was high enough even if the creek should rise, and Turner lived there with his wife and three boys while he built a sod house on another part of his claim.

But Turner, a recent immigrant from England, didn't expect the severity of the thunderstorm that struck one day while he and the two older boys worked on the soddy. He sent 12-year-old Edgar back to the dugout to check on his wife and youngest child. Edgar soon came back hollering and waving his hands.

Turner ran for the dugout and waded through the rising water, struggling to keep his balance against the current. The dugout itself was flooded. Inside, Mrs. Turner sat on one of the wooden doors the family was using as temporary flooring. Balanced on a floating door, she held the youngest boy while holding a frying pan over his head to protect him from the rainwater pouring through the roof like a sieve.

“Higher and higher the two caged birds were lifted till their heads almost touched the roof,” Turner wrote years later.

He had to get them out quickly. He grabbed the little boy, waded across the creek and left the child on high ground. Then he went back for his wife.

Turner was carrying his wife across when he stepped in a hole, stumbled and dropped her into the rushing water. Somehow, he stayed on his feet and grabbed hold of her dress.

“We scrambled and struggled through to the other side the best way we could,” he wrote.

The Turners lost most of their supplies, but escaped without loss of life. They stuck it out on their claim, and in 1903 Turner published a memoir, *Pioneers of the West*, recounting this and many other hardships that the family

met with a combination of hopefulness, ignorance and fortitude. [N](#)

Visit History Nebraska's website at history.nebraska.gov.



Home of D. Meek, south of Broken Bow, 1890. Photo by S.D. Butcher. History Nebraska RG2608-0-1610



Roten Valley, Custer County, Nebraska, 1892. Photo by S.D. Butcher. History Nebraska RG2608-0-1677

Just an Eagle

Story and photos by Dina Barta

Last spring, I received a call from conservation officer Matt Seitz who asked me to pick up an eagle that had fallen from a nest near Barneston. Although I was on vacation at the time, I couldn't pass up the opportunity to hold a baby eagle. I said I would get it and went out to meet the farmer who knew where the bird was located.

Gary Remmers was working in his field on April 27 when he noticed something yellow and out of place on the ground. Remmers stopped his tractor and moved closer to inspect. To his astonishment, a large ball of fluff with large talons and a huge bill sat

before him. Remmers called his son, Justin, who assisted him with the baby bald eagle. Justin told me that when he got there, he noticed an eagle's nest 40 feet up in a nearby tree. Adult eagles circled and screamed at them as they picked up the young bird.

Justin agreed to meet me in Wymore. I was expecting to see a small ball of white fluff or a bird that was nearly ready to fledge. I did not expect a prehistoric-looking, chicken-like thing with gray, wool-like feathers covering its body. The baby eagle's down felt like a sheep's coat. The bird was calm when we made the transfer at Rex Adams' home in Wymore. We took a

few photos, and from there, I went on my way to Fontenelle Forest's Raptor Recovery in Elmwood.

Betsy and Doug Finch waited for my arrival. Betsy looked for injuries on the exam table while speaking to the bird in a comforting, assuring tone. It seemed to understand and stood up as tall as it could, spreading its nubby wings as if to say "all good." Betsy found no injuries, which was amazing since this bird had no wings that could help it to glide down to the ground. To prevent the young bird from imprinting on humans, Betsy fed it a small meal with an adult eagle in view.

Raptor Recovery decided not to return the bird to the nest. For one thing, finding a way to get it there would be a feat, and secondly, we did not know if another eaglet had pushed this bird out of the nest while competing for food. It was lucky to survive one fall without injury. We did not want to take a chance on another one.

For the next few months, Raptor



Top: Gary Remmers, Justin Remmers, Doug Finch and Betsy Finch pose for one last picture with the juvenile eagle before release. Bottom: Doug Finch, a Raptor Recovery volunteer, releases the bird at a state recreation area in Gage County.



Conservation officer Dina Barta picks up a baby eagle that Justin Remmers and his father rescued on their farm.



Betsy Finch examines the eaglet for injuries at Fontenelle Forest's Raptor Recovery in Elmwood.

Recovery made sure the eagle stayed healthy and imprinted only on other eagles. In late September, Betsy called to say that the bird was ready for release. She contacted Justin and Gary Remmers as well, and we made plans to meet at a nearby state recreation area. The Remmers said that the eaglet's family had left the nest on their property and that the birds have been seen at the recreation area. Betsy asked me if I could assist in catching the eagle in its flight pen. Of course, I said yes!

Catching an eagle in a flight pen is always an adventure. Even though this eagle had been saved by humans, it wanted nothing to do with us. When I walked into the flight pen and saw the huge bird, I completely froze – not in fear but in admiration. As it flew overhead, I stood in awe and watched its long wingspan block out the light. The sound of an eagle's wings moving the air always sends chills down my spine. As I stood by, useless, Betsy, Doug and Brooke Manes caught the

bird. Brooke was the first to be able to grab and control its talons; the bird seemingly wanted to eat Brooke's face. Before leaving Raptor Recovery, volunteers weighed and outfitted the eagle with some "bling" in the form of a leg band. Since its arrival, the eagle grew from 3 to 9½ pounds.

At the state recreation area in Gage County, we met Gary, Justin and Lynn Remmers, as well as a family friend. Rex Adams and CO Seitz also came out to watch. After a few quick photos, we released the eagle.

The moment passed quickly. The bird flew right over us and did not look back. It soared out to the lake, and for a moment, I feared it was going to go into the water. I asked if anyone knew of a boat nearby. The eagle continued to descend toward the water, and to my relief, it hovered just a few inches above the lake, its wingtips even touching the water a couple of times. It was enjoying its freedom. Then it flew to the other side of the lake and landed on the shore. We

watched for about 15 minutes, until it got up and took off into a grove of trees where we lost sight.

"Just an eagle." It was just an eagle that touched a few lives and made friends out of strangers. **N**

Dina Barta has been a conservation officer for the Nebraska Game and Parks Commission since 1992.





SMITH FALLS CAMPING. PHOTO COURTESY OF THE NEBRASKA TOURISM COMMISSION

VISIT CHERRY COUNTY

By Bobby Olson, Nebraska Tourism Commission

In Cherry County, Nebraska’s largest county, the adventure is only limited by the length of your trip.

Up here, outdoor recreation is the name of the game. With nearly 50 years of experience in leading people down the Niobrara National Scenic River, Sharp’s Outfitters is known for providing one of Nebraska’s finest float trips. You can even pick your mode of transportation from a selection of canoes, kayaks or tubes. If you’d rather relax on shore, Sharp’s Campground features 2½ miles of premium riverside campsites including RV hookups, showers and a clubhouse.

Nearby, check out the stunning views at Fort Niobrara National Wildlife Refuge or hike up to Smith Falls, Nebraska’s highest waterfall, where standing under the water is a cold treat. For another Sandhills experience, head to Samuel R. McKelvie National Forest or take in some history at the Arthur Bowring Sandhills Ranch State Historical Park in Merriman.

You’ll likely have worked up an appetite after all that exploration, so why not head into town for some chow. Valentine’s Peppermill Restaurant & Lounge offers an unparalleled prime rib in addition to their other Nebraska beef options. In fact, they freely admit that “aging steak properly and not cutting your selection until it is ordered is a bit of an obsession.”

If fine dining is what you’re after, look no further than The Prairie Club. These 5-star meals are served overlooking both the gorgeous Snake River canyon and a golf course that gives

Scotland’s Bandon Dunes a run for its money. While there, be sure to try a glass of Niobrara Valley Vineyards’ Marquette, an INDY International Wine Competition silver medalist.

However, Marquette is by no means the only wine the Niobrara Valley Vineyards has received acclaim for, and it’s an absolute pleasure to visit with the owners in their Nenzel tasting room. For the beer drinkers out there, try Bolo Beer Company’s Aquifer Ale to discover a crisp and refreshing pilsner brewed with just a hint of Nebraska corn and pure Ogallala Aquifer water.

When you’re ready to drop exhaustedly into bed, The Prairie Club features lodging that ranges from a rustic bunkhouse to an elaborate room in the main lodge, for those interested in spending some time hitting the links. A more typical hotel stay is available at The Niobrara Lodge, but if you’re looking to stay off the beaten path then you can’t go wrong with Heartland Elk Guest Ranch or Niobrara River Ranch.

Either way, consider planning your rest around the Nebraska Star Party, a popular Merritt Reservoir event where locals and visitors alike gather atop a bluff to view the stars under some of the clearest skies in the country. Don’t worry, you won’t need a telescope for this – though you’re welcome to bring one. This year, join the fun July 19-24.

Since you’re probably itching to start planning your trip, feel free to check visitvalentine.com or visitnebraska.com for more helpful information.

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THREATENED AND ENDANGERED: THE GINSENG

By Gerry Steinauer

Ginseng is a fabled plant of folk medicine. For centuries, the root, consumed raw, pickled, dried or powdered, has had purported curative powers. In recent decades, poaching and over-harvesting of the plant for medicinal use has led to population declines over much of its range – the moist deciduous forests of the eastern United States and Canada.

A perennial, ginseng (*Panax quinquefolius*) has a thick taproot from which rises a solitary stem reaching up to a foot in height. The few compound leaves are long-petioled and similar in appearance to those of the abundant woodbine, which ginseng often grows with and is mistaken for. The small white to greenish flowers, arranged in a terminal cluster, bloom from late May into June and the distinctive bright red, fleshy berries ripen in July and August.

In Nebraska, ginseng grows in rich, Missouri River bluff woodlands and is known from only five locations, all of which are on conservation lands. These populations range in size from just a few to about 50 plants. Here, at the dry western edge of the species range, ginseng has likely never been overly abundant, but the fact that the Pawnee once used the plant in a love charm, along with the roots and flowers of other plants, indicates it was once likely more abundant than it is today. Since Euroamerican settlement, habitat destruction has led to population declines, and ginseng is now a state threatened species.

Ginseng is now wild-harvested and even farmed under

wooded canopies in many eastern states. The dried root is exported in great quantities, most going to China, where Asian ginseng (*P. ginseng*) has been a medicinal plant for millennia. The United States Fish and Wildlife Service has approved regulated harvest of ginseng in 19 states, but not Nebraska where harvest or possession of the plant is illegal. It is so rare in our state that poaching is likely not profitable nor an issue.

Though touted for enhancing mental health, a recent Oregon State study found that ginseng extracts provided no psychological benefits to humans. Science has also not confirmed many of the plant's other purported medicinal values. Studies do suggest that the plant's ginsenoside compounds have antioxidant properties, inhibit the growth of certain types of cancer cells and lower blood sugar in Type II diabetics among other benefits. Many medical professionals, however, warn that the quality and reliability of many ginseng supplements are questionable, and some have been found to contain dangerous amounts of heavy metals.

One of Nebraska's ginseng populations grows at Ponca State Park. Here, biologists, funded through the Nebraska Environmental Trust, are controlling invasive plants and using prescribed fire and tree thinning to enhance the oak woodlands. Such management also promotes native plants including ginseng. Hopefully, conservation management at the park and other sites will allow this rare medicinal plant to survive in our state.



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<https://environmentaltrust.nebraska.gov/>

NebraskaLand Photo



PHOTO BY CHRIS MASADA

THE EYE-CATCHING BLACKBIRD

By Joel Jorgensen

A handful of blackbird species are some of the first migratory birds to arrive in Nebraska and are a sure sign of the coming spring. Unfortunately, these seemingly plain black, brown or glossy plumaged birds can be easily overlooked, but there is one blackbird species that demands attention. Yellow-headed blackbirds stand out and provide a flash of color upon their arrival in early April when the landscape is just beginning to turn green. Similar to other blackbird species, males migrate earlier in spring than females. Compact flocks of males sporting vivid buttercup yellow heads with contrasting bold white wing patches often number in the hundreds and will move together seamlessly in single-species flocks. Their preferred habitats include wetlands, cattle yards and open country.

Yellow-headed blackbirds not only migrate through Nebraska but also nest locally in the interior of wetlands that possess standing water and dense stands of cattails or other emergent vegetation. The earlier migrating males establish territories prior to the arrival of females. Males broadcast from their territories by vocalizing an unmusical, raspy and dizzying buzz that has been described as sounding

phonetically like “kuk – koh-koh-koh – waaaaaaa.” Although this species’ song is unmusical, the sound is synonymous with a Nebraska marsh in spring. Males are polygynous and attract a harem of females to their territory.

The largest breeding populations of yellow-headed blackbirds occur in the wetlands of the Sandhills and the Rainwater Basin, but this species can breed anywhere in the state if suitable habitat exists. Most yellow-headed blackbirds have moved south of Nebraska by November as this species regularly spends the winter in the Southwest and in Mexico.

Interestingly, Nebraska claims a little bit of historical significance with respect to this species. The yellow-headed blackbird was first described by French ornithologist Charles Lucien Bonaparte in 1820 from a specimen collected along the Loup River near Fullerton in Nance County. No doubt that boldly colored blackbird that ultimately was sacrificed for science was a little too noticeable for its own good.

Joel Jorgensen is the nongame bird program manager for the Nebraska Game and Parks Commission.

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PHOTO BY JUSTIN HAAG

RAIN, RAIN, GO AWAY

By Martha D. Schulski

Landscape hues shift from shades of brown and dirty white to hints of green that pop from long-dormant trees. The spring sun warms the daytime, while nights hang on to the last bit of winter’s chill. Cloud patterns change from stretched-out white and gray layers (stratiform) to cotton ball masses (cumuliform) that can expand the depth of the atmosphere. Rainfall begins in earnest and ramps up with intensity toward our wettest months of the year on average – May and June.

Have you noticed that when we do get rain, it usually happens in the evening and overnight hours? Rainfall occurs through several primary mechanisms, such as a large-scale weather front marching across the Plains or daytime heating that generates rising air currents. The latter can occur on a localized scale with distinct boundaries of where it rains and where it doesn’t, thanks to those cotton-ball-looking clouds that meteorologists call cumulus.

Rainfall also occurs on a regional scale, resulting in more widespread areas of rainfall that can cover several counties

or bigger. These convective events provide us with an abundance of rainfall in the late afternoon to overnight hours, when compared to dawn and daytime hours. They can also impact large swaths of Nebraska before losing energy and dying out.

Have you also noticed that we seem to be getting more rain lately? Well, your perception is right. Much of Nebraska has gotten wetter – about 10 percent more for our annual total since systematic record-keeping began. In fact, without going back more than a century, 2019 was the second wettest year on record (behind 1993). April, May and June, in particular, is the time of year when we are seeing more rain.

So, get ready for wetter evenings and nights. You might have been thinking “rain, rain, go away,” but be sure and bookend that with “come again another day.” Timing is everything when it comes to the weather.

Martha D. Shulski, at the University of Nebraska-Lincoln, is the director of the Nebraska State Climate office.

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DONATE TO WILDLIFE THIS TAX SEASON

By Jerry Kane

Nebraskans receiving a tax refund this year have an opportunity to support wildlife and habitat conservation.

On Line 45 of the Nebraska state income tax form, individuals may donate all or part of their tax refund to the Nebraska Wildlife Conservation Fund, which helps thousands of species in Nebraska, particularly those that are rare, endangered or threatened.

Tax refund donations have benefited many species over the years, including the river otter, swift fox, peregrine falcon, bald eagle, songbirds and at-risk pollinators like monarch butterflies and bumble bees. Donations are used to maintain and improve habitat for these and many other fish and wildlife species, as well as to provide wildlife viewing and other educational opportunities for Nebraskans. Additional information is available at nebraskawildlifefund.org.

For taxpayers not entitled to a state tax refund, contributions can be made at nebraskawildlifefund.org or by mail to: Nebraska Wildlife Conservation Fund, Nebraska Game and Parks Commission, P.O. Box 30370, 2200 N. 33rd St., Lincoln, NE 68503.



In 2008, University of Nebraska–Lincoln graduate student Kent Fricke released a river otter into a slough along the Platte River in Hall County. This once-endangered Nebraska species was delisted in January 2020 – thanks in part to financing from the Wildlife Conservation Fund.

PHOTO BY ERIC FOWLER



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NEW RESEARCH ON EASTERN REDCEDAR

By Renae Blum

For decades, mechanical removal has been a key strategy to control eastern redcedar, an invasive species sweeping north across the Great Plains. But new research from the University of Nebraska-Lincoln indicates that this method isn't as successful as previously expected.

Eastern redcedar moves aggressively, with the ability to convert open grasslands to woodland in as little as 40 years, and it's happening on a large scale. Our current strategies aren't keeping pace with the rate of invasion, said Dillon Fogarty, a UN-L Ph.D. student studying cedar invasion.

"Large investments have been put into mechanical removal, but it hasn't halted encroachment in Nebraska, let alone reversed trends," Fogarty said. "This species is continuing to spread rapidly, putting Nebraska's grasslands at risk."

Part of the issue, Fogarty said, is that mechanical removal is a reactive method, not a preventative one. Typically, large trees are removed with mechanical treatments, which means these treatments are used in places where invasion has already become a problem. Meanwhile, redcedar continues to move unchecked into previously intact grasslands.

It's also expensive: mechanical removal can cost up to \$150 per acre in the Sandhills, the equivalent of \$150,000 to treat just 1,000 acres. Costs are even higher in regions where more trees are established. For example, costs of \$1,000 per acre are now common in regions of Kansas.

"Simply put, mechanical treatments alone are too expensive to confront the problem at a large scale and over a long period of time," Fogarty said.

An alternative strategy that landowners can incorporate into their management plan is prescribed fire, Fogarty said. It's cost-effective and can be used to target all stages of redcedar invasion, from seeds to seedlings, small trees and large trees. Because of this, prescribed burns can be used to stop invasion before it becomes a problem, as well as restore grasslands after invasion, Fogarty said.

And contrary to popular opinion, it's relatively safe to use compared to mechanical treatments. To compare levels of risk between mechanical tree removal and prescribed fire, researchers looked at fatality rates in proxy occupations such as logging and firefighting. Firefighting was the least risky, even considering that most of the fatalities were caused by unplanned fires and not prescribed fires. On the other hand, occupations like logging and crop production were associated with greater risks of fatality.

People also tend to conflate the dangers of wildfires and prescribed burns as if they are the same, Fogarty said, but science doesn't support this: Studies show that wildfire-

related fatalities exceed those resulting from prescribed fires by 3,350 percent.

Prescribed burns do carry the risk of fires escaping, but research shows that this happens in less than 1 percent of cases, he said.

Mechanical treatments definitely have their time and place, Fogarty said, but a variety of strategic management approaches are needed.

"To defend our grasslands, we need land management strategies that incorporate preventative methods such as prescribed fire," Fogarty said. "In regions that are successfully confronting invasion and defending grasslands, prescribed fire is a strong component of their management plans."

To learn more, consider joining your local prescribed burn association or attending prescribed fire workshops led by Pheasants Forever and the Nebraska Game and Parks Commission.



Prescribed fire is a cost-effective way to control eastern redcedar invasion.

PHOTO BY ERIC FOWLER

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Park Permit Required • Food vendors on site



Spoonbill back in the 60s (1968) with L.J. Stark and Gary Dross on the Missouri River near Wynot, Nebraska.
 – Lowell Stark, Prior Lake, Minnesota

Attention **Nebraskaland** Subscribers

We are quickly running out of submissions for “Portraits from the Past.”

If you send us yours, we may be able to get it into an upcoming issue relatively soon (first-come, first-served, of course).

Send your originals (or good reproductions) to the address below, and we will be sure to return them.

If e-mailing pictures, please send JPEGs scanned at 100 percent at a high resolution (i.e. 300 dpi) to tim.reigert@nebraska.gov. Call (402) 471-4595 if you have questions. When possible, please include a story about the photograph, identifying people, places and approximate date the photo was taken.

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. Text may be edited and photos adjusted for reproduction. All photos will be returned.

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PHOTO BY JULIE GEISER

BIRD OF A DIFFERENT COLOR

By Julie Geiser

While out taking photos one morning, I came across a strange-looking bird. From a distance, I couldn't tell what the bird was. Curious, I slowly closed in and snapped photos of it until I could see it was a partially leucistic, or piebald, American robin.

Many bird and mammal species can display leucism, which is a condition where there is a reduction of pigmentation resulting in white, pale or patchy colors of skin, hair, scales or feathers. In birds, leucism only affects the feathers, and the degree of leucism varies, depending on how pigment cells were defected during an animal's development.

The plumage of leucistic birds appear paler than normal because there is a reduction in all types of pigmentation. Some birds may show irregular patches of white among normal colored feathers, which results in pied, or piebald, leucism. Other leucistic birds may have no pigmentation at all in their feathers, making them look pure white; however, this does not mean that the bird is an albino.

Albinism affects all the pigments in an individual, not just in spots like the American robin I photographed. Albino

birds show no color whatsoever in their feathers and have pale-pink or reddish eyes, legs, feet and a pale bill, whereas leucistic birds often have normally colored eyes, legs, feet and bills.

There are some downfalls to white feathers. These feathers can wear out faster than darker colored feathers due to their lack of melanin, which is a structural component of feathers. Weakened feathers may make flying more strenuous, and white feathers reflect heat, making it tricky for the bird to keep warm in cold temperatures. Lastly, white plumage is not good camouflage for birds that depend on it to keep safe from predators, such as cats, foxes and hawks.

Identifying leucistic, or piebald, birds can be challenging but the majority of these birds will possess other normal plumage colors that can be used for identification. While the white feathers on the American robin I photographed were perplexing, its normal colors made identification less difficult. Examining a leucistic bird's size, shape, range and behavior, and taking note of other birds nearby, can also aid you in identifying the species.

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Look for the Peregrine Falcon image on your Nebraska tax return.

