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JULY/AUGUST 2020 VOLUME 20, ISSUE 4

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Earl Says…

Wow, this Covid 19 nonsense is really getting out of hand. For a long while it was just some virus that was affecting us from a distance. But now most of us know at least a couple of people who have had it or it has affected us financially.

Speaking of hurting financially, I would draw your attention to the many non-profit organizations that are hurting. I'm especially speaking about the ones in the hunting industry; NWTF, QDMA, RMEF, DU and others. All of these great organizations have cut back on staff as well as expenses. I am the President of our local NWTF chapter as well as a member of the State Board and this crisis hit us at the worst possible time, banquet season. Banquets are the main source of funding for most of these organizations and several events have been canceled or postponed.

As for the NWTF, we are starting back with some banquets in a few weeks. Things will look a lot different with social distancing and pared down attendance but we have to try to turn this situation around. If you hear of an event anywhere in your area, please consider attending. Another way to support these non-profits is to go to their websites and bid on online auctions and buy raffle tickets.

We will get through this I know but, in the meantime, please help us through this tough time. I look forward to better times soon.

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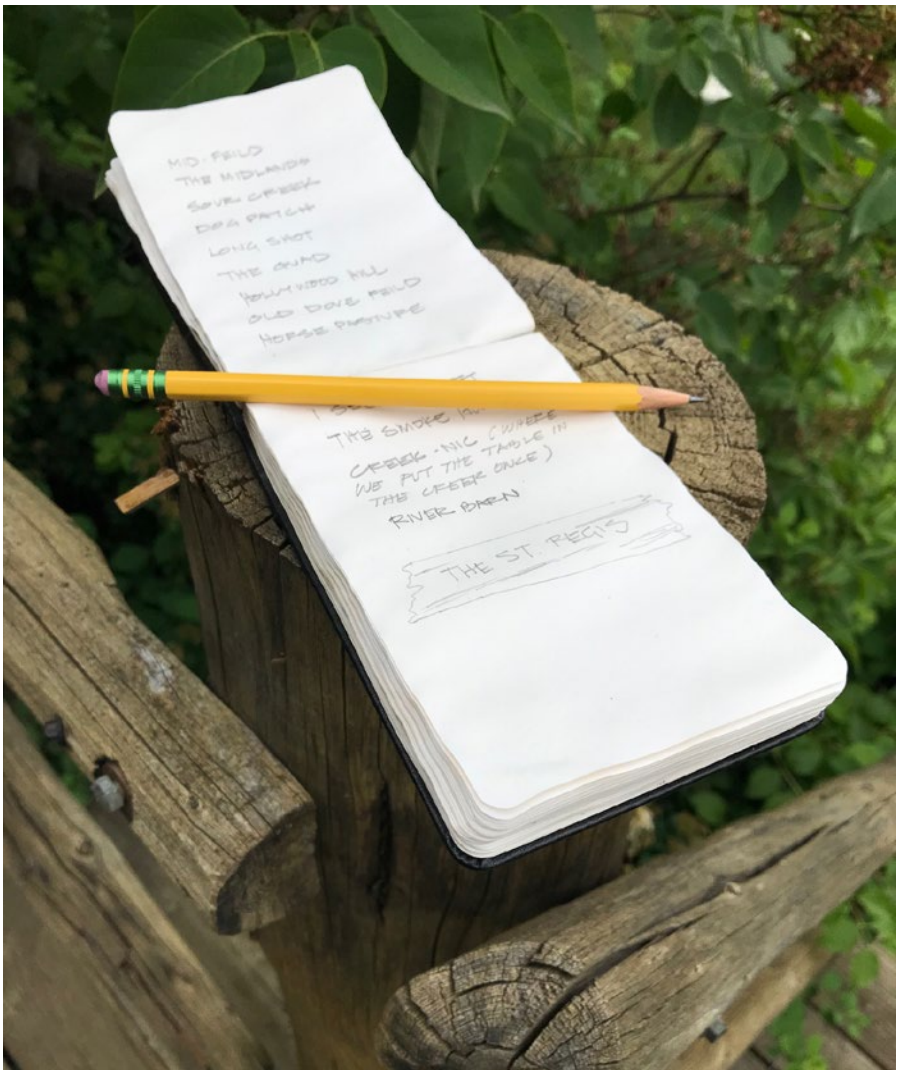
Cover Photo by Scott Brown

What is in a Farm Name?

By Keith Summerour



The discussion to name your farm, your fields, or your favorite fishing hole on the river can be surprisingly difficult. It can be so problematic that I am often asked to participate or moderate the names that are being floated across the table by owners stuck in analysis paralysis!

The difficulty lies in the idea that, once named, a farm forever becomes embodied by that name. The land will be identified by that name, and scrutinized perhaps by family members and a host of well-meaning friends.

So, I thought perhaps I could provide a guide that I use to put the task of naming into perspective.

"What is in a name?", Shakespeare asks and to this point, indeed what is it? Is it a place, a feeling one has when there, an aspiration, or even a memorial?

Keith Summerour was born and raised in Alabama and graduated from Auburn University with a Bachelor of Architecture in 1987. Included in that five - year program was a year abroad studying the classical architecture in London, Paris, and Florence. Florence clearly made a huge impact on Summerour as he took an apartment and established a studio there in 2004 and spent numerous months in the city for years to come. Today he still visits Italy frequently, immersing himself in the architecture, food and with the people he has met along the way. He also serves on the Board of The Florence Academy of Art.

Summerour and Associates Architects was established in 1997. The firm's work can be found across the United States with a large concentration in the Southeast. There is a balance of residential and commercial work in the firm's portfolio including The Old Edwards Inn in Highlands, NC and Blackberry Farm in Walland, TN, both Relais and Chateaux properties, Institutional work for the likes of Wofford College and The University of Alabama and event venues such as the Summerour event space in Atlanta, GA and The Avenue event center in Greenville, SC.

Keith spends most of his free time on his farm in Gay, GA, Towerhouse Farm, where he keeps chickens and bees, raises sheep and grows his own vegetables. His focus has turned to a healthier, mindful way of living which extends into the firm's culture.

The firm currently has two monographs, Summerour, Architecture of Permanence, Scale and Proportion and Creating Home, Design for Living.

To cut through the murky obligations we have in thinking about the place, I think it is wise to consider, to contemplate, how the land in question makes you feel when you are there. Is it a summer knoll under a giant shade tree, a reedy pond with great late day fishing, or a peaceful Beech tree along a wooded escarpment deep in the heart of your land? This feeling for the place is the start to naming it and usually the best ending.

I was once touring a wonderful new farm in Alabama with large open fields that gave way to rich bottom lands filled with beautiful Beech trees. The water tan leaves clinging to the low hanging branches were recognized by all as a magical and unique moment particular to their farm. Thus, Beechwood Farms was decided upon there and then!

Generational farm or ranch properties have their own special naming difficulties. The children or grandchildren wish to honor the family place, but also need to "own" their time on the land they now call theirs.

The naming of a place after a family member or dear friend can be about their favorite spot, an activity that occurs there, or even famous quarry. Harrison's Fishing Hole, Stephanie's Walk, or "Hollywood's" Hill which was named after a large buck we had for a number of years that loved to have his picture taken on the game camera, are examples of this. At our farm, the ghost of Hollywood still haunts my memory when hunting that ridge.

I believe naming various areas of your farm is helpful for your guests to navigate the land, particularly when fall hunting season arrives. You may have hunting guests unfamiliar with your property who will need orientation with your game stands. A simple map with areas denoted is a nice keepsake for your guest but also a risk mitigation device. When your hunters go out into the field, if they need help collecting their kill, or have an accident, others in the party will know where they are located.

The type and style of the lettering used on maps and signage can vary greatly, but a basic guide with land signs will set you in a great direction.

If you purchase a wood routing lettering kit you can create a style of

signage mimicking state or national park signs. I believe this "forestry" style is familiar to most people, is associated with the outdoors, and can blend and harmonize with the surroundings because of the use of wood as a substrate. If you use already aged barnwood siding even better.

Naming or marking locations does not have to be an endless guessing game or obsession. Keep a small moleskin type field note pad 3-1/2 x 5-1/2 inches and as fall hunting season takes over and your mind starts to wander while sitting in your stand, jot down the names that come to you. Let those names settle in for a few weeks, then choose the most resonant and don't look back! Enjoy the doing, and relax the thinking.

Ninjas of the Bird World: The Biology and Ecology of North American Owls

By Ryan Shurette

G. Ryan Shurette is a Certified Wildlife Biologist and Owner/ Guide of DragSmoker Fishing Guide Service. Contact him at 256-404-5814.

Spotted owls, unlike most other wild bird species, are not afraid of humans and they will actually approach humans closely without fear. (Photo: R. Shurette)

Most of us remember, whether fondly or unpleasantly, some of our first jobs. One of my most unforgettable wildlife-related jobs was locating and banding Mexican spotted owls in the high elevation ecosystems of the Coconino National Forest in northern Arizona. I was fresh out of college and my wife and I had gotten married just two weeks before my report date, which was in late March. We packed everything we owned (which took about 15 minutes) and headed out to Flagstaff. It was sunny and 75 degrees when we arrived. The very next day it snowed thirty inches, and right away I knew I was in for an adventure. For the next several months I would develop both an appreciation and a fascination with these owls as I became intimately familiar with their habits and their home.

There are three subspecies of **Spotted owl** (*Strix occidentalis*); the Northern subspecies (*caurina*), the California subspecies (*occidentalis*), and the Mexican subspecies (*lucida*). All three are federally threatened and live in the

western portions of the country. I was curious about these owls with all the hype and publicity they have received over the past several years regarding logging and habitat decline across their range. From my experience in the Southeast, timber thinning and disturbance was often beneficial for rare wildlife and plant species associated with fire-adapted systems. I assumed there were valid differences and I wanted to see what the truth was. But mainly I just needed a job. I soon learned that finding and banding Spotted owl chicks is an art, as well as a science. This is basically how to approach it. During the right time of the year, you travel as far as you can by vehicle and then hike into the general vicinity where the owls were mapped the previous year (Spotted owls mate for life and generally stick fairly close to the same territory they establish and defend each year). Sometimes the hike can take several hours and it is best to spike camp on-site. You really want to be in their territory when the adults are active and calling, which is typically from just before dusk until a little after midnight, and then again from about 3:00 AM until a couple hours after dawn.

If you've never seen them up close, owl chicks are fuzzy, strange-looking creatures that resemble alien lifeforms. (Photo: R. Shurette)

When you find the adults calling you try to get to them quickly so that you can entice them with live tethered mice (which are kept in a high-tech PVC tube in a backpack) to get them close by. Interestingly, wild Spotted owls, unlike most other wild bird species, are not afraid of humans and they will actually approach humans closely without fear. You can often walk right up under them in the woods. I have actually fed many of them mice directly out of my hand. After confirming their color band combinations you let them take the mouse, in hopes they will deliver it to their chick or chicks, if they have any in the vicinity. When they grab it you run as fast as you can trying to keep your headlamp and flashlight on them as you follow. As one can imagine, since all this is taking place in the dark, in rough country, and often in thick forest, this step usually has to be repeated several times in order to eventually find the nest. Spotted owls sometimes nest in tree cavities and other times in fairly large stick nests built by other birds in trees. Once the nest or nest site is located, the owl chicks are likely to be in the nest if they are young, or perched nearby if they are older and semi-mobile. If you've never seen them up close, owl chicks are fuzzy, strange-looking creatures that resemble alien lifeforms. In our study, all chicks were either captured by hand after climbing the tree, or by using a telescopic pole with a wire noose, so that they could be banded. The bands were color- and numerically coded so that each individual could be identified during the demographics and habitat use study. Afterwards, a forest and vegetation habitat survey is conducted at and around the nest site so that those parameters can be analyzed against brood success, etc.

One day my crew leader gave me an assignment to band the owl chicks of a certain adult pair in a remote part of our study area. I remember clearly that he had told me no one had ever been physically attacked by an adult Spotted owl while capturing their chicks; Northern goshawks absolutely, but never a Spotted owl. Sure they will bite you with their sharp beak and squeeze you with their talons if you are holding them, but it usually isn't too bad even without gloves. So, after banding dozens of chicks and adults without much incident I had no reason to doubt him. It was good daylight, maybe 6:30 AM by the time I had captured the first of the two chicks and I was on the ground with the banding rivets and my notebook all spread out. All of a sudden, the adult male hit me on the head so hard that I saw stars and it knocked my cap off. I reached up and felt a long deep cut in my scalp as the blood began to trickle. "Dang, I

sure am glad these things won't attack you." I said to myself. A hapless woodrat scrambling through the needle cast under a midnight stand of Douglas fir wouldn't stand a chance! I told my crew leader about it the next day and he just laughed, thinking I'd made it up. Later in the season, he admitted that same male had also attacked him when he went back in to check the chicks' survival. Served him right! Turns out, by the way, Spotted owls do respond negatively to large clear-cuts, however some selective harvesting methods seemed to be tolerated by the species.

Owls (Strigiformes) are indeed a strange and mysterious order of birds. They are grouped into two main families which include the **true owls** (Family Strigidae) and the **barn owls** (Family Tytonidae). Owls are for the most part nocturnal and are characterized by forward-pointing eyes that provide binocular vision, exceptional hearing, and a sharp beak and talons for capturing and dealing with prey. Many other physical and physiological adaptations make them super-efficient predators, especially under the cover of darkness. Hunting at night is a common strategy in mammals but it is fairly unique in the bird world. A few other bird species, including night herons (which eat fish, amphibians, and small reptiles) and nightjars (which feed mainly on insects) have adapted to this strategy, but the vast majority of birds lack the proper equipment to hunt in the dark. Owls on the other hand have a well-tuned

Soft fringes on the trailing edges of owls' flight feathers effectively eliminate air turbulence, and therefore sound. Silent flight allows an owl to remain undetected up to the point of contact with their prey and also creates a quiet environment while they are gliding along over the forest floor actively searching and listening for prey. (Photo: R. Shurette)

arsenal for nocturnal hunting. First, let's take a look at their feathers. Essentially all North American owl species exhibit camouflage adult plumage. Combinations of browns, greys, and reds, with pale underparts, provide very effective camouflage patterns for stealth in low-light conditions, while also hiding them remarkably well during the day while they are asleep. Also the large wings and flight feathers are designed for dampening sound and enabling silent flight. They can glide very slowly without flapping their wings, and even when they do, serrations on the leading edges and soft fringes on the trailing edges of their flight feathers effectively eliminate air turbulence, and therefore sound. Silent flight allows an owl to remain undetected up to the point of contact with their prey. This adaptation is obviously very helpful in avoiding detection on approach by a mouse or a vole, but it also creates a quiet environment while they are gliding along over the forest floor actively searching and listening for prey. Without this adaptation, wind and air noise would be too great to discern subtle sounds. Imagine trying to hear someone talking softly to you from another room while you are washing your hands. An owl's sense of hear-

ing is nothing short of amazing. The ears of an owl are special. Although they are sometimes confused with the ear tufts that some species like Great-horned and Long-eared owls have on the top of the head (which are used for display), the actual ear openings (apertures) are located on the sides of the head and are covered by the facial disk feathers. The facial disk is an adaptation of the facial bones and feather arrangement used for channeling soundwaves, much like a satellite dish into the ears. The ears in many owl species are also vertically offset. In other words the right ear is set slightly higher on the head than the left. This allows effective triangulation and processing of the soundwaves to better pinpoint the origin of a sound. Some species, like the barn owl, also use a specialized pathway of aural nerves through a structure called the vestibular organ, and cochlea, to determine the difference between sound level and sound time in order to precisely estimate the elevation and distance of a prey item. An owl has a similar range of auditory sounds (frequencies) to that of humans. In fact humans can even detect lower frequency tones than Barn owls. However, the owl's hearing is much more acute than ours in the middle ranges (2-7 kHz) allowing them to detect rustling leaves or a squeaking vole at a great distance. Owls have the ability to detect sound distance between the left and right ear of about 30 millionths of a second. And finally, the medulla of an owl, the part of the brain that is associated with hearing, is much larger and has exponentially more neurons than those found in other birds.
Comprehensively, this supersense of hearing allows an owl to detect, pinpoint, pursue, and capture a prey item, even in near-total darkness.

An owl's eyesight is also very specialized and unique. Owls have incredibly large eyes (up to 3% of their body weight in some cases) that do not move in their sockets. Owl eyes are tube-shaped and are instead locked rigidly in place by bony structures called sclerotic rings. This lack of mobility is compensated by their ability to quickly turn their heads around 270 degrees to the left or right, and straight up and down with no movement of the rest of the body. The owl's eyes are situated in the very front of the head to allow for maximum field of binocular vision, and just as in most other raptors, provide them with very acute depth perception.
However, unlike daytime-hunting hawks and eagles, owls' eyes contain an incredible density of retinal rods (1 million per mm) as opposed to color-seeing cones. They also have a light-reflecting layer (the tapetum lucidum) behind their retina just like cats, dogs, and nightjars that provides them with superior night vision. This structure is not to be confused with the nictitating membrane which is found outside the eye and beneath the outer eyelids. The nictitating membrane is essentially a tough clear membrane that closes from the side and serves as protection when the predator is involved in subduing its thrashing prey. Like many other species of birds, owls' eyes are hardwired to their brains in such a way that they can also process visual information extremely quickly. Owls can be quite long-lived, with some individuals making it to 30+ years but that is rare in the wild. Many only live a couple breeding seasons.

Like other birds of prey, owls are also equipped with sharp beaks and strong talons, with one toe pointed backwards and three forward. Owls however have a flexible joint in their foot that allows one of the front toes to orient backwards (like a woodpecker) while catching prey and in some perching situations. This flexible zygodactyl arrangement allows the bird to hold struggling prey more efficiently. When used in unison, all of the features we have described provide a comprehensive weapon and stealth package that allows an owl to be a very effective night-time predator. We've already discussed the Spotted owl so now let's take a look at some of the other individual species that occur in the various habitats across the country.

One of the largest (up to 22" long from beak to tail) and most widespread species in North America is the **Great horned owl** (*Bubo virginicus*). This species is found in all lower 48 US states, Mexico, Canada, and most of Alaska across a wide variety of habitats. They are readily distinguished by their large size, yellow eyes, and red-

dish facial disk, and prominent ear tufts. They are often detected by their deep vocalization which consists of six or seven hoots. They have a very diverse diet and are known to feed on animals as large as geese, porcupines, and skunks. They will also take insects, small mammals like voles, mice and chipmunks, American coots, rabbits, fish, reptiles, other birds, and even other raptors like owls and eagles. Most hunting is performed during night-time hours but the Great horned is sometimes active during the daytime, especially in winter. Nests are either made inside cavities in dead trees or in structures built by other animals, especially hawks. The white spherical eggs are incubated for about 35 days before hatching. Chicks remain in or around the nest for another 5 or 6 weeks taking food from the adults. Nocturnal birds like owls can be difficult to survey and study and accurate population counts can be a challenge. A conservation organization called Partners in Flight (PIF) maintains databases from various sources, including the North American Breeding Bird Survey (BBS), to inform population trends and estimates of bird species. According to PIF estimates, the current population for the Great horned owl is about a million individuals, with about half of the population occurring in the US. The BBS has indicated a decline in this species over the past several decades although they are still widespread and not threatened at this time. Two similar species are the **Long-eared owl** (*Asio otus*) and the **Short-eared owl** (*Asio flammeus*). Slightly smaller than the Great horned owl, each is about 14" in length and both species can be found in the Southeast in winter, and throughout the Midwest and West in all seasons. They also breed across much of Canada in the summer. As their name implies, the Long-eared has long pronounced ear tufts and the Short-eared has tiny tufts in the middle of its forehead. The Long-eared owl is fairly common in much of its range (not so much in the Southeast) and it hunts at night in open fields and wetlands but it roosts by day and nests in heavy woods, whereas the scarc-

Owls have incredibly large eyes (up to 3% of their body weight in some cases) that do not move in their sockets. Owl eyes are tube-shaped and are instead locked rigidly in place by bony structures called sclerotic rings. Red phase Eastern screech owl shown here. (Photo: Dick Daniels)

er Short-eared owl prefers more open country (marches, fields, and tundra) where it nests on the ground.

The **Barn owl** (*Tyto alba*) is one of the strangest looking birds you'll ever encounter in the wild. Adults have a ghostly pale appearance and a white, heart-shaped face with jet black eyes. Males typically express lighter plumage coloration than females. The Barn owl hunts open habitats in grasslands, wetlands and marshes, deserts, open forest and woodlands, and agricultural fields. The species (comprised of many subspecies) can be found across the entire globe, with the exception of Antarctica. The Barn owl, like most other owls, is monogamous and adults mate for life. They use old previously constructed nests lined with crushed pellets (regurgitated bone and undigested hair from prey items) and the incubation period is about 32 days. Barn owls prey mainly on small mammals and they are important in that regard in many agricultural regions. They sometimes stockpile prey items at the nest to later be fed to the chicks. In the West they can be locally common but in the East they are uncommon and scarce in many areas, although this species is secretive and difficult to detect. The global population has been estimated by PIF at 2 million adult birds.

Probably the most common owl in the East is the **Barred owl** (*Strix varia*). It is fairly large and heavy with dark brown streaking down its tawny breast and belly. It has a large rounded head (lacking ear tufts), dark eyes, and a yellow beak. It is well known, especially by turkey hunters, for its "*who cooks for you…*" call. It looks very similar in its appearance to the Spotted owl, and this species is now actually considered an invasive species that threatens the Spotted owl due to competition, since its recent spread into some new areas of the West. The Barred owl is a forest dweller and is common in river bottoms, swamps, as well as in hardwood and pine upland forests. This species is often heard and seen hunting in daytime. It feeds on small mammals, birds, herps, bats, and fish. Barred owls are numerous in the East and their population is estimated at 3 million (PIF) range-wide, with western populations expanding and increasing.

Another common owl in the East is the small (8" long) **Eastern screech-owl** (*Otus asio*). The species has bright yellow eyes and ear tufts, when raised. The plumage can be either gray or reddish, depending on the color phase. The red phase is more common in the South while the gray phase is

dominant in the northern parts of its range. When roosting in the open or a crack in a tree trunk, with the ear tufts raised and eyelids closed, they resemble part of the tree and are almost invisible. This little owl has a surprisingly loud trilling call, and is most often detected by sound alone. It feeds on small rodents and birds but also relies heavily on insects like beetles, tree crickets, and moths. They nest in tree cavities excavated by other animals, where they lay 2 to 6 round white eggs per season. Eastern screech owl population size is estimated to be roughly 900,000 birds (PIF), but decreasing slightly in the US. It was once considered a single species with its close cousin, the **Western screech owl** (*Otus kennicotti*), which inhabits the western one third of the country and is similar in its ecology and behavior. However, the Western screech owl only has gray plumage coloration, and no red phase. Breeding Bird Survey data suggest there are probably about 200,000 Western screech owls in the wild. Ranging from southern Arizona well into the dense high elevation oak woodlands of Mexico the **Whiskered screech owl** (*Otus trichopsis*) looks almost identical to the Western. It is slightly smaller (about 7" long) and has a strange, Morse code sounding call. All screech owls eat a variety of prey items and are strictly nocturnal. When cleaning Wood duck nest boxes, we often found them asleep, roosting inside. They would be so groggy we could gently pick them up, take them out, quickly clean out the box, and return them before they could even wake up.

Similar in size, the **Northern saw-whet owl** (*Aeogolius acadius*) breeds in dense conifer and mixed forests of the northern half of the country and southern Canada. It is a potential winter resident in the Midwest and the Southeast but they are seldom seen or heard in those regions. The Saw-whet has yellow eyes, a red and white streaked breast and belly, and a white forehead. The juveniles have dark un-streaked cinnamon plumage on the breast. Their song is a monotonous whistle that sounds like a back-up alarm on a truck. Someone long ago thought it sounded like a cross-cut saw being sharpened and named the bird accordingly. This is another strictly nocturnal species and they hunt most of the same prey as the screech owl. It breeds in cavities, especially near river or streamside habitats, and has a slightly larger clutch compared to some other owl species (4-7 eggs). This owl is often the target of other owls and is commonly taken by Great horned, Spotted, and even Eastern screech owls, as well as diurnal avian predators like Cooper's and Broad-winged hawks. PIF suggests a total population size of 2 million Northern saw-whet owls across its range. Taking over where the Northern saw-whet owl's range stops at its northern boundary,

Barn owls have a ghostly pale appearance and a white, heart-shaped face with jet black eyes. Males typically express lighter plumage coloration than females. The Barn owl hunts open habitats in grasslands, wetlands and marshes, deserts, open forest and woodlands, and agricultural fields. The species (comprised of many subspecies) can be found across the entire globe, with the exception of Antarctica. (Photo: Public Domain)

the **Boreal owl** (*Aegolius funereus*) is almost identical in appearance to the saw-whet but it inhabits the colder northern boreal wilderness and muskeg ecosystems of northern Canada and the northern US Rockies. They are secretive and also strictly nocturnal. Little is known about their population trends since they live in such remote regions, but PIF has estimated a global population of around 1.7 million for the species. Sharing the same basic range through the open spruce meadows and marshes and boreal forests of Canada and Alaska, the larger **Northern hawk owl** (*Surnia ulula*) up to 16" long, has a very different appearance. It has a long tapered tail and looks and acts more like a hawk or falcon in many ways than an owl. It hunts mainly during the daytime, from the top of a spruce tree, and feeds on small mammals (mainly voles) during the summer and switches over to grouse and ptarmigan in the winter. This species is sometimes used for falconry purposes in Canada. There are two other North American owls that inhabit the cold northern latitudes, and they are both big. The **Great gray owl** (*Strix nebulosa*) looks like a Barred owl on steroids. It has yellow eyes, concentric rings in its facial disk and is about 27" in length. It is not common across any of its range, which dips down into the mountains of Oregon and California. The species is actually federally listed as Endangered in California. Great grays often nest in old raven or hawk nests. The other large northern owl is the **Snowy owl** (*Nyctea scandiaca*) which hunts on the vast open tundra habitats of northern Canada and Alaska. This large white owl has yellow eyes and small dark brown spots on the wings. In winter it can wander south into the US (sometimes even as far south as Tennessee and Alabama, although this is very rare). Snowy owls nest on the ground and feed chiefly on lemmings, just like the Great gray. Lemming populations fluctuate and thus so do Snowy and Great gray owl numbers in some regions. Population estimates for the Great gray and Snowy owls are difficult to predict. But according to available survey data they number somewhere around 200,000 individuals each (PIF, 2019).

Another strange and interesting owl is the **Burrowing owl** (*Athene cunicularia*), which inhabits open habitats in the bulk of the western US during the summer months, and the southern portions of peninsular Florida all year long (the Florida population is a different subspecies and is slightly smaller). There are other subspecies of Burrowing owl that extend into southern South America. It is relatively small (about 9" in length) and has yellow eyes, brown and buff plumage, and long legs. This owl nests underground in burrows in desert and grassland habitats (especially in prairie dog towns) but it can sometimes be found in small groups along mowed fields, airports, agriculture fields, and roadsides. They typically use other animals' (ground squirrels, tortoises, etc.) burrows but they can excavate their own if needed. They are active at day or nighttime and hunt insects and small animals from or near the ground. When disturbed in the burrow this species can imitate the sound of a rattlesnake to help ward off intruders. This species is sometimes associated with gopher tortoise burrows in Florida longleaf pine systems. PIF estimates there are about 2 million burrowing owls across the entire range with about a third or less spending some part of their life in the US. Vehicle collision, habitat loss, and predation by dogs and cats have led to declines in this species over the past 40 years in some parts of the range.

The remaining four species of

Slightly smaller than a Great horned owl, the Northern long-eared owl is fairly common in much of its range (but not so much in the Southeast) and it hunts at night in open fields and wetlands, but it roosts by day and nests in heavy woods. (Photo: Public Domain)

North American owls are small western species. At the size of a sparrow, the smallest is the **Elf owl** (*Micrathene whitneyi*), which inhabits the desert lowlands and canyon habitats of southern Arizona and New Mexico during the spring and summer season. It commonly roosts and nests in cavities created by other birds in trees and saguaro cacti. It is strictly nocturnal and feeds mainly on insects and scorpions. The Elf owl is somewhat timid and can even play dead when threatened. The slightly larger (6-7 inches in length) **Flammulated owl** (*Otus flammeolus*) is closely related to, and similar in appearance to, the screech owls. This cavity nester spends the breeding season in the western third of the US from Washington State down into Mexico, in mixed oak and pine habitats, especially ponderosa pine ecosystems. It also feeds heavily on insects. Two species of pygmy-owl, the **Northern pygmy-owl** (*Glaucidium gnoma*) and the **Ferruginous pygmy-owl** (*G. brasilianum*), are mainly active during daylight hours, especially at dusk and dawn. The Northern can be found throughout the year in all the same western states as the Flammulated owl, while the Ferruginous is a Mexican species that barely extends northward into the southern tip of Texas and Arizona. They are both only about 6 ½ inches long but they are very aggressive. The Northern pygmy-owl often even catches and kills birds larger than itself. Both species have yellow eyes and large black "eyespots" on the back of their heads. Population trends for these small western owls are stable in most regions but appear to possibly be declining in some areas. Exact range-wide population estimates are difficult to produce since all four species

extend largely across Mexico.

These 19 species of North American owls represent a diverse assemblage of birds of prey, occupying essentially all of the major terrestrial ecosystems across the continent. From arid deserts, to cold boreal forests, to humid southern swamps, they are well-adapted to living and hunting the various environmental niches they inhabit. Through enhanced physical features and specialized physiological characteristics, they are effective hunting machines, often employing the strategy of silently stalking their prey under the cover of darkness. It is easy to understand why owls are sometimes referred to as "ninjas of the bird world".

The Burrowing owl inhabits open habitats in the western US during the summer months, and the southern portions of peninsular Florida all year long. It is small (about 9" in length) and has yellow eyes, brown and buff plumage, and long legs. This owl nests underground in burrows in desert and grassland habitats (especially in prairie dog towns) but it can sometimes be found in small groups along mowed fields, airports, agriculture fields, and roadsides. (Photo: Douglas Barnum, U. S. Geological Survey. Public Domain)

Summertime and Your Lake

By Scott Brown

Summertime can present many problems for lake owners like this shallow, stagnant area in a lake in Georgia during August. Luckily this is a cove on an otherwise good waterbody and really doesn't affect the fishery. This area is probably avoided by many fish until the water chemistry gets better. But if this occurred every summer over the whole waterbody, it would have a negative impact on the fishery.

Summertime for your lake can be stressful on the fish and the lake owner/manager, depending on the physical and chemical makeup in and around the waterbody. Some waterbodies cruise through summer every year with little or no issues, except enjoyment for the resource users. Some owners have mild stress over weed control and some owners have an annual pressure cooker over weeds, poor water quality and fish health. Summertime issues can be addressed when building your lake, other landowners inherent a lake already built with a wide range of mild to serious issues they must deal with annually.

A lake's age, physical characteristics and where your water comes from will dictate whether a waterbody fairs well in the summer, or it has many negative issues affecting fish growth, reproduction, health and survival. We always enter a new situation with a new client cautiously on how aggressive the management should be until we know all the facts, including what a waterbody experiences during the summer (hottest time of the year). Some clients are in disagreement at first, but with a slower methodical approach the management success on the

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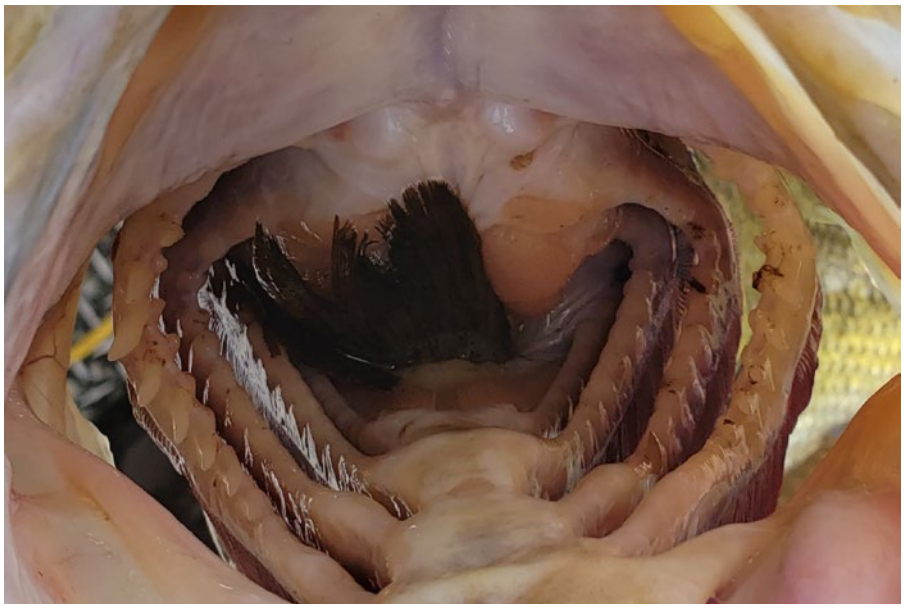
back end is always better and more successful with less effort and money wasted. A perfectly good all-around waterbody in the spring and fall does not mean there are not hot weather issues during the summer.

Physical traits like shoreline slope and depth can affect summertime water quality and vegetation growth. The less slope present, the more plants that can grow farther out into the lake during the growing season. The farther south you live, the longer the growing season, the more weeds can accumulate over the longer time frame. If the waterbody is shallow throughout, you can have both elevated water temperatures and excessive aquatic plant growth. The steeper the slope and deeper the waterbody the less vegetation growth and cooler water temperatures with generally higher Dissolved Oxygen (DO) levels, down to a certain depth then the DO levels become lower or non-existent, unless a bottom aeration system is installed and operating. A drought can also contribute to issues by lowering water levels and water chemistry changing for the worse due to shallowness. Some areas experience their rainy season during the summer. If you have quality runoff filling your waterbody, that is good, but if your runoff comes from lawns, a golf course, agricultural fields or livestock, poor water chemistry and/or excessive weed growth may be the result.

As water temperatures continue to rise and peak during summer months, water begins to separate (become stratified) in deeper lakes where water in deeper areas may be cooler than surface water, but may be low or completely void of dissolved oxygen. With a bottom aeration system this is avoided and DO is present from top to bottom in the water column, and water may be slightly cooler at the surface than without bottom aeration. If water gets too warm, it loses the ability to hold as many oxygen molecules, which results in DO levels being low in the shallow, stagnant areas. Depending where you are, water may rise or fall during these months. Summer rains in the South can also contribute to deteriorating water chemistry with high nutrient run off from agricultural areas or highly fertilized lawns that can lower dissolved oxygen levels stressing or killing fish. Evaporation takes place at a faster rate during summer in some areas where summer is a dryer period. Some water chemistry component levels (ammonia and chlorine) in water can be lowered from lake water through evapotranspiration. Another influence is how much bottom organics (muck) are in your lake. A small amount of organic build up is acceptable, but excessive organics can lower DO and elevate temperatures, which are side effects of decomposition. In extreme cases of organic buildup, dredging, or draining and scraping is the only way to alleviate the harsh summertime conditions having a negative impact on the fish population.



Most fish will slow down eating habits during the peak summer heat, possibly consuming less or changing to searching for prey at dusk and dawn.

Water chemistry and good water quality is the foundation for any good fishery. But many lake owners do not realize that means good water quality all year, not just during fall, winter and spring. A lot of good intentions have been diminished or eradicated with poor water quality during the summer. Knowing how the heat affects each waterbody on your

This waterbody is experiencing low water, and as a result Naiad and filamentous algae are taking over the open water. An herbicide treatment performed in the summer needs to be done in sections to prevent a DO crash and undue stress or death to fish.

property is very important as to not implement management strategies that get derailed from hot temperatures in the summer.

Water chemistry data taken in the summer is really the most critical time to look at it. Most waterbodies in warmer climates have good water chemistry fall through spring. In extremely cold climates, waterbodies may experience poor water quality in both winter and summer, especially if no aeration system has been installed. As the water temperature rises, so does the amount of DO to a point, but once the temperature gets above certain levels DO will start to come down. Hot water and lower DO levels can stress summer spawning bluegill, young-of the-year, juveniles and adult desirable fish species.

Dissolved oxygen will cycle daily with the highest levels at dark and the lowest at daylight. Normally this cycle does not harm fish unless the level is going below 3 from top-to-bottom daily. A more dangerous cycle is the pH, where it will also fluctuate at its highest at dark and lowest at daylight. If this fluctuation is greater than 2.0-2.5 daily, it can stress fish and even kill them, which many times is overlooked. If discovered, this can be fixed with liming to bring the pH up and stabilize it so the daily fluctuation does not occur.

Some areas may have a nine-month or more vegetation growing season while others four-to-five month. In areas with longer growing seasons vegetation (including filamentous and planktonic algae) can become an issue. In cooler climates treating vegetation any time is usually acceptable, unless 50% or higher coverage, while with waterbodies in warmer climates, conducting large herbicide treatments in spring and fall and only spot treating in the summer may be necessary to reduce fish stress or preventing a fish kill. Decomposing plant material, whether naturally occurring or as a result of herbicide use, lowers the DO. The more winter vegetation die-off, the more it is knocked back and longer it takes for regrowth. In areas with a long growing season combined with a mild winter, herbicide use for shoreline, emergent, submergent plants and algae can be expensive and time consuming and done with caution.

An unvegetated shelf or shallow

Channel catfish are always a summertime favorite to catch, but even they may need to be pursued early in the morning, late in the evening, or even after dark when their feeding activity increases.

water in the spring does not mean these areas do not cause issues during the peak of summer heat. These areas may become choked with vegetation or so hot that little DO is present and fish may avoid these areas until temperatures come down or only use for feeding at night when temperatures are slightly cooler.

As water temperature rises in the spring, vegetation begins to grow. Some vegetation will actually slow its growth as temperatures peak, some grow strong all growing season, and some accelerate growth when water is hottest. Knowing the plant species present and its habits is critical for good lake management. The earlier in the growing season a plant is identified as a future issue, the better. You want some vegetation, but early intervention makes it easier and cheaper to treat with herbicides than later. If you have an algae bloom, it will intensify during the summer which helps feed fry and threadfin shad, but becoming too intense becomes a negative instead of a positive.

Fish transitioning from spring to summer varies by location. Top predators may continue to feed all summer long and not slow down until winter, while in the Deep South, where water temperatures may reach upper 80's or low 90's near the surface, certain species may slow down consuming forage, because of high water temperatures and/or lower DO levels causing stress which also reduces feeding activity. Surface water temperatures above 85° F can start causing issues depending on your waterbody's makeup. Most fish spawn once or twice in spring, while bluegill may spawn several times or all summer long. Bluegill spawning will stop in extreme heat conditions or have lower nesting success rate due to hot water and/or lower DO levels. Small forage is abundant in early summer, and as the year goes, those individuals not consumed continue to grow. Your waterbody will have the most fish in it during early summer, after most fish have spawned before they have been preyed on. Juvenile predator fish like largemouth bass and bream will feed on the newly hatched fish and gorge until they are gone, if no quality habitat is present to protect some allowing them to grow. This is usually associated with a stunted bass population where no forage grows and is all consumed every year by smaller individuals. Rising water after the spawn will be helpful in survival with newly hatched fish, but the opposite if in summer water levels are falling. Fish may change from an all-day feeding pattern to loafing in darker, cooler, deeper water where sufficient oxygen is available (6-8 feet when 12-15 feet deep without aeration), coming to the surface and shoreline to feed as the sun sets when the surface water temperatures are cooler. If the

Golden shiners are fairly tolerant of warmer water temperatures, but not of low DO levels.

lake stratifies, fish may be located in the deepest part of the water column where DO levels are high enough to support them. If the water is de-stratified, fish will be in the deepest holes out of the sunlight and heat.

If your spring electrofishing results show abundant undesirable rough fish species such as gar, bowfin, carp, suckers, bullheads, etc. that can tip a manger off that even though the water chemistry is perfect in the spring, there could be a time period when it is less desirable and even detrimental to quality/desirable fish species such as largemouth bass, bluegill, redear sunfish, threadfin shad, brook silversides and black crappie. Poor summer water quality can hinder these species' numbers and growth, while the previously mentioned rough fish can prosper under less undesirable conditions. Before introducing a new native sport or forage species, make sure it can survive the summer in your waterbody. Signs of summer stress may appear on or in the fish tissue as sores or parasites. These stress signs usually start appearing during the spawn as spawning stress, but may continue and increase if your waterbody puts additional undue stress on the fish.

During the summer phytoplankton and zooplankton

During the heat of summer, enjoying your lake at last light may be the best time to catch fish.

(microscopic plants and animals, respectively) both increase which helps feed newly hatched bluegill. If water temperatures stay in an acceptable range, they will continue to feed small fish all summer and into the fall. Even when feeding fish with automatic fish feeders, they should be set to come on before or at first light and just prior or after dark. Typical feeder species such as bream and catfish may also avoid feeding during the heat of the day.

When fishing ponds in the summer, fishing will probably be best at dawn and dusk, and some after dark angling is very productive including for largemouth bass. In the morning, start with topwater baits over shallow areas and as the sun rises, switch to crank baits, deep spinner baits and plastic worms. If you do wish to fish midday, fish deep and work the bait slow for bass, and deeper for bream around docks, overhanging vegetation or at offshore fish attractors. For bream in the summer, using crickets is an excellent way to catch quite a few in a short time anywhere in the country I have found. In the evening, start deep and as the light fades switch to topwater over shallower water. After dark, use a noisy topwater plug or surface spinner bait. I have seen in crystal clear deep lakes, fishing for bass after dark with live bait (bream and shiners) can be very good using a circle hook to minimize hooking mortality. Also, slow trolling the length of a pond using a trolling motor dragging a plastic worm or deep diving lure during midday has proven affective. Summertime channel catfishing is good at dawn, dusk and after dark. Some species like Hybrid striped bass may completely shut down feeding and may not be catchable until cooler water temperatures return in the fall.

Years ago, I a wrote an article titled "*Not all Waterbodies are Created Equal*" and this applies to maneuvering through summertime heat. Most lakes handle it fair to well with only a few summertime issues, but some are drastically held back on achieving their potential because of summertime issues that affect water quality, vegetation growth and/or fish health. Identifying your waterbody's summertime short comings and correcting or minimizing them where possible will help you achieve your lake management goals.

What Is Happening to Wild Turkeys in the South?

By Ron Jolly
Photos by Tes Jolly

Ron Jolly (ronjolly22952@mindspring.com) is an award-winning outdoor writer and video producer living with his wife, Tes, on their farm near Tuskegee, Alabama. Tes (www.jollysoutddorvisions.com) is herself an award-winning writer and outdoor photographer. You've seen lots of her work in past issues of *Wildlife Trends Journal*.

In June, 2020, I participated in a reunion of old friends hosted by Robert and Hilda Pitman at White Oak Plantation near Tuskegee, Alabama. The idea was to relive the good old days shared by friends in the turkey woods, deer stand, duck blind and chasing bugles. Most of the attendees had been my friends for over 40 years and played a role in my career as an outdoor writer, book author and video/television producer. A couple of the attendees were relatively new friends who, in some way, carry influence in the outdoor world.

We boiled crawfish, fried catfish, swapped lies and indulged in an occasional adult beverage. We fished, shot custom long-range rifles and watched custom turkey calls being made just for us. We

Legalized feeding and baiting of deer attracts turkeys to bait sites creating turkey predator food bars and disease spreading hotspots.

laughed, slapped backs, retold old stories and told jokes. At 1:00 P.M. on the second day we convened a meeting to discuss the real reason we gathered at White Oak— the state of the wild turkey and turkey hunting.

There was no laughing, joking or kidding is this discussion. It was the serious business of 12 grizzled, veteran turkey hunters plus the participation of two veteran female turkey hunters and outdoor communicators. For two hours we pondered the decline of the wild turkey and searched for answers and ways to convey those concerns to our turkey hunting brothers and sisters.

I warn you this is not a pretty read filled with the emotion and heart pounding excitement we all know as turkey hunting. There are no descriptive sentences portraying the grace and beauty of our grand bird. This is an honest attempt to share the experience and wisdom garnered from over 500 years of combined turkey hunting experience.

You may ask, "Who are these folks who have decades and decades of turkey hunting prosperity and bliss and what gives them the right to tell me what to do?" You would be right. We do not have that right and that is not what you are about to read. This is not an attempt to provide solutions to the decline in wild turkey populations. To get the right answer to any problem someone first has to ask the right question and to proceed from there with a dialogue among the turkey hunting community. This is the attempt of each participant to do just that.

Jim Spencer has been hunting turkeys for 43 years and lives in north central Arkansas. He is the author of The Turkey Hunter's Digest, Bad Birds and soon to be released Bad Birds Too books. He pens the Bad Birds feature in Turkey and Turkey Hunting Magazine and has published more than 1,000 turkey hunting articles.

"The wild turkey population in the U.S. peaked in the late 1980's and early 1990's at an estimated 6-7 million birds. I'd venture to say there are at least

two and probably ten times as many turkey hunters today and we all know turkey numbers are down in many states, especially the Southeast. My question is:

How do we sustain turkey hunting as we know it with more and more hunters and stagnant turkey population growth?"

Jim Ronquest lives in east central Arkansas and has been hunting turkeys for 43 years. He appeared in several Primos Truth Series videos and is co-host and producer of the popular RNTV television show on the Sportsman Channel. In 2006 he won the prestigious World Duck Calling Championship in Stuttgart, AR. He offers these insights:

"I have many concerns about the state of the wild turkey today. Those concerns include habitat management, predator control, poor hatches and hunter ethics. We keep pushing the envelope with better guns, ammunition, decoys, blinds and calls. My question is:

How do we better educate hunters, new and old, on the time honored history, traditions and ethics of our sport?"

Jill Easton has 21 years experience hunting turkeys and resides in north central Arkansas. Easton is an accomplished outdoor writer and award winning author. She is an avid trapper and regularly does seminars on the local, state and national level. She is an effective ambassador for trapping and regularly takes newcomers and interested non-trappers on her trap line. In 2008 Easton was named the Arkansas Trappers Association Trapper of the Year.

"The world fur market imploded in 2013. There were not a lot of trappers then but there are hardly any left today. There is no incentive because there is virtually no market for the fur. My concern is greater numbers of turkey and turkey nest predators. My question is:

What can we do to effectively control predators and reduce nest and turkey predation?"

Sights like this are becoming less common across much of the southeastern United States as wild turkey numbers decline.

Tes Randle Jolly started turkey hunting 30 years ago.and lives in east-central Alabama. She is an award winning wildlife photographer, author and one of the premier wild turkey photographers in the United States with cover photo credits for many of the most prestigious magazines in the country. Jolly spends untold hours and days in close proximity to undisturbed wild turkeys.

"In my time spent in the photo blind for the last 20 years I have been fortunate enough to observe many of the behaviors that make the wild turkey so unique. I have also seen and photographed some problems that have reduced turkey numbers in our area. Nest predation, hens with no poults and turkeys with heads covered with ugly sores caused by Avian Pox. My question is:

Have we considered the effects legalized baiting and feeding deer has on turkeys by creating turkey predator food bars and disease transmission hot spots?"

Nest predation is a major cause of more and more hens losing their already difficult struggle to brood and rear poults.

David Cardin has hunted turkeys for 45 years and resides in southwest Arkansas. He made regular appearances on Primos Truth Series videos for more than 20 years. Cardin's unique hunting and calling style and woods savvy established him as one of most popular members of the Primos Pro Staff.

"I started hunting turkeys in Arkansas when there were very few turkeys, a limit of one per season and a very short season.I have seen turkey hunting opportunities soar as numbers increased from those early days and return to the low numbers we have today. One thing that concerns me is the wholesale planting and harvesting of monoculture timber stands such as loblolly pine. My question is:

Do we fully understand the effect monocultural timber practices on a very large scale has on turkey populations?"

Mike Lingo has hunted turkeys for 50 years and lives in northeast Louisiana. Lingo was first introduced to the hunting public with his appearance on the Truth II About Spring Turkey Hunting by Primos and appeared in almost every Primos video for the next seven years. Lingo is an old school turkey hunter who was taught the sport by his father.

"I am concerned about turkeys in our area for several reasons including predators, hunting

pressure and poor hatches. I am also concerned about preserving the traditions of the sport and passing them on. My question is:

How do you adjust harvest numbers and seasons to prevent over harvest of turkeys?"

Keven Matthews lives in south Alabama and has 29 years of turkey hunting experience. Matthews has appeared on numerous television shows and hunting DVDs produced by Mossy Oak and Primos. He works with Primos to develop mouth diaphragm calls and is credited with designing the Primos Signature Series, the Hook Hunter Series, and the Hacked Off Series of calls and most recently the Mossy Oak Mouth Call Series. He has hunted and worked with world champion callers Bob Walker, Preston Pittman and Larry Norton to name a few.

"My passion is hunting turkeys and building quality mouth calls. I am friends with the current Director of Alabama's Wildlife and Freshwater Fisheries Division and hear and see the frustration of trying to change state laws in a timely manner. My question is:

How do we get advisory board members and elected officials to put politics aside, approve and implement the recommendations of state game and fish directors and biologists.and base seasons and harvest quotas on science?"

Feral hogs are known to wreck turkey nests and eat eggs, but perhaps habitat destruction is their biggest role in turkey population declines.

One of the highlights of the White Oak reunion was the food and accommodations.

Mark Yarborough has been hunting turkeys 38 years and lives in northeast Mississippi. He has 30 years experience as a wildlife manager and ecosystem restoration expert. He currently works for the Mississippi Department of Wildlife, Fisheries and Parks as the Wildlife Manager for the state's Charles Ray Nix WMA.

"As a wildlife manager, decisions I make are based on observations and data. Accurate reporting of harvest data is essential for setting limits and season dates. My question is:

The White Oak reunion stretched late into the night as old friends pondered the current state of the wild turkey.

How do we convince hunters that providing harvest data is essential and the first step in protecting the resource?"

Phillip Morton has hunted turkeys for 30 years. He resides in east-central Alabama and assisted with several video productions by Woods Wise Products. Morton has a background in public education and is currently teaching his 14 year old son to be a turkey hunter and outdoorsman.

"I think the distance between biologists and everyday outdoorsmen causes intimidation from a terminology standpoint. Educating the next generation is very difficult and we need to put that terminology in layman's terms. My question is:

How do we turn the "me too" attitude and self gratification that dominates social media into a platform that educates young people on the traditions and history of the sport of turkey hunting?"

Coates Head lives in northeast Louisiana and has hunted turkeys 42 years. A farmer by trade, Head appeared on Truth Series videos and television over a 20 year period. He has managed several large tracts of land for deer, waterfowl and turkeys.

"I currently manage a hunting property adjacent to the Mississippi River. It is on the protected side of the levee so flooding is not a problem other than animals fleeing a flood. I have learned that where I live, good management practices for deer are not always good for turkeys. I have also learned you can't legislate morality and you can't ticket bad intentions. I was shocked to see reports from several states the harvest numbers were at record levels at the mid-point of the season with increased hunter participation due to the Covid 19 pandemic. My question is:

How can we adjust to abnormal circumstances such as floods or a pandemic in a timely manner to protect the resource from over harvest and pressure?"

Buddy Hanks started hunting turkeys 50 years ago and lives in central Mississippi. Hanks was featured on the first audio cassette produced by Primos and appeared on the first four turkey hunting videos Primos produced. He is an accomplished competition turkey caller with two state championships and several other wins on his resume.

"I have seen the rise and fall of turkeys and am always amazed at the marvel of a hen brooding and rearing poults. It seems everything is against them but given the right conditions and habitat they come through time and time again. In the South one of the huge problems we have is fire ants. If you shoot a dove or drop a scrap of food and leave it on the ground, in five minutes odds are it will be covered with fire ants when you pick it up. My question is:

Have we considered and do we understand the impact of invasive insects such as fire ants on hatching poults and turkey nests?"

Barry Estes lives in central Alabama and owns and operates Alabama Hog Control. The company serves farmers, ranchers and property owners with feral hog removal. He has turkey hunted over 30 years.

"I cover a lot of ground chasing hogs. I see their devastation on land and habitat every day. My personal lease in southwest Alabama has seen a decline in turkeys for several years. We trap and shoot every hog we can and trap fur bearers such as raccoons, coyotes and opossums. Despite these efforts we did not kill a single gobbler on 5,000 acres this past season. My question is:"

Do we fully understand the impact of feral hogs on wild turkeys?"

Jeff Sherwood lives in west-central Mississippi and has 43 years of turkey hunting experience. He appeared on several Truth Series videos and in 1996 became series producer and served four years. He now builds custom rifles and shotguns through his company Sherwood Tactical.

"The technology we have today is light years ahead of what we

Front row, right to left—Barry Estes, Buddy Hanks, Jeff Sherwood, Jim Spencer, Mike Lingo, David Cardin, Mark Yarborough, Ron Jolly, Kevin Matthews, Phillip Morton, Coates Head and Jim Ronquest. More than 500 years of turkey hunting experience is standing on this porch.

hunted with even 10 years ago. We have discovered chinks in the armor of the turkey gobbler that allow us to kill him when he is normally not killable. Strutter decoys, fanning, reaping and popup blinds can make the grand bird look like a total fool. We have guns and ammunitions that are sometimes deadly at 70 yards and some hunters willing to try that shot. My question is:

Where do we draw the line on how far we are willing to go to kill a turkey?"

Dr. Bobby Dale lives in northeast Mississippi and has hunted turkeys for 44 years. Dale is an accomplished book author with titles such as Double Gobble and Turkey Roost Tales to his credit. He is a historian of the sport of turkey hunting and steeped in its traditions.

"I see and hear the public hunting lands are too crowded with hunters now. I just hope we older folks who have enjoyed the golden years of turkey hunting will do our best to emphasize to our youth the importance of fair chase, ethical sportsmanship, woodsmanship and conserving our beloved resource. My question is:

What can we do to limit or reduce the amount of pressure put on our public hunting lands and a seemingly declining turkey population?"

At this point it is time for me to do some outdoor writer stuff and add a little fluff, warm and fuzzy to what has so far been a doom and gloom read. I have hunted turkeys for six decades. When I started, simply hearing a gobbler was a monumental feat. Killing one was front page of the local newspaper material except you didn't even tell your best friend for fear of losing

your secret hunting spot.

I was fortunate to have a Dad who taught me the basic old school yelp three times, wait 30 minutes then yelp three times style of turkey hunting. Nobody knew any other way. He didn't have camo clothing, made his own calls and shot an old Winchester model 12 that he trusted to 35 yards. Nobody taught him how, he learned on his own and shared that with me.

Somewhere along our life journey everyone at that round table discussion decided he or she knew enough about turkey hunting to share it with any and everybody who would listen, read or watch. And share we did. People who never dreamed of chasing wild turkeys started and they shared it again. Manufacturers saw the opportunity and began building better guns, calls and ammunition. We learned yelp three times, wait 30 minutes and yelp again was boring. Cut and run was more exciting and produced more stories, videos and kills. When our tags were filled we grabbed less experienced hunters and helped them learn how to make turkeys flop. Through it all there were more turkeys each year and life was good. More hunters produced more revenue for state agencies through license sales and matching federal funds. More hunters produced higher sales and profits for equipment manufacturers . More hunters meant growing membership sales for organizations like the National Wild Turkey Federation and still there were more turkeys.

Then one day somebody noticed something had changed. In some areas there were not as many turkeys as the year before. There were fewer gobbles on cool, clear April mornings and more hens wandering around in June without a compliment of poults.

Again, we are not here to tell you what to do or how to hunt. You are hunters and you are responsible for the miraculous comeback of these grand birds. You know what is right and what is wrong. You are hunters and you know the situation in the area you hunt. Our goal is to ask the right questions. If we have done that and only one of these questions is answered and addressed correctly we have made a difference. Imagine that all these are the right questions and they are answered and addressed correctly. Who's to say the best days of turkey hunting are behind us? You are hunters and only you can force the scientific, moral, ethical, and political changes needed to accomplish the goal of reversing a perfect storm that is wreaking havoc on wild turkeys. If not you, if not hunters, then who?

Coyotes, raccoons, opossum and predatory birds take their toll on turkey nests and poults.

Wildlife Trends Journal Management Calendar

Dave Edwards

Managing understory of mid-rotation pine stands to promote high quality wildlife habitat is a game changer for many properties.

Start preparations for fall food plots.
It is difficult, if not impossible, to establish successful food plots without planning and adequate soil preparation. Planting quality food plots is a process that may span over several months, not a weekend. There are several factors that influence the success of a food plot program. Among the most important are establishing a well thought out food plot plan, ensuring proper soil fertility and pH, ensuring hardpan does not exist, preparing a firm, smooth seed bed, only planting under favorable conditions, and controlling weeds. Each of these activities plays an important role in the success of your food plots. Here are a few tips on planting this fall:

- Test soil early and apply required lime (preferably at least 6 months prior to planting). It takes time for the chemical process to take place and effectively change

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the soil pH. If you didn't lime in spring or early summer, go ahead and apply it now…better late than never.

- Use the results of the soil test to create the best fertilizer blend for your specific soil needs. Many people use balanced fertilizers such as 13-13-13 because they are easy. However, it is well worth your time to custom blend fertilizer to match your needs verses applying a balanced fertilizer that often requires applying extremely high amounts of some nutrients to compensate for the lack of others in the soil – which results in wasted fertilizer/ wasted money.
- Order seed and fertilizer as early as possible to ensure it is ready when you are.
- Ensure plots are relatively smooth. This takes time and should be done well ahead of planting dates. If you are broadcast planting, simply drag the field just before planting to loosen the soil to provide good seed-soil contact. Once broadcasted, cultipack the field to "mash" the seed into the soil (If you've never seen or used a cultipacker, check them out. In my opinion it is a "must have" implement that has many applications in food plot planting). Do NOT drag food plots if they are somewhat unsmooth or if you planted small seed such a clover. Dragging will result in burying seed too deep.
- Have seed beds ready, but don't fall into the trap of planting too early. September is often a very dry month. Mid-October is ideal in most areas of the Southeast. This is when we start getting regular cold

With proper food plot preparations, annual clovers from last fall are easily regenerated.

Now is the time to mow hunter access trails through quail woods.

fronts that bring rain. Planting too early normally results in disease (mostly army worms), poor planting success due to droughty conditions, or if you receive adequate rain the food plot is knee high and less attractive to deer by the time gun season arrives.

- Adding annual reseeding clovers such as crimson or arrowleaf into your fall plantings will increase the quality, nutritional value, and longevity of your food plots. With proper management, these clovers will produce food well into summer then regenerate again next fall which will save you money on seed costs.
- Use exclusion cages to monitor deer use and plot performance. An exclusion cage is a small "tube" of fence staked to the plot that prevents deer from eating the crop within the exclusion cage which allows you to assess plot growth and deer use of the plot. Cages are normally 2-3' foot in diameter and 3-4' tall. I've seen many food plots where the manager thought the crop did not do well, where in fact it did but deer simply mowed it down and never gave it a chance to grow.

Prepare skinning shed for deer data collection

Deer season is right around the corner. Collecting information from deer harvested on your property can provide valuable insight to the status of your herd, the progress of your management strategies, and assist in making harvest decisions that will improve the deer herd and ultimately the hunting. Making sure your skinning shed is fully stocked and ready should be an annual pre-season activity. At a minimum, you should be collect-

ing age (jawbone), weight, antler measurements, and reproductive data. Supplies needed include jawbone extraction tool, pruning loppers, wire basket to air-dry/store jawbones, sharp knives, permanent markers, pencils, weight scale, gambrel/rope for hanging deer, flexible measuring tape, instructions on how to collect and store harvest data (recommended if more than one person will be collecting the data), and harvest data sheets to record the information collected. General preparations may include sharpening and lubricating pruning loppers, calibrating weight scales, inspecting and/or replacing rope or cables used to hang deer, ensuring water source is working properly, and stocking/organizing the data collection area. The Quality Deer Management Association (QDMA) or Forestry Suppliers are great places to purchase supplies to collect harvest data including harvest data sheets. Collecting and analyzing harvest data is often the backbone to the success of a deer management program.

Manage mid-rotation pine stands with herbicides to improve food and cover for wildlife

Although thinning pine plantations improves wildlife habitat by promoting development of food and bedding/escape cover, the responding vegetation often includes species such as sweetgum, waxmyrtle, gallberry, etc. that shade out and reduce desirable forage plants/vegetation over time. An effective technique to control undesirable hardwood competition, and promote quality deer foods, is through the use of herbicides. An application of selective herbicide will minimize hardwood competition and promote development of higher quality wildlife food and bedding/escape cover within treated areas. While you can apply this herbicide throughout the growing season, it is most effective if applied from late summer until leaf drop in the fall. Furthermore, research has shown that a single treatment can significantly increase growth and production of the remaining pine trees by final harvest, hence, generating a return far outweighing the cost of the treatment. Treating entire stands may be most practical from a timber production standpoint, but is not necessary from a wildlife perspective. For example, in a thinned pine plantation, simply applying herbicides via skidder/tractor down select thinned rows into the adjacent pine rows can significantly increase the quality and quantity of deer browse and ultimately raise the nutritional carrying capacity of the area. Once pine stands are treated, a prescribed burning rotation should be established thereafter. This technique is often referred to as a "mid-rotation" release. It is reducing hardwood competition and 'releasing' the pines for better growth. I often use this strategy (herbicide followed by fire) to create natural food plots within middle aged pine plantations. These areas create lots of great habitat and thus exceptional hunting opportunities for deer and turkey.

Condition and train hunting dogs.

Each September thousands of hunters and their dogs go afield and begin their hunting season. In many parts of the United States, particularly in the Southeast, September is the opening month for dove and early teal season, with shooting preserve quail season starting in October in many areas. In the Southeast, where temperatures in the nineties are not uncommon, all hunting dog owners need to condition their four-legged friends beforehand and be familiar with the dangers a working dog can face in these conditions.

Many professional gun dog trainers recommend a warm weather training regimen of an hour in the morning and another in the evening. Run your dog and work on retrieving drills, building slowly as you go. Just as when you are starting a fitness program, workouts should start out slow and easy. Make the workouts fun and if needed take frequent rest and water breaks. As in any training process you want to increase the duration gradually as the dog increases his endurance and becomes accustomed to the heat.

The onset of heat related problems can be quite subtle, so it is important to keep a watchful eye on your dog while training or hunting in warm weather. The different types of common heat-related problems that may be encountered while training and hunting are: Heat stress, heat exhaustion and heat stroke. If

Planting a successful food plot is more than a weekend project.

your dog is not performing at his normal level, slow in reacting to your commands, panting, or simply lays down and does not want to get up, get him out of the sun and into a shaded area, allow him to rest and give him water in small quantities frequently. If there is a waterhole nearby, encourage the dog to get in it to cool its body temperature. We often provide our dogs with Gatorade or Pedialyte which helps replace electrolytes – similar to a drained athlete.

Mow access lanes through quail hunting areas.
Generally speaking, areas that are being managed for quail hunting are disturbed regularly by fire, disking, and/or applications of herbicide to control undesirable vegetation to promote quality quail habitat. Consequently, the understory habitat in these areas seldom grows taller than 3 feet. However, even with such low growing vegetation, navigating and hunting these areas with bird dogs and other hunters (particularly kids) can be challenging due to the relatively thick nature of this vegetation. While prescribed fire, disking, and herbicide applications are best suited for creating quail habitat, mowing can be used to increase the huntability of the habitat. That is, mowing access trails through quail habitat will allow easier access for hunting. How and where you mow trails is a personal preference. Some people like straight line/checkerboard mowing which results in a systematic appearance and is easier for hunters to figure out where other mowed lanes are while working dogs. While it depends on the situation, I prefer randomly mowed lanes that wind through the habitat. This strategy results in a more natural look. Regardless of the method you use, mowing these trails just before the growing season ends (late summer) will allow the vegetation to grow a little before hunting season/dormant season

arrives. I generally try to time this mowing when I feel there are 2-3 weeks left of growing season. The result will be trails that are easily walked but do not appear as though they were just mowed providing a more natural/aesthetic look within the quail hunting areas.

If you added annual clovers to your food plots last fall, September is the time to apply management to regenerate the food plots.
Incorporating reseeding annual clovers into your fall plantings will allow you to extend the plot's wildlife value by providing quality food sources through early summer. Without them, fall plots of small grain such as winter wheat and oats generally become less productive and thus less valuable for wildlife by early spring. If you have planted annual clovers such as crimson or arrowleaf clover, allow them to flower and seed out – which normally occurs in April – June depending on which growing zone you are in. The flowers are important for game birds, particularly quail and turkey poults. Flowers attract insects which are an important component in the diet (source of much needed protein) for very young turkeys that were hatched this spring. Although plots generally get weedy after the clover has seeded out (which isn't always a bad thing), leave these plots alone until early fall. About 3 weeks to a month prior to planting time, mow the plots as low as possible, allow a week or so for the weeds to start growing again, and apply glyphosate (RoundUp) to knock them out and prep the plot for re-planting. If weeds were thick, you may consider burning the thatch off to expose bare ground (burning also enhances clover seed germination). Once the weeds die (or have been burned off), spread fertilizer, lightly disk the plot to expose bare ground and "stir up" the residual clover seed from last year, then plant annual small grains (wheat and oats). The key to the whole process is to not disk the food plot too deep. After the first planting, and if you've allowed last year's clover to seed out, annual clovers will reseed and come back every year – which not only provides great nutrition and extends the life of your fall annual plots, but will save you money on seed.

Manage dove fields in preparation for the upcoming season.
Unless you hunt deer in August in South Carolina, dove season is often the first hunt of the year in the Southeast. Dove field planting activities are normally dictated by the time it takes for the specific crop you plant to mature. Common dove field crops include dove proso millet, browntop millet, Japanese millet, sunflowers, grain sorghum, corn, and wheat, all of which have different seed maturing periods. The goal is to have mature seed available for dove a few weeks before the season starts to allow them time to find and begin using the field. If all goes well, most dove fields are nearly mature by mid-August. As the season approaches, here are a few techniques I have used to increase dove use of the field before a planned hunt:

1. Maintain a clean disked strip or two through the field of bare ground. These are strips that you do not plant, rather simply keep plowed through the summer and into dove season. Dove find these bare dirt areas attractive because it is easy to walk in, exposes seeds, grit, and offers dusting areas. Disked strips offer access to seed from your plantings once they mature as well.

2. If the field has a water hole or pond, make sure dove have access to it. In some cases, this means either mowing or burning the vegetation along a section of the shore will be needed.

3. Once the crop is mature, begin periodic strip mowing or sectional burning to allow access and expose seed to dove. I prefer burning if it is possible because it completely cleans the ground allowing better access for dove and exposes more seed. Only a few strips are needed at any one time. The goal is to only mow/expose enough seed for dove to use for a week or so. Add another strip or burn another section as dove need it. This method will prolong the life of your dove field by providing seed to dove over several weeks or months.

Install trail cameras to capture photos of deer
Depending on where your property is in the whitetail's range,

antler hardening (shedding of velvet) has already taken place or will shortly. Late August or early September is a great time to begin installing trail cameras around your property to capture photos of bucks. During this period, bucks are congregated in loose bachelor groups allowing you to photograph multiple bucks together. Where to place the cameras depends on local food sources and deer activity. In some cases, attracting deer to a camera site with scattered whole corn is most effective. However, mineral licks that were created earlier in the year often make great camera locations, particularly if you have experienced wet conditions. Other locations that may be effective in late summer or early fall include entrance trails to large agriculture fields, along the edge of smaller food plots of perennial crops, summer food plots, or small water holes (if weather is warm and conditions are dry). Naturally, most hunters are anxious and excited to plug the SD card into a computer and run through the photos to see what kind of bucks they have, which is what I do. However, take time afterwards to do a little analysis of the photos. By counting the number of bucks and does in the photographs you can get an idea of the existing adult sex ratio which will help you make harvest decisions. Estimating the age of the bucks you photographed will shed light on the buck age structure. Obviously, a full-scale camera survey will provide the most accurate and comprehensive information about the deer herd, but "random" trail camera photos certainly have a story to tell and can help you better understand the status of the deer herd on your property. All of this allows you to make better management decisions that lead to desired results. Photos from trail cameras will also help reduce "mistakes" when judging bucks in the woods while hunting (where judgments are often made in seconds while your heart is racing 200 beats per minute!)

Maintaining strips of bare ground within a dove field will help you attract and hold more birds.

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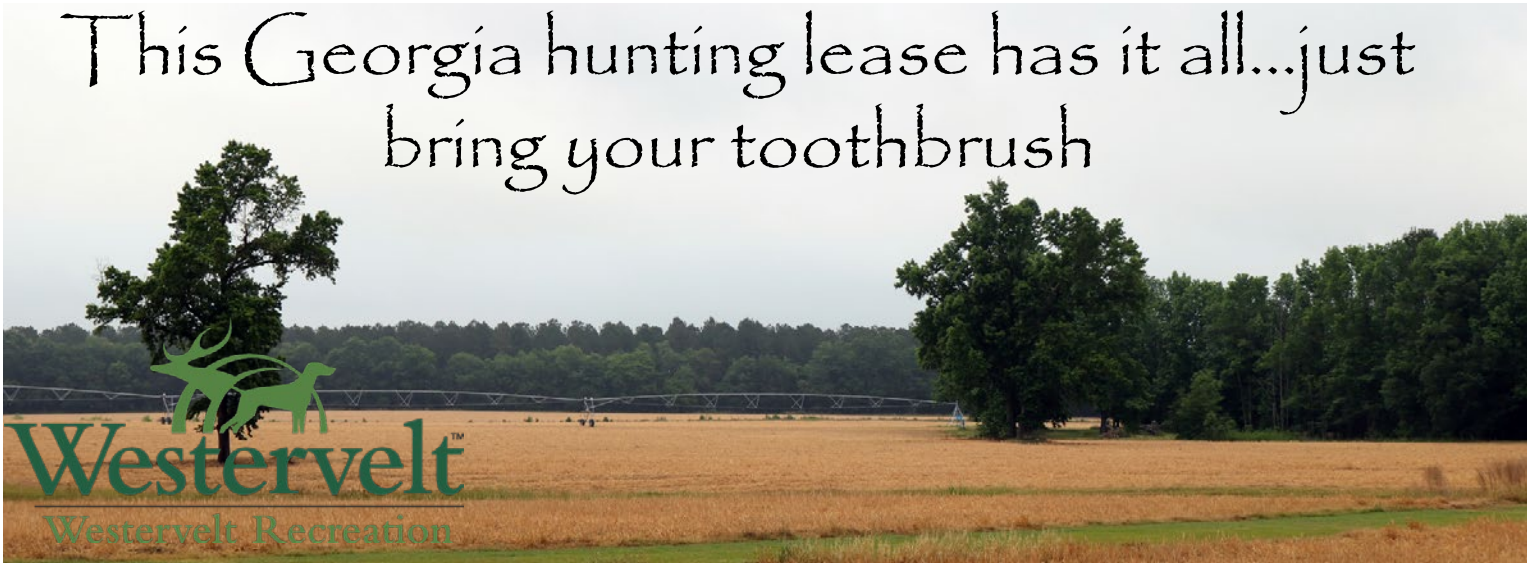

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