



A whitetail fawn pauses in a grassland south of Gretna on a summer afternoon.
Photo by Eric Fowler.



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NEBRASKAland

June 2008

SANDHILLS BLOWOUTS

One of the region's most
fascinating topographical
features

20 Lakes – 20 Parks

This year, nearly 800,000
people will visit Fremont
Lakes State Recreation
Area

Nine-mile Creek

The history and future of
a western Nebraska
trout stream



PLUS AIRBOAT CATFISHING • A RARE ORCHID • ARCHERY FOR NOVICES • CATCH & RELEASE?



NEBRASKALand

Volume 86, Number 5, June 2008

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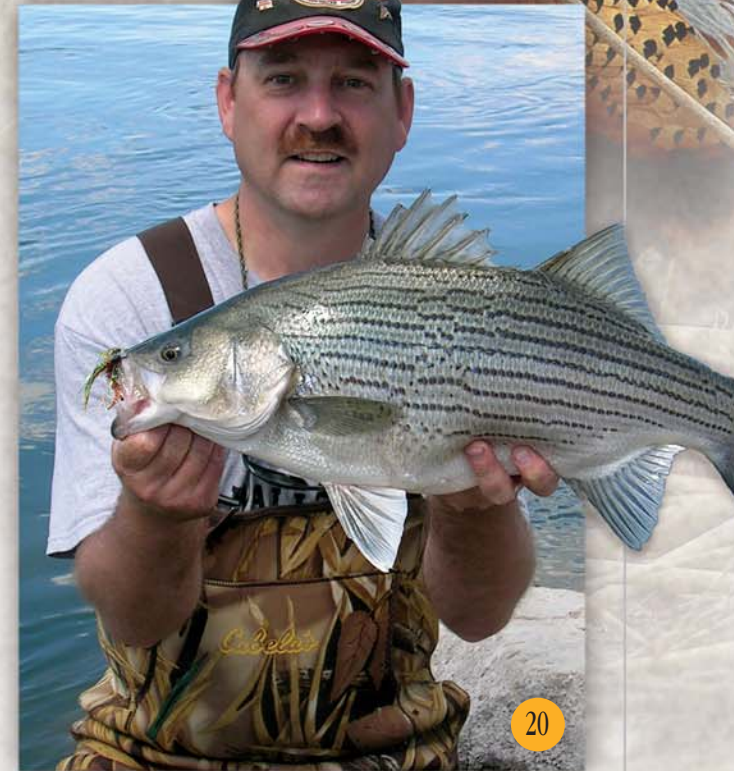
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Cover: Richard Reichenbach and Joe Delgado of Lincoln and Paul Seittler of Ogallala found just enough wind to go for an evening sail on Lake McConaughy. Photo by Eric Fowler.
Opposite: Bractless mentzelia (*Mentzelia nuda*), is one of the first pioneer plants to colonize raw sands on the margins of Sandhills blowouts. See story on page 10 Photo by Jon Farrar.



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Comment



Nebraska-made Decoys

I appreciated the article in your April issue regarding Nebraska-made decoys. The picture of Joe Cole's decoys attracted my attention because my dad's decoys are the same. Joe and Vi Cole were our next-door neighbors in Kearney. My dad, Glen Matson, (now deceased) spent many evenings with Joe in the basement of the World Theatre making duck decoys. We have my dad's decoy bag, blanks ready to be stacked and glued to make the hollow decoys, and numerous finished decoys that are identical to those of Cole's featured in your article. Dad and Joe probably made a couple of hundred of these. Dad put a rock in each of his to show it was hollow, and he signed the bottom using an electric pencil. In the late 60's he sold most of his inventory that I was aware of (possibly 50) to an individual for \$2 apiece.

The boards were glued together using "Jorgensen" type clamps – no nails or screws. Glen was a cabinetmaker by trade, so all of the boards that he and Joe would have used were no doubt yellow pine scraps from his shop. I'm fairly certain that Joe and his family did not move from Kearney until after 1952, since I was working for him at the World Theatre as an usher until that time. Dad hunted from a blind on the Platte River. His last wish was to have his ashes spread over his duck blind.

Marilyn Matson Fiebig
Bella Vista, Arizona

Thanks for the Memories

I was born and raised in/around Atkinson and currently reside in Friendswood, Texas. I read NEBRASKAland thanks to a gift subscription from my parents.

I keep tabs on "hometown news" via the Internet and was saddened to read of Bill Horst's death in March. Ironically, the article about him was published just one month after his death. I'm sure he was very proud to have been the subject of the story.

"Coach" Horst was my football coach in 1968-69 for the newly formed West Holt High School, located in Atkinson. I graduated from there in 1970 and went on to graduate from UN-L in 1974. I remember he and his wife Diane taking long walks, holding hands like young lovers, in the summer evenings before the school year started. As memory serves, they had their first child while he taught/coached in Atkinson. I'm sure you've heard from many of his former student-athletes.

As Bob Hope would have said –
"thanks for the memories."

Randy Rothchild
Friendswood, Texas



Bill Horst



Tucker's First Turkey

Dear Rex Amack,
Thank you and NGPC staff for all your efforts in recent years to promote youth hunting in Nebraska. Lowering the eligible age for big game hunting opens up the sport to young hunters during their formative years, before they've become too set in their ways to take an interest in hunting. And by offering a 'youth season,' young hunters the chance to hunt at their own pace without the competition, pressure or stress of trying to keep up with more experienced outdoorsmen.

Enclosed is a picture of my

10-year-old-son, Tucker Harders, with my dad, Shawn Harders, and Tucker's first turkey. My mom, Nancy, called it in on their Loup River frontage near Cairo. Tucker sat in the blind with me all day for the youth season opener (except for a few hours that afternoon when he stopped hunting to catch two catfish) and got his tom the following morning while hunting with his grandparents. Tucker's just beside himself and truly had a weekend he'll remember for the rest of his life.

Please continue to make outdoor recreation fun, easy, safe, and affordable for kids so they'll develop the interest, skills and passion to preserve hunting and fishing long after we're gone.

Shane Harders
Omaha, Nebraska

A Welcome Read Far Away

I would like to say thanks for a great magazine. The pictures are great and the narrative is good, interesting and timely, even if read a few years later.

I discovered this when I started forwarding my son's magazine to him in Iraq. All the guys are enjoying them. I've ended up sending them as packing in boxes and have even sent back issues from 2002 and they are enjoyed.

Keep up the good work.
Rozanne Hintz (mother of John Hintz)
Dixon, Nebraska

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Please include your postal address and telephone number.
Letters may be condensed and edited for clarity. Photographs are welcome and will be returned.

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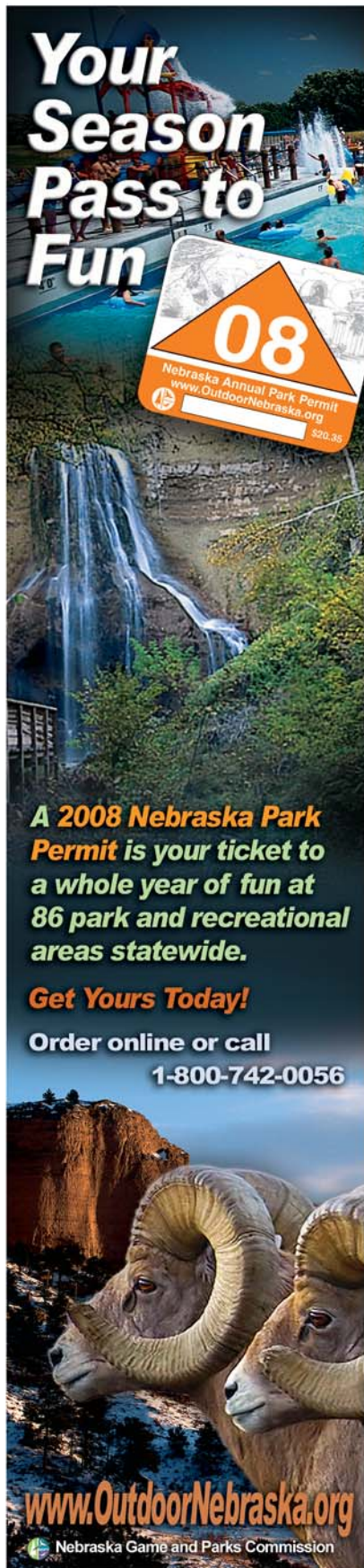
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Participants take aim during the Nebraska Archery in the Schools Program State Tournament that was held at State Fair Park in Lincoln this past April.

NASP Tournament Held

A total of 230 fourth- to 12th- grade students from 11 schools participated in the Nebraska National Archery in the Schools Program (NASP) State Tournament held April 26 in Lincoln, according to Aaron Hersberger, Nebraska Game and Parks Commission outdoor education specialist and NASP state coordinator.

The young archers had been participating in NASP during their physical education classes in their schools. Awards and trophies were presented to individual students and teams in several categories. Saunders Archery provided \$500 Tom Saunders scholarships to Lisa Geckle and Rapheal Erdie of Mater Dei Academy in Omaha, the top scoring female and male high school seniors respectively. Samantha Griffin of Lincoln North Star High School recorded the tournament's top score – 268 out of a possible 300. The top score male score was 264, recorded by Ryan Hedges of Dawes Middle School in Lincoln. Lincoln's North Star High School won the high school division state championship and Dawes Middle School won the middle school division.

The tournament was coordinated by the Commission, Nebraska State Archery Association, Lincoln Prairie Bowmen Archery Club, Golden Arrow Archery Club of Omaha and

many volunteers.

"The National Archery in the Schools Program is very unique as a curriculum in its ability to teach not only the life skill of archery, but to improve self-confidence and self-discipline in students as well," Hersberger said. "When you walk into a NASP tournament and look at the participants, you are amazed by the diversity of the archers taking part – from the skinny fourth grader to the big, high school senior. Everyone can take part in archery and have an absolute blast doing it. You don't have to be super tall or extremely muscular to be good at archery, and that's the reason that NASP is so popular – everyone can do it."

Peregrines Using Capitol Nest Box Again

For the fourth consecutive year, a pair of peregrine falcons has produced eggs in a nest box outside the 18th floor of the State Capitol building. As of April 15, four eggs were present in the box, and the eggs were expected to hatch in early May, said Joel Jorgensen, the Nebraska Game and Parks Commission nongame bird program manager.

Jorgensen said biologists read the leg bands of the adult female and have confirmed it is the same bird (A/*Y) present since 2005. The male

is assumed to be the same bird (19/K) as well, but no positive identification had been made yet.

The Commission's popular FalconCam, a video camera mounted at the top of the State Capitol building, provides direct pictures to a television in the capitol rotunda and to the Commission's web site at www.OutdoorNebraska.org, so interested people can observe activities in the falcons' nest box. The photos are updated every 60 seconds. The direct link to the webcam is: <http://www.ngpc.state.ne.us/wildlife/falcon.asp>.

In 2005, the pair successfully raised one chick that, through the Name the Chick Contest, was called Pioneer. In 2006, three chicks fledged and were named Willa, Bess, and Sterling after famous Nebraskans Willa Cather, Bess Streeter Aldrich, and J. Sterling Morton. Last year, four chicks fledged and were named Boreas, Notus, Eurus and Zephyrus after the four wind gods from Greek mythology that are ascribed to the cardinal directions North, South, East, and West. If the falcons successfully raise young again this year, the Name the Chick Contest will be renewed.

Kearney Expo 2008 Well Attended

Kearney Expo 2008, held April 17-19, drew 9,600 participants and was deemed a great success by organizers.

The second annual Expo, hosted by the Nebraska Game and Parks Commission and presenting sponsor Cabela's, was an opportunity for Nebraskans of all ages to celebrate their outdoor heritage. The first two days of the Expo designed for school groups and drew 2,600 students from 90 schools.

A new feature added to the Expo this year was the Cabela's Outdoor Challenge, which allowed participants to compete for free in six skilled events. Adults competed in shotgun, 3-D archery, trapping, kayaking, rod and reel casting, and camping games.



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Youths competed in pellet gun, archery, trapping, fishing, rod and reel casting, and camping games. A total of 165 people competed in the Challenge, which was won by Julie Campbell of Hildreth (Female Adult), Brian Blankenship of Kearney (Male Adult) and Aaron Winberg of Hazard (Youth).

This fall's Missouri River Expo will be held September 20-21 at Ponca State Park.

Cornhusker Trapshoot Successful Again

The 2008 Cornhusker Trapshoot, held May 1-3 at the home grounds of the Nebraska Trapshooting Association (NTA) at Doniphan, attracted nearly 1,700 junior high school and high school boys and girls. When the last bluerock turned to dust during Saturday's 100-yard handicap competition, Jeremy Denny of Fremont had won the prestigious Cornhusker Cup, awarded to the high overall individual score, by breaking 194 of 200 targets. Ari Bowhay of Scottsbluff won the High Lady Trophy by hitting 190 targets. Wyatt Lanik of Norris won the boy's junior high division, while Hannah Korak of the Wilber won the girl's junior high title.

The shoot is sponsored by the Nebraska Game and Parks Commission and the NTA. Next year's event, the 40th annual

Cornhusker Trapshoot, will be held April 30-May 2.

Waterfest to be held at Lincoln's Holmes Lake

Lincoln's second Waterfest, a free event celebrating recreation and water quality awareness, will be held Saturday, June 14 from 5 to 8 p.m. at Holmes Lake Park in Lincoln.

Waterfest activities will include fishing, canoeing, kite flying and games. There will also be a raptor release, a live radio broadcast, a performance by the String Beans, educational exhibits and free refreshments.

The first Waterfest was held in 2006 to celebrate the completion of a major improvement project at the lake and park, which are managed by the Lincoln Parks and Recreation Department. The two-year, \$5.6 million renovation project included the removal of 321,000 cubic yards of sediment that had accumulated from 40 years of development and agricultural use upstream. The dredging project extended the recreational life span of the lake by more than 100 years and was funded by Lincoln, the Nebraska Department of Environmental Quality, the Nebraska Game and Parks Commission, the Nebraska Environmental Trust Fund and other partners. ■

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New Hunting Regulations Passed

Recent regulation changes should attract more hunters.

By Doug Carroll

Recent changes in minimum age limits and hunter education requirements have made it much easier for young hunters, and older, potential hunters who may not have grown up in a hunting household, to try out the sport. While some of these changes have not yet officially taken effect, here's a quick recap on what each change involves, and how it might affect you and other hunters.



New hunting regulations that take effect in July will make it easier for young hunters and people new to the sport to try hunting for the first time.

LB 299

Enacted in 2007, this bill removed the minimum age limit for turkey hunters and the requirement that archery turkey hunters take a bowhunting education class prior to hunting. Young hunters must still be accompanied by an adult and kept under close supervision, but hundreds of young hunters were able to enjoy the thrill of the hunt this past spring turkey season for the first time.

LB 690

As successful as LB 299 was in increasing young hunter participation in the sport, a bill passed during this year's state legislative session probably will have a much greater effect.

Passed by the legislature and signed by Nebraska Governor Dave Heineman this spring, LB 690 becomes effective on July 17 and involves a substantial change in Nebraska's hunter education requirements and lowers the minimum age required to hunt deer in the state.

First and foremost, the requirement of who must complete a hunter education program prior to hunting

has changed: Now only hunters age 12 through 29 must carry proof of having successfully completed Firearm Hunter Education while hunting with either a firearm or crossbow, and they have to have proof of completion of Bow Hunter Education while hunting deer, pronghorn, elk or mountain sheep with bow and arrow. Prior to the passage of this bill, firearm hunter education or bowhunter education was required of all hunters born on or after January 1, 1977.

Another change made will make it even easier for new hunters to safely try the sport and learn from an experienced hunter before investing the time required to complete a hunter safety course – the creation of an Apprentice Hunter Education Exemption Certificate.

Hunters age 12 through age 29 who have not yet completed a Firearm Hunter or Bowhunter Education course and want to give hunting a try may now obtain an "apprentice hunter education exemption certificate" from the Commission, but they must be must

be accompanied by a licensed, "experienced" hunter age 19 or older at all times while hunting with this certificate. The hunting mentor can accompany no more than two hunters at one time that are under age 12 or using an apprentice exemption, and he or she must at all times be within unaided visual and verbal communication with the other hunters.

LB 690 also lowered the age requirements for deer hunting in Nebraska to 10, but hunters age

10 through 15 must still be accompanied at all times by a licensed hunter age 19 or older while hunting. Until this change, the Nebraska Game and Parks Commission was prevented from allowing anyone under age 12 to hunt deer. If a child is under the minimum age now but will be at or above the minimum age during deer season, a permit may be purchased for them only when they have reached the minimum age.

When and if a child will begin hunting still remains a parental decision that should be based upon the maturity of each individual child – while some 10 year olds are mature and responsible enough to handle deer hunting, some 14 year olds are not. Children can still participate in the hunting experience as an observer and hunt small game whenever their parents decide to allow them to, but now they have the option to hunt bigger game. That will help ensure that Nebraska's strong hunting heritage continues to be passed on from generation to generation. ■

BLOWOUTS

Fascinating topographical features
of the Nebraska Sandhills



Text and photos by Jon Farrar

“Wherever the sand is not held together by the roots of plants or by moisture, or is not otherwise protected, it is little by little carried away by the wind. If a spot on a dry hill becomes bare, the loose sand is blown away; a hollow is made; the surrounding grass dies from the drought; the dry sand, no longer held together by the roots, slides down into the hollow and in its turn is borne away; and thus the hollow becomes larger and larger.”

– *Native Vegetation of Nebraska* by J.E. Weaver, 1965

Blowouts are sort of like anchovies – you either love them or you hate them. There is a rumor going around Cherry County that one of the first things a Texas land investor did after buying a ranch in the Sandhills was to cover up the blowouts. Within months of closing the deal, the Texan brought in dozers and scrapers, filled what he saw as offensive eyesores, and

had the scar seeded with heaven knows what, maybe some exotic grass that never should have been allowed to leave Europe. Granted, there is little love lost on Texans in that part of the country, coming to the Sandhills with their oily money and buying land after first sucking all the groundwater they could from under Texas, so the rumor might be a bit harsh. Or not.

On the other side of the coin are the



During the early 1900s, the vegetative cover in the Sandhills was sparser than today. Where blowouts carved deep enough, they often filled with groundwater.

blowout lovers – mostly botanists because only in blowouts does the rare blowout penstemon prosper; ranch children who for generations have slid down a blowout’s steep sandy slope; artifact hunters who currycomb them hoping to find an 11,000-year-old Clovis projectile point exposed by the wind; or folks who find the grassed dunes monotonous, and welcome any feature on the landscape.

There is a middle ground between penstemon-huggers and Texans, and its the most important range of the opinion spectrum – that of traditional Sandhills ranchers who have always owned most

of the blowouts and decided what to do with them, as much as that has ever been possible. Blowouts, like hailstorms and sunny days, are to a large degree free agents of climate and weather, and control of them mostly falls in the realm of powerful earth forces. Still, ranchers, by either managing their grasslands wisely for the long-term, or by extracting as much value as possible from them in the short-term, play a big hand in how many blowouts are on their ranches. Ranchers, though, are often subject to forces beyond their control – cash flow, cattle markets, beef embargos, drought and mortgages –

forces that can dictate stocking rates, how many cow-calf units stay in a pasture for how long, and ultimately the range condition. But before blowouts can be described, the region where they are found requires definition.

Restless Sand

The Sandhills region in central and north-central Nebraska is the largest sand dune area in the Western Hemisphere, covering more than one-fourth of the state, about 18,000 square miles, 265 miles east to west and 130 miles north to south, about the size

A sparse cover of plants holds the Sandhills region in place. Only 700 years ago, the region would have looked more like North Africa’s Sahara desert.

of states of New Hampshire and Vermont combined. But where did all that sand come from? The answer, though relatively simple, is somewhat unsatisfying – it came from many places.

Approximately 98 million years ago, during the Cretaceous period of geologic history (the so-called “age of giant reptiles”), shallow seas covered much of the continental interior. Sediments were deposited in that sea for about 33 million years, sediments that would be

exposed when the sea level fell, eroded and reworked as silts and sands. So much of the sand found in central Nebraska today was made in place. More gravel and sand was carried by wind and water from present-day Wyoming and Colorado into what became the Sandhills region. By 60,000 years ago, modern-day drainage systems were forming across Nebraska, carrying even more gravel and sand from the west. At that time, the region was a series of small dune fields with

Incessant winds have eroded sand away from the once deeply buried root of bush morning-glory (below), leaving it hanging on the side of a blowout crater. Struggling to survive, new shoots emerge from the sand. Some blowout craters, (opposite) may be 300 to 900 feet in circumference and up to 75 feet deep before the wind can carve no deeper.



streams flowing between them, according to University of Nebraska geologist James Swinehart. About 12,000 years ago the mid-continent climate became more arid, and the last of the glaciers retreated north. By 10,000 years before the present, grasslands had replaced spruce forests and aspen and pine parklands. Swinehart and his earth science colleagues believe the Sandhills region was largely shaped during the last 24,000 years. During that time the wind has been a relentless sculptress, fashioning and refashioning the surface of the region whenever prolonged drought stripped the dunes of its binding vegetation. Between 24,000 and 12,000 years ago, north winds windrowed the sand into enormous east-west ridges, some 25 miles long, a mile wide and more than 400 feet higher than adjacent

valley floors. These dunes became active again between 9,000 and 6,000 years ago, cannibalizing themselves and moving as much as three-fourths of a mile. Researchers currently believe the Sandhills region assumed its present appearance within the last 900 years during a 200-year dry period, when northwest and southwest winds laid a second generation of small dunes over the old dunes, dunes no more than two miles long and 300 to 600 feet wide, oriented in a northwest-southeast fashion. Since that time, drought has sent dunes rolling over the landscape, but on a relatively small scale compared to the past, and the wind has pocked the dunes with small, closely spaced blowouts.

Using a relatively new technique called “optically stimulated luminescence” dating that measures when a

grain of sand was last exposed to sunlight, hence when dune movement buried it, university researchers suggest the last “mega-drought,” lasting “at least several decades” and resulting in “full mobilization of the sand sea,” ended only 700 years ago.

Those findings in the early 2000s, and earlier findings in the 1990s based on core samples taken from the dune field, set off a flurry of newspaper articles under alarming headlines – “Good-bye, Nebraska” and “Great Plains or Great Desert? A Sea of Dunes Lies in Wait” – suggesting it was only a matter of time before massive ridges of sand dunes would be knocking on Grand Island’s back door and rolling southeasterly toward Memorial Stadium.



Pock on the Land

“The most striking habitats of the uplands are the ‘blow-outs.’ Blow-outs are conical or rounded depressions of varying depth and diameter formed by the blowing of the sand and vegetation from certain spots on the upper slopes and crests of the hills. The rim of the more or less conical depression is sometimes almost circular, but it is usually irregular with a general circular outline.” So wrote University of Nebraska botanist Raymond J. Pool in his 1912 booklet *Glimpses of the Nebraska Sand Hills*. His detailed description of blowouts, and how they form, are still apt today.

Pool speculated that no sooner had

vegetation colonized the newly created dunes than disruptive forces of nature and men began to work to again put them in motion – massive herds of bison that occasionally grazed the region, native people who burned the grasslands to improve it for wild grazers and their own stock, periodic drought and wildfires. When the first ranchers came to the Sandhills, Texas longhorns replaced bison as the primary animal agent of soil disturbance. During the early years of cattle ranching, stock was run on government land, and there was no incentive to pasture moderately. Many ranchers overstocked, and cattle concentrated on grasslands near lakes and streams, their hooves breaking the vegetative tie that bound the sand.

Wildfires swept at will across hills that had not been overgrazed, exposing ridges to the work of winter winds. Turn-of-the-century photos show more sand than vegetation on the sandy uplands. Since the early 1900s, ranchers who owned their land, and took the long view pasturing it, have increased the density of plants in the region many fold. Stock tanks and mineral licks dispersed across ranches, smaller pastures and grazing systems encouraging better livestock distribution have all reduced erosion and the creation of blowouts.

In his 1913 doctoral thesis, Pool wrote: “A single hill sometimes shows only one blow-out although this one may be so large that the whole side or top of the hill is occupied. Frequently

several blow-outs originate upon a single hill or ridge and they may coalesce rather early so that a single large crater is formed which possesses several secondary depressions.” Left to work, a ridgeline blowout can eventually severe a dune or migrate down its full length.

Blowouts are most common on northwest-facing slopes. They are uncommon on northeast-facing slopes, in part because they are more sheltered from summer heat, hence the soil retains moisture more efficiently, fostering a wind-resistant cloak of woody shrubs, grasses and forbs (broad-leaved plants that die back to the ground each year). Northwestern winds predominate in winter and early spring when plant

cover is most sparse and the soil surface susceptible to erosion. By the time southerly winds predominate, the growing season is underway and a new growth of vegetation helps hold surface sand in place on south-facing slopes.

Once the cover of vegetation is broken, the wind carves deeper and deeper into the dune, carrying loose sand over the hillcrest and depositing it on the lee side of the crater rim. Coarse sand falls out first, finer sand and silt is carried farther away. Because the windward side of the crater is the source of sand, its rim is usually lower than the lee side where sand is being deposited, and the angles of their slopes reflect that – the windward slope longer with a gradient

into the bottom of the crater. In this way a spiral wind movement is frequently developed and the wind reaches to the very bottom of the blow-out, which may now be fifty or more feet below the rim. This grinding action of the wind continues to loosen more sand at the sides, causing it to slip more and more into the bottom, where the wind catches it and hurls it up over the sloping interior surface,” Pool wrote. He termed this wind action a “sand mill.” After years of such scouring, Pool noted, some blowouts are 300 to 900 feet in circumference and up to 75 feet deep. Where the water table is close to the surface, craters are occasionally carved deep enough during dry periods that water seeps into them during times of rising groundwater, creating Pool’s seemingly incongruous phrase – a “blow-out pond.”

“Sooner or later, however, the blow-out reaches a period that may properly be termed *maturity*,” Pool continued. “At this time a depth has been reached such that even the most vigorous wind action fails to increase it further, the sand mill becomes ineffective, and the sand that slides into the bottom of the blow-out tends to remain there.”

Pool made a clear distinction between the classic crater-shaped blowouts found on ridges and hills, and expanses of exposed sand found elsewhere in the region, such as “*plane* sand-sweeps that are much broader” and “sand-draws sometimes more than a mile long The term blow-out should be restricted to the crater-form depressions which are so numerous in certain parts of the hills and which really exhibit the *unique* blow-sand conditions of the region.”

Pioneer Plants

A blowout is a battleground between plants struggling to gain and keep a foothold, and soil disturbance of all sorts hell-bent on moving sand. Exposed sand is a hostile environment for plants – a shifting substrate with high temperatures and excessive evaporation. But plants have evolved devious strategies to persist and reproduce, such as seeds willing to lie dormant for decades awaiting the opportunity to germinate and send down roots. There is usually adequate soil

moisture a few inches below the surface of a blowout, so a plant’s success or failure is initially dependent on getting roots down to it before being blown away.

The first plants to pioneer a blowout’s raw sands usually establish on the crater’s bottom or lower slopes, where the wind velocity is lower, and on the deposition fan outside of the crater. One of the first species to colonize is appropriately called blowout grass (*Redfieldia flexuosa*). The survival strategy of blowout grass is a spiderweb of coarse and tough rhizomes (underground stems) spreading 40 feet or more in search of moisture. “Redfieldia may be the only plant in such situations for many years,” Pool wrote. “All during this time it is extending its area by undermining and binding the soil with its network of slender rhizomes. From these rhizomes there arise tufts of long, flexuous, narrow leaves gracefully nodding in the gentle breeze or lashing about like so many slender wires in the higher winds. “After Redfieldia has once taken charge of the habitat other species soon begin to wander over the rim of the



blow-out and to invade the area occupied by the first blow-out pioneer,” Pool continued. Other grasses establishing on the heels of blowout grass are sandhill muhly (*Muhlenbergia pungens*), plains muhly (*Muhlenbergia cuspidata*), sand love grass (*Eragrostis trichodes*), Indian rice grass (*Stipa hymenoides*), needle-and-thread (*Stipa comata*), sand bluestem (*Andropogon*

halli), and sand reed (*Calamovilfa longifolia*). But it is pioneering forbs that are the most conspicuous: silky prairie clover (*Dalea villosa*), lemon scurf-pea (*Psoraleidum lanceolata*), prairie spiderwort (*Tradescantia occidentalis*), hoary vetchling (*Lathyrus polymorphus*), wild begonia (*Rumex venosus*), clammy weed (*Polanisia dodecandra*), Geyer’s spurge



While seemingly sterile, there is both plant and animal life in and around a blowout. Because of the soil disturbance, weedy plants are often among the first to colonize. They are prolific seed producers, an annual crop that attracts small rodents such as Ord’s kangaroo rat (above). Northern prairie lizards, (opposite, top) come to feed on ants and insects drawn to the flowers of blowout pioneer plants such as silky prairie clover (opposite).

of about 30 degrees, the lee side steeper with a gradient of about 60 degrees.

“Naturally with the increasing depth of the blow-out the direct force of the wind becomes considerably checked by the prominent rim of the crater,” Pool wrote. “But peculiarly enough, as the wind strikes the farther slope of the blow-out a reverse current is developed which strikes beneath the rim and dips





(*Euphorbia geyeri*), skeletonweed (*Lygodesmia juncea*) and others adapted to early stages of succession.

One of the most peculiar pioneer plants is painted milk-vetch (*Astragalus ceramicus*), a plant with a host of colloquial and descriptive names – bird’s-egg vetch, bird’s-egg pea, rattlespod and painted pod. While the plant’s flowers are inconspicuous and pealike, the fruiting pod is showy, from one to two inches in length, bladderlike, and cream-colored mottled with reddish-purple, a pattern suggestive of the mottled eggs of many birds. Within each pod are several small, brown seeds. The vetch’s strategy to survive in unsettled sands is somewhat like blowout grass. It is a perennial with grasslike leaves to minimize moisture loss and physical damage when whipped about by incessant winds, and has extensive spreading rhizomes to anchor the sand, gather moisture and from which new plants are sent up.

The plant that steals the show, though, is blowout penstemon (*Penstemon haydeni*), better known to generations of ranch children in

decades gone by as blowout bluebells. Unlike other pioneering plants, blowout penstemon appears lush and extravagant, forming dense clumps after a few years and bearing compact clusters of tubular, pink to milky blue flowers that are strongly fragrant in late-May and early June. Until discovered in a dune field in Wyoming in 1996, the species was believed to grow only in Nebraska’s Sandhills. Pool considered the species “one of the more common and typical species” of the Sandhills blowout community in the early 1900s. By the 1940s, though, it was thought to be extinct because the control of wildfires and improved grazing practices had eliminated so much of the disturbed habitat it requires. In the early 1980s, after several years of searching, Nebraska botanists could locate only five populations totaling approximately 600 plants in the Sandhills. In 1987, the species was listed as federally endangered.

Like other pioneer plants, blowout penstemon has evolved physical characteristics to prosper in unstable, relatively infertile, sandy soils. A thick,



Blowouts (opposite) are most common on northwest-facing slopes where exposed to winter winds. Blowout penstemon (above) requires raw sand to prosper. Its tubular blue flowers earned it yet another name – blowout bluebells. It forms into dense clumps (top), producing many seeds that can wait years to germinate.



One of the most curious sights in a blowout are the bladderlike seedpods of painted milk-vetch (above). Its flowers are inconspicuous and pealike, and its leaves stemlike to endure the constant abrasion of blowing sand. On the rim of blowouts, more showy flowers are found, such as bractless mentzelia (opposite). While its flowers are delicate, the rest of plant is well adapted to the blowout's harsh environment, with modest, tough leaves covered with small, barbed hairs.

waxy cuticle over its long, narrow leaves protects the plant from abrasion by wind-driven sand and slows the loss of moisture from the plant. The deep taproots tenaciously hold plants in place and seek moisture deep in the blowout's sands. The stems of the plant are what botanists term adventitious, meaning that if sand is eroded from around a plant and the stalks come to recline on the sand, new roots are sent out along it, establishing additional plants. Wind blows the penstemon's seeds into the deposition zone on the lee side of the crater where they are buried, but as the blowout advances down or across a ridge they are uncovered. Blowout penstemon seeds can be buried and remain dormant for decades, ready to germinate when conditions are favorable. In fact, the seeds need to be exposed and scarified by blowing sand to germinate. James Stubbendieck,

Professor of Grassland Ecology at the University of Nebraska-Lincoln, who has studied, propagated and reestablished blowout penstemon during the last 30 years, believes that blowout penstemon has a life span of only six to eight years. "There is no reason for it to live longer because its habitat moves away from it," he said.

After years of stocking artificially propagated plants, blowout penstemon may now be abundant enough to no longer need an endangered species designation. Stubbendieck estimates there are more than 22,000 plants in Nebraska today, 85 percent of which are introduced populations.

Written in Sand

Plants are so sparsely spaced in a blowout they are conspicuous. Animal life is not so evident – it doesn't put down roots and stay in one place. There is little reason for most animals to frequent the near-sterile and unstable blowout environment, and unlike plants there are no animals specifically adapted to life in a blowout.

Animal life in blowouts is mostly noted by implication – the presence of tracks and burrows. In the early morning, after nocturnal animals have been active and before the wind rises to erase traces of their passage, there may be tiny, telltale tracks of native mice that came to hunt sloughed-off plant seeds, perhaps the serpentine trail of a western hog-nosed snake on the hunt for lizards or toads, or the ploddingly parallel tracks of a passing ornate box turtle in search of a mate. Badgers and skunks have long since recused themselves to dark dens excavated in the still firm sand near the tops of the crater. On the margins, or where vegetation has gained a toehold in the blowout, are the multiple entrances to Ord's kangaroo rats' underground labyrinths. And if the little mice were active during the night, there will be an apron of fresh sand kicked out of the burrow's mouth. As the day warms, ants resume their thoughtless labor, burrowing deeper, working to keep windblown sand from covering their previous day's progress. Maroon-and-cream tiger beetles skate across the sands like water striders on a film of pond water, and their grotesque ant lion

larvae build new sand funnels, waiting, concealed at the bottom to engulf unwary insects falling into their primitive trap. Skittish earless and northern prairie lizards come from hiding to bask, warming their cold blood enough to dart here and there after insect prey or mates.

Turn at the Blowout

There was a time in the Sandhills, not all that many decades ago, when conspicuous blowouts were landmarks, often used to guide travelers – "Take

this trail north, and just before the big Hamilton blowout take the trail west." The days of trail roads between isolated, small Sandhills towns are now resigned to history, and enduring blowouts are nearly a thing of the past. Most ranchers wage war on their blowouts. To some, they are seen as unsightly, maybe hint at poor range management such as overgrazing and as lost grazing, even though blowouts are but a miniscule fraction of a percent of the total acreage of most ranches. To some ranchers, blowouts are like dandelions in an urban lawn or a weedy fencerow

in farm country. Blowouts have been filled with tires, old and poor quality prairie hay, cottonwood branches, and have served as ranch dumps for everything from cast-off machinery and fallen outbuildings to tin cans, appliances and coils of too-old-to-use barbed wire. Many are on the verge of becoming an archeologist's summer project, or a treasure hunter's booty of Indian head pennies and medicine bottles from times before screw-top caps.

Many blowouts could be made to vanish in a few short years with

moderate grazing and a run of wet years, but there will always be some – that is the nature of a dune field only tentatively held in place by sparse vegetation. Ranches that have been wisely pastured for three or four generations have blowouts, and so do public grasslands in the region, lands where making a profit by raising cattle is not a concern, and so grazing is moderate. There are even ranchers who sort of like having a blowout or two, places for grandkids to play and for blowout bluebells to blossom in spring. If the wind has its way, that is assured. ■



Catch and Release?

By Daryl Bauer, Fisheries Biologist
Nebraska Game and Parks Commission

Turning loose a potential meal may seem to defeat the purpose of fishing, but there is a way to have your “cake” and release it too – selective harvest.

Pull up a chair with any group of anglers sharing a few beverages and telling stories nowadays and it’s a good bet that at some point the words “catch-and-release” will come up. Depending on the group, the discussion may become a little more animated at that point – some anglers practice catch-and-release with religious fervor, while others “catch all they can, and can all they catch.” Is there a happy medium

to this debate?

There are many examples of the benefits of catch-and-release sport fishing. To qualify for a Nebraska Master Angler award, a largemouth bass has to weigh five pounds or measure at least 20 inches if it is immediately released. If it isn’t, it can only qualify for the award by meeting the weight requirement, which is harder to do. Because anglers consistently release more than 80 percent of the Master Angler bass caught in Nebraska, there are almost always more largemouth bass entered in the Master Angler program each year than any other species, proving how released fish can continue to provide angling excitement for others.

Another example comes from 2006, when the top waters for Master Angler fish of any species were Red Willow and Branched Oak reservoirs. At Red Willow, 161 of 165 (98 percent) of all trophy fish were released, while 142 of 149 (95 percent) were released at Branched Oak. Both waters have consistently produced large numbers of trophy fish in recent years because of the long-term practice of voluntary catch-and-release of big fish at Red Willow, and the mandated release of all flathead catfish and wipers at Branched Oak since 2000.

Catch-and-release can be an important tool in developing and maintaining quality fishing, but never forget that fish are a renewable resource and anglers should continue the tradition of savoring a good meal of fresh fish if they want to. So is there a general rule to apply to which fish should be harvested and which ones should be released? In some places, length limit or other

regulations require catch-and-release because fisheries managers have specific objectives they want to achieve, such as ensuring there are enough large predators available to keep panfish, prey fish or rough fish in check.

In many cases, however, the decision to catch and release or catch and keep is the responsibility of the individual angler. No one can tell an angler what his or her ethics or standards should be, but in recent years more and more anglers are adopting the philosophy of “selective harvest,” a term coined by *In-Fisherman* magazine to describe the practice of keeping only the species or sizes of fish that can withstand some harvest while releasing those that are less abundant. In most cases, practicing selective harvest dictates that anglers harvest only as many fish as needed to enjoy a meal or two of fresh fish – it is not about filling the freezer with fillets.

Some of the species that are typically more abundant and can withstand some harvest are those of the panfish family: crappie, bluegills and even bass. Conveniently, these are also some of the best on the table. Large predator fish are almost always less abundant and better candidates for release in order to maintain quality fishing. In fact, large individuals of any species, even panfish, are almost always less abundant and therefore good candidates for release. In practice, on a reservoir with a 15-inch minimum length limit for walleye, selective harvest would prescribe taking a few 15- to 18-inch walleyes for a meal of walleye almonidine while taking a picture of a 28-incher and turning her loose. Another example would be throwing a few of those 7- to 8-inch bluegills on the ice while slipping that honest to goodness “pounder” back down the ice hole. How about a 40-inch flathead or muskie? Those large predators are the least abundant and therefore the best candidates for release. Big fish are hard to catch not because they are so smart, but because they are so rare. By releasing those fish, the fun of catching them

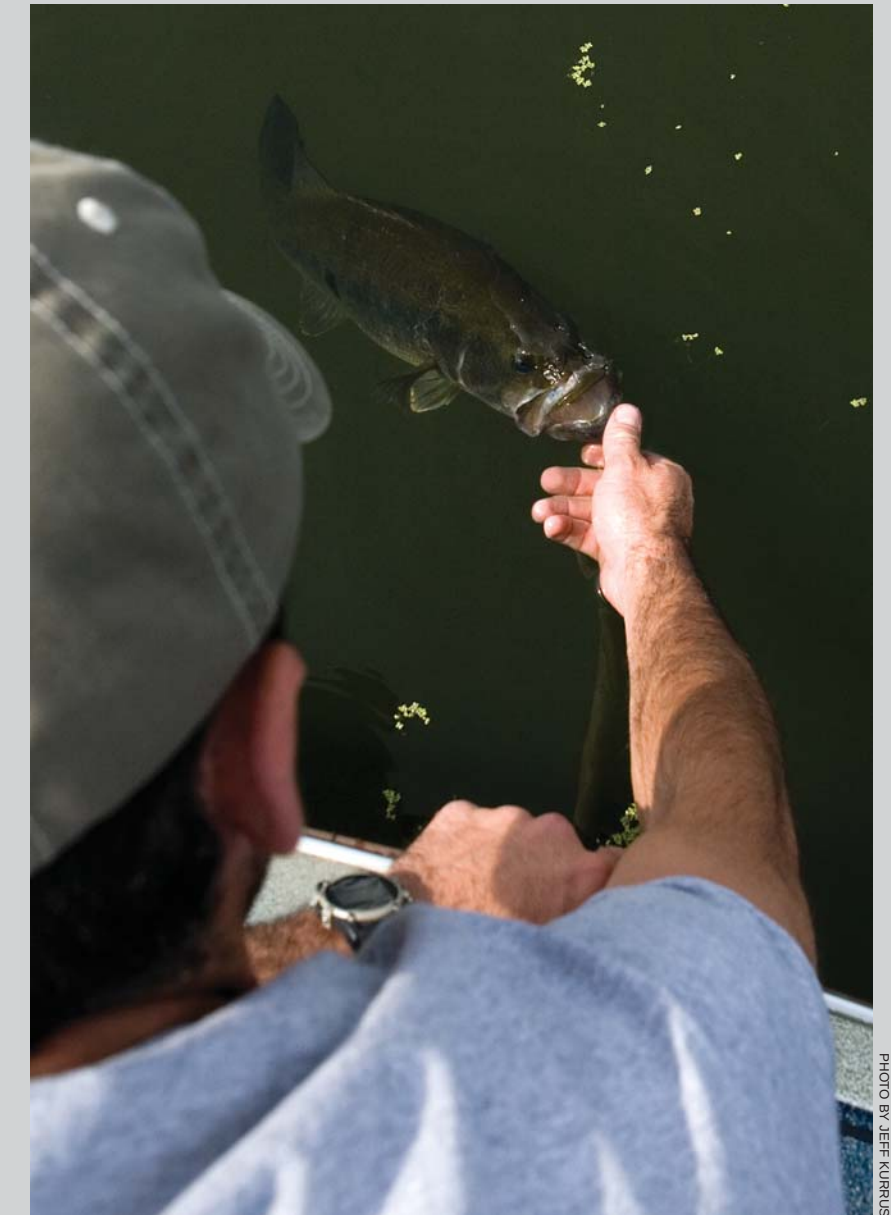


PHOTO BY JEFF KURRUS

Get hooked fish in and back to the water quickly, carefully supporting their body while unhooking or taking pictures, to increase their odds of survival.

can be enjoyed again.

But how about the joy of showing off that big fish? Many anglers decide to keep a trophy fish to have it mounted, but modern technology gives us the option of releasing that memorable fish and still having a great-looking mount to show off. With a few pictures and measurements of the fish, many taxidermists can match its exact size and coloration with a reproduction mount that is of better quality and will last longer than a skin mount of the actual fish.

Again, the decision to keep or release a legal fish is one that anglers have to make on their own, but angler attitudes are evolving. A lot of us enjoy eating fresh fish, but the emphasis on harvest is a lot less than it used to be. That is a good thing, because if the oceans can be overfished, there isn’t a body of water in Nebraska that can’t be. Catch-and-release or selective harvest is being practiced by many anglers, and it’s a practice that can help maintain and improve the fishing for all of us. ■



PHOTO BY DANIEL BAUER

Author Daryl Bauer carefully shows off a 25-inch trophy wiper caught and released while fishing at Lake Ogallala.

Archery For Novices

Photos and text by
Doug Carroll

Bowhunting is a great sport, but it's one that requires a lot of practice and preparation. This first of a two part series gives you some tips on buying equipment and shooting correctly.

practicing with broadheads, scouting and stand placement. Remember, fall seems like a long way away, but it really isn't. If you want to try bowhunting for the first time this year, now is the time to start.

Buying Equipment

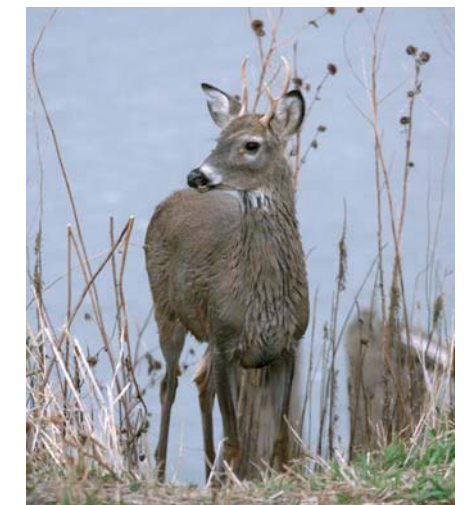
When my friend Norman and I started bowhunting some 25 years ago, it was both easier and harder than it is today. It was easier because we didn't have as many choices to make when it came to equipment, but it was harder because the gear available wasn't nearly as good as it is now. With that increase in quality, however, has come an increase in price – to the degree that the sport may be intimidating to the pocketbook. It doesn't have to be, however.

While there is a plethora of better, fancier equipment available today, the basic equipment needed to bowhunt deer is the same today as it was when I started – you need a bow, some arrows and some sharp broadheads.

Some archers prefer to use recurve or other traditional bows, but the majority of bowhunters today use compound bows, and that is what I would recommend that you start off with. Because a compound bow has a series of off-round pulleys or cams at the ends of the bow limbs that store energy in the string itself as well as the limbs, it can create more power and a faster arrow) than a similarly sized traditional bow. This design also gives the archer "let-off," which means that at a certain point of the bow being drawn back, the cams begin holding most of the weight instead of the archer. As a result, the archer can aim the bow more easily and can wait longer for a deer to present a suitable target.

The first time you visit a serious archery shop, you may be surprised to find that many of today's top-of-the-line bows cost as much, or more, than a high-powered rifle, even without any accessories. While these marvels of technology may be the latest, greatest thing to fling an arrow, they're probably not what you need or want to start your bowhunting adventures. In fact, they may be the last things you want because many of these speed burners require perfect form to shoot correctly, and they might drive you nuts before you can achieve this form.

Luckily you don't need an expensive, or even new, bow to kill your first deer. The first deer I harvested fell from an arrow launched by a very basic, early model Bear compound, and while part of me really wants to upgrade my current bow, it's just as effective today as it was when I bought it used almost 15 years ago. Look for some type of mid-priced new or used bow. A lot of good, used bows can often be found at



Harvesting game animals with a bow and arrow requires hours of practice and careful attention to detail.

Nathan Michl of Lincoln practices his shooting form at the Prairie Bowmen Archery Club range in Lincoln.

Are you tired of watching the bucks you've patterned all summer suddenly vanish into thin air by the time the firearm deer season rolls around? Tired of knocking on doors, trying to get permission to hunt during the gun season, only to be told no because there's already going to be too many deer hunters on the land?

Maybe you're just looking for a new

challenge, a way to start the deer season earlier or the chance to possibly harvest a doe or two for the freezer while you wait for Mr. Big to trot past your stand. If this sounds like you, I've got your answer – bowhunting.

Bowhunting deer is a challenge, but it's a sport that is also terribly addictive. To be able to harvest a game animal with a bow, you have to be very quiet and still, so you'll see and hear things

in the woods that many people never get to enjoy.

Because learning to accurately shoot a bow requires time and lots of practice, however, bowhunting is not a sport you should try to pick up two weeks before the season starts. While most people can pick up a modern deer rifle and become fairly competent with it after just a few trips to the rifle range, shooting a bow well enough to harvest

a deer requires a lot of practice. In addition, the close proximity needed for ethical shots at deer requires extra attention to stand placement and knowledge of deer movement. This month I'll cover some basic equipment needs and shooting form suggestions to get you started in this great sport, and in the August/September issue I'll give you some tips on making final preparations for the season, including



Proper follow-through means keeping your bow arm on target while pulling straight back with your release hand, as illustrated by the shooting form of Erica Anshutz, a world-class archer from Grand Island.

archery shops as people trade up for newer bows, but make sure the bow has been checked for defects before buying it.

The most important thing to do is to buy a bow that fits you and can meet the minimum poundage required for hunting deer in Nebraska (at least

40 pounds of draw weight at or before 28 inches of draw). If you have little or no experience in archery, enlist the help of an experienced friend or an archery pro shop when looking for a bow. I consider a bow to be a good fit when my release hand is at my anchor point (discussed later), the bow is drawn

back as far as it can go and my bow arm has only a slight bend in it.

Drawing a 40-pound bow is easily done by most adult men, but it can be difficult to do for some women and young archers. Don't worry about it too much, however, when you're just starting out, because the back and arm

muscles used to draw a bow develop quickly with plenty of practice. If possible, try to purchase a bow that is adjustable both in poundage and draw length. The draw weights of many bows can be easily changed, so a young or beginning archer can begin practicing at say, 25 pounds of pull, and gradually increase the poundage up to the minimum legal weight of 40 as their muscles develop. Bows with adjustable draw lengths work well for growing kids or if you want to experiment with different types of arrow releases or rests.

Another thing to think about when choosing a bow is whether or not you plan on using an arrow release, a mechanism used by some hunters to release the string instead of using their fingers, because using a release may affect your draw length. The advantages of using a release are that it is easier on your fingers, it gives you a cleaner, more consistent release and the fact that many modern bows are so short that the string angle created when the bow is drawn demands that a release be used for consistent shot placement. The type of arrow rest you use might also affect your need to use a release. The disadvantage of using a release is that it is another thing you have to buy and it is something else that can break, get lost or be forgotten in the car or back home.

One thing Norman and I didn't have to think much about when we started

out were arrows. Our choices back then were arrows with wooden shafts (not readily available or very cheap) or aluminum (readily available and fairly cheap, but somewhat prone to bending and sometimes mass-produced with less-than-great quality assurances). Today carbon composite-type arrows dominate the market, although aluminum arrows are still available and are of much better quality than those I started out with. Whatever type of arrow you choose, make sure it matches the draw weight and poundage your bow is set at.

Practice, practice, practice

Once you have suitable equipment, perhaps the single-most important thing that will determine your success or failure in the woods this fall is your ability to place arrows where you want them. You can be hunting the best spot in the woods, where deer are constantly around you, but if you can't shoot accurately, you're going to miss the deer completely or, worse yet, simply wound it. The way to keep this from happening is to practice, practice, practice, but you have to do so with good form or you won't achieve your maximum ability.

The key to shooting a bow well is consistency. In the woods you sometimes have to shoot from awkward

Bowhunter Ed

Hunters ages 12 through 29 hunting deer, antelope, elk or bighorn sheep with bow and arrow must successfully complete a bowhunter education course prior to hunting or purchase an Apprentice Hunter Education Exemption Certificate from the Nebraska Game and Parks Commission.

The Bowhunter Education class lasts a minimum of ten hours and is taught by volunteer instructors across the state throughout the year. It's a great class for new archers to take even if they don't have to, because it teaches a lot of things they can use in the field.

For a list of classes scheduled in your area, contact your local NGPC office, or go online to outdoornebraska.org, click on Hunting, then Bowhunter Classes.

positions, but as you begin developing your archery skills, try to be consistent with your form. If you do, you'll soon start thinking more about the target than how you're holding or drawing the bow, and your accuracy will increase dramatically.

Start by developing a good stance, your feet at a 90-degree angle to the target, shoulder-width apart and your body weight equal on both legs. Your shoulders should line up with an imaginary line drawn from the center of the target. Now move your front foot (the one closest to the target) back so that your toes are even with the mid-point of your back foot and turn your front foot slightly toward the target. This will give you a solid base to shoot from.

The ideal way to "hold" a bow at full draw is by forming a "V" with the thumb and forefinger and putting the bow's grip against the meaty part of your thumb. During the draw and



Archery shops like this one at Scheels All Sports in Lincoln are great places to look at a variety of equipment and get expert advice.

release of the arrow, the bow should not be gripped as much as it is simply pushed away from the body. To help achieve a proper grip, many archers use a bow sling to prevent the bow from falling out of their hand upon arrow release. Note: If you have to “reach for the sky” in order to get your bow pulled back, then you’re “over bowed” and need to lower your draw weight. Dropping the poundage will give you better form and allow you to practice more without getting overly tired. If needed, you can always increase the draw weight later as you gain strength from practicing. If you continue to draw too heavy of a bow, you risk developing poor form and may be spotted by that big buck walking past your tree stand next fall, wondering what the heck all that grunting, groaning and movement above him is about.

At full draw, the elbow of your release arm ideally should line up with the arrow and pointed straight behind you, while your fingers or arrow release are “anchored” at a spot on your face or head that feels comfortable and

which you can easily return to shot after shot. Some people like to anchor at the corner of their mouth, some at the tip of their nose and some release shooters tuck their index knuckle into the notch just below their ear. Whatever anchor point you choose, be consistent with it if you want to be accurate.

While some people do very well by aiming instinctively, most people are better off using a bow sight, which requires the shooter to line the sight up with the target before releasing the arrow. Some sights have built-in levels, which really help in making sure you aren’t canting your bow (turning the bow to the left or right) during a shot. Combined with the use of peep sights, an aiming device that can be attached to the bowstring, bow sights make it much easier for bowhunters to hit their targets consistently.

As you work on your shooting form, you’ll find it is much easier to start with your bow arm a bit high and slowly lower your sight pin onto the target versus starting low and trying to raise the pin up gradually. When your sight

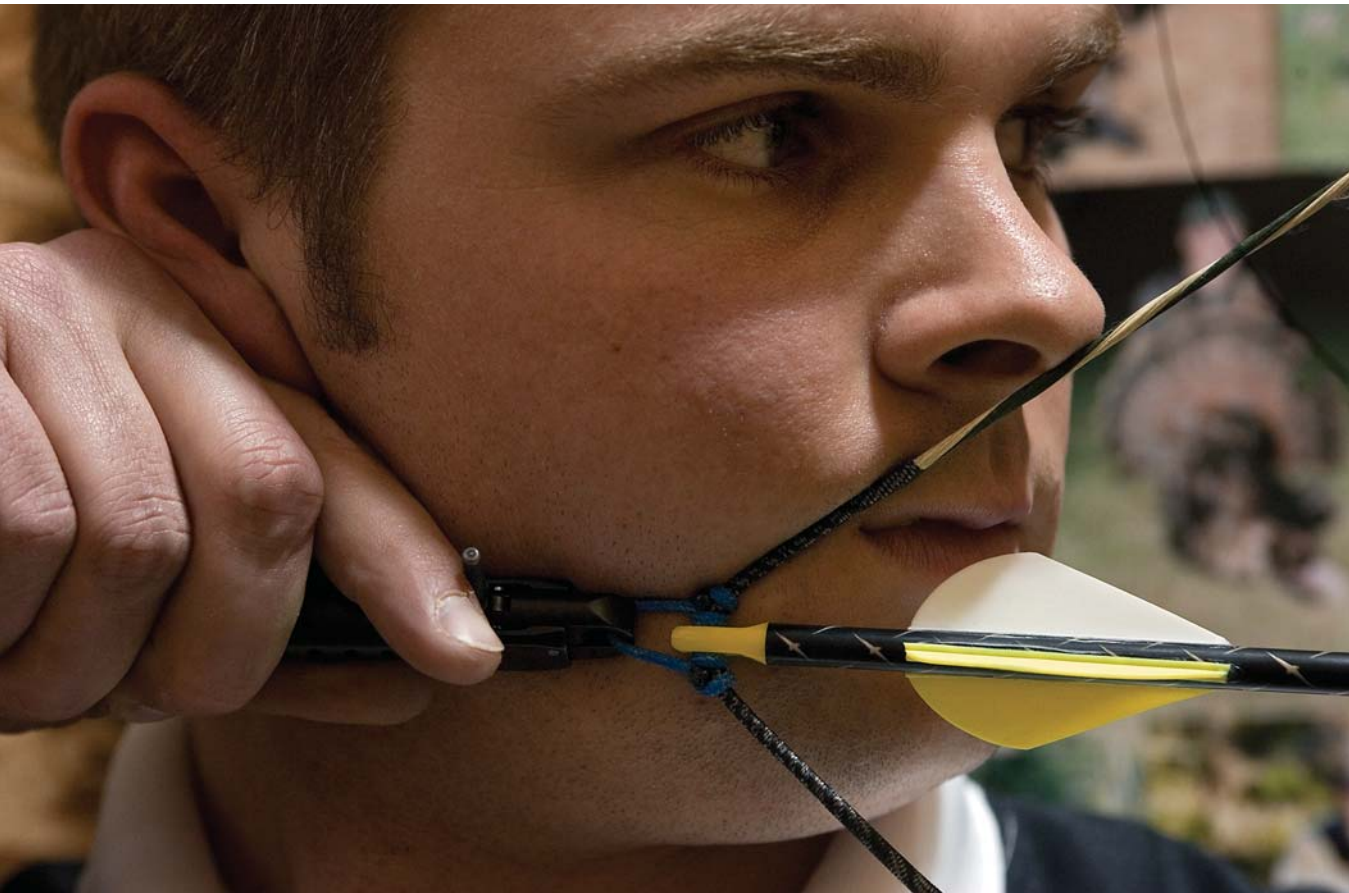
is centered on the target, gently release the arrow. If you’re using proper follow through, your slightly bent bow arm will straighten out toward the target while your release arm stays put or travels straight back and your shoulder blades come together. It’s almost like ripping a towel in half. During the release, try to keep your sight on target until the arrow strikes. Doing so will help ensure that you are using proper form and aren’t dropping your bow arm, which can cause the arrow to strike low.

The first couple of times you shoot, don’t worry too much about where your arrows are hitting. The first couple of weeks should be about developing muscle strength and proper shooting form. I would recommend shooting a couple dozen arrows per session at first and building up repetitions from there. If that feels like too many, shoot fewer – if it’s too few, shoot more. Just make sure you don’t overdue things.

As you get stronger and become comfortable with the bow, then you can start worrying about where the



Bowfishing is a lot of fun and is a great way to practice archery skills during the summer.



Travis Stevenson of Lincoln shows how he anchors his mechanical release prior to shooting an arrow.

arrows are hitting. Even then, pay more attention to how small of a grouping you can get with your arrows than with how many bull’s-eyes you are getting – your bow sight can always be adjusted to indicate where the arrows will land, but only after you achieve consistent form.

Following these tips should get you headed down the road to bowhunting success. If you need a good place to practice and want to pick the brains of experienced bowhunters, ask local sporting goods store about archery ranges, clubs and shooting competitions in your area. Even if you don’t yet feel comfortable competing yourself, competitions can be a great way to see how other people shoot. Good luck and good shooting. ■

In the August/September issue, we’ll talk about broadhead selection, practicing for real hunting situations, shot selection and touch briefly on scouting and stand placement.

Mentored Archery Program

When I started bowhunting with a friend in high school, neither Norman or I had any experience with deer hunting and neither did any of our family members or friends. Needless to say, we weren’t very successful the first couple of years – the learning curve was just too steep.

If you are between the ages of 12 and 17, the Nebraska Game and Parks Commission might be able to help you avoid many of the mistakes we made. Through its mentored youth archery program, the Commission pairs youth with experienced mentors who can help guide them to bowhunting success and provide hunting opportunities they might otherwise lack. Interested youth must have successfully completed a state certified bowhunter education program and submit a completed application and parental release form by August 1. Chosen youth will need to provide their own archery equipment and pass a proficiency test. Mentor programs are currently underway in the Omaha, Lincoln, Wayne, Grand Island, Kearney, North Platte, Scottsbluff areas, but more may be added if additional hunting areas and mentors are found. For more information or to receive a registration form, contact Aaron Hershberger at aaron.hershberger@ngpc.ne.gov or (402) 471-6144.

20 Lakes 20 Parks

Text and photos by Jeff Kurrus

Each visitor comes to Fremont Lakes State Recreation Area, 30 miles northwest of Omaha, with a different purpose in mind, and the area gladly accommodates.

This year over 800,000 people will visit Fremont Lakes State Recreation Area (SRA), 30 miles northwest of Omaha.

With only 210 acres of water available, numbers this high make it seem as if a person would never be able to find a patch of water for themselves. That, however, is not the case. Instead, there is more than enough water for an angler, water skier, canoeist or swimmer, and most certainly enough land for the walker, bicyclist, motorist or beach bum passing through. All one needs at a place like this is a spot to camp. Which the area can gladly oblige.

On a summer day late last year, catfish angler Robert Bells sat at a picnic table by Lake No. 3, an afternoon trip providing a very necessary after-work break. Legs crossed and arms folded, he enjoyed the last moments of the day at a lake where his

was the only line in the water – a somewhat odd occurrence considering how good the fishing can be at this SRA.

In 2007, Fremont Lakes SRA was listed in *Field & Stream* magazine as one of the top 150 places to fish in the United States. With 20 sandpit lakes spread out over 667 acres of land, this SRA offers a variety of fish species, including channel catfish, bluegill, muskellunge and largemouth bass. With both deep and shallow water, wooded cover, submerged vegetation, rip-rap and other man-made structures available, Fremont gives anglers options when searching for their favorite sport fish.

In addition, Lake No. 3 has been made into a bullhead lake – a project started last June by the Nebraska Game and Parks Commission to increase fishing interest. Because bullheads are so easy to catch, it's a great spot for kids to take a bobber and a worm and



Fremont Lakes SRA's Victory Lake provides one of eastern Nebraska's best options for water recreation.



Canada geese swim across Lake No. 5 at Fremont Lakes SRA during a thunderstorm.

start fishing.

The SRA also accommodates a variety of watercraft. Lakes 4, 17 and 19 have dirt and rock boat ramps while 1, 2, 10, 11, 12, 18, 20 and Victory Lake (No. 15) have concrete boat ramps for bigger boats. Kayaks, canoes and johnboats are welcome on all the lakes, and land anglers often have as much luck as the boat anglers. Even on its busiest holiday weekends, when it seems as if there would be an angler behind every tree, there is still good, fishable water available. “While the fishing pressure is

constant,” said park superintendent Bill Booth, “spreading it over 20 lakes is beneficial.”

True to Booth's words, a group of anglers were bluegill fishing at Lake No. 5 that afternoon. Donovan and Chloe Tuttle had their dad, Patrick, fishing in circles – rigging rods here and casting bait there. Chloe pointed toward a family of geese swimming across the lake, her interest in everything around her much more prevalent than her desire to pay attention to a silly old bobber.

Another group of waterfowl walked close to young Paige Sandness at Victory Lake as she pointed at them, smiled, then watched the jet skiers circle Victory Lake's island. At 86 surface acres, Victory Lake (with attached Lake No. 10) is one of the metropolitan area's most popular watersport hotspots throughout the summer due to the limited number of skiable lakes in eastern Nebraska.

Recent projects by the Nebraska Game and Parks Commission have improved the water recreation

experience at Victory by widening its channels and scraping back points on the south side of the lake in an effort to provide more surface area for personal watercraft. That day, Dale Demont was one of those participants, taking a lap at Victory on his jet ski. His extended family looked on, deciding whether a leisurely stroll through the park or a campfire chat by the lake seemed the best ticket for the afternoon.

Others also watched Demont, as well as the other boats and jet skis, pass. Some did so from the buoyed swimming



Paige Sandness looks at a group of waterfowl on Victory Lake.

areas added on Victory Lake, and others from the 70 modern and 15 primitive campsites overlooking Victory.

A hot ticket item during the summer months, this SRA's padded sites fill up quick, and can receive reservations up to 12 months in advance. Along Victory is a high-energy camping section. On the south section of the SRA, where Victory is located, there are 168 modern camping pad sites with 60 primitive sites available. But, as Booth pointed out, depending on the camping atmosphere desired, there are plenty of other options for visitors as well.

On the area's north side, across Military Avenue, a much quieter, reserved camping option is available at



Along Victory Lake is a high-action campsite that allows visitors to either watch personal watercraft on the lake or participate in watersports themselves.

both Fisherman's Point and Cottonwood Cove, where 25 modern pads can be found. On this side of the SRA, tent campers can also set up anywhere there's an open spot.

"You can rough it in a primitive setting, making your own food over fire," said Booth, "or you can use your cell phone to call in an order of food from the concession, the Lakeside Country Store and Grill. At night you can look at the stars over the campfire, or take the kids to a movie four miles away."

Campers that afternoon, as well as day visitors, took advantage of all the amenities the area had to offer. A couple dined by sunset at a picnic table while Fremont native Jeff Kumm pushed his three kids, T.J., Jayden, and Elle, on the playground swings near Lake No. 10.

Dogs and their owners raced to see who could pull who the quickest; bike riders rolled through the park as kids camping with their parents attempted to give chase on their own bikes; walkers moved through a group of ducks walking down the street with them, and a group of teenagers swam at one of the SRA's four beaches.

After the summer, the numbers of boaters will decrease dramatically, and Fremont Lakes SRA will turn into another, entirely different, public area. Quiet and reserved throughout, the yellow glow of fall cottonwood trees

will prevail, and a walk or ride through the area might even prompt an afternoon nap by the lakeside.

It will be just another day at Fremont Lakes SRA, where a new park will welcome visitors each time they arrive. ■



The use of personal watercraft is permitted at lake Nos. 10, Victory Lake (15) and 20.



David Carpenter and his grandson Patrick Carpenter fish for largemouth bass at Lake No. 16.

Nine-mile Creek

The history and future of a western Nebraska trout stream

Text and photos by Bob Grier

Throughout most of its history, Nine Mile Creek east of Scottsbluff in the Nebraska Panhandle has been described as one of the High Plains's finest coldwater trout streams. The story of the migratory strain of rainbow trout that traveled up the North Platte River from Lake McConaughy to spawn in Nine Mile and other tributaries has been told many times. Surprisingly, the real story of Nine Mile Creek is even

more complex than the development of an upstream migrating rainbow trout population – Nine Mile's story is a story of human industry, intrigue, indifference, foresight, and continuing promise and peril.

Nine Mile Creek in its present appearance didn't exist before the arrival of the first ranchers, cowboys, frontier job-seekers, community boosters and homesteaders in western Nebraska's North Platte River Valley as recently as the

1870s. Nine Mile's history actually began quietly on a mid-summer day in 1886 on a small spring just west of the current Nine Mile drainage.

The summer heat and the prairie's relentless winds were taking a toll on a five-acre

millet field just south of B.F. Gentry's homestead near a rare, life-giving spring later named in honor of Rebecca Winters, who died on the Mormon Trail on August 15, 1852. Her grave, including the engraved iron wheel rim used to mark it, can still be seen along Highway 26 just west of Winters Creek on the east edge of Scottsbluff.

In all probability, Mr. Gentry and a neighbor hadn't ever heard the word "irrigation," but with the spirit that helped pioneers overcome adversity wherever it was encountered across the still-young nation, the men used shovels to dig a quarter-mile-long furrow from the spring to the millet field. Their

small effort was quick to blossom all along the North Platte River.

Several far-sighted individuals arrived in the North Platte Valley about that same time, men who had already seen the promise of irrigation in other states. They quickly set about organizing the construction of a system of canals and laterals that would deliver water from the North Platte River to farmers' fields.

In just five years, a list of the region's irrigation canals included Winter Creek, Minatare, Mutual, Mitchell, Enterprise, Castle Rock, Bayard, Chimney Rock, Interstate, Tri-State, Farmer's and Nine Mile. What had started as a region that

looked everything like the land that early explorers had described as the Great American Desert had become the state's leading irrigation region. Word of the bountiful crops of grains and vegetables spread far and wide.

With the arrival of large-scale surface irrigation, however, came unintended consequences, including newly formed wetlands, probably from elevated groundwater plus seepage and flooding that occurred when rainfall during the irrigation season required district irrigation managers to release excess water in order to prevent blow-outs of the earthen canal banks. As early as 1904, Bayard's newspaper, *The*



Nine Mile Creek Wildlife Management Area, located three miles east of Minatare on U.S. 26 and six miles north on a county road, offers 178 acres of fishing and hunting access. Public access is also available on private land enrolled in walk-in access agreements and marked by signs such as the one on page 37.

Transcript, noted losses from "waste water flooding" and shortly thereafter, judges on the U.S. Court of Appeals



Winter's higher flows and sheltered streambanks provide some of the best opportunities of the year on Nine Mile Creek for anglers like Wayne Sedivy of Alliance.



Marked by clipped tail fins, recaptured rainbow (upper) and brown trout (lower) provide the data needed for trout population estimates in Nine Mile Creek. The clipped tail fins quickly regrow and a second sampling is needed within weeks for accurate data.



Nebraska Game and Parks Commission fisheries biologists Tony Munter and Al Hanson use electro-fishing gear on the creek at Nine Mile WMA to capture trout for their on-going population study.

ruled that owners of canals were responsible for seepage water.

Drains to carry the spillwater and rainfall from prairie thunderstorms during the irrigation season were originally dug by hand, but Frank McCarter of Bayard later invented a canal digging machine that could cut through the large wetlands created by rising groundwater levels and seepage, digging a five-foot deep, sixteen-foot wide canal.

Described as “simply a corn lister only many times larger,” McCarter’s invention was tied to three large capstans, each with a team of four horses and holding up to a quarter-mile of steel cable. One history of the region

says that “the summer of 1917 was exceedingly busy” for McCarter and his canal machine. The North Platte Valley wetlands were quickly converted into fertile agriculture fields tied into the surface water irrigation systems.

The tremendous seepage from the porous canal water delivery system, added to the subsurface groundwater table that was trapped above impermeable layers of Brule clay below the North Platte Valley floor, set the stage for Nine Mile’s drain and other hand-dug drains located downstream of the major irrigation canals to become full-fledged, perennial flowing streams.

Historically, permanently flowing North Platte River tributaries included

only Sheep Creek along the Wyoming-Nebraska border and perhaps a few others, including Winter Creek, that had short stretches of permanent stream. Pioneer historians noted there were very few opportunities for homesteading on the north side of the North Platte because of the difficulty of finding water. The earliest settlers were forced to carry water from the river. Additionally, the region’s only wood was located south of the river near the Wildcat Hills escarpment.

During the first years of the 20th century, maps of the North Platte River Valley were replete with the names of wet and dry creeks – designating full and part-time, intermittent drains and

streams, including Nine Mile, Wet and Dry Wild Horse, Wet and Dry Red Willow, Stuckenhole Creek, Mitchell Drain, Alliance Drain and other streams. Nine Mile and Red Willow became the largest streams feeding into the North Platte River.

Construction of Kingsley Dam on the North Platte River began in 1936 and Lake McConaughy filled by 1952. But even earlier, at least by the 1930s, state and private individuals had stocked Panhandle streams, including Otter Creek and Lonegren Creek, which flow directly into McConaughy, as well as Nine Mile and other North Platte tributary streams, with rainbow trout.

According to Rod VanVelson, a

Nine Mile Creek is known as the best of all of the North Platte Valley’s trout streams, but declining water levels related to the High Plains drought, restricted water use and more efficient irrigation application systems are taking their toll.

fisheries biologist and trout specialist with the Nebraska Game and Parks Commission in the Panhandle between 1966 and 1978, the early stocking of rainbow trout from Nebraska hatcheries and other state and federal hatcheries across the country was the prelude to the development of migratory rainbows in Nine Mile Creek and other North Platte Valley streams.

“It is not too difficult to believe that trout stockings in those early days relied on numerous sources and strains of rainbows and it was likely that some of them, possibly from federal fish hatcheries in the northwest, had steelhead genetics and migratory tendencies.

“One scenario of how migratory rainbow runs developed in the upper North Platte Valley could be that during the filling of McConaughy, rainbow trout from a variety of hatchery sources were stocked in the upstream drainage and in the three small streams flowing directly into McConaughy. Some of these rainbow may have moved downstream either by random movement, displacement by floods or as a response to temporary changes in water quality possibly due to any number of factors, including irrigation return and high water temperatures. These displaced rainbows matured in McConaughy and they naturally began seeking out spawning sites in streams above the lake since rainbow require running water in gravel habitats to successfully spawn.

“Early conservation officers reported anglers catching tremendous five- and even ten-pound rainbows in North Platte Valley streams and at Lake McConaughy during the ‘50s. Those fish became the migratory rainbow population that migrated into the North Platte tributary streams and produced some of the finest trophy trout fishing found anywhere.”



Trout and other fish are momentarily stunned by the electrical current flowing between the hand-held electrodes. Fish captured for the population study are measured, marked, recorded and released back into the stream.

The nearly immediate evolution of the migratory strain of rainbow trout in McConaughy and the North Platte Valley feeder streams was dramatic.

“The migratory rainbow runs in Nine Mile and other tributary streams continued through the 1970s before environmental changes in the upstream drainage and in Lake McConaughy created serious impacts on the migratory population. These changes included the stocking of striped bass that became efficient trout predators, especially when small rainbows from the tributary streams migrated into the lake, and later in the summer when the lower reservoir water levels had reduced the size of the summer trout habitat – water less than 70 degrees with oxygen levels greater



Nine Mile Creek provides a haven for flora and fauna in the fertile North Platte River Valley’s extensive agricultural landscape. Stream improvement projects, like this one in 1996, reduced erosion and promoted productive meanders and associated wetlands. New efforts to enroll landowners to buffer streambanks and reduce livestock use in the streambed are also paying dividends.

than 3.0 ppm. The narrower band of summer trout-supporting water may have made it easier for large stripers to target rainbow trout.”

During the late-1960s and early 1970s, a nursery stream stocking program for those North Platte Valley streams lacking adequate trout spawning habitat was initiated by Commission fisheries biologists. The survivors of nearly 100,000 fingerling migratory rainbow stocked annually in the upper North Platte Valley streams migrated downstream one year later to bolster the trout fishing in Lake McConaughy. The program included trout habitat improvement projects on the tributary streams and better land-use and riparian stream-side management to help develop the coldwater potential in the upper North Platte River drainage.

Even with the migratory strain of rainbow stockings, the runs of migratory rainbow into the North Platte feeder streams from McConaughy continued to diminish until biologists walking the streambanks eventually were unable to find any “redds” – the rainbow’s characteristic spawning sites dug in the

stream-bottom gravel. In addition, after 2000 and the low-water period at McConaughy brought on by a serious High Plains drought-cycle, the shallower lake’s summer water temperatures no longer were able to support trout.

A Nine Mile Creek trout population study between 1967 and 1999 found that rainbows dominated the stream’s trout population from 1967 to about 1982, at which time brown trout began to significantly exceed rainbow numbers. Nine Mile’s current trout fishery evolved to include naturally reproducing brown trout and rainbow populations. Commission biologists continue their fisheries research, including a catch, mark and release study to better understand and manage the resources currently available.

A severe flood in the Nine Mile watershed in the late 1980s led to the Commission’s largest Nine Mile stream improvement project to date. The flood had cut a nearly straight channel across one of the stream’s productive meanders and channelized an adjacent wetland marsh. Commission biologists contracted

to return the original curve and also buried large “root wads” – mature tree stumps with sections of root tangles – along the outside curve of the channel to prevent additional erosion into the nearby farm field. The biologists also planted willows along the stream bank to help reduce erosion.

Efforts and interest to step up other stream improvement projects coalesced by 2003, when a working agreement between the Commission, the Department of Environmental Quality and the North Platte Natural Resources Commission created a temporary watershed coordinator position to coordinate Nine Mile watershed projects and activities.

Dennis Beyer, who was hired to fill the position, said his assignment was “completely new and a true job description didn’t exist, so we immediately started discussions to determine what we could do in the Nine Mile watershed. I’m from a farm and ranch background and felt that one of the first priorities would be to contact Nine Mile Creek landowners to see if there were cooperative efforts

and projects we could agree on. During this period, Nebraska received a grant from the U. S. Environmental Protection Agency for exotic and noxious vegetation control and since our group was best able to initiate an exotic invader project, we found some of the funding necessary to get started.”

A Nine Mile Creek Watershed Association was formed and a board of directors was chosen to formulate and adopt a management plan. The draft water resources plan for the creek included improved flood control, improved water quality and quantity, increased habitat quality and quantity for trout and other riparian wildlife, and other projects.

The watershed project’s milestones include signing contracts with several landowners to participate in buffering their portion of the riparian area adjacent to the creek, placing instream structures, including vortex weirs, and the group applied for additional EPA and Nebraska Environmental Trust grants and other funding to eradicate salt cedar and Russian olive trees.

A total of eight landowners on Nine Mile Creek signed riparian buffer contracts to buffer riparian areas as well as to restore altered wetlands back to their original condition over a 10-year period. In May 2005, a contract was awarded to begin the removal of Russian olive trees along the stream, as well as an additional contract to grind the trees in place and dispose of the mulch.

Under the contract, a tracked tree harvester would cut the Russian olive trunks above ground level and Habitat, a herbicide approved for riparian use, was spot-applied to kill the tree’s root system. The harvester then piled the trees for grinding or chipping to produce mulch. Some of the piles of Russian olive trees were left in place to provide small game habitat structures, and the watershed group plans to follow the Russian olive removal with plantings of native shrubs, including buffalo berry and other native vegetation.

The Russian olive eradication along Nine Mile was completed in March 2006 and a limited amount of follow-up chemical spraying of re-sprouts and noxious weeds continues.

“We were gratified that the tree

removal sites almost immediately grassed over. Everyone’s concern was the potential for increased stands of noxious weeds, including musk thistle,” Beyer said shortly after the Russian olive removal was completed. “As part of the contract, we’ll continue to address noxious weeds and possible Russian olive re-sprouts. The grassed stream banks, with the Russian olive’s roots and tree stumps left in place to help reduce erosion potential, and the new buffer strips along the riparian corridor have been very positive.”

Seen from the air today, Nine Mile cuts through a patchwork of irrigated farm fields and pastures. The stream’s banks include mature and younger cottonwoods, willows and scattered cattail marshes. Anglers can access the stream on the 178-acre Nine Mile Wildlife Management Area, located three miles east of Minatare on U.S. Highway 26 and six miles north. In addition, several landowners on Nine Mile signed contracts to permit walk-in fishing access to the public on their section of the stream, and signs along county road right-of-ways identify these open areas.

Annual electrofishing by fisheries biologists continues to find populations of catchable brown and rainbow trout

in the stream and the studies show that the populations have remained fairly static for several years. Irrigation return water during the May through October irrigation season, as it has since the early 1900s, annually increases the stream’s turbidity and water temperatures, and a few stretches of the stream show the impact of continued use by livestock and overgrazing. Long stretches of the stream, especially below U.S. Highway 26, remain as they have since the arrival of homesteaders in the valley – hand dug, narrow, swift-flowing drainage ditches. Nine Mile Creek empties into the North Platte River just northwest of McGrew.

Nine Mile’s history is intertwined with the arrival of ranchers, cowboys, homesteaders and the beginnings of irrigation in the North Platte Valley, but its future is equally entwined with human activities.

Advanced agricultural practices, including the increased use of groundwater irrigation, more efficient and limited applications of surface water and the impact of continuing drought on the High Plains all seem to suggest that Nine Mile’s watershed and creek will continue to change for years to come. ■



Private land enrolled in public walk-in only access and other stream improvement projects are in part funded by the Nebraska Environmental Trust.

Transplanting a Rare Orchid

By Gerry Steinauer, Botanist
Nebraska Game and Parks Commission

The small white lady's-slipper (Cypripedium candidum) is one of Nebraska's rarest native plants. Recently, a wet prairie north of Columbus in Platte County containing a large lady's-slipper population was slated for development. The Nebraska Game and Parks Commission and volunteers have undertaken an effort to save these orchids.

The small white lady's-slipper is one of two lady's-slippers native to Nebraska, the other being the yellow lady's-slipper (*Cypripedium parviflorum*) of eastern woodlands. Both members of the orchid family, the white lady's-slipper was historically known from 20 counties in eastern and central Nebraska, mostly in the Loup, Elkhorn and Platte river valleys. Since 1990 it has been observed at

only 15 sites in seven counties. Range-wide, the white lady's-slipper is now restricted to 13 northeastern and central states and two southeastern Canadian provinces.

Nebraska's two largest known white lady's-slipper populations, located in the Loup River Valley, contain several hundred plants. The Columbus site contains about 100. Most of Nebraska's white lady's-slipper populations support only a few plants. This orchid's

decline in our state has resulted from the plowing of wet prairie habitat, the annual mid-summer haying of prairies that removes flowers and seed heads in remnant prairies, competition from invasive plants, such as smooth brome and reed canary grass, and herbicides used to control invasive weeds.

The white lady's-slipper root system consists of a mass of white, fleshy rhizomes (underground stems) lying a few inches below the soil surface. During unfavorable growing conditions, such as drought, the orchid can survive as a rhizome only for a year or possibly more. The orchid has a symbiotic relationship with several species of mycorrhizal fungi. Branching, threadlike hyphae of the fungi penetrate the orchid's rhizomes and help with soil moisture and nutrient uptake. In exchange, the plant provides the fungi with carbohydrates produced by photosynthesis.

In late-April or early May, white lady's-slipper stems sprout from one to several buds located on the rhizomes. The erect stems are often clumped and grow to a foot tall. Ascending, elliptic, up-to-five-inch-long leaves sheath the stem.

The orchid flowers from mid-May through early June. The one or two terminal flowers have three petals and three sepals, which are highly modified for insect pollination. The lower petal,

known as the lip, forms a slipperlike pouch – hence the name lady's-slipper. This lip is about ¾ to one inch long and is white with purple stripes or spots, most of which are on the inside of the pouch. The remaining petals and sepals are somewhat leaflike in appearance and are greenish-yellow with brownish-purple stripes along their lengths. Two spirally twisted, inch-long petals are carried on the side of the slipper. Two small sepals are fused and hidden below the slipper while the other is about an inch long and carried above the slipper.

Small bees and, less commonly, beetles and flies, pollinate the flowers. The insects are deceived into visiting the flowers by color and fragrance, as the flowers provide no nectar as reward to the insects for pollination. The insects enter the pouch from above and can exit only through smaller openings toward the rear of the lip. In the process they rub against the stamens and stigma completing pollination. Occasionally, larger insects, such as bumblebees, enter the lip but cannot fit through the exit holes and are sometimes trapped and die.

The orchid's inch-long seed capsules mature in late summer. They can contain thousands of microscopic seeds, but in most years, few capsules reach maturity. The orchid's relationship with fungi is especially important during seed germination, as the microscopic seeds contain no stored nutrients for seedling growth. The fungi provide all water and nutrients to the young seedlings until they begin to photosynthesize.

In 2004, the Nebraska Game and Parks Commission learned that a 40-acre wet prairie north of Columbus had changed ownership and was soon to be developed. Years of mid-summer haying had likely eliminated them from the prairie, but white lady's-slipper orchids still survived in the adjacent, unhayed road ditches. To save these orchids, Tim Janssen and Jim Pyrzynski of the Greater Omaha Orchid Society and Commission staff began a transplant effort.

In October 2005, 21 of the Columbus orchids were transplanted to two native wet prairies on The Nature Conservancy's Platte River Preserve in Hall County. In an attempt to transplant



The author and Jim Pyrzynski plant white lady's-slippers taken from the Columbus site.

the fungi with the orchid, soil clumps approximately 10 inches in diameter were left around each spade-dug orchid rhizome. The orchids were dormant at this time with only withered, dry stems aboveground. Because of their dependence on the fungi, white lady's-slippers and other orchids are sensitive to environmental change and often do not survive transplanting. If an orchid's symbiotic fungi are unable to inhabit the new site due to intolerance of soil chemistry, hydrology, or other factors, the orchid transplant will not survive.

At the preserve, holes were dug and the soil clumps containing the orchids placed in them. Loose soil was tamped around each clump.

The orchids were planted about a yard apart in rows aligned along slight elevation gradients, which thus changed the distance to available groundwater. Hopefully this would ensure that some orchids were planted in areas with appropriate soil moisture. The location of each transplant was triangulated from set posts to aid in future location, and the transplant areas were fenced to prevent cattle disturbance.

In October 2006 and 2007, an additional 42 orchids were transplanted from the Columbus site to the preserve. In 2007, 19 orchids were also transplanted to the Commission's Wood Duck Wildlife Management Area located in the Elkhorn River Valley in Stanton County. Four of these orchids were planted at the edge of a

spring-fed, oxbow wetland, and the rest were planted in a shallow wetland located between low sand dunes. The remainder of the Columbus orchids will be transplanted this fall.

Of the 21 orchids transplanted to the preserve in 2005, nine were still alive in the fall of 2007 and three had bloomed earlier that spring. Eleven of the 22 orchids transplanted to the preserve in 2006 were alive in 2007. These survival rates are acceptable considering 2005 and 2006 were droughty in central Nebraska.

The orchid transplant effort will be successful only if the transplants eventually set seed and produce new plants. It may take several years to determine if the orchids reproduce as orchid seedlings often grow slowly. If the required mycorrhizal fungi are not present at the transplant sites, or do not spread from the transplanted soil, orchid seeds will never successfully germinate and the populations will disappear.

In a few years, the transplant areas will be occasionally burned and grazed along with the wet prairies and wetlands in which they occur. These management actions will reduce plant litter and set back surrounding vegetation reducing competition for sunlight and soil moisture for orchids and their potential seedlings.

Transplanting white lady's-slippers from the Columbus prairie may save an otherwise doomed population. Only time will tell if the effort was successful. ■



One of Nebraska's rarest native plants, small white lady's-slippers require wet prairie habitat and are now found in only seven of the state's counties.



Dave Ortlieb casts to a logjam along the banks of the Platte River west of Louisville last September.

It didn't take long for Dave Ortlieb to catch the first channel catfish of the day and put it in a cooler on ice. To be exact, it was just six minutes after he cast his line to a logjam in the Platte River near Louisville State Recreation Area and not quite 20 minutes after he pointed his airboat up the river from the boat ramp at Highway 50 and hit the gas.

It's not always that easy, but for someone who has spent his entire life fishing this part of the Platte, it can be. The key is simply dipping a plastic worm in stink bait and tossing it in a catfish hole. "If they're in the neighborhood, they will be caught," Ortlieb said.

There are plenty of channel cats in the neighborhood, and a few flatheads too. Ortlieb, 45, has been fishing for them since he was old enough to get himself to the river from his home near Platte River State Park west of Louisville.

"When I was a kid we'd come down here and fish all the time," Ortlieb said. "We'd ride our bicycles down from Dad's and we'd sit right here and fish. "There were big slabs of limestone you could walk on out here in the summer. They've been silted over and undermined and actually sunk down into the riverbed."

When those limestone slabs disappeared, so did the holes they helped create. But there are plenty of

holes in the Platte. When he turned 16, Ortlieb abandoned his bicycle and started strapping his rod, a tub of stink bait and a cooler onto his motorcycle and heading to the river to find them. "I'd just ride out on the river, park out on a sandbar and go fish," he said. Of course that strategy only worked when the river was low. Even then, there were plenty of holes he couldn't reach.

As Ortlieb's rod tip danced, he yanked it from the rod holder and reared back. "Did I get him," he asked rhetorically. "No, I missed him. It's just like golf; you've got to have a good follow-through."

After that, the rod tip quit dancing. "Well, fish? I'm getting kinda' antsy,"

Ortlieb said after about a half hour with nothing to do except watch the sun try to burn through the low clouds and haze that blanketed the river valley on this early September morning. "That one bit and he must've went back and told them all 'There's somebody up there fishing.'"

So off to the next hole he went.

Ortlieb now lives near Elmwood. While he's a little further from the river, fishing it has been easier for him since 1990, when he finished building his first airboat. Now no hole on the Lower Platte is out of reach, and no catfish living in them is safe. "It's the best way to get around here," he said.

Airboats navigate the sandbar-choked

Blow Boat Cats

Text and photos by Eric Fowler

Shallow water and plenty of sandbars make navigating the Platte River nearly impossible in a conventional motorboat, but those obstacles don't phase airboats, making the craft a perfect choice for anglers looking to pull catfish from its waters.

Platte with ease. They move in little to no water, and, when necessary, can even scoot across dry sandbars. Less water is actually better, Ortlieb said, because of the reduced drag on the boat. Whenever possible, Ortlieb tries to run in the shallow water next to sandbars and in doing so picks up an extra three or four miles per hour without changing his throttle position. That's a good thing in a boat that only burns five or six gallons of gas an hour at 1,700 rpm and more than twice that at 2,500 rpm. "That's the worse thing about these aircraft engines," Ortlieb said. "The way gas prices are these days, I guess I can keep my foot out of it."

Ortlieb opted for a 540 cubic-inch, 260 horsepower Lycoming aircraft engine for his first airboat rather than the big-block Chevy's most people were using. Aircraft engines cost more to both buy and maintain, but they are designed to turn a propeller directly, and produce high torque at low rpm. Keeping the propeller speed low is important, because that is the primary source of noise in airboats. Car engines, on the other hand, produce more torque at higher rpm, which means a reduction drive is needed between the engine and propeller to keep performance high and noise low.

About five years ago, Ortlieb put the same engine on a new 15-foot fiberglass hull, on which he built a deck with two fishing chairs. "I like to go fishing," he said, "There are guys that got seats, seats and seats and they just drive around. I've got room for people to

move around and fish."

When Ortlieb built his first airboat, there were only four or five others on the Lower Platte. "A guy pretty much knew everybody who had an airboat out here, and now I'd say down in this area there are probably 40 or 50." Most of those are pleasure boats, but some are owned by catfishermen. Other anglers use johnboats with Go-Devil motors designed to run in shallow water. Some even drop a canoe in upriver and stop at holes on their way down.

"He's another eater," Ortlieb said with a laugh as he threw another fish in the cooler at the second stop of the day, a logjam on one of the footings of the Lied Platte River Bridge south of



Dip worms and stink bait will catch plenty of pan-sized catfish in the Platte River.

Gretna, a segment of the abandoned Rock Island Railroad that is now a hiking trail. “We need to get a few more of them. Three or four of them and a 15-pounder would be nice.”

That hole produced two more fish, one for the cooler and one that didn’t quite make the grade size-wise. There were plenty of bites, most of which came while Ortlieb was either tightening the engine’s alternator belt or tying another dip worm rig after breaking one off on a snag. “Well by golly, when I don’t have any worms to tie or boats to work on, the darned fish won’t bite. Maybe I should change the oil or something.”

Or head upriver.

The first place Ortlieb looks for catfish on the river is usually a logjam, and there’s no shortage of those. When the current hits a pile of logs, it scours a deep hole around them. Catfish like to tuck themselves between the logs to stay out of the current and wait for dinner to float by. Other likely places to find catfish include cutbanks, banks protected by riprap, and holes on the downstream end of sandbars. “There are times when these holes can be shoulder deep or deeper,” Ortlieb said.

During his many years fishing the Platte, Ortlieb has learned a few tricks for reading the river, including watching

his boat wake to find holes that can be hard to spot when the water is murky, and those that might look good at first but turn out otherwise. “If you’ve got one little quick little channel and then it shallows up, the wave will start breaking and you know ‘Man, the water ain’t deep enough. Nobody’s living in that,’” he said.

With few exceptions, Ortlieb has always used Doc’s Catfish Getter Dip Bait. One of many such products known as stink bait, this thick goo made with cheese, liver, blood or other ingredients is a favorite of many catfishermen. It works well in reservoirs, and can be deadly in rivers and streams, where the current slowly washes the bait off the dip worm and carries it downstream, leaving a trail of scent fish can follow to the hook. “They’re smelling her in,” Ortlieb said. “You sit here a half hour and you’re bringing fish in from 200 yards downriver. They’re coming to try to find what the smell is.”

He buys worms in bulk in six different colors and builds his own rigs by tying a No. 6 Mustad treble hook to two feet a 20-pound-test monofilament leader and threading the worm on the line with a darning needle. He figures he’s got about a quarter in each rig, a bargain compared to the \$2 or so a two-pack of commercially tied rigs costs.

Ortlieb fishes with heavy baitcasting rods and Abu Garcia reels spooled with 25-pound-test monofilament. He makes his own three- and four-ounce egg sinkers every few years at a “smelting party” with fellow fishermen. Those are slid onto the line above a heavy snap swivel, on which he hooks his dip bait worm rig.

The third stop of the day, a cut bank on the river’s west side a mile upriver from the Lied Bridge, didn’t yield a bite. Neither did the fourth, a deep hole where the river flowed against a bank covered with concrete rubble. Not one to dawdle where the fish aren’t biting, Ortlieb fired up the boat and headed across the river to a narrow channel that flowed between the bank and a small island.

By now, it was time for the



Hard-mouthed catfish can be hard to sink a hook into, so Ortlieb rears back on the rod on every bite.

photographer to wet a line. To Ortlieb’s delight, I found a good follow-through on a hook-set doesn’t always produce a fish. “That’ll come back and have a set of dentures on it,” he said with a laugh.

Ortlieb’s next chance felt like a good fish when he set the hook, but to his surprise it turned out to be a smooth soft shell turtle. “If that was about a 15-pound snapper, by golly, we might’ve had to throw him in the cooler.”

The turtle was the biggest thing that hole produced. It did give up some fish, but most were barely longer than the three-inch dip-bait worms.

“We’re just going to have to move out of the nursery. We might as well motor. When four fish come to the boat and none go in the cooler, we found the daycare.”

Ortlieb has learned the best bite comes when the river is rising, which happens once a day thanks to releases from the Loup Power District canal. Water diverted from the Loup River near Genoa passes through hydroelectric plants at Monroe and Columbus before dumping into the Platte. The hydro

plants ramp up production during the day to meet increased demand, and when they do, more water ends up in the Platte, causing what is known as hydropreaking. Several variables influence when and how much the river rises when the water reaches Louisville about two days later. But for the most part, the river at Louisville is rising for a half day and falling for the other half.

“Sometimes it really doesn’t come up much,” Ortlieb said. “I mean sometimes you’re only talking two inches of difference, but it’s just enough to turn them on.”

The rising water washes debris and food from the sandbars that was left there when it fell, and hungry catfish are waiting. Whenever Ortlieb is thinking about going fishing, he checks the USGS Web site at <http://waterdata.usgs.gov/ne/nwis/sw> and tries to plan his trip around the rise. “Sometimes it’s peaking down at Louisville at six in the morning and it’s like ‘Yeah, right. I don’t want to be there then,’” he said with a laugh.

Bigger surges often follow heavy

rains elsewhere in Nebraska. While those rises can be good for fishing, they aren’t necessarily good for navigating the river in an airboat. When the river is high, the cage covering the prop on Ortlieb’s boat won’t fit under the Lied Bridge.

Ortlieb has been on the river when one of those surges hit. “All of a sudden



Ortlieb uses a darning needle to thread fishing line through the dip worm before attaching a hook.



While the Platte occasionally produces big channel catfish and a few flatheads, the big fish this day was a two-and-a-half pound channel catfish.

a log hits the side of the boat,” he said, remembering one of those days. “I mean I’m just parked on a sandbar like this and the next thing you know. ‘Clunk.’ I look upriver and it was nothing but logs. You’ve got to beat the surge to the bridge, otherwise you don’t make it under the bridge.”

If Ortlieb hasn’t checked river levels online, he can still tell when the river’s rising. “There are little things that after a while a guy kind of gets to paying attention to,” he said. “You’ve got that little stick over there floating down river. I mean that’s a sign. At the high point of the deal, you can see the foam.”

Ortlieb’s boat can move much quicker than the river, which flows along at about two mph. If he’s on the river ahead of the rise, Ortlieb will head upstream, wait for it, and follow it all the way back to Louisville.

Hole number five, a logjam on the east bank of the river a few hundred yards from Interstate 80, produced the biggest channel cat of the day, a two-and-a-half pounder and another 12-incher, but not the big fish Ortlieb was looking for.

“We went to the daycare down the street,” Ortlieb said. “We’re looking for the old folks’ home. We got granny out of there but all the kids



Ortlieb keeps his dip worms in a contractor’s bag designed to hold screws and carries the bag in a five-gallon bucket dubbed his “bucket of happiness.”

are coming out to play now. We need some benders, some of them that you can’t get the rod out of the holder.”

The sun finally burned through the clouds. But while the temperature was heating up, the fishing wasn’t. It was still a better day than the construction crews working on the I-80 bridge were having.

Ortlieb decided we’d tortured them long enough, making them watch us fish while they worked, and headed downriver to fish one more hole.

Ortlieb usually doesn’t get much further upriver than the U.S. Highway 6 bridge near Ashland, but occasionally makes it as far as the mouth of the Elkhorn River west of Gretna, a 16-mile jaunt from Louisville. “There’s good fishing way upriver but a guy usually has his limit by the time you get up that far,” he said.

“You can catch your limit of pan-sized ones, catch a good mess of fish and on occasion you’ll pull in a big one. This year we stopped down there in one little hole and we caught a couple of them that were running a pound or so, maybe a pound-and-a-half. And then the next throw out, here you come back with a six pounder. Just fishing with this stuff here in the broad daylight, I mean I’ve gotten 15- or 16-pounders off these piles before.”

For about half of that 16-mile stretch, the Elkhorn’s muddier water stays on the east side of the Platte and the water on the west bank is clearer. While one would think that water clarity wouldn’t make much difference when you’re looking for a fish that feeds more by taste and smell than sight, Ortlieb said he does have better luck in clear water. Worm color can make a big difference some days as well.

“There are days that it’s actually the reds and the purples,” he said. “Whoever’s got them on will catch fish. In the clearer water, the brighter colors work. But you get into the black and the reds and purples, they work when the water’s a little stained.”

Ortlieb fishes places other than the Platte, including the Tri-County and Sutherland canals in western Nebraska. “We usually go out there for a week every year and live on catfish and



Outfitted with a Lycoming aircraft engine, Ortlieb’s airboat flies down the Platte at a top speed of 55 mph.

sweet corn,” he said. But the Platte is always there waiting. He’ll fish it as soon as he can get the boat on the river. A few years ago, he hit the water when the temperature hit 60 one January day. “There were chunks of ice coming down the river and I would pull up in the creeks. The catfish were lying up in there. I was using jars of shad and man ... in the winter if the creek mouth is

open, you’re only there for an hour and you’re like, ‘Well, we’re done. Now we might as well go drive around.’”

In late-March or early April, flatheads are especially fond of those creek mouths and a bluegill-baited hook dropped in front of them. Flatheads put the feedbag on again in the fall, too, Ortlieb said. He’s landed his share, and failed to land a few more. He’ll never

forget one fish that took his bait and headed for the main channel. After he finally got his pole out of the holder, he started tightening the drag. “And I was tightening and tightening and it never slowed down and the line just came down to the end and away she went. It was like, ‘What can you do?’” he recalled.

Ortlieb has pulled his share of channel

and flathead catfish from a hole at the mouth of Fountain Creek. But on this day, it didn’t even produce a bite.

Ortlieb didn’t mind. There were fish in the cooler that would be in the fry pan that evening, a good way to end a day.

“The occasional train kind of breaks the silence but it’s awful peaceful out here,” he said. “It’s a good day to be on the river.” ■

White Bass Hatchery Production

Bringing back the “good ol’ days” of white bass fishing at Big Mac.

By Rocky Hoffmann

If there has been one demand heard loud and clear from fishing folks who regularly visit Lake McConaughy, it is “Bring back the white bass to that of the good ol’ days.” There were a couple of phenomenal “good ol’ days” eras at Lake McConaughy – one in the early 1970s and the other in the mid-1980s. Most of today’s anglers likely are recounting the latter era, when white bass fishing was fast and furious, so to speak, and the size of fish caught was also something to brag about.

Darrol Eichner of Ogallala, the Nebraska Game and Parks Commission’s fisheries manager for the southwestern part of the state, answers this “bring ‘em back” demand with an emphatic, “Maybe we already have.” Eichner said that last year’s August creel survey revealed spectacular angler catches that totaled 190,000 white bass that month alone.

This time, however, the presence of a strong white bass population is largely the result of hatchery work, not natural reproduction as was the case in the 1980s. Personnel at the Commission’s North Platte Fish Hatchery have made significant improvements in the culturing of white bass, and they did so pretty much on their own, as there is very little white bass experience in the captive culture world.

But why is Big Mac now dependent on hatchery-stocked fish, when only 20 years ago it managed fairly well on its own in producing a good supply of white bass?

Two reasons, said Eichner: In the mid-1980s there were more than sufficient spring flows in the North Platte River to allow spawning white bass to travel upstream from the lake to reproduce. Recent river flows have been greatly reduced, so access to



Jim Hand of North Platte shows off a net full of white bass after a day of fishing at Lake McConaughy.

good spawning habitat for white bass has been reduced as well. Secondly, Eichner feels that predation and competition from alewife have significantly restricted recruitment of white bass through the fry stage.

The Commission’s current management plan is to stock young white bass and wipers in Lake McConaughy on alternate years. Recent low water levels at the lake, however, have had an effect on some stocking plans.

“We have cut back on our stocking numbers by adjusting the stocking rate to the surface acres of a much lower lake,” Eichner said.

This year is a white bass stocking year at Big Mac, and biologists have requested nearly 180,000 white bass fingerlings from the hatchery system. That’s a tall order considering the difficulty in culturing white bass.

North Platte Fish Hatchery

superintendent Bryan Sweet said that although his facility has been very successful in the hatchery culture of white bass for Lake McConaughy, not all aspects of the process are under a controlled environment, and that starts with the collection of adult spawners from the wild.

“We’re not always certain that we are going to get the males and females we need to begin the process,” said Sweet. “And when we do, there are a lot of factors that will affect the success of the program. White bass fry are extremely small and sensitive.”

Rapid temperature changes or prolonged cooler water temperatures as a result of climatic events will greatly reduce hatchery success rates or even eliminate a year’s production all together, said Sweet. Once hatching occurs and the young fish are stocked into hatchery ponds, they are at the mercy of radical changes in weather. Raising the fish to the fingerling size of one to two inches before stocking is key to establishing a strong year-class at Lake McConaughy.

Eichner feels that there are at least two strong year-classes of white bass in this Ogallala-area reservoir, and anglers will likely have good success again this year.

“Regardless of personal preference, white bass always have been, and always will be, the bread-and-butter fish of western reservoirs. Those who come here to fish for walleye and find the fishing a bit slow on any given day want to be able to fall back on white bass. We also have a tremendous shoreline fishery for white bass for those without boats. And, we have a trickle down effect on lower Platte River reservoirs, which produces exceptional white bass fishing at inlets and from boats.” ■

PHOTO BY ROCKY HOFFMANN

Pronghorn Sheds

Shed once a year, a pronghorn’s headgear is highly unusual.

By Bob Grier

Almost everything about Nebraska’s pronghorn (*Antilocapra americana*), the world’s second fastest land mammal after the African cheetah, is unusual, even to scientists and researchers that have devoted careers to understanding this prairie speedster that is commonly, yet erroneously, called an antelope. Zoologist, naturalist, taxidermist and writer W.T. Hornaday’s description written in 1904 remains as accurate today as any modern biologist’s report: “The prong-horned antelope is found only in North America, and it possesses so many anatomical peculiarities, found in no other animal, that zoologists have created for it a separate Family, which it occupies in solitary state.”

Hornaday’s writings also predicted that the pronghorn would be the first North American big game species to become extinct, but his research, and the fledgling conservation ethic of the period, helped prevent the pronghorn’s extinction.

A pronghorn’s horns are nearly at the top of the list of “anatomical peculiarities” described by Hornaday. The triangular prongs on the leading edge of the horn, commonly known as cutters, are normally found only on males and early naturalists recognized that the horns’ daggerlike shapes, with forward-pointing prongs and inward-turned horn tips, are formidable weapons.

A researcher on the National Bison Range near Moiese, Montana recorded 82 fights between pronghorn bucks between 1987 and 1994. The fights, on average, only lasted about a minute and a half, yet 12 percent of them proved fatal to one of the



Their horns are one of many unusual aspects that pronghorns have.

competing bucks.

Pronghorn are the only species in the world that shed horn sheaths that are formed over a bony horn core. Although matted hair fibers are usually seen at the base of the pronghorn’s horn sheath, the sheath is made up of cells called corneum which form on the outer layers of live skin that covers the bony horn cores. The corneum, or protective layer, is composed of a hard protein called keratin that forms hooves, horns, claws and nails.

The pronghorn’s horn sheath continues to grow and harden for about 9 to 10 months of the year, ending before the late-summer rutting season. Following the rut, the underlying skin covering the core begins producing new horn growth and the increasing growth lifts the old sheath from the supporting horn core.

In Nebraska, the horn sheaths are usually dropped, or cast, in mid- to late-November and December. Removal of the buck’s horn sheath earlier in November, for example,

reveals a narrow, cone-shaped horn already formed at the top of the bony core.

It’s rare to find cast horn sheaths on Nebraska prairies and grasslands inhabited by pronghorn. The casts are soft and can rapidly disintegrate. Discarded horn sheaths are also chewed by coyotes, badgers, porcupines, ground squirrels, mice, gophers and prairie dogs.

Interestingly, relatively recent research on pronghorn horn growth has found an additional distinction between pronghorn and many other big game mammals, including deer and elk. Big game trophies are normally classified by the size of the antlers or horns, and it was once thought that the

harvest of older, mature deer, elk, pronghorn and other big game species would have little impact on herd propagation. Trophy deer and elk, as well as Rocky Mountain bighorn sheep and goats, for example, are often larger males beyond breeding age. But because the maximum growth for pronghorn horns is reached by three years of age, pronghorn can become trophies before they displace mature herd bucks for breeding rights.

So Nebraska’s pronghorn is a one-of-a-kind, horn-shedding, fleet-footed, highly specialized adaptation to North America’s prairies and grasslands. Scientists and others will continue their research of, and their disagreements on, the fossil record and scientific classification of pronghorn, but for the naturalist in all of us, the sight of a pronghorn extending its strides and speed alongside a road or highway-bound vehicle should be reward enough for the continuing efforts to protect this most singular of species. ■

PHOTO BY BOB GRIER

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Exit 285

Take this exit to fun at Windmill SRA and Rowe Sanctuary.

By Jeff Kurrus

Along Interstate 80, there are a number of places one could stop for a breather, camp for the night, wet a fishing line, take a nice nature hike or visit an educational site. Few places, however, combine all of these opportunities in one location. Exit 285 is one of them.

First, Windmill State Recreation Area (SRA) is located just north of this interstate exit. Known for the antique windmills on its 154 acres, this area has six fishing lakes, totaling 23 acres of water. Lake No. 1 is stocked with trout in October and March, Lake No. 4 is stocked with 10-inch channel catfish each fall, and Lake No. 3 holds both wipers and catfish. The rest of the lakes have largemouth bass, bluegills and channel catfish.

A swimming beach, 69 camping pads with electrical hookups, and 20 primitive sites are also available. While these sites are at about 85 percent capacity on the summer weekends, the park resembles more of a ghost town during the week. "On our summer weekdays there may only be 15 units per night being used," said park superintendent Mark Clymer. But that's exactly why campers come here, including the Hayes family from Grand Island.

With three kids in tow, the Hayes family has simple desires for camping locations, which Windmill SRA provides: "It's clean, has a regular mowing schedule and it's close to home," said mother Deb Hayes. "We don't want to spend a lot of money to travel because of gas."

Windmill SRA is 13 miles east of Kearney and 35 miles west of Grand Island, but perhaps most importantly for those visitors looking to experience nature, it's just five miles north of Rowe Sanctuary.

Known for accommodating



The Hayes family, (from left to right) Caleb, Allie, Ben, dad John and mom Deb, cook breakfast while camping at Windmill SRA.

hundreds of thousands of cranes and thousands of visitors during the spring migration season, Rowe Sanctuary becomes just as quiet as Windmill by the time summer rolls around. Yet despite the absence of visitors, there is no absence of activities for all ages.

Rowe has five miles of hiking trails near the Platte River that are a great spot for birding. Other wildlife, including white-tailed deer and turkeys, can also be viewed on morning and afternoon walks. "Leave your watch at home and wander around here with a field guide and binoculars," said Rowe director Brad Mellema.

During the summer, Rowe's Iain Nicolson Audubon Center is open 9 a.m. to 5 p.m. Monday through Friday and Sunday 1 to 4 p.m. This "green" building, with gift shop, educational displays and viewing area of the Platte River, is the second-largest building in the United States constructed of straw bales. "The uniqueness of the building often interests people," said Tony Docherty, volunteer coordinator at Rowe. "We can also show people other conservation aspects concerning

its construction."

In addition, Rowe hosts Big Bend SOAR (Summer Orientation About Rivers) camps for students in grades 2-5. The SOAR dates this year are June 16-19 and 23-26, and campers participate in a variety of activities focusing on the Platte River including natural and physical science, language arts, history, agriculture, music and art. The cost is \$80. A few days earlier, Rowe offers the Flying Higher Camp on June 10-11 for kids in grades 6-8. This hands-on ecology camp combines scientific surveys with fun activities.

Visit Exit 285 during the summer when it's quiet. Then come back during the spring migration, when this part of Nebraska takes on an entirely new identity. ■



To reserve a camping spot at Windmill SRA, call (402) 471-1414 or go online at OutdoorNebraska.org. For questions regarding Rowe Sanctuary or its children's camps, call (308) 468-5282 or go online at Rowe.Sanctuary.org.

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Portraits from the Past



The photo was taken in the fall of 1955, as all three of us graduated from Ainsworth High School in 1956. Sandhills potholes were a favorite place to hunt ducks. Pictured (from left to right): Harris Lambley, who owns the sale barn in Burke, South Dakota; Fred Swett, a real estate agent in Ainsworth; and myself, a retired firefighter living in Mohave Valley, Arizona.

For you duck counters, the photographer was also armed. All three of us endured and survived bypass surgery in our early to mid-60s. God bless all those healthy vittles mom fed us growing up on the farm in the 1940s and 50s.

– Merle Alberts, Mohave Valley, Arizona

This is a picture of a pheasant hunt from November 1961 at Madison, Nebraska. Pictured (from left to right): Conservation Officer Walt Meyer in his younger days, myself, Les Seiler, and my brother, Tom Nichols. At that time there were lots of birds and Soil Bank land, and we could hunt within three miles of town and still be back for 10 a.m. church. Even back then, before Walt became an officer, he made sure we obeyed the law.

– James E. Nichols, Ogallala, Nebraska



This picture was taken on a fishing trip at Long Pine, Nebraska on August 5, 1931. It includes three of my uncles and my father: (from left to right) Frank Wedberg, Emil Wedberg, my father, David Johnson, and Art Johnson. They went there often in the fall as my father had asthma.

– Maurece Johnson Engelbart, Norfolk, Nebraska

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



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