

West Virginia Wildlife



Fall/Winter 2012

A Publication of the West Virginia Division of Natural Resources

Wild Perspective



The Overlooked Sport

I've often heard that if you flattened out West Virginia, it would be one of the largest states. We sure are blessed with beautiful hills in every direction and stately mountains in the eastern half of the state. What that means for our water resources is that the water throughout the state is almost always moving downstream, and that our landscape has a scarcity of wetlands. In regards to our wildlife resources, that hilly terrain translates into a low population of waterfowl.

We have two basic populations of waterfowl. First, we have resident Canada geese, wood ducks and mallards. And then we have migrant populations of various species of geese and ducks that pass through the state or spend part of the winter here.

Even though our state doesn't have many waterfowl compared to most states and despite the fact that waterfowl hunting doesn't provide much income, our agency still employs established techniques to wisely manage those resources. During the first few days of January every year our biologists conduct aerial surveys of waterfowl which enable them to detect long-term trends in populations. Our biologists actively participate in the Atlantic Flyway Council, providing input to the U.S. Fish and Wildlife Service on setting the season dates and bag limits. Our personnel set out and monitor wood duck nest boxes annually. They also band Canada geese to monitor our resident goose population. All the information they gather aids in setting hunting seasons, ultimately resulting in sustainable populations of waterfowl which our children and grandchildren will enjoy.

Each year the USFWS sets the total number of days of waterfowl hunting and the earliest opening date and latest closing date. This year our biologists tweaked the seasons by eliminating zones and adding a six-day, third split season during November when some early migrants are passing through and the habitat has changed from the October season.

I encourage you to get outside and enjoy the sight of waterfowl flying overhead in formation or their brightly colored reflections on still water, or try your hand at the challenging sport of waterfowl hunting. It will awaken your senses and lift your spirits. Believe me, I know. It happens to me every year.

Frank Jezioro

Frank Jezioro, Director, Division of Natural Resources

West Virginia Wildlife



Large lunkers like this musky lurk in West Virginia waters.

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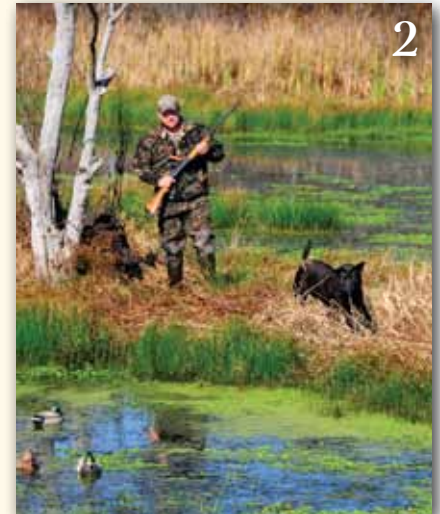


Photo by WV Dept. of Commerce/Steve Shaluta



Photo by Jeff Hagenga



DNR photo

Waterfowling

in Wild and Wonderful

By Mike Peters

To say that it was an unusually warm January would be putting it mildly. In fact, it was downright balmy, with temperatures going into the 70s. West Virginia had experienced several weeks of unseasonably warm temperatures and plenty of rain to go along with it. Earlier in the duck season, all the wetlands, ponds and lakes had frozen up solid, which is pretty typical for this area. But warm temperatures and rain gave me new hope in getting a few more days afield before the late duck season closed.

One of my associates and I were conducting the annual mid-winter waterfowl survey close to my favorite hunting grounds. After work, I was able to see what was hanging out at one of my hunting spots. In addition to the usual large number of geese, I was quite surprised to see a half dozen black ducks and even some ring-necked ducks. The chance to swing my

barrel on some ring necks was too much temptation. I just knew the next day might be the perfect opportunity to do so. A cold front pushing through northern Pennsylvania (bringing ice and snow to that area) would hopefully push more ducks south to our warmer clime.

As usual, the morning came way too soon, but I was ready. I loaded all the typical gear into the truck the night before, including all my cold weather clothing. It's an hour drive to the wetlands, so I always wear the minimal amount of clothing to reduce overheating and sweating. I parked further away than normal from where I set up my decoy spread, because I knew the geese would be nervous and I didn't want to risk flushing them before shooting time.

The recent rains had caused the water in the wetland to be high and above the normal level. A slight



breeze stirred the warm air. The overcast sky hinted of rain. It was so warm that all I needed was the clothing I wore for the drive there — a T-shirt and a long sleeve shirt. It was turning into a perfect duck hunting day and all was going well. I finished setting up the decoys and the blind, just waiting for shooting time to arrive. I enjoyed the peacefulness of the wetland, just me and the lab, anticipating the morning hunt as thoughts of killing my first ring neck ran through my head. I was tempted to sip some coffee from the thermos, but I was way too hot already, kicking myself for not bringing my canteen of water.

Then it happened. My solitude was broken by the arrival of another hunter. His headlights shown down on me and my setup. After a short pause, the car proceeded down the lakeshore. I feared he would attempt to approach the lake where the geese were

Happy hunters watch a retriever bring back the harvest.

Photo by WV Dept. of Commerce/Steve Shaluta

roosting. The calm gaggling of the geese, which I had been hearing all morning, soon turned into nervous alarmed honking. I knew what had happened, and three minutes before shooting time, skeins of geese were winging their way off to an unknown destination.

Usually this meant goose hunting was over for the day. It's a resident population that experienced hunting pressure early in the season, so it doesn't take them long to react and fly away. Their return to this roost — if they return — is normally way past shooting hours. My hope to bag one last goose for the season flew away with those birds.

But the calling did not fade into oblivion as usual. I continued to hear honking and it seemed as if the

sound was approaching. It was shooting time when the first couple of geese returned, but they were too high, too far away, and unresponsive to my calling. In the meantime, the ducks began their morning flight around the lake just as the sun started peeking over the ridge though the cloud-laden skies. Nothing was responding to my calls. Then a single, lonesome goose came into view. I gave my usual call sequence and the bird responded well, until it alighted in the middle of the lake. I was pretty sure the other hunter was messing with the birds. But some convincing calling reassured the loner, and in no time it was winging its way towards me.

At this point, I think it's important to mention that to say my shooting abilities were lacking would be an overstatement. Even though I had spent 14 years afield pursuing waterfowl, my shooting ability had never caught up to my talents in locating and calling birds, setting decoys, and building blinds. No matter how much time I spent shooting clay targets, my shot-gunning skills just lagged behind. To make matters worse, I had just replaced my wooden stock and forend with a new synthetic wetlands camouflage set. I planned to concentrate more on my shooting and attempt to lead the birds more.

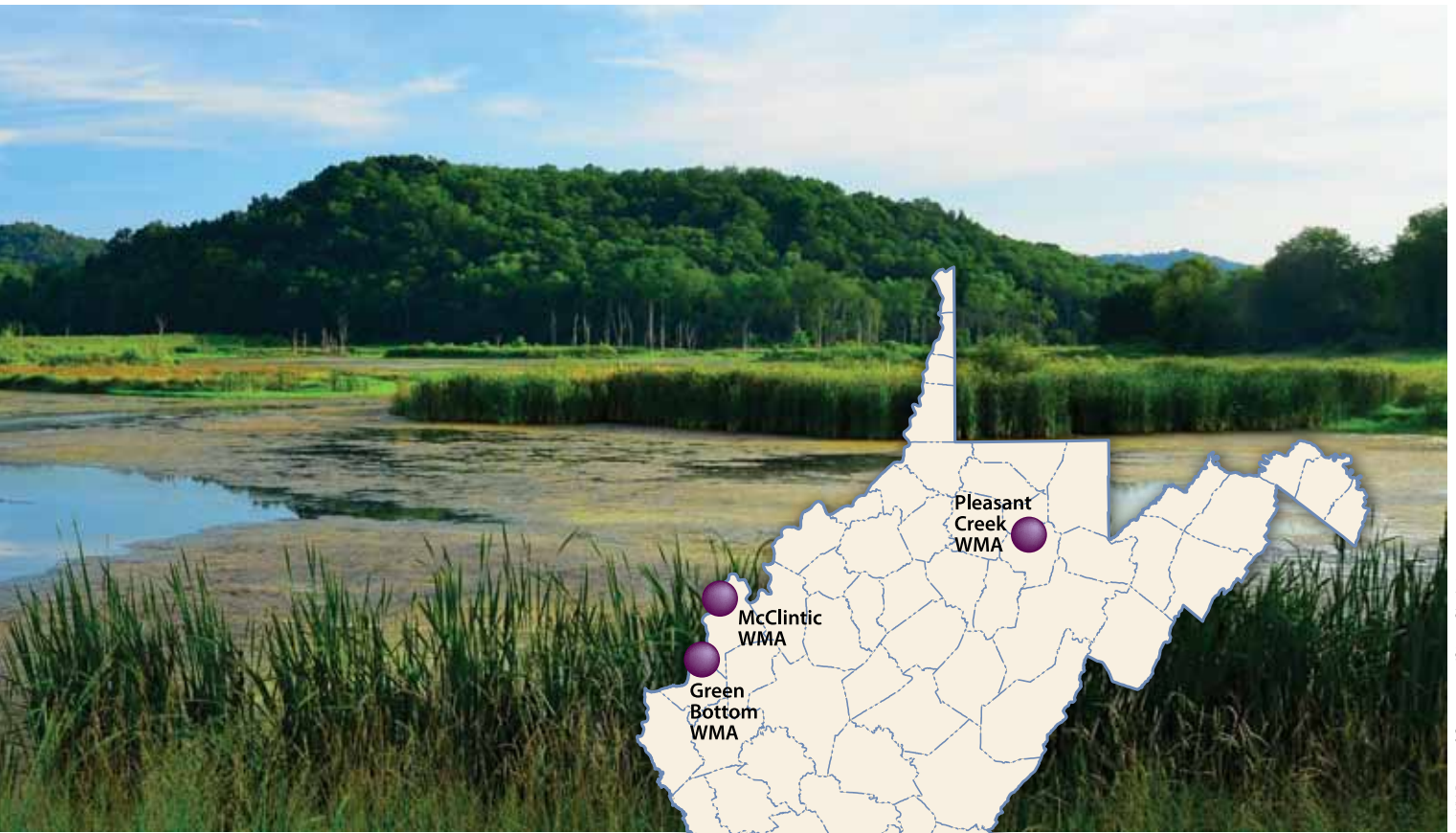
As the goose cruised past, the single report from the shotgun yielded great results. With a longer lead, the bird dropped to the ground dead. Unfortunately, the lab didn't have any interest in retrieving the bird. After sniffing the bird a couple times, she seemed to decide that the person who shot the bird should go get it. I might have expected this behavior earlier in the season, but not this late. I chalked it up to the dog having a bad day.

We returned to the blind, bird in hand, and started anticipating the next birds. Ducks were flying but were not interested in what I was offering. A couple of larger flocks of geese circled half a dozen times or so but would not commit. I actually called so much that I got winded and figured the geese had won.



Just as I was catching my breath, a duck from the far side of the lake took to the air and headed right towards me. The overcast sky sprinkled rain. The duck was flying head on and didn't yield any color patterns. In my mind's eye I quickly identified it as a mallard and patiently waited for the right time, focusing on my shooting.

The bird flared as I jumped up. I shot and the bird slightly wavered as the shot passed below and behind the bird. Not enough lead. Concentrate! A greater lead on the bird and a second shot rang out. My spirit sank as I watched it flying away. But a sudden unexpected turn in my direction sent me into a frenzy trying to reload and prepare for a third chance. The bird passed in front of the blind and a single shot set the duck into a controlled rapid descent and me into preparing for a possible fourth shot if needed. Just as the duck was about to hit the water, it turned ever so slightly. Then I saw it — a white finger-like color pattern running up the back of its neck. My first northern pintail!



WV Dept. of Commerce/Steve Shaluta

At Pleasant Creek (pictured above), McClintic and Green Bottom WMAs, the DNR focuses on waterfowl management.

Although I can vividly recall all the intricate details leading up to this climatic point, the rest of the morning is a whirlwind of blurred thoughts and emotions. Harvesting my first drake “pin,” after 14 years of duck hunting, and in West Virginia no less, was a momentous event in my duck hunting career.

When avid waterfowlers dream about duck hunting destinations, I would guess that West Virginia does not make many of their top 10 lists. The truth of the matter is that West Virginia has been described by some as the most “duckless” state in the nation. The low number of duck hunters in West Virginia — approximately 1,500 — is probably a good indicator of this “ducklessness.” To compound this situation, duck hunting in West Virginia doesn’t hold the same “tradition” among hunters as deer, bear and turkey hunting. In fact, when I tell people I duck hunt, the usual response is, “You can duck hunt in West Virginia?” The problem: West Virginia does not

have the wetland habitat to produce, attract and hold large numbers of breeding, migrating and wintering populations of waterfowl that the other 49 states have. To sum it up: being a duck hunter in West Virginia isn’t easy!

Having said that, if a duck hunter keeps his or her expectations in perspective (not wanting to limit out every day), duck hunting in West Virginia can be pretty darn good. Sure, West Virginia doesn’t have endless expanses of wetlands, but we do have some nice areas. The DNR has several wildlife management areas focusing on waterfowl management: McClintic in Mason County, Green Bottom in Cabell and Mason counties, and Pleasant Creek in Barbour County. In addition, other WMAs have lots of potential. These areas combined with a small number of waterfowl hunters translates into high quality areas with little competition. Any one

area usually doesn't get a lot of pressure. Although West Virginia may not have the large waterfowl populations other states enjoy, we do have a great diversity of species. Wood ducks, mallards, green and blue-winged teal, and black ducks are the most common species in the bag.

A plethora of books, videos and TV shows are available to educate the beginning waterfowl hunter. So this is where I'll insert my disclaimer for this article. I am not, nor would I ever consider myself, an expert duck hunter. I am not a "Pro Staffer," nor do I ever want to be. Although there are numerous hunters who have killed more ducks in one season than I have taken during my entire hunting career, I would consider my passion for the sport no less than theirs. I enjoy everything about the sport: seeing the morning sun rise above the horizon, watching the fog loom over an awaking marsh, proudly watching my lab that I trained make a difficult retrieve, successfully working a flock of geese into gunning range.

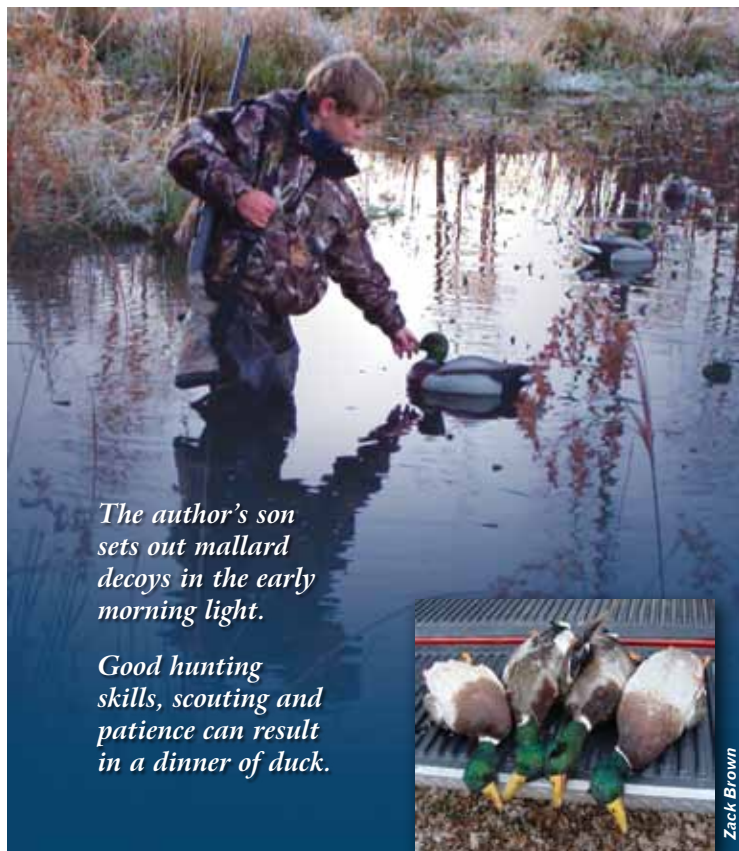
With the above disclaimer out of the way, I will attempt to give some advice for the beginning

West Virginia duck hunter. The early season is good for wood ducks, mallards and teal. Just about any body of water in West Virginia has potential. You don't need large decoy spreads, half a dozen is fine, if any at all. A lot of duck hunting can either be done by pass shooting in which you stand along a travel corridor such as a creek or river and shoot as they fly by, or by jump shooting in which you walk along or canoe a body of water and shoot the birds as they jump up. The bottom line is that you can have all the nicest decoys, be the best caller, have the most expensive gun and elaborate blind, but if you are not where the ducks are, you are not going to get any ducks. I know a lot of folks out there who violate this basic principal. Early morning and early evening scouting is a necessity.

Late season duck hunting is exciting because it offers great potential for harvesting a variety of migrant species. The down side is that small and sometimes even large wetlands and impoundments freeze up by this season. Most hunting will take place at larger bodies of water that didn't freeze up, and at streams and rivers that are either large or have a good current to them. Those small impoundments that froze up quickly will also thaw quickly with a warm period combined with some rain. They can be highly productive, but your schedule needs to be flexible to take full advantage of those opportunities.

Duck hunting in West Virginia might not be as easy as in many other states, but it's an exciting wing shooting sport that can be enjoyed with minimal equipment. It's also a multi-dimensional sport that has many specialty areas including carving decoys, calling-in competitions, making calls, and training dogs to mention a few. I would encourage anyone who has thought about duck hunting and hasn't tried it yet to give it a try here in West Virginia.

Mike Peters is the Assistant District Wildlife Biologist stationed in Farmington.



Wildlife Diversity Notebook: Brown Creeper

By Karen McClure

Common Name:

Brown creeper (also American creeper, California creeper, common creeper, little brown creeper, Mexican creeper, Sierra creeper, tree creeper)

Scientific Name:

Certhia familiaris

West Virginia Status:

The DNR Wildlife Resources Section ranks the brown creeper as vulnerable for breeding due to restricted habitat, but their nonbreeding population is considered stable.

Note: Habitat destruction is considered a threat to these birds in Kentucky, Illinois, Indiana, Ohio, New Jersey, New York, Idaho and Montana.

Description: Brown creepers are small (about five inches long) and slender, with long, stiff tails. They brace themselves with these tails when spiraling up trees to feed. As the name implies, brown creepers are brown overall, with white flecks on the back and head, and white undersides and eyebrows. They have reddish rumps and tails. Their well-camouflaged coloration makes them adapted for a life spent mostly on a tree trunk. Brown creepers have thin, slightly curved bills. The wingspan is seven to eight inches. These birds weigh in at one-fourth to one-third of an ounce (approximately the weight of two nickels). Brown creepers have a high-pitched, cricket-like voice. A multi-syllable song is complemented by a "see-see" call note.



A thin bill aids the creeper in pulling insects from a tree's bark.

Photo by Dan Jackson/
Cornell Lab of Ornithology



Courtesy of Wil Hershberger

The brown creeper's coloration makes it well suited to life on a tree trunk.

Habitat: Look for brown creepers in areas with evergreen trees or areas with a mix of evergreen and deciduous trees and shade trees.

Diet: Brown creepers specialize in eating insects that live in tree bark. They eat a variety of insect eggs, larvae and mature insects. They also feed on spiders and pseudoscorpions. Brown creepers pull their prey out of the bark with their bills. They work their way up the trunk, then fly to the base of another tree to creep up again. Brown creepers eat some nuts and seeds. (See Bird Butter recipe in the Sense of Wonder activity.)

Range: In winter, brown creepers live in most of the United States and Southern Canada, south to Mexico and Nicaragua. They are year-round residents of Southeastern Canada, extending south through the Appalachian Mountains in West Virginia. In West Virginia, they breed at higher elevations in northern hardwood forests, and they winter at lower elevations throughout the state.

Life History: Brown creepers usually build their nests in a dead tree, five to 15 feet high, under a strip of loose bark. Sometimes, they'll build in a tree cavity. The nest is a crescent-shaped sling of cocoons and spider egg cases, topped by a nest of moss, twigs and bark, lined with the feathers of other birds. In early spring to mid-summer, the female lays four to eight white eggs with a few brown spots. Incubation takes about two weeks, producing naked hatchlings with a tiny patch of down on their heads. The young birds leave the nest two weeks after hatching. The oldest brown creeper on record in North America was over four years old. At night, brown creepers roost clinging to the trunk of a large tree, or even the side of a house.

Karen McClure is a Public Information Specialist with the DNR Wildlife Resources Section stationed in South Charleston.



White-Nose Syndrome

A Deadly Enigma

By Craig W. Stihler



West Virginia has more than 4,000 caves, many of which are home to bats that hibernate in them during the winter when insects, their sole food item, are not available. During hibernation, a bat's body temperature drops and metabolism is greatly slowed. This allows bats to survive for months living off of the fat they accumulated in late summer and fall. The best hibernation caves provide optimal temperature and humidity conditions and give the bats a place to hibernate undisturbed during the winter. Where conditions are ideal, bats may congregate by the thousands to wait out the winter. Since the early 1980s, West Virginia DNR Wildlife Resources Section biologists have worked with landowners to protect important bat hibernacula and to monitor bat populations. At some sites, gates or fences have been constructed to reduce human traffic into caves when the bats are present. As a result of these efforts, bat populations have increased. For example, the number of endangered Indiana bats hibernating in Hellhole Cave in Pendleton County increased from 3,330 bats in 1986 to more than 18,000 individuals in 2010.

In 2007, while biologists in West Virginia were documenting increases in bat numbers hibernating in caves, biologists in New York were noting hibernating bats with fungus growing on their muzzles. At first this was no more than a curiosity, but soon it became obvious that something was very wrong. Thousands of dead bats were found at some hibernation sites, and bats were seen flying out of caves in mid-day in the middle of winter. Whatever was killing the bats seemed to be associated with the fungus, and it was spreading. By early 2008, White-Nose Syndrome (WNS), as the condition came to be known, had spread to Connecticut, Massachusetts and Vermont. By early 2009, it had arrived in West Virginia.

During winter bat surveys conducted in January and February 2009, bats affected by WNS were observed in four caves in Pendleton County. Biologists found dead bats at one of the four sites. Surveys in surrounding counties did not find any sign of the disease. Surveys conducted



Yvonne Dromms

Above, dead bats litter the entrance room of Hellhole Cave in Pendleton County. Hundreds of dead bats were found during a 2010 survey. In background, the entrance to Hellhole.

Opposite page, little brown bats hibernating in Big Springs Cave in Tucker County show the tell-tale signs of White-Nose Syndrome. At bottom left, the WNS fungus covers the muzzle of a tri-colored bat. At bottom right, a little brown bat with the WNS fungus on its nose.

in early 2010, however, detected WNS in caves in Greenbrier, Mercer, Monroe and Pocahontas counties. In Pendleton County, the disease was affecting bats in Hellhole, the state's most significant bat hibernaculum. A bat found on a building in Jefferson County also tested positive for WNS that year. By early 2012, WNS had spread throughout the eastern portion of the state where most of the state's caves are found, and it had also been found in bats hibernating in abandoned mines in Fayette County.

Soon after WNS was discovered, scientists initiated several studies to look at the underlying cause of the condition and just how bats are affected. Although the fungus was always associated with the condition, no one knew if the fungus caused WNS or if it was a secondary infection of bats stressed by something else. Research has since shown that the fungus, a newly described species known as *Geomyces destructans*, is the sole cause of WNS. Healthy bats exposed to the fungus develop the disease in the laboratory. Although the condition is known as White-Nose Syndrome, the fungus is often found on the wings, ears, feet and tail as well as the muzzle. Unlike most fungi, this fungus grows well at cold temperatures and thrives in cold, moist cave conditions. The fungus does not grow at warm temperatures, and therefore does not affect active bats or humans. Bats that do not hibernate, like the migratory hoary bat, the state's largest bat, appear to be unaffected.

In a study conducted in several states, including West Virginia, the activity patterns of hibernating bats with and without WNS were examined. Bats normally arouse periodically from hibernation. These arousals



allow them to find water to drink, excrete wastes, and “jump start” their immune systems. However, bats with WNS arouse more frequently than healthy bats, leading to early depletion of their fat reserves. As the fungus grows, it invades the skin. Of particular importance is damage done to the wing membranes. A bat's wings have functions other than flight. For example, they play an important role in maintaining water balance. Bats affected by the fungus are often so dehydrated that their wing membranes are no longer pliable. Although the exact mechanism by which WNS kills its victims is not understood, it is clear that mortality rates can be high.

In West Virginia, populations of two of the state's most common bats, the little brown bat and the tricolored bat (formerly called eastern pipistrelle), declined 93

percent at caves where WNS had been present for two years. Mortality in northern long-eared bats has been quite high in the Northeast. In West Virginia, the initial number of northern long-eared bats at the sites that were examined was low, but none remained after two years. The decline in other species has not been as severe, but certainly higher than populations can



Photo by Jeff Hajenga

The fungus does not grow at warm temperatures, and therefore does not affect active bats or humans. Bats that do not hibernate, like the migratory hoary bat [above], the state's largest bat, appear to be unaffected.



Virginia big-eared bats do not appear to be affected by WNS, although this species hibernates in caves where the fungus has impacted other bats.

Photo by Craig W. Stihler

sustain. One surprise is the Virginia big-eared bat, a very rare species with most of the world's population occurring in West Virginia. Although this species hibernates in caves where WNS has impacted other bats, Virginia big-eared bats do not appear to be affected, and their numbers have actually increased since the fungus was found in West Virginia in 2009.

The long-range effects of WNS are not known, but it is apparent that a great number of bats will be lost. In January 2012, the U.S. Fish and Wildlife Service estimated that more than 5.7 million bats had already died. Some species may become extinct if populations fall to levels which are no longer viable. However, a glimmer of hope exists. The fungus that causes WNS has been found in European caves, and although some bats are affected, the large-scale mortality events seen in North America have not occurred. This may indicate that some bats are able to survive WNS and may pass this quality to their offspring. A small number of bats still live in the original WNS sites in New York, and the fungal infection appears to be less severe now at these sites than during the original outbreak. If there are survivors, biologists hope that populations may be able to recover, although this will take time. Most bats give birth to only one young each year, so populations do not rebound quickly.

To minimize stress to the bats that still remain in West Virginia caves, DNR personnel encourage cavers to avoid going into caves where bats hibernate when

the bats are present — generally September through mid-May. Cavers should also clean and decontaminate all gear between caving trips following the U.S. Fish and Wildlife Service protocol (<http://www.whitenosesyndrome.org/resources/cavers>). In addition, they should never take gear that has been in a cave in a WNS area into caves in areas where WNS has not been found. Given how important surviving bats may be to the recovery of these species, efforts should be made to reduce stress outside of the hibernation period as well.

Putting up a bat house will provide bats with a summer roost where they are welcome. If you have a colony of bats in a building, consider letting them stay there if they are not causing any problems. If you need to exclude a colony from a building, this work should be done before the colony returns in the spring. Fall and winter are the best times to do this work. Again, consider putting up a bat house as an alternate roost so they remain in the area and provide “bug control” services. Information on bat houses and excluding bats from buildings can be found at www.batcon.org.

White-Nose Syndrome is an unprecedented wildlife crisis. Huge numbers of bats are dying and multiple species are affected. Only time will tell how bat populations in West Virginia will change as a result of WNS. Some species may be lost. Other species that were abundant before WNS may survive in low numbers. Species not affected may become more abundant because of the lack of competition. DNR and its partners will monitor bat populations across the state to see how this disease affects the various species and to see if vital information can be gained from bats that contract the disease but don't die. Wildlife Resources Section personnel will assist with research in hopes of finding a way to fight WNS and aid bat populations in recovering.

Craig Stihler is a DNR wildlife biologist stationed in Elkins.



CELEBRATING THE NATION'S GREATEST CONSERVATION PROGRAM

By Scott A. Warner

Each year, nearly 400,000 hunters take to West Virginia's woods to enjoy some of the best recreational opportunities this state has ever known. However, if it wasn't for the forward-thinking actions of a few politicians, at the urging of hunters and gun manufacturers generations ago, neither our state nor our nation would have the abundance of wildlife, wildlife habitat and wildlife management programs we enjoy today. This year, state wildlife agencies across the nation are celebrating the 75th anniversary of the most successful wildlife management partnerships ever implemented by federal and state agencies.

First discussed in the 1920s, a proposal to tax the manufacturers of firearms and ammunition to provide money to manage wildlife was revived in March 1937 by participants at the Second North American Wildlife

Conference. One of the prominent participants, Carl Shoemaker, was appointed to draft legislation. After securing support from the firearms manufacturers, he obtained support from Senator Key Pittman of Nevada and Representative Willis Robertson of Virginia. Robertson is best known for adding the following 29 words to the bill: "...and which shall include a prohibition against the diversion of license fees paid by hunters for any other purpose than the administration of said State fish and game department..." Pittman

introduced the bill on June 20, 1937, with Robertson introducing an identical bill in the House several days later. Congress passed the bill with amazing speed and lack of political bickering on August 17. On Sept. 2, 1937, President Franklin D. Roosevelt signed into law the Federal Aid in Wildlife Restoration Act, commonly known as the Pittman-Robertson (PR) Act.



**On Sept. 2, 1937,
President Franklin D.
Roosevelt signed into
law the Federal Aid in
Wildlife Restoration Act.**



From left: Releasing deer in 1950s; banding wild turkeys in 1960s; radio tracking turkeys in 1980s; family enjoying benefits of PR program; tracking muskies in 2000s; hunter buying bow, which helps fund wildlife projects.

DNR Photos



75 Years

IT'S YOUR NATURE

Under the Act, Congress placed a 10 percent excise tax on firearms and ammunitions used for hunting that was earmarked to reimburse state wildlife agencies for activities directly related to wildlife management. According to Shoemaker's plan, revenue collected from this tax would be apportioned among state wildlife agencies through the U.S. Fish and Wildlife Service's Federal Aid Program based on the number of hunting licenses sold in each state and the state's surface area. Over the years, Congress has amended the Wildlife Restoration Act to include additional items used for hunting such as archery and handguns. This has allowed wildlife agencies to keep up with the demands of hunters and shooting enthusiasts. Based on the success of the Wildlife Restoration Program, Congress passed The Sport Fish Restoration Act in 1950, which placed a tax on the manufacture of fishing equipment (later expanded to include motorboat and small engine fuels). These funds can only be used by the states for fisheries management, boating access and aquatic education.

To protect the integrity of this program, restrictions were placed on these federal apportionments. The law states that only state wildlife agencies are eligible to receive the funding and that the money citizens pay in excise taxes can only be used to reimburse wildlife agencies for programs directly related to wildlife management activities. In addition, the legislation went one step further by requiring states to create assent legislation ensuring that revenue collected from the sale of hunting licenses could only be used for wildlife management activities. These stringent federal mandates have been very successful in protecting license money from financing special interest groups or going into the state's general revenue fund.

In the early 1900s, state wildlife agencies were significantly challenged, with wildlife populations threatened by unregulated hunting, industrialization, and the sprawl of human expansion that impacted wildlife habitat. We must not forget that during this time most wildlife agencies were in their infancy and didn't have a secure source of funding. With passage



WV Dept. of Commerce/Ron Snow

In the 1940s, federal aid money was used to purchase land to create Panther Wildlife Management Area in McDowell County.

of the Federal Aid in Wildlife Restoration Act, state wildlife agencies finally had that source. Federal aid dollars allowed for the implementation of activities such as habitat management, land acquisition and research. Work previously thought impossible by early wildlife professionals could now be implemented, and has led to today's wildlife management success stories.

The concept of the Wildlife Restoration Act, though simple, is brilliant. It is based on a user pay/user benefit philosophy, generating support from hunters, state and federal wildlife agencies, and the hunting industry alike. When a hunter purchases a deer rifle outfitted with a nice scope along with ammunition to go hunting, 11 percent of the purchase (increased from the original 10 percent) will end up funding state wildlife programs directly benefiting the hunter through better deer management programs, land acquisitions, habitat protection and improvements, and hunter education programs.

In terms of its economic significance, state wildlife agencies receive \$350 million of federal aid money annually to support programs directly benefiting wildlife and hunters. In West Virginia, annual apportionments average around \$4 million. Since 1937, West Virginia has received nearly \$100 million to fund such successful programs as the purchase of acreage in McDowell County in the 1940s to create Panther Wildlife Management Area, implementation of the West Virginia hunter education program in the 1970s,

the wild turkey restoration program of the 1980s that reintroduced turkeys to all 55 counties, the grouse study of the 1990s, and most recently, the research efforts that have been monitoring the expansion of the state's black bear population. In addition, the money goes to fund management activities that take place every year on nearly 1.5 million acres of land in our wildlife management area program and technical assistance to private landowners.

The extended economic benefit of this program to the state and its businesses should not be forgotten. The management activities partially funded by federal aid dollars, and the resulting abundance of wildlife, bring millions of dollars into the state's economy through job creation, hunting equipment and clothing sales, and food and lodging costs for hunters. The federal aid program also provides local economic benefit through the purchase of equipment and material used for management activities on state wildlife management areas.

So whatever attracts you to nature, today's wildlife success stories are directly related to the forward-thinking actions of hunters and Congress 75 years ago by the creation of the Wildlife Restoration Act. Through this program, \$4 billion has been contributed by hunters, creating a partnership between the state wildlife agencies and the U.S. Fish and Wildlife Service that is envied by most other federal programs. With the continued degradation of our natural resources, conservationists, whether they have an interest in hunting or not, must recognize the contributions made by hunters. The PR program truly has become a user pay, public benefits situation. It's through this understanding, and continued support to state wildlife agencies through the Federal Aid in Wildlife Restoration Program, that we'll be able to enjoy our wildlife resources for generations to come.

Scott Warner is the Federal Aid Coordinator for the Wildlife Resources Section stationed in South Charleston.

Learn more at thankyouforhunting.com

Photographs by Mitch Kacz, Wildlife Images

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*cleverly disguised as a
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I am an American sportsman. By supporting an extra 10% tax with every firearm and ammunition purchase, I've helped fund our nation's greatest wildlife rejuvenation success stories. Through license fees and special excise taxes, hunters and anglers have contributed over 8 billion dollars to preserve and protect our wildlife and environment. As an American sportsman, I am the most influential conservationist in the world today.



the mysterious



By Clifford L. Brown and Kevin Yokum

The missile shot out from under the log and attacked the lure with blistering speed. The forceful impact nearly threw me out of the boat. Having clearly missed the strike, I watched in amazement as the bold fish followed my lure to the boat again and again with no sign of intimidation or fear, and yet it was too smart to strike the sharp-hooked lure again.

Muskellunge, usually called musky, are like that — fickle in nature and yet brazen seemingly to the point of insanity at times. But understanding these mysterious creatures may lie in knowing that they sit at the top of the freshwater food chain. When a musky prepares to attack, aquatic inhabitants of all shapes and sizes better be alert.

Despite the interest generated from musky anglers and even the general public, much is still unknown about this gigantic fish. Muskies are spring spawners, usually becoming more active in April when water temperatures reach 50 degrees. Muskies in West Virginia's streams and rivers spawn in shallow, slow-moving water, usually in the upper or lower reaches of pools. In reservoirs, these fish will spawn in a few feet of water along the shoreline over areas with dead vegetation or other cover along the lake bottom. Females will drop up to 200,000 eggs. Males fertilize the eggs, and then swim away. The eggs, about 1/8-inch in diameter, fall to the bottom. There is no nesting or parental care.

If all goes well, hatching takes place in eight to

14 days. At this point, the newly hatched musky is little more than two eyes and a wiggle. After the yolk is absorbed, the fry begin feeding upon zooplankton, eventually switching to prey on other tiny fish.

Survival of these young muskies depends on a variety of factors including water temperature, oxygen levels, available forage and predation.

Low water temperature reduces the availability of zooplankton and other foods for the young muskies, and a low oxygen level could result in suffocation and death. Predators of young muskies include aquatic insects, fish, birds and even other muskies.

Armed with a mouth full of sharp teeth, muskies are formidable predators. Suckers, minnows, chubs, bluegills, perch, crappie and rock bass, which are predators of musky eggs and fry, soon become a growing musky's prey. While a musky will eat just about anything it can catch, it prefers soft-rayed fishes such as chubs and suckers.

The musky can be a highly migratory fish, with documented reports of individuals swimming 20 miles or more in a 24-hour period. Usually these migrations are timed with a spawning run, searching for food sources, or establishing a home range.

Most of the time, however, muskies remain creatures of habit, often inhabiting the same section of stream as long as plenty of food and cover remain available. DNR fisheries biologists have documented numerous Buckhannon River muskies that live within a defined 400-meter section of river for several years, seldom vacating that stretch of river. Anglers have reported catching the same fish in the same pool, sometimes only days apart.

Probably the primary reason anglers are so intrigued by the musky is its size. Muskies are huge fish, and even an average one, say 30 to 35 inches, could be the largest fish an angler has ever caught. Take a jumbo 50-incher, of which West Virginia offers an impressive number, and you have the fish of a lifetime.



A young musky born in the spring caught by DNR personnel during fall sampling.

Muskies spawn in the spring. Eggs are usually deposited indiscriminantly over several hundred yards of shoreline. There is no parental care. Adult spawners return to the same spawning ground in consecutive years.

Musky exhibit sexual dimorphism, which in this case means females grow faster and larger than males. Females mature at four to five years of age and typically run 26 to 30 inches in length. Males reach maturity around 25 to 28 inches and may be three or four years old. A 50-inch musky in West Virginia is likely a female at least 10 years old.

Prior to 1974, muskies over 26 inches could be legally caught and kept. In later years the minimum length limit was changed twice to the current length limit of 30 inches. Based on years of research, these changes were designed to permit at least one year of

natural reproduction before a musky could be legally harvested. The daily creel limit for musky in West Virginia is two and the possession limit is four. Many die-hard musky anglers, however, release most, if not all, of the muskies they catch.

In addition to these size and creel limits, there are several areas in the state with special regulations specifically for musky. Jennings Randolph Lake features a minimum length limit of 36 inches, while North Bend Lake and a mile downstream of the Lake dam on North Fork of Hughes River prohibit musky harvest for fish under 40 inches. A six-mile section of Middle Island Creek in Tyler County and a 6.5-mile section of the Buckhannon River in Upshur County have been



Above: Kevin Yokum holds large muskie caught during sampling by DNR personnel. Right: DNR fisheries biologists place muskie in holding tank to identify if it had previously been caught and tagged with PIT tag.

DNR Photos



designated as special catch-and-release areas where no harvest is allowed.

As mentioned previously, West Virginia does have its share of lunker muskies. Stonecoal Lake in Lewis County holds the notable distinction of holding both the current length and weight records for musky in West Virginia. The length record of 52.7 inches was set in 2003 by Glen Boyd, while the weight record was set by Anna Marsh in 1997 with a 49.75-pound monster.

These fish were remarkable, because prior to 1997, Lester Hayes' Elk River fish held both records at 52.5 inches and 43 pounds for more than 40 years. The longest musky measured in West Virginia, however, was found dead in Burnsville Lake in 1996. This 55-inch behemoth died from unknown causes, perhaps old age.

If you think all the big ones are gone, then think again. The magical 50-inch mark is regularly surpassed by muskies caught from waters across the state.

Recently, three fish from Stonewall Jackson Lake were

caught and released by die-hard musky anglers, all of which would likely have broken the state length record.

Anglers in West Virginia are fortunate to have thriving native populations of muskellunge as well as a successful stocking program in waters not containing native fish. Some of the more popular waters for musky fishing in West Virginia include the Buckhannon River, Burnsville Lake, Elk River, Hughes River, Little Kanawha River, Middle Island Creek, Mud River, North Bend Lake, Stonecoal Lake, Stonewall Jackson Lake and Tygart River.

Muskies are mysterious creatures which instill fear in the aquatic realm, intrigue in the angling world, and curiosity for nearly everyone else. In any case, these giant fish remain a fixture among West Virginia's waters and should continue to be so for years to come. The next record musky in West Virginia will come from...well that's a mystery too!

Cliff Brown is a wildlife manager stationed in Elkins, and Kevin Yokum is a former DNR district fisheries biologist.

A Sense of Wonder...

Winter BIRDS

By Karen McClure

Since numerous birds in West Virginia migrate south in the late summer and early fall, winter is the perfect time to start learning to identify the ones that are winter or year-round residents. With a shorter list of probable birds at your feeder, in your yard or along your hike, it will be easier hopefully to figure out which species you are seeing or hearing.

Below is my favorite recipe for what I call "bird butter," also known as peanut butter suet. I have managed to lure in the elusive brown creeper with this recipe. Actually, I'm pretty sure the other feeder birds helped by scattering small fragments of bird butter below the feeder on the snow and ground, and carrying it to a tree trunk on their feet. The brown creeper was observed many times darting from the base of the tree trunk to the area below the Bird Butter feeder, snacking, and then darting back. If you doubt they dart, you haven't watched a brown creeper.

You will notice that my recipe contains no whole seeds or fruits. I read several years ago that birds can aspirate the suet mixture while trying to eat these larger items, and end up getting sick. So I skip them, and the birds still eat it. In addition to bird butter, I highly recommend black oil sunflower seed as a general bird feed. The seed mixes are often less expensive, but many birders have noted that few birds eat the other seeds in the mixes.

The facing page has bird cards to help you identify the common birds you might see and/or hear in winter in West Virginia. There are two species of chickadees in West Virginia, the Carolina chickadee, and the black-capped chickadee. They are so similar, even experienced birders have trouble telling them apart, so often they note them as "chickadee species." Bird songs are the vocalizations that males use to mark their nesting territory. Some species have more than one song, and a few females sing, too. Calls are vocalizations that birds make for other reasons. Many of these birds are "early singers" so you can catch them singing in the winter.

Although their natural food consists of insects they dig out of trees, downy woodpeckers can be attracted to suet feeders.

Photo by WV Dept. of Commerce/
Steve Shaluta

Bird Butter (peanut butter suet)

1 Cup Vegetable Shortening

1 Cup Peanut Butter

4+ Cups Corn Meal

Melt shortening over medium-low heat. Stir in peanut butter until well mixed. Remove from heat. Stir in 4 cups of corn meal. Add more until mixture resembles mashed potatoes. Pour or spoon onto sheet cake pan to cool. If bird butter does not harden, place in freezer. When butter is solid, cut into blocks to fit suet feeder. Store extra bird butter in the freezer. I cool/store in reusable containers that are the right size to fit in my suet feeder.

A Sense of Wonder...

Objectives

Beginning birders have fun hiking to find birds, looking for them in the yard, or watching them at feeders. They learn field marks, vocalizations, size estimation, and map skills.

Method

Children cut out and use the bird cards to find and identify common backyard birds. They measure and weigh bird equivalents. They can make bird butter and fill feeders to attract birds.

Materials

Bird cards, ruler, pencil, journal (optional), kitchen scale (optional), dried beans (optional), drawing paper, binoculars (optional), bird feeders (optional), black oil sunflower seed (optional), and ingredients for Bird Butter (listed below).

Learn how to use binoculars

Look at the bird while holding the binoculars. Then bring the binoculars to your eyes without moving anything but your arms. You should now be able to see the bird through the binoculars if it didn't fly away. Focus if you need to.

For more bird fun, check out:

www.brooksbirdclub.org
www.birdwatchersdigest.com
www.allaboutbirds.org



Tufted Titmouse

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What to do

1. Cut out and read the bird cards together. Find West Virginia on a map. Find objects that are about the same length as each bird. Note on each card the object you found that matches the bird in length.
2. Look out the windows for the birds. Try all the windows of the house. Note on the cards or in your journal which birds were found at each window.
3. Go out in the yard and look for more birds. Again, note on the card or journal where a specific bird was found.
4. Go on a walk nearby and look for more birds. Note in your journal the ones that aren't on the cards.
5. Put up a seed feeder and fill with black oil sunflower seed. Watch for new birds to note in your journal.
6. Make bird butter and place in a suet feeder or citrus fruit net bag. Hang where you can watch the birds eat the bird butter. Note any new birds in your journal.
7. Draw a picture of each of the birds from the bird cards on a piece of white paper. Place one of the drawings on your kitchen scale. Place beans on the paper until the scale reading equals the weight listed on the bird cards for that bird. Wrap up the birds, tape them shut, and feel the weight in your hands. Birds are lightweights! Or maybe more appropriately – featherweights! Repeat until you have a paper bird for each species.

Option

If you don't have a kitchen scale, you can still make paper birds. Just count the number of dried pinto beans from the chart below to make each paper bird.

Bird	Number of beans
Cardinal	90
Titmouse	45
Chickadee	30
Downy Woodpecker	60
Hairy Woodpecker	120
White-breasted Nuthatch	60
Red-bellied Woodpecker	150

Northern Cardinal

Scientific Name: *Cardinalis cardinalis*

Song: 28 songs -- nasal “wha-cheer” or “pretty pretty” most common

Call: nasal “chip”

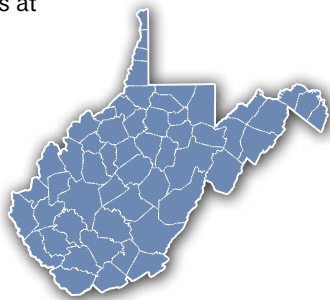
Height: 8-9 inches

Weight: 1.5 ounces

Facts:

- Female Cardinals can sing all 28 songs. Female birds of most species do not sing at all.
- Cardinals can move their crests for sign language.
- Cardinals build several nests and raise several broods a year.
- The oldest cardinal on record lived 28 years, though most live between 4 and 13 years.

Range: Statewide – absent in spruce forest and some northern hardwood areas at high elevations (above 4000 feet).



Chickadee

Scientific Name: *Poecile atricapillus*

Song: whistle-like “pheebee pheebee” or “pheebee pheebee”

Call: low and buzzy “chick a dee dee dee”

Height: 4-6 inches

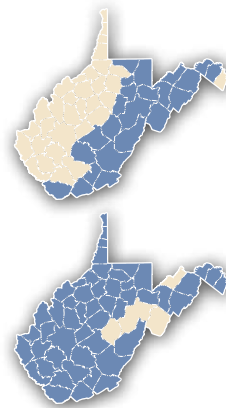
Weight: 0.5 ounces

Facts:

- There are two species of chickadees in West Virginia: the black-capped, and the Carolina.
- It is hard to tell the two species apart if they aren't singing.
- The black-capped is a more northern and high altitude bird, while the Carolina is more southern and lives in lower altitudes.

Range:

- Black-capped chickadee – McDowell, Mercer, Monroe, Summers, Fayette, Greenbrier, Nicholas, Pocahontas, Webster, Randolph, Upshur, Pendleton, Tucker, Grant, Hardy, Barbour, Preston, Taylor, Monongalia, Mineral, Hampshire, Morgan, and Berkeley counties.
- Carolina chickadee – all counties except Mineral, Pendleton, Randolph, and Webster.



White-breasted Nuthatch

Scientific Name: *Sitta carolinensis*

Song: low, whistle-like song

Call: nasal “yank”

Height: 5-6 inches

Weight: 1 ounce

Facts:

- In West Virginia, we have a red-breasted nuthatch that is a more northern and high- altitude bird than the white-breasted nuthatch.
- White-breasted nuthatches are often moving upside-down, making their way down tree trunks looking for food. When the bird gets low, it often flies up to a high point in another tree, and makes its way down again.

Range: Statewide – wherever there is deciduous forest/trees, but are absent in spruce forest at high elevations.



Red Bellied Woodpecker

Scientific Name: *Melanerpes carolinus*

Song: nasal trill

Call: downward “churr”

Height: 10 inches

Weight: 2.5 ounces

Facts:

- If you make some bird butter, a red-bellied is likely to come and pick up large hunks of the food.
- The female red-bellied woodpecker has a patch of red on the back of her head. The male's red patch stretches from the bill to the base of his neck.
- Red-bellied woodpeckers take food out from under the bark more often than drilling holes.

Range: Statewide.



Chickadee

Poecile atricapillus



Dama Dewhurst

Northern Cardinal

Cardinalis cardinalis



Steve Shaluta

Red Bellied Woodpecker

Melanerpes carolinus



Steve Shaluta

White-breasted Nuthatch

Sitta carolinensis



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Man Has Record Day on Ohio River

Mark A. Foster of St. Albans, W.Va. recently caught a state record blue catfish from the Ohio River. Foster used cut bait to catch the 43.9-inch, 44.5-pound fish from the R.C. Byrd pool on the Ohio River.

Foster's catch establishes a new West Virginia record for length and weight. His catch breaks his own 2011 record catch of a 32.28-pound blue catfish. The previous length record was a 42.25-inch blue catfish caught by Lynn Lange in 2009.

Foster also caught a 52.25-inch, 15-pound longnose gar that ties the current length record held by Shelby Searls. Foster caught the gar on the same day he caught the blue catfish from the Ohio River using cut bait. The longnose gar weight record of 19.08 pounds held by Michael Casey from 1993 still stands.



WMA Topographical Maps Online

Topographical maps of 23 West Virginia Wildlife Management Areas are now available online. The maps, featuring boundaries, contour lines, water features, roads and trails were produced by the DNR Wildlife Resources Section.



"These maps should be a great help to hunters this fall when they head out into the woods," said DNR Director Frank Jezioro. "Anglers and those just interested in getting outdoors and exploring one of the areas should also find them useful."

Maps for areas around the state are available in different formats and resolutions to accommodate different Internet speeds. To view or print a map, go to the DNR website www.wvdnr.gov and click on "New WMA Topo Maps" under "Hunting."

Correction to a big fish tale

You've heard many stories about the big fish that got away. Well, we had our own version in the summer issue of *West Virginia Wildlife*. In the *Wildlife Diversity Notebook* article it was stated that in West Virginia, bluegills have reached lengths of 31 inches. More than one reader called us on that big fish tale. In the last draft of the magazine before it went to print, the numbers were accidentally transposed. The real length measurement should have been 13 inches. I apologize to anyone who has been out there searching for the really big one.

Editor

New Fishing Opportunities at Edwards Run

When Edwards Run Pond had to be drained in 2002 due to continuing dam problems, public lake fishing in Hampshire County was significantly limited.

Several ponds on the other side of the stream at the Edwards Run Wildlife Management Area had been built to rear fish. Over time, the ponds weren't needed as newer production facilities were developed, but the ponds continued to hold water. District Fisheries Biologists Jim Hedrick and Brandon Keplinger proposed combining four small fish-rearing ponds to create a new one-acre impoundment that would replace the previous Edwards Run Pond.

The new impoundment, completed by the end of 2011, provides anglers with a trout-stocked impoundment in Hampshire County and provides improved water management options for the pond. The existing water supply is still operational and the flow can be controlled, preventing excessive sedimentation and reducing the likelihood of problems with the dam during flooding.

DNR Wildlife Resources Section personnel built several types of fish habitat structures in the new pond during the construction phase. The habitat enhancements provide spawning areas, fish-attracting structures, and refuge for juvenile fish. Spawning benches, which consist of a slab of wood held up with concrete blocks, were installed to provide overhead fish cover and spawning areas for bass and sunfish. DNR personnel also installed spawning boxes to provide a cavity area required for channel catfish spawning.

Wildlife Resources personnel stock the pond with trout once during the month of February and once every two weeks



between March and May. Warmwater game fish, including smallmouth bass, redbreast sunfish and channel catfish, provide anglers with fishing opportunities throughout the year. The new pond has excellent shoreline fishing access and is a great location for kids to fish. Boats will not be permitted on the new pond because of its small size. Access improvements are also being planned for installation in the near future.



Sport Fish Poster Available

SOUTH CHARLESTON, W.Va. – A new West Virginia Sport Fish Identification Poster is now available either as a printed poster or online at the Division of Natural Resources website. The poster, featuring paintings by Duane Raver of game fish found in the Mountain State, was produced by the DNR Wildlife Resources Section.

“We’ve published this poster in response to many outdoor enthusiasts who have been asking for something like this for a while,” said DNR Director Frank Jezioro. “The fish illustrations have been printed on the back of our fishing regulations for years, but the images on this poster are much larger and clearer.

The color poster features warmwater and coldwater fish species. Fish enthusiasts can go to the DNR website and print the poster in either letter size or 11-by-17-inch sizes. To print a copy, go to www.wvdnr.gov and click on “Sport Fish Identification Poster” under the Fishing heading.

Printed 18-by-24-inch flat posters are available for pick-up at DNR district offices and many West Virginia state parks. In addition, folded 11-by-17-inch posters can be mailed from the DNR South Charleston office by calling 304-558-2771 or writing to WVDNR, 324 Fourth Avenue, South Charleston WV 25303.



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