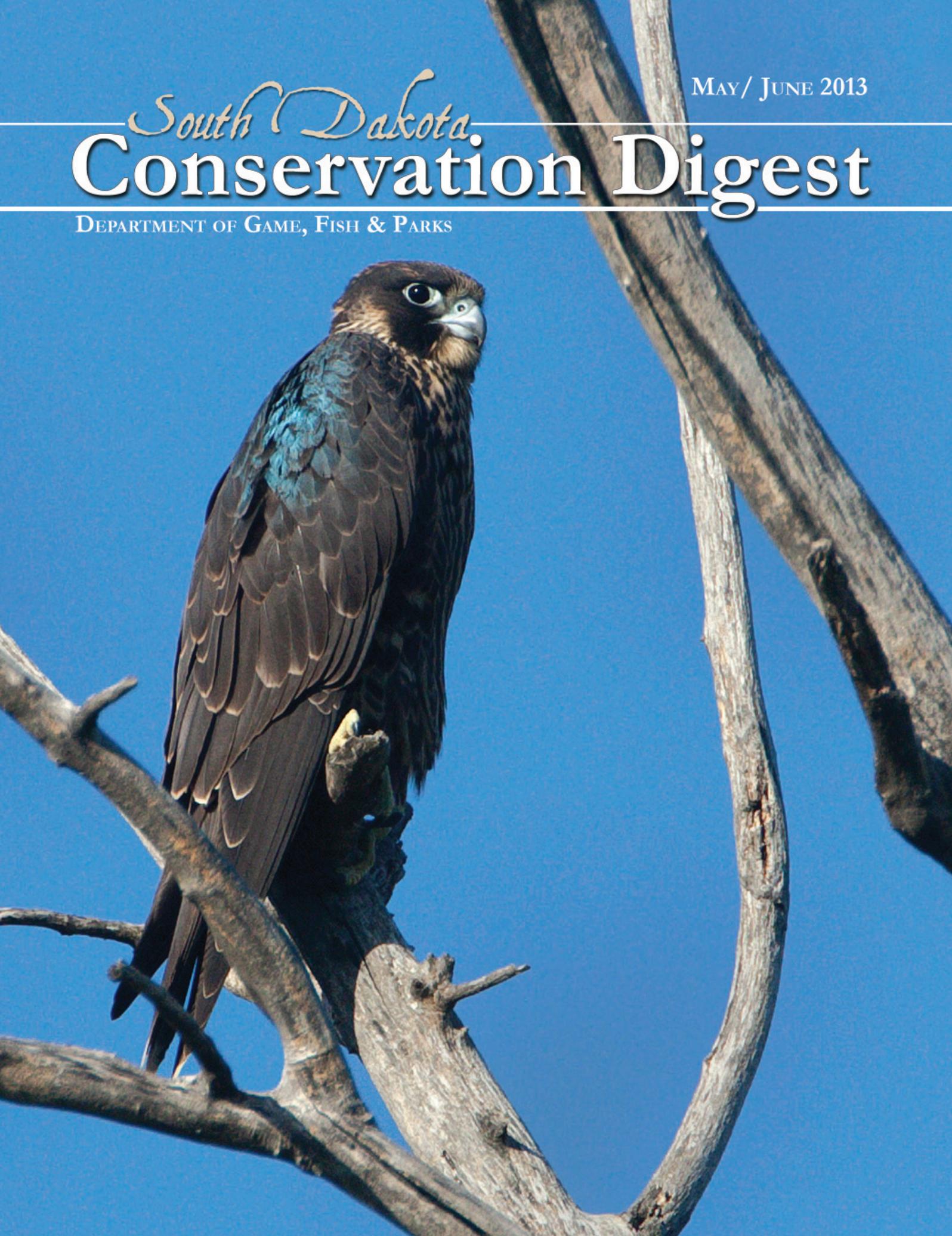


MAY/ JUNE 2013

*South Dakota.*  
**Conservation Digest**

DEPARTMENT OF GAME, FISH & PARKS





# *Busted!*

Winter had decided to linger  
during Spring in twenty-thirteen.  
Waters were opening slowly;  
rivers' edge was a snow-sculpted scene.

Gulls and Grebes had landed  
between shores of glacial ice;  
Cormorants, next to arrive,  
were thinking once or twice:

"Where can we find the best bullheads,  
the juiciest, tender and sweet?"  
"Just let us find and eat them;  
there is no tastier treat."

The Cormorants got right to work  
busy and -- quite methodical.  
The bullheads were disappearing  
in a manner -- quite logical.

Not logical enough for the Pelicans  
who readily joined the feast.  
They thought the fish belonged to them  
and attacked with the heart of a beast.

But always in a group of birds  
one musters courage and dares;  
A brave little Cormorant swallowed  
and ate, in spite of the Pelican glares.

"Listen, Son", one Pelican griped,  
"that fish belonged to me!"  
"Don't you get it? You do the work  
and I get the fish for free."

The Cormorant gulped and swam away  
feigning sadness for the error of his ways;  
He said to himself with a glib little gleam,  
"Sometimes, being the early bird pays!"

*~ Poem by Kathryn Paula Perisch-Manson, Photograph by Bruce Perisch*

# South Dakota Conservation Digest

DEPARTMENT OF GAME, FISH & PARKS

Volume 80, Number 3

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- | 4 Youth Conservation Camp: 50 Years of Outdoor Education  
*by Maggie Lindsey with Mike McKernan*
- | 8 Paddling Through Time: Big Sioux River Offers History, Beauty  
*by Jarett C Bies*
- | 10 Low-head Dam Safety  
*by Brandon Gust*
- | 12 Black Hills Peregrine Falcon Reintroduction Project  
*by Jane Fink*
- | 16 Things Every Kid Should Do This Summer
- | 18 My Life as a Naturalist  
*by Raesha Ray*
- | 22 A Day in the Life of a New Officer  
*by Diana Schroeder, Austin Norton and Zach Thomsen*

Features

	Dakota Flora.....	24
	Dakota Naturalist.....	26
	Natural Heritage.....	28
	Park Notes.....	30
	Wildlife Notes.....	31

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# Youth Conservation

## 50 Years of Outdoor Education



For 50 years the South Dakota Wildlife Federation (SDWF) and the Game, Fish and Parks Department have worked together to provide young people from across South Dakota a unique learning experience.

The Youth Conservation Camp is a one-week conservation education workshop where young campers learn about hunting, fishing, wildlife and conservation through hands on activities.

Camp is held in early June each year for 120 South Dakota boys and girls between the ages 15-17 at Camp Bob Marshall, a 78-acre area covered in ponderosa pine on Bismarck Lake in the beauty of the Black Hills. Since the first camp was held in 1964, thousands of South Dakotans have experienced the importance of a conservation-minded life after attending this camp.

The working partnership between SDWF and

GFP has been a part of the camp from the beginning. SDWF manages the camp, recruits the campers, operates the transportation to and from camp, as well as organizing some of the activities. The GFP organizes the classes and arranges the instructors – many of whom are GFP employees. Campers have a variety of classes to choose from, and can either learn a new skill or pursue an interest.

The camp has evolved. In its infancy it was a boys-only camp, but in the 1970's began welcoming girls.

The teaching format has also changed. In the early years classes were more lecture-based. Tom Putzier, camp director in the 1990's, saw that there needed to be a change. Working together with Maggie Engler, GFP's Education Services Coordinator, they designed a format of hands-

# Camp:



on learning with a broad selection of classes. The focus now is on a well-rounded learning experience in all phases of outdoor recreation and conservation. The kids that attend actually go out and help fishery biologists catch fish and collect data; shoot rifles, handguns, shotguns and bows; learn how to set traps for furbearers; paddle a canoe; tie flies then fish with those flies; and even collect evidence and interview “actors” to solve wildlife violation cases after receiving a TIP’s call. The students are immersed in these hands-on activities for a full week which has a positive impact on their lives.

For some, the camp has had life-long implications. A good number of the counselors are former campers who want to come back and pass on the experience.

“There are always more people interested in



*By Maggie Lindsey,  
with Mike McKernan*



“serving as a counselor than there are spots to fill,” Mike McKernan, Camp Director for SDWF, said. “These are all volunteer positions, which says a lot about what this camp means to those who take part in it. Many of the instructors come back year after year for the love of the camp and the teaching experience.”

When a camper catches his or her first fish, or fires a rifle or shotgun for the first time or learns to tie a fly, it can be a life-changing experience. Many of these young people have gone on to obtain degrees in wildlife management and are now working in that field. For others, the experiences have served them well as they become adults.

Part of my work as the current Education Services Coordinator for GFP has been coordinating the classes over the past four years. I have witnessed first-hand the positive impact the camp has had on young lives.

Celsie Van Beek grew up in Sioux Falls and attended the camp for seven years. She attended the first three years as a camper and has come back every year after as a volunteer conservation counselor.

“This camp became the foundation of my goals and gave me the inspiration and determination to want

to go to college and get a degree in something that I have a lot of passion for: Conservation,” Celsie says. “I am currently attending Northwest Iowa Community College pursuing an AS in Natural Resources and Conservation, with two more semesters to go. I will graduate – fingers crossed – and continue my education for a BS in Environmental Sciences, and I have the camp to thank for this. Each year I leave with so much hope to make a difference in the kids’ lives that attend, and I am grateful that I can work personally with the girls in my cabin and show that a simple hobby can turn into a passion and even career choice or positive lifestyle. I’m living proof that this camp matters, and I have so much pride and faith in what this camp can do for others.”

Liz Renner, Hartford, attended the camp for the first time in June 2010. When asked to put into words how the camp affected her, Liz wrote: “That first week at Camp Bob Marshall provided me with the opportunity to explore the field of wildlife conservation with other teens who share my passion. We gained valuable experience conducting lake surveys for fisheries biologists, studying stream ecology and aquatic invertebrates, and learning

from professionals in the conservation field. We were taught gun safety, and I took a class called “Catch the Poacher” to learn about the procedures involved in conservation officer investigations. We got to use metal detectors to find bullets in a poached deer and conducted mock interviews to find the culprit. I also took a class on wild turkeys taught by a conservation officer and a wildlife biologist and learned about wild turkey hunting, their behavior, and turkey conservation practices. Looking back, I can honestly say that camp changed my life. Conservation Camp helped me discover that my love of wildlife could be put to use in a rewarding career in wildlife management. For the past two summers, I have returned to serve as a counselor-in-training because I never wanted to leave. I have become an active member of the Izaak Walton League and NWTF, and I will continue to advocate for protecting wildlife in South Dakota and around the world. As I head off to college this fall, I plan to pursue a degree in natural resources management and wildlife ecology with the goal of publishing undergraduate research. My dream is to earn a Ph.D.



and work as a research ecologist for either a governmental agency such as the US Fish and Wildlife Service or for a non-profit organization such as The Nature Conservancy.”

In 2012 another past camper returned to assist his father in teaching the archery class. Wyatt Hespe, Murdo, had attended the camp for the past four years and wanted to give back.

“Not only did I meet people, I made lots of friends that I still keep in touch with. This camp is great to learn more than what most people already know about the wildlife, marksmanship, and other outdoor trades. I started as a freshman in high school and ever since then I have enjoyed and have wanted to go each year. The people (conservationist, GFP, counselors, and counselors-in-training) that put this great camp on do a lot of work. It shows that they do care about how people look at our conservation system in South Dakota and they want to show kids how people as young as us can make a difference. Helping with other activities and projects that go on at camp make it fun to inter-

act with other kids. We can show them they can do something that they never knew how to do or something they wanted to do.”

McKernan added, “There are a number of these kids who come to camp that have never hunted or put a worm on a hook before. But that is what this camp is all about – getting kids involved in the outdoors or keep them interested in the outdoors and keep the spirit of conservation alive for another generation.”

Many lives have been impacted by Youth Conservation Camp. One stands out in my mind.

The first year this young man attended, he was a bit of a behavior challenge. That first afternoon of free fishing I can still hear him stating “I hate fishing!” Well that evening one of the counselors and I were down on the lakeshore teaching the kids how to fish and this young man joined us with one of our loaner rods in hand. I took time with him and in no time he was casting and actually started catching fish.

For the rest of the week we hardly saw him as he spent every free mo-

ment down at the lake fishing – we even had to go round him up for meals. He would even be out on the lake before breakfast. When this young man returned the next year a bit taller and much more confident, he excitedly told me all about his past years fishing adventures. In his hand he held his prized possession – his own fishing rod. That second year he spent most his time teaching others to fish passing on his passion to others. When he returned the third year I hardly recognized him – standing tall with maturity and huge smile on his face he had brought along his younger brother so he could experience the camp and teach him how to fish the local lake.

The boy had become a man and was now a mentor. Our teaching had gone full circle.

*Maggie Lindsey is the Education Services Coordinator for Game, Fish and Parks.*

*Mike McKernan has served as volunteer Youth Conservation Camp Director for the South Dakota Wildlife Federation for many years.*

# Youth Conservation Camp Information

## WHO MAY ATTEND?

Any student in the 9th, 10th, or 11th grade who is in the upper half of their class scholastically and is interested in conservation as a hobby or vocation is eligible to attend.

## HOW TO APPLY?

Apply directly to a local sportsperson’s club in your area or to a local Soil Conservation District Office. These organizations screen applicants as to eligibility and sponsor youth to the camp. The organizations have priority for reservations January 1st through March 1st.

If neither of these is available to you, your application may be mailed directly to Mike McKernan, Camp Director, Chris Hesla, Director of the South Dakota Wildlife Federation, or to any Assistant Camp Director.

## COURSES OFFERED

*Some of the courses that have been offered are:*

- Archery
- Conservation Officer Investigations
- Fish Netting/Lake Survey
- Lake/Stream Fishing
- Insect Identification
- Solve the Case
- Stream Ecology
- Bird Basics
- Boating Safety
- Wildlife Photography
- Fly Tying
- Deer/Elk Tracking
- Shooting Skills
- Lighting Ceremony at Mt. Rushmore

# Paddling Through Time

## The Big Sioux River Offers History, Beauty

By Jarett C. Bies



The eye will pick up subtle changes in scenery when one is rounding a bend in the Big Sioux River near Flandreau, S.D. A keen pair of eyes might even notice – if they are lucky – the brown torpedo of a river otter, diving for fish. More likely, the bend will reveal less exotic critters, including white-tail deer who will often gallop across the river's shallow channel, startled by the silent shapes of kayaks or canoes slipping down the surface of this 419-mile brown stream in eastern South Dakota and northwestern Iowa.

The Big Sioux River's history as a thoroughfare for paddled Native American craft and as a rich source of fur-bearing animals makes it among the state's most popular small-river paddling spots. From its headwaters north of Watertown, S.D., to where it joins



the Missouri River (creating the craggy tip of South Dakota on maps), it is truly a river on the rebound after years of better – and worse – conditions.

Paddlers flock to the Big Sioux because it offers an entry-level experience for them, but it's a waterway known for its challenges. The falls of the Big Sioux adorn South Dakota's largest city and give Sioux Falls its name. A few deadly low-head dams also still stand in several spots along the river. The entire river is rated a Class I or below in terms of rapids, but a few ripples and rough spots, including near Dell Rapids, S.D., do break up the mellow nature of a majority of the Big Sioux.

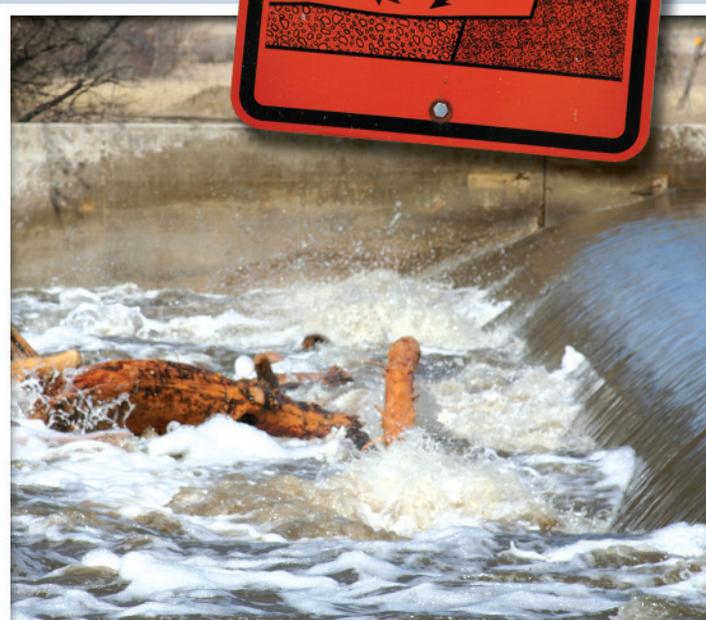
Scenic beauty and ease of use make the river a treasure for a paddler who seeks a natural adventure without the intensity that comes with canoeing or kayaking on the big water of the Missouri River. The Big Sioux's abundance of waterfowl and birds of prey, along with its rippling banks alive with ground animals, make it a destination that offers "bite-sized" day trips as well as multi-day expeditions that can take a paddler from farmland to forest and back again over the course of dozens of miles.

The river's channel averages a depth of about 2-3 feet in normal conditions, and for too many years it was seen as a dumping ground. Efforts to improve its water quality have produced mixed results, and runoff from the many corn and soybean fields, as well as livestock offal, do not make it a river that one longs to swim. But for a paddler hoping to see bald eagles, an occasional mink or fox, and the ubiquitous deer of South Dakota, it is a treasure and a treat, albeit one with plenty of muddy banks.

While the river bisects Sioux Falls, many of its stretches are ghost-town quiet where few – if any – fellow humans will be seen. The area above the city of Flandreau is among the best stretches for sightseeing and easy paddling. North of Canton, S.D., recent dam-removal work by the state of Iowa has led to a long and luscious stretch rich in Native American history as well as wildlife and flora.

The Big Sioux River's calm waters are a respite for any enthusiast of nature who seeks a bit of solace with a paddle in hand. Bring a camera, adventure lust and then step back in time on the current that will carry you, gently, to a peace and serenity just minutes away from a wide number of towns in South Dakota's eastern plain.

*About the author: Jarett C. Bies of Vermillion, S.D., is a longtime Midwestern writer and kayaker. He is a former board member of the South Dakota Canoe & Kayak Association and co-founder of the South Dakota Kayak Challenge, a race on the Missouri River between Yankton, S.D. and Sioux City, Iowa.*



*While the Big Sioux River does make for a great canoe and kayaking destination, there are a few low-head dams which can lead to injury, or even death if you are not cautious. Continue to the next page to read more about low-head dams and safety.*

# Low-head Dam Safety

By Brandon Gust, SD GFP Boating Safety Coordinator

Our river systems throughout the state see a lot of use during the summer months. Canoeing, kayaking, and even tubing are popular summer time activities for all stretches of the rivers in South Dakota.

As with most recreational activities, some potential safety risks exist when taking to the rivers. Fortunately, most of those risks can be reduced with education, pre-planning, and use of safe recreational practices.

One relatively unknown threat existing on many rivers in South Dakota is low-head dams.

Low-head dams are nothing new. They have existed on our rivers and creeks for many years. In fact, the majority of our current low-head dams have been in place since the early 1900's. Most were built to harness energy, create a water source for municipalities or establish small reservoirs for recreational purposes. Whichever the case, most low-head dams in South Dakota have outlived their intended use. Unfortunately, ownership of these structures is often unknown making removal of them difficult.



## Drowning Machines

Low-head dams pose an extreme danger to anyone boating or recreating on a river. They pose such a danger they are often referred to as “drowning machines.” This name suits them well when you consider the hydraulics present at low-head dams and the number of lives that have been lost to them nationwide.

To better understand the mechanics/hydraulics behind a low-head dam, one only needs to reference their washing machine at home. When an object or person flows over the face a low-head dam, they are instantly pushed

A low-head dam is a structure that generally spans from one side of a riverbank to the other, partially blocking the waterway and creating a backup pool of water behind the dam. As water reaches the wall it flows over the drop off, which can be anywhere from 6 inches to 25 feet. Because the drop off can be as low little as 6 inches the dangers of low-head dams are often underestimated.



under the water located on the downstream side of the dam. After being pushed underwater and dragged along the bottom of the river bed, the object is generally brought back to the water's surface only to be pulled back toward the face of the dam due to the rotating hydraulic created by water flowing over the dam. After being pulled back to the face of the dam, the object is once again forced under water, starting the entire process over again. Though life jackets should be worn by all who recreate on a river, it is very unlikely that even the best jacket will keep you above water if you happen to go over a low-head dam.

### **Beware the Boil**

Another area of concern with regards to low-head dams is the portion just downstream from the face of the dam. Because of the hydraulic created by the dam, every low-head dam generally has an area called the "boil." This tends to be an area where the hydraulic pulling water toward the dam and the downstream flowing water meet. This area is usually visible to naked eye. The boil serves a divider line of sorts between the hydraulic effects of the dam and the general downstream flow of the river. This is extremely important when trying to portage around a low-head dam or if you happen to be recreating near one. Entering the water at or upstream of the boil of a low-head dam could prove very hazardous as the hydraulic force created by the dam might be strong enough to pull you in thus trapping you inside its vortex.

Unfortunately, not all low-head dam locations are known across the state. Efforts are being made to mark and sign those areas that are known. Be sure to familiarize yourself with the stretch of river you plan to navigate. Always wear a life jacket and heed any warning signs that may alert you to the presence of a low-head dam.

### **SAFETY TIPS...**

- > **Familiarize yourself with the river before recreating on or near it.**
- > **Obtain a map of the river and ask people about any hazards on it.**
- > **Boat with responsible, experienced boaters.**
- > **Keep your eyes open for warning signs, markers or buoys that may indicate the presence of a dam. The retaining walls of a dam can be easier to spot - and can be a good indicator that a dam is ahead.**
- > **Portage around all dams and re-enter well downstream of the boil.**
- > **Always wear a life jacket.**



# Black Hills PEREGRINE

South Dakotans may soon have a chance to see a part of their heritage restored in the Black Hills of western South Dakota where the third year of peregrine falcon reintroduction is underway. This state endangered species has received a boost from a special project sponsored by South Dakota Game, Fish and Parks in an effort to restore this breeding bird to the state.



# FALCON

## Reintroduction Project

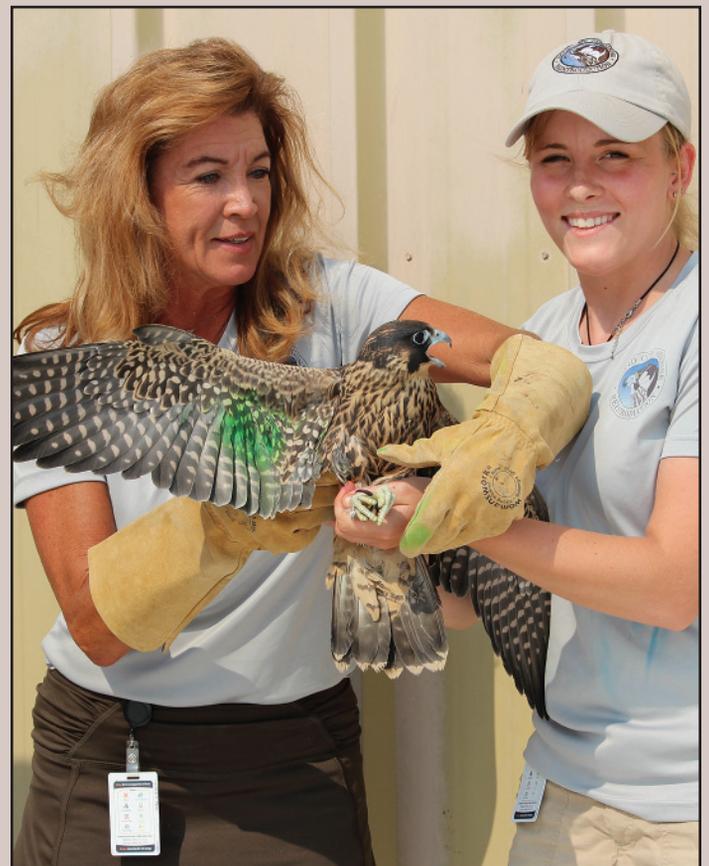
This fast-flying falcon has long captured the imagination of bird watchers, falconers and conservationists. Once protected by the Endangered Species Act, the peregrine falcon has been recovered in many parts of its North American range, but not so in South Dakota. For more than 50 years the peregrine has been absent from its former breeding range in South Dakota where the last known nests were in Harding and Pennington counties. Peregrines suffered the effects of widespread pesticide use, illegal shooting, extinction of the passenger pigeon and habitat degradation. The population plummeted across North America by the early 1970s, leaving less than 20 breeding pairs.

Today, the fastest animal in the world may now be seen in downtown Rapid City as the reintroduction effort is underway for its third year. Why the urban environment? Peregrines are cliff and ledge loving birds. Cities with tall buildings provide adequate habitat for these speedy birds of prey, which require altitude to hunt, at times reaching speeds of more than 200 mph! They prey upon pigeons, ducks and other birds.

The peregrine is a crow-sized bird adapted for high speed bird hunting. They

possess large eyes with a dark malar stripe and special nostrils that prevent rushing air from collapsing the airway during high-speed dives. Peregrine falcons have long, pointed, swept-back wings designed for speed as they plummet to the earth in spectacular dives after prey. Modern day telemetry has provided a better understanding of this fast-flying falcon, which has been clocked in dives after prey at nearly 230 mph! Fascinating biology indeed for a 2-pound creature!

The peregrine falcon reintroduction process is underway atop the Black Hills



Biologists Jane Fink and Blake Schioberg handle a young falcon while waiting for paint to dry.

Photo © Mary ann Pembroke



Raptor biologist Jane Fink weighs a newly arrived peregrine before placing into the hackbox.

Photo © Mary ann Pembroke

Power Corps building in downtown Rapid City where special boxes have been placed to house the young baby falcons. The project began in 2011 with the receipt of 20 falcons purchased from captive breeders across the country. At about 30 days of age the birds are transported to western South Dakota where biologists await them. They are weighed, given health exams and banded with 2 important identifying bands, a silver band on one leg and a red band on the other, indicating their South Dakota release. The birds are cared for and watched daily on a special camera with an associated webcam for public viewing.

Biologists observe, feed and care for the youngsters while awaiting developmental milestones that signal their readiness for first flight. Usually after 10 days or so, the young falcons demonstrate their willingness to fledge. Smaller males are quicker to develop than larger females. Biologists make final adjustments, applying a temporary nontoxic paint marker to their wings. Because the falcons arrive over several weeks, this special paint signals to ground observers and monitoring biolo-

gists whether the falcon is newly released or already skilled at flight for several weeks.

Biologists watch carefully and rescue inexperienced fliers when they get into trouble, as awkward first-time fliers will. Very soon the falcons develop into fast and graceful fliers and after 4-6 weeks are observed hunting their first prey items over the downtown skies. The birds develop quickly as they are highly migratory each fall. At only a few months of age, they face a long and perilous migratory journey to Central and South America where they will overwinter until reaching sexual maturity.

The rationale for reintroduction is the hope that young falcons, once mature, will return to nest as adults in the area where they learned to fly. Mortality factors are many and include electrocution and collisions with cars and mirrored-glass buildings. Some 70% of young peregrines may not make it through their first year of life.

This special project is made possible by funding from South Dakota Game, Fish and Parks' Wildlife Division and a federal source called State Wildlife Grant funds. This annual Congressional appropriation is critical to state wildlife agencies like



South Dakota Game, Fish and Parks to restore rare species. Through these efforts, residents may now be afforded a glimpse of this beautiful and rare falcon, once gone and hopefully soon restored to full glory!

If you find or see a peregrine falcon with a red leg band please contact South Dakota Game, Fish and Parks at (605) 773 3387, or the peregrine falcon project coordinator Jane Fink at (208) 582 0797.

*Jane Fink is the South Dakota Peregrine Falcon Release Coordinator*

Top Left: "Athena" before she was discovered grounded from "Art Alley" in downtown Rapid City.

Top: "Dakota" sports identifying bands.

Below: Biologists check feathers before release.

Photos © Mary ann Pembroke



# Things Every Kid Should Do This Summer!



## Make Mud Pies

Messy, creative and downright fun for kids of all ages, you can make mud pies anywhere. Use spoons, sticks, cookie cutters and aluminum pie plates to shape your masterpiece. Stick on (or mix in) seeds, pebbles, leaves and bits of fallen fruit for added interest. This activity requires little supervision, and as they work, kids learn about the texture, absorption and drying characteristics of different soils. Visit the Outdoor Campus West's mud kitchen and get your creation on the menu.



## Fly a Kite

The South Dakota winds make perfect kite-flying weather. Flying a kite has been an outdoor rite of passage across the world for over 2,800 years. Just find a spot of open prairie and let your imagination fly.

## Skip a Rock

Look for a medium-sized rock with at least one smooth, flat side. Don't use stones that are too thin—they'll fall apart when they hit the water. Hold the stone between your index finger and thumb (thumb on top). Or, fit your index finger to the back curve of the rock, resting it on your remaining curled in fingers. Keeping the stone smooth-side down, throw the stone in a sidearm toss parallel across the water as flat as you can. (Sidearm: think tennis racket swing, not Frisbee toss.) Experiment with different sizes and shapes of stones, and with different throws and distances to the water.



## Flip a Buffalo Chip

Visit Custer State Park during their spring Open House Celebration or during the fall Buffalo Roundup to take part in this honored tradition. Buffalo chips are provided (it's best you don't try to gather your own).

## Learn to Cast

Notice the use of "cast" instead of "fish." We all know it's the journey, not the destination. For most kids, perfecting a pinpoint casting technique in the backyard grass is just as fun as throwing it into the water. And the expectations aren't as high, so there's no letdown if they don't bring home a fish.

## Find Tracks

Damp nights give us a great opportunity to find fresh animal tracks. The soft or muddy ground preserves the details of the print the best. While you can find tracks at any time of the day, the best time to look for them is early in the morning before anything has a chance to disturb them. You don't have to be out in the wilderness, either. Even the family dog's print will bring amazement.

## Be a Gust of Wind

Few can resist the call of a dandelion or milkweed that's gone to seed. Go ahead and blow. As you do, you're giving nature a gentle push to help disperse the seeds. The seeds can travel quite far on their parachutes – groupings of umbrella-like, feathery hairs – literally taking them across valleys and over mountains.

## Cook on a Stick

A meal prepared on an open fire is a lot more fun, and the whole family can take part. A simple stick over the fire is often all the equipment you need for a tasty treat. Then, find something to stick on the stick – marshmallows, strawberries, hot dogs, bread, apples – roast and enjoy!

## Look a Bug in the Eye

It's the little things. Get down to a bug's level and see the world as they do. You'll be surprised how many of the critters are right under your feet. Get to know them.

## Get a Birds-eye View

Climb to the top of the Newton Hills Observation Tower, or make the trek up Bear Butte or Spirit Mound. They'll offer you a whole new angle on the world.

## Become a Junior Naturalist

Learn about the rich natural and cultural history of South Dakota, and earn your right to be called a Junior Naturalist. Requirements include completing physical activities, attending nature programs and volunteer service. Go to [gfp.sd.gov](http://gfp.sd.gov) for program details.

## Go Barefoot

Try green lawns and interesting rock surfaces, or let mud squish between your toes. Don't forget to watch out for burrs, thorns and other things that would hurt. There are places where barefooting won't work, but plenty of places where it will. Find and embrace them.

## Take a Wagon Ride

For many us, it's how our ancestors arrived in this area. Relive the experience for yourself – the rhythm of the hooves, the sway of the wagon, and yes, even the smell of the horses. Rides are free to those in attendance at the Fort Sisseton Historical Festival each June.

## Swim in a Lake

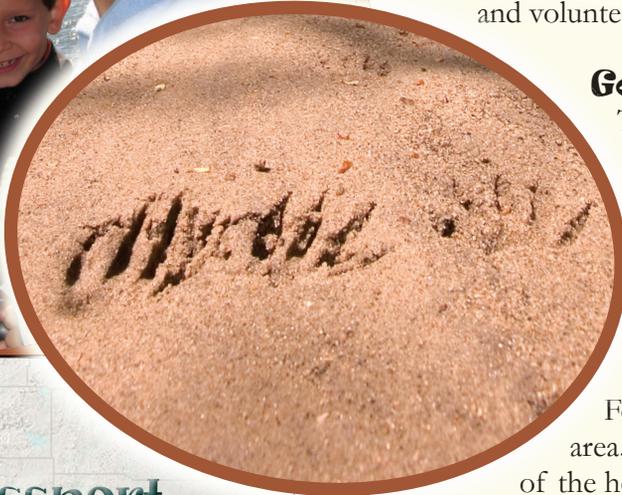
Swimmin' holes seem to have fallen by the wayside. Don't let them. Experience that feeling of sharing the non-chlorinated water, mud and rocks with the creatures around you.

## Hold Something Slimy

It could be a frog, a minnow or a worm. Get out of your comfort zone and put something slimy in your hand.

## TAKE IT ALL IN

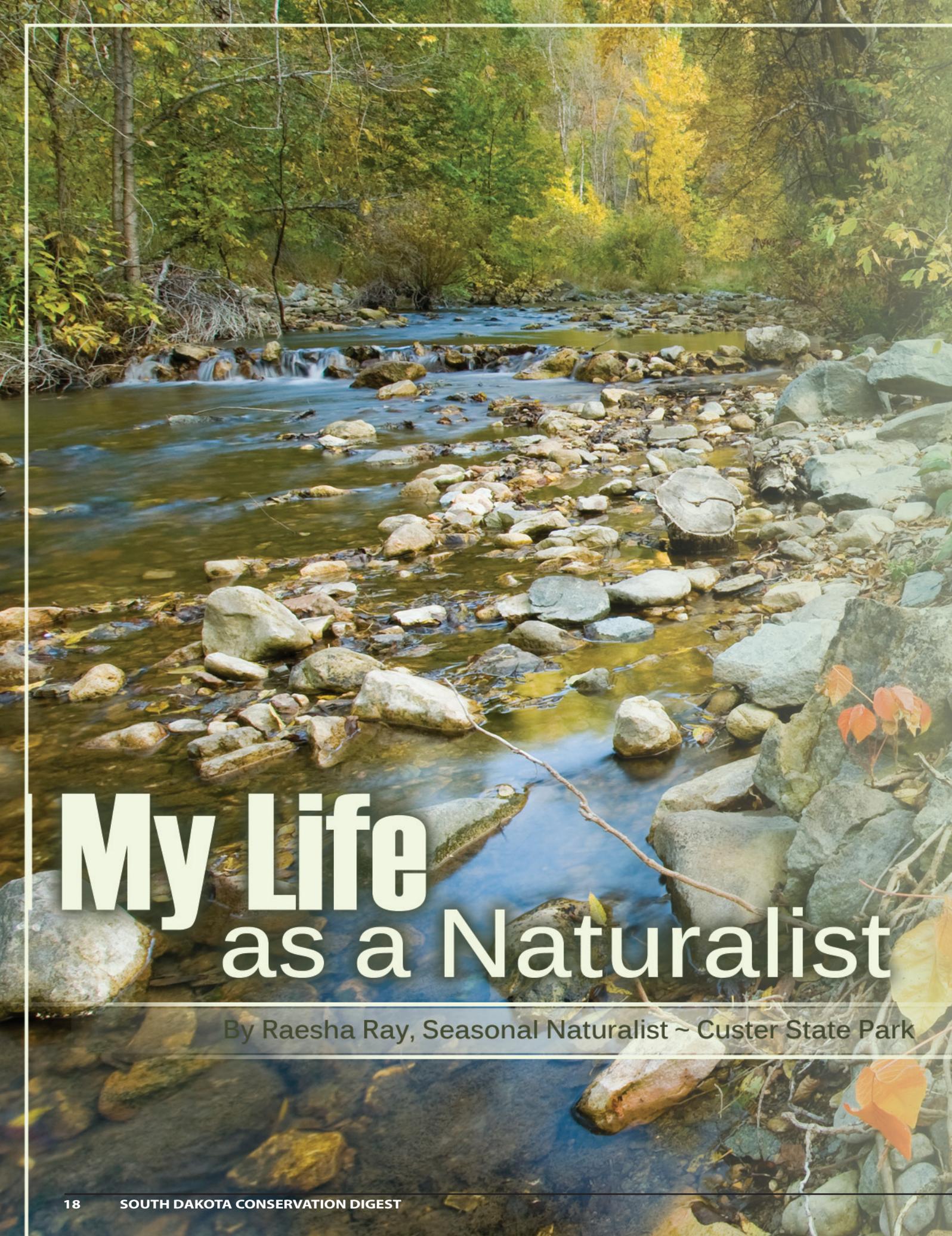
Where have you been? Record your travels in the GFP Fitness Passport book. Visitors can get stamps for completing activities at state parks, the state fish hatcheries and the Outdoor Campuses. Fill up your book to earn prizes along the way, provided by Sanford Health as part of their *fit*™ program.



## fitness passport challenge



South Dakota Game, Fish and Parks



# My Life as a Naturalist

By Raesha Ray, Seasonal Naturalist ~ Custer State Park



Do you ever wake up and ask yourself what you are going to do today? I know I have, not because I don't have anything to do, but because sometimes I just want a change – something new. I run through a checklist of possible things to do but nothing seems appealing. But one summer, when I received a job as a naturalist at Custer State Park, my mornings finally changed.

No, a naturalist is not someone who runs around naked or hugs trees all day long. A naturalist is someone who observes, recognizes and appreciates the natural world.

My new job required me to observe my surroundings. I began to see life from a new perspective. Every direction awaited my attention and exploration. I quickly realized that nature has endless opportunities for learning. I've always enjoyed the outdoors; I like swimming, hiking, hunting and fishing, but never really took a close look at my surroundings. That summer, each day was filled with excitement as I grew closer to nature.

My first experience enjoying nature in a new way was insect catching. I was assigned to create an aquatic insects program for kids ages 7- 12. After reading and re-reading how to catch insects with a net, I tested the book's guidelines. I put the net into the water, but my mind still

questioned how the technique could produce results. I unfolded my net on the ground to see insects – lots of insects!

I found mayfly nymphs, water striders, blood worms and caddis flies. It was fascinating to discover the abundance of life below the water's surface. This instantly inspired me to learn more, so we set up an aquarium housing everything we had found. The aquarium gave us an up-close view of these secretive critters and the truth behind the "bug eat bug" world.

I was appalled when I saw a predatory diving beetle feeding on a worm. I was surprised by the sight of a mayfly's gills fluttering in the water. I was fascinated when I actually saw a mayfly molt its skin. The aquarium would help me to show aquatic life to the children so they too could learn and be intrigued by the simple yet mesmerizing ways of nature.

The day of the first program, I stated the rules: Don't cross the road; observe your surroundings; whatever you catch alive must remain alive. Then I led the soon-to-be Junior Naturalists down to the stream – not a creek, not a river, but a small stream that honestly looks quite disappointing upon first approach.

However, one dip with a net and kids began to shout with excitement: "A bug!" "A spider!" "I caught a beetle!" "Ewww! What's this?" "Let me see!" The com-

“Most visitors come to view the great spectacles that are the bison. They can leave with a memory, but as a naturalist, I hope they leave with more. I want people to leave with an appreciation, an understanding, and a motivation to take further action.”

ments were like my bonus pay throughout the day. The abundance of life found in the stream not only surprised the kids, but the parents too. It let me know that I was succeeding in my job.

My new knowledge didn't stop with insects. I found another interest after watching a mountain bluebird zip, dive and swoop for a beetle. Bird watching is a timeless hobby. It's more than sitting on a deck and ooo-ing at a pretty hummingbird. Bird watching offers a combination of the intensity of finding a new bird, the skill in taking a mental picture of that bird, and the diligence needed to differentiate one characteristic from another to find the exact species.

It is not just finding the name of the bird that is rewarding but the facts that go along with that species. For example, what is the habitat of that species? Does it migrate or is it a year-round resident? What food does it prefer and at what seasons? What are the species' relatives?

Likewise, fun facts are always interesting. Fun fact 101: The white-breasted nuthatch moves up, down and sideways along the tree trunk. Their name describes their behavior of forcing fleshy seeds and acorns into the tree's bark in an attempt to break the food with the bird's beak. Their overall goal is to "hatch out" the seed.

Bird observing tip: Place a bird feeder in front of your window and fill it with unsalted black sunflower seeds. Watch the variety of song birds that delve into your gracious offering. Make sure your camera is near because you will want it when you witness the circus of bird activity.

While I led guided nature hikes I became acquainted with the flora and fauna of different locations. Hikers always asked about the plants we saw. I quickly figured out that as a naturalist I must learn the names of the surrounding plants.

## JUNIOR NATURALIST & PUPS PROGRAMS AT CUSTER STATE PARK!

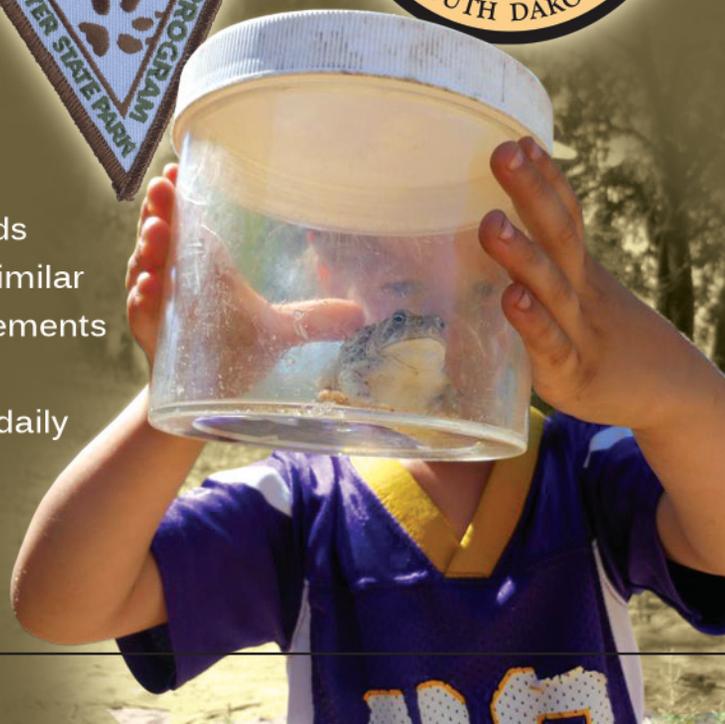
As part of the Custer State Park Junior Naturalist program, kids 7-12 years old participate in several different activities to earn a certificate, gold seal and embroidered patch. Activities highlight the park's resources through guided nature hikes, recreational activities, evening programs, and other fun and educational offerings.

To earn an embroidered patch, a series of activities and a Junior Naturalist Hour is required of each participant. During the summer season, qualifying activities are held daily in the park.

The Pups Program is designed to help 4-6 year olds learn more about nature and Custer State Park. Similar to the Junior Naturalist Program, there are requirements for the kids to complete in order to earn an embroidered patch. Qualifying activities are held daily in the park during the summer season.

For more information, visit

[www.custerstatepark.com](http://www.custerstatepark.com)



Vegetation sprang up around me in all directions, overwhelming at first, but my supervisor taught me how to identify each plant. With the help of an identification book I was able to detect a specific plant along with its characteristics and relations. Knowing a plant by name, explaining its adaptations and offering mythologies strike an interest in most listeners.

For example, common yarrow is a common species of plant found in the Black Hills at all elevations. This plant has white flowers in bundles with a fern-like foliage. After being boiled, to create a tea, the plant has many medicinal uses such as treating a sore throat, an earache, stimulating urination and/or bowel movements. There is even an old wives' tale that declares: After placing a yarrow leaf under your pillow at night, you will dream about the man you will marry.

Plants of all kinds - including grasses, shrubs and wildflowers, even weeds - have a story to be revealed. As a naturalist, my job was to interpret natural surroundings and what lives within them for our visitors.

I enjoy observing wildlife, but my favorite experience as a naturalist has been the opportunity to witness the delicate changes in the environment with each season. I started my positions in May and left in late August. Within those four months I saw snow melt, rain fall, grass grow, grass die, deer born, bison mate, coyotes hunt and elk migrate.

Nature is like pliable material - it transitions easily into a new state. If people were more pliable they would be less stressed.

Nature is not only pliable but truthful. Nature possesses honesty and sincerity. I feel nature exposes the realities of life to all who care to see it.

A reality that nature possesses so clearly is life and death. This concept is often silenced in conversations but it is real. Part of living is dying and as a naturalist I have witnessed the clarity of both. It is remarkable to see a new-



born bison calf take his first steps just as it is to watch an old bull buffalo take his final steps. Different emotions are involved but essentially they are both remarkable in explaining nature.

Custer State Park has a herd of over 1,000 bison and it is captivating to watch the beasts meander over the prairie hills in search of a new grazing location. They appear lethargic and uncoordinated, but they can run 35 miles per hour for up to five miles. Their narrow hips allow them to maneuver quickly. Their large hump muscle supports their massive head and broad shoulders. I enjoy watching 1,500 pounds of bison roll in the dirt as it creates a wallow. (A wallow is a dirt depression in the ground where bison roll to suffocate insect pests and scratch off their thick winter coat.)

Most visitors come to view the great spectacles that are the bison. They can leave with a memory, but as a naturalist, I hope they leave with more. I want people to leave with an appreciation, an understanding, and a motivation to take further action.

Appreciation and awareness can be reached somewhat through observation, but at other times it must be experienced. An interpreter bridges that gap by suggesting what to see and how to see it.

While working as a naturalist in Custer State Park I learned many things, but what I truly gained was the utmost appreciation for nature. Unfortunately, nature is not timeless in today's era. Busy schedules distract us from many of the fascinating opportunities our natural world presents.

As a naturalist I strived to restore an appreciation for nature in others. I wanted to motivate parents to take their kids outdoors and allow them to witness the fascinating simplicity of life. I wanted kids to become mesmerized by a frog's tongue as it catches a moving insect, or by a small dung beetle moving large rounds of dung to feast upon.

Nature is filled with waiting wonders; what are you waiting for? Get out there and explore!



# A Day in the Life of a New Officer

## Diana Schroeder

Looking back, I started early to build toward a position as a conservation officer with Game, Fish and Parks. I had two years experience as a correctional officer with the Brookings County Sheriff's Department while attending college at South Dakota State University. I also had worked as a campground attendant at Lake Vermillion State Park for a summer. I applied for a conservation officer position in November 2011, even though I didn't graduate from college until May 2012. I was offered an interview with GFP at the end of November, and a few weeks later received a conditional job offer pending a background investigation, polygraph, and a psychological exam. My career with GFP began in earnest on August 2012 when I became a Conservation Officer Trainee.



## Austin Norton

My career with Game, Fish and Parks began when I was only a freshman at South Dakota State University. Throughout college I had a number of internships with GFP, including as a fisheries technician, in wildlife damage management, in habitat management, and most importantly as a conservation officer intern. Now I find myself an official Conservation Officer Trainee with GFP.



## Zach Thomsen

The definition of a career is the pursuit of a lifelong ambition – in my case, a life-long goal to become a conservation officer. I started by attending college at South Dakota State University, graduating in 2009. Along the way, I've worked as a GFP intern, seasonal and full-time employee. I have enjoyed many new experiences already, meeting many great people and best of all following my dream of joining the Conservation Officer team.



The lure of a career in the outdoors working with fish, wildlife and other natural resources in South Dakota creates many requests at the Game, Fish and Parks Department for information on what is required to be a conservation officer. We at the Conservation Digest thought it would be interesting to follow three Conservation Officer Trainees – Diana Schroeder, Austin Norton, and Zach Thomsen – as they develop their careers. Here are their stories.

In August of 2012 GFP sent Diana, Zach and Austin to the Basic Law Enforcement Academy in Pierre for 13 weeks of intense training. The academy certifies all law enforcement officers in South Dakota. After successfully completing the Academy, GFP required each trainee to take a three week post-Academy training that taught game and fish laws and prepared each for 15 weeks of field training.

## Diana

Field training allows us to work with two different conservation officers in two different duty stations, one East River and one West River. This allows us to view two completely different spectrums of South Dakota. My first training was in Meade County with Scot Hawks. I had lived in eastern South Dakota my entire life so I had little to draw on for what to expect. I came to learn a lot about myself in the seven weeks I spent there then I ever thought possible.

The first week was a ride-along with Hawks, but it was far more than just riding along. I had questions answered and got to experience some of the day-to-day of a conservation officer's schedule. After the first week I got to move behind the wheel, take calls, and conduct my own wildlife investigations that Hawks had accumulated for me prior to my arrival. Handling a wildlife investigation was both satisfy-

ing and a confidence building, and between those cases, patrolling, wildlife management activities, and beginning new cases I learned a lot about multi-tasking.

What is a conservation officer's day-to-day schedule? Whatever the day may bring.

I would be working on an investigation in our Sturgis office, when we would receive a Turn in Poachers (TIPs) call about someone hunting with a rifle in an archery-only area. Hawks and I would drop everything and respond to the call. I might plan a day in the office catching up on reports when a landowner would call with a request for depredation assistance.

My plans for the day could change at the drop of a hat, but our priority was assisting the public.

Building rapport with the community is a priority, and checking licenses is a great way to meet people. As trainees, we agree that visiting with the public about the things we love – the outdoors and wildlife – is one of the things we enjoy the most. One January afternoon I was patrolling Lake Orman and visiting ice fishermen. One guy remarked, "I haven't had a conservation officer check my fishing license for over 25 years." He thanked me for checking his license and visiting with him. That encounter made me realize why I wanted to be a conservation officer, and how very much I was looking forward to many more years and many more positive experiences like this one.

## Austin

I've been asked, "What's a normal day in the life of a conservation officer?" I immediately think to myself, there is no such thing as a 'normal' day.

My field training took me to Perkins County with Keith Mutschler as my training officer. I also grew up East River and wasn't sure what to expect in northwestern South Dakota; however any worries quickly went away when I was welcomed to the community with open arms. Rarely a day went by when I didn't get to meet someone knew, and in fact meeting people has been the most rewarding part of my career so far.

My first real law enforcement experience came just a few days into my field training. I was patrolling along a highway, came over a hill and saw a vehicle with two men standing outside. It looked suspicious, but I wasn't sure how to proceed. I looked at Mutschler and nervously asked, "What do I do?" He gave me a quick word of encouragement and I was able to work through the problem and get the final result I needed. Think and Adapt – or Problem Based Learning as it is called – is part of a learning process that GFP incorporates in training. It allows trainees to 'fail forward' and learn from our mistakes.



## Zach

My training took me to Chamberlain where I was able to work in the counties of Buffalo, Lyman and Brule with Mark Ohm as my training officer. The area has provided me with many great experiences and outdoor adventures of all types. Great people and great communities make this area one-of-a-kind, and I have especially benefited by meeting many new landowners. The open roads and rangeland has given me a wealth of knowledge about this part of the state.

Looking back at my first license checks and my first landowner contacts, I remember how daunting the job of a conservation officer seemed. Along the way I have discovered what a joy it is to speak with so many people who share my passion for wildlife and recreational pursuits. Recently I met an ice fisherman on a cold winter day. Wind chills were in the single digits, but even so the two of us had a great experience visiting and we parted with a friendly hand shake. Even the coldest weather can't stop a good conversation between strangers who find they have common interest in the outdoors.

Another experience that made me realize the rewards of a career as a conservation officer came one day when I met a young girl on a piece of public hunting ground. She had just shot two white-tailed deer about 20 minutes apart. It was great to share the excitement with her and to realize what conserving South Dakota's wildlife resources is all about.

## Diana, Austin & Zach

We have been fortunate to experience wildlife as diverse as handling lake trout, mountain lions, elk, golden eagles, bobcats among others. It is important to respect both wildlife and the people who enjoy hunting, trapping and fishing. The best part of being a conservation officer is our connection with the public, wildlife and the outdoors. We are learning the ropes and looking forward to the experience and challenges our careers with Game, Fish and Parks hold.

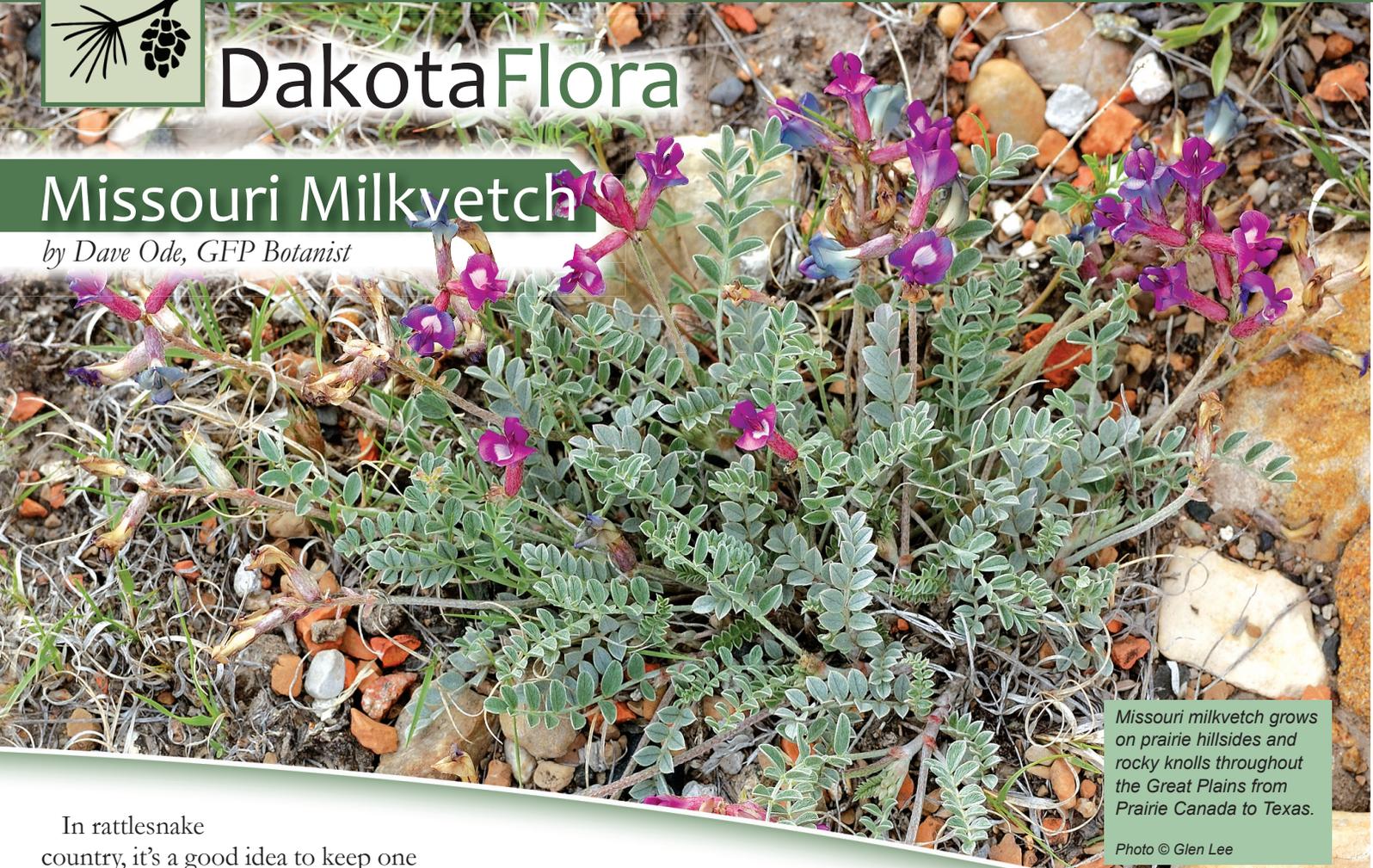
All three officers completed their field training assignments in late March-early April. Zach Thomsen is stationed in Philip. Diana and Austin have been temporarily assigned to the Chamberlain and Watertown offices where they will work until assigned a permanent duty station. The three are embracing the quote: "If you love your job, you never have to work a day in your life". If you see them, they invite you to introduce yourself and share a couple of stories. They agree that these visits have become the part of the job they enjoy the most.



# Dakota Flora

## Missouri Milkvetch

by Dave Ode, GFP Botanist



Missouri milkvetch grows on prairie hillsides and rocky knolls throughout the Great Plains from Prairie Canada to Texas.

Photo © Glen Lee

In rattlesnake country, it's a good idea to keep one eye on the ground. And, that's what I assume Meriwether Lewis was doing on September 18th, 1804 as he hunted through the Missouri River breaks near what is now Chamberlain, South Dakota. He had just killed a rattlesnake the day before "in the village of the barking squirrels." Lewis was seeing lots of creatures that were new to science. The day before, John Colter killed the Corps of Discovery's first mule deer and Lewis had just collected a specimen of their first black-billed magpie. But, I don't know why on this day in September, he stooped over and collected a specimen of Missouri milkvetch. It was not in flower this late in the year, but it might have had fruits. The specimen he collected still exists as a single, mounted, fragmentary pressed plant; Lewis's specimen number 36, with a label that says "18 of Sept. the growth of the high prai-

ries." It was the first scientific collection of Missouri milkvetch even though it lacked the necessary flowers and fruits to allow botanist Fredrick Pursh to describe it as new to science.

The distinction of first describing this plant species goes to Thomas Nuttall, a British botanist who, seven years after the Lewis and Clark Expedition, accompanied a band of trappers and traders up the Missouri River. Also in this company was a second botanist, John Bradbury who collected specimens of Missouri milkvetch and in 1817 published a popular account of his journey up the Missouri River titled "Travels in the Interior of America..." The specimens of both men end up in England, where Nuttall studies them and in 1818, first publishes the name *Astragalus missouriensis* for this little legume that still grows on the river

bluffs of the Missouri River. Nuttall's description includes the following passage, "On hills throughout the upper Louisiana; flowering in May. A very elegant species with deep violet purple flowers (there is also a white-flowered variety occasionally to be met with)."

In the years since its original discovery, botanists have recognized four varieties of Missouri milkvetch based upon consistent differences in flower size, fruit shape, leaf sheaths, and stem lengths. Our variety *missouriensis* occurs throughout the Great Plains ranging from the prairie provinces of southern Canada to the plains of west Texas, westward to the Rocky Mountains and eastward to the western edge of Minnesota and Iowa. The three

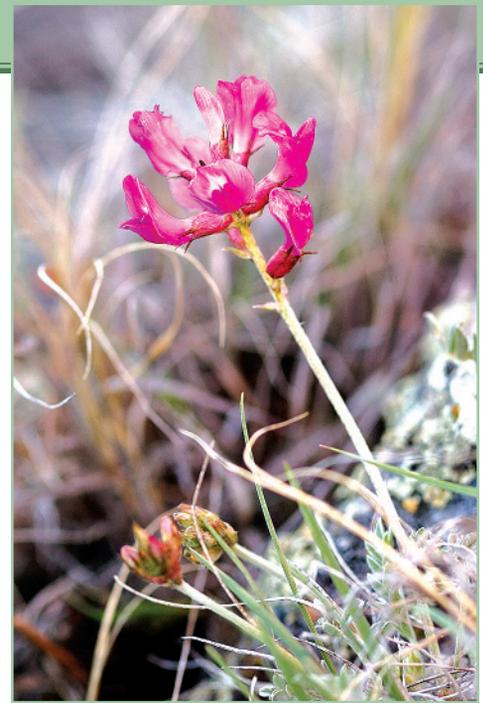
other varieties (*amphibolus*, *humistratus*, and *mimetes*) are localized or regional endemics of the Four Corners area of the Great Basin, and do not extend onto the Great Plains.

Claude Barr, who propagated and grew many prairie wildflowers on his ranch in southwestern South Dakota, writes of Missouri milkvetch in his book *Jewels of the Plains*, “Close upon the ground small rosettes of neat, pinnate, grayish leaves, from a several-branched crown, are in evidence through much of the year. In early spring horizontal branches radiate to eight inches, to be dressed in late May or early June with an abundance of up-arching racemes of magenta-purple -- often more bluish purple -- creating a luminous effect of pleasing color. The rare sight of a short-grass pasture slope thickly set with hundreds of these plants at their height of bloom gives a high rating to *Astragalus missouriensis*. In the garden a plant seldom lasts beyond the third year, but there are usually young ones to carry on, and never any undue number.”

In my experience, Missouri milkvetch often begins to flower in late April. It's pea-like flowers attract small wild bees, honey bees, bumble bees, and butterflies at a time of year when there

are not many other flowers to forage on. Some *Astragalus* species are toxic to livestock, but Missouri milkvetch has not been reported as poisonous, although because it grows so close to the ground I rarely see it grazed by cattle or horses. Deer, pronghorn, sheep and rabbits are more likely to nibble it's freshly emerged spring leaves.

Missouri milkvetch has a lot of fellow milkvetches. Across the northern hemisphere there are more than one thousand species of *Astragalus* with about 350 of them occurring in North America, and 30 species just here in South Dakota. One of the characteristics of Missouri milkvetch that separates it from many of its brethren is the “dolabriform” hairs that cover its leaves, stems, and fruits. The word comes from the Latin *dolabra*, an ancient weapon shaped like a pickaxe. Each hair resembles a tiny pickaxe head, pointed at both ends and fastened in the middle; as opposed to basifixed hairs that are fastened at one end. The only other similar, spring flowering, *Astragalus* having purple flowers, dolabriform hairs, and occurring across most of South Dakota is prairie milkvetch (*Astragalus adsurgens*, now known as *A. laxmannii*) which has smaller fruits, and longer, more



In the Northern Plains, Missouri milkvetch blooms from late April to early June Photo © Glen Lee

upright stems.

Not much else is known about Missouri milkvetch. Along the Missouri River, it still grows in many of the same habitats where Lewis, Bradbury and Nuttall collected it over two hundred years ago. If it had medicinal or cultural uses among the Arikara or Lakota peoples, those uses were not written down, other than one possible reference. On June 14th, 1811 John Bradbury and his fellow travelers were visiting the Arikara villages near the mouth of the Grand River. One of the Arikara healers or “medicine men” had seen Bradbury collecting plants, and assuming him to be a fellow healer, invited Bradbury into his lodge and showed him the contents of his medicine bag, which, among other medicinal herbs, contained “two new species of *Astragalus*.” Whether Missouri milkvetch was one of those two medicinal astragali, we will never know. What I do know is that this little purple-flowered milkvetch is named after the Missouri River, is intimately adapted to the Great Plains, has a history that reaches way back beyond human memory, and contains secrets that remain to be discovered. 🌿



The fruits of Missouri milkvetch are about one inch long by one-half inch wide, turn black with age and may persist well into the second growing season.

Photo © Matt Lavin



# Dakota Naturalist

## GETTING KIDS HOOKED ON BIRDS



By Kelly Preheim  
Kindergarten Teacher, Armour, SD

After playing a “bird riddle game” at lunch, one of my kindergarteners came over to me and said, “I told them it was a bird that starts with “L” and they said Lyrebird, but it was a Lesser Yellowlegs!” Yes, I really have five and six year olds in my class that talk of Lesser Yellowlegs and Lyrebirds as well as other birds of which many adults remain unaware. One may find this unbelievable, but it is true. As a group, my ten kindergarteners can name over 200 birds and they know the song/call of over 25 species. This far exceeds my expected goal of getting young students interested in South Dakota birds.



I have taught kindergarten in Armour, SD for 20 years and had previously taught a short bird unit at the end of the school year. However, during the last two years, since I've become an avid birder, I started teaching a bit about birds nearly each week. It wasn't difficult to do and it correlates perfectly with my required Science Standards. I begin by telling them about my birding experiences, which all of us birders love to do, if we can find someone who will listen. I show some photos of birds that I've seen over the weekend and tell some fascinating facts about them. It is amazing how the children soak up this bird knowledge. At first they were slightly interested, but it wasn't long until they were hooked!

Early in the year each student received their very own *Backyard Birds of South Dakota* booklet from the South Dakota Department of Game, Fish and Parks. These booklets are kept in the classroom for the entire school year and they are one of my best resources in teaching about birds.

I also created a PowerPoint slideshow starting with a few backyard birds and I continue to add to it throughout the year. I am very thankful for the use of the photos from our local South Dakota bird photographers. These photos make a big difference and they are fantastic! I teach about birds with this slideshow on the Smart Board, show bird videos from the Cornell University - Lab of Ornithology and use photos from my Bird Cam to practice identifying birds.

We go through the bird flashcards and I read many library books about birds. We also play a “Name a Bird” game where they each take turns naming a different bird. This has gotten quite complex lately with birds such as Semipalmated Plover, Wilson’s Phalarope and Gyrfalcon being tossed into the mix.

There is a bird center in my classroom with bird booklets, pamphlets, a bird memory game, feathers, the Bird Identifier {a bird song identification device} and a couple of pairs of {faulty} binoculars to use at our three huge windows. There is an old field guide that they often look through too. They love to go the bird center!

On my kindergarten blog, I often post links to bird sites and videos as well as suggestions of where parents could take their children to see birds. I am so happy to hear that the parents are now taking their children birding and hiking. We also go hiking at our local lake and we record what we see in our Nature Observation Journal.

During the owl unit, the students dissected owl pellets and thought it was very interesting. They compared the bones to those on a chart. They really love owls and can identify all of the South Dakota owls. They really like all birds it seems and they love to talk about them. We often start out each morning discussing our bird sightings. Since spring migration has started, it is not uncommon to have a child march into the classroom in the morning with a big smile and shout, “Life bird!” Then he/she will share their recent sighting.

My students completed a couple of big projects this year. We have published a twenty page bird book titled, Our Favorite Backyard Birds, with drawings and text written by these little ones. We also teamed up with a high school science class to build four nest boxes to be placed at our local lake.

The highlight of our school year may be in May as we will travel to an area lake for an all-day field trip complete with two birding hikes, a picnic, outdoor classroom, free play and kite flying. I have taken students on this trip each of the last twenty years and it has always been a great time!

I am sharing my experience to encourage people to get children interested in birds. Children are very capable of identifying birds; in fact many seem to have a phenomenal memory for bird names and facts. It is important for children to become more aware of their outdoor world so that they will grow up to respect and care for it.

As you have read, there are many ways to get children interested in birds and spending time with them talking about birds and getting them an age-appropriate field guide of their very own would be a good start. It is also very important to get children outdoors more often and one way would

be to take them hiking or birding. Point out birds, other animals, rocks, etc. Keep it low key and fun! Have them bring a friend and do it often.

There is a boy in my class who is really interested in birds and often at playtime he will bring over the South Dakota bird pamphlet and point to a bird. He asks me to tell about when I saw the bird and what it was like. He just lights up when I tell him my tales, like when I hiked through Union Grove State Park with other birders, hopping across rocks to cross a big stream, getting my foot stuck in the mud, climbing up a small cliff, and getting a bloody arm all to see my first Golden-winged Warbler.

Another teacher says it’s because of the way I talk about birds that gets kids excited. She says it’s this passion about birds and nature that fascinates them. Many of us have that passion, so now we need to share it with others and why not share it with kids? 🐾





# Natural Heritage

## Marvelous Martin Migration

By Casey Mehls and Paul Mammenga



Photo © USFWS

Amazing things can come in small packages. The purple martin, weighing no more than a tennis ball, is capable of traveling from South Dakota all the way to South America and back every year. Details of this long distance migration were once unknown until cutting edge research began in 2011 by Paul Mammenga in collaboration with Dennis Mammenga, SDGFP, the Purple Martin Conservation Association, and York University unlocked some of its mysteries.

Purple martins are popular backyard birds that breed in eastern South Dakota in groups called colonies. Paul and Dennis are South Dakota purple martin “land lords” that host colony sites with over two hundred nesting compartments consisting of hollowed-out gourds, wood and metal houses. Every fall the martins leave the colonies to travel to their wintering grounds in South America, and then return every spring to the same sites to breed once again. Paul and his collaborators were

interested in determining the migration pathway the martins follow during their long distance journey.

To track the migration route, an innovative device called a geolocator was attached to adult martins. These geolocators only weigh 1.2 grams and contain a clock, light sensor, and a battery. By continuously recording light levels, they tell us day length and sunrise/sunset times which can then provide a daily latitude and longitude position. The geolocators were attached to the martins using a Teflon ribbon harness that is looped around the top of both legs. Once fastened, the geolocator sits just above the martin’s tail similar to a backpack.

Before the geolocators could be attached the martins needed to be captured which required some creativity. At each of their colonies, Paul modi-



Photo © Bill Dalton

Purple martin seen wearing the geolocator device and yellow leg band.

fied the nesting gourds and houses so they could be used to trap the martins as they entered to feed their young. Above every entrance hole, a metal rod with a long string attached was installed that held up a trap door. When a martin enters the compartment, the string is pulled and the trap door drops, covering the hole with the martin inside. The martins were then extracted by hand and their age and sex were determined before the geolocators were attached and the martins released. Small yellow leg bands with unique numbers were also used to help identify individual birds. After the martins left their colonies in the

fall the anxious wait began for the return of any birds with geolocators and the information they would bring.

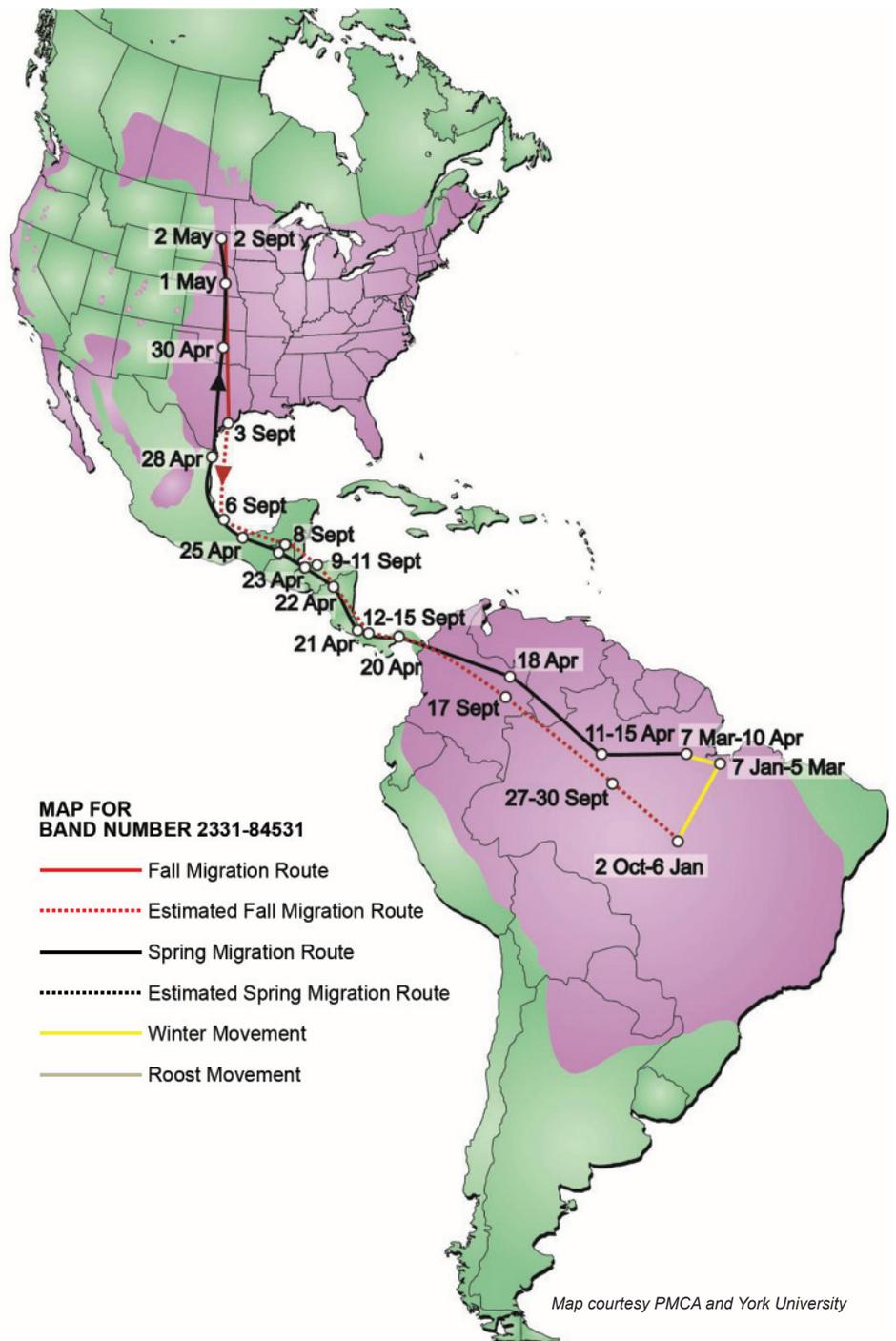
The martins were first sighted again in early April of 2012. The birds needed to be recaptured to remove the geolocators and access the stored information which was used to produce maps for the fall and spring migration routes. The results from the geolocators were remarkable. For example, on September 2nd one adult male with band number 2331-84531 flew all the way from his South Dakota colony site to the Texas coast in one day, a distance of over 1,200 miles. He then followed the coastline down through Mexico into Central America at a more leisurely pace until he reached his wintering grounds in Brazil on October 2nd. This bird chose to spend his winter near the mouth of the Amazon River before he began his spring migration on April 11th. His spring route closely followed the fall migration pathway through Central America and Mexico, reaching his same breeding colony in South Dakota in only 22 days. This martin's total migration distance from the colony site to wintering grounds and back totaled 10,551 miles.

The research isn't over yet. In the

summer of 2012, Paul put geolocators back on some of the same martins to determine if they take similar pathways and use the same wintering areas every year. Paul also put bands on martin nestlings to determine where

the young go after leaving their home colonies. At the time of writing this article, we have not yet received an update from Paul but all wait in eager anticipation for what's to come next.

Funding for this research was provided in part by SDGFP Wildlife Diversity Small Grants Program. If you are interested in purple martin conservation, check out the Purple Martin Association of the Dakotas website at: <http://purplemartinassociationdakotas.weebly.com>



Map courtesy PMCA and York University



Purple martins nesting in gourd system at Paul's colony near Columbia, SD.



# ParkNotes

## STATE RECREATION AREAS OFFER SUMMER NATURE CAMPS FOR KIDS

Several state parks and recreation areas will be offering several free nature day camps throughout the summer for kids ages 7-12 to explore the area and focus on the outdoors.

**Angostura Recreation Area** near Hot Springs. Info: 605.745.6996

- Kids' Fishing Day, June 12, 9:30 a.m.– Noon MT.
- Track Detectives, July 10, 9:30 a.m.– Noon MT.
- Nature Explorers, August 7, 9:30 a.m.–Noon MT.

**Big Sioux Recreation Area** near Brandon. Info: 605-582-7243

- Trees, June 20, 9-11 a.m.
- Nocturnal Animals, July 18, 9–11 a.m.
- Reptiles, August 8, 9–11 a.m.

**Custer State Park** near Custer. Info: 605.255-4515

- Kids' Fishing Day, June 26, 9:30 a.m.– Noon MT.
- Track Detectives, July 24, 9:30 a.m.– Noon MT.
- Nature Explorers, August 14, 9:30 a.m.–Noon MT.

**Lake Poinsett Recreation Area** near Arlington. Info: 605-627-5441

- Fishing, June 11, 10 a.m.–2 p.m.
- Nature Day Camp, July 16, 10 a.m.–2 p.m.
- Nature Day Camp, August 8, 10 a.m.– 2 p.m.

**Oakwood Lakes State Park** near Bruce. Info: 605-627-5441

- Fishing, June 4, 10 a.m.–2 p.m.
- Nature Day Camp, July 9, 10 a.m.–2 p.m.
- Nature Day Camp, August 6, 10 a.m.– 2 p.m.

**Palisades State Park** near Garretson. Info: 605-594-3824

- Trees, June 13, 9–11 a.m.
- Nocturnal Animals, July 11, 9–11 a.m.
- Reptiles, August 1, 9–11 a.m.

**Rocky Point Recreation Area** near Belle Fourche. Info: 605.641.0023

- Kids' Fishing Day, June 19, 9:30 a.m.– Noon MT
- Track Detectives, July 17, 9:30 a.m.– Noon MT.

Reservations are required and can be made by calling the park office. The camps are geared for kids ages 7-12, but younger children may attend if accompanied by an adult. Kids are reminded to wear clothing appropriate for the weather and shoes comfortable for walking. No snacks or refreshments will be provided, but kids are welcome to bring their own. The camp is free; however a park entrance license is required.

## RIDERS CAN STILL REGISTER FOR 16TH ANNUAL MICKELSON TRAIL TREK

**LEAD, S.D.** – Openings still exist for riders to take part in the 16th Annual Mickelson Trail Trek, say park officials. The deadline for early registration for the Sept. 20-22 ride is July 1. After that, merchandise is not included with registration.

Registration can be completed online by visiting [www.mickelsontrail.com](http://www.mickelsontrail.com) and by following the "Trail Trek" link. Registration is available on a first-come, first-served basis.

Riders on the Trail Trek will cover 109 miles of the trail over three days, from Friday, Sept. 20 through Sunday, Sept. 22. The registration fee includes the trail pass, shuttle service, commemorative souvenirs, refreshments and some meals during each day's ride. Riders are

responsible for accommodations and mechanical support. The ride is open to all bicyclists 14 years of age or older.

The Trail Trek highlights the George S. Mickelson Trail as it winds through the heart of the Black Hills from Edgemont to Lead/Deadwood. The ride began as a celebration of the completion of the rails-to-trails project. It continues today to introduce new bicyclists to the trail and thank supporters for their long-standing enthusiasm for the Black Hills trail.

For more information on the Mickelson Trail or the Trail Trek, visit [www.mickelsontrail.com](http://www.mickelsontrail.com) or contact the Black Hills Trail office at 605-584-3896.

## STATE PARK VISITORS SHOULD LEAVE FIREWORKS AT HOME

**PIERRE, S.D.** – The upcoming Fourth of July holiday is always a busy time in South Dakota's state parks and recreation areas. As you celebrate, Game, Fish and Parks officials ask you to please leave your fireworks at home.

Discharging fireworks is prohibited on all lands owned or leased by the Department of Game, Fish and Parks. The ban includes state parks, recreation areas, lakeside use areas, game production areas and nature areas. Discharging fireworks is also illegal within the exterior boundaries of the Black Hills forest fire protection district, national forests and national parks within South Dakota.

For more information on the South Dakota State Parks, visit [gfp.sd.gov](http://gfp.sd.gov) or call 605-773-3391.



## **YOUTH HUNTER EDUCATION CHALLENGE RETURNS TO SOUTH DAKOTA**

PIERRE, S.D. - Young hunters will get a chance to demonstrate both their shooting abilities and their knowledge of conservation at the 2013 Youth Hunter Education Challenge (YHEC) June 15 in Mitchell.

South Dakota youth who participate in the daylong event will compete in two age divisions and eight separate shooting sports and outdoor skills tests. Events range from firearm and archery proficiency to orienteering and wildlife identification. All rules and regulations will follow National Rifle Association International rules as much as possible.

“YHEC is designed to promote youth participation in the shooting sports, hunting and overall knowledge of the outdoors,” said Gary Stadlman, South Dakota YHEC Coordinator. “This is a test to see how we have done as HuntSAFE instructors, and I would encourage any youngsters who have completed their HuntSAFE classes to participate in this year’s event.”

All registrants must be at least 12 years old, hunter-education certified and have parent or guardian approval. An adult coach or parent/guardian must be present at the event. For registration information, interested individuals should email [outdoorprogramming@gmail.com](mailto:outdoorprogramming@gmail.com). For general information, phone Gary Stadlman at 605.227.4286. More information is also available at: [gfp.sd.gov/outdoor-learning/YHEC.aspx](http://gfp.sd.gov/outdoor-learning/YHEC.aspx)

The 2013 YHREC event is sponsored by the South Dakota Shooting Sports-YHEC Committee and the South Dakota Department of Game, Fish and Parks.

## **GFP INVITES EDUCATORS TO SCORE A BULLSEYE WITH FREE ARCHERY TRAINING**

PIERRE, SD - The South Dakota Department of Game, Fish & Parks will host teacher training next month at Watertown for the National Archery in the Schools Program (NASP).

NASP allows schools in South Dakota to safely incorporate archery into their school curriculum and at no cost to the local school district. Home school parents are also encouraged to attend the training at no charge.

The one-day training is scheduled for Wednesday, May 29, at the Watertown Middle School gymnasium. The session begins at 8 a.m. and ends at 5 p.m. CDT.

Teachers wishing to introduce archery into their schools must pre-register for training by email at [outdoorprogramming@gmail.com](mailto:outdoorprogramming@gmail.com) or by phone at 605.220.2130. Space is limited so registrations should be made as soon as possible.

## **ELK SEASONS FINALIZED**

WINNER, S.D. -- The South Dakota Game Fish and Parks Commission has finalized several elk-hunting seasons for 2013.

Archery elk hunters will have 92 “any elk” and 15 “antlerless elk” licenses available for the season. The 2013 Archery Elk Season will run from Sept. 1-30.

The Black Hills Firearms Elk Hunting Season will run from Oct. 1-31 for the “any” elk license holders. Antlerless elk seasons will run from Oct. 16-31 and Dec. 1-15. Black Hills Firearms Elk hunters will have 620 licenses available, comprised of 445 “any” and 175 “antlerless” licenses.

The Prairie Elk Season will have 45

“any” elk and 51 “antlerless” elk licenses available, which is four less than 2012. Other changes from 2012 are:

Boyd County, Nebraska will no longer be part of Unit 30.

The season dates for Unit 30A will run from Sept. 1 - Dec. 31.

The season dates for Unit 11B will run from Sept. 1 through the Friday before the third Saturday in October (2013 season dates are Sept. 1 - Oct. 18) Unit 11D was added with season dates of Sept. 1-Dec. 31.

## **AQUATIC INVASIVE SPECIES MARKETING CAMPAIGN**

The South Dakota Game Fish has recently launched a marketing campaign to help control the spread of Aquatic Invasive Species. The main focus of this “SD Least Wanted” campaign is to curb the spread of Asian carps, however, all invasive species known to be a risk to South Dakota’s waters are included. A logo has been created to give this campaign a brand, keep your eye out for as it should start showing up throughout the state!



Game, Fish & Parks  
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### **OUTDOOR LEARNING EVENTS**

GFP partners with local groups and organizations to bring the outdoor experience to both youth and adults.

Scan this QR Code with your smartphone, or visit

[gfp.sd.gov/outdoor-learning/step-outside.aspx](http://gfp.sd.gov/outdoor-learning/step-outside.aspx) to view upcoming events!

