

# NORTH DAKOTA OUTDOORS

PUBLISHED BY THE NORTH DAKOTA

GAME AND FISH DEPARTMENT

\$2.00 OCTOBER 2018





# MATTERS OF OPINION



**Terry Steinwand**  
*Director*

September was a busy month in this neck of the Northern Plains for those people who enjoy what North Dakota has to offer in fall.

The month kicked off with dove season, followed by the Hungarian partridge, sharp-tailed grouse and ruffed grouse openers. Then there was the youth deer season opener, youth waterfowl season, early resident waterfowl season, regular waterfowl season and the two-day youth pheasant season.

And if we back up just a bit, the state's bowhunting season for deer opened on August 31, as well as the pronghorn bow season for those lucky enough to draw a license.

If you look at that lineup (which should also include some fall fishing) and ponder for just a minute the outdoor activities that became available in September alone, it's easy to understand why so many people look forward to this time of year. It's also easy to understand why so many people proudly call North Dakota home.

And we're just getting started.

By the time you read this, the pronghorn gun season will have opened, followed by North Dakota's pheasant season, which is arguably one of the most anticipated openers in the state behind the deer gun season in November.

While many of these outdoor activities require varieties of equipment and as many differing strategies to fill game bags and livewells, they all have one thing in common. Habitat.

You've heard us here at the Game and Fish Department talk time and again about the importance of having quality wildlife habitat on the landscape.

Without adequate habitat on the landscape, for example, animals struggle to battle the harsh winter conditions that are often familiar in North Dakota. Without good habitat, animals take much longer to rebound after months of snow and cold.

While we're working on recovering wildlife habitat that has been lost across all of North Dakota, it's not a quick process.

What's encouraging is that it's not only our wildlife biologists who understand the importance of quality habitat, but many hunters and some landowners as well.

Evidence of this is in the number of hunters who, thanks to a bill approved in the 2015 legislative session, have donated their refunds after not being drawn in the Department's deer lottery. That money, along with funds from those hunters who purchased bonus points rather than entering into the Department's resident deer gun, muzzleloader, pronghorn and turkey season drawings, is earmarked for creating habitat that will benefit deer over time.

Of course, not only will the habitat be of value to deer, but to other wildlife as well. Kevin Kading, Department private land section leader, takes a closer look at this program in this issue of North Dakota *OUTDOORS*.

While this program will create quality wildlife habitat on Private Land Open To Sportsmen acres in areas of the state, it's not going to be a quick fix. But, as Kading said in the article, "It's a start ... and we have to start somewhere."

With a big chunk of fall still before us and many opportunities at hand, I encourage everyone to venture outdoors and experience firsthand North Dakota's great outdoors.

*Terry Steinwand*



## DEPARTMENT DIRECTORY

Governor Doug Burgum

### ADMINISTRATIVE DIVISION

Game and Fish Director: Terry Steinwand

Deputy Director: Scott Peterson

Chief, Administrative Services: Kim Kary

Business Manager: Corey Wentland

Administrative Staff Officer: Justin Mattson

Administrative Assistant: Lynn Timm

Administrative Officer/Building Maint. Supvr: George Lee

Building Maint. Tech: Charlie Mattheis

Accounting Manager: Angie Siegel

Accountants: Kelly Wike, Melissa Long, Ashley Baker

IT Section Supervisor/GIS Specialist: Brian Hoesek

IT Coordinators: Alan Reile, Larry Gross

Licensing Manager: Randy Meissner

Assistants: Gail Mosset, Amanda Anstrom, Tracy Price,

Tana Bentz, Tanya Mikkelsen

Administrative Assistant – Dickinson: Janel Kolar, Stephanie Richardson

Administrative Assistant – Devils Lake: Lisa Tofte

Administrative Assistant – Jamestown: Tonya Kukowski

Administrative Assistant – Riverdale: Vacant

Administrative Assistant – Williston: Samantha Oster

### CONSERVATION AND COMMUNICATIONS DIVISION

Division Chief: Greg Link, Bismarck

Communications Supervisor: Craig Bihrl, Bismarck

Editor, *North Dakota OUTDOORS*: Ron Wilson, Bismarck

Digital Media Editor: Lara Anderson, Bismarck

News Editor: Greg Freeman, Bismarck

Video Project Supervisor: Mike Anderson, Bismarck

Outreach Biologists: Doug Leier, West Fargo; Greg Gullickson, Minot;

Pat Lothspeich, Bismarck; Jim Job, Grand Forks

Information Specialist: Dawn Jochim, Bismarck

Graphic Artist: Connie Schiff, Bismarck

Education Supervisor: Marty Egeland, Bismarck

Education Coordinators: Jeff Long, Brian Schaffer, Bismarck

Hunter Education Coordinator: John Mazur, Bismarck

Conservation Supervisor: Steve Dyke, Bismarck

Resource Biologists: John Schumacher, Bruce Kref, Bismarck

Conservation Biologists: Sandra Johnson, Patrick Isakson, Elisha Mueller, Bismarck

Administrative Assistant: Brandon Diehl, Bismarck

### ENFORCEMENT DIVISION

Division Chief: Robert Timian, Bismarck

Investigative Supervisor: Scott Winkelman, Bismarck

Operations Supervisor: Jackie Lundstrom, Bismarck

Warden Pilot: Jeff Sieger, Bismarck

Region No. 1 Warden Supvr: Mark Pollert, Jamestown

District Wardens: Corey Erck, Bismarck; Jerad Bluem, Steele; Michael Sedlacek,

Fargo; Tim Phalen, Wyndmere; Andrew Dahlgren, Edgeley; Erik Schmidt, Linton;

Greg Hastings, Jamestown

Region No. 2 Warden Supvr: Paul Freeman, Devils Lake

District Wardens: Jonathan Tofteland, Bottineau; Jonathan Peterson, Devils Lake;

James Myhre, New Rockford; Blake Riewer, Grand Forks; Alan Howard, Cando;

Peter Miley, Cavalier; Drew Johnson, Rugby

Region No. 3 Warden Supvr: Doug Olson, Riverdale

District Wardens: Jim Burud, Kenmare; Tim Larson, Turtle Lake; Ken Skruza,

Riverdale; Michael Raasakka, Stanley; Brian Updike, Minot; Joe Lucas, Watford City;

Shawn Sperling, Keenan Snyder, Williston

Region No. 4 Warden Supvr: Dan Hoenke, Dickinson

District Wardens: Kaylor Johnston, Hazen; Art Cox, Bowman; Courtney Sprenger,

Elgin; Zane Manhart, Gola; Jake Miller, Killdeer; Jeff Violet, Mandan; Zachary

Schuchard, Richardson

Administrative Assistant: Lori Kensington, Bismarck

### WILDLIFE DIVISION

Division Chief: Jeff Williams, Bismarck

Assistant Division Chief: Casey Anderson, Bismarck

Game Mgt. Section Leader: Stephanie Tucker, Bismarck

Pilot: Jeff Faught, Bismarck

Upland Game Mgt. Supervisor: Jesse Kolar, Dickinson

Upland Game Mgt. Biologist: Rodney Gross, Bismarck

Migratory Game Bird Mgt. Supervisor: Mike Szymanski, Bismarck

Migratory Game Bird Biologist: Andrew Dinges, Bismarck

Big Game Mgt. Supvr: Bruce Stillings, Dickinson

Big Game Mgt. Biologists: Bill Jensen, Bismarck; Brett Wiedmann, Dickinson;

Jason Smith, Jamestown

Survey Coordinator: Chad Parent, Bismarck

Wildlife Veterinarian: Charlie Bahnson, Bismarck

Game Management Technician: Ryan Herigstad, Bismarck

Wildlife Resource Management Section Leader: Kent Luttschwager, Williston

Wildlife Resource Mgt. Supvr: Bill Haase, Bismarck; Brian Prince, Devils Lake;

Brian Kietzman, Jamestown; Dan Halstead, Riverdale; Blake Schaan, Lonetree

Wildlife Resource Mgt. Biologists: Arvid Anderson, Riverdale; Randy Littlefield,

Lonetree; Rodd Compton, Jamestown; Judd Jasmer, Dickinson; Jacob Oster, Williston

Wildlife Techs: Tom Crutchfield, Jim Houston, Bismarck; Dan Morman, Robert

Miller, Riverdale; Ernest Dawson, Jamestown; Cordell Schmitz, Lonetree; Scott Olson,

Devils Lake; Brandon Ramsey, Lonetree; Zach Kjos, Williston

Private Land Section Leader: Kevin Kading, Bismarck

Asst. Private Land Coordinator: Doug Howie, Bismarck

Private Land Field Operation Coordinator: Nathan Harling, Bismarck

Private Land Biologists: Colin Penner, Levi Jacobson, Bismarck; Curtis Francis, Jaden

Honeyman, Dickinson; Ryan Huber, Riverdale; Renae Schultz, Jamestown; Terry

Oswald, Jr., Lonetree; Todd Buckley, Williston; Andrew Ahrens, Devils Lake

Procurement Officer: Dale Repnow, Bismarck

Administrative Assistant: Alegra Powers, Bismarck

Lonetree Administrative Assistant: Diana Raugust, Harvey

### FISHERIES DIVISION

Division Chief: Greg Power, Bismarck

Fisheries Mgt. Section Leader: Scott Gangl, Bismarck

Fisheries Supvr: Jeff Hendrickson, Dickinson; Jason Lee, Riverdale; Paul Bailey, Bis-

marck; Randy Hiltner, Devils Lake; Dave Fryda, Riverdale; Brandon Kratz, Jamestown

Fisheries Biologists: Russ Kinzler, Riverdale; Todd Caspers, Devils Lake; Aaron

Slominski, Williston; Mike Johnson, Jamestown

Fisheries Techs: Phil Miller, Devils Lake; Pat John, Jamestown; Justen Barstad,

Bismarck; Brian Frohlich, Riverdale; Jeff Merchant, Dickinson

Production/Development Section Supvr: Jerry Weigel, Bismarck

Aquatic Habitat Supvr: Scott Elstad, Bismarck

Aquatic Nuisance Species Coordinator: Jessica Howell, Jamestown

Fisheries Development Supvr: Bob Frohlich, Bismarck

Fisheries Dev. Proj. Mgr: Wesley Erdle, Bismarck

Fisheries Development Technician: Kyle Hoge, Bismarck

Administrative Assistant: Janice Vetter, Bismarck

### ADVISORY BOARD

District 1 ..... Beau Wisnes, Keene

District 2 ..... Robert Gjellstad, Verva

District 3 ..... Thomas Rost, Devils Lake

District 4 ..... Joe Solseng, Grand Forks

District 5 ..... Duane Hanson, West Fargo

District 6 ..... Cody Sand, Forbes

District 7 ..... David Nehring, Bismarck

District 8 ..... Dwight Hecker, Fairfield

# 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

OCTOBER 2018 • NUMBER 3 • VOLUME LXXXI

## TABLE OF CONTENTS

### FEATURES

Questions About Sakakawea's Salmon Program .....	2
Program Improves Deer Habitat .....	6
Tiny Tags Help Validate Paddlefish Ages .....	8
Thinking Outside .....	12
Grandma's .410.....	16

### DEPARTMENTS

Buffaloberry Patch.....	18
Back Cast .....	25



### Front Cover

A record 14,617 prospective hunters submitted applications to hunt bighorn sheep in western North Dakota in 2018. The Game and Fish Department allocated three licenses for the 2018 hunting season, two fewer than 2017. *Photo by Ty Stockton.*



Official publication of the North Dakota Game and Fish Department (ISSN 0029-2761)  
100 N. Bismarck Expressway, Bismarck, ND 58501-5095

Website: [gf.nd.gov](http://gf.nd.gov) • email: [ndgfd@nd.gov](mailto:ndgfd@nd.gov)

• Information 701-328-6300 • Administration 701-328-6305

• Outdoors Subscriptions 701-328-6363

• Hunter Education 701-328-6615 • Licensing 701-328-6335

• 24-Hour Licensing by Phone: 800-406-6409

• 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.

Permission to reprint materials appearing in *North Dakota OUTDOORS* must be obtained from the author, artist or photographer. We encourage contributions; contact the editor for writer and photography guidelines prior to submission.

The NDGFD receives federal financial assistance from the U.S. Fish and Wildlife Service. In accordance with Title VI of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973, Title II of the Americans with Disabilities Act of 1990, the Age Discrimination Act of 1975, and Title IX of the Education Amendments of 1972, the NDGFD joins the U.S. Department of the Interior and its bureaus in prohibiting discrimination on the basis of race, color, national origin, age, disability, sex (in education programs or activities) and also religion for the NDGFD. If you believe you have been discriminated against in any program, activity, or facility as described above, or you desire further information, please write to: N. D. Game and Fish Department, Attn: Chief Administrative Services, 100 N. Bismarck Expressway, Bismarck, ND 58501-5095 or to: U.S. Fish and Wildlife Service, Attn: Civil Rights Coordinator, 4401 N. Fairfax Drive, Mail Stop: MBSP-4020, Arlington, Virginia 22203.


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

**POSTMASTER: Send address changes to:**  
***North Dakota OUTDOORS***  
100 North Bismarck Expressway  
Bismarck, ND 58501-5095

***Report All Poachers (RAP) 701-328-9921***

In cooperation with North Dakota Wildlife Federation and North Dakota State Radio.





While salmon can't reproduce naturally in North Dakota, they still go through the motions.

CRAIG BIRLE

---

# QUESTIONS ABOUT SAKAKAWEA'S SALMON PROGRAM

---

*By Ron Wilson*

*Chinook salmon were stocked in Lake Sakakawea in 1976, less than a decade after the reservoir filled, to inhabit the deep coldwater environment not used by other fish species. This nonnative species, like other fish in the Missouri River System, has ridden the ups and downs of low- and high-water years, times of abundant forage and times when prey was tougher to come by.*

It hardly seems that back-to-back years are nearly the same. The same goes for fishing for salmon in the state's biggest reservoir.

With that in mind, North Dakota Game and Fish Department fisheries biologists Scott Gangl, Dave Fryda and Russ Kinzler, address some questions and concerns about Sakakawea's salmon population.

**Q:** *We're getting some feedback from people reporting that salmon fishing hasn't been very good this year, though Game and Fish says the population is in good shape. What's going on? Is it related to the high-water level or fish spreading out since there is more area of deeper water?*

**A:** Looking back a year or two, salmon fishing in 2017 was pretty good. Game and Fish Department fisheries biologists also worked one of the strongest spawning runs and successful egg collection efforts ever. Using the annual Great Planers Trout and Salmon Club derby as one metric in 2017, the winning weight was the 9<sup>th</sup> largest in 29 years of the derby. Fishing was also good in 2016, with every team in the derby catching fish and the winning weight was the largest in the history of the derby.

The high water and abundant coldwater habitat in 2018 have certainly affected salmon fishing, especially in the downrigger bite during the summer in the lower portions of the reservoir. Salmon concentrate in the lower reservoir for one of two reasons. Like all salmon populations, sexually mature salmon in Lake Sakakawea instinctively migrate to the area of their natal origin to spawn. Salmon stocked in Sakakawea are raised in Garrison Dam National Fish Hatchery in water that comes from the Garrison Dam powerhouse. They "imprint" to the chemical signals in water from that area and return to the area to spawn.

The second reason salmon congregate in the lower reservoir is due to

the decreasing amount of coldwater habitat as summer progresses. At high lake levels, coldwater habitat is abundant throughout a large portion of the reservoir and fish are not forced by thermal and oxygen constraints to the area where most of the angling effort occurs. In years of low lake levels and limited coldwater habitat, both the sexually mature and immature salmon are forced into the lower reservoir early in the summer, becoming much more concentrated and vulnerable to anglers.

In 2011, which had similar lake elevations to this year, summer salmon fishing was poor for downrigger fishing, but decent later in the fall for long line and shore anglers. Additionally, spawning efforts that fall documented an abundance of salmon in the run.

**Q:** *Are there so many rainbow smelt in the lake that the fish just aren't biting?*

**A:** That is certainly another factor playing into catchability. With abundant smelt and high lake levels, there is no reason salmon must be near the dam prior to spawning season. During the Department's just-completed hydroacoustic survey in late August, smelt were abundant throughout the lower 80 miles of the reservoir.

**Q:** *Is Game and Fish overestimating the salmon population in the lake?*

**A:** Department fisheries biologists don't estimate the size of the salmon population. Instead, they make predictions based on prior years stocking numbers, forage abundance, habitat conditions and the number of jacks (mature age-1 male salmon) in the previous fall spawning run. These factors provide insight into what "should" be out there for salmon. However, biologists have no way of indexing accurately until the fall spawning run. In 2017, the spawning run was very strong with lots of jacks, and with favorable habitat and forage there "should" be a good population in the 2018 spawning run.

**Q:** *Why doesn't Game and Fish stock more salmon? What all goes into deciding how many salmon get stocked?*

**A:** The stocking decisions are based on forage and habitat conditions, as well as hatchery production capabilities. In recent years, we've stocked the maximum number of large-sized salmon smolts the hatchery can produce. The total coldwater production (salmon, rainbow and brown trout) have been maxing out the hatchery capabilities.

We could stock more salmon by either reducing production of trout for other statewide needs, or by drastically reducing the size of stocked salmon, and likely further complicating survival through increased predation. Predation can have a major impact on stocked salmon survival, with predators ranging from gold-eye to walleye also thriving during high water periods. We learned over the years that raising smolts to a larger size equates to better survival and have concentrated on stocking fish big enough to avoid predation. Stocking more salmon would require stocking smaller salmon, and many of those would be eaten by predators in short order.

Growth of salmon can be density-dependent, meaning the more you stock, the smaller they will be on average. Salmon size had been smaller in recent years, and that's another factor taken into consideration when we determine how many to stock.

**Q:** *Can't Game and Fish get other areas of the lake to hold fishable salmon populations?*

**A:** Past stocking experiments at other locations up-reservoir have proven the salmon still return to the dam during the spawning run when they become sexually mature. Salmon evolved to swim thousands of miles throughout their life cycle. Lake Sakakawea is a small water body compared to the oceans in which the salmon evolved. They are highly mobile and moving 50-100 miles is nothing to a salmon.



Salmon anglers fish  
the east end of Lake  
Sakakawea.



MIKE ANDERSON

They are going to reside where they find the most favorable habitat and forage conditions.

**Q:** *There are so few bigger salmon. Does Game and Fish need to look elsewhere for better genetics?*

**A:** This is a question we've gotten quite a bit over the years, particularly when anglers see the larger salmon being caught at Ft. Peck in Montana and Lake Oahe in South Dakota. Interestingly, for most of the last decade a large portion of salmon stocked in Lake Oahe and Ft. Peck originated from eggs collected in Lake Sakakawea. Salmon tend to get larger in those reservoirs due to their diet, but they are the same fish genetically.

**Q:** *Does what salmon eat dictate how big they get?*

**A:** Salmon get larger in Ft. Peck and Oahe largely due to their coldwater forage dominated by cisco instead of rainbow smelt. Cisco are larger, and salmon can more efficiently forage this species.

**Q:** *Why doesn't Game and Fish try stocking more forage species so that the salmon can grow larger?*

**A:** Cisco (perhaps millions) are already present in Sakakawea and are part of the reservoir's diverse forage base. However, smelt are the dominant coldwater forage and drive all aspects of the fishery. Smelt suppress cisco when both coexist, and with high smelt abundance we are seeing very low numbers of young-of-the-year cisco in recent years. When smelt abundance was very low in Sakakawea in the mid-2000s, some increases were seen in cisco abundance.

**Q:** *Are all these fish being caught today younger salmon? Did something happen to the older year-classes?*

**A:** All age classes of salmon have been smaller. It is not simply all young fish. There is some indication that we are seeing fewer age-3 fish in the run. However, all ages have been smaller.

**Q:** *Why not try a different species of salmon like Atlantic salmon?*

**A:** South Dakota tried to experiment with Atlantic salmon, but found that there was no reliable source of eggs. Their experimental stocking was based on the idea that Atlantic salmon would utilize warmer water and different forage. On Oahe there was abundant warmwater forage (gizzard shad) during low water and poor smelt abundance. However, on Sakakawea when smelt abundance was low due to drought, so was warmwater forage and the last thing biologists wanted was more predators to feed on a limited forage.

**Q:** *How about reconsidering stocking lake trout?*

**A:** The multiple lake trout stockings never contributed much, or became established in the reservoir, most likely due to limited cisco forage. Cisco-dominated coldwater forage reservoirs like Ft. Peck produce good lake trout fisheries, but Lake Sakakawea lacks an abundant cisco population.

**Q: What about stocking rainbow trout in Sakakawea?**

**A:** Rainbow trout have been stocked in Lake Sakakawea, but have failed to produce justifiable returns. Additionally, as mentioned earlier, the coldwater production facility at Garrison Dam National Fish Hatchery is maxed out and stocking rainbows in the reservoir would come at the expense of other trout needs in the state.

**Q: Why doesn't the Department stock salmon in Garrison Dam Tailrace anymore?**

**A:** Salmon were stocked directly into the Tailrace from 2006 to 2010. During that time the Sakakawea forage base and the salmon fishery were both in poor condition. Conversely, the forage base in Oahe and the Garrison Reach were in good condition.

Each year fisheries biologists place small coded wire tags into salmon, and fin-clip them to indicate that they've been tagged, before they are stocked. The codes on the tags allow biologists to evaluate the return rate of individual stockings, as well as where the fish were stocked and returned. The short answer is those salmon that were directly stocked into the Tailrace did very poorly as far as returns to the angler, or to the Department during egg collecting. The good fishing experienced in the Tailrace some years was mainly from fish stocked in Sakakawea that went through the dam.

In the seven years we would expect those 2006 to 2010 stockings to show up, one in seven salmon caught in the Tailrace were from those stockings. Stocking salmon directly into the Tailrace was a poor investment in angler dollars, as they did not return to the fishery in numbers enough to justify continued direct stockings.

With excellent forage in Sakakawea, we are stocking the maximum number of salmon (at the large size currently stocked) that the hatchery can produce. Given the poor returns from Tailrace stocking, it would be a poor choice to take fish from Sakakawea and stock them in the Tailrace where they have not proven to do well.

---

**RON WILSON** is editor of *North Dakota OUTDOORS*.



CRAIG BIRLE

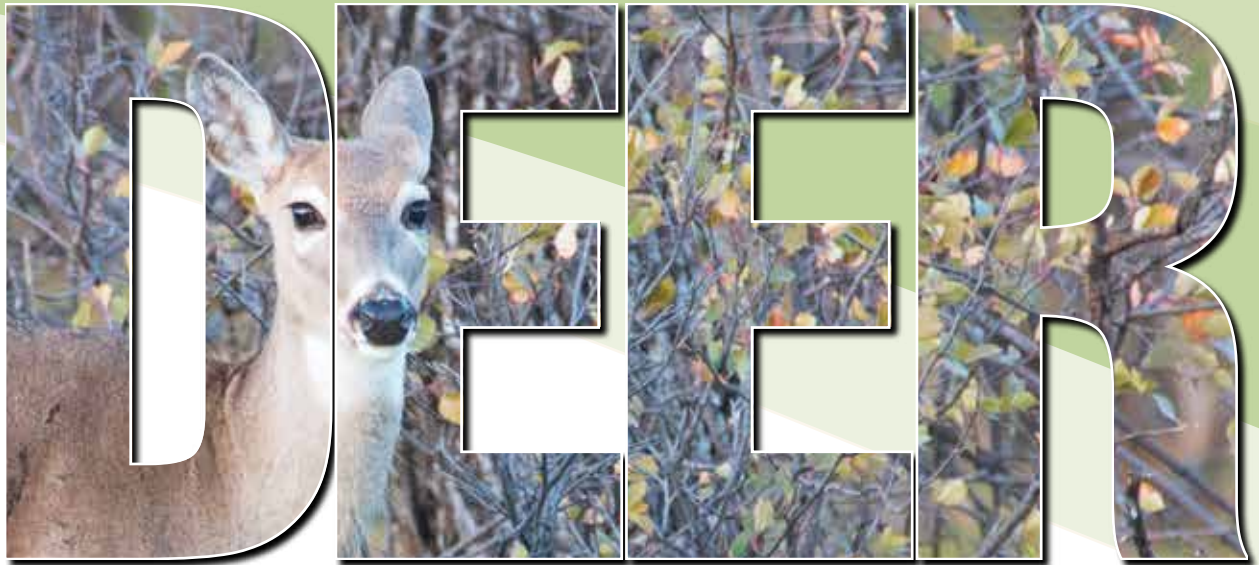
Game and Fish Department fisheries personnel (top) electro-fish a back bay in Lake Sakakawea for adult salmon. The fish are taken to the nearby hatchery where biologists collect eggs and milt. Smelt (bottom) are the dominant coldwater forage in Sakakawea.



MIKE ANDERSON



# Program Improves



*By Ron Wilson*

**I**n 2015, following back-to-back deer gun seasons when fewer than 50,000 licenses were made available to hunters – something not seen in North Dakota in about 35 years – lawmakers made it possible for hunters to help improve wildlife habitat that would favor the state's deer population.

In a bill that unanimously passed in both the House and Senate during the 2015 legislative season, unsuccessful applicants in North Dakota's deer gun lottery could for the first time in 2016 donate their refunds to the Game and Fish Department's Private Land Open To Sportsmen program.

The focus of the proceeds, wildlife managers said, would not only be on improving deer habitat, but providing access to deer hunting habitat.

In 2017, legislators also unanimously approved another bill that allowed resident deer gun, muzzleloader, pronghorn

and turkey hunters, who did not want to receive a hunting license issued by lottery, to purchase a bonus point beginning in 2018 for a fee that is the same as the respective license.

Proceeds from those hunters choosing to buy bonus points are also allocated to the Department's PLOTS program.

So far, hunters – unsuccessful lottery applicants and those buying bonus points – have contributed about \$282,000 to the PLOTS program, according to Game and Fish Department records.

"In the past decade, where we've lost more than 808 linear miles of trees – the equivalent of traveling from Fargo to Williston and back – and thousands of acres of grass across the state, these dollars can help replace some of the deer habitat that's been taken off the landscape," said Kevin Kading, Department private land section leader. "We're focusing primarily on developing good winter cover, like trees, and grasslands that provide cover

during warmer months for adult does having fawns."

Relative to the amount of deer habitat that's been deleted from the landscape, Kading said the program isn't an immediate panacea.

"It's a start ... and we have to start somewhere," he said. "If the dollar amount grows, we can leverage these dollars with other funds, such as the state's Outdoor Heritage Fund and federal Pittman-Robertson funds to do bigger projects."

Based on the amount of wildlife habitat on the landscape and the uncertainties of North Dakota winters, building the state's deer population to the point where Game and Fish could make available 75,000 deer licenses annually to meet management plan goals, will take time.

"I think hunters are looking at their donations to the PLOTS program with the future in mind because deer hunting has such a storied tradition in North



Dakota,” Kading said. “These donations from unsuccessful applicants in the Department’s deer drawing, or money generated from hunters buying bonus points, will help build habitat and further the deer hunting tradition.”

While it takes time for the funds to grow and be allocated to the PLOTS program, Kading said some of the money has been used to plant 1,400 acres of grass habitat, and nearly 50,000 linear feet of trees and wildlife food plots in Emmons and Kidder counties.

“We wanted to let the program build

but we need to be aware of their placement, so we don’t impact other wildlife species,” he said. “For example, fragmenting important grasslands with trees may negatively impact waterfowl or other grassland-nesting bird species.”

The habitat improvement projects completed thus far, and those in the future, are on PLOTS lands. And as those familiar with the program know, these lands offer walk-in access to hunters.

Kading said Game and Fish personnel are careful about picking sites to plant grass and trees.

habitat conditions on these acres is a win nonetheless.

“This habitat being planted on PLOTS lands benefits deer and other animals, and deer just don’t stay on PLOTS,” he said. “If you can help them get through winter and provide places for deer to have fawns in spring, hunters will benefit from this somewhere else in coming years.”

It should be noted that this program isn’t the Game and Fish Department’s first venture into creating wildlife habitat on PLOTS lands.

# HABITAT

dollar-wise before doing some projects because simply going out and planting a single row of trees isn’t going to help a lot,” Kading said.

Kading said it’s important to note that a lot of windbreaks and tree rows in the state have reached the end of their lifespans and are not being replaced.

“Trees have a place in North Dakota,

“We are trying to place the new plantings in areas that are near other wildlife habitat,” he said. “We want to tie into existing habitat bases that are already out there, instead of, say, creating a small piece of habitat in the middle of nothing.”

While some hunters don’t hunt on PLOTS lands and may judge the value of the program, Kading said improving

“PLOTS has developed thousands of acres of habitat with private landowners over the years,” he said. “What we are talking about here is an additional bump in funding that is directly earmarked for creating deer habitat and access.”


**RON WILSON** is editor of *North Dakota OUTDOORS*.

*An aerial view of a new tree planting on PLOTS land in Emmons County.*



SUBMITTED PHOTO





*While nice weather greeted paddlefish snaggers on this day last spring, high flows in 2018 hindered snagging success.*



# TINY TAGS HELP VALIDATE PADDLEFISH AGES

*By Ron Wilson*

North Dakota Game and Fish Department fisheries biologists released roughly 2,500 paddlefish young in early September into the upper reaches of Lake Sakakawea, where food and habitat conditions are best suited for their survival.

While the 10- to 13-inch paddlefish will complement a population that relies mostly on natural reproduction, the recently released fish will more importantly serve as a reliable measuring stick when the fish reach sexual maturity years down the road.

“The primary benefit of releasing hatchery raised paddlefish into Sakakawea is not meant to boost the population any significant amount, but to serve as age markers within the population,” said Dave Fryda, Department Missouri River System supervisor in Riverdale. “While these 2,500 paddlefish will contribute to the fishery to some extent, that number is pretty small when you compare it to natural reproduction.”

The paddlefish were raised last summer in Garrison Dam National Fish Hatchery from

eggs taken from adult fish netted in upper Sakakawea and the Garrison Tailrace. Before their release, coded wire tags were inserted into the end of the rostrums, or bills, of the young paddlefish.

Fryda said the metal tags, which are about 1 millimeter in length, are hidden from the human eye, but are detected when a wand is waved over the rostrum of a harvested fish.

“The way we are able to recover tagged paddlefish is that about 90 percent of the fish harvested during the spring snagging season go through the cleaning station at the confluence of the Missouri and Yellowstone rivers near Williston,” Fryda said. “We have been able to wand virtually every fish that has gone through the cleaning station over the years.”

Game and Fish personnel have tagged young paddlefish periodically since the 1980s. Of late, fish were fitted with the tags in 2007 and 2011 and released into the Missouri River System.

Biologists age paddlefish hatched in the wild by counting the growth rings in the

lower jaw bone after harvest. This method of aging is further validated when compared to the tagged fish.

“We know what their jaws look like for growth rings and then we can compare them to the tagged, known-age fish,” Fryda said. “We know exactly how old the tagged paddlefish are, so it is kind of a calibration method to verify what we believe the age is of wild fish.”

Knowing the age structure of paddlefish in the population, Fryda said, is important in managing the species. While paddlefish are long-lived, some live up to 50 years or more, their reproduction and recruitment into the population is sporadic.

“Paddlefish will have one big year-class maybe every 10 to 15 years, and we are reliant on that year-class to support the bulk of the fishery for quite a few years before another year-class moves in,” Fryda said. “So, it is critical to know the age structure of these fish when determining safe harvest levels, so we know that harvested fish are being replaced by new recruits.”

Scott Gangl, Department fisheries management section leader, said the 1995 paddlefish year-class has dominated the snagging harvest for the past decade. And

fisheries biologists are starting to see some indications of a pretty good 2011 year-class, but it will be another two to three years to know the magnitude of that class as those fish mature.

The paddlefish harvest cap for North Dakota is 1,000 fish. It has remained at this mark since 2003. High flows in 2018 hindered snagging success and the cap wasn't reached for the first time since 2009.

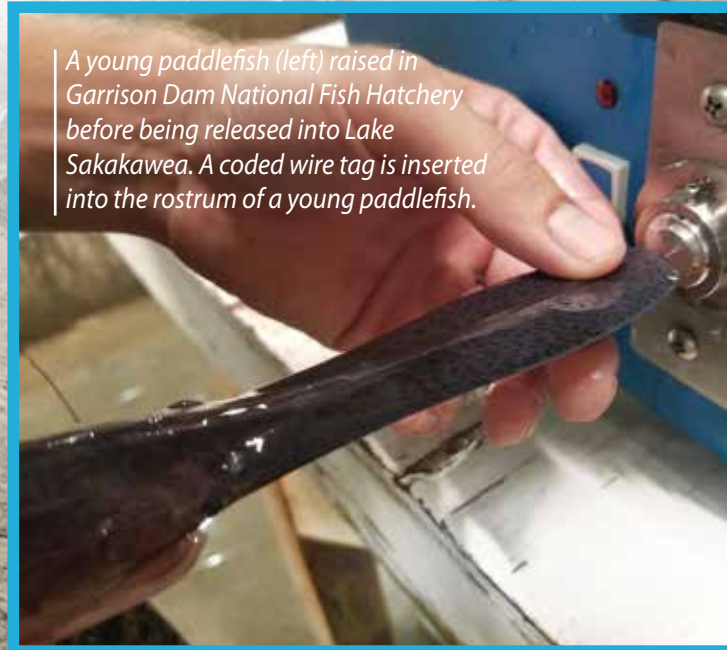
Most years though, the harvest season has closed early because the cap was reached before the official season-closing date.

The paddlefish targeted during the snagging season beginning May 1 are sexually mature fish that are making their spawning run up the Yellowstone River. Because it takes years – 7-10 years for males and about 15 years for females – for this species to reach sexual maturity, the fish tagged and released by biologists in 2018 will not be seen by snaggers until 2028 or later.

“These fish will be spending years, the majority of their lives, swimming around Sakakawea and feeding before they go on their first spawning run,” Fryda said.

---

**RON WILSON** is editor of *North Dakota OUTDOORS*.



A young paddlefish (left) raised in Garrison Dam National Fish Hatchery before being released into Lake Sakakawea. A coded wire tag is inserted into the rostrum of a young paddlefish.



## Paddlefish Truths

- Paddlefish feed mostly on tiny animals called zooplankton. After their first year, paddlefish use filament-like gill rakers to filter zooplankton.
- Mature paddlefish migrate upstream out of Lake Sakakawea into the Yellowstone and Missouri rivers to spawn. After spawning, adults typically move back downstream into Sakakawea.
- When exposed to water, paddlefish eggs become sticky and adhere to gravel and cobble substrate. After hatching, young fish drift downstream, eventually reaching the headwaters of Lake Sakakawea where they spend their first few months.
- Studies have shown that young paddlefish grow faster when Sakakawea's water levels are high and rising.
- Because of greater zooplankton abundance, older juvenile and adult fish also utilize the upper portions of Sakakawea. Apart from spawning migrations, paddlefish remain in Sakakawea.
- Tagging studies have shown that adult males spawn more frequently than adult females.
- The greatest threat to paddlefish is loss of habitat. Successful spawning and recruitment appear to be the primary limiting factors. Paddlefish need natural, free-flowing rivers to reproduce effectively.

*Snaggers line the shore during the 2018 paddlefish snagging season. Jerry Weigel (below), Department fisheries production/development section supervisor, releases paddlefish into Lake Sakakawea.*

TY STOCKTON

09-165809

NORTHWEST MARINE TECHNOLOGY

*A coded wire tag is produced as a spool of wire. Individual tags are cut from the spool for injection. The cut tags are 1.1 mm long and have a numeric code etched along the wire.*



MIKE ANDERSON

MIKE ANDERSON

MIKE ANDERSON





# THINKING OUTSIDE

*Story and Photos by Alicia Underlee Nelson*

**R**ebecca Dura remembers her first hunting trip with startling clarity. The upland game and waterfowl hunter grew up in a hunting family, raised by a mother who curled up with the dogs at her own mother's feet between retrievers, and a father who taught his girls about duck anatomy as they cleaned the birds. But she never picked up a shotgun until she was an adult, because her father feared that the recoil would overpower her slight frame.

So when her future husband mentioned he was going duck hunting, she was curious and asked to join the hunting party. Dura wouldn't take a shot with her grandmother's shotgun until the next year. But her first hunting trip is etched into her senses all the same.

"It was one of those really bright, clear October days, very cold in the morning," said Dura, pulling the memory out of the air like it happened yesterday. "It was very still. They started off into the cattails and I just kind of crouched there. And I kept hearing planes above me, but I couldn't see any planes. I finally realized I was hearing teal come in overhead and I was hearing the wind in their wings. And I still love that about hunting – sitting there on

a real quiet day, you can hear them coming."

Decades later, that silence still brings her back. "It's amazing how quiet it can be," she said. "Most of the time there's just so much background noise that it's hard to realize that is not silent."

The silence is part of the attraction for bowhunter Marty Egeland too. "Part of the reason I like bowhunting is it's so quiet out there," Egeland said. "With rifle hunting, it can be just pandemonium. Sometimes it seems like there's people in orange everywhere."

Egeland says he's learned to appreciate the stillness the more he hunts. "A young hunter wants to get a lot of shooting in," he said. "At this point, I just enjoy going out. It's kind of calming. It's relaxing. If I just want to get away from life a little bit and not worry about the list of things I have to do, I just sit in the tree in peace and solitude and just watch the squirrels."

Egeland and Dura might not know it, but they're practicing mindfulness – the art of using your senses to pay attention to the present moment.

And they're not alone. Most hunters and anglers are skilled at monitoring their environment. Hunting the wind, noting fish



feeding habits and insect activity, tracking game, and making yourself still and alert to every sound all demonstrate sensory awareness. Using your senses outdoors benefits your health and well-being in ways that go well beyond the fish and game you take home.

"We all know how good being in nature can make us feel," wrote Dr. Qing Li in the introduction to his book, "Forest Bathing." "We have known it for millennia. The sounds of the forest, the scent of the trees, the sunlight playing through the leaves, the fresh, clean air – these things give us a sense of comfort. They ease our stress and worry, help us to relax and think more clearly. Being in nature can restore our mood, give us back our energy and vitality, refresh and rejuvenate us. We know this deep in our bones. It is like an intuition, or an instinct, a feeling that is sometimes hard to describe."

Science is just beginning to understand and quantify what humans have instinctively known for thousands of years – that time spent in nature makes us feel good, both physically and emotionally. In Norway, Sweden and Denmark, locals embrace *friluftsliv*, or "free air life," hiking, jogging and dining outdoors, commuting on foot in the summer and on skis in the winter and camping pretty much wherever they please.

In Japan, residents head to the forests to practice *shinrin-yoku*, hikes so immersive the practice is called "forest bathing," a form of recreation that's spread to Korea, Finland and the Pacific Northwest.

For the Native Americans of the Great Plains, including those who have lived for centuries on the land that would become North Dakota, a deep respect for the natural world and its cycles wasn't just a philosophy – it guided hunts, ceremonies and every facet of day-to-day life.

Studies have shown that immersing yourself in nature reduces stress hormones and soothes the nervous system. It lowers blood pressure and cholesterol and helps you sleep better. Spending time outdoors can increase cardiovascular health (and muscle endurance when walking and carrying gear are involved), and strengthen the immune system. Being in nature has been shown to improve emotional outlook and increase energy and focus, providing some relief for those suffering from mood disorders like depression and anxiety.

This explains why we still enjoy fishing, even on days when the fish aren't biting. It's why a day of hunting rarely feels wasted, even if that coveted buck never appears. It also means that the next time someone gives you grief about spending too much time hunting or fishing, you can smile and cite scientific data to show them that you're actually improving your health, while feeding yourself and your family, refining your skills and having a good time.

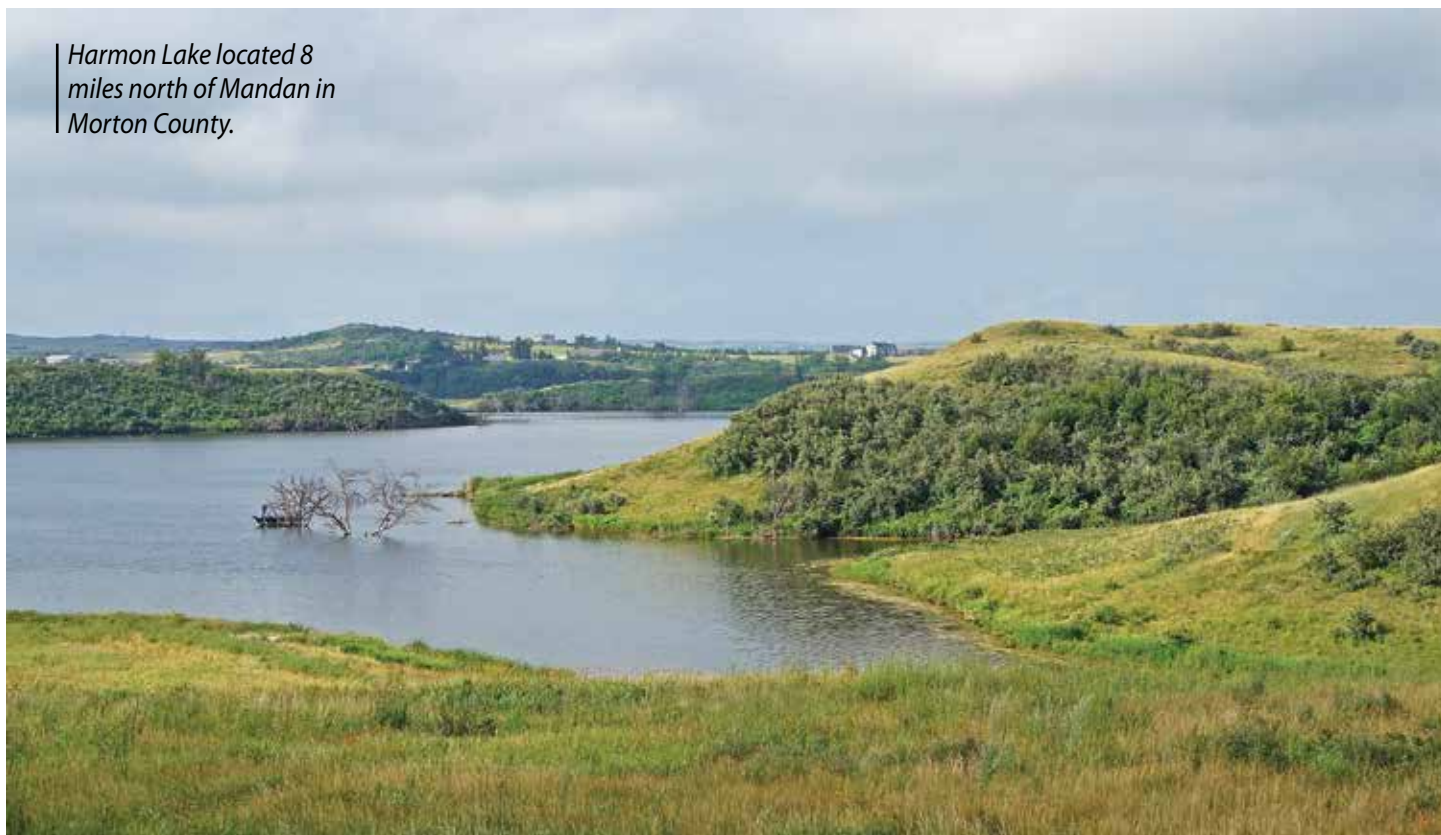
But how do we get those same physical and emotional benefits when hunting season is over? How do we get our minds back to that calm place when the boat's been winterized but the ice won't hold an icehouse yet? How do we connect with nature in the off-season?

“

*"Instructions  
for living a life.  
Pay attention.  
Be astonished.  
Tell about it."*

*– Mary Oliver –*

Harmon Lake located 8  
miles north of Mandan in  
Morton County.



How do we push the obligations and to-do lists out of our minds and find new ways to appreciate the natural world around us?

That's what I went to Harmon Lake near Mandan to find out. When I'm outdoors, I'm always doing something – fishing, hiking, camping. There is always a task to perform and data to monitor – hooks to bait, tents to set up, and devices and apps that tell me exactly how fast I'm going, how many miles of trail I've traveled and how many calories I'm burning as I go.

Could I really be still in nature and without a task to complete? I honestly wasn't so sure. But I showed up for the "Think Outside" workshop at Harmon Lake to try.

The half-day event in mid-July was part of a Humanities North Dakota series designed to help people get outdoors and see the state's most unique landscapes with fresh eyes by combining an activity (like cycling, canoeing, kayaking or hiking) with a casual discussion about books and poems that encourage us to pay closer attention to the world around us. We were originally supposed to paddle the Missouri River at Cross Ranch State Park, but high water levels moved us to Harmon Lake at the last moment. That's where I joined a diverse crew of hikers, mountain bikers, birders and anglers. We gathered around two picnic tables on a foggy morning to figure out how selections from two books (Annie Dillard's "Pilgrim at Tinker's Creek" and Joe Wilkins' "When We Were Birds," if you're curious) might help us learn to see our surroundings in a new way.

Dillard's gentle, conversational, Pulitzer Prize-winning book details everything she sees during walks through Virginia's Roanoke Valley – the changing seasons, smooth and graceful water turtles, the tiny organisms in the water she observes under a microscope. She sees not just with her eyes, but with all of her senses, noticing and exalting both the mundane and the extraordinary.

Her intense curiosity and keen attention to detail remind me of one of my favorite poets, Mary Oliver, another nature lover who writes about ordinary moments in the natural world – a flock of geese flying overhead, the habits of a beloved dog – with quiet simplicity. They both create poems and stories by ordinary people *for* ordinary people, folks who find meaning and wonder in places others miss.

Wilkins' snapshots of day-to-day moments and familiar places – telling stories to sleepy children, the sight of yellow eyes along a fenceline, the concrete sprawl of modern cities – encourage us to pay attention to the tiny details of everyday life. This, according to Tayo Basquiat, the North Dakota-born backpacker and trail runner who hosted the "Think Outside" events, is the whole point.

"Poets pay attention well and can heighten our senses and arouse our emotions, even if the poem as a whole is not understood or prompts a host of different interpretations," Basquiat said. "For me, all the events this summer were about giving people

the time, place, means and invitation to pay attention."

The events Basquiat hosted showed participants a variety of terrain, from the Pembina Gorge near the Canadian border to the quiet forests of Fort Ransom State Park near Lisbon. The way they moved through each environment varied too.

My leisurely paddle on Harmon Lake was considerably less strenuous than biking 82 miles back and forth along the Lewis and Clark Trail between Bismarck and Washburn, mirroring the explorers' route along the mighty Missouri River, or hiking to rugged and remote reaches of the Maah Daah Hey Trail near where Theodore Roosevelt once made his home in the badlands. These are places that are featured in history books, but often overlooked by those who live nearby. It's so easy to take the landscapes closest to us for granted, to miss what's right before our eyes. When you assume that you know a place, that it has nothing left to teach you, it's harder to pay attention. As the fog cleared and I paddled out

into Harmon Lake (a body of water I'd initially dismissed as pretty but not terribly inspiring – and not a particularly challenging place to canoe or kayak), I was surprised to discover that I was, in fact, paying attention. When you've spent a few minutes thinking about using your senses or comparing a poem about birds with one about the noises and smells of modern city life, even the most humble outdoor setting seems a whole lot more interesting. There was much more to experience here than I initially assumed.

My friend JoRelle was seated behind me, eager and a little apprehensive about her first tandem kayak excursion, so for a long while we concentrated on the rhythm of the waves and the soft splash of our paddles as we found our groove. My feet were soaked and the wind made tiny whitecaps appear, forcing us to recalibrate and head for calmer waters. (So much for an easy paddle.) There we broke the comfortable silence to remark on the spots where the lake was shallow and clear and the places where it was cool and deep, to wonder at an unfamiliar bird song and to quietly watch the reeds rustling in the wind. Cyclists whizzed around the lakeside trails, popping in and out of view, while turtles sunned themselves on the rocks, looking lazy and content.

I took my challenge to the next level at nearby Cross Ranch State Park, setting out not to hike, but to just sit for a while at various points and see what happened. The trails appeared empty, but they were bursting with life.

The leaves of the towering cottonwoods rustled and dozens of butterflies darted overhead. I noticed the soft fluff bursting from milkweed pods and smooth, red-violet berries growing along the trail. While pondering the splintered husk of a tree, I looked up to meet the watchful eyes of a doe. She turned and bounded off into the woods before I even had a chance to exhale. I heard more meadowlarks in a few hours than I had in my entire life.

I turned a corner and ran my fingers through native prairie





grasses. I could smell water before I saw the placid Missouri River shimmering pale pink and violet in the evening light. I nodded to fishermen on the bank, some solo, others in clusters, all of us together, yet comfortably alone. The eddies at the water's edge swirled, but we were still. The world was quiet. They were technically fishing, and I was ostensibly hiking, but this was mindfulness at work, meditation masquerading as recreation.

There's nothing wrong with that, according to park ranger Char Binstock, who oversees operations at Cross Ranch State Park. "When you go outdoors with a goal, you also feel the sense of accomplishment in addition to enjoying nature," she said. "I know that if I spot a rare bird or hike through the backcountry trails at Cross Ranch State Park, I feel accomplished in addition to the added bonus of catching rays and exercising."

So take up hiking or birdwatching – neither require any special equipment to start. Head outside with a wildlife guide and study the plants and animals that live in the state. Sit on the dock (or the porch or a park bench) with a book by or about naturalists, conservationists and observers of the natural world. (Start with the authors discussed earlier, or try classics by Ralph Waldo Emerson, Henry David Thoreau or John Muir.) Go mountain biking. Pack up the kids and go camping.

You can even try geocaching, discovering hidden treasures (usually trinkets and coins) hidden in public spaces. GPS coordinates direct you to the caches, but you might need your game tracking skills to actually find the prize. (I tried it at Cross Ranch State Park and had to enlist the help of Mandan brothers Hunter Hammer and Carter Hammer, ages 12 and 13 respectively, since

my tracking skills were sorely lacking.)

Branch out and visit new places. "Set up a challenge for yourself to visit every one of North Dakota's state parks one summer, or all the places on North Dakota's extraordinary places list, or go to a wildlife refuge or management area in the state," suggested Basquiat.

Don't neglect city parks, wetlands or quiet gravel roads close to home, either. "Wildness is something that is cultivated or practiced in lots of different places, some right in the heart of urban areas or on ranches," Basquiat added.

Once you've given a place your attention, it's hard not to care about it. "People love and offer care most readily to the people and places they know," explained Basquiat. "If you've never been to the Pembina Gorge or Elkhorn Ranch or Fort Ransom, it's not on your radar as a place to care about ... but if you hike the Maah Daah Hey Trail, the place leaves a mark on you. You've been there and maybe have an interest in making sure you can return, that others can have those experiences, and, in the end, making sure those places are available and cared for."

Using our senses in nature offers an incredible range of health benefits to any person willing to slow down and pay attention. But paying attention can also help preserve North Dakota's wild places, so that same privilege is available to future generations.

And that's something that benefits us all.

---

*ALICIA UNDERLEE NELSON, West Fargo, is a freelance writer who also blogs about outdoor recreation, travel and food in North Dakota and beyond at [prairiestylefile.com](http://prairiestylefile.com).*

*Appreciation of nature by hunters and anglers isn't a new concept, of course, and here in North Dakota, the writings of Theodore Roosevelt are a good example of that philosophy well back into 1800s.*

*In the early 1900s, the Game and Fish Board of Control, the predecessor to what would become the North Dakota Game and Fish Department, included this segment in its annual report to the governor in 1910, at a time when most of the big game species had disappeared from the state, and leaders were struggling with how to address rapidly declining populations of other wildlife species.*

## A Philosophy of Hunting from 1910

"There is charm for the civilized man in an escape from the orderly and more or less luxurious surroundings of his everyday life to spend a few days near to Nature in field or forest or marsh; there is fascination in claiming as his own, by virtue of his skill with rod or trap or gun, the wild creatures. ... But if he is a true sportsman it is not necessary, nor even conceivable, that he will make his hunting, fishing or

trapping trip a slaughter of bird and beast and fish for the mere pleasure of killing. The pleasure is in the chase, in matching human skill and reason against the instinct and cunning of the wild creatures, not in the dealing of death. It is possible to enjoy an outing in primitive surroundings without taking the life of furry, feathery or finny creatures.

"Aside from the pleasure of the sport with rod and gun, there

is much benefit in the outdoor life, in the relaxation from the cares of a humdrum life, in the healthy exercise, pure air, and wholesome food. It would be a calamity to the race if hunting and fishing were to be abolished or lost to mankind through the total disappearance of game and fish. For the sake of the future generations, as well as that we ourselves may enjoy the fruits of the earth, the wild creatures must be saved.

**"Think Outside" events for 2019 are currently in the planning stages. Information and event details can be found at [humanitiesnd.org](http://humanitiesnd.org).**



# GRANDMA'S .410

By Dalane Kitzman

*Editor's note: The author learned of this story about his grandmother's grit and her .410 from his mother, the oldest of the children referenced in the story, a few months before she died. She described the many hardships they endured during the Great Depression / Dirty Thirties. However, she also insisted that there were good times as well, and as an example relayed this true Christmas story and the events that followed.*

It was Christmas Eve in the middle of the "Dirty Thirties." The Dakota prairies were barren from years of drought.

Most of the neighbors had abandoned their homesteads and moved to cities where food and jobs were more plentiful, but Grandpa held on; farming and ranching were his dream. He was

fortunate in one thing – Grandma had the grit required to be his partner in what had turned into a desolate place.

As subzero winds howled outside, held back only by the newspaper





insulation and the tarpaper that covered their two-room plywood shack, Grandma presented each of their young children with their Christmas gift – a small doll for each girl, and a sling-shot for the boy – all hand-made by her and Grandpa. These were accepted with genuine gratitude, as the children knew these were no small sacrifice.

When Grandma declared bedtime was nigh, Grandpa said that a few more minutes of playtime were due. Then he arose and discretely made his way to the small entryway that served as mudroom and storage space. There he had hidden a special gift he'd purchased for Grandma by skimming off a little bit of money from the sales of cream throughout the past year. He held it behind his back coyly as he re-entered the room, walked toward Grandma, and placed it in her lap.

The wide-eyed children gasped.

Grandma stared in disbelief at the extravagant gift, and then wept.

A shotgun was an essential tool on the prairie and in this regard, Grandma was handicapped. She was a good shot; as a youngster

she'd learned from her father when she rode beside him as he drove the stagecoach on the south central North Dakota line that connected Ashley, Lehr and Wishek in the early 1900s before the automobile took over. But with her slight, 98-pound frame, Grandpa's powerful 12-gauge shotgun would throw her onto her back, punishing her more than the target.

The coyotes seemed to know when Grandpa was away on a trip to sell livestock or purchase supplies. Then they'd boldly come right up to the house, howling fiercely and snatching cats and chickens and even threatening the littlest children. Grandma dreaded pulling the trigger on the 12 gauge, which was the only thing that would scare the coyotes off, at least for a while. She also had difficulty holding the heavy gun steady, so coyote fatalities were rare.

Grandma's new gun changed that. Stevens had developed an inexpensive, lightweight .410 single-shot shotgun with a short, nylon stock, the model 94c. It fit Grandma perfectly. Although it wasn't nearly as loud as the 12 gauge, the coyotes took notice when Grandma's blast rolled one of their kin. After that, they seemed to

come around less. Grandma, the children, and the chickens felt safer.

Other than her wedding ring, Grandma's .410 was her most prized possession. It was more than an indispensable tool for protection. It also provided sustenance, independence and psychotherapy. Periodically, the cramped two-room shack, her stubborn husband, and the four needy children became overwhelming. When this occurred, Grandma would announce that she was "going out for a while."

She'd saddle the horse, grab her gun and some shells, and gallop away. Grandma would return hours later, often with the horse carrying braces of game birds, rabbits and an occasional fox or coyote. And a new refreshed attitude. The children didn't mind helping clean the game, and Grandpa was happier too. Dinner those nights always tasted better, and it wasn't just because of the pot of fresh game on the table.

---

**DALANE W. KITZMAN, MD**, is a North Dakota native now living in North Carolina. This is his third contribution to *OUTDOORS* in recent years.

JOE MAHLER







# BUFFALOBERRY PATCH

By Greg Freeman, Department News Editor



| Whitetail buck.

TY STOCKTON

## General Game and Habitat License Required for Deer Hunters

Deer hunters are reminded of a state law that requires hunters to purchase a general game and habitat license before receiving a deer license.

North Dakota Century Code 20.1-03-02 reads “a person may not acquire any resident or nonresident license to hunt, catch, take or kill any small game or big game animal unless that person first obtains an annual general game license.”

The North Dakota Game and Fish Department will only mail deer licenses after the general game and habitat license is purchased.

The general game and habitat license can be purchased online by visiting My Account at the Game and Fish website, [gf.nd.gov](http://gf.nd.gov).

Also, it's important to locate your deer license and check it for accuracy, making sure the unit and species is what is intended.

Deer hunters who can't find their deer license and who have already purchased their general game and habitat license, can get a replacement license by printing out a duplicate (replacement) license application from the Game and Fish website, or can request an application by calling 701-328-6300.

The form must be completed and notarized, and sent back in to the Department with the appropriate fee.

## Game and Fish Allocates Three Bighorn Sheep Licenses

The North Dakota Game and Fish Department allocated three bighorn sheep licenses for the 2018 hunting season, two fewer than 2017.

**One license is for Unit B3 and one for B4. Also, one license, as authorized under North Dakota Century Code, was auctioned in spring by the Midwest Chapter of the Wild Sheep Foundation, from which all proceeds are used to enhance bighorn sheep management in North Dakota.**

Similar to last year, Game and Fish announced in February that the status of the bighorn sheep hunting season would be determined after completion of the summer population survey. The number of once-in-a-lifetime licenses allotted to hunters is based on data collected from the Department's recently completed summer population survey. Results of the survey showed a total of 77 rams, 12 fewer than 2017 and 27 fewer than 2016.



| A bighorn sheep ram in the badlands.

TY STOCKTON

Brett Wiedmann, Game and Fish big game management biologist in Dickinson, said the 13 percent decline in ram numbers was likely the result of an ongoing bacterial pneumonia outbreak that was first detected in 2014.

“In addition, 2017 had the second lowest lamb recruitment on record so only four yearling rams were observed,” Wiedmann said. “Encouragingly, no adult animals within the herds that were exposed to disease in 2014 showed clinical signs of pneumonia, and the summer lamb count in those herds improved.”

## Pheasant Numbers Similar to Last Year

North Dakota's late-summer roadside surveys indicate total pheasant and Hungarian partridge numbers this fall are similar to last year, while sharp-tailed grouse numbers are down.

**R.J. Gross, North Dakota Game and Fish Department upland game management biologist, said the survey showed total pheasants observed per 100 miles were down 2 percent from last year. In addition, broods per 100 miles were unchanged, while the average brood size was up 27 percent. The final summary is based on 278 survey runs made along 101 brood routes across North Dakota.**

"Even though survey data suggests pheasant production was certainly better than last year, hunters will still notice the lack of production from 2017 in the overall population," Gross said.

Statistics from southwestern North Dakota indicate total pheasants were down 32 percent and broods observed down 29 percent from 2017. For every 100 survey miles, observers counted an average of six broods and 45 pheasants. The average brood size was 5.2 chicks. Despite the population decline, Gross said the southwest still holds the most pheasants in the state.

Results from the southeast show birds are up 63 percent from last

*Department biologists report that southwestern North Dakota still holds the most pheasants in the state.*



CRAIG BIRHLE

year, and the number of broods up 77 percent. Observers counted five broods and 40 birds per 100 miles. The average brood size was 5.8. Gross said while some areas of the state show a large increase in percentages from last year, such as in the southeast, it is important to keep in mind this is based off a low population in those areas in 2017.

Statistics from the northwest indicate pheasants are up 9 percent from last year, with broods up 4 percent. Observers recorded three broods and 26 pheasants per 100 miles. Average brood size was 6.5.

The northeast district, generally containing secondary pheasant habitat with lower pheasant numbers compared to the rest of the state, showed two broods and 19 pheasants per 100 miles. Average brood size was 5.8.

Sharptails observed per 100 miles are down 49 percent statewide from 2017, while partridge are up 7 percent.

"Hunting will be slower than last

season in most of the state, and all indications are that hunters will see significantly lower numbers of grouse statewide," Gross said. "There will be localized areas of good hunting opportunities, but in general hunting will be fair at best."

Despite increases in sharptail lek counts in spring for eastern North Dakota, brood survey results show statewide declines in numbers of grouse and broods observed per 100 miles, and a slight decline in average brood size. Observers recorded 0.8 sharptail broods and 6.8 sharptails per 100 miles. Average brood size was 4.55.

Although partridge numbers have shown a slight increase, Gross said most of the partridge harvest is incidental while hunters pursue grouse or pheasants. Partridge densities in general, he said, are too low to target. Observers recorded 0.4 partridge broods and 4.4 partridge per 100 miles. Average brood size was 7.03.





## Whooping Crane Migration

Whooping cranes are in the midst of their fall migration and sightings will increase as they make their way into and through North Dakota over the next several weeks. Anyone seeing these endangered birds as they move through the state is asked to report sightings so the birds can be tracked.

The whooping cranes that do make their way through North Dakota each fall are part of a population of about 500 birds that are on their way from nesting grounds at Wood Buffalo National Park in Canada to wintering grounds at Aransas National Wildlife Refuge in Texas, a distance of about 2,500 miles.

Whoopers stand about 5 feet tall and have a wingspan of about 7 feet from tip to tip. They are bright white with black wing tips, which are visible only when the wings are outspread. In flight they extend their long necks straight forward, while their long, slender legs extend out behind the tail. Whooping cranes typically migrate singly, or in groups of 2-3 birds, and may be associated with sandhill cranes.

Other white birds such as snow geese, swans and egrets are often mistaken for whooping cranes. The most common misidentification is pelicans, because their wingspan is similar, and they tuck their pouch in flight, leaving a silhouette like a crane when viewed from below.

Anyone sighting whoopers should not disturb them, but record the date, time, location and the birds' activity. Observers should also look closely for and report colored bands which may occur on one or both legs. Whooping cranes have been marked with colored leg bands to help determine their identity.

Whooping crane sightings should be reported to U.S. Fish and Wildlife Service national wildlife refuge offices at Lostwood, 701-848-2466, or Long Lake, 701-387-4397; the North Dakota Game and Fish Department in Bismarck, 701-328-6300; or to local game wardens across the state. Reports help biologists locate important whooping crane habitat areas, monitor marked birds, determine survival and population numbers, and identify times and migration routes.

## Youth Waterfowl Hunting Trailer Available

The North Dakota Game and Fish Department and Ducks Unlimited co-sponsor a trailer full of waterfowl hunting gear that is available to families with young hunters.

Purchased by the Game and Fish Department's Encouraging Tomorrow's Hunters grant program, the trailer is designed for families who don't have the appropriate gear for their young hunters to hunt waterfowl. The equipment is donated by Avery Outdoors.

Use of the trailer is free, and it is equipped with goose and duck decoys for field hunting, and two bags of floating duck decoys and marsh seats for hunting a wetland.

For more information, or to reserve equipment, contact the Ducks Unlimited office in Bismarck at 701-355-3500.

## Hunting from Duck Boats Safely

Waterfowlers hunting from boats are encouraged to wear properly-fitted life jackets while on the water.

**Hunting jackets with built-in life jackets are light and comfortable to wear. In addition, wearing a life jacket will not only keep the overboard hunter afloat, but also slows the loss of critical body heat caused by exposure to cold water.**

Capsizing and falling overboard from small boats are the most common types of fatal boating accidents for hunters.

Eight people have drowned in state waters since 1998 while hunting from a boat, and none were wearing life jackets.

## Waterfowl Hunters Reminded of ANS Regulations

Waterfowl hunters need to do their part in preventing the spread of aquatic nuisance species into or within North Dakota.

Waterfowl hunters must remove plants and plant fragments from decoys, strings and anchors; remove plant seeds and plant fragments from waders and other equipment before leaving hunting areas; remove all water from decoys, boats, motors, trailers and other watercraft; and remove all aquatic plants from boats and trailers before leaving a marsh or lake. In addition, hunters are encouraged to brush their hunting dogs free of mud and seeds.

Cattails and bulrushes may be transported as camouflage on boats. All other aquatic vegetation must be cleaned from boats prior to transportation into or within North Dakota.

In addition, drain plugs on boats must remain pulled when a boat is in transit away from a water body.

More ANS information, including regulations, is available by visiting the North Dakota Game and Fish Department website, [gf.nd.gov](http://gf.nd.gov).



Goose meat donations are accepted in the fight against hunger.

CRAIG BIRHLE

## Sportsman Against Hunger Accepting Goose Meat

Waterfowl hunters are reminded that the North Dakota Community Action Sportsmen Against Hunger program is again accepting donations of goose meat taken during the regular waterfowl season. This includes both Canada and light (snow, blue and Ross's) goose donations.

Similar to last year, hunters can bring in their goose meat to participating processors after removing the breast meat from the birds at home. Or, hunters may also deliver geese

directly from the field to a processor, but identification such as the wing or head must remain attached to the bird until in possession of the processor.

For a list of participating processors in North Dakota, visit the North Dakota Community Action website at [capnd.org](http://capnd.org).

Breast meat brought from home without a wing or head attached must be accompanied by written information that includes the hunter's name, address, signature, hunting license

number, date shot and species and number taken. Information forms are also available at the North Dakota Game and Fish Department website.

Hunters will also fill out a brief form so that processors can keep a record on donated goose meat, the same as is required for processing any other type of wild game meat.

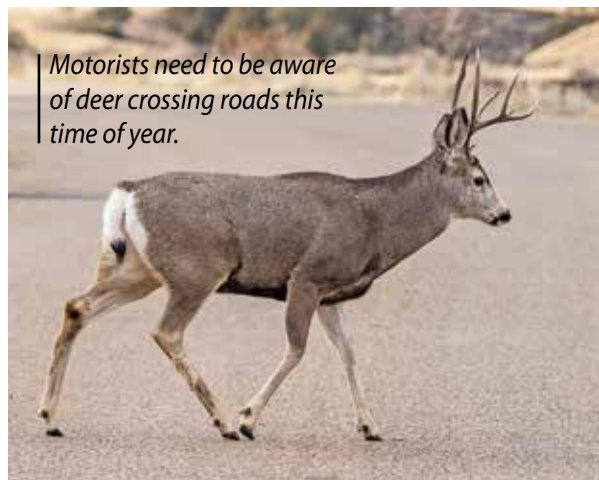
Since no goose carcasses or feathers are allowed inside processing facilities, hunters must be able to ensure proper disposal and clean-up of carcasses.

**R.A.P.**  
REPORT ALL POACHERS  
701-328-9921

*Poachers Steal Your Wildlife – Make the Call!*







## Motorists Warned to Watch for Deer

Motorists are reminded to watch for deer along roadways this time of year because juvenile animals are dispersing from their home ranges.

October through early December is the peak period for deer-vehicle accidents. Motorists are advised to slow down and exercise caution after dark to reduce the likelihood of encounters with deer along roadways. Most deer-vehicle accidents occur primarily at dawn and dusk when deer are most often moving around.

Motorists should be aware of warning signs signaling deer are in the area. When you see one deer cross the road, look for a second or third deer to follow. Also, pay attention on roadways posted with Deer Crossing Area caution signs.

Deer-vehicle accidents are at times unavoidable. If an accident does happen, law enforcement authorities do not have to be notified if only the vehicle is damaged. However, if the accident involves personal injury or other property damage, then it must be reported.

In addition, a permit is still required to take parts or the whole carcass of a road-killed deer. Permits are free and available from game wardens and local law enforcement offices.

A few precautions can minimize chances of injury or property damage in a deer-vehicle crash.

- Always wear your seat belt.
- Don't swerve or take the ditch to avoid hitting a deer. Try to brake as much as possible and stay on the roadway. Don't lose control of your vehicle or slam into something else to miss the deer. You risk less injury by hitting the deer.
- If you spot deer ahead, slow down immediately and honk your horn.

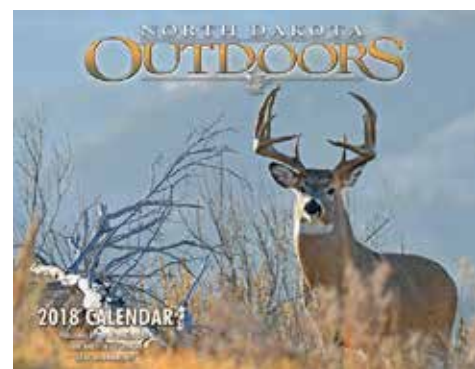
## Order 2019 OUTDOORS Calendars

The North Dakota Game and Fish Department is taking orders for its North Dakota *OUTDOORS* calendar, the source for all hunting season and application

dates for 2019. Along with outstanding color photographs of North Dakota wildlife and scenery, it also includes sunrise-sunset times and moon phases.

To order online, visit the Game and Fish website, [gf.nd.gov](http://gf.nd.gov), or send \$3 for each, plus \$1 postage, to: Calendar, North Dakota Game and Fish Department, 100 N. Bismarck Expressway, Bismarck, ND 58501-5095. Be sure to include a three-line return address with your order, or the post office may not deliver our return mailing.

The calendar is the North Dakota *OUTDOORS* magazine's December issue, so current subscribers will automatically receive it in the mail.



## STAFF NOTES



*Charlie Bahnson*

### Bahnson Hired as Wildlife Veterinarian

South Dakota native Charlie Bahnson has been hired as the Department's wildlife veterinarian in Bismarck. He received his Doctor of Veterinary Medicine from Iowa State University and his Doctor of Philosophy in wildlife disease through the University of Georgia.



*Zach Kjos*

### Kjos Hired as Wildlife Technician

Trenton native Zach Kjos was hired in July as a wildlife technician in the Game and Fish Department's Williston district office. He has Bachelor of Science degree in wildlife and fisheries science from the University of North Dakota.



# KEEP IN TOUCH!

with Game and Fish

## SOCIAL MEDIA



Facebook.com/ndgnf



instagram.com/ndgameandfish

## TEXT ALERTS



JUST TEXT:  
**NDGF Alerts**  
TO: **468311**

For more options to receive Game and Fish news and information, visit the Game and Fish website at [gf.nd.gov](http://gf.nd.gov).

### RECEIVE:

- Application Deadlines
- Season Opening Dates
- Maximum Harvest Quotas
- Other Timely Updates

## WEBSITE

visit <http://gf.nd.gov>

**PURCHASE** and Print Licenses and Apply for Lottery Licenses

**VIEW** North Dakota *OUTDOORS* Magazines

**EXPLORE** North Dakota *PLOTS* Guide

**WATCH** Outdoors Online Weekly Webcasts and TV Features

### MORE FEATURES

- Current wildlife and fishing news
- GIS map creation
- Review important season dates and regulations
- Register for hunter education classes

## TV/BROADCAST

### Weekly Video News Broadcast

#### BISMARCK

KEYR - Saturday - 6 pm  
KXMB - Sunday - 10 pm  
CATV - Saturday - 9:30 am

#### DICKINSON

KQCD - Saturday - 5 pm (MT)  
KXMA - Sunday - 9 pm (MT)

#### FARGO

KVRR - Saturday - 9 pm

#### GRAND FORKS

KVRR - Saturday - 9 pm

#### MINOT

KMOT - Saturday - 6 pm  
KXMC - Sunday - 10 pm

#### WILLISTON

KUMV - Saturday - 6 pm  
KXMD - Sunday - 10 pm

## MAGAZINE



**NORTH DAKOTA  
GAME AND FISH DEPARTMENT**  
100 North Bismarck Expressway  
Bismarck, ND 58501-5095  
701-328-6300  
Email: [ndgf@nd.gov](mailto:ndgf@nd.gov)





# WATERFOWL HUNTERS

Aquatic Nuisance Species can severely degrade  
waterfowl habitat and reduce  
hunting opportunity.

Follow North Dakota regulations to protect waterfowl hunting for the future.

## CLEAN - DRAIN - DRY

DRAIN ALL WATER  
REMOVE VEGETATION  
PULL DRAIN PLUGS

**ALL EQUIPMENT. EVERY TIME.**



**STOP AQUATIC  
HITCHHIKERS!**

Be A Good Steward. Clean, Drain, Dry.

For complete regulations visit [gf.nd.gov](http://gf.nd.gov)





# back cast



By Ron Wilson

*Editor's Note: I thought of my daughter the other day when I read a news release from Pheasants Forever that hit on hunter recruitment, retention and reactivation.*

*This is a weighty issue that deserves attention. In part it said that a national survey indicated a steep drop in hunters nationwide*

*from 13.7 million to 11.5 million from 2011 to 2016. These numbers are concerning. Yet the one highlight was the number of women hunters in the nation remained steady at 11 percent.*

*"As vital contributors to conservation, more women involved with hunting equals more license sales and future investments through*

*the Pittman-Robertson Act, funneling 11 percent of sales tax on all firearms, ammunition and other sporting accessories back to states for strengthening public access and wildlife populations."*

*I'm certainly, both feet in, on board with that.*

When my daughter sat between my legs in the basement sometime in the early 2000s shooting a BB gun at a cardboard box wrapped in Duct tape, I imagined she'd be a hunter.

She peppered the Crayon-drawn targets – dinosaurs, if I remember correctly – with the same enthusiasm of a brother that came before her and a brother that came after.

Instead, she announced at the time, that she wanted to be a Cheeta Girl, a popular Disney-created character that was trendy with girls her age.

That was fine, and we rolled with that. Yet, I figured if she was afforded the same opportunities and encouragement that her brothers received, she'd eventually slide to our side, wondering why she waited so long.

Years passed.

She argued late last summer, at 22 years of age, that maybe I wasn't as encouraging as I remembered. I maintained otherwise, but maybe she was right.

Interestingly, we had this discussion while I quizzed her on the ten commandments used in the North Dakota hunter education program. It's a word association tool that teaches students to never climb a fence with a loaded firearm, to treat every firearm with the same respect due a loaded firearm, and so on.

She passed the class on a Thursday ... and called her boyfriend, the guy, a good guy, behind her newfound interest in hunting

early season Canada geese and shooting at diving and dabbling ducks zipping between snowflakes.

Last fall, hunting under the Department's apprentice hunter validation program, with her boyfriend as her mentor, she shot her first duck, a canvasback.

"Dad, all the guys said shooting one of those was a big deal," she said last fall over her cell phone from somewhere near Devils Lake.

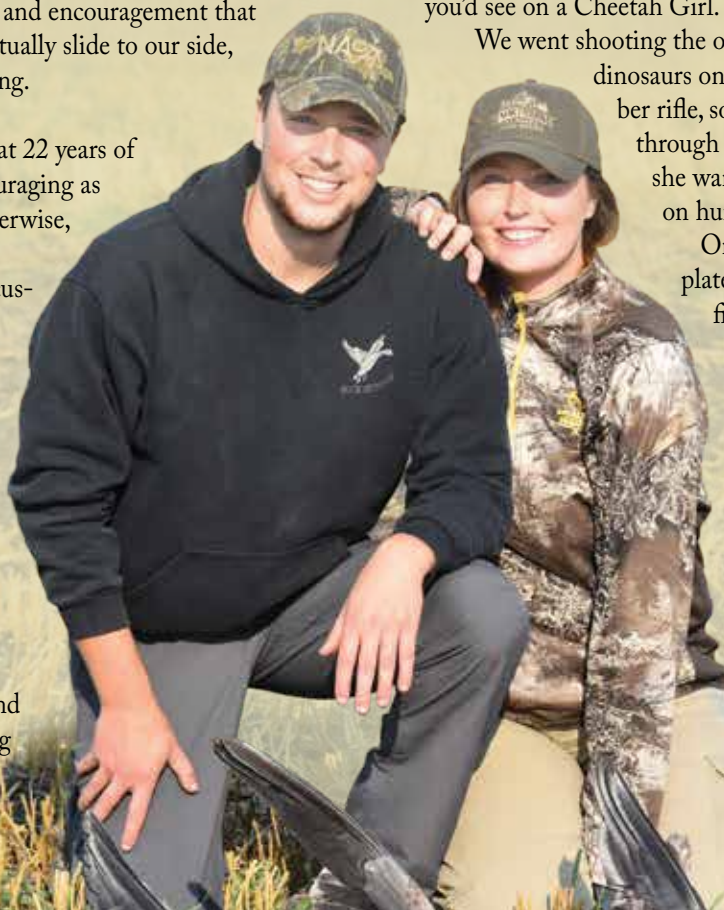
Recently, while packing for a pronghorn hunt in southwestern North Dakota, I was rummaging around in my gear when I came across a pair of knee-high rubber boots, chest waders and insulated camo bibs. All new stuff, quality gear, all in her size. Not something you'd see on a Cheetah Girl.

We went shooting the other day, at paper plates this time, not dinosaurs on a cardboard box. We used the .22-caliber rifle, so she could work the bolt and sight through a scope. Both things are new to her, but she wanted to practice because she has designs on hunting deer next fall.

On our drive home from plinking paper plates, she talked about the final push to finish her college studies, how she was nervous to move to a new city in a new state. She wondered what the bird hunting was like there and suggested that I load the dogs, drive down later this fall to find out.

It's not that easy, I thought to myself, but one thing I will do is call and thank her boyfriend once we get home.

**RON WILSON** is editor of North Dakota **OUTDOORS**.







# A LOOK BACK

By Ron Wilson

North Dakota Game and Fish Department officials figured that if 3 percent of bowhunters shot a deer during the state's first archery season in 1954, then the season would be considered a success.

The 3 percent bar was based on information collected from other states that had already conducted archery seasons.

That season, which ran October 9 through October 24, about 1,120 licenses were sold to bowhunters and fewer than 110 deer were shot.

Yet, it was figured that 9.5 percent of hunters were successful, easily eclipsing the 3 percent mark.

"Therefore, the first season of this type conducted in this state was considered very satisfactory," reported the June 1955 issue of *North Dakota OUTDOORS*. "Although most of the deer killed were taken in the eastern part of the state, due to most of the hunters being located there, both mule and white-tailed deer were taken throughout the state."

It was argued in some circles at the time that a bowhunting season would negatively influence the state's deer population.

"The small number of deer killed shows that these seasons can be conducted each year without cutting into the deer populations in any way," according to the June 1955 issue of NDO. "Therefore, it appears that the bow-and-arrow hunters of North Dakota will be able to enjoy seasons on deer fairly regularly from now on."

And they have. Like the development in the bowhunting equipment industry, the number of archers pursuing deer in North Dakota today has, not surprisingly, grown considerably in six-plus decades.

According to Game and Fish Department records, more than 28,000 archery licenses in total were sold to resident and nonresident hunters in 2017. Hunter success was about 38 percent.

Back to the early years,

bowhunter license numbers by 1960 had more than doubled. The number of days open to bowhunting had also more than tripled.

According to bowhunter survey information gathered by Game and Fish officials at the time, the 219 archers who harvested a deer in 1960 hunted an average of 6.4 days.

Some hunters spent a lot more time in the field. "The champion of persistence was a fellow who reported going afield with his bow and arrow every day of the season, for 52 days," reported the August 1961 issue of NDO. "Here is one fellow who enjoyed a full season of bowhunting. Not too far behind him were three others who hunted 45, 42 and 40 days apiece. Not many sportsmen can devote that much time to their favorite sports. However, if they could, few would have that kind of patience."

**RON WILSON** is editor of *North Dakota OUTDOORS*.