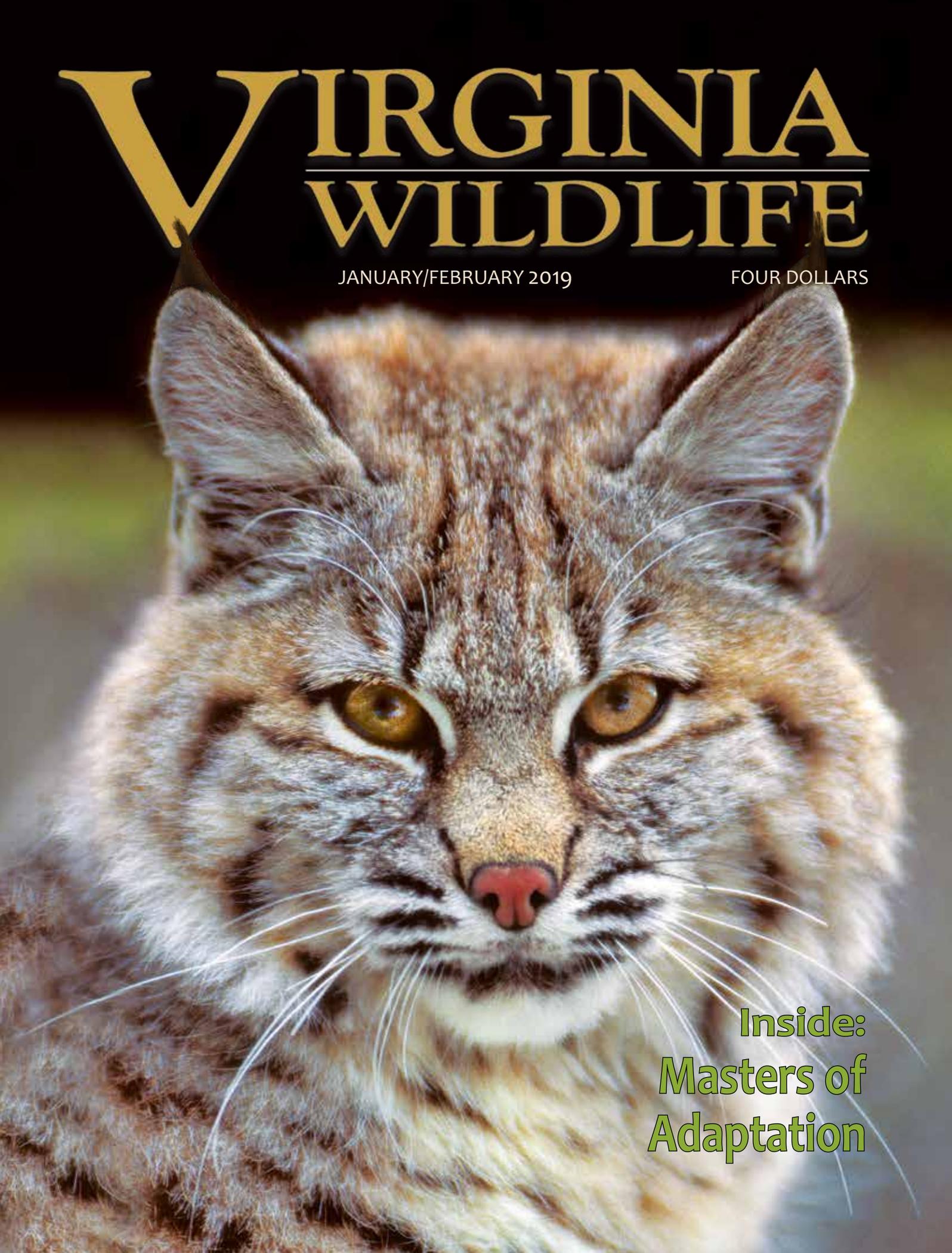


VIRGINIA WILDLIFE

JANUARY/FEBRUARY 2019

FOUR DOLLARS



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Masters of
Adaptation

JANUARY/FEBRUARY

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BOB DUNCAN
Executive Director

As one year closes out and another begins, I find it helpful to consider the progress being made. For example, over the past decade, with the support and approval of our Board, DGIF has acquired more than 21,000 acres of land for wildlife, wildlife habitat, and wildlife-related recreation. This represents about ten percent of our total land holdings and these purchases have ranged from the fabled Eastern Shore to Southside and on to the Great Southwest. These properties have varied in size from two acres (for critical bat caves) to over 4,200 acres for a new wildlife management area. And the additional good news is that more land projects are already in the works. It is our goal to provide quality hunting, fishing, boating, and wildlife watching opportunities within a reasonable driving distance of all Virginians.

During that same time frame, DGIF started a Leadership Development Program to provide future managers and leaders for the department and since 2007 we have held eight law enforcement training academies and successfully graduated 139 new conservation police officers. We also celebrated our 100th anniversary and moved our headquarters to a new location. Along the way, we stocked a few elk and launched a new Go Outdoors licensing system which, after we got a few bugs out, has provided us with opportunities to serve our customers better than before.

We'll always be a work in progress as I believe there will always be change and new challenges. We need to continue in our efforts to place a priority on science, innovation, meeting the needs of wildlife resources, protecting habitat, focusing on the future, and being proactive. There will always be a need to provide sound stewardship for the protection and management of all our wildlife and natural resources.

I would be remiss if I didn't also mention the wonderful efforts made by Sally Mills, who recently retired as the editor of *Virginia Wildlife*. She, along with the talented editorial staff and a host of outdoor writers and photographers, has continued to bring to life the important work that the department does every year and this issue is no exception.

A great example can be found in the article "Manage Forests For Diversity" that looks at a very passionate conservationist who is devoting his time and resources to educating people about the importance of quality habitat and the need for managing young forests. It goes without saying that the right habitat benefits all wildlife, including animals like bobcats, owls, and kestrels which are also featured in this month's issue. As there is no better time than during the cold winter months to organize your fishing gear and to get your boat in order for the upcoming season, David Hart has provided a check list and he hopes that you will have a fun and safe time on the water. So, as we move into the New Year, where would we be today without some forward-thinking conservationists of the past who blazed a trail for future generations. See Curtis Badger's story on some of those pioneers from the Eastern Shore.

Teddy Roosevelt called conservation efforts "work worth doing!" I could not agree more and let's hope that 2019 brings lots of opportunities for conserving, connecting, and protecting our wildlife resources.

MISSION STATEMENT

Conserve and manage wildlife populations and habitat for the benefit of present and future generations. Connect people to Virginia's outdoors through boating, education, fishing, hunting, trapping, wildlife viewing and other wildlife-related activities. Protect people and property by promoting safe outdoor experiences and managing human-wildlife conflicts.



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Masters of Adaptation

By Jo Ann Abell



© Bill Lea

THOUGH RARELY SEEN, THIS ELUSIVE PREDATOR IS FOUND IN EVERY COUNTY OF VIRGINIA.

Not long after moving to our farm in the Blue Ridge Mountains of southwestern Virginia, my husband and I were paid a late winter visit by a bobcat. We were getting ready for bed when a series of short, high-pitched yowls broke the quiet of the night. We get coyotes and foxes hunting through the fields and up in the surrounding hills at night so we are used to hearing the 'call of the wild,' but this was the first time we had heard the caterwauling of a bobcat seeking a mate. We listened, hoping to hear it again, but after that one outcry the night went still.

The next morning, we walked down to the creek behind the house. Snow from a few days earlier had melted, and although

the chances were slim, the muddy silt along the edge of the creek might bear witness to our visitor. After walking only a short distance, we were delighted to see what were clearly the paw prints of a bobcat! Unlike the tracks of coyotes or dogs, feline tracks rarely show claw marks because their claws are retracted except when climbing or pouncing on prey. There are also distinct differences in the heel pad. The front of the feline heel pad has two lobes, the canine has one; the rear of the feline pad has three lobes, the canine has only two.

After that night, we didn't hear the bobcat again. Although we maintain our property to benefit wildlife, bobcats prefer to not share their living space with people. Our shy visitor had probably

picked up the scent of humans and dogs and retreated to the thousands of acres of deep woods behind us that are part of the George Washington and Jefferson National Forests.

Masters of Adaptation

One of the most secretive and fascinating mammals in the commonwealth, the bobcat is named for its short, “bobbed” tail. Smaller than its northern cousin, the lynx, the average bobcat tom weighs 20 to 25 pounds (but can weigh up to 40 pounds). Females are smaller, averaging 15 pounds. Their mottled coloring—tawny with black spotting, black-tufted ears with black ruffs of hair extending down the side of the head resembling sideburns, distinctive white patch on the back of the ears, and black-tipped tail—gives these hunters the protection of built-in camouflage. Disappearing into its natural surroundings, the bobcat is a nearly invisible, silent stalker.

Bobcats have evolved to live in a wide variety of lush as well as marginal habitats. Found in Mexico, the United States, and Canada, they are able to live in deserts, mountains, forests, farms (mixed with woods), swamps, brushland, and even urban and suburban settings, as long as they can find food and dens to raise their young. Superior adaptability makes *Lynx rufus* the most widespread wildcat in North America.

In recent decades, bobcats in Virginia have been increasing in number and expanding their geographic range. With more bobcats and populations more widespread than at any time in recent history, some have even found their way into suburban neighborhoods. In 2017, an Arlington woman videoed a bobcat in her backyard, confirming reports that bobcats live along the Potomac River corridor on the outskirts of the nation’s capital. Sightings have also been

reported in Falls Church, Great Falls, and McLean. Seldom seen, bobcats sleep in hollow trees, thickets, or rocky crevices. Being nocturnal, they prowl for food at night when their prey are most active and their chances of coming into contact with people are reduced.

Although bobcats have expanded their range to include every county in the state, that doesn’t mean you’ll likely see one on your next trek into the woods. While a human’s field of vision is 180 degrees, the feline’s field of vision is 200. This gives them an advantage over their prey and also explains why bobcat sightings are so rare. They see you long before you see them. Bobcats are so stealthy and well camouflaged that the chances of getting more than a fleeting glimpse are almost infinitesimal. My cousin, a retired game warden and veteran hunter, told me that even with a trained eye, perseverance, and a healthy measure of woodsman’s luck, it

may be only once in a lifetime that you set eyes on this feline phantom.

A Fierce and Wily Predator

Bobcats are masterful hunters, relying on secrecy and surprise to track down and capture their prey. Although they sometimes venture out in the daytime, they are much bolder under cover of darkness. Hunting alone, they are patient and tenacious killers, tracking their prey primarily by sight and then by sound. After zeroing in on a rabbit or rodent, the cat fixes its gaze on the animal, crouches low while slowly maneuvering closer until the prey is within striking distance, then rushes in for the attack and makes the kill with a bite to the nape of the neck or head.

When the sun goes down, bobcats start their nightly rounds—and they are equipped for success. Pupils that widen to maximize light reception give them superior night vision (in low-light conditions,

seeing eight to ten times better than we do). Large, tufted ears capture the slightest sound or movement. Sharp, retractable claws and chisel-like incisor teeth are lethal weapons. Their muscular build makes them good climbers, and strong rear legs enable them to jump a six-foot fence. Extreme physical prowess has allowed these forest hunters to flourish as dominant mammalian predators.

Bobcats hunt cottontails, voles, groundhogs, squirrels, mice, and also ground-nesting songbirds, ruffed grouse, and wild turkeys. This fierce carnivore can take down prey weighing up to eight times its own body weight. Though rare, they have been known to take down adult deer and will kill fawns when available. Attacks on small dogs and domestic cats are rare but do occur. Bobcats will occasionally kill small livestock such as sheep, goat, and poultry. They also scavenge carrion, including deer carcasses. If food becomes

scarce, a bobcat can go several days without eating and uses caches to store leftover food to be consumed later.

While attacks on humans are rare, there was a bobcat attack on a Blue Ridge hiker at Virginia’s Humpback Rock in Augusta County in July, 2016. The *Richmond Times-Dispatch* reported that the bobcat pounced on a man in his early 30’s who was able to fight back as his hiking companion sprayed the cat with bear spray, causing it to flee. Since bobcats typically hunt at night, and this attack happened in broad daylight, the cat was suspected of being rabid and the man underwent a series of rabies shots.

In an August 2017 incident, a bobcat attacked an 82-year-old man in King William County who also successfully fended off the cat and was taken to the hospital for treatment. Traps set by officials to capture the animal were unsuccessful. There was no indication of what provoked the attack; however, Furbearer Project Leader Mike Fies, with the Department, believes the cat was rabid. Fies says most bobcat attacks on humans are by rabid cats.

“Since 2001, I’ve documented nine bobcat attacks on humans, all of which were suspected or confirmed rabies cases,” he reports. Still, says Fies, the incidence of rabies in bobcats is low, with an average of 1.6 confirmed cases per year over the last ten years.

At the national level, mountain lions and wolves are the only predators of adult bobcats (although young bobcats may be taken by owls, eagles, foxes, and coyotes). With no confirmed sightings of either of these larger predators in the state over the past 100 years, the bobcat is—along with black bears and coyotes—an apex predator, making management of its populations important in relation to overall ecosystem function and biodiversity.

The primary causes of adult bobcat mortality are human related and include hunting, trapping, and collisions with vehicles. On the plus side for the species,

Left: Using a snow bank for cover, this bobcat watches for a meal. Photo © Bill Lea



selective timber harvesting in recent years has benefitted bobcats and other wildlife. Removing larger trees opens the forest canopy, letting in sunlight that stimulates the growth of understory plants that provide shade, hiding places, and food used by prey species.

A Conservation Success Story

Back in the 1970s, 40 states had no bobcat protections and bounties were common. Today, most states, including Virginia, have bag limits on hunting and trapping the cats. As a result, bobcat numbers have nearly tripled nationwide since the 1980s to as many as 3.6 million, according to a 2010 study in the *Journal of Fish and Wildlife Management*—the most recent national survey. The authors of the study concluded that in the past several decades bobcats represent a real wildlife conservation success story, having reached the point that their populations are growing or stable across their range.

Mirroring the national trend, Virginia reflects a similar increase in bobcat numbers from the mid-1980s through the 1990s, followed by a leveling off period after the year 2000. “Based on population survey data, their numbers have been fairly stable over the last decade,” says Fies. There have been some moderate short-term fluctuations, most likely caused by changes in habitat, particularly the maturation of large areas of forestland, which reduces food sources for their prey species, he adds.

In the 2017-18 harvest season, hunters harvested 768 bobcats and trappers took 590. Licenses are required to hunt or trap bobcats, and kills must be reported to DGIF by telephone or the Internet within 24 hours. Many bowhunters also report sightings of bobcats (as well as turkey, grouse, and other species) during the deer bowhunting season, which adds to the knowledge base used by wildlife managers to determine specie numbers and distribution.

Fies believes the current population in Virginia to be very healthy and sees the steady increase in bobcat numbers and



The adaptable bobcat is not afraid of water and doesn't have any problem swimming when moving through its territory.



Being on top of the food chain in Virginia, the primary causes of bobcat mortality are human related and include hunting, trapping, and collisions with vehicles.

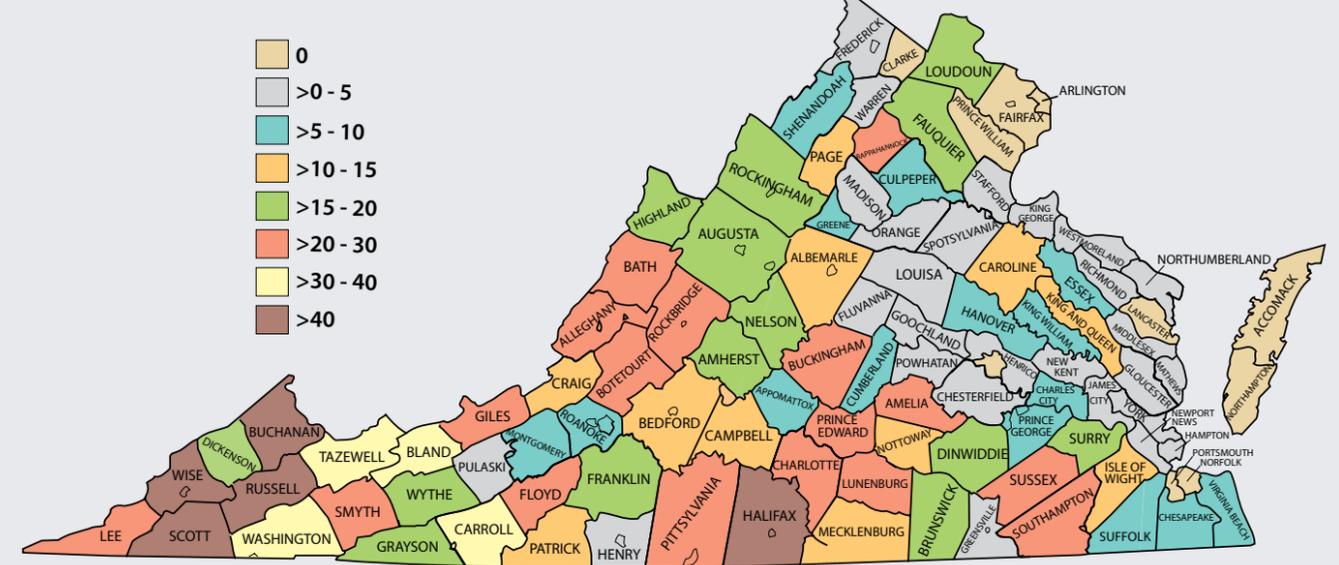


A “bobbed” tail is what gives this elusive cat its name.

VIRGINIA BOBCAT HARVEST STATEWIDE (1977-78 to 2017-18)



2017-18 Bobcat Harvest



distribution across the state as a conservation victory. “When I first joined the Department in 1983, we had bobcats in the mountains and a few in the Dismal Swamp. There were very few in the Piedmont Region and none in the Coastal Plain. Now, although populations are still low in the Coastal Plain, we have bobcats in every county of the state,” he says.

During a recent walk on a neighboring farm, taking in over 300 acres of trees and fields, I heard the yowling of a bobcat

coming from the woods, maybe 100 yards off. Truthfully, I couldn't summon the courage to go into the woods alone to investigate, but it was enough for me just to know they're around. 🐾

Jo Ann Abell has been writing about wildlife for 20+ years. She lives on a farm in Lexington with her husband, three dogs, chickens, and honeybees.

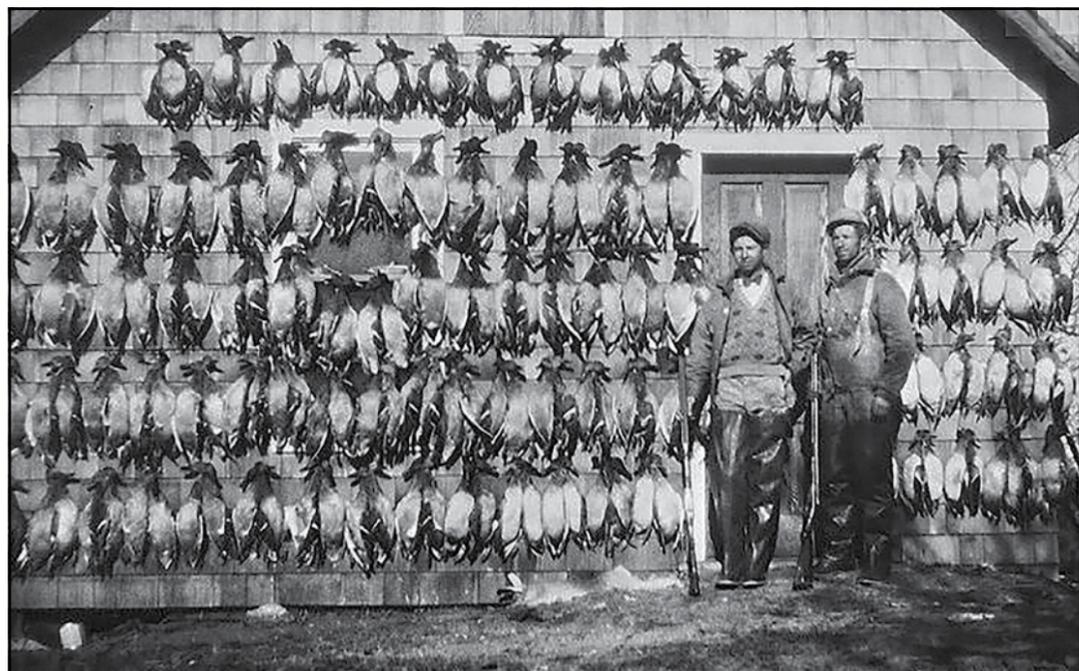


THE PIONEERS

By Curtis J. Badger



These five shaped the history and culture of wildfowl hunting in Virginia.



Hundreds of men and women have left their mark on the history of wildfowl hunting in Virginia, including biologists, lawmakers, and dedicated citizen scientists. But a group of five pioneers stands out as having set lasting trends that over the years have become cultural benchmarks that define the sport.

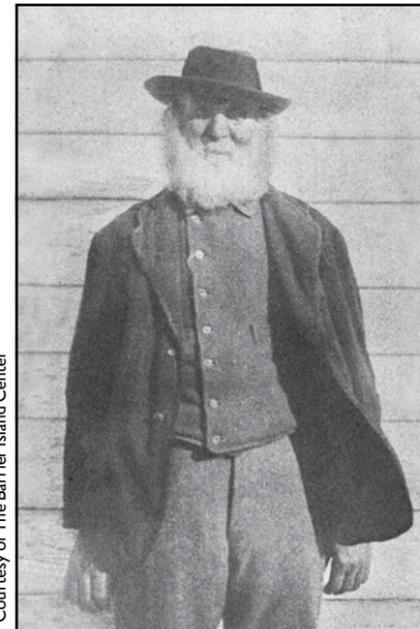
Our pioneers comprise a very diverse group. Most of these men were well known Americans in the 19th and early 20th centuries, nationally recognized public figures when they were at the peak of their careers. Unfortunately, that is not so much the case today. The passage of time has clouded many of their accomplishments, so perhaps it is time to re-introduce them.

NATHAN F. COBB

Nathan Cobb and his family moved from Massachusetts to Northampton County in 1837 and settled near the village of Oyster where they opened a small store. In December 1838 Nathan applied to the county for a license to operate a tavern and sell spirits, and in March of the following year he bought Great Sand Shoal Island, an 88-acre barrier beach east of Oyster.

Nathan and his three sons soon began construction of a small residence on the island, and from there they operated a business salvaging ships and hunting wildfowl. The Cobb family constructed additional living quarters on the island, and soon they were entertaining guests who would come in the summer to bathe

Courtesy of The Barrier Island Center



Nathan F. Cobb is credited with the Eastern Shore's first gunning clubs.

in the surf and in winter to hunt countless waterfowl.

But the Cobbs in those days were mainly known for salvaging ships. This was some thirty years before the U. S. Life-Saving Service was formed, so the Cobbs provided a vital service to mariners. If a ship went aground, the Cobbs would rescue the crew and then bargain with the owners for salvage rights to the cargo. The Cobbs had a reputation for being shrewd when it came to salvaging goods, but they never charged a fee for saving a life. Indeed, the Cobbs were known for feeding and clothing the unfortunate crew members and treating them just as graciously as they did paying guests in their quickly growing resort.

By the time the government established a lifesaving station on the island in the 1870s, the Cobbs' hotel business was flourishing. Hunters would come in winter for the excellent waterfowl hunting, and in spring they would return to hunt migrating shorebirds. The summer brought families who came to enjoy the cool ocean breezes.

Left: At the time, there wasn't much thought on limiting the harvests of waterfowl and shorebirds. This photograph of a 1890 market duck hunt is a great example of nationwide harvests. Photo courtesy of Ken Barnes.

The Cobbs built a large hotel, complete with a ballroom, dining facilities, and even a bowling alley. They also built additional lodges, including one called the Baltimore Lodge, a New York Lodge, and a Virginia Lodge. They built dwellings for hotel staff, residences for the Cobb family, and barns and pastures for livestock.

Nathan died in 1881 at age 84, and his passing was noted with respect by the maritime community. A three-masted schooner was commissioned to be built in his memory and given his name. The 167-foot *Nathan F. Cobb* was launched in Rockland, Maine, in 1890 and soon began shipping freight among East Coast ports.

The Cobb Island Hotel continued to operate after Nathan's death, but coastal storms seriously damaged the old resort, and it went through a series of owners and operators. The end finally came late in 1896 when a hurricane raked the East Coast. The hotel was damaged beyond repair, and local newspapers reported that the furnishings were sold at auction for \$850, thus bringing an end to a colorful era of Virginia history.

But the storms of 1896 had other victims as well. A square-rigged schooner bound for New York loaded with lumber and cross ties capsized off the coast of Georgia in a northeaster in early December. The cook and a shipmate drowned when they were swept overboard, and the ship drifted southward for four days before coming to rest on a sandbar off Ormond Beach, Florida.

In a tragic coincidence, the schooner *Nathan F. Cobb* perished along with the hotel its namesake had built more than a half-century earlier. Fittingly, local folks salvaged the remains of the *Nathan F. Cobb* and built a cottage on Ormond Beach with lumber taken from the ship. The wooden ship nameplate *Nathan F. Cobb* was hung over the fireplace. The Cobb Cottage still stands at 137 Orchard Lane and is part of the Ormond Beach Historic Trail.

ALEXANDER HUNTER

If Nathan Cobb and his family are responsible for launching the era of the gunning clubs, then Alexander Hunter could be charged with aiding and abetting. For a man who worked for 40 years in the General Land Office in Washington, Hunter was a prolific writer. He was born in 1843 and grew up on Abingdon Plantation, which now is the site of National Airport. Hunter served in the Confederate Army during the Civil War and wrote several books about his experiences, but he is best known for *The Huntsman in the South*, a collection of stories that capture what life was like on the barrier islands during the era when waterfowl hunting was gradually evolving from subsistence to sport.

Many of Hunter's stories depict a certain tension between local people on the islands, who viewed the fall arrival of waterfowl as vital to their winter diet, and visiting sportsmen, who felt that hunting should be practiced with certain limitations and manners, perhaps reflecting their European roots. Hunter certainly placed himself in the second category.

Hunter comes across as a bit of a snob and a dandy in much of his writing, but



Author Alexander Hunter wrote about the Shore's sporting life, helping to popularize hunting as a growing hospitality industry.

Courtesy of The Library of Virginia



© George Shiras / National Geographic Creative
George Shiras helped lay the groundwork for the Migratory Bird Law of 1916 and the Migratory Bird Treaty Act of 1918.

he gives us the best window we have to this era of the sporting life. Hunter wrote many articles for national magazines such as *Forest and Stream*, and he helped popularize the concept of hunting as an arm of a burgeoning hospitality industry. Hunter was so prolific he frequently published items under a pseudonym to avoid appearing to dominate a publication. The pseudonym was “Chasseur,” which means hunter in French.

GEORGE SHIRAS

George Shiras was a lawyer from Pittsburgh whose father was a U.S. Supreme Court justice. Shiras was born in 1859 and grew up hunting and fishing, mainly at his family’s summer retreat in the Marquette area of Michigan. As a young man, Shiras took up photography and soon began using hunting techniques to capture wildlife on film. In 1894 he joined the Revels Island Shooting Club, an association of wealthy northern businessmen who owned several thousand acres along the coast of the Eastern Shore near Wachapreague. Shiras built a house on Revels Island and spent many springs photographing migrating shorebirds.

Shiras was elected to Congress in 1903 and served for only one term, but during his two years in office he helped lay the groundwork for conservation legislation that would be part of the Migratory Bird Law of 1916 and the Migratory Bird Treaty

Act of 1918. Shiras used photography to document the lives of shorebirds on the barrier islands and developed techniques to photograph birds in flight. In many of the photographs taken on the island, Shiras used carved decoys to lure birds to within camera range.

Shiras’s work with the camera gained national attention when it appeared in National Geographic magazine. Seventy-four of Shiras’s photographs were published in the July 1906 issue, and National Geographic later published two chapters of his Revels Island photos in the 1935 two-volume classic, *Hunting Wild Life with Camera and Flashlight*. His work helped make Americans aware of the folly of allowing shorebirds to be killed as they were mating and nesting, and he was among the first to persuade Congress to outlaw the practice.



Courtesy of Ducks Unlimited

Joseph Knapp is considered the father of Ducks Unlimited.

JOSEPH KNAPP

Early wildlife conservation efforts were pioneered by private citizens, many of them wealthy owners of coastal gunning clubs in Virginia and North Carolina. Joseph Knapp was a New Yorker whose father, Joseph Fairchild Knapp, was a founder of Metropolitan Life Insurance Company. The younger Knapp followed his father in the life insurance business and also became involved in publishing. But Knapp’s true passion in life was waterfowl hunting, and he realized that to have a sustainable population of game birds, conservation and propagation were necessary. In 1919 he bought a remote tract of land that

stretches from the Back Bay area of Virginia south into Knott’s Island, N.C. and built a three-story Colonial mansion with 37 rooms. He and a neighboring lodge owner, William E. Corey, president of U.S. Steel, began a European style program of raising game birds and releasing them into the wild.

Knapp’s interest in wildfowl conservation led him in 1930 to launch a foundation dedicated to the well-being of waterfowl. He called the foundation More Game Birds in America, and he published *More Waterfowl*, a booklet that outlined a plan to protect waterfowl populations. Knapp realized that it would be necessary to protect habitat, especially in breeding areas, to ensure the long-term sustainability of waterfowl.

Knapp’s foundation in 1935 was incorporated as Ducks Unlimited, which became the world leader in wetlands conservation. His lodge on a marshy island in Currituck Sound is gone now, but in 1960 the 8,320 acres surrounding it became home to Mackay Island National Wildlife Refuge, a preserve visited annually by tens of thousands of ducks.

THOMAS DIXON

Thomas Dixon and Joseph Knapp were friends, and they had a great deal in common. There were also great differences in their lives. Dixon and Knapp were children of the Civil War, born a few months apart in 1864. Dixon’s father was a fire and brimstone Baptist preacher; Knapp’s mother, Phoebe Palmer Knapp, was a prolific composer of hymns, the best known of which is *Blessed Assurance*.

Knapp grew up in an affluent household in New York City, a child of privilege and private schools. Dixon grew up dirt poor in Shelby, North Carolina, a child whose formative years were colored by the poverty of Reconstruction. Dixon had little formal schooling but educated himself through a fiercely disciplined reading program. He was accepted into Wake Forest College in 1879 at age 15.

Dixon was a brilliant young man whose hard scrabble upbringing branded

him with a lifelong need to succeed. He was an award-winning debater in college, won election to the North Carolina legislature before he was of voting age, and then set off on a meteoric career as a preacher and lecturer that made him nationally known. Dixon was a lanky man with angular features and stood well over six feet tall, so he must have been an imposing figure in the pulpit or behind the lectern.

Dixon had a large congregation at 23rd Street Baptist Church in New York City, but he chose to live in Virginia to be near the Chesapeake Bay and barrier islands. He bought a spacious home on the bay in Cape Charles in 1894, not long after that railroad town was founded. He spent the week there with his family, then took the train to the city on Friday to deliver his sermon. Dixon had always wanted an imposing Virginia plantation, and in 1899 he moved from Cape Charles to Elmington, a 500-acre spread in Gloucester with a 32-room mansion built by the Tabb family.

You don’t afford imposing Virginia plantations on a preacher’s salary, and by this period in his life Dixon had added the title “novelist” to his list of credentials. *The Leopard’s Spots* was published in 1902, and *The Clansman* came out three years later. The books made Dixon a wealthy man, and



© Virginia Center for Digital History

Novelist Thomas Dixon (L) and Captain Jack Andrews of the Life-Saving Service pose after a shorebird hunt, Cobb’s Island, c.1890.

in 1905 he left Elmington to return to New York, and eventually to California where he became a film producer. He wrote the screenplay for D.W. Griffin’s landmark silent film, *Birth of a Nation*, based on his novels.

Dixon made a lot of money and he enjoyed spending conspicuously. While at Elmington, He went through a number of yachts, the last being the 80-foot schooner *Dixie*, built by E. J. Tull of Pocomoke City, Maryland. Dixon and Knapp became friends and hunting partners and shared a passion for waterfowl and conservation. Dixon bought a lot on Cobb’s Island and built a cottage there, and he and Knapp hunted with friends along the Carolina coast. In 1917 Dixon bought a marshy island bordered by Back Bay and Currituck Sound from the Roper Timber Company. The island had a boarding house where Roper’s timber crew lived, and Dixon converted this into a hunting lodge. Two years later Dixon sold the island to his friend Knapp, and it became the core of his Knott’s Island compound.

Dixon wrote an autobiography, *The Life Worth Living*, while living at Elmington, and it paints a picture of a man fully satisfied with his situation in life. Dixon took delight in being a country farmer and exploring the Chesapeake in various sailing craft. Chapters on brant hunting on the seaside of the Eastern Shore and shooting curlew over decoys on Smith Island are like opening a time capsule. Alexander Hunter was a more prolific writer, but Hunter tended to embellish and exaggerate. Dixon writes with simplicity, strength, and clarity. He was a good story teller.

Dixon was still a young man when he wrote *The Life Worth Living*, and you would think that at age 40 he would have come to terms with his needs, but in 1905 Dixon was on the move again. He sold Elmington, returned to the city, and renewed the search for fame and fortune that was sparked years earlier on a dirt poor farm. Dixon made a fortune and spent it all. He returned to North Carolina where he died virtually penniless in 1946 at age 82.

EPILOGUE

The Cobb Hotel was swallowed up by the Atlantic well over a century ago, but the Cobb legend lives on, primarily through decoys and other artifacts. Decoys made by Nathan Cobb, Jr. are especially desirable, selling at folk art auctions for astounding sums. A swimming goose decoy sold a few years ago for \$457,000, a running curlew for \$390,000.

Their chronicler, Alexander Hunter, is noted among collectors for *The Huntsman in the South*. The original 1908 Neale volume is difficult to come by, but there are recent reprints, and print-on-demand copies are available.

The wildlife photography of George Shiras was trend setting at the time, and was intended to document animal behavior. Today, his stark black and white images are shown in art galleries. An exhibition of Shiras’s work was shown in 2016 at the Musée de la Chasse et de la Nature in Paris, and a companion book, *George Shiras – In the Heart of the Dark Night*, was published.

Joseph Knapp’s conservation work lives on through Ducks Unlimited, the most successful wetlands preservation organization in America. A foundation formed by the Knapp family is still supporting good works.

As for Thomas Dixon, he seemed to have found himself when he published *The Life Worth Living* in 1905. He had his dreamed-of Virginia plantation and his wealth and fame, and he and his wife and two sons seemed to enjoy exploring the Chesapeake and hunting on the barrier islands. But perhaps because of the poverty that defined his youth, the life worth living was still not quite enough. Dixon always needed more, and he ended up with less. ❧

Curtis J. Badger has written widely about the natural and human history of the coast. His most recent book, *Letters Home*, written with his wife Lynn, is a collection of letters written by family members during the post-Gold Rush days in California to family back home in Va.





ON THE ROAD FOR KESTRELS



By Dan Bieker

It's 7 a.m. on a chilly December morning and as I pull into his driveway, birding buddy David White comes limping out.

"How's that sciatica?"

"Tolerable" he mutters. "Let's go, we're burnin' daylight."

So we're off: two grizzled foot soldiers headed down the road with a truckload of kestrel nest boxes, two by fours, ladders, screw guns, hammers, and the smell of fresh coffee wafting through the cab. Today it's just two of us, half of the Virginia Society of Ornithology's (VSO) Kestrel Strike Force. Our mission: to erect as many nest boxes as we can before dark. If we're lucky, maybe ten.

It's all part of the VSO's initiative to install nest boxes for the American kestrel (*Falco sparverius sparverius*) in suitable habitat throughout the state. No doubt about it, this little falcon is in trouble. According to the North American Breeding Bird Survey—a massive data collection effort overseen by the U.S. Geological Survey—kestrel numbers in the U.S. have declined by half since the late 1960s.

We're not naive; nest boxes alone will not save the kestrel. Reasons for their decline are many and not fully understood, but nest boxes can help boost populations where natural cavities are scarce. Other factors include a shift to more monoculture farming, competition from European starlings, and the ever-present threat from pesticides. The neonicotinoid family of insecticides is especially concerning, as evidence continues to mount on the harmful effects of these chemicals. "Neonics," as they are called, can dramatically reduce the quantity and diversity of insects, and kestrels are voracious insect predators.

Luckily, the four-wheel-drive truck is up to the challenge as we slog through a slimy stew of mud and manure on an Orange County cattle farm, scanning for fence posts. Mounting boxes on fence posts avoids having to dig a hole and set a separate post (an unappealing proposition for us). Actually the box is attached to 12-foot, treated two by fours fastened into a "T," then raised and screwed to a fence post. We can also place boxes on trees if they're in open fields and have an unobscured

trunk, or outbuildings if relatively free of human activity. The Strike Force endures mud, manure, barbed wire, ticks, chiggers, and livestock of questionable temperament, but we carry on!

At another stop, an interested but cautious farm lady worries kestrels will eat her cat. "No," we explain, "they won't eat your cat, your chickens, or your poodle. Kestrels are small, about the size of a blue jay, and eat mostly mice and voles as well as lots of insects."

"Wonderful" she smiles in relief. "Have at it!"

Primarily denizens of farmland, kestrels are the most colorful of all raptors, with males sporting striking blue-gray wings and females a rich, tawny brown all over. Like their cousin the peregrine falcon, kestrels are sleek, agile, and incredibly powerful for their size. Look for them patrolling over pastures or sitting patiently on utility wires, ready to pounce on whatever small critter lands in their sights. Besides small mammals and insects, they also prey upon lizards, frogs, snakes and—rarely—small birds.

Left: A male kestrel perches on top of a chosen nest box awaiting approval from his mate. Photo © Maslowski Productions. Top: Male kestrels are the most colorful of Virginia's raptors. Photo © Bob Schamerhorn.



Female kestrels are in charge of most of the brooding, keeping chicks secure, warm, and fed with food brought by the male.



Growing chicks need more food so the female assists in the hunt, here with a mouse.

Typically a male will scope out nesting sites during the winter, attempting to lure a female. As cavity nesters, kestrels are quite adaptive! They will nest in abandoned squirrel cavities, cracks in barns and other buildings, even high up in the metal pipe openings of electric transmission towers. Fortunately for our purposes, they take readily to nest boxes.

Our boxes are built with northern white cedar, which is incredibly light, durable, and weather resistant. Panels on the side allow access for cleaning and research purposes. Kestrels are quite messy, though it doesn't seem to bother them much, and once a box is inhabited it tends to be used year after year. One box in a long-term VSO study was claimed 15 years in a row, with debris accumulating within inches of the entrance hole, and was still being successfully used. Kestrels do not build any nest inside their box; a few inches of added wood chips, however, affords some padding and helps nestle the eggs.

Three to five eggs are typically laid, starting in March or April. Kestrels are attentive parents, with each partner taking on specific roles. Most of the brooding is done by the female while the male brings food, especially closer to hatch time. Incubation takes about a month, and the chicks spend another month in the nest before fledging.

At our next stop, David spies a female kestrel atop the bare branches of a walnut tree. What better sign! It takes about 15 minutes to assemble the two by fours, attach the box and predator guard, and screw the assembly securely to a fence post. Sometime during the operation she has flown off. We can only hope she'll return and take up residence before her primary nemesis appears.

Starlings! Those pesky, introduced freeloaders have disrupted so many of our native cavity nesters. One has to respect their tenacity, but on a practical level they spell trouble. "Skags,"

as country folk are fond of calling them, will eat anything and nest in just about any hole. A kestrel can whip the tar out of a skag if it chooses, but once a starling has taken up residence in a box it's less likely that a kestrel will do so. We're not shy about informing landowners that it's perfectly legal to 'dispatch' starlings at any time, or to at least remove the eggs and nest if they're willing to access the box. Other species are more welcome, especially screech owls—since kestrel boxes are ideally suited to these diminutive raptors. Native bluebirds, flickers, red-headed woodpeckers, and tree swallows are also welcome inhabitants.

Kestrels are most definitely birds of open country, and the rural backroads of the Piedmont, Shenandoah Valley, and Allegheny Highlands are where most of Virginia's kestrels reside. As old farmsteads

(and farmers) gradually die away and development creeps farther into the countryside, kestrels and other species are being squeezed out. Their decline closely mirrors the demise of other open country and grassland species, such as bobwhite quail, upland sandpiper, grasshopper sparrow, and loggerhead shrike. While many factors are at play, habitat loss is major. Kestrels are also under attack from the air. Fledglings are especially vulnerable to Cooper's hawks. For this reason it's best not to place boxes along woodland edges, where Cooper's hawks like to patrol.

Our next stop is a remote backroad cattle farm that even Google Maps apparently has not found. No fence posts here, so we scan for trees, settling on a lone standing poplar. After a few branches are pruned away I mount the box on my shoulder and shinny up the ladder, while my trusty cohort stands comfortably on terra firma barking out orders. "A little higher ... more left ... no!, more right!" It's a juggling act, with one hand holding the box while fumbling with screws and a drill in the other. Funny how the wind blows twenty miles an hour faster and ten degrees colder fifteen feet up a ladder.

Keeping tabs on our more than 450 boxes scattered around the state is beyond the capability of the volunteer strike force, so landowners are encouraged to report on activity with their boxes. One monitoring project is ongoing, however, in Highland County, which hosts over 70 boxes. The effort is headed by local resident Patti Reum, who along with Mary Ames has been a dedicated strike force member since its inception. Using a wireless inspection camera that can peek into the boxes with minimal disturbance, Patti and other volunteers monitor boxes during the breeding season. Highland County is a stronghold for kestrels, with plenty of open country and livestock operations. Over 70 percent occupancy by kestrels has been observed in the boxes monitored there.

As natural nesting cavities become scarce and competition increases, the VSO's nest box project will hopefully provide more opportunities for kestrels to raise their young. An equally important facet of the project is landowner education. Property owners are encouraged to preserve brushy areas, keep old fencerows in place, leave dead trees standing, and think hard about eliminating pesticide use.

Few birds possess the tenacity, fascinating antics, and colorful appearance of the American kestrel. An icon of American farmland, they symbolize our country's rural heritage like no other species. Hopefully they will continue to be an integral part of our rural landscape, something our children and grandkids can continue to enjoy down the road. 🦅

Dan Bieker is an assistant professor of natural sciences at Piedmont Virginia Community College and vice president of the Virginia Society of Ornithology.



Kestrels are cavity nesters but loss of habitat makes holes difficult to find. This older chick calls to a parent from its nest cavity.

WANT TO LEARN MORE?


VSO
 Conservation Committees
 Kestrel Project:
www.virginiabirds.org/news/2018-kestrel-project-update



Kestrels are often seen hunting from fence posts and telephone wires along rural roads.

FISHING SEASON IS ALMOST HERE!

A PRE-SEASON CHECKLIST

Story and photos by David Hart



Do you hear that? That's the sound of spring creeping up on you. There may be a blanket of snow on the ground and a brisk wind rattling your windows today, but before you know it, birds will be singing, trees will be blooming and the fish will be biting. Yep, fishing season is right around the corner. Will you be ready?

With a little effort and a few hours here and there, you can get a jump on the upcoming fishing season and have all your gear in working order when that first mild day calls you outside. Here's a checklist of things you can do to get ready.

Spring Cleaning

What started out as a museum-quality display of lures, hooks and other gear turned into a jumbled mess of tackle at the end of the fishing season. Yeah, your tackle box is a disaster, isn't it? The perfect time to clean it up and organize that mess is today. Spread an old sheet across your kitchen table, grab all your fishing gear from the garage and get to work.

Wipe down dirty lures with a paper towel dipped in warm, soapy water. Replace rusted or broken hooks and toss lures beyond repair in the trash. Sharpen dull hooks and organize

(cont. pg 20)

Fishing Pre-Season Check List

January 1, 2019

- 1) Get a sheet, cover table, dump out tackle box.
- 2) Clean lures with soapy water, paper towels.
- 3) Set aside lures that need hook replacement and/or sharpening. Locate hook sharpener. Throw out unusable lures . . . REALLY!
- 4) Sort lures, flies, and hooks by size, style, and/or purpose. Create species specific tackle boxes for smallies, muskie, big catfish, and trout.
- 5) Do I need any more hooks, weights, lures?
- 6) Grab reels and plan on new line for all. Decide type and test for each.
- 7) Check out up-coming fishing/outdoor shows for new gear. (Look for new boat, don't tell wife!)
- 8) Check DQIF website for fishing info. Renew licenses & subscription to Virginia Wildlife magazine!
- 9) Old boat & motor; change oil, check spark plugs, fuel lines, hoses, electrical. Replace fire extinguisher & flares. Are life jackets in good shape? Trailer lights & work? Registration up-to-date? (look for new boat!)

INFORMATION ON LICENSES & WHERE TO FISH

Department of Game and Inland Fisheries
www.dgif.virginia.gov/fishing
www.gooutdoorsva.com

NEW! Find Wildlife VA: Fishing
<http://vafwis.dgif.virginia.gov/findwildlifeva>



Pulling out last season's lures can be time consuming now, but well worth the effort come fishing season.



Organize and replace weights and hooks before the season gets into full swing.

UPCOMING SHOWS

Richmond Fishing Expo
www.richmondfishingexpo.com

Virginia Fly Fishing Festival
www.vaflyfishingfestival.com

Western Virginia Sports Show
www.westernvasportshow.com

Mid-Atlantic Sports and Boat Show
www.vaboatshow.com

Bass Pro Shops annual Spring Fishing Classic
www.basspro.com/shop/en/fall-and-springclassics

them by size, style or purpose in separate compartments in your tackle box. Separate lures by style, size, and species of fish they catch. An organized tacklebox will help you spend more time casting and less time searching.

Strip last year's monofilament off your reels and fill the spools with fresh, new line, but make sure you match that new line to your reel size and the fish you plan to catch. Eight-pound test, for instance, is a good all-purpose line for medium-action spinning reels and such fish as crappie, smallmouth bass, and trout. Twelve or 14-pound mono is great for baitcasting reels and most largemouth bass fishing applications.

Stock Up

As you clean and straighten your tackle, make notes on what you need for another productive season. Are you low on certain types of hooks or weights? Did you run out of a specific lure that caught a lot of fish last year? Shop now before your favorite lures sell out. Whether you visit a local tackle shop, a big-box retailer like Bass Pro Shops or buy your gear

online, there's no better time to restock your tackle box than right now. You may be able to get those lures or even a new rod and reel for the best price of the year thanks to pre-season sales.

Showtime!

Before you start shopping, spend a day at one (or all) of Virginia's outdoors shows that cater to hunters, anglers, and boaters. You will not only get to see the latest tackle and gear on the market, you can get some of the best deals of the year. Local and national experts conduct seminars on Virginia waters and techniques that will help you catch more and bigger fish. You can even join local fishing clubs and meet others who love to fish as much as you.

The Richmond Fishing Expo and Virginia Fly Fishing Festival is held in Doswell at the state fairgrounds in January; the Western Virginia Sports Show takes place in Fishersville in February; and the Mid-Atlantic Sports and Boat Show is held in Virginia Beach in early February. Bass Pro Shops holds its annual Spring Fishing Classic at its Ashland store in the late winter, too.

Go Surfing

When that first mild day calls you out of the house, where will you go? A wild trout stream deep in the mountains? A bass-rich tidal river? Maybe catfish or crappie in one of Virginia's reservoirs? The good news is that there are hundreds, even thousands of choices scattered across the state. Even better? The DGIF's website can help narrow that search before you pull out of your driveway. It not only has regulations for every game fish species in the state, it is filled with useful information to make your fishing season a productive one.

One of the most helpful tools is a new interactive map that helps you find fishable waters throughout the state. Hundreds of lakes, rivers, and streams and the species of fish most common in each are highlighted through clickable icons. Search by species, body of water or just poke around the map to find new places to fish. It includes public access points on major rivers, public lakes and the top species in each. An interactive trout fishing map also lists stocked, special regulation, and wild trout waters throughout the

state. Both maps also show state roads and public land boundaries.

While you are on the website, don't forget to renew your fishing license. You can even sign up for a new feature that allows you to auto-renew your license when it is set to expire. You will never have to worry about forgetting your license again.

Tend Your Boat

Whether you pull a sleek new fiberglass bass boat, a well-worn johnboat or you throw a kayak on top of your car, there is no better time to get your watercraft in proper working order than right now. A thorough cleaning is always a good idea before the season starts.

So is some general maintenance. Change the oil in your outboard, check the spark plugs and inspect the fuel line and other hoses. Replace them if they are worn or cracked or take your motor to an authorized service center if you want to leave it to a professional. Don't wait. Once boating season gets started, boat repair shops can be backed up for weeks.

Inspect the trailer before you tow

your boat anywhere, as well. Check the grease in the wheel bearings and add more if needed. Inspect the tires. Are they dry-rotted or worn? Replace them before your first outing of the year.

The trailer's lights might need some work, too. Check the bulbs and replace them if needed. Inspect the wiring. Blown bulbs are often a result of electrical shorts, which can be caused by wires rubbing against the trailer. Don't wait until you get pulled over by a law enforcement officer to find out your lights aren't working properly.

Fire extinguishers can lose pressure, even if they have never been used. Check yours and replace it if necessary, and inspect life jackets for wear.

How about the registration? Any boat that is equipped with a motor, no matter the size of the boat or the size or type of motor, must be registered with the DGIF. Either way make sure yours is up-to-date or register your boat through the Department's website. You can also take a boater's safety course online. It is now mandatory for anyone operating a boat with a 10 horsepower or larger

engine or anyone over 14 years old operating a personal watercraft.

Set Some Goals

Bored with the same waters and the same fish? Then, make plans to try something new. Whether your goal is to catch different species of fish, travel to remote corners of the state or try an entirely new method of fishing, make a vow to spend more time on the water this year.

Set aside days to explore new lakes, float a new river, or fish a trout stream that you've always wanted to fish. Don't let anything come between you and those plans.

Even better, set a goal to introduce two or three or even five new people to fishing. Invite a neighbor or co-worker to a favorite water and teach them how to catch their very first fish.

Before you know it, fishing season will be here. Are you ready? 🎣

David Hart is a full-time freelance writer and photographer from Rice. He is a regular contributor to numerous national hunting and fishing magazines. Contact him at hartfish1@gmail.com.

- January 1, 2019
- DONE
- ## Fishing Pre-Season Check List
- ✓ 1) Get a sheet, cover table, dump out tackle box. Wife found sheet with rust on it...need to buy new sheet
 - ✓ 2) Clean lures with soapy water, paper towels.
 - ✓ 3) Set aside lures that need hook replacement and/or sharpening. Locate hook sharpener. Throw out unusable lures...REALLY! Keep jitterbug Dad gave me in 1968.
 - ✓ 4) Sort lures, flies and hooks by size, style, and/or purpose. Create species specific tackle boxes for smallies, muskie, big catfish, and trout. Need: Puff Daddy, 10 & 12 (5 each), various nymphs, Latest muskie lures?
 - ✓ 5) Do I need any more hooks, weights, lures? Need: Team Catfish 8/0 Double Action circle hooks, Bank sinkers, 4 - 10 oz
 - ✓ 6) Grab reels and plan on new line for all. Decide type and test for each. Take reels up to local tackle shop for spooling new line. More tippets!!!
 - ✓ 7) Check out up-coming fishing/outdoor shows for new gear. (Bought new boat, don't tell wife!) Check Virginia Wildlife magazine's, "Out & About" for latest show
 - ✓ 8) Check DGIF website for fishing info. Renew licenses & subscription to Virginia Wildlife magazine! Add trout license and National Forest permit to auto renewal
 - ✓ 9) Old boat & motor; change oil, check spark plugs, fuel lines, hoses, electrical. Replace fire extinguisher & flares. Are life jackets in good shape? Trailer lights work? Registration up-to-date? (Look for new boat!) Sell old boat, buy new gear for new boat! Take wife out to her favorite restaurant.

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2019 Virginia Wildlife Calendar

www.shopdgif.com

Virginia's Most Mysterious Birds

By Glenda C. Booth

In the dead of winter 2015, people lined up spotting scopes all day long just north of Reagan National Airport's runways, transfixed by a snowy owl (*Bubo scandiacus*) patiently perched under arriving and departing planes. Others stood for hours in JC Penney's Springfield Mall parking lot where another snowy owl sat on the roof for hours, mostly immobile and unfazed by the local "paparazzi."

In 2013-14, Virginia had what retired biology professor Clair Mellinger calls "a snowy owl invasion." Snowies were recorded all over the state in "numbers not seen in a century or more," observed Bryan Watts. The year 2013 was "like a tsunami" that gave Virginians "an adrenalin rush," he observed in a William and Mary College Center for Conservation Biology blog. Ornithologists call this phenomenon an irruption.

Few people see owls in their lifetimes, so to see a bright, white Arctic bird in Virginia is a thrill for birders and non-birders alike. Colin Surovell, then age nine, marveled, "That snowy owl was way cooler than a crow."

The Owl Mystique

The over 220 or so owl species in the world have intrigued people for millennia. At times called "ghost birds," owls are largely nocturnal and to some people, seem mysterious, stealthy, and even spooky. They hoot, hiss, howl, wail, yowl, and scream. To the Romans, owls presaged death. For the Greeks, owls portended military victory. Owls are common nursery rhyme themes and school mascots. "Owls are icons for everything from potato chips to cigars," Virginia expert John Spahr says.

Basics

Owls live on all continents except Antarctica and are found in many habitats: suburbia, forests, farms, high desert steppes, the tropics, and polar regions. The elf owl (*Micrathene whitneyi*) in the western United States weighs around 1.5 ounces; the Eurasian or European eagle owl (*Bubo bubo*) can weigh up to 9.3 pounds.

Four owl species regularly nest in Virginia. Short-eared and northern saw-whet owls, common winter residents, are also known to breed in the state. People

see a few additional species, but there's never been a statewide survey of all species, says Jeff Cooper, a biologist who specializes in raptor research for the Department. Surveying owls is challenging. Most are excellent at camouflage and primarily active at night.

Special Characteristics

Owls have several special features or adaptations. Their satellite-dish-shaped face funnels sound to their asymmetrical ears, positioned to help determine where sound is coming from. With supersensitive hearing, owls can pick up the sounds of prey rustling on the ground or a mouse digging under two feet of snow.

Unlike most birds with eyes on the sides of their heads, owls have large eyes that face forward, like human eyes, and probably ten times better. Their tube-shaped eyes help them see faraway objects. Owls have nictitating membranes that help block dust. To see at their sides, owls must swivel their heads, and most can turn their heads 270 degrees.

Owls have comb-like, primary flight feathers on their large wings' leading



© Ann and Rob Simpson



© Bill Lea

Eastern Screech Owl



© Bill Lea

Barn Owl



© Bill Lea

Barred Owl



© Shutterstock

Great Horned Owl



© Shutterstock

Short-eared Owl



© Annand Rob Simpson

Northern Saw-whet Owl

edges enabling silent flight and stealthy approaches. Their talons are curved and sharp, adapted to seize and squeeze prey. Their leg and foot bones are especially stout for landing hard on prey.

An owl's beak curves downward, unlike most other raptors with protruding beaks. Mice, shrews, voles, and small birds are their most common prey. Adults eat their prey whole and regurgitate indigestibles, like bones and feathers, as a pellet. They can tear large prey apart, gulp down pieces, and take pieces to nesting owlets.

Virginia's Owls

Eastern Screech Owl

The eastern screech owl (*Megascops asio*) is one of the most common owls seen in Virginia, "ubiquitous," reports Spahr, adding, "not that they are that easy to see." They are 8.5 inches in length and weigh around six ounces. Masters of disguise, the owls' plumage blends in with the tree bark of the holes and hollows of trunks where they spend much of the day. Some are reddish brown, while others are gray.

If you think you hear a horse whinnying in the spring, it's likely screech owls pairing up, says Spahr. Their name comes from their screeching call. Spahr has

done nocturnal surveys and monitored nest boxes in Highland County for about five years to understand the relative distribution of the red and gray morphs. He estimates that in Virginia around 60 percent are red and 40 percent, gray. "These projects have yielded hundreds of encounters with this attractive little owl and have given me some insights into the how, what, when, and where of searching for this species and potential breeding documentation," he offers.

Barn Owl

Barn owls (*Tyto alba*) have a distinctive, heart-shaped face, earning this species the nickname "monkey owl." They have a white underside, long legs, and several calls—a bark, hiss, and click trill. They weigh about a pound and are 16 inches long.

Barn owls usually hunt over open fields at night. According to Cornell University's *All About Birds*, "The barn owl has excellent low-light vision and can easily find prey at night by sight. But its ability to locate prey by sound alone is the best of any animal that has ever been tested. It can catch mice in complete darkness in the lab or hidden by vegetation or snow out in the real world."

Cooper surveyed barn owls for many years in central Virginia and says they are relatively common in Orange and Culpeper counties. He installed nesting shelves in barn silos, monitored the birds' activity, and banded chicks. Cooper dubs them "wacky birds," because they can have young at any time of year.

While one nest in natural cavities in hollow trees or in river banks, like those of the Rappahannock River's Fones Cliffs, Cooper says that barn owls are almost solely dependent on artificial structures. These can include barns, abandoned buildings, church steeples, bridges, and tunnels. Traditionally, "barns were easy for them," but today Cooper is seeing older silos with an open ledge at the top being replaced with tank-type silos without ledges. Because of their declining population, the state lists the barn owl as a "Tier III, Species of Greatest Conservation Need" in its Wildlife Action Plan.

Barred Owl

Barred owls (*Strix varia*) are more heard than seen, known for their haunting, baritone night call, "who cooks for you, who cooks for you-all." They get their name

from their "bars" or striped plumage.

Around 21 inches in length and a little over a pound, they are one of the few owls that people see during the day, but generally, they roost during the day and hunt at night. They tend to be in older forests but are highly adaptable to varied habitats, including mixed forests and disturbed areas. They appear to be very tolerant of people. "Barred owls are the opportunists of the owl world," wrote Leigh Clavez in *The Hidden Lives of Owls*.

Great Horned Owl

Great horned owls (*Bubo virginianus*) have no horns, but with long feathered tufts on their heads, an intimidating stare, and hooting voice, this is the owl every schoolchild would likely draw if tasked.

Among owls, they are big ones, at 22 inches in length and three pounds in weight. Considered to be widespread, great horned owls prefer undisturbed habitats and forests, but are also found in wetlands, grasslands, and other semi-open habitats. Because they have excellent night vision and are superior hunters (they can take large raptors, skunks, rabbits, snakes, and even porcupines),

they've been called the "tigers of the sky" as their deadly grip can sever the spine of any prey.

Short-eared Owl

Short-eared owls (*Asio flammeus*) are uncommon to rare in Virginia, but are known to breed here. They are most often seen outside the breeding season, in places like the UVA's Blandy Experimental Farm in Boyce, in Tazewell, Culpeper and Orange counties and at DGIF's Saxis Wildlife Management Area, among others. Their small ear tufts are often invisible unless alarmed. Heavily streaked overall with a whitish face and yellow eyes outlined in black, they are 13-16 inches long and weigh seven to eight ounces. They prefer open areas like marshes, meadows, and fields and hunt during daylight flying low over the ground.

Northern Saw-whet Owl

Several Virginians are studying the state's most elusive owls. Northern saw-whet owls (*Aegolius acadicus*) are Virginia's smallest breeding owl. At seven to eight inches in length and weighing two to five ounces, they have bright yellow eyes and a cat-like face. The male's shrill breeding

call sounds like sharpening a saw blade on a whetstone; hence their name. They are highly nocturnal and masters at hiding from view.

The northern saw-whet is one of the most understudied birds in the state, says Dr. Ashley Peele, coordinator of Virginia's second Breeding Bird Atlas. Jay Martin of the Blue Ridge Discovery Center concurs: "Not a lot is known about it in this range, this far south." Virginia's Wildlife Action Plan lists them as a Tier I, Species of Greatest Conservation Need.

To better understand this little gnome of a bird, several Virginians are banding saw-whets. Martin is surveying the saw-whet population on Whitetop Mountain and Mount Rogers, in coordination with DGIF and the U.S. Forest Service. He gathers field data to eke out the differences in forest types between occupied and unoccupied habitat. He is also mapping breeding and wintering ranges. "The northern saw-whet owl is the perfect charismatic species to inspire a broad range of people to appreciate the biodiversity of the Blue Ridge," he argues.

Liberty University's Dr. Gene Sattle has banded over 400 migrating saw-whets near Lynchburg, and Clair



Owls live among us whether we know it or not. Here, an Eastern screech owl sleeps camouflaged in a suburban neighborhood tree.



Owls, such as this barred owl, are the only birds with silent flight making them adept hunters.

MORE INFORMATION

The Global Owl Project,
www.biologicaldiversity.org

Owl Research Institute,
www.owlresearchinstitute.org

Project OwlNet
www.projectowl.net

All about Birdhouses
www.nestwatch.org

Virginia Breeding Bird Atlas,
<http://amjv.org/vabba/getting-involved>

Mellinger, a retired Eastern Mennonite University biology professor, has banded over 1,700 saw-whets moving through Virginia since 2001. His team catches from 50 to 300 birds every November in Rockingham County, with a five to ten percent recapture rate.

These biologists are analyzing migration timing, differences in magnitude of flights among years, and differences in timing and movement among age and sex classes. “The exciting part is that there are a lot more owls around than we thought,” says Mellinger.

A Rare Visitor

At the Blandy Experimental Farm in 2015, Judy Masi heard some “little birds going crazy,” says her husband, Dr. David Carr, Blandy Director. Carr soon learned that the birds were aroused by an unexpected visitor, a long-eared owl (*Asio otus*) perched in a dense arborvitae near a building. The “Blandy” owl, presumably the same bird, returned the winter of 2016-17. “It is extremely rare to find this bird in Virginia,” explains Carr. “We’re at

the southern limit of where it winters in the East. It is an extremely secretive bird, highly nocturnal, and picks roosts hard to find.”

Long-eared owls are around 14 inches in length and weigh from 7 to 15 ounces. Their populations have fallen an estimated 91 percent in North America since 1970, reports Partners in Flight.

Challenges

Habitat loss and fragmentation and human encroachment are the leading threats to owls. The habitats of mice, voles, and other small prey—typically meadows, fields, and grasslands—are vanishing. Climate change is altering habitat, ranges, and migration timing.

Owls can be injured or killed as they navigate the human-modified landscape. Many fly low over roadways or catch prey on roadsides, risking collisions with vehicles. Because they hunt at night, they are hard for drivers to see. Owls can also collide with fences and become tangled in the wire. They can die from ingesting poisons used to kill rats, mice, and other

rodents. Some rodenticides can interfere with blood clotting and cause victims to bleed to death. At the Wildlife Center of Virginia, screech owls are the most common injured owl brought in, but the center also gets barred, barn, and great horned owls. In 2017, of 1,208 intakes, ten percent were owls.

And there’s the information gap. Peele puts it this way: “Nocturnal species are a perpetual challenge for bird conservation. Many volunteers may not feel comfortable walking a trail or driving rural roads at night to listen for owl hoots or whip-poor-will cries. This means that, at any given time, our understanding of the current distribution and status of owls, nightjars, or American woodcocks is incomplete at best.” She invites help in filling in our knowledge of what she calls, “Virginia’s most mysterious bird species.”

Glenda C. Booth, a freelance writer, grew up in Southwest Virginia and has lived in Northern Virginia over 30 years, where she is active in conservation efforts.



One of an owl’s challenges is crossing roadways hunting for prey. Here, Gary Williamson, a retired state park ranger, holds a great horned owl that didn’t make it. It is illegal to collect road kills of owls so, unless they are still alive and need to go to a rehabilitator, please leave them.

Manage

F O R E S T S

for Diversity



Given its grand scale and imposing features, it would be easy to think that a forest's most sublime state is as old growth. This may be a reason that various groups have, for the past four decades or so, lobbied against any timber cutting in the George Washington and Jefferson National Forests (GWJNF). But we understand today that, scientifically, many species of wildlife (including some three dozen species of songbirds along with many game animals) require young forests for all or part of their lives.

That and the fact that many species of trees (Virginia pine, for example) don't live long enough to become old growth, or they provide little food for wildlife even if they do subsist for decades (maple, poplar, ash). A paucity of young forest stands has caused a serious decline in songbird, deer, turkey, and grouse numbers on the GWJNF and the suppression of next-generation oaks entering the ecosystem.

Enter conservation organizations and Wayne Thacker of Bumpass who together have formed the Virginia Wildlife Habitat Coalition, which advocates for more young forest regeneration on public land being created through sustainable timber harvests. Members of the coalition include the heads of such organizations as the Virginia Deer Hunters Association (VDHA), Virginia Bear Hunters Association (VBHA),

the Virginia Hunting Dog Alliance, and state chapter leaders of such organizations as the Quality Deer Management Association, National Wild Turkey Federation, Rocky Mountain Elk Foundation, and Ruffed Grouse Society.

Richard Sprinkle, president of the VBHA, believes a real need for the coalition exists. "One of the biggest wildlife-related problems right now is the increase of bear/human conflicts in neighborhoods and even urban areas and in areas near or adjoining the national forest," he says. "The bears do not have enough hard or soft mast food in the national forest because of the lack of young forests and oak regeneration.

"So they are forced to leave the national forest in the summer to look for soft mast foods such as pokeberries, huckleberries, and blackberries. And in the fall and winter, the bears often leave as well because of the lack of acorns and other hard mast. If we had more young forests in our public lands, we'd have fewer bear/human conflicts on our private lands."

Denny Quaiff, who directs the VDHA, agrees and says his organization has become active on the public land habitat front. "After months of hard work, we have formed the Virginia Deer Hunters Educational and Habitat Foundation. Money donated to this foundation will be tax exempt and go toward scholarships and habitat improvement projects on public

land. These projects will be on a landscape-wide basis and involve the purchase of trees, seeds, fertilizer, and equipment. Projects will benefit not only deer but also many other species of wildlife.

"Last year we were also able to purchase a grain drill from funding that our western VDHA Chapter strongly supported. The drill is being used by the DGIF to establish wildlife food plots on state WMAs and national forest lands. With our newly formed foundation in place it's our hope that more equipment can be purchased in order to continue expanding this effort."

Mike Donahue, a biological technician for the GWJNF, believes that more young forests would benefit such creatures as songbirds and butterflies as well. "Disturbances from natural causes (including beavers, ice and other weather-related events) plus fire, disease, and tree-fall gaps create openings in the forest canopy where young forests begin to regrow," he says.

"Grazing, timber harvest, and controlled burning can mimic natural disturbances and may serve the needs of many open-habitat species. A number of disturbance-dependent species and communities inhabit these openings or the edges around the openings year-round.

"These openings serve as ideal nesting habitat, cover, foraging areas, and nectar sites for a host of species. Forest birds

By Bruce Ingram

Top: Each spring tropical migrants, such as this yellow warbler, arrive in Virginia looking for nesting habitat. Photo © Shutterstock. A black bear and her cub depend on open foraging areas for food. Photo © Paul McCroskey. Blackberries are a great food source. Photo © Bruce Ingram.

The Coalition

"All representatives of our member organizations are working hard to support their own organizational mission, and the coalition represents solid agreement across all organizations on the importance of a habitat mosaic on Virginia's public lands," says Wayne Thacker. "We got our start in Spring 2015 during a meeting with then GWJNF Supervisor, Tom Speaks.

"Several hunting conservation organizations participated with other forest users in the GWJNF Stakeholder Collaborative that worked together to provide input on the Forest Plan Revision and recognized the need to continue. More concerned preservationists wanted to save all the trees by ending all commercial logging on all public land. Speaks

noted the importance of a consistent message and involvement in forest planning on the part of hunting organizations in collaboration with the USFS/GWJNF and any stakeholder structures."

As coalition chair and spokesman, Thacker represents the group in various efforts, which include presentations, letters to Congress, serving on the GWJNF Stakeholder Steering Committee, representing the coalition in some national forest meetings, and anything having to do with timber harvest and related data.

"The coalition functions like a bunch of folks sitting by the fire. We come and go, tend our individual business, and work together toward increased active management on Virginia's public land," he explains.

such as thrushes, tanagers, and warblers actually need the habitat young forests and open woodlands provide to survive. The abundant insects and berries produced in young forests help newly fledged birds quickly grow and fuel up for a successful southward migration in autumn."

Donahue adds that young forests are also important to animals often thought of as woodland dwellers. Black bears use woodlands, but they also frequent young forests to gorge on berries, consequently building up fat reserves before hibernating in their winter dens. Small mammals like mice, squirrels, rabbits, and bats also use young forests to find meals. Butterflies and other pollinators benefit greatly from open, treeless early successional habitats, where they can find the nectar of wildflowers. In short, different species need young growth open areas with thick escape cover nearby along with older growth for mast—a mosaic of diversity.

Specific Project

The Virginia Wildlife Habitat Coalition is very excited about the Lower Cowpasture Restoration and Management Project in the GWJNF. The project involves Douthat State Park, The Nature Conservancy's Warm Spring Mountain Preserve, and 77,700 acres in the national forest itself.

Altogether, some 117,500 acres will be positively impacted.

Objectives include: restoring the health and diversity of fire-adapted forests and rare plant communities; enhancing habitat for declining early succession species and those of greatest conservation need; improving the function and connectivity of streams, which will benefit brook trout and rare fish and mussel species; and providing resilient ecological systems capable of overcoming the negative effects of climate change.

Hope for the Future

DGIF's Deer Project Coordinator Nelson Lafon believes the message that more young forests are needed is finding followers.

"It's worth noting that public pressure or litigation isn't necessarily the main reason for reduced timber sales on national forests anymore," says Lafon. "In fact, it seems that stakeholder input into forest management is less adversarial than it was in the past. Part of the reason is the success of the stakeholder collaborative, where wildlife, timber, recreation, and wilderness proponents work together.

"GWJNF staff are certainly supportive of increasing active management on our national forests, but the limiting factor

is often the number of folks to get things done. USFS staff positions have declined significantly over the last decade, meaning there are fewer folks to help plan and administer projects of all kinds. This includes timber projects as well as recreational projects. It's also worth noting that acreage burned on national forests has increased as timbered acreage has decreased."

Wayne Thacker believes that as people better understand the benefits of more timber management, they'll also understand why creating different age classes of forest makes the GWJNF a more healthy and resilient landscape, better able to fend off disease.

"The coalition advocates for all types of habitat in the GWJNF from young forests created by timber cutting and prescribed burns to mature forest," Thacker concludes. "We feel a mosaic of habitat types is best for wildlife." ❧

Bruce Ingram's latest book is [Living the Locavore Lifestyle](#); for more information on this work and his river fishing and floating guides, go to <https://sites.google.com/site/bruceingramoutdoors>.



Clockwise, top: Wayne Thacker notes the lack of undergrowth in this area of the Jefferson National Forest. Photo © Bruce Ingram. Whitetail deer, photo © Ryan Yoder; chipmunk with acorn, photo © Paul McCroskey, all benefit from young forest habitat.

Habitat Challenges

The GWJNF consists of some 1.8 million acres, primarily in Virginia but with parcels in West Virginia and Kentucky. The Forest Service's own goal for this national forest is to create 3,300 to 6,400 acres of early successional habitat annually and ten times that every decade. In 2015, the forest in that crucial 0-10 year range was only 32 percent of the minimum acreage and just 17 percent of the maximum. For the GWJNF overall, just 0.6 percent of the forest was in forest 0-10 years of age and 1.6 percent in 0-20 years. Timber harvests on the GWJNF declined from about 6,000 acres per year in 1988 to about 600 acres per year in 2017.

Retired DGIF and current Wildlife Management Institute

biologist, Steve Capel, reminds folks that timber harvest does not reduce forest acreage; it simply rejuvenates forest to a younger age. Clearcutting is typically only a small fraction of timber harvests. Shelterwood and selective cuts are also needed. Older, closed canopy growth is not adequate for the creation of thicket habitat, as no sunlight reaches the ground to stimulate growth of lush vegetation that provides protection and food.

In short, regenerating young forests through sustainable harvesting helps protect the forest, creates wildlife habitat, and benefits local economies through job creation. For more information, go to The Young Forest Project: <https://young-forest.org>.

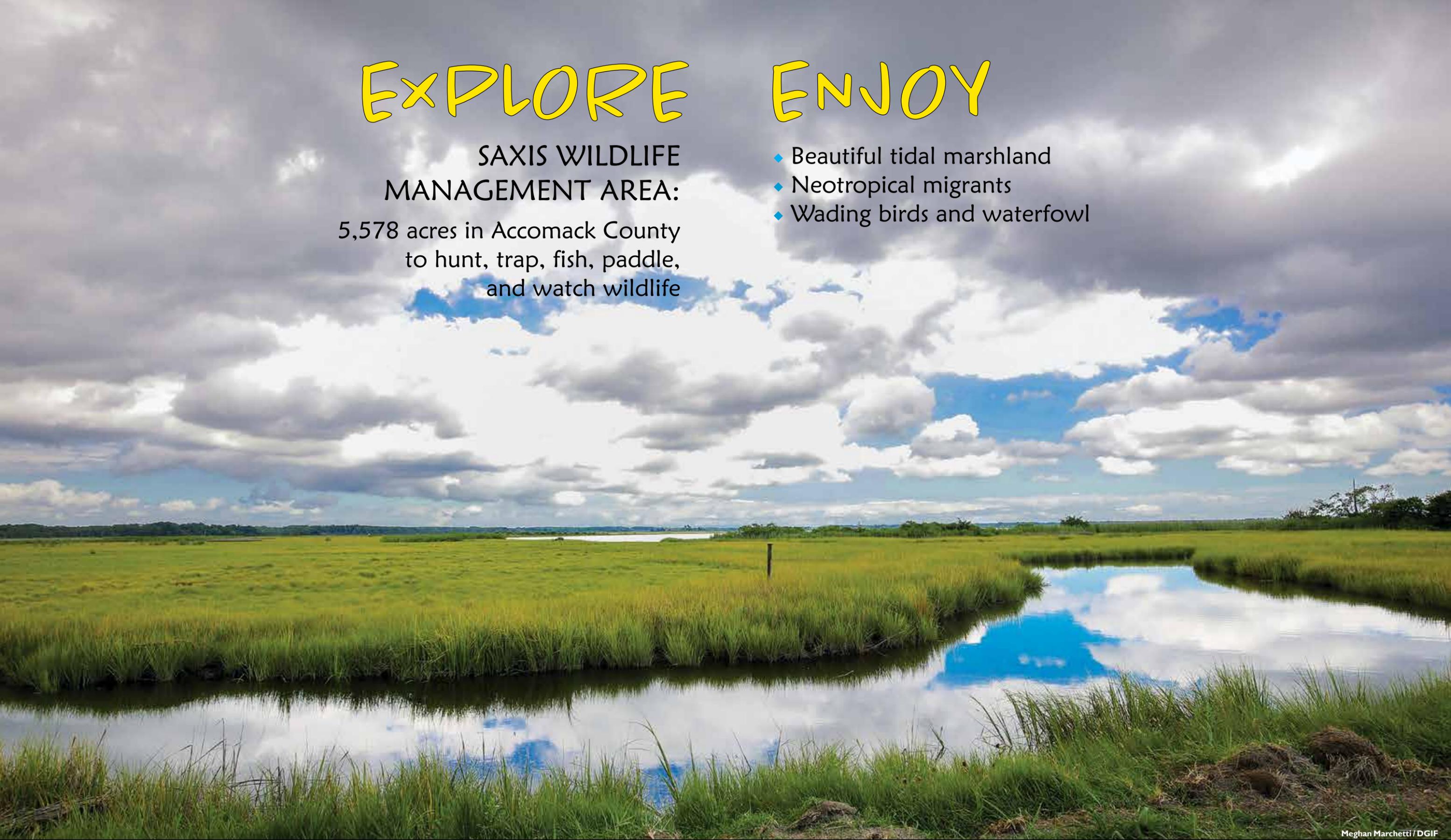
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SAXIS WILDLIFE MANAGEMENT AREA:

5,578 acres in Accomack County
to hunt, trap, fish, paddle,
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ENJOY

- ◆ Beautiful tidal marshland
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- ◆ Wading birds and waterfowl



Meghan Marchetti / DGIF

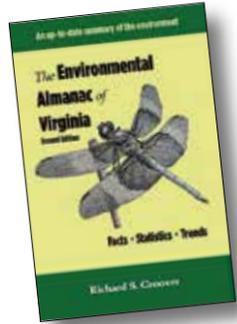


CONSERVE. CONNECT. PROTECT.

The Virginia Department of Game and Inland Fisheries maintains 44 management areas totaling more than 225,000 acres for a variety of outdoor recreational opportunities. For more information on how you can visit our wildlife management areas, go to: www.dgif.virginia.gov/wma.



OUT & ABOUT



Outdoor Classics by Beth Hester

The Environmental Almanac of Virginia, 2nd Edition

Richard S. Groover
2017 Hanover Films & Communication
Photos, Maps, Infographics and
Illustrations
virginiaenvironmentalalmanac.com
(804) 381-1968

"To the end that the people have clean air, pure water, and the use and enjoyment for recreation of adequate public lands, waters, and other natural resources, it shall be the policy of the Commonwealth to conserve, develop, and utilize its natural resources, its public lands, and its historical sites and buildings. Further, it shall be the Commonwealth's policy to protect its atmosphere, lands, and waters from pollution, impairment, or destruction for the benefit, enjoyment, and general welfare of the people of the Commonwealth."

– Section 1, Virginia Constitution

Virginia is home to a number of significant natural wonders, including the Chesapeake Bay. It is also gifted with an unusually broad range of ecosystems and habitats, many of which are under pressure from development, industrial and agricultural pollution, climate change, and invasive species. So it's no wonder respected academic, aquatic ecologist, and award-winning filmmaker, Richard Groover saw fit to end the introduction to his important, and well-researched book with that section of

our state's constitution that pretty much states that it's the Commonwealth's duty to protect Virginia's natural resources for the benefit of its citizens. Groover's compilation of facts, statistics and trends provide readers with a completely up-to-date, scientific summary of the state of Virginia's environment, covering both manmade and naturally occurring challenges. It also showcases the efforts of the many state and federal organizations charged with monitoring, conserving, and promoting Virginia's environmental health.

The book covers a wide range of topics including: the condition of our precious wetlands, the impact of invasive species, cities with the worst air quality, how climate change influences weather patterns, a listing of significant earthquakes in Virginia, and the state of our flora and fauna. Whether you're a data fiend, or simply someone who's interested in Virginia's environmental status, there is something of interest for everyone.

Here's just a sampling of the interesting factoids present in every chapter:

- The Chesapeake Bay could lose 50-80% of its tidal wetlands due to sea level rise in the 21st century.
- A one degree Fahrenheit rise in ocean temperature can increase a hurricane's

wind speed by 15 to 20 miles per hour.

- Approximately 50% of Virginians get their drinking water from underground wells.
- One Hackberry tree, over a thirty year period can remove 880 pounds of carbon dioxide from the atmosphere.
- Invasive snakehead fish have been found in Lake Anna.
- The August 2011 earthquake in Louisa County was a magnitude 5.8, which was the largest since 1897. The tremors were felt in twelve states, and as far north as Canada.

There's thought-provoking statistics aplenty, but this valuable resource can help readers be more discerning when it comes to understanding environmental issues. Aware of the politically contentious currents of discussion surrounding ecological concerns, Groover focuses on hard science, and lets the growing body of research speak for itself, while reminding us that crucial scientific data should never be 'disappeared' from public view for opportunistic reasons. Groover cites a Cree Indian prophecy: "Only when the last tree has been cut down, only when the last river has been poisoned, only when the last fish has been caught—only then will you find that money cannot be eaten."



Lynda Richardson / DGIF

VIRGINIA BEACH WINTER WILDLIFE FESTIVAL

JANUARY 25-27, 2019

Join Virginia Beach Parks & Recreation and the Virginia Department of Game & Inland Fisheries for this free event where you can see and learn about winter wildlife all around Virginia Beach. Vendors, workshops, live animals, children's activities, and raffles as well as local food trucks.

For more information: www.vabeach.com/virginia-beach-events/fairs-festivals/winter-wildlife-festival



Kids, Meghan Marchetti / DGIF; bird on feeder © Shutterstock

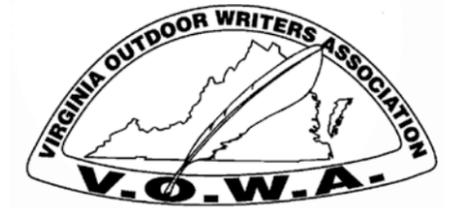
The Great Backyard Bird Count

February 15-18, 2019



Anyone can participate, from beginning bird watchers to experts. It takes as little as 15 minutes on one day, or you can count for as long as you like each day of the event. It's free, fun, and easy—and it helps the birds.

Detailed instructions, bird lists, the 2018 summary, and more at: <http://gbbc.birdcount.org>



Youth Writing Contests

Grab your laptop and get to work. The Virginia Outdoor Writers Association annually sponsors two writing competitions for Virginia high school students (grades 9-12) and undergraduate students attending a Virginia college or university. Awards are offered for winning entries.

www.vowa.org

Deadline: February 1, 2019

RICHMOND FISHING EXPO



January 18-20, 2019
Meadow Event Park, Doswell, Va.

Friday: 9-7
Saturday: 9-7
Sunday: 10-5

For more information:
www.richmondfishingexpo.com



Due a Tax Refund?

Please consider supporting essential research and management of Virginia's native birds, fishes, and nongame animals.

If you are due a tax refund from the Commonwealth of Virginia, simply mark the appropriate place on this year's tax checkoff on the Virginia State Income Tax form.

To make a cash donation directly to the Nongame Program, visit the Department's website or mail a check made payable to Virginia Nongame Program.

Send to: DGIF Nongame Program, P.O. Box 90778, Henrico, VA 23228-0778.



PICS FROM THE FIELD



You are invited to submit one to five of your best photographs to "Pics from the Field," Virginia Wildlife Magazine, P.O. Box 90778, Henrico, VA 23228-0778. Send high-resolution jpeg, tiff, or raw files on a CD/DVD or flash drive and include a self-addressed, stamped envelope or other shipping method if you would like it returned. Also, please include any pertinent information regarding how and where you captured the image, what camera and settings you used, and your phone number/email address in case we need to contact you. We look forward to seeing and sharing your work with our readers!



Walking around his Woodlake home in Chesterfield County, **Joshua Burroughs**, a commercial photography student at the Chesterfield Technical Center, spotted a beautiful barred owl "hoood" posed quietly for a portrait. Joshua used a Nikon D800 DSLR camera, Nikkor 28-300mm f/3.5-5.6 lens, ISO 1600, 1/320, f/7.1. Way to go Joshua!! Keep up the good work!

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11th Annual
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March 9, 2019
Meadow Event Park
Doswell, Va.

Back Bay: Award-winning Short Film Chronicles Restoration of Historic Bass Fishery



There's a new video making the rounds on YouTube. Thanks to the efforts of Flymen Fishing Company in association with passionate Tidewater-based angler and guide Cory Routh, we have access to a film that you'll want to share with friends. Under 12 minutes long, the film which recently won the 2018 Drake Magazine Award for Best Conservation Fly Fishing Video, tells the story of Back Bay, its heyday as a legendary largemouth bass fishery and waterfowling destination, its decline, and its renewal. The video also features reminiscences and commentary by renowned sportsman Lefty Kreh, Walt Cary of 'Walt's Poppers' fame, and guide Mike Smith.

In 1979, writer Angus Phillips told of a day on Back Bay where his fishing party boated 54 bass using fly rods and miniature popping bugs. Some of the fish he determined were in the two to four pound range. Savvy anglers revered Back Bay for its scenic vistas, wildlife variety, and great fishing.

Then something started to happen—or rather many things happened that in concert led to a marked decline in water quality and wildlife habitat over time. These same problems virtually destroyed the

excellent bass fishery anglers once knew.

DGIF fisheries biologist Chad Boyce, who is one of the experts featured in the film, attributes Back Bay's decline to over-fishing, sedimentation, farm runoff and poor farming practices, artificial saltwater incursion, and the impact of herbicides.

But thanks to a dedicated cadre of conservation-minded anglers and volunteers, many of whom formed the Back Bay Restoration Foundation, the tide has turned. Back Bay is in the process of healing. People are seeing the return of wild turkey, important grasses are making a comeback, and judicious stocking of bass is boosting natural reproduction. The film's ultimate message: "Protecting your home waters starts with you."

Don't take my word for it. Watch the film, and share it on social media. Prepare to be inspired.

—Beth Hester

TO WATCH

Go to www.ruthlessoutdooradventures.com and click on the YouTube link at the top of the landing page. Alternately, do a Google search, or go to: <https://youtube.com/user/ruthless-fishing> and enter search term Back Bay. Enjoy!

CONSERVATION AT WORK

Working for the DGIF is more a calling than a job.

One of the greatest things about working for Virginia's wildlife agency is the passion and commitment shared by those who are drawn to a career at DGIF. Individuals possessing different talents and diverse backgrounds, who perform work that is varied and challenging—all join together to share one mission.

Whether it be working to capture ducks in a swamp at midnight, assisting hunters and fishermen, or greeting visitors to the front desk at HQ, we all love what we do. At DGIF, we consider ourselves to be a family.

We thought you would like to meet some of our DGIF family and share in their passions both at work and outside of the office. Starting with this issue, *Conservation at Work* will feature them in *Virginia Wildlife* magazine, *Notes from the Field*, and our blog. For more, go to: www.dgif.virginia.gov/atwork. We hope you enjoy meeting the faces of DGIF!



Karen Horodysky

Fish and Wildlife Information Services Aquatic Biologist

I grew up in a really developed part of Northern California, and my family—while they appreciated the outdoors—they weren't particularly 'outdoorsy.' We didn't fish, we didn't hunt and we didn't camp. I got into the fisheries profession partly because I loved science since childhood, but also because I was becoming aware that I loved nature and the outdoors. This is what led me to the fisheries field, and now, to DGIF.

I serve as a liaison between aquatic biologists and information management, ensuring that our data is stored, managed, shared and interpreted correctly. My job is great because while I'm working on important projects in the office, I do get to go out in the field with the biologists to learn about what they're doing and what kind of data support they might need.

"The greatest gift life has to offer is the opportunity to work hard at work worth doing."

— Theodore Roosevelt



Jason Hallacher / DGIF



I love to fly fish. It's a way for me to get out into nature and connect with what I'm doing in my daily life. I also love to fly fish because it's a way to relax. You have to focus when you're fly fishing—trying to read the water, decide what fly to use to catch fish—and not catch anything behind you when casting. I find by focusing like that, I'm not thinking about daily concerns or worries. I can just unplug and get away.

Virginia has a lot of diverse opportunities for fishing. You can ask yourself, what kind of experience do I want today and what species do I want to fish for? Then, you can and do it. It's accessible, and it's also really beautiful!

When I think about why I love the outdoors, I often think of a quote, which is the first line of Aldo Leopold's *A Sand County Almanac*. It goes, "There are some who can live without wild things and some who cannot." I am one of those who cannot.



For most of us in the sporting and hunting dog community, there are two halves to every year—hunting season and fishing season. But some years are “Leap Years” and those have three seasons a year. These are the years when, with a leap of faith, a human enters into PUPPY SEASON!

You cannot break down Puppy Season into a specific number of days or weeks because these are times measured with a plethora of emotions. Gazing into your little, female setter puppy’s eyes, you see nothing but innocence and trust. There is not a doubt in your mind that she will never deceive you by busting a covey while hunting with your friends. Nor would that German Shorthaired Pointer puppy start hunting on its own and refuse to come when called—not after having driven with you for over 1,000 miles to trudge across grouse and woodcock country.

Mishaps can occur even after your pup has been professionally trained. However, if you investigate the reasons for this insolence, you may find that it was not your dog that has betrayed you... it was your own family. The problem is, you thought you had bought and professionally trained the next inductee to the *Bird Dog Hall of Fame*. But your family thought you were buying them a pet. You expect your trained hunting dog to follow commands by consistent enforcement and rewards. Your family, maybe not so much.

Dogs are very observant and likely become confused as to what their boundaries

are when given inconsistent commands. For instance, you train your dog to sit at the door and not rush into the house until you have entered it. You then give it a command letting it know it is okay to come in. If the rest of your pack does not enforce the same rules, you now have a problem. As draconian as this may sound, this simple rule prevents your 90-pound Lab from rushing in and knocking over your wife while she is carrying an armload of groceries. Let this happen more than once to your “Mrs. Lucky” and watch how fast the family pet becomes “your dog” and where the new sleeping arrangements will be for you and “your dog.” If your young son has never been taught to wait for you when leaving home and is allowed to rush to the car in the driveway, then do not be surprised if, when leaving the local mall, he rushes out to the car in the middle of a busy parking lot.

As internationally known professional trainer Ben Randall pointed out in a recent British outdoor publication, inconsistencies in training lead to a progression of the dog owner “giving in” and not sticking to the rules of properly set boundaries, such as jumping up on your guests with muddy paws no matter whether at home or in the field.

“Respecting space is one of the first things I teach a young dog,” said Randall. “A dog should grow to understand that the area immediately around you is not to be entered into unless you invite him or her to do so.” Randall also stresses that

friends and family should stick to the same correction techniques. “One person out of every ten who praises your dog for jumping up can undo a lot of hard work,” Randall emphasized.

More and more, dogs are treated like part of the family and, like the rest of the family, inconsistency in messages to family members can create problems. If the hunter in the family does not allow his or her mud covered dog to immediately jump in a car and sit on the front seat after a hunt but the family does not make that dog wait for approval before jumping into the car, that is a mixed message. You are asking us dogs to figure things out for ourselves. If we are immediately praised, petted, and hugged by the one who lets us just jump in and sit on the front seat... then guess which thing we will choose.

Be consistent with a correction. Give it once and then enforce a correction if not obeyed. You will be happier. Your dog will know what is expected of it and, who knows, your children’s behavior may show a marked improvement.

Keep a leg up,
Luke

Luke spent many sunrises hunting up good stories with Clarke C. Jones, and thankfully, left us a cache of colorful tales. You can learn more about Clarke and Luke at www.clarkecjones.com.



A Walk in the Woods

By Mike Roberts

Whereas many of the commonwealth’s avian migrants skedaddle south during September and October, enough feathered residents endure the cold temperatures and inclement weather to make wintertime birding a worthwhile outdoor activity. One species that can be observed year-round is the handsome red-shouldered hawk. Although most birds of prey remain relatively quiet outside of the breeding period, this medium-sized raptor is vocal throughout the year—even on the coldest of winter mornings. The raucous cries of a mating pair of red-shoulders riding late-morning thermals is a reliable harbinger of spring, too. Ironically, blue jays mimic them in a manner that makes it practically impossible to differentiate between the passerine’s imitation and the call of the colloquial “hen hawk.”

The red-shouldered hawk’s geographical range stretches across the eastern third of North America—from southern Canada to Mexico. In addition, one of several recognized subspecies ranges from the coastal regions of northern California south along the Baja Peninsula. Preferring hardwood forests, edge habitats, wooded river bottoms, and swamps, this keen-eyed predator feeds primarily on voles, rats, mice, and chipmunks. Studies have revealed that some species of hawks can distinguish the ultraviolet (UV) light range, which is one reason red-shoulders sit tirelessly zeroed in on the grassy trails frequented by small rodents; the mammals regularly mark their paths with urine that absorbs UV. This luminescence provides the hawks with an edge in locating prey. Swift awing, *Buteo lineatus* opportunistically preys on dove-sized birds, squirrels,



and snakes. When food sources become scarce, they often take advantage of road-killed wildlife—even whitetails.

As with other members of the broad-winged hawk family (the buteos) red-shouldered hawks are monogamous. April courtship includes shrill vocalizations that echo across rural landscapes and spectacular aerial performances; the male ascends hundreds of feet above the circling female, folds his wings, and plummets into a stoop of blinding speed—passing precariously close to his mate.

Nests are usually located in mixed deciduous forests, either in the crotch of a sizable hardwood tree or a tall, isolated Virginia pine, as much as 60 feet above ground. Construction is a shared responsibility, with the large structure a conglomeration of sticks and twigs. The top layer is lined with moss and shredded bark. Rather than build a new platform each year, red-shoulders are famous for refurbishing facilities used the prior year. Great horned owls, which breed in February, are notorious for adopting vacant hawk nests. As with many species, red-shouldered hawks can acclimate to human presence, even nesting in suburban woodlots and backyards.

One of the most interesting, and puzzling, behavioral aspects typical of nesting buteos is the placement of conifer branches or other greenery atop the structure. Some ornithologists consider such behavior a tangible signal to potential nesters; another theory focuses on nest concealment. Others hypothesize that the aromatic needles and leaves function to repel insects and ward off bacterial and fungal diseases. On a personal note, several of the red-shouldered hawk nests I have observed over the years contained branches of black cherry, the leaves of which contain a toxin called prussic acid—hydrogen cyanide! Ask any farmer what happens if cattle consume the wilting leaves of wild cherry. Perhaps there is more to this matter than meets the eye!

Incubated by both sexes, the three to four white, spotted eggs hatch in about 30 days. Whether or not the entire brood of down-covered chicks survives to fledge depends upon food availability. Because the female lays one egg every other day, and begins incubation before the entire clutch is laid (resulting in asynchronous hatching), older chicks have a size and strength advantage over their siblings. Without sufficient food, the youngest birds often fall victim to nature’s unmerciful laws of survival.

Come spring, if you go for a walk in the woods and detect the piercing calls of a pair of red-shoulders wheeling about in the sky, pause to take delight in their breathtaking courtship antics.

A lifelong naturalist and wildlife photographer, Mike Roberts enjoys sharing his knowledge with others.



PHOTO TIPS

By Lynda Richardson

The Zen of String



A local high school student works on her String Challenge during a Virginia Outdoor Writers Association (VOWA) sponsored writing and photography workshop at Pocahontas State Park in Chesterfield.

After the craziness of the holidays I want to get outside and do something. Whether it's a walk along the river or an exploration of a new location—I just want to be alone to give my mind a quiet change of pace ... and a challenge.

Before venturing afield, I decide whether to bring a camera or a sketch pad and colored pencils. My selection, stuffed into a small backpack and slipped over my shoulders, will also include a small ball of string.

Upon arrival to the destination, I begin down the trail with a slow "observers" pace. My eyes sweep the surroundings for

wildlife but I'm also looking for anything that catches my eye, for whatever reason. As I walk, several birds fly overhead, dark against a gray sky. Most of the leaves have disappeared from the trees except for a few crumpled holdouts. Continuing on I look down and spot a lonely Christmas fern. It peers from the rumpled forest floor, the most colorful of its surroundings. I spend a few minutes staring at it and the area around it before I commit. When satisfied, the string comes out.

Widely circling the fern with the string I try to include a few decaying stumps, fragile dried leaves and moss covered

rocks. The string has set my objective. Now is the time to "Be Still."

Sitting down at the outside edge of the string circle, I cross my legs and close my eyes. I concentrate on my breath deeply taking air in, holding it, and breathing out, each to the count of four. As I begin to let go of the holiday chaos I first ask myself, "What do you hear?" Besides my breathing, overhead a few leaves rattle against a slight breeze. Nearby, a Carolina wren startles me as it belts out a long series of lyrical notes. In the distance the honking of Canada geese echo up from the river. And is that a train moving along the tracks mingled in?



A Christmas fern nestled in oak leaves is normally an image that would go unnoticed. The Zen of String guided me to this texture-filled image.

Now, "what do you smell?" The distinct musk of decomposing leaves is rich and heavy. It tingles in my nose feeling like the beginning of a sneeze. Another smell could be pine but I'm not sure. I turn my face towards the soft breeze and try to pick up anything else. Unfortunately, the cold masks any other scents that I might sense.

"What do you feel?" The ground is soft, damp, and cold. I can tell because my jeans have soaked through with a chill that is a little annoying. With my eyes still closed I feel around me. Crunchy, brittle leaves break apart loudly under my touch, a rock is cold and rough, the moss soft but prickly, and the muddy ground clings to my fingertips.

Wiping my hands on my pants I sit back and take a few deep breathes before opening my eyes. I am relaxed and ready. I push up on all fours and lean over the circled area. What story is here to tell? My other senses have already prepared me but now I need to select something. The Christmas fern is still calling to me so I

study it more carefully. It looks beat up after the hot summer. Green fronds are torn and spotted in brown. But looking closer I notice the way the leaves connect to the center stem, how the tips of the fronds droop down, the brown "fur" at the base of the plant, and its dead remnants decaying away into the leaf litter. Where should I begin?

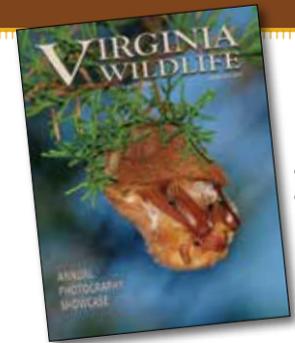
For today's challenge, I decided to use photography as my medium; a full-frame Canon 5D Mark IV DSLR camera and one lens, a 16-35mm. I purposely did not choose a macro to force myself to dig deeper into my creative side. Since I can only focus as close as 5 inches, it is a challenge.

Pulling the camera out of my backpack I begin taking a few pictures of the fern searching for its mysteries. I look through the viewfinder trusting my instinct of what makes an interesting image. I shoot, and look, and think. Around 30 minutes later I decide it is time to change subjects and I look around the inner circle

of string. I'm not seeing much but decide to force myself to try for another hour. Exploring the decaying logs exposes a dark beetle sleeping peacefully. Moss covered rocks reveal intricate and contrasting textures. As long as I am not in a hurry and can remain "in the zone" this could easily become a calming, hours-long endeavor. I take in the sounds around me and now definitely smell pine and it's now my knees and elbows that are getting cold, wet, and muddy. But I don't care. As long as I can push away the stressful thoughts of my busy life it is worth it. For me, learning to "Be Still," is a meditative exercise that gives me permission to reconnect with the outdoors in such an intimate way that it brings me peace. So, the next time you need a break from your chaotic life go back to nature with a camera or sketchbook and don't forget your string.



A former career photojournalist for 30+ years, and now Zen String Master, Lynda is the art director for this magazine.



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fare game

“Behind every wild game dish is a story, an experience, the harvest, and the passion.”



Wood Duck Mac 'n' Cheese

Recipe by Emily George • Photo by Meghan Marchetti

There's more to hunting or fishing than pursuing a trophy buck or citation trout. It's about sustainability, an appreciation for a rewarding day afield, and gathering around the table with family and friends. Full circle, DGIF wants to show that a challenging chase for harvested wild game is worthy of bringing from the field to the table. It's the only way to appreciate wildlife for its existence, and to illustrate self-sustainability at its core. **The fair chase is ultimately fare game.** See more of our new fare game recipes in *Virginia Wildlife* each issue, or visit dgif.virginia.gov/faregame.

Hunting and fishing have the purpose to connect people to their natural resources, protect game species for the future of sustainability, and to conserve these resources inhabiting the land and providing for the people of the Commonwealth. DGIF is the leader of conserving, protecting, and connecting these things to ensure that what is accessible now, is obtainable years to come.

INGREDIENTS

4-6 wood duck breasts
1 box of elbow pasta
6 tbsp. butter
1-2 cups shredded cheddar cheese
3 tbsp. flour
½ cup milk
(add more if mix begins to thicken too much)
chicken stock
6 fresh chopped garlic cloves
cayenne pepper (ground)
red pepper flakes
3 tbsp. honey dijon mustard
salt & pepper
bread crumbs

DIRECTIONS

- 1 Preheat oven to 350 degrees.
- 2 Cook pasta according to directions in water or ½ water & ½ chicken stock.
- 3 Cook breasts in skillet on medium-low heat and shred or slice the breasts as they cook. Season with salt, pepper and garlic powder.
- 4 Remove breasts from skillet and melt the butter in the skillet. Add the flour and milk. Stir until it begins to thicken. Add the chopped garlic cloves, salt and pepper, and cayenne pepper.
- 5 Add the shredded breasts and stir until breasts are coated. Add chicken stock if mixture is too thick. Then, add mustard and red pepper flakes.
- 6 Add the cooked, drained pasta and stir until everything is coated in the flour mixture. Let cook for about 2 minutes on med-low heat.
- 7 Add the cheese slowly until it melts and covers everything in the pan. Let simmer for about 5 minutes on low, or until cheese is completely melted.
- 8 Add additional spices to taste. Stir everything together.
- 9 Top mac 'n' cheese with bread crumbs and mix-up/push down the crumbs a bit to coat with cheese. Bake for 20-30 minutes. Serve warm.

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