

# NORTH DAKOTA OUTDOORS

PUBLISHED BY THE NORTH DAKOTA



GAME AND FISH DEPARTMENT

\$2.00 MAY 2021



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# Matters of Opinion

*By Terry Steinwand, Director*



In the early 1990s, the North Dakota Game and Fish Department began a communications effort focusing on the dangers of aquatic nuisance species and the fallout of unwanted exotics once established.

This communications effort, which has been repeatedly bolstered over the years, continues and seems even more relevant today with the arrival of zebra mussels in some North Dakota waters.

Adult zebra mussels were first discovered in North Dakota in the Red River in 2015. In the last handful of years, these exotics, which cause major infrastructure problems and a variety of unwanted influences in natural underwater environments, have been discovered elsewhere in the state, Lake Ashtabula and Lake LaMoure included.

Public awareness about aquatic nuisance species, including zebra mussels, and the actions that help prevent their spread, is a priority of the Game and Fish Department.

All people who recreate on North Dakota waters, from anglers, waterfowl hunters, to pleasure boaters, play such a huge role in preventing the spread of ANS. And the way that they do this is by being informed.

Understanding this, Game and Fish is eager to acknowledge May 16-22 as National Aquatic Nuisance Species Awareness Week.

In all fairness, we are fortunate to have low numbers of aquatic nuisance species in the state. Other than zebra mussels, North

Dakota has just a few aquatic invasive plants and animals including curly leaf pondweed, Eurasian watermilfoil, bighead, silver and common carp. Curley leaf pondweed can be found throughout the Missouri River System, Lake Metigoshe, the Sheyenne River in Barnes County, and a few small reservoirs. In the last five or six years, Eurasian watermilfoil has only been documented in the Sheyenne River in Barnes County. Bighead and silver carp are only found in the James River, while common carp are widespread and are found in many waters across the state.

Down the road, we would be excited to again report that North Dakota remains fortunate in its low numbers of aquatic nuisance species.

To do so, we encourage all water users to clean, drain and dry all equipment after every use. Clean and remove all plants or animals from watercraft or equipment prior to leaving any recreational area. Drain and remove water from all equipment prior to exiting designated access points. Not draining water can be extremely hazardous and may cause negligent transportation of ANS to various locations. Afterwards, verify that all equipment is completely dry before using again.

Our natural resources are cherished by many and we all need to do our part to protect them. Don't take my word for it. Go explore and experience North Dakota's great outdoors.

*Terry Steinwand*

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# NORTH DAKOTA OUTDOORS

PUBLISHED BY THE NORTH DAKOTA GAME AND FISH DEPARTMENT

*The mission of the North Dakota Game and Fish Department is to protect, conserve and enhance fish and wildlife populations and their habitats for sustained public consumptive and nonconsumptive use.*

• **Editor:** Ron Wilson • **Graphic Designer:** Connie Schiff • **Circulation Manager:** Dawn Jochim

**MAY 2021 • NUMBER 9 • VOLUME LXXXIII**

Official publication of the North Dakota Game and Fish Department (ISSN 0029-2761)

100 N. Bismarck Expressway, Bismarck, ND 58501-5095

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• The TTY/TTD (Relay ND) number for the hearing or speech impaired is 800-366-6888

*North Dakota OUTDOORS* is published 10 times a year, monthly except for the months of April and September. Subscription rates are \$10 for one year or \$20 for three years. Group rates of \$7 a year are available to organizations presenting 25 or more subscriptions. Remittance should be by check or money order payable to the North Dakota Game and Fish Department. Indicate if subscription is new or renewal. The numbers on the upper right corner of the mailing label indicate the date of the last issue a subscriber will receive unless the subscription is renewed.

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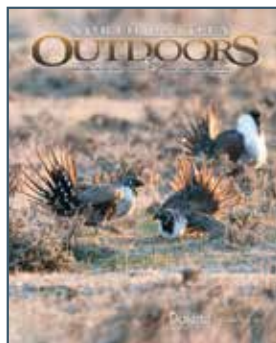
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Periodical Postage Paid at  
Bismarck, ND 58501  
and additional entry offices.  
Printed in the United States

**POSTMASTER:** Send address changes to:  
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## Front Cover

While the sage grouse population in southwestern North Dakota isn't as robust as it once was, male birds gathering on leks in spring certainly remains an age-old spectacle. *Photo by Ashley Peterson, Bismarck.*

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Game and Fish



# 3 Takes on Reproduction



*Male sharp-tailed grouse on  
a lek in spring 2021.*

JESSE KOLAR



Putting an accurate count on the number of different animal species in North Dakota is difficult to do. We have our share of year-round residents, like the black-capped chickadee, boxelder bug, plains hog-nosed snake and least shrew that are hearty enough to shoulder everything from a summer heat wave to a January Alberta Clipper.

Others are harder to tally, like the American golden plover, which nests near the shores of the Arctic Ocean and winters in South America but is a treat for attentive birders during its spring and fall migrations through our state. And some, like the opossum and black bear, are only occasional visitors.

Whatever the exact tally, North Dakota has an enormous diversity of animals that live in the state or simply visit.

Equal to this diversity in wildlife is the variety of reproductive strategies these animals employ. These reproductive strategies combine many different factors including age at maturity for parents, number of offspring produced, level of offspring development, what parental care is provided, and life expectancy. All these factors combine in ways that provide both advantages and disadvantages to the animal's goal of passing on their genes.

Taking a closer look at the reproductive strategies of just three of our resident animals – walleye, sharp-tailed grouse and mountain lions – puts this diversity on display.

## **More Eggs Than Necessary**

On one end of the reproductive extreme we have most of North Dakota's fish species, walleye included. From the time it hatches, a walleye's goal is to survive and grow as quickly as possible to a size where it has a reasonable chance of competing for reproductive success. In most North Dakota waters, male walleyes grow most rapidly until reaching about 15 inches in length and 3 years of age. At 15 inches, they have a fighting chance to vie for space alongside a spawning female and can produce enough sperm to give each egg a chance at fertilization.

North Dakota's female walleye most often reach sexual maturity at 18-20 inches and 5 years of age. Similar to males, a female walleye's rate of growth slows after reaching sexual maturity as the fish devotes some of its resources into egg production ... something female walleye do exceptionally well.

Photoperiod (day length) and water temperature combine to let walleye know when it is time to reproduce. As day length increases in spring and water temperatures warm into the low to mid-40s, walleye seek suitable shallow, gravel areas to deposit their eggs. Female walleyes broadcast their eggs over gravel and the males in attendance, likely several, will release sperm to fertilize the eggs. Mom and dad are now out of the picture and provide no parental care. The eggs are slightly adhesive and stick to gravel where they develop for roughly

two weeks (depending on water temperature) before hatching.

The number of eggs a female walleye produces is influenced by her size and condition. In other words, a large female that has abundant food will produce more eggs than a smaller fish in need of a meal. Healthy fish populations contain many more small fish than fish of large sizes, so most of a walleye population's egg potential lies in small- to medium-sized females rather than fish of trophy size. The North Dakota Game and Fish Department collects an average of 70,000 eggs from each female walleye during spring spawning operations. This results in enormous reproductive potential for the population.

As an example, the Department routinely encounters over 500 mature female walleye during spring netting and spawning operations at Lake Oahe's Beaver Bay. Collectively, 500 Beaver Bay female walleye have an egg potential of approximately 35 million eggs. When you consider that 500 fish represent a small portion of the mature female walleye in the bay, and that Beaver Bay contains just a small portion of all the female walleye in Lake Oahe, the Lake Oahe walleye population likely has the potential of producing over 100 billion eggs each spring.

This is where a walleye's reproductive strategy becomes clear. Walleye produce many more eggs than necessary and Mother Nature sorts out how many eggs will hatch

and survive to adulthood.

Continuing with the Lake Oahe example, walleye reproductive success tends to be excellent when good environmental conditions exist. These conditions include water management by the U.S. Army Corps of Engineers that leads to stable to rising water levels during and immediately following the walleye spawn, stable springtime weather without high wind events (rapid temperature swings and high winds can cause significant egg mortality), and abundant zooplankton forage for newly hatched walleye to feed on.

These conditions were met on Lake Oahe in spring 2009, producing one of the best years of walleye reproductive success, and strongest walleye year-classes, ever documented on Lake Oahe. Just two years later, Lake Oahe's forage base was decimated by the 2011 Missouri River flood. This lack of forage, especially zooplankton, resulted in extremely poor walleye reproductive success in spring 2012.

This reproductive strategy is advantageous in that it allows walleye to quickly increase in numbers when environmental conditions are favorable, while limiting reproductive success when conditions are poor. This strategy has proven especially useful for walleye in Lake Oahe. The amount of water that Mother Nature provides, and how that water is managed by the corps, is the primary factor governing the quality of the fishery. Both floods (1997 and 2011 for example) and droughts (1988-92 and 2001-08 for example) have periodically impacted this walleye fishery by reducing available habitat and causing forage shortages. On the flip side, environmental conditions and water level management that favor



ASHLEY PETERSON

## Walleye

*Walleye are the focus of the majority of anglers in North Dakota, be it on the Missouri River System (top) or many other waters around the state. The Game and Fish Department takes advantage of the walleye's high reproductive potential by collecting eggs (bottom) from select populations. A nice walleye (right) from the Missouri River System.*



MIKE ANDERSON



forage fish production and walleye reproduction, growth and survival have produced extraordinary results.

This reproductive strategy is given important consideration as walleye populations are managed by the Game and Fish Department. The Department has not stocked walleye in the Missouri River or Lake Oahe since 1981 and is relying on natural reproduction to maintain the fishery. Thus, ensuring that there are enough female walleye to get the job done is essential.

As we learned more about the factors that govern walleye reproductive

Missouri River System to year-round angling in 1975 (lifted the spring fishing closure) to provide additional opportunity to anglers. The rest of the state followed in 1993.

The decision to remove the spring fishing closure in 1975 stirred up lively debate among many anglers, some sure that this would decimate a popular walleye fishery. While most of North Dakota's anglers are appreciative of the year-round angling opportunity, these debates tend to be rehashed each spring.

We have now gone 46 years since the last spring fishing closure on Lake Oahe (and the entire Missouri River System) and it has been 40 years since the last hatchery walleye were stocked between Garrison Dam and the North Dakota and South Dakota border. And yet, this walleye population has maintained itself through natural reproduction, all while having a diverse size structure of fish, including fish to trophy sizes.

The Department neither encourages nor discourages

anglers from harvesting female fish full of eggs in spring. Rather we advise that they make the ethical decision to only harvest what they can use within the regulations. We now have 46 years of history that indicates that this is an effective management strategy for

maintaining North Dakota's high-quality walleye fisheries, while maximizing the opportunity anglers have to enjoy these fisheries. This is due, in large part, to a walleye's extreme reproductive strategy.

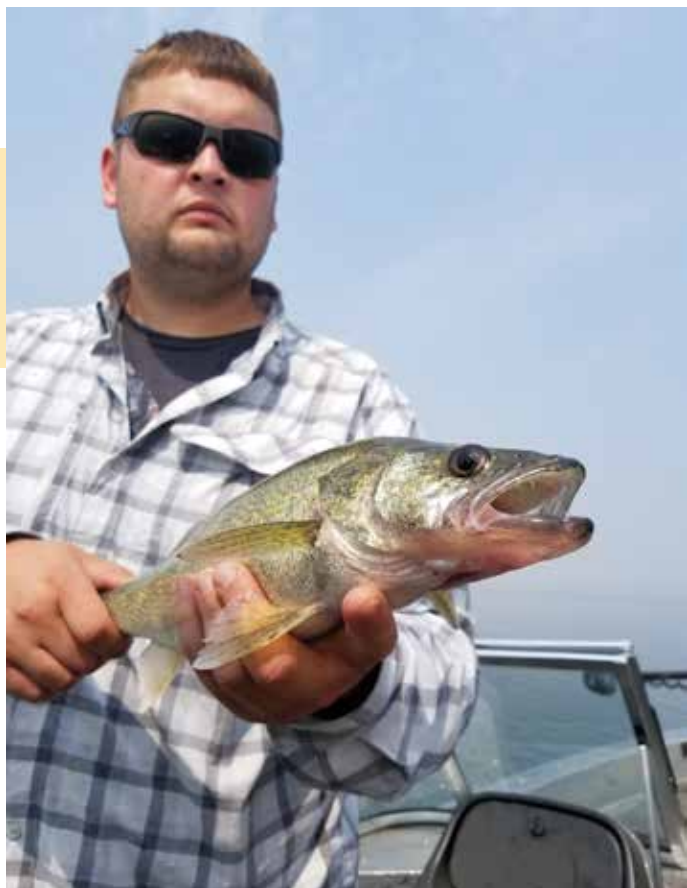
Having walleye populations maintain themselves through natural reproduction is desirable. However, many of our state's waters lack suitable habitat or have salinity levels that are too high to allow walleye reproduction, but otherwise have good conditions for supporting a walleye population (Alkaline Lake in Kidder County is an example). In these cases, the Department takes advantage of the walleye's high reproductive potential by collecting eggs from select populations (Lake Sakakawea, Devils Lake, and Lake Oahe have commonly served as walleye egg sources). We then work in partnership with the Garrison Dam and Valley City national fish hatcheries to hatch and raise those fish and stock them where needed throughout the state.

## A Race to Maturity

If you've spent enough time on North Dakota's backroads, you've likely on occasion had to brake for sharp-tailed grouse. In this discussion regarding reproductive strategy, these native birds are once again in the middle of the road.

A sharp-tailed grouse hen only produces a small fraction of the eggs produced by a female walleye. However, sharptail hens can lay eggs when they're 1-year-old. They can hatch out 15 or more chicks in a year, and a single male can breed several hens, so each individual grouse has the potential to replace themselves more than tenfold in a single year.

Although relatively short-lived, a hen that lives 3 years (a realistic lifespan of a wild sharp-tailed grouse) could pro-



MIKE ANDERSON

success on Lake Oahe and the rest of the Missouri River System (including Lake Sakakawea), it became very clear the number of female walleye in the population was not a limiting factor for reproductive success. Considering this, the Department opened the entire

duce 45 chicks during her lifetime, and her offspring and their offspring could be producing before she dies. It's not hard to see how sharptail populations can rebound rapidly when conditions are suitable for successful nesting and brood-rearing.

However, sharp-tailed grouse lay their eggs on the ground (April-July) and must incubate them in their vulnerable nest bowls for 23 days before hatching. Further, after hatching, chicks are tied to the ground for the first 2-4 weeks (June-August) before they can attain any sort of sustained

flight (July-September). It's no surprise that roughly 40% of eggs laid will be food for skunks, raccoons, badgers, fox, coyotes, weasels, snakes, hawks, owls, even deer and cattle consume eggs on occasion. (Note: when abundant vertical cover is available, nest success of 80% is possible).

When a sharptail's first nest (12-15 eggs) is predated or abandoned, they'll go on to lay a second or third nest, each time with fewer eggs. Of the 60% of eggs laid that hatch, 60% typically die from cold rains, hail or predation before they are old enough to survive

on their own (40-50 days). So, despite the incredible potential, sharptail populations only grow exponentially during years when habitat conditions, weather conditions and alternate prey abundance align. More often, females produce just enough surviving young to replace themselves.

Adult sharptail survival could be high for a ground-nesting bird, were it not for their reproductive strategy. The two main bottlenecks occur in March-May while they're congregated and conspicuous on traditional breeding grounds (called leks or dancing grounds) and in June-August while hens defend their chicks and are more reluctant to fly and easier to detect. Roughly half of the adult sharptail that die in any given year will die during April, May and June, resulting in annual survival rates of 30-60% depending on the habitat conditions and weather events.

Overall, sharptail rely on a reproduction strategy where they reach sexual maturity rapidly and need to survive 2-3 years to produce enough "disposable" eggs. Harvest unlikely affects their larger population, but highly concentrated harvest, especially of adult hens, could impact populations in areas up to two to three sections.

### Protective Parenting

Mountain lions firmly occupy the other end of the reproductive spectrum. In other words, mountain lions produce only a few offspring in their lifetime, but they invest a considerable amount of time and effort in ensuring survival of those offspring.

A female mountain lion typically will not produce her first litter of kittens until 3 years of age, after she has reached adulthood and established a territory. A male's only contribution to reproduction is during breeding and males do not aid in caring for young. After breeding, gestation lasts 92 days



JESSE KOLAR

## sharp-tailed grouse

*Native sharp-tailed grouse (top). Sharp-tailed grouse eggs after hatching (below).*



JESSE KOLAR





GAME AND FISH PHOTO

# mountain lions

*A mature mountain lion female and kittens captured on a trail camera in western North Dakota.*

and then an average of three kittens are born.

Mountain lion kittens can be born anytime of the year, but most are birthed during July-August. Newborn kittens are only about 1 pound each but are essentially miniature versions of the adults and grow rapidly during their first year of life. It will only take about a year for that 1-pound kitten to become an 80- to 100-pound subadult.

Kittens are dependent on their mother for food until 10-12 months old and will remain under her protection in their mother's territory until 13-18 months. Studies that have marked newborn mountain lions indicate that we can expect 50% (or less) of the kittens to survive to independence. Causes of mortality to mountain lion kittens include predation (from mountain lions or other predators), disease, starvation and accidents.

Because kitten-rearing is such a long process for mountain lions, an adult female only breeds and produces a litter about every other year. Female mountain lions have the potential to live many years (oldest documented in North Dakota was 16 years old), but most will not live past 7-8 years. Therefore, a female mountain lion

with average reproductive success will likely only produce about 4-5 kittens that will survive and become independent.

As a result, the Game and Fish Department allows for only a limited mountain lion harvest compared to walleyes or sharp-tailed grouse. North Dakota's mountain lion hunting season is controlled by a harvest limit that ensures take does not exceed reproductive output in most years.

To accomplish a sustainable harvest, we must do a good job tracking population trends. Unfortunately, mountain lions do not lend themselves well to traditional survey techniques, such as roadside or aerial counts. Therefore, we require successful hunters to relinquish their mountain lion carcasses to us after removing the pelt and edible meat. These carcasses contain important information on survival and reproduction that we then use to estimate population trends.

Because hunters are the primary cause of mortality for adult mountain lions in North Dakota, we can control the trajectory of those population trends by adjusting harvest limits and ensure sustainability in the face of limited reproductive potential.

## Summary

So, which reproductive strategy is best? In short, it depends.

Walleye have evolved to live in an environment with rapid and extreme fluctuations and food availability and habitat conditions, produce large numbers of poorly developed offspring with little or no parental care, allowing the abundance of this species to fluctuate with changing environmental conditions to maximize an individual's opportunity to pass on its genetics.

On the contrary, if a species lives in an environment with relatively stable food availability and habitat conditions, that species maximizes its likelihood of passing on its genetics by producing low numbers of well-developed offspring, providing excellent maternal care, and defending a territory.

Mountain lions excel at this strategy.

Most of North Dakota's animals, like sharp-tailed grouse, lie between these extremes.

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**PAUL BAILEY**, Game and Fish Department fisheries supervisor, **JESSE KOLAR**, Department upland game management supervisor, **STEPHANIE TUCKER**, Department game management section leader. The authors are listed in the order in which the animal species were presented.



# 2021 Legislative Review

*By Scott Peterson*



Every other year in North Dakota, our elected officials gather at the state capital to propose, review, debate and ultimately vote on legislation that will set the course for the state and its citizens.

Some of these bills are also related to how the North Dakota Game and Fish Department delivers services to its customer, which is partly why we closely track the bills and provide input or testimony as needed or appropriate.

Once bills are formally introduced, we review and determine those that may have a nexus to the Department and its customers, based on their own merit. A decision is then made which bills to monitor, and for those that we do keep an eye on, we further decide to take a position of support, opposition or to remain neutral and simply track the bill.

By all accounts, the number of bills that will influence how the Game and Fish Department does business, either directly or indirectly, was down somewhat this session. The 67th gathering also seemed a little quieter than some sessions in recent years. That's not to say that things still didn't get hectic at times, but the overall tone was somewhat milder.

One of the more obvious differences was the absence of a bill that would presume all lands closed to hunting or trespassing on all private lands. That discussion during the session revolved around extending the electronic posting study, which was approved in 2019 and implemented electronic posting as another option for landowners to post land. A wide variety of firearms-related bills were also introduced and debated as well.

Because state law often dictates how we conduct business at the Game and Fish Department, it is vitally important that we diligently track bills and establish a rapport with key legislators because bill language can, and does, change quite frequently throughout the session.

As expected, the COVID-19 pandemic played a big part this session in many ways. Before the session officially started, a requirement was put in place that all bills be introduced electronically. The public was required to wear masks while attending any hearings and, in an effort to limit in-person attendance, all hearings and floor sessions were live-streamed.

While this was undoubtedly viewed as a hindrance to many, I personally found it convenient to view committee hearings without having to travel to the capital. I would guess that this also allowed for more efficient use of time by many who would have otherwise had to spend most of the day at the capital to attend a hearing or two.

So, the question remains as to how Game and Fish Department constituents fared through this latest round of legislation. I'd say that they did fairly well. Meaning, I don't think hunters, anglers and trappers of this state will notice a huge difference in the laws that determine the way they pursue their passions.

While we do our very best to keep the best interests of our customers in mind while helping shape legislation, it is still important for each and every citizen of this state to make their own voices heard on those bills they deem important.



## HUNTERS, ANGLERS, TRAPPERS TAKE NOTE OF NEW LEGISLATION

The North Dakota Game and Fish Department tracked 21 outdoors-related bills during the 2021 legislative session, nine of which were passed by both chambers and signed into law.

The following bills take effect Aug. 1.

**HB 1017** – Appropriates \$92,368,134 to the Game and Fish Department for the biennium beginning July 1, 2021 and ending June 30, 2023. Passed House 81-13. Passed Senate 46-1.

**HB 1081** – Relates to access and activities on trust lands and provides a penalty. Passed House 68-25. Passed Senate 40-7.

**HB 1113** – Requires written permission from the owner of the property, or an individual authorized by the owner, to place bait for the purpose of attracting wildlife and to install camera/video equipment that must have identification. In addition, provides a penalty. Passed House 94-0. Passed Senate 47-0.

**HB 1218** – Nonresidents who own land in North Dakota may hunt during the first seven days of the pheasant season on land they enroll in the PLOTS program. Passed House 92-0. Passed Senate 46-1.

**HB 1221** – Adds clarification to section 47-05-17 of century code, relating to an exemption from prohibition against severing hunting rights from surface estates. Passed House 65-26. Passed Senate 45-2.

**HB 1242** – An individual who was issued an apprentice hunter validation license in 2020-21 may receive another. Passed House 91-0. Passed Senate 45-2.

**HB 1411** – An individual may use an artificial light to pursue on the individual's premises at any time throughout the year any predatory animal attempting to destroy property. Passed House 92-2. Passed Senate 47-0.

**SB 2036** – Legislative management shall continue to study the electronic land access database and application during the 2021-22 interim and expand it to all counties. Passed Senate 45-2. Passed House 91-2.

**SB 2144** – Allows the owner or an individual authorized by the owner the option to designate land as posted or

closed to hunting in an online database and provides a penalty for trespass. Passed Senate 44-2. Passed House 89-3.

## BILLS THAT FAILED

**HB 1120** – Allows a resident who is entitled to purchase a disabled veteran deer license to hunt white-tailed deer five days preceding the youth deer hunting season and during the regular deer gun hunting season. In addition, 100 licenses would be available each year and taken from the five units with the lowest selection rates for hunting licenses. The licenses may not be used in those units and are not valid on public lands. An individual who receives one of these licenses may not apply in the deer gun lottery. Passed House 91-0. Failed Senate 8-39.

**HB 1178** – Nonresident members of the Armed Forces who qualify to receive a resident license may apply for and be issued a lottery license for deer. Failed House. 14-76

**HB 1270** – An individual is guilty of an infraction by placing a trail camera, etc., on private property without written permission from the owner or occupant. In addition, the device must have identification. Failed House 0-94.

**HB 1327** – Allows former residents who lived in North Dakota for at least 10 years to receive 1% of the total deer gun licenses. Failed House 1-90.

**HB 1340** – A law enforcement officer would not be able to enter private property for search and seizure without permission is prohibited. Failed House 37-56.

**SB 2037** – Amends a section of century code relating to criminal trespass and electronic posting, including an individual would be guilty of a class A misdemeanor by entering an enclosed fence; and the name of a person would not have to appear on each sign on physically posted land. Failed Senate 0-47.

**SB 2038** – Allows the option to designate land as posted or closed to hunting in an online database or other electronic application. Failed Senate 0-47.

**SB 2118** – Increases game and fish violations for a class 1 noncriminal offense from \$50 to \$100, and a class





ASHLEY PETERSON



ASHLEY PETERSON

Hunters don't need landowner permission to access PLOTS tracts (top left), SB 2144 allows landowners the option to designate land as posted (top right) or closed to hunting in an online database or other electronic application. A bill to allow applicants age 75 and older to enter their name twice in North Dakota's moose (right) lottery did not pass.



ASHLEY PETERSON

2 noncriminal offense from \$25 to \$50. Failed Senate 21-26.

**SB 2143** – Allows solid fluorescent pink or a camouflage pattern of at least 50% fluorescent orange or pink to be worn by big game hunters. Passed Senate 43-4. Failed House 14-78.


**SB 2172** – Applicants age 75 and older would be able to enter their name twice in the moose lottery. Passed Senate 27-20. Failed House 34-78.

**SB 2184** – Certified hunter education instructors would be issued a license to hunt any legal deer during the deer

gun season. In addition, hunter education instructors who have taught for the preceding five years would be issued one bighorn sheep, elk, or moose license. Failed Senate 6-41.

**SB 2211** – Allows the use of an artificial light with a power source of not more than 6 volts while hunting furbearer, ground squirrel, prairie dog, porcupine, rabbit, or skunk, excluding the regular deer gun season. Passed Senate 28-19. Failed House 13-79.

**SCOTT PETERSON** is the Game and Fish Department's deputy director.



*In an attempt to thwart potential threats, the American bittern strikes a pose: outstretched neck, bill pointing up, and feathers flatten against the body. Freezing in place, combined with its striping feathers, help it disappear among the vegetation.*

*(RIGHT) American Bitterns are medium-sized with a long, thick neck and long, pointed bill. The alternating light and dark feather pattern helps camouflage these birds in their habitat.*



# AMERICAN BITTERN

STORY AND PHOTOS BY ASHLEY PETERSON



Regardless of the subject, more times than not, early morning starts are a given. Capturing an America bittern portrait is no different.

Summer of 2020 provided abundant wetland options for many living things, the American bittern being one of them. The trick

was finding one, which I quickly learned, was more of a right place, right time scenario.

On a combined fourth attempt in search of a marshy area likely entertaining bitterns, Mike Anderson, Game and Fish Department video project supervisor, and I ventured northeast of Bismarck

where he'd last spotted one of these medium-sized herons. You may or may not be familiar with the "American Bittern" video program the Department produced last fall. This written piece is the behind-the-scenes photo edition of how we captured the video for that story.



As the first rays of light began reflecting soft sky colors in the many patches of standing water, our eyes darted in and out of the ditches, hoping to catch a little patch of something that didn't quite belong.

At least, that was my plan.

I'd mostly seen photos and video of this bird, and once very briefly in the wild. So, I was surprised when we stumbled upon a bird about an hour into our drive. Starting from afar, I pulled out my camera and quickly snapped a few photos, recorded a few seconds of video, and held still. I expected the bittern to spook and fly away at any moment.

Nope, not this fella.

Not only was the bittern preoccupied with its search for breakfast, but it also seemed to care less about having an audience. In fact, at one point, this bittern became so comfortable with our vehicle, it wiggled-waddled up the bank to within 6 feet of us. My lack of experience and research on this bird briefly gave me cause for concern: how bold is this bird? Was it coming to give me a piece of its mind about its portrait session?

Nope. Turns out, it spotted a grasshopper and made a meal of it. I will admit, I was so shocked, I forgot to hit the shutter button. Sometimes, when you experience a new wildlife encounter such as this, you just stop and watch.

We observed this bird stalking its prey, darting in and out of the vegetation like a ninja and "hiding" in plain sight. By the way, when a bittern thinks its hiding, it will stand very still, raise its head tall to stretch out its neck, using its dark- and light-patterned feathers to camouflage with its surroundings. While this maneuver does work, it's just less effective when standing in the middle of marshy water, several feet away from any cover.

Mike and I watched this bird over the course of two hours. Content with a variety of photos and video and the bittern's ultimate cooperation, we continued on our way.

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**ASHLEY PETERSON** is the Game and Fish Departments photographer/videographer.

*The American bittern's yellow eyes have the ability to focus downward, rendering a comical expression when viewed straight on.*





*Patience and very slow, deliberate movements aid these birds in stalking their prey, up to the striking moment.*

*American bitterns can be found in freshwater marshes, typically along the edge of reed growth. While it's uncommon to find a bittern out in the open, this particular fella not only ventured away from his hiding place, but came within a few feet of our vehicle.*





# THE BASICS OF FI



SUBMITTED PHOTO

## Docks. Piers. Boat Ramps.

These words are often substituted and used interchangeably by the public when discussing a recent fishing trip or asking questions about what facilities might be available at a lake they plan to fish. While all three are interrelated and associated to angling and boating, each

one describes a facility that has its own distinct function and serves a completely different purpose than the others.

In the following, we will look at docks, piers and boat ramps, describe some of the variations and provide some examples of each.



# SHING FACILITIES

BY BOB FROHLICH



SUBMITTED PHOTO

Construction of a boat ramp extension at Northgate Dam (far left). Anglers use the Schwab Landing site (left) on Devils Lake. Young anglers wet a line off a fishing pier (bottom) at Glenburn Pond.



SUBMITTED PHOTO



## 📍Piers

A fishing pier is a platform or structure that extends into or over the water from the shoreline to provide additional public fishing opportunities. Piers are often necessary for anglers to gain access to deeper water, beyond the cattails, weeds and submergent vegetation along the shoreline which makes it difficult to fish.

There are basically two types of piers found in North Dakota, floating and earthen/rock. The majority of the 250 fishing piers scattered across the state are the floating type. Most floating piers are T-shaped, have handrailings around the perimeter and are supported by foam-filled floats mounted to the bottom of the frame. These are the most popular as they can accommodate fluctuating water levels, can be moved to different locations on a given lake, or to a new lake, and can be removed during winter to alleviate damage caused by ice expansion and movement.

Rock and earthen piers are usually not as prone to ice damage, but they are generally harder to fish from, more difficult to retrieve and net fish due to large rocks and are vulnerable to surface grass and weed growth. The benefit of a rock/earthen pier is that it doesn't have to be installed or removed annually and has a lower maintenance cost than a floating pier.

No matter the type, fishing piers are extremely popular with the public and allow access to ponds, lakes and weed-choked areas that would otherwise be inaccessible.

## 📍Docks

Courtesy docks sit on or alongside a boat ramp and are designed to provide a safe means to aid and facilitate anglers when loading or unloading their boats. Courtesy docks can be divided into two general categories, primary docks and secondary docks. Primary docks are located on the boat ramp and are straight "finger type" docks that allow anglers to get in/out of their boats without having to crawl over the bow or walk into the water while launching.

While there are many variations to their construction, the most popular are those made of a galvanized steel frame, fiberglass decking, vinyl bumper system and adjustable outer leg support. The adjustable leg support allows the dock to be leveled (all directions) and include either a wheel or skid base, depending on the type of ramp or if an anchor system is available.

Secondary docks can be straight, T-shaped or U-shaped and are located off to the side of the ramp with the main purpose being to provide anglers a place

- 📍 Rock fishing pier (top) at Lake Darling. Concrete boat ramps (bottom) are the most common and popular as they provide a firm, solid base and are not easily damaged or affected by ice or other variables.







SUBMITTED PHOTO



SUBMITTED PHOTO

📍 (Top) Anglers have nearly 300 fishing waters with almost 400 public boat ramps that provide the needed access to some wonderful fishing opportunities around the state. (Bottom) A secondary dock at Dakota Waters Resort on Lake Sakakawea that provides anglers a place to drop someone off to go get the vehicle or temporarily tie up their boat if they are by themselves.

to drop someone off to go get the vehicle or temporarily tie up their boat if they are by themselves without impacting the main ramp. Most secondary docks are floating as there is not a firm or solid base to support them. Like piers, courtesy docks are extremely popular and make it possible for someone to safely launch and retrieve their boat with or without help of another person.

## 📍 Boat Ramps

A boat ramp is an inclined, hard surface facility that is constructed and maintained for the purpose of launching and retrieving boats. It is constructed both above and below the waterline and is the flat hard surface that an angler backs his/her vehicle and trailer down.

The three main types of boat ramps are gravel, metal or concrete and the type constructed depends on the water body and amount of boating use. Gravel ramps, often referred to as primitive launch sites, are found on smaller lakes or rivers and are an inexpensive and quick way to provide access for smaller boats or canoes.

Slide-in metal ramps come in bolt together sections that are put together up on dry ground and then pushed into the water. They can be installed or removed quite easily but are also susceptible to buckling and damage during winter as the ice expands and/or shifts during ice-out.

Concrete boat ramps are the most common and popular as they provide a firm, solid base and are not easily damaged or affected by ice or other variables. The Game and Fish Department utilizes a “pour and push” method of construction whereas the first slab is poured on dry ground and then pushed out into the water. The second above water slab is then simply poured in place to complete the ramp. The end product is a solid concrete ramp from top to bottom with one splice at the water line.

A single lane ramp is typically 14-20 feet wide, while a double lane ramp is 30 feet wide or more with a courtesy dock installed down the middle. Slope is extremely important, and the preferred slope of a ramp is between 12-14%. A ramp steeper than that can be dangerous, while a shallower or flatter one will force the user to back their vehicle into the water and usually makes loading and unloading more difficult.

Fishing continues to be very popular in North Dakota. Thankfully our anglers have nearly 300 fishing waters with almost 400 public boat ramps that provide the needed access to these tremendous fishing opportunities.

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**BOB FROHLICH** is the Game and Fish Department's fisheries development supervisor.



# BUFFALOBERRY PATCH



## men convicted of poaching

A months-long investigation into the poaching of about 10, and possibly more, whitetail bucks in Barnes County beginning in 2019 ended in the conviction of four men.

"We charged them with the only ones that we could prove, which was right around 10 bucks," said Greg Hastings, North Dakota Game and Fish Department warden in Jamestown and lead investigator in the case. "We suspected there were more deer taken, but we honestly don't know."

The four men were Jakob Ashline and Payne Drake, both of Valley City, and Calvin Bjornson and Ryan Rudolph, both of Spiritwood.

The convictions included, among other penalties, many misdemeanors, fines and fees:

- Ashline – 15 A misdemeanors; nine B misdemeanors; \$7,900 in fines, fees and restitution; 53 days in jail; and loss of hunting/fishing/trapping privileges for 10 years.
- Drake – One A misdemeanor; eight B misdemeanors; \$850 in fines and fees; and loss of hunting/fishing/trapping privileges for two years.
- Bjornson – Two A misdemeanors; one B misdemeanor; and \$4,750 in fines and fees.
- Rudolph – Four A misdemeanors; two B misdemeanors; \$2,635 in fines, fees and restitution; and loss of hunting/fishing/trapping privileges for two years.

In addition, Ashline forfeited two rifles and a spotlight; Rudolph forfeited one rifle and must complete 100 hours com-

munity service; and Drake must complete 80 hours of community service.

Beginning in October 2019, Department wardens began by investigating a buck shot near Valley City that had its antlers removed. Within a week, another buck, also missing its antlers, was discovered in nearly the same location. No meat was removed from either carcass and left to rot.

Mark Pollert, Department warden supervisor in Jamestown, said more suspicious, dead deer were reported to wardens later that fall, most near the Sheyenne River Valley from Lake Ashtabula to Kathryn. In two cases, antlers had been removed from the deer in the same manner and the carcasses left to waste.

In December 2019, game wardens, with assistance of warden pilot Jeff Sieger of Bismarck, conducted a night flight in hopes of developing suspects. That night, warden Michael Sedlacek of Fargo became involved in a ground pursuit of a vehicle that appeared to be illegally shining wildlife.

The vehicle eventually got stuck in the snow and the shining suspects, who were not involved in the same case with the four eventually convicted men, were apprehended with the assistance of other wardens and law enforcement personnel. During an interview with the suspects, wardens discovered a photo of a large whitetail buck, which led to additional investigations.

"Catching those guys shining deer landed us a photo of a poached deer we'd been hearing about and got us to digging further," Hastings said.

Lots of digging followed.

"Like I've said multiple times, it was a lot of work, a lot of investigating," Hastings said.

Wardens spent countless hours conducting interviews, served several warrants and collected evidence for safekeeping and DNA analysis.

Assisting Hastings with much of the investigation was warden Andrew Dahlgren of Edgeley. Seven wardens from the southeastern part of the state were involved in varying degrees in the complicated case, Pollert said.

"This investigation was highly complex and involved hundreds of warden hours to successfully complete," said Scott Winkelman, Game and Fish Department enforcement division chief. "It really shows the excellent work our game wardens do on a daily basis. The entire investigation is a terrific example of how the public, game wardens and the state's attorneys can work together to protect North Dakota's wildlife."

Wardens thanked citizens for reporting the suspicious activities that led to the investigations. Thanks also to the Barnes County Sheriff's office and the North Dakota Highway Patrol for their assistance. And special thanks to the Barnes County State's Attorney's office for their dedication in prosecuting the case.





*Dickinson angler Jared Shypkoski and his record walleye.*

SUBMITTED PHOTO

## Walleye Verified as State Record

A 16-pound, 6-ounce walleye caught March 13 by Dickinson angler Jared Shypkoski is the new state record, according to North Dakota Game and Fish Department

personnel.

Shypkoski reeled in the 33-inch fish in the Eckroth Bottoms area of upper Lake Oahe.

The previous record of 15

pounds, 13 ounces was taken in 2018 by Neal Leier of Bismarck, approximately 30 miles upstream on the Missouri River near the Fox Island boat ramp.

## 2020 Deer Season Summarized

A total of 58,146 North Dakota deer hunters took approximately 39,322 deer during the 2020 deer gun hunting season, according to a post-season survey conducted by the state Game and Fish Department.

Game and Fish made available 68,650 deer gun licenses last year. Overall hunter success was 68%, with each hunter spending an average of 4.8 days in the field.

Hunter success for antlered

white-tailed deer was 67%, and antlerless whitetail was 63%.

Mule deer buck success was 81%, and antlerless mule deer was 83%.

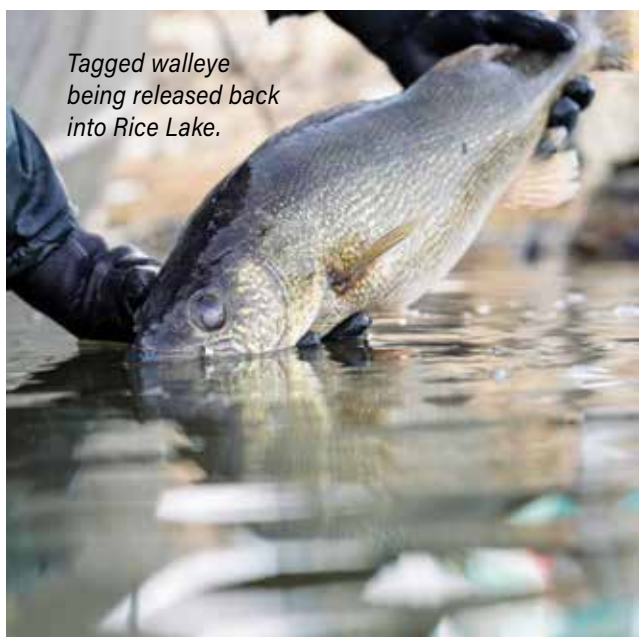
Hunters with any-antlered or any-antlerless licenses generally harvest white-tailed deer, as these licenses are predominantly in units with mostly whitetails. Buck hunters had a success rate of 70%, while doe hunters had a success rate of 69%.

Game and Fish issued 12,130 gratis licenses in 2020, and 9,678

hunters harvested 5,612 deer, for a success rate of 58%.

A total of 1,276 muzzleloader licenses were issued, and 1,093 hunters harvested 481 white-tailed deer (234 antlered, 247 antlerless). Hunter success was 44%.

A total of 30,336 archery licenses (27,041 resident, 3,295 nonresident) were issued in 2020. In total, 26,420, bowhunters harvested 9,911 deer (9,058 whitetails, 853 mule deer), for a success rate of 38%.



Tagged walleye being released back into Rice Lake.

ASHLEY PETERSON

North Dakota Game and Fish Department fisheries biologists tagged hundreds of walleyes in two North Dakota waters in April in an effort to determine exploitation and harvest in these popular fisheries. Walleyes were fitted with jaw tags at Rice Lake, Emmons County, and Antelope Lake in Pierce County as part of one-year studies in both waters. Tagging fish for study purposes in North Dakota is not uncommon. For example, Department fisheries biologists are in the third year of a four-year walleye tagging study on Lake Sakakawea to look at such things as natural mortality, aging mortality and fish movements. Fisheries biologists say it's imperative walleye anglers report tagged fish from whatever waters they are fishing, no matter if they end up in livewells or back in the lake. Anglers are also encouraged to treat tagged walleye just like they would treat any other fish they might have caught. If it's a fish an angler was planning on keeping, then harvest the fish. If it's a fish an angler was going to release, then do so, but record the tag number and leave the tag on the fish. Tagged fish can be reported on the Department's website, [gf.nd.gov](http://gf.nd.gov), or call the Game and Fish Department's main office in Bismarck at 701-328-6300.

## NASP State Tournament Results

School-aged archers from across the state participated virtually in the 2021 National Archery in the Schools state tournament. Archers competed in their own gymnasiums and scores were submitted electronically.

The top 10 archers in each division of the bullseye tournament qualify for the national tournament, which will be held virtually. In addition, the top team in each division also qualifies.

The North Dakota Youth Archery Advisory Committee contributed \$21,000 in college scholarships to the top five overall scorers in both boys and girls divisions.

Oakes students claimed top honors in the high school (grades 9-12), middle school (grades 7-8) and elementary (grades 4-6) bullseye team divisions.

The overall individual male winner was Oakes archer Hunter Kamlitz, while Medina student Gracie Gunderson claimed the top individual spot in the female division.

Top three place winners in the individual competition by division:

**High school boys** - 1) Hunter

Kamlitz, Oakes; 2) Clancey Zimbelman, Oakes; 3) Casey Everson, Barnes County North.

**High school girls** - 1) Gracie Gunderson, Medina; 2) Tallin Schafer, Lidgerwood; 3) Allee Boyer, Edgeley.

**Middle school boys** - 1) Braysen Sagert, Oakes; 2) Gage Hoffman, Medina; 3) Hunter Genre, New Rockford-Sheyenne.

**Middle school girls** - 1) Shayle Zimbelman, Oakes; 2) Madison Samuelson, Mt. Pleasant; 3) Mackenzie Nogowski, North Sargent.

**Elementary boys** - 1) Drew Hofmann, Medina; 2) Louis Schmidt, Ellendale; 3) Andy Jones, Oakes.

**Elementary girls** - 1) Alyssa Brumund, Edgeley; 2) Nora Helgersen, Oakes; 3) Sophia Krush, Wilton.

In addition, archers were scored in a NASP 3-D Challenge tournament.

In the team category, Oakes students claimed top honors in the high school and middle school divisions, while Wilton claimed the top prize in the elementary division.

Overall individual male and female

winners were Clancey Zimbelman, Oakes, and Gracie Gunderson, Medina.

Top three individual performers in the 3-D high school boys division were 1) Clancey Zimbelman, Oakes; 2) Mason Kamlitz, Oakes; 3) Connor Cose, Mt. Pleasant.

**3-D high school girls** - 1) Gracie Gunderson, Medina; 2) Zoey Bohnenstingl, Lidgerwood; 3) Keera Erickson, Oakes.

**3-D middle school boys** - 1) Braysen Sagert, Oakes; 2) Isaiah Wertz, Oakes; 3) Hunter Genre, New Rockford-Sheyenne.

**3-D middle school girls** - 1) Shayne Zimbelman, Oakes; 2) Gabriella Golmer, Wilton; 3) Madison Samuelson, Mt. Pleasant.

**3-D elementary boys** - 1) Louis Schmidt, Ellendale; 2) Deahgan Benson, Gackle-Streeter; 3) Hudson Miller, Wahpeton.

**3-D elementary girls** - 1) Karly Rivinius, Gackle-Streeter; 2) Megan Jarrett, St. Johns Academy; 3) Morgan Scott, St. Johns Academy; 3) Sophia Krush, Wilton.





SUBMITTED PHOTO

## Cleaning Stations Help in ANS Fight

In a continuing effort to stop the introduction and spread of aquatic nuisance species, particularly zebra mussels already anchored in some North Dakota waters, the North Dakota Game and Fish Department installed a boat cleaning station near the Red River in Grand Forks and at Lake Ashtabula and Lake Metigoshe.

The self-serve, waterless CD3 units are free and open to the public and include a high-powered air hose, broom, wet/dry vac, a tool for removing vegetation from underneath boat trailers and flood lights to illuminate the cleaning process in low light.

Ben Holen, Game and Fish Department ANS coordinator, said the CD3 unit installed at the North Landing boat ramp in Grand Forks likely won't be the only one found along the Red as another could be installed later near Wahpeton.

Lake Ashtabula and the Red River are popular recreational destinations that have zebra mussels. Larval-stage veligers were discovered in the Red River more than a decade ago and adult zebra mussels were found for the first time in 2015.

Holen said the CD3 units, like the one installed in Grand Forks, are designed to minimize the chances of the larval-stage and adult exotic mussels from hitching a ride out of the Red River to waters elsewhere.

"Understanding this, we certainly encourage people coming off the river to use this free cleaning stations wherever they are installed," Holen said. "These units are designed to get your boat clean, drained and dried pretty quickly."

## Report Bald Eagle Nest Sightings

The North Dakota Game and Fish Department is asking for help locating active bald eagle nests.

Conservation biologist Sandra Johnson said the Department is looking for locations of nests with eagles present, not individual eagle sightings.

Eagles lay eggs in early to mid-March, which hatch about a month later. Johnson said it's easy to distinguish an eagle nest because of its enormous size.

Nearly 300 active bald eagle nests can be found in more than three-quarters of the counties in the state. Historically, Johnson said nests were found along river corridors, but that's not the case today.

"Bald eagles have proven to be quite adaptable and will nest in trees out in the middle of pastures, fields or anywhere they've got a food source nearby," she said.

Nest observations should be reported online at the Game and Fish website, [gf.nd.gov](http://gf.nd.gov). Observers are asked not to disturb the nest, and to stay a safe distance away. Johnson said foot traffic may disturb the bird, likely causing the eagle to leave her eggs or young unattended.



**Overall Winner**  
**MacKenzie Gaul, Pembina**  
**Winner (10-13)**



**Avery Steiner, Bismarck**  
**Winner (6-9)**



**Emelia Thielman**  
**Winner (14-18)**

## Earth Day Patch Contest Winners

The North Dakota Game and Fish Department has announced the winners of this year's Earth Day patch contest.

Winners in the three age categories were Avery Steiner of Bismarck (6-9), MacKenzie Gaul of Pembina (10-13), and Emilia Thielman of Fargo (14-18). Gaul's design was chosen as the contest winner.

Each member of a school, Girl Scout, Boy Scout, 4-H club or youth organization who participates in cleaning up public lands through May will receive a specifically designed conservation patch.

Groups participating in the Earth Day project are encouraged to take the following precautions to ensure safety: keep young people away from highways, lakes and rivers; and only allow older participants to pick up broken glass.

Interested participants are asked to contact Pat Lothspeich at 328-6332 to receive a reporting form for their project.

## Environmental Education Workshop Offered

The 2021 Collaborative Environmental Education Workshop, featuring Habitats of North Dakota, Project Learning Tree and Project Wild materials, will be held June 15-16 at North Dakota State University in Fargo.

This is an educational workshop for teachers, environmental educators, or anyone who wishes to learn more about the outside world. The five North Dakota habitats (wetlands, badlands, prairie, woodlands and riparian) will be

studied, including their location, plants and animals and the importance of each habitat. The North Dakota Habitats, Project Learning Tree and Project WILD curriculums will be used as textbooks for this course. Explore topics like species diversity, invasive species, wildlife migration and adaptations.

The workshop will be interactive and fast paced, with hands-on activities. Lessons will be project based and correlated to academic standards.

Different instructional methods will be used to reach all learning styles. Be prepared for outdoor walking field trips and activities, weather permitting. All supplies are provided.

One graduate credit is available through North Dakota State University. Register for the workshop at [www.ndsu.edu/dce//k-12/info/18147](http://www.ndsu.edu/dce//k-12/info/18147).

For more information, contact Sherry Niesar at 701-527-3714 or at [sniesar@nd.gov](mailto:sniesar@nd.gov).

## Fisheries Division Celebrates Area Landowners

The North Dakota Game and Fish Department honored several Emmons County area landowners in April for their cooperation in providing boating and fishing access to Rice Lake and construction of a carp barrier to keep the undesirable species from getting into the popular Emmons County fishery.

While this annual certificate of appreciation is typically given

to an entity, park board or club, this year it was given to these individuals because their support demonstrates how local cooperation can positively influence area fishing lakes and recreation areas, said Bob Frohlich, Game and Fish Department fisheries development supervisor.

The cooperating landowners in the Rice Lake access project include Mark and Jean Hollaar;

Todd Nieuwsma; Allen Nieuwsma; Gordon and Debra Van Boven; and Kenneth Nieuwsma. Cooperating in the carp barrier project were Dale Nieuwsma and Duane Nieuwsma.

"These efforts exemplify the long-standing cooperation with North Dakota landowners, providing valuable fishing opportunities for the public for years to come," Frohlich said.



*Several Emmons County landowners were instrumental in the construction of a new boat ramp (top left) at Rice Lake and a barrier (top right) to keep carp out of the popular fishery.*



# BACKCAST



By Ron Wilson

While we often go it alone, many of our triumphs depend on the kindness of others.

The landowner who willingly opens the gate.

The buddy who says in passing he'll help haul your deer out of the back-country and enthusiastically shows up when summoned no matter the time, weather, score of the ballgame.

The patient turkey hunter, with decoys in tow and the ability to magically manipulate a diaphragm call, offers up his spot, knowledge of birds he's scouted, and the cherry, front row seat in his native blind where thumb-size limbs have been trimmed to create a shooting lane.

We hear the first tom gobble at 6:07 a.m., 12 minutes before shooting time. The turkeys are roosting a quarter mile west, maybe farther. The glass-half-full in me quietly says they might as well be in another township. Yet, with a directive to be patient, I settle into my camp chair, lean too far right and tip into a hole I didn't see when setting up in the dark.

Back in my chair, finally reseated after some help from my audience of one, we laugh quietly, and I wonder if I've cost us a bird.

In time, the world around us settles. The turkeys we heard earlier have left their roost in an audible rush of beat-

ing wings fighting gravity. We spy them occasionally through binoculars as they adjust to the day's pecking order in patches of prairie clear of trees and heavy brush.

It's difficult to determine how many birds we've put eyes and ears on so far. Certainly, a dozen, likely more, according to the choir of gobbles and the tally of glimpses of dark shapes here and there. Save for a lone hen that fed to within less



than a football field of our hideout, the majority of the birds have stuck to the western edge of the property.

Be patient, I am reminded again.

I've killed time in worse spots, and certainly in worse ways. The view is gorgeous. The company good. And my chair's comfortable when upright.

I've got all day, I tell myself, even when I know it's not entirely true.

When the half-dozen or so toms top out on the open hilltop at maybe 400 yards, I look at my wristwatch and know that we've been hunkered here for nearly 3 hours. A series of artificial yelps over my left shoulder, which sound spot on to me, catch the birds' attention and they straight line it to our decoys, down one side of the ridge and up the other.

My shotgun is resting on wooden shooting sticks and my only worry is making a good shot. When the toms finally come into view, I'm ready, but it's as if they've lost all bravado on their uphill climb and hang up at 50-plus yards, skirt the decoys and disappear.

It could end here, another close enough encounter with nonnative wild birds that have mixed it up with hunters in North Dakota for more than a half-century. I'm familiar with coming this close and going home empty handed. I'm OK with it.

Yet, before we can even consider packing up, moving elsewhere and trying something different, four more toms, running the same path with outstretched necks and confidence that our decoys are the real deal, strut into shotgun range.

We just had to be patient.

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**North Dakota Outdoors Magazine**  
**North Dakota Game and Fish Department**  
**100 N. Bismarck Expressway**  
**Bismarck, ND 58501**

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*Earlier this spring, Game and Fish Department personnel drove North Dakota backroads to check the attendance of sharp-tailed grouse on dancing grounds. The annual prairie grouse spring leks counts, the only specific prairie grouse survey performed by the Department, is conducted to see how the sharptail population is doing following winter. There are 25 active routes spread across the state. Some of the leks are close to the road and the birds are clearly visible, while others are farther out and must be inspected (as seen in the photograph) with spotting scopes or binoculars. Attendance at the leks, many of which have been used over and over for years, can vary from a couple birds to 50 or more grouse. The peak of this time-honored spectacle is typically mid-April when the females are in attendance and the activity spikes. Even so, for survey purposes, only male grouse are counted.*



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