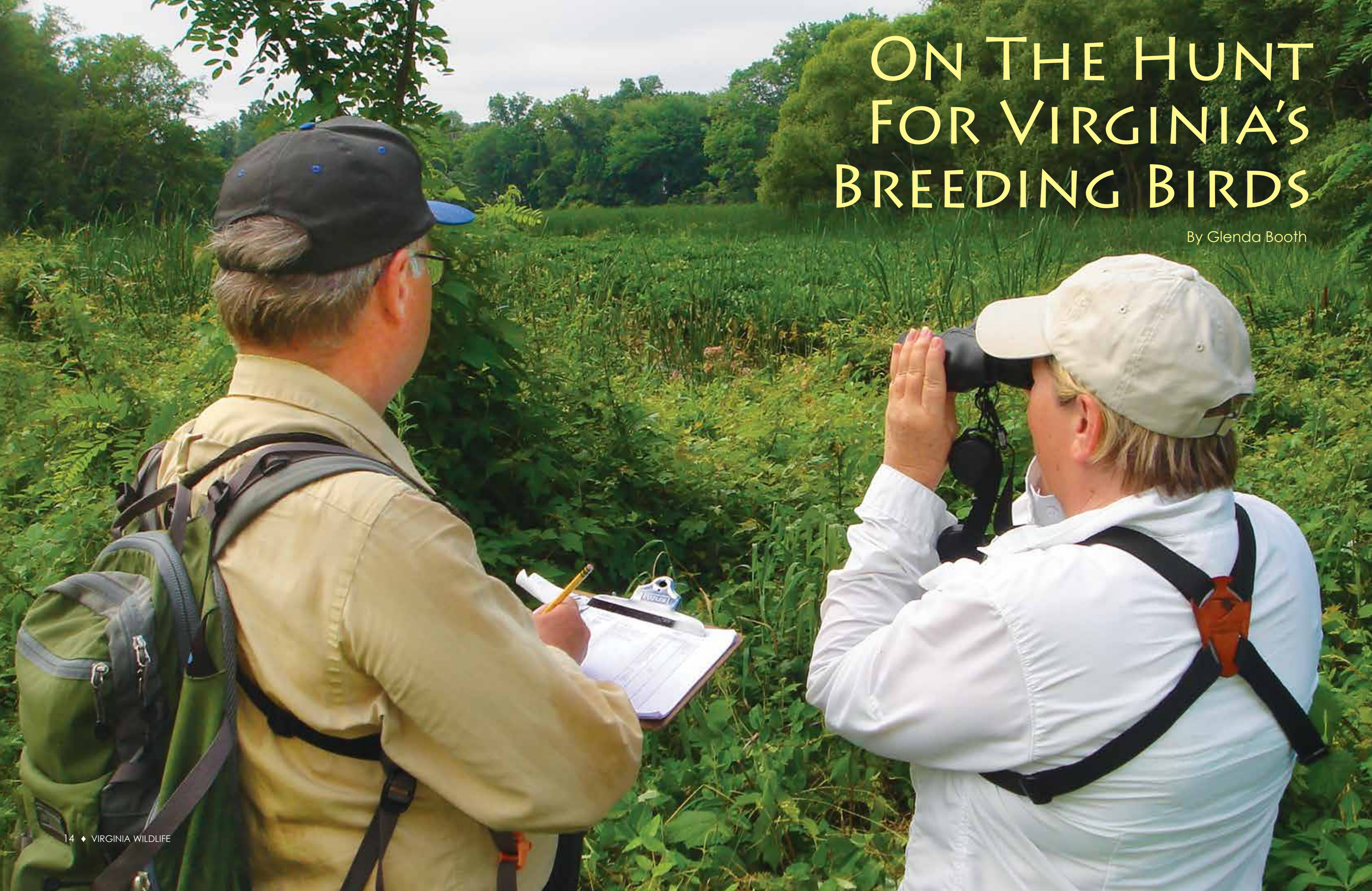


ON THE HUNT FOR VIRGINIA'S BREEDING BIRDS

By Glenda Booth



Ashley Peele was stopped in her tracks when a male cedar waxwing (*Bombycilla cedrorum*) near a female hopped in circles, fluttered his wings violently, and begged like a juvenile bird. “He looked like he was having a fit,” she chuckles. An avian ecologist, Dr. Peele is working with the Conservation Management Institute at Virginia Tech.

Her description of the cedar waxwing reminds us of that famous line rhapsodized by poet Alfred Lord Tennyson, “In the spring a young man’s fancy lightly turns to thoughts of love.” Tennyson presumably excluded the avian world. But in the spring a bird’s fancy also turns to love, though not always lightly. Breeding birds engage in all kinds of intriguing behaviors:

- Male ruffed grouse “drum” their wings over a large log, a sound that travels for miles.
- Male terns bring gifts of fish to females during courtship.
- Birds become creative nest builders. Ospreys (*Pandion haliaetus*) add oddities like Styrofoam cups, kites, bones, rags, plastic bags, and shiny streamers to their stick nests. Phil Lehman, a Blacksburg-area birder, watched a Northern parula (*Setophaga americana*) padding its nest with tent caterpillar webbing last spring. Crows and ravens add shiny, sparkly objects like aluminum foil. “You can find the craziest things in there, even jewelry,” says Peele.

Documenting Virginia’s Birds

Virginians are fanning out across the state to document breeding birds for the second Virginia Breeding Bird Atlas (VABBA2), an ambitious five-year inventory that began in 2016 and runs through 2020. This atlas is an update of the state’s first such bird inventory completed in 1989 and is being coordinated by Dr. Peele.

“Birds are a great ecological indicator of how the environment is doing,” says Jeff Trollinger, DGIF’s deputy director for the Bureau of Wildlife Resources. This is one of the reasons why the agency is partnering with the Virginia Society of Ornithology to sponsor the VABBA2, which includes additional partners such as the Appalachian Mountain Joint Venture, Virginia Master

Naturalists, The Nature Conservancy, U.S. Forest Service biologists, local bird clubs, Audubon chapters, and others on what is largely a citizen science project.

During the first field season in 2016, more than 450 volunteers reported over 684,000 birds, identified over 205 species, and confirmed that 174 of those species currently breed in the state. Dr. Peele em-



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With populations in steep decline, barn owls need to be monitored. Previous pages: Larry Cartwright and Laura Sebastianelli survey for breeding birds in the Dyke Marsh Wildlife Preserve. © Glenda Booth

phasizes the importance of citizen science in modern conservation efforts: “Without these volunteers, it would be impossible to collect such extensive data on Virginia’s breeding birds.” Volunteer efforts will be augmented through bird abundance surveys conducted across the state.

What Can We Learn?

What questions will the atlas answer? Fundamentally: For each species, what is its current breeding distribution and estimated population size, and where is it least and most abundant?

With this data scientists and decision-makers can analyze changes in Virginia’s avian communities since 1989. Trollinger explains, “The first breeding bird atlas provided a baseline of information

about our breeding birds across Virginia. The second BBA will provide a comparison of how populations have changed over the past 30 years.”

John Townsend, a hunter and outdoorsman, notes that “declines and upswings in a species’ numbers can be tracked,” adding that “it is difficult to determine such trends without the intensive field work of volunteers.”

Project leaders also hope to learn when and where birds are forming territories, building nests, laying eggs, and fledging young. What are their distributions among habitats? Have there been changes in species diversity? If there are population declines or increases, why?

As State Coordinator of the VABBA2, Peele describes other “umbrella questions” about how changes in the landscape affect birds; for example, habitat loss from development or from farmland converting back to forest.

Ultimately, the VABBA2 is a tool that will be used to broadly guide avian conservation within the commonwealth. The data can help inform large-scale conservation management strategies, such as Virginia’s Wildlife Action Plan, and help focus species conservation efforts on specific geographic areas where they are most in need of help or where the biggest conservation outcome can be achieved. It is anticipated that VABBA2 results will be used by a variety of entities, including federal and state agencies, universities, and nonprofit organizations.

How They Survey

The atlas project includes 12 distinct regions, each headed by a local coordinator. Within each region, bird data will be collected in geographic blocks that are roughly nine square miles in size. Up to three volunteers can sign up to survey a single block, which entails about 20 hours of field time. To distribute volunteer effort evenly, coordinators ask volunteers to focus on designated priority blocks first—comprising roughly 17 percent of the state.

Surveyors will attempt to record the number of species in each block and confirm breeding for each. They will survey periodically over the breeding season and report their observations to eBird ([eBird](http://eBird.org)).

(org/atlasva), an online database curated by the Cornell Lab of Ornithology. Peele hopes each block surveyor will visit all habitat types in a block and confirm breeding in at least 60 percent of species observed. While each block needs a committed leader, people do not need to be formally signed up to submit observations and novice surveyors are paired with veteran birders.

Breeding Behavior

How does someone know a bird is in fact breeding? Witnessing birds copulating, feeding young, incubating eggs, or carrying nesting material are reasonably reliable and recognizable signs of breeding, but bird behaviors can sometimes be confusing and subtle. The handbook cautions, for example, that some birds like wrens build “dummy” nests and these nests are not necessarily a confirmation of breeding. And the nests of some birds like turkeys and shorebirds are very minimal, difficult to discern.

To help volunteers understand behaviors they may see in the field, the handbook provides survey guidelines, breeding behavior categories, and codes. For example, surveyors may record a *possible* breeder like a bird observed in suitable nesting habitat during their breeding season or a *probable* breeder, such as a male Northern cardinal (*Cardinalis cardinalis*) courting a female by feeding her seed. Another sign of breeding is known as “territorial defense,” such as when a male ruby-throated hummingbird (*Archilochus colubris*) chases another male away from a feeder or honeysuckle vine.

Priority Species

“In the U.S., 40 species of common birds are in steep decline and 17 of these breed in Virginia,” reports the project handbook. Many of them are included in the VABBA2 priority species list. The list is based largely on Virginia’s Wildlife Action Plan’s “Species of Greatest Conservation Need” but also includes species whose status here is currently not well known. Priority species include the American black duck (*Anas rubripes*), common merganser (*Mergus merganser*), American bittern (*Botaurus lentiginosus*), barn owl (*Tyto alba*), and bobolink (*Dolichonyx oryzivorus*). Volunteers

are asked to collect additional information on such species, to help better assess their status and target future research.

When?

March to July is primary breeding season in the state, but surveyors will be on the lookout all year. “In the fall, there’s not much going on,” says coordinator Mike



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Bobolink, such as this male in breeding plumage, is considered a priority species.

Lott, northern region steward for the Department of Conservation and Recreation. But come December and January, owls, hawks, and falcons begin breeding activity. Bald eagle (*Haliaeetus leucocephalus*) courtship can start as early as December in Virginia. Great blue herons (*Ardea herodias*) start nest building in rookeries in February.

Atlas officials urge surveyors to get out early in the morning for the “dawn chorus,” when the males of many bird species are actively singing. The majority of diurnal birds are most consistently vocal before noon. Volunteers will also survey after sundown to detect nocturnal species, like the common nighthawk (*Chordeiles minor*) and Northern saw-whet owl (*Aegolius acadicus*).

Why Study Breeding Birds?

Townsend stresses that sportsmen are interested in the natural world that surrounds

them. “Sportsmen have a deep understanding, appreciation, and respect for wildlife and natural phenomena. Projects like the atlas can help provide enjoyable context to a day out-of-doors in the same way a field guide can, by providing an avenue for learning and curiosity.”

Randy Thrasher, a Lynchburg-area deer hunter, concurs: “Each bird has a story to tell.” He counts all the species he can see and hear when he is stomping around in the woods.

An experienced birdwatcher, Larry Cartwright sees it like this: “Watching birds is the ultimate reality show for me. It beats anything television has to offer, real organisms living and sometimes dying every day. It is all there, unedited and real. If you believe that what happens to wildlife can affect humans, then people should care about this.”

Dr. Peele tends to think big picture. “The world is changing rapidly in ways that will affect all living things. It is critical for us to understand how issues like changing land use will affect natural ecosystems that we all enjoy and depend on. Birds are not only fun to watch, but can tell us a great deal about what is happening ecologically in a given place and time. We need to engage people with our natural resources because we can all play a role in their stewardship. The atlas is a very tangible way to do this and to make a difference for Virginia’s birds.” ❧

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.

For More Information

- ◆ Check Out Our Video: https://youtu.be/nls212r_eZU
- ◆ Atlas Handbook, Block Explorer: www.vabba2.org
- ◆ Atlas eBird portal for articles/updates: ebird.org/content/atlasva

Learn to Survey

Project managers will host atlas trainings in 2017, including one at the Virginia Society of Ornithology’s annual meeting from May 5-7, hosted by the Richmond Audubon Society in Glen Allen. Visit www.virginiabirds.org/.