

A photograph of two wild turkeys in a forest. The turkeys are in the foreground, facing the camera, with their large, patterned tails fanned out. They have dark, iridescent feathers and prominent red wattle. The background shows a dense forest with tree trunks and foliage.

West Virginia Wildlife

Summer 2012

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Wild Perspective

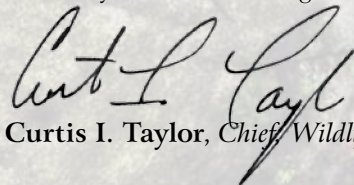
Remembering a Legend

As far back as my high school days in McDowell County, I readily admit to being drawn to anything and everything to do with wild turkeys. During my career as a wildlife biologist starting at West Virginia University, then University of Tennessee, Tennessee Wildlife Resources Agency and 30 plus years with West Virginia DNR, I have been more than fortunate to spend time with the legends of wild turkey conservation. Glenn “Tink” Smith of Piedmont, West Virginia, was one of those legends. While Tink was best known for his award-winning, breathtaking photos of wild turkeys, perhaps one of his best skills was communicating with people, and his message was always the same: do whatever we can to promote conservation of wild places and wildlife, especially turkeys, and introduce our young folks to the wonders of nature and the joy that comes from hunting and fishing.

For those of you who might not know, Tink’s wild turkey photos were taken from a blind that started out as a hole in the ground. From this angle, Tink produced images of turkeys like no other – from a chipmunk’s eye view; many times so close he could have touched them. He literally took enough pictures of wild turkeys, and other wildlife, to fill a good size room, maybe 100,000. Instead of trying to profit from his unique talent, Tink would give his photos to anyone promising to use them to help wild turkey conservation. Tink quickly became a fixture with the National Wild Turkey Federation and supplied photos for their magazine, which had started out using pictures of tame turkeys because there were very few quality images of wild turkeys available. But he also played a monumental role with the newly formed conservation group. He became a spokesperson for the Federation and the need to raise dollars for scientific management of his precious wild turkey resource, not just in West Virginia, but across the country. In true West Virginia fashion, his message was always to the point and down to earth, nothing fancy, just “let’s get the job done.”

I saw Tink at every National Wild Turkey Convention I attended and was inspired, humbled and filled with Mountaineer pride every time he took the stage to address the multitude of convention goers. It was quickly evident to any in the room that he was a true West Virginian, proud of his state, his heritage, and what had been done to increase turkey numbers. I always looked forward to my conversations with Tink, no matter what the venue, and I always knew I would come away with some of his knowledge and skills, whether it was dealing with turkeys or people. I was overwhelmed when he took the time to send me a congratulatory card and personal note when I became Chief with instructions to go out and buy myself a steak dinner!

Tink turned 101 years old April 5, 2012. Sadly, he passed away just 10 days later. He will be remembered and missed by all who were fortunate to hear him speak or be able to spend time with him. His words of encouragement, wisdom and plain old common sense will be forever etched in my memory. I think about him a lot and carry in my wallet a business-card-sized turkey photo he gave me 20 years ago as a reminder of my obligation as a hunter, biologist and West Virginian to keep the welfare of the wild turkey foremost in my thoughts and deeds. Tink wouldn’t have it any other way. Until we meet again, farewell my friend.



Curtis I. Taylor, *Chief, Wildlife Resources Section*



West Virginia Wildlife



Stream-side wetland habitat at Edwards Run WMA.

Karen McClure

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WV Dept. of Commerce/Steve Shaluta

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Photo by Terry Spivey, USDA Forest Service, Bugwood.org



Photo by Jim Walker



DNR photo

A photograph of a bull elk with large, dark antlers, standing in a forest. The elk is facing right, and its head is turned slightly towards the camera. The background is a soft-focus forest with green trees and a light-colored sky.

West Virginia Elk Management

The opportunity to see elk, especially bull elk, seems to be a popular idea among the state's citizens.

Photo by Terry L Spivey,
Terry Spivey Photography, Bugwood.org

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By Gary Foster

The sound of a bull elk “bugling” or the sight of a majestic bull and cow elk grazing on a high mountain meadow are common images that most folks associate with the western United States and the rugged Rocky Mountains. However, what many people might not realize is that wild elk also occur in several eastern states, including the southern portion of West Virginia.

Historically, elk were common inhabitants across North America and populated the majority of the lower 48 states. During colonial times, the Eastern elk dotted the landscape east of the Mississippi River, including the area which is known today as West Virginia. Eastern elk provided an important source for food, shelter and clothing for American Indians and the early European settlers. Evidence of elk and their distribution throughout the state is illustrated by the widespread use of the word “elk” in place names, such as Elk River, Elk Fork Lake, Elkview and Elk Creek. Elk herds were found in the Ohio and Kanawha River valleys, but the largest elk populations occurred in the state’s high mountain regions.

Elk numbers declined in West Virginia, as well as in the eastern United States, throughout the 1800s as

the area was exploited and became home to European settlers. Subsistence hunting, market hunting and wide-scale timbering all contributed to the decline of the elk population throughout the eastern United States. Historical records indicate elk disappeared from West Virginia during the latter half of the 1800s. The last known occurrences in the Mountain State were reported from the headwaters of the Tygart Valley and Greenbrier rivers around 1875.

In 1972, the then West Virginia Department of Natural Resources conducted its first elk reintroduction feasibility study. In 2005, the Division of Natural Resources, with funding provided by the Rocky Mountain Elk Foundation, completed another study which evaluated habitat potential and the social feasibility of restoring elk to the landscape in West Virginia. The 2005 feasibility study identified areas in West Virginia which could support elk from a habitat (biological) standpoint, as well as from a sociological perspective. Cultural or sociological

Two generations of elk resting in snow at the WV State Wildlife Center.

Courtesy of © Steven Wayne Rotsch



The Southern Coal Fields Region (shaded area) was chosen as the most suitable elk restoration area in West Virginia.

considerations (potential for human/wildlife conflicts for example) must always be given serious consideration when evaluating any type of reintroduction program and when setting population objectives for large wildlife species such as deer and bear.

The feasibility study completed in 2005 identified several multi-county regions in West Virginia which could support elk based upon habitat conditions. The Southern Coal Fields Region, however, was selected as the most suitable restoration area due to its close proximity to Kentucky's elk restoration area and its potential for a passive management approach, as well as its relatively low potential for human/elk conflicts. One downside to this area is the lack of public land. Residents in this region were polled as part of the feasibility study. The poll indicated that 75 percent of respondents had a positive attitude regarding the restoration of elk in the southern counties, especially as it relates to elk viewing, hunting and the aesthetic pleasure of knowing elk could again be a part of our state's wildlife resources.

Elk are a gregarious species that thrive on openland habitat, grazing on grasses, forbs and other herbaceous vegetation. As a result of seasonal shifts in food availability, however, elk will also browse on twigs and woody vegetation and consume hard mast such

as acorns to meet their nutritional needs. Male elk are called bulls, with adults on average weighing upwards of 700 pounds. Females, called cows, are smaller, with adults reaching weights of 500 pounds or more. The mating season or "rut" occurs in late September and early October. Cow elk typically give birth in late spring to a single calf which weighs approximately 35 pounds at birth. For the past several decades, elk have received "protected status" in the state. There is no hunting season in West Virginia for this species.

Since the early 1900s, numerous eastern states, including Pennsylvania, Virginia, Kentucky, North Carolina and West Virginia have made attempts to relocate elk from wild elk populations located in the western states. The majority of the reintroductions conducted in the early 1900s were unsuccessful. The most successful venture has been the reintroduction of elk into the southwestern coal fields region of Kentucky during the period between 1997 and 2002. A total of 1,550 elk were released at eight different



Courtesy of John Fleisher

An old surface mine in Mingo County illustrates potential elk habitat.

sites in a 16-county restoration zone. This project was funded with \$4 million from the Rocky Mountain Elk Foundation and nearly \$1 million from the Kentucky Department of Fish and Wildlife Resources, mostly in personnel costs. Kentucky currently supports the largest elk herd in the eastern United States, with an estimated population of 11,000 animals.

The successful reintroduction of elk in Kentucky and the subsequent migration of elk into West Virginia have elevated the need to develop an effective, science-based elk management plan for West Virginia. The DNR Wildlife Resources Section recently implemented its agency's "West Virginia Elk Management Plan (2011-2015)" which outlines the DNR's goals and objectives related to the management of the elk resource in West Virginia.

The cornerstone of the plan is the designation of a seven-county area located in the Southern Coal Fields Region of the state as West Virginia's Elk Management Area. McDowell, Logan, Wyoming, Mingo and the southern portions of Boone, Lincoln and Wayne counties comprise the elk management area. This

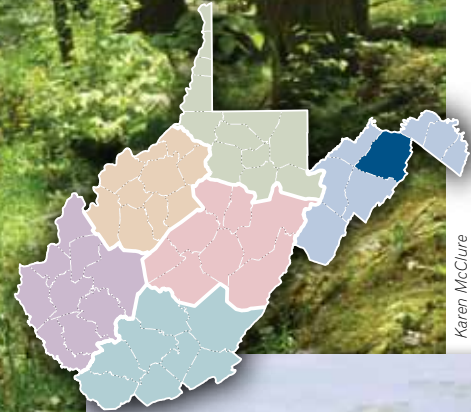
region is characterized by heavily forested rugged mountains and reclaimed grassland areas which are primarily associated with coal mining operations. An objective of the plan is for elk to naturally populate the elk management area through a passive management approach (natural movement of wild elk from Kentucky). DNR personnel will monitor the population and manage it accordingly for recreational opportunities. Because of the increased potential for crop and personal property damage outside of the designated management area, subsequent legislation will be promulgated to allow management to prevent elk from becoming established outside of the desired area.

During the fall of 2010, a draft of the West Virginia Elk Management Plan was placed on the DNR website (www.wvdnr.gov). In addition, a public news release was disseminated to media outlets across the state requesting public feedback on the agency's Elk Management Plan. Although the response rate was light, 94 percent of respondents favored the idea of elk being restored to West Virginia.

Wildlife Resources Section personnel are in the process of developing monitoring protocol to evaluate the current status and distribution of the elk herd in West Virginia, as well as developing a GIS database of the large corporate landholders in the elk management area. Hunters and the general public can support the elk management effort by reporting elk sightings to either the DNR District Office in Beckley (304-256-6947) or the McClintic DNR Office (304-675-0871).

Gary M. Foster is Supervisor of Game Management, stationed in Elkins.





Karen McClure

Description: Oak-hickory forest dominates this 387-acre wildlife management area. Natural and man-made clearings provide acres of edge habitat, and about 17 acres of scrub-shrub make a nice habitat mix for wildlife. The terrain is mostly low, steep-sided hills surrounding the stream that gives the WMA its name. The campground consists of six primitive campsites with pit toilets.

A one-acre pond provides anglers the opportunity to fish for stocked trout, along with warm water species including bass, catfish and sunfish.

Wildlife Viewing Information: Look for white-tailed deer, squirrels, ruffed grouse and turkeys in the forest and along the forest edges. The following bird species have all been noted from Edwards Run WMA: turkey vulture, red-tailed hawk, American kestrel, yellow-billed cuckoo, pileated and hairy woodpeckers, Northern flicker, Eastern wood peewee, Acadian flycatcher, Eastern phoebe, Eastern kingbird, tree swallow, Northern rough-winged swallow, white-breasted nuthatch, gray catbird, cedar waxwing, red-winged blackbird and common grackle.

Songbirds like the tufted titmouse, yellow-throated vireo, wood thrush, American robin, yellow warbler, song sparrow, indigo bunting, Baltimore oriole, American goldfinch and Louisiana waterthrush can be observed and heard, especially during the spring and summer nesting season.

Butterflies abound, most noticeably during midday in the summer. Species include: falcate orangetip, Eastern tiger swallowtail, spring azure, cabbage white, Eastern pine elfin, juniper hairstreak and Juvenal's duskywing.

Edwards Run and the one-acre pond are stocked with trout, and also support sunfish, bass and catfish. These bodies of water can also be good places to spot birds such as Canada geese, mallards and other ducks, and green herons. Visitors can also observe a variety of turtles, salamanders and frogs.



WV Dept. of Commerce/Steve Shaluta

Green herons may be seen as they stalk fish to eat in Edwards Run and Edwards Run Pond.

Directions: From U.S. Route 50 at Capon Bridge in Hampshire County, turn north on Route 15 and go two miles.

NOTE: Edwards Run WMA is a public hunting area. Please check the current West Virginia Hunting and Trapping Regulations or call the number listed below for hunting season dates.

Ownership: WV Division of Natural Resources. 304-822-3551

Wildlife Diversity Notebook: Bluegill



WV Dept. of Commerce/Steve Shaluta

Common Name: Bluegill

Scientific Name:
Lepomis macrochirus

West Virginia Status: Common.
Bluegills live in all major streams in West Virginia.

Description: Bluegills belong to the sunfish family, and have spiny-rayed fins. The bluegill has a dark opercular (or ear) fin, with a dark margin. Bluegills also have a dark spot near the back end of the dorsal fin. Identifying sunfish species is tricky, since they can hybridize easily and hybrids can have characteristics of both parents. Bluegills in West Virginia have reached lengths more than 31 inches, and weights more than 2.5 pounds.

Habitat: Streams, ponds or lakes with dense aquatic vegetation.

Diet: Bluegill fry feed on zooplankton, preferring daphnia. After the zooplankton numbers run low, the young bluegills switch to aquatic insects, and continue to feed on these invertebrates and some other fish for the rest of their lives. Insects and small fish are good bait, and lures that mimic insects and small fish work well, too.

Range: Bluegills are native to eastern and central North America, from western New York to Florida, and west to Texas, northern Mexico, and Minnesota. These sunfish have been introduced throughout North America, Europe and South Africa.

Life History: Male bluegills build nests, often in colonies, to prepare for spawning which occurs in May and June. The entire colony spawns within hours of each other. Males defend their nests and don't leave the nests to forage. They do not feed their young. A large predator will be mobbed by the males of the colony and any other nearby males and even females that are still carrying eggs in the area. Mobbing begins or intensifies when a bluegill is captured by the predator. Bluegills have not been observed mobbing during egg predation. Instead, eggs are protected by each male on guard at his nest. Catfish, snails, other bluegills, and pumpkinseeds are known bluegill egg predators.

Small males sometimes mimic females to have access to females that have been attracted to larger males' nests. These slick cross-behaviorists manage to pass on their genetic material without building or guarding a nest. Bluegills sometimes hybridize with green sunfish, orangespotted sunfish, redear sunfish, longear sunfish, and pumpkinseeds. These hybrids can be challenging to identify. It is no wonder that a lot of Mountaineers call them all bluegills, sunfish, or brim.

References: Fishes of West Virginia, Jay R. Stauffer, Jr., Jeffrey M. Boltz, and Laura R. White.

A photograph in the upper right corner shows two men in a field setting. One man, wearing a light-colored short-sleeved shirt, is holding a dead animal, possibly a raccoon or similar mammal. The other man, wearing a white short-sleeved shirt and an orange safety vest, is looking at the animal. They appear to be conducting a field study or wildlife management activity.

Partners *in* Wildlife Conservation

**West Virginia Division of Natural Resources's
Cooperative Management Partnership with
the U.S. Army Corps of Engineers.**

By Robert A. Silvester



On Good Friday morning, April 15, 1927, the rains came, setting all-time records over several thousand square miles, covering much of Missouri, Illinois, Arkansas, Mississippi, Texas and Louisiana. The Memphis Commercial Appeal warned: “The roaring Mississippi River, bank and levee full from St. Louis to New Orleans, is believed to be on its mightiest rampage. All along the Mississippi, considerable fear is felt over the prospects for the greatest flood in history.” One man recalled, decades later, “I saw a whole tree just disappear, sucked under by the current, then saw it shoot up, it must have been a hundred yards downstream. It looked like a missile fired by a submarine.”

So went the events of the great flood of 1927, which inundated an area of about 26,000 square miles. Levees were breached, and cities, towns and farms lay in waste. The flood waters destroyed crops, and paralyzed industries and transportation. Property damage amounted to about \$1.5 billion at today’s prices. More than 200 people lost their lives and more than 600,000 people were displaced.

Out of this carnage came the Flood Control Act of 1928, which committed the federal government to a definite program of flood control. Later, the Flood Control Act of 1936 authorized the expenditure of \$310 million for flood control projects during the next year. The only limitation on federal flood control projects was that the economic benefits had to exceed the costs.

Osprey nestlings await the next parental feeding 20 feet above Stonewall Jackson Lake.

Photo by Kirk Piehler

Top: *Biologists with the Corps of Engineers (left) and the WV DNR Wildlife Resources Section measure the bill of a young osprey.*

Photo by Marshall Snedegar



Bluestone Dam is one of 10 dams in West Virginia built by the U.S. Army Corps of Engineers as a result of the Flood Control Act of 1936. Completed in 1948, it has been undergoing major renovations the past few years.

Since 1936, Congress has authorized the U.S. Army Corps of Engineers (COE) to construct hundreds of miles of levees, flood walls and channel improvements along with approximately 375 major reservoirs. As part of this major commitment to flood control for the Upper Mississippi and Potomac River drainages, the COE has developed and maintains 10 reservoirs in West Virginia. Tygart Lake, the first impoundment, was completed in 1938. More than 50 years later, Stonewall Jackson Lake, the newest impoundment, was completed in 1990.

Although flood control is still the primary role of these reservoirs, that is not the only major benefit these reservoirs have had in our state. In addition to the actual impoundments, more than 124,000 acres of land situated around these reservoirs are leased to the West Virginia Division of Natural Resources Wildlife Resources Section as wildlife management areas. While many local residents might still harbor some ill feelings over the development of these projects on their family farms, many believe the cooperative partnership between the WRS and COE has been a remarkable success story that has benefitted our state’s wildlife resources for more than 50 years.

The WRS cooperative partnership with the Corps has afforded a unique opportunity to develop wildlife



More than 18,000 acres comprising Elk River WMA provide public access to land surrounding Sutton Lake. The land also provides habitat for many wildlife species including the uncommon Eastern hognose snake.



Photos by
WV Dept. of Commerce
Steve Shaluda

management programs on Corps projects for numerous wildlife species. Many of these areas are composed of a variety of different forest types. From riparian habitats and their associated bottomland hardwoods to oak-hickory forest types along the ridge tops, these Corps projects provide a mosaic of ecological communities that are critical for a variety of wildlife species. Almost all of the Corps projects are located along major waterways where thriving communities and settlements occurred. In fact, many of these major river bottoms were the focal point for early Indian villages that pre-date the first European settlements. The Corps projects afford protection for these early settlements. With appropriate management practices, these river bottoms provide invaluable habitat for wildlife species, including cottontail rabbit, bobwhite quail, red-winged blackbirds, bobolinks and whip-poor-wills.

Recently, wildlife biologists have identified more than 80 species of “Greatest Conservation Need” requiring the diverse habitat communities found

on many COE projects. Riparian habitats with bottomland hardwoods interspersed with wetlands, along with herbaceous and shrub cover provide roosting and nesting habitats for wood ducks, and nesting areas for other migratory waterfowl species. Corps areas are frequented by wildlife species such as bald eagles and ospreys that are listed as species of special concern. The uncommon Eastern hognose snake has been found numerous times on Elk River Wildlife Management Area around Sutton Lake in Braxton County. According to the most recent survey data, the range of this snake is extremely limited, with only 100 occurrences known statewide.

DNR personnel first initiated several successful wildlife management projects on COE projects. Southern West Virginia counties received turkeys trapped on Bluestone Lake Wildlife Management Area in Summers County



during the Wild Turkey Restoration Program. In addition, wildlife resources personnel trapped and fitted wild turkeys with radio transmitters on several COE areas for two studies on wild turkey population dynamics and gobbler survivability. R.D. Bailey Lake WMA in Wyoming County was the focal point for the re-establishment of deer, turkey and river otter in southern West Virginia.

The reintroduction of osprey in West Virginia first occurred on Tygart Lake in Taylor County using a technique call hacking. The term “hacking,” coined during the Elizabethan Era, refers to a technique in which endangered raptor chicks are placed in boxes containing nest material perched along high cliffs or atop poles to provide protection from predators. DNR personnel place the chicks in these boxes a couple of weeks before they fledge. The birds are closely looked after and provided with food through a pipe, void of any human contact, so they will become independent once they are released into the wild. (For more information on the process, go online to www.wvdnr.gov, click on WV Wildlife Magazine in upper right, click on past issues and read “Things are Looking Up” in the Summer 2006 issue.)

COE projects located along major waterways such as the New, Tygart, Monongahela and Ohio rivers are the main focal point for the WRS migratory waterfowl management programs. These waterways represent the major migration routes through the state. Wildlife management activities include the development of various wildlife habitat components that are critical for many species. The development and maintenance



Colin Carpenter

Crabapple with protective enclosure to prevent over-browsing by deer.

of openings with herbaceous plants by mowing, liming and fertilizing have established critical brood rearing habitat for turkey, ruffed grouse and many grassland bird species. Roads and trails are sometimes gated and maintained as linear wildlife openings. Gated roads provide a refuge with limited disturbance for wildlife species to raise their offspring. Planting a variety of fruit and nut-producing shrubs and trees, coupled with the pruning of existing fruit trees, ensures an ample supply of soft and hard mast foods for wildlife.

Existing fruit trees require sunlight, so clearing competing vegetation allows more light to reach the trees. Planting annual grasses and grain crops provides foraging areas for several wildlife species. The control of noxious vegetation with herbicides provides better foraging areas for wildlife species and limits the spread of these invasive plant species that compete against native plants which provide optimal food and cover for native wildlife. The development of marshes along riparian areas that are periodically flooded provides critical habitat for waterfowl species.



DNR wildlife manager plows field at Bluestone Lake WMA in preparation to plant food and cover for wildlife.

Photo by Colin Carpenter



Colin Carpenter

A timber harvest on Bluestone WMA creates an opening which benefits wildlife.



Colin Carpenter

Prescribed burns improve habitat for many wildlife species.

Planned timber harvests are a vital habitat management tool benefitting numerous forest wildlife species. Early successional forest habitat (five to 20 years after cutting) is critical for many wildlife species of concern. The American woodcock, ruffed grouse, rufous-sided towhee and golden-winged warbler thrive in these communities and are examples of species in decline. Stonewall Jackson Lake and Green Bottom Wildlife Management Areas were selected for the development of an American Woodcock Demonstration Areas which showcase the Best Management Practices (BMP) for developing woodcock habitat. This project is part of the Appalachian Woodcock Initiative and one of the goals outlined by the North American Woodcock Conservation Plan.

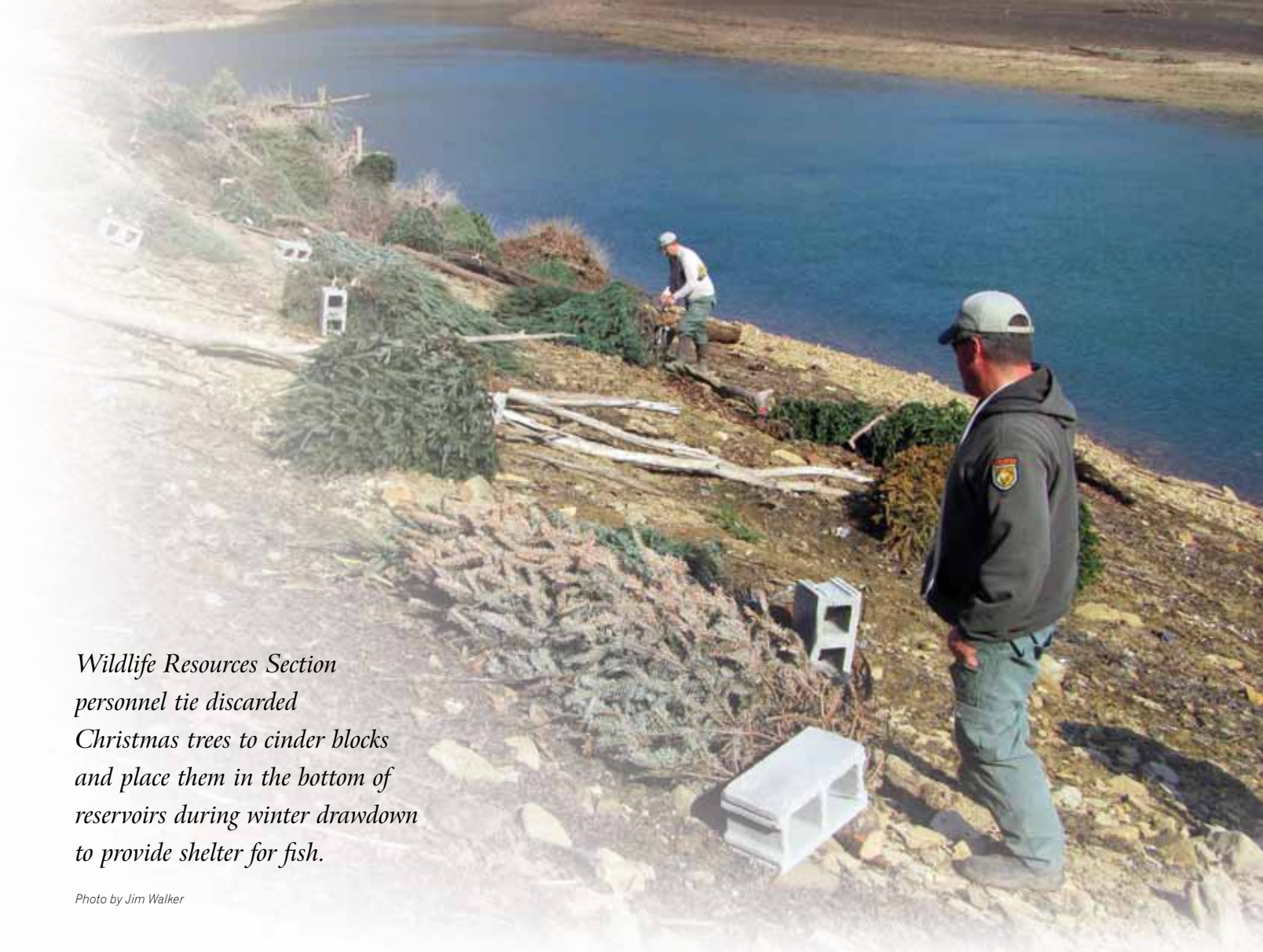
Maintaining oak forests is also vital in developing sound wildlife management programs. Using shelterwood cuts, where approximately 50-60 percent of the forest overstory trees are removed, allows for a new generation of oak seedlings to perpetuate oak forests. Monies generated from timber sales are invested in the same areas to fund additional management programs. In addition to timber harvests, wildlife managers have incorporated prescribed burning, a technique where fire is used during proper weather conditions to remove competing vegetation while also releasing important nutrients back into the soils to help the desired species of plants grow in the newly regenerated stands.

In addition to the upland wildlife programs, WRS fisheries personnel actively manages the fisheries resources in Corps reservoirs and large river systems such as the Ohio and Monongahela rivers. Fish habitat enhancement projects include the development of aquatic vegetation to improve spawning and nursery areas, and placement of fish attractors such as Christmas trees collected by the West Virginia Division of Environmental Protection Rehabilitation Environmental Action Plan (REAP) program. These attractors are placed near the shore line to accommodate both boating and shore line anglers. Other artificial structures that attract fish include concrete blocks and plastic pipe called "spider blocks." They are so named because they resemble a giant spider when completed. Spawning enhancers such as catfish spawning boxes and clean pea gravel are put in some COE lakes. The establishment of these habitat projects involves several groups including Corps staff and volunteers from the West Virginia Bass Federation and Muskies Inc.

The value of these Corps projects for fish and wildlife habitat is apparent. Their importance

Emergent vegetation beds planted by DNR personnel provide cover for young fish and other aquatic animals.





*Wildlife Resources Section
personnel tie discarded
Christmas trees to cinder blocks
and place them in the bottom of
reservoirs during winter drawdown
to provide shelter for fish.*

Photo by Jim Walker

as public access areas for hunting, fishing and other wildlife-associated recreation is particularly valuable, as opportunities to pursue these activities decline on privately-owned lands. As the demand to develop additional recreational facilities such as cabins, campgrounds, golf courses and ball fields on COE land increases, we need to understand how vital undeveloped areas are to our state's wildlife and

citizens. Urban sprawl and other human activity has fostered increased habitat fragmentation and loss, decreased water quality, and an alarming increase in wildlife-human conflicts that may eventually lead to more declines in wildlife numbers. This human encroachment on wildlife communities has created an uncertain future for many wildlife species. In an era when the demand for public access areas for hunting, fishing and other wildlife-associated recreational opportunities is at an all-time high, and is projected to increase with each passing year, these COE lands are essential to the well-being of West Virginia's wildlife resources.

Robert A. Silvester is the District Wildlife Biologist stationed at French Creek.



Jim Walker



West Virginia's Celebration of



NATIONAL HUNTING AND FISHING DAY®

By Jerry Westfall
and Art Shomo

Its History and Purpose

Every year, on the fourth full weekend in September, something special happens. All across the country, Americans come together to celebrate their love of hunting and fishing. So you never heard about this exciting event? It's called National Hunting and Fishing Day, and is sponsored by many state wildlife agencies all over the United States. West Virginia is no exception, as the state will celebrate its 35th annual National Hunting and Fishing Day (NH&FD) Celebration on September 22-23, 2012. This event is jointly sponsored by the West Virginia Division of Natural Resources and the West Virginia Wildlife Federation.

The history of the NH&FD movement takes us back to the 1960s, when hunters and anglers were interested in the ideas promoted by the growing environmental movement. They understood long before the 1960s that wildlife is intricately associated with habitat, and that habitat destruction or degradation negatively affected wildlife. They were dismayed, however, that the contributions hunters and anglers made to habitat protection and enhancement were not being communicated to the public. People did not understand the critical role hunters and anglers play in conservation.



Left to Right: Shooting air rifles at the 1978 celebration at French Creek. Crowd at Stonewall Resort State Park watches the headline event. The late Rev. Stacy Groscup demonstrates the use of a blow gun. Master longbow archer Byron Ferguson performs a trick shot.

DNR photos

The first suggestion for a day recognizing the conservation role played by hunters and anglers originated in Pennsylvania. Ira Joffe, owner of Joffe's Gun Shop in Upper Darby, Pennsylvania, brought this idea to state officials. In 1970, Pennsylvania Governor Raymond Shafer, liked the idea so well that he created "Outdoor Sportsman's Day" in the state. With prompting from the National Shooting Sports Foundation, the success and popularity of this celebration soon came to the floor of the U.S. Senate. In June 1971, Thomas McIntyre, a U.S. Senator from New Hampshire, introduced Joint Resolution 117 authorizing National Hunting and Fishing Day on the fourth Saturday of every September. An identical bill was introduced in the U.S. House of Representatives by Florida Rep. Bob Sikes. Congress unanimously passed both bills in early 1972.

On May 2, 1972, President Richard M. Nixon signed the National Hunting and Fishing Day Bill. On the day of signing he wrote, "I urge all citizens to join with outdoor sportsmen in the wise use of our natural

resources and in insuring their proper management for the benefit of future generations." The adoption of a NH&FD Celebration soon blossomed across the country. NH&FD was quickly adopted by 50 governors and more than 600 mayors across the country. The first events were held in 1973. It is estimated that approximately 3,000 "open house" celebrations of National Hunting & Fishing Day occurred in those early years. These celebrations were held in places such as shooting ranges and suburban frog ponds. In 1975, President Gerald Ford mandated that NH&FD be held the fourth Saturday in September, and it has stayed that way ever since.

Over the years, most state celebrations of NH&FD have been refined to single large annual events. A national umbrella organization, NH&FD Program, provides a clearinghouse of information and steers the nationwide celebration. National honorary chairs of NH&FD have included President George Bush, Terry Bradshaw, Hank Williams Jr., Tom Seaver, Arnold Palmer and Jeff Foxworthy, among many others.

1978: French Creek, West Virginia

The idea of holding a big celebration of National Hunting and Fishing Day in West Virginia at the State Wildlife Center was the brainchild of Bill Vanscoy, former superintendent of the French Creek Game Farm, as it was called at the time. Early in 1978, he tasked Art Shomo, who operated the mobile wildlife exhibit, with organizing the event. The first DNR celebration of National Hunting and Fishing Day was held September 22-24, 1978 at the wildlife facility located 12 miles south of Buckhannon.

The event included displays of recreational vehicles, boats, and hunting, fishing and trapping equipment. Visitors could watch demonstrations of electro-fishing, turkey cannon netting, fly casting and bird dog training. Attendees could try their hand at shooting muzzleloaders, air rifles and shotguns. Contests included a raccoon hunt, raccoon dog bench show and turkey calling. In addition, wildlife movies were shown in a large tent supplied by the National Guard. More than 5,000 visitors attended that year. The celebration continued at French Creek until 1996 when it was

moved to Stonewall Jackson Lake Resort State Park for easier access and more space.

Today, West Virginia's NH&FD Celebration continues to grow in popularity. Stonewall Resort State Park is an ideal location for the event because it is located close to the state's center and is just minutes off Exit 91 of Interstate 79. West Virginia's event will likely be held at the park in the foreseeable future.

Recent headline acts and seminars continue to generate buzz about West Virginia's NH&FD Celebration. Internationally acclaimed longbow trick shooter Byron Ferguson is the event's highlight and largest draw. Byron shoots instinctually and can split a playing card in half from the side, shoot dimes out of the air, and snuff out candles with an arrow. Byron's performances always draw large crowds. Tom Bechdel has annually brought his nationally acclaimed seminar





For West Virginia's first National Hunting and Fishing Day Celebration, army tents became a movie theater.



Retriever demonstration at the 1978 celebration.

DNR photos

on eastern coyote hunting. Other seminars and demonstrations focus on hunting safety, fishing, snakes and birds of prey.

But perhaps the greatest thing about West Virginia's National Hunting & Fishing Day Celebration is the ability for both adults and children to see wildlife skills demonstrated and to participate in outdoor skills. Popular demonstrations include the deer and squirrel field dressing and skinning – passing on the declining knowledge of these necessary techniques. The wild game and fish cooking demonstration, providing free samples of popular recipes, is always a big hit. In addition, the public can try their hand at fly fishing and learn the art of controlling bird dogs. On the shooting range, the public can try (at no additional cost) muzzleloader shooting, .22 rifle shooting,

and clay pigeon shooting. Other shooting opportunities are available with air rifles and crossbows.

Children learning hunting and fishing techniques – and having fun doing it – makes the National Hunting & Fishing Day Celebration very special. Activities for youth include archery instruction, 3-D archery shooting and a hunting simulator with laser guns, as well as the opportunity to shoot a muzzleloader, .22 rifle, shotgun, and air rifle.



Cutting edge film technology circa 1978.

DNR photo

Shooting opportunities that are provided at no additional cost are closely supervised. Popular exhibits that always bring the public back include a big buck display, trophy fish display, and animal track display.

The Outdoor Youth Challenge has evolved from strictly a competition format to an outdoor skills and



Bill Vanscoy demonstrates deer field dressing.

DNR photos



DNR Director Frank Jezioro and Stoney ready for action.

knowledge event in which youth ages 6-18 can either compete in a set of activities or just participate in any of the activities offered. Any youth participating in the challenge is eligible to win prizes, including lifetime hunting and fishing licenses! The winners of the competition format receive scholarships to summer conservation camps in West Virginia.

Visitors can peruse tables of outdoor-related equipment set up by numerous vendors. They can also satisfy their appetite by visiting food booths set up by both commercial businesses and non-profit organizations.

So, why do the DNR and the West Virginia Federation co-sponsor the National Hunting and Fishing Day Celebration every year? Certainly, West Virginia's event shares the initial reason for the national celebration: to showcase the accomplishments and continued benefit hunters and anglers play in conservation. But West Virginia's Celebration is designed to generate excitement about outdoor-related activities and ultimately promote recruitment and retention for young, budding hunters, anglers and wildlife-watchers,

and for those older individuals who have temporarily abandoned these sports. With this event, the DNR hopes to help preserve West Virginia's outdoor heritage. We hope to educate the public by providing opportunities to learn the skills, safety, ethics, respect and stewardship needed for these outdoor activities. And basically, just to encourage folks to get outdoors. The Celebration also provides an outstanding outreach opportunity, allowing the public to learn about DNR's management activities and wildlife law enforcement. In addition, it provides folks an opportunity to learn how other organizations, agencies, landowners and businesses help to conserve West Virginia's wildlife and preserve our hunting and fishing heritage.

So, if you haven't checked out West Virginia's NH&FD Celebration, do yourself, and your family, a favor and come out this year to see what all the excitement is about. You'll soon understand why many West Virginians come back to the event year after year.

Jerry Westfall is the Assistant District Wildlife Biologist stationed in Parkersburg.

Humans vs. Birds!



WV Dept. of Commerce/
David Fattaleh

Background

You have heard it before – birds are real lightweights. See if you can stack up to the physical feats of our feathered friends. This activity allows people to see if they can run faster and jump higher, so to speak, than some record-breaking birds. This is a great way to learn more about birds, and get a little exercise.

Objective

Competitors use math to compare their own adaptations and abilities to those of some birds. This activity is a sneaky way to use science, environmental education, social studies, math, and physical education into a fun activity.

Method

Contestants follow the event instructions to measure their abilities, and compare them to the information on birds provided.

Materials

- A flat area 25-30 yards long
- Paper
- Pencil
- Tape measure
- Stopwatch
- Flagging or rope to mark off 20 yards
- Small container to hold something fragrant
- Scented items (orange peel, cologne, flavoring extract, etc.)
- Calculator

What to do

If the competitors are working as a team of two, then have them take turns following the directions at each station and compare themselves to the birds. For a larger group, set up each station in a different area, and divide the group in two, half as station leaders, and the other half as contestants. The contestants move through the stations, with at least one leader at each station. After the contestant groups go around to all of the stations, switch jobs so the leaders can go through, and the contestants can be the leaders.

The activity was reprinted with permission from Flying WILD @2010, Council for Environmental Education.



WV Dept. of Commerce/
Steve Shaluta



WV Dept. of Commerce/Steve Shaluta



Station 1 WINGING IT!

CHALLENGE:

See how your “flapping rate” compares with different birds.

Count the number of times you can flap your arms in 10 seconds. Have someone with a stop watch, or watch with a second hand, tell you when to start and stop as you count your flaps. Record the number of flaps.

How do you compare?

| BIRD | WING BEATS/10 SECONDS |
|--------------------------|-----------------------|
| Crow | 20 |
| Pigeon | 30 |
| Peregrine Falcon | 43 |
| Carolina Chickadee | 270 |
| Rufous Hummingbird | 700 |

The master flapper award goes to the Rufous Hummingbird which is able to flap its wings 700 times in 10 seconds—that’s 70 times per second!

SUPER CHALLENGE:

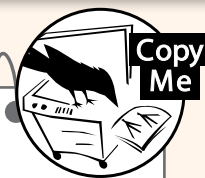
How long can you flap your “wings” before you start to become tired?

A Blackpoll Warbler travels 2,000 miles, from New England to Venezuela, in three days! This degree of exertion is equivalent to a person running 4-minute miles for 80 consecutive hours.

20-YARD DASH CONVERSION CHART

Use this chart to check calculations for human running speeds for 20 yards.

| FINISH TIME (SECONDS) | MILES/HOUR | FINISH TIME (SECONDS) | MILES/HOUR |
|--------------------------|------------|--------------------------|------------|
| 3.0 | 13.6 | 6.0 | 6.8 |
| 3.1 | 13.2 | 6.1 | 6.7 |
| 3.2 | 12.8 | 6.2 | 6.6 |
| 3.3 | 12.4 | 6.3 | 6.5 |
| 3.4 | 12.0 | 6.4 | 6.4 |
| 3.5 | 11.7 | 6.5 | 6.3 |
| 3.6 | 11.4 | 6.6 | 6.2 |
| 3.7 | 11.1 | 6.7 | 6.1 |
| 3.8 | 10.8 | 6.8 | 6.0 |
| 3.9 | 10.5 | 6.9 | 5.9 |
| 4.0 | 10.2 | 7.0 | 5.8 |
| 4.1 | 10.0 | 7.1 | 5.8 |
| 4.2 | 9.7 | 7.2 | 5.7 |
| 4.3 | 9.5 | 7.3 | 5.6 |
| 4.4 | 9.3 | 7.4 | 5.5 |
| 4.5 | 9.1 | 7.5 | 5.5 |
| 4.6 | 8.9 | 7.6 | 5.4 |
| 4.7 | 8.7 | 7.7 | 5.3 |
| 4.8 | 8.5 | 7.8 | 5.2 |
| 4.9 | 8.3 | 7.9 | 5.2 |
| 5.0 | 8.2 | 8.0 | 5.1 |
| 5.1 | 8.0 | 8.1 | 5.1 |
| 5.2 | 7.9 | 8.2 | 5.0 |
| 5.3 | 7.7 | 8.3 | 4.9 |
| 5.4 | 7.6 | 8.4 | 4.9 |
| 5.5 | 7.4 | 8.5 | 4.8 |
| 5.6 | 7.3 | 8.6 | 4.8 |
| 5.7 | 7.2 | 8.7 | 4.7 |
| 5.8 | 7.1 | 8.8 | 4.6 |
| 5.9 | 6.9 | 8.9 | 4.6 |



Station 2

TRACK AND FIELD... AND AIR!

CHALLENGE:

How fast can you run?

Begin at the starting line and see how long it takes you to reach the finish line. Have someone with a stop watch tell you when to start, and measure how many seconds it takes you to complete the run. The marked-off distance is 20 yards. Using the following formula, calculate how fast you ran in miles per hour:

$$\frac{20 \text{ yards}}{\text{finish time in seconds}} \times \frac{1 \text{ mile}}{1760 \text{ yards}} \times \frac{3600 \text{ seconds}}{1 \text{ hour}} = \text{ x miles per hour}$$

For Example: If you ran the 20 yards in 5.9 seconds –

$$\frac{20 \text{ yards}}{5.9 \text{ in seconds}} \times \frac{1 \text{ mile}}{1760 \text{ yards}} \times \frac{3600 \text{ seconds}}{1 \text{ hour}} = 6.9 \text{ miles per hour}$$

If you want to check your answer, one of the station leaders can use the 20-Yard Dash Conversion Chart to check if your answer is correct. Compare your results with how fast some birds fly.

How do you compare?

| BIRD | FLIGHT SPEED IN MILES PER HOUR |
|---------------------|--------------------------------|
| House Sparrow | 20 mph |
| Crow | 30-45 mph |
| Mallard | 45-60 mph |

SUPER CHALLENGE:

How long do you think it would take you to run a distance of 600 miles?
(Washington, D.C., to Atlanta, Georgia, is about 600 miles.)

It takes most students about 10 minutes to run a mile. At this speed and without stopping to rest, it would take you about 4 days! A Ruby-throated Hummingbird can complete a 600-mile nonstop flight across the Gulf of Mexico in as little as 18 hours!

FUN FACT: The fastest bird is the Peregrine Falcon, which can dive at speeds of up to 175-200 miles per hour when chasing its prey.



Station 3 WHAT'S YOUR WINGSPAN!

CHALLENGE:

Hold your arms out straight to either side and see how your "armspan" compares to the wingspan of different birds.

After a leader measures your "armspan" using a measuring tape, record the length.

How do you compare?

Ruby-throated Hummingbird 4 inches

American Robin 15 inches

Crow 40 inches

Bald Eagle 7 feet

Andean Condor and
Marabou Stork 10 feet

Wandering Albatross 12 feet

FUN FACT: The largest bird in the world is the Ostrich, which can stand over 8 feet tall and weigh more than 300 pounds. The smallest bird is the Bee Hummingbird, which is only 2 inches long, including its bill and tail. (It weighs only as much as a ping pong ball!)

Station 5 THE NOSE KNOWS

CHALLENGE:

How well do you smell?

See how close you have to get in order to smell the mystery scent in the canister.

How do you compare?

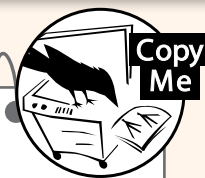
If you were a Turkey Vulture, you could have easily smelled this down-wind from 200 feet away. Take a look around and try to locate something 200 feet away from you. Do you think you could smell something from that far away?

FUN FACT: Turkey Vultures can "sniff out" their food from up to 200 yards away (that's about the length of two football fields). The Turkey Vulture's sense of smell is so acute that engineers have used them to find leaks in a pipeline 42 miles long. They do this by pumping a chemical that smells like rotting meat (the smell Turkey Vultures use to locate their food) through the pipe and then seeing where the Turkey Vultures gather.

Scientists believe that both Turkey Vultures and Kiwis have an excellent sense of smell that helps them locate food, and that Storm Petrels use smell to locate their nests in dense breeding colonies. Although there is some controversy, most scientists believe that the majority of birds do not have a good sense of smell and rely more on their keen senses of sight and hearing to find food.

SUPER CHALLENGE:

Can you think of a bird in your area that uses its sense of sight or hearing to locate food?



Station 4 EATING LIKE A BIRD

CHALLENGE:

How many hamburgers do you think you could eat in a day?

Some birds increase their body weight by 5% in a single day before migrating. Look at the chart below to see how many hamburgers you'd have to eat in a day if you were a bird getting ready to migrate.

How do you compare?

You'd have to eat this many burgers every day for 10 days in a row to gain as much weight as many birds do before they migrate.

IF YOU NOW WEIGH:

IN A DAY, YOU'D HAVE TO
EAT THIS MANY BURGERS:

| | |
|------------|-----|
| 60 pounds | 42 |
| 100 pounds | 70 |
| 150 pounds | 105 |

FUN FACT: Each spring, hundreds of thousands of shorebirds, including Red Knots, Sanderlings, and Ruddy Turnstones, visit the Delaware Bay shore of New Jersey and Delaware to gorge themselves on freshly spawned horseshoe crab eggs. During their stay of about 10 days, Red Knots gain 50% of their body weight in fat—the equivalent of a 100-pound person gaining 5 pounds of fat every day for 10 days. This increase in body fat enables the Red Knots to fly nonstop from the Delaware Bay to their arctic breeding sites. (What do you think will happen if horseshoe crabs are overharvested in the Delaware Bay?)

Station 4 EATING LIKE A BIRD CALCULATIONS

ASSUMPTIONS:

1. Each hamburger contains 250 calories.
2. Every 3,500 calories consumed results in a 1-pound weight gain.
3. This is a simplistic calculation that does not take into account the calories burned through digestion and through other activities. It also does not take into account different metabolic rates between individuals.

Formula used to calculate the number of hamburgers required to gain a given amount of weight:

$$\begin{aligned} & (\text{Desired weight gain} \times 3,500 \text{ calories}) \\ & \text{divided by } 250 \text{ calories} = \# \text{ of hamburgers} \end{aligned}$$

For example:

To increase body weight by 5%,
a 60-pound person would need
to gain 3 pounds

$$60 \text{ pounds} \times 5\% = 3 \text{ pounds}$$

$$3 \text{ pounds} \times 3,500 \text{ calories} = 10,500$$

$$10,500 \text{ divided by } 250 \text{ calories} = 42$$

This person would need to eat 42 hamburgers.

Brook Trout Access Restored on Shavers Fork Tributary

The DNR and its partners have completed a major project to restore spawning access for brook trout in Beaver Creek of the Shavers Fork River above Cheat Bridge in Randolph County. "For the first time in 25 years, brook trout in the Shavers Fork main stem can move upstream into Beaver Creek to their critical tributary spawning areas," DNR Director Frank Jezioro said.



Steve Brown

Besides improving brood trout habitat and access to their spawning areas, the project doubled the flood capacity of the Beaver Creek culverts.

Unique in West Virginia, Shavers Fork is a high-elevation, big-river brook trout fishery. For more than a century, the river and its watershed have been impacted by activities such as logging and railroad construction which have reduced brook trout habitat and populations. Recent plans to restore brook trout have prioritized both habitat restoration and removal of fish passage barriers between the main stem and the species' spawning tributaries.

The DNR Wildlife Resources Section has expanded its successful Acid Stream Restoration Program to include physical habitat restoration as well as stream liming. Director Jezioro said, "New grant funding for stream restoration became available to us through congressional appropriations and the Eastern Brook Trout Joint Venture."

To build the Beaver Creek project, biologists worked with key partners at West Virginia University's Natural Resources Analysis Center and others, assembling a team of experts with unique expertise and skills. The team included DNR biologists, WVU research scientists, stream restoration experts from Canaan Valley Institute, and railroad construction specialists from TrakSpec Railroad Corporation, based in Hurricane, W.Va. Because the project site is located on a remote section of railroad, all construction material such as logs and rocks and heavy equipment had to be transported to the site by rail. TrakSpec's expertise and equipment was critical.

In the end, the team built a new, fish-friendly section of stream with a sophisticated complex of culverts, the centerpiece of which is a partially-buried 10-foot culvert containing a simulated stream channel.

Midway through the project, a major design change was required to meet a mandatory construction deadline and to provide a design that could be more readily used for additional streams. "The most impressive thing for me was the way the team pivoted to an entirely new design and pulled together to build such a high-quality project," DNR Program Manager Steve Brown said. He added, "Major thanks go to the guys at CONTECH Construction Products who located a 10-foot culvert for us in a matter of hours and had it on site in three days. I also want to thank State Rail Director Cindy Butler and the State Rail Authority.

Looking to the future, Director Jezioro observed that the project is a good model for future transportation culvert replacements because it complies with all current and proposed Corps of Engineers requirements for fish passage through culverts.

Briery Mountain WMA in Preston County Permanently Closed

Effective Oct. 31, 2011, the lease between the West Virginia Army National Guard and the West Virginia Division of Natural Resources for the Briery Mountain Wildlife Management Area was terminated, and the area will be closed to public use.

"The removal of Briery Mountain as a WMA is necessary because of anticipated increase in training activity by the West Virginia Army National Guard, which will restrict public access to the area," said Curtis I. Taylor, Chief of the DNR Wildlife Resources Section. "These training activities will create public safety concerns that are not compatible with the use of the area as a WMA."

Public lands in the Preston County region that are available to hunters, trappers and anglers include the Coopers Rock State Forest, and the Snake Hill and Blackwater WMAs. Information on these public lands is available from the District 1 DNR Office in Farmington (304-825-6787), the 2011-2012 Hunting and Trapping Regulations Summary, and from the DNR website at www.wvdnr.gov.

Reporting fish and wildlife violations in West Virginia just got easier

The Law Enforcement Section of the West Virginia Division of Natural Resources has added a new website option for reporting activity that threatens fish and wildlife. Submitting a tip sends a message to DNR district office staff for response. The website can be found at www.wvdnr.gov/LEnforce/Poachers.shtm.

"We have a limited number of Natural Resources Police Officers in the field, so the public plays a critical role in protecting our natural resources by reporting violations," said Lt. Col. Jerry Jenkins of the DNR Law Enforcement Section. "Submitting a report is a quick and easy way to report violations."

DNR law enforcement officers ask anyone who witnesses a potential violation to collect as much information as possible without confronting the individual under suspicion. Jenkins said helpful information includes license plate numbers, vehicle color and make, the type of violation, the time it occurred and a description of the individual or individuals involved.

"Reporting a crime with this form is anonymous," Jenkins said. "No information will be collected that will identify the user of this system unless you are willing to give us your name and contact information."



Courtesy Izaak Walton League

Shawn Head (left) receives award from Bruce Evans, president of the Mountaineer Chapter of the Izaak Walton League.

Wildlife Biologist Shawn Head recognized by Izaak Walton League of America

Shawn Head, a Wildlife Resources Section wildlife biologist stationed in the DNR Elkins office, was honored by the Izaak Walton League of America with its prestigious Honor Roll Award. Head received the award at the conservation organization's national convention in recognition of his outstanding contributions to public education and the conservation of America's natural resources over the past 23 years.

His education efforts have included giving wildlife-related presentations to youth groups, school classes, campers attending county, state and national youth camps, and college students. For 15 years he has been actively involved in setting up the Outdoor Youth Challenge held at Stonewall Resort during West Virginia's National Hunting and Fishing Day Celebration. He has volunteered for 10 years with the IWLA Mountaineer Chapter at the Hooked on Fishing, Not on Drugs Expo held annually in Elkins. In addition, Head helps with the Chapter's Youth Conservation Day. He also holds membership in several national and state conservation and professional organizations.

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