WHAT'S HATCHING?

Official Newsletter of the Maryland & DC Breeding Bird Atlas 3

ISSUE NO 9 | OCT 2020

Photo credit: Jordan Rutter

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BIRD OF THE MONTH

Black Vultures are an atlasing enigma, but there's a trick vulture researchers use to locate their nests.

BLOCK PARTY

It's a party in Wicomico! This month, we're exploring a block with a Delaware boundary.

OUT OF THE ARCHIVE

Party like it's 1949! Read about the discoveries of common winter resident "Short-billed Marsh Wrens" and, in western Maryland, regular summer resident Cliff Swallows.

On July 10, 2020, Tim Carney (Maryland Environmental Service) found a female Northern Shoveler with five young on Poplar Island, Talbot County. This represents the third Confirmed Maryland breeding record for Northern Shoveler. The young appeared to be about 5–6 weeks old, which indicates the eggs were laid in early May. Maryland's first breeding record was in Blackwater NWR during the first atlas (1985), when Bob Ringler found a female with seven young. The second was in 2019 when U.S. Fish & Wildlife Service personnel found a nest with eggs, also on Poplar Island. Do two concurrent breeding records represent abnormalities, or are they the start of a trend?"

"I think that, if required on pain of death to name instantly the most perfect thing in the universe, I should risk my fate on a bird's egg."

- Thomas Wentworth Higginson

Looking for a good, Atlas-related read this winter?

Check out *The Most Perfect Thing* by Tim Birkhead. Avoiding obtuse jargon, Birkhead guides you through an engrossing investigation into the intricacies of egg development and function.

UPCOMING EVENTS

The Birder's Guide to Maryland & DC website has exceptionally detailed information about most popular birding destinations in Maryland and DC.

One of the most useful atlasing tools on the website is 'Explore by Habitat'. Want to find sites with 'Salt or Brackish Mud'? How about 'Reclaimed Industrial Sites'? Or maybe just 'Hedgerows'? The Birder's Guide has you covered.

Explore the information at birdersguidemddc.org.

From the Coordinator

Time to use the general eBird portal for everything but Rock Pigeons!

At the beginning of the month, I switched from the Atlas portal to the general eBird portal. Despite the breeding season having been effectively over for several weeks, the simple action of flipping a virtual toggle switch symbolized a distinct end to the data collection that had preoccupied me for so many months. I'll continue to report our resident Rock Pigeons to the Atlas, but otherwise my atlasing efforts will focus on strategizing for next year (hopefully with fewer travel constraints!) and reviewing and analyzing the 2020 data.

The wait for the beginning of 2021 data collection seems like it's a long one, but it's really only three or four months. Not to mention, of course, there is the less-than-glamorous-but-still-important atlasing of Rock Pigeons, well-known as a bird capable of year-round nesting (although Sept 20 is the latest one has been Confirmed in Maryland or DC).

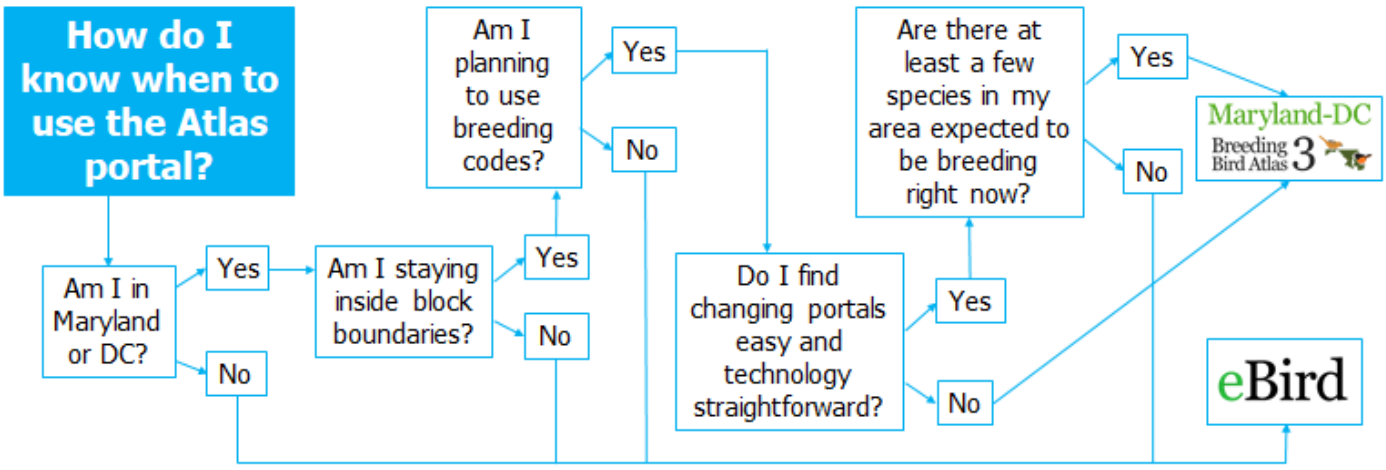
Once February gets here, it will be time to begin early searches for Barred and Great Horned Owls, Red Crossbills, and, as this issue explains, vultures.

Black and Turkey Vultures are an atlasing enigma; they are abundant, easy to detect, and exceptionally difficult to find solid evidence of breeding for. But their crucial role in the ecosystem and ongoing distribution changes warrant the additional effort required to accurately document their regional breeding effort.

When you observe vultures while atlasing, don't be too overeager to apply a breeding code; in particular, use code H cautiously, since most observations of vultures are not near their nest site. Be sure that your observation accurately represents breeding behavior—and read on to find out more about what that behavior is!

--Gabriel

Photo credit: Bill Hubick



bird of the month:

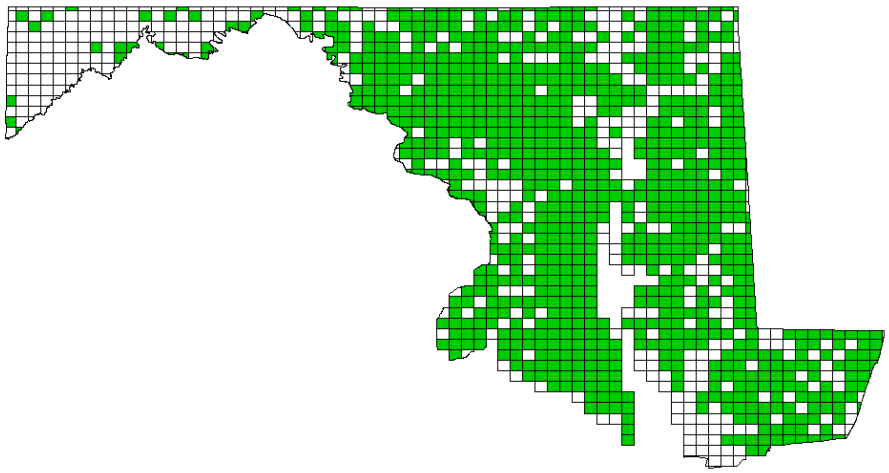
BLACK VULTURE

Photo credit: Jordan Rutter

Black Vultures were first reported in Maryland in Montgomery County in March, 1895. A common breeding bird now, it wouldn't be until 1922 that Maryland's first Black Vulture nest would be reported, this time in St. Mary's County. By the 40s, Black Vultures were considered to be permanent residents in southern Maryland, and they have only expanded across the state since. The reason for their expansion isn't clear, but likely has to do with increased food availability from roadkill and hunting, reduced persecution, or recovery from pesticide-induced declines.

Forests are used for roosting at night and for nesting, but open areas are required for foraging. Unlike Turkey Vultures, Black Vultures have a poorly developed sense of smell and rely on their vision to locate their primary food source, carrion. The difference in foraging strategies between these two vultures is reflected in their foraging height as well; Black Vultures tend to soar much higher than Turkey Vultures. This allows them to watch Turkey Vultures, follow them to a new food source, and subsequently usurp the carcass. Black Vultures are more aggressive than Turkey Vultures and tend to forage in groups, a combination that allows them to overwhelm their scavenging competitor.

But Black Vultures also follow other Black Vultures to food sources. In fact, the large, communal roosts they use at night serve as a sort of information center for local vultures. Black Vultures will return to a food source the following morning, so individuals who were unsuccessful at finding food the previous day can simply follow their neighbors.



Black Vulture distribution map from the Maryland & DC Breeding Bird Atlas 2.

BLACK VULTURE

Slow and steady: the vulture and the hare.

Black Vultures are long-lived birds with low mortality (about 10% per year) and little risk of predation as adults. The oldest wild Black Vulture recorded was 25 years old, and it's entirely possible they live longer than that. This longevity record came from a banding effort in Louisiana that saw over 22,000 Black Vultures banded during a twelve year span. However, using metal bands on vultures is detrimental to their health because they spray excrement on their legs to assist with thermoregulation, and metal bands interfere with that (wing tags are used instead now). The band recovery record simply states "found dead", so it's unclear how the band on this individual may have influenced its demise.

On the other hand, the youngest documented breeding Black Vulture was an astonishing eight years old. This advanced age may be a result of minimal research on their demographics or it could reflect limited nest sites, but it is still likely an accurate reflection of a "slow and steady" reproductive strategy.

Because Black Vultures have higher wing-loading than Turkey Vultures—in other words, their ratio of body mass to wing area is higher—Black Vultures must wait later in the day for the air to warm enough for them to soar and forage. But if an individual already knows where its food source is, it can safely spend more energy flapping, rather than soaring, to reach its food source, and getting there early in the morning reduces the chance that the food will already be consumed. Black Vultures that leave a roost early in the morning using a flapping flight are heading to a food source, and hungry neighbors know this. This information sharing creates stiff competition at a food

Photo credit: George Jett

source, but by foraging with its relatives and cooperating as a team, an individual can increase its competitiveness at a food site. In fact, most agonistic encounters—aggression directed at members of the same species—are directed towards non-relatives, and other family members, including mates, parents and children, and siblings, will get involved and help out.

Black Vultures are sexually monomorphic and monogamous, and form year-round pair bonds that are only severed by their partner's death. Unlike most birds, which freely engage in 'extra-pair copulations' (the scientific term for cheating), there is no evidence of this in Black Vultures. Copulations occur almost exclusively at the nest site and away from other vultures, which likely prevents any extra-pair copulations. If a male performs a pre-copulatory display at a roost site, he is immediately attacked by other vultures.

Vulture biology presents a challenge for detecting breeding. Because their food source is difficult to predict where and when it will occur, they have massive home ranges of about 60 square miles (or 6.5 atlas blocks!). Most activity takes place within six miles of their main roost site. This means code H (a bird found in suitable breeding habitat) cannot be applied to most vulture sightings. Roosting and foraging vultures can easily be miles away from their nest sites. Vultures do not have syrinxes, so singing codes do not apply to them. Despite their aggression to other vultures, they are not territorial, and copulations are rarely observed. They do not build nests or carry food in their bills. Courtship displays have been described for vultures, but these must be interpreted cautiously. In these displays, one individual chases a second individual for some time. However, Black Vultures care for their young until the following spring and this behavior may represent an adult driving off the previous year's young (on the other hand, these 'follow chases' are indeed likely associated with courtship in Turkey Vultures). Short of finding a nest, there are limited ways to determine whether a vulture is breeding in a block.

Photo credit: George Jett

Photo credit: George Jett

Black Vultures prefer undisturbed locations to nest in. They tend to select forest, especially large, roadless tracts, and they lay two whitish, brown-splotched eggs on the ground in a cave, a hollow log, under a brush pile or in a thicket, or in an abandoned building or duck blind. To determine a location's suitability as a nest site, the pair will perch in a prominent location overlooking the proposed nest site for 4–6 weeks prior to egg-laying. In Maryland, Black Vulture eggs have been recorded from March 10 to July 5, so to consistently log Probable-status vultures, locate pairs in February perched near suitable habitat and record them with code P (pair in suitable breeding habitat). Turkey Vultures exhibit similar perching behavior, but they tend to nest about two weeks later than Black Vultures.

Both adult Black Vultures share the 39-day incubation period equally, alternating once each day. The chicks hatch covered in buffy down and the parents continue to alternate brooding duties. After 24 days, the chicks are capable of thermoregulation and are left alone during the day. Parents regurgitate food for the oldest chick first, which eats the most. The younger, smaller chick receives the remainder and may starve if there is insufficient food. Successful nests fledge an average of 1.7 chicks, and about 85% of nests in re-used nest sites are successful. Brooding stops entirely at 43 days and by 79 days the chicks are fully feathered and ready for their first flight.

They'll remain near the nest site for the next ten days or so before leaving and will remain dependent on their parents until the following spring. Because they remain dependent on their parents for so long but travel so widely, code FL (recently fledged young) should only be used for fledglings in late summer that appear to still be near the nest site.


Photo credit: Eaton Ekarintaragun

Photo credit: George Jett

In BBA2, 42% of blocks had a breeding record, while a quarter of blocks were relegated to Observed status. There were far fewer records in BBA1; only 23% of blocks had breeding evidence, while another 14% had Observed status. With diligence and appropriate timing, breeding vultures can be searched for systematically. Accurately identifying changes in their local breeding distribution will be important for understanding the continent-wide changes this species has undergone.

Author: Gabriel Foley

References

Buckley, N.J. (2020). Black Vulture (*Coragyps atratus*), version 1.0. In Birds of the World (A.F. Poole and F.B. Gill, Editors). Cornell Lab of Ornithology, Ithaca, NY, USA. https://doi.org/10.2173/bow.blkvul.01

ATLASER SPOTLIGHT

Eaton Ekarintaragun is a 14 year-old violinist and wildlife artist from Calvert County.

What made you interested in birds?

In 2018, I attended a birding summer camp with the Calvert Nature Society. I did not know much about birds then, so I thought the camp would be an excellent opportunity to learn something new. Delighted by the detail and observation skills needed to bird-watch, I took off right away.

What's the best thing about atlasing?

I think it's the opportunity to observe and record breeding behavior. It lets me slow down and pay more attention to the common species and learn more about them. As soon as I began to recognize the signs of a bird breeding nearby, there seemed to be fledglings and nests everywhere!

In addition to binoculars and a field guide, what would you take atlasing?

I would definitely bring a camera. It can come in handy, especially when sighting an unusual bird or if you encounter an individual whose ID you are not entirely sure about.

What bird reflects your personality?

I think a bird that could fit my personality well is the Sora. Sora are shy and usually solitary, but not always.

If you could pick anyone to go atlasing with for a day, who would it be?

I think I would enjoy a day of atlasing with either Gene Groshon or Shannon Steele, two Calvert County Naturalists who helped get me into birding.

Ruby-throated Hummingbird. Photo credit: Eaton Ekarintaragun

What bird do you particularly like?

If I really needed to pick a favorite, I think it would be the Ruby-throated Hummingbird. They're easy to observe, and each individual seems to have its own personality. I like how they are curious, and how they seem to know you after long interactions with them.

What is today's biggest conservation issue?

Climate change is one of the biggest issues in conservation today. As our planet changes, birds will have to continuously struggle to find new ways to survive. A step toward fixing this would be to educate other people, who will be more prone to help once informed of the threats to our wildlife.

Where is your favorite place to atlas?

I've found the place I atlas the most is where I live, in northern Calvert County.

BLOCK PARTY

Hebron CE, Wicomico County

Bounded on the north by the Delaware border and the small town of Hebron in the southwest, Hebron CE remains unadopted and unatlased. A mix of woodland and agriculture, the block has little water and almost no public land, but rural roads provide access to most of the block. In the southwest corner of the block, there is a small park and a cemetery that border Rewastico Creek. To find them, travel along Route 50 until you reach the Valero fuel station that marks the block's boundary, then head north until you see the park and cemetery on either side of the road.

In the first atlas, only 63 species were documented in Hebron CE, but atlasers found 72 species in BBA2. As expected for a block with oak-pine forest, Chuck-will's Widow was found in BBA2, and Summer Tanager and Pine Warbler in both atlases, but Yellow-throated Warbler is noticeably absent from the species list. Louisiana Waterthrush, Prothonotary Warbler, White-eyed Vireo, Acadian Flycatcher, and Vesper Sparrow were all classified as Probable in BBA1 but weren't found in the following atlas. On the other hand, American Kestrel, Pileated Woodpecker, and Worm-eating Warbler were only recorded in BBA2. Barn Owl and Baltimore Oriole were both found in BBA2, and Hebron CE was one of only four Wicomico blocks with either of these species. Check the creeks marked on Google maps to find scrubby areas that may hold birds found in both previous atlases including Prairie Warbler, Yellow-breasted Chat, Blue Grosbeak, and Northern Bobwhite. Don't forget to take a stroll through the town of Hebron itself; you should find House Sparrow, House Finch, Chimney Swift, and Ruby-throated Hummingbird.

Visiting blocks like Hebron CE is one of the great advantages to participating in an atlas. Atlasing encourages you to visit places you may never visit otherwise, and this can result in unexpected finds. In 1947, Robert Stewart wrote that "one is impressed with the paucity of field data that is available for many species, some of which are undoubtedly quite regular in their occurrence within the state. This is a reflection of the relatively small amount of field work that has been done in the past over large parts of Maryland and emphasizes the need for much more field work in the future." Seventy years later, we have immensely improved our knowledge of the region's birds, but it is a perennial effort. Thoroughly exploring habitat representative of much of rural Maryland is critical to accurately understanding shifts in bird distribution and advancing Maryland's ornithological knowledge.

Author: Gabriel Foley

Baltimore Oriole. Photo credit: Jordan Rutter

Were you part of October Big Day?

Send a summary of your day to mddcbba3@mdbirds.org and we'll publish it in next month's issue!

TIPS AND TRICKS

Applying breeding codes to Black and Turkey Vultures must be done conservatively. A soaring vulture should not receive code H, since soaring is indicative of foraging behavior that frequently occurs miles from a nest site. Similarly, vultures at a communal roost will rarely receive a breeding code. Many of the social behaviors observed at a roost are unrelated to breeding or cannot be confidently separated from similar non-breeding behaviors.

Below is a list of breeding codes contextualized for vultures:

Code F: Vultures tend to be foraging while they are soaring, so code F is largely inapplicable to them.

Code H: This code should only be used if a vulture is seen directly associating with suitable nesting habitat, such as a lone vulture flying out of forest or perched near an abandoned building. It should not be used for soaring vultures or vultures perched in a group.

When you're atlasing, it helps to know plants and insects as well. The Maryland Biodiversity Project is a fabulous way to learn about the region's flora and fauna, and you can contribute sightings to it as well!

MarylandBiodiversityProject
marylandbiodiversity.com

Codes S, S7, M: Vultures lack a syrinx, so they cannot sing. Singing codes should not be used for vultures.

Code P: Although both vulture species mate for life, only Black Vultures associate with their partner year-round. Both species will perch together near the nest site in the weeks prior to egg-laying. For Black Vultures, egg-laying starts in mid-March, while Turkey Vultures begin laying eggs in early April. This means February and March is the best time to find breeding evidence; look for pairs perched together in forest or near abandoned buildings or other structures (*e.g.*, duck blinds). Avoid disturbing any vultures you find during this time since that can cause them to abandon the nest site.

Code T: Vultures often exhibit agonistic behavior, but this is rarely related to territoriality or breeding. This code should not be used for vultures at a roost site or at a food source.

Code C: Courtship flight displays have been described for both Black and Turkey Vultures, but for Black Vultures these displays may be associated with driving away offspring and not with courtship, so it's best not to use this code for Black Vultures. The Turkey Vulture courtship flight involves one individual following the other 60–150 ft away, and may include a steep dive at the lead bird. The display is usually under a minute, and takes place most often in the spring.

Code N: A vulture entering or exiting a potential nest site such as a hollow tree or log, an old building, a cave, or a brush pile is an ideal situation for using this code.

Code A: A vulture heard hissing from an abandoned building or other potential nest site is a good situation to use this code.

Codes B, PE, CN, NB, DD, FS: These codes do not apply to either vulture species and should not be used (except, rarely, code PE).

Code ON: This code can be applied to an adult vulture flushed from a nest site or for a pair of vultures exchanging incubation duties.

Codes FL, FY: These codes must be used cautiously because young vultures begin foraging far from their nest site shortly after fledging. Black Vultures are dependent on their parents until the following spring, while Turkey Vultures are independent soon after fledging. Only use these codes if a young bird in late summer or early autumn is near a likely nest site.

Codes NE, NY: If you find vulture eggs or young, be sure to minimize disturbance as much as possible. Both vulture species will reuse a nest site the following year, but minimal disturbance is one of the primary attributes required for a nest site.

Author: Gabriel Foley

FROM THE FIELD

Contributions from the atlasing community!

First MD-DC BBA3 Spotted Sandpiper chick! Photo credit: Bill Blauvelt

Juvenile Red-shouldered Hawk. Photo credit: Therese Moynihan

Eastern Screech Owl. Photo credit: Simon Best

Spotted Sandpiper. Photo credit: Bill Blauvelt

Singing Prothonotary Warbler. Photo credit: Sriram Bala

Do you have a story or photo to share with atlasers?

We'd love to hear about it! Send your submissions to the editor at mddcbba3@mdbirds.org.

OUT OF THE ARCHIVE

The Distribution of Maryland Birds (#3 of a Series)

Stewart, R.E. 1949. The Distribution of Maryland Birds. *Maryland Birdlife* 5(1):2.

Cliff Swallow. Photo credit: Gabriel Foley

This is the third in a series of papers written for the purpose of presenting new information on the geographical distribution and abundance of Maryland birds. Four species are treated this time, as follows:

Razor-billed Auk [Razorbill] (*Alca torda*)

One bird was seen in the surf near the Isle of Wight coast guard station on February 3, 1938, by John H. Buckalew. This represents the second record of this species in Maryland, the first having been made by Wetmore and Preble at Ocean City on December 4, 1926. As a result of the second sight record, this species may be placed on the regular list, bringing the State total to 310 species.

Stilt Sandpiper (*Micropalama* [*Calidris*] *himantopus*)

Observations during the past three years by John H. Buckalew, C. S. Robbins, and R. E. Stewart show that this species is a regular and at times a fairly common fall transient along the coast. Records include 13 seen on July 6, 1947, and 14 on August 23, 1947 at Assateague Island; three on August 24, 1947, at the Blackwater Refuge; and two at West Ocean City on August 24, 1946.

Cliff Swallow (*Petrochelidon pyrrhonota*)

Recent observations by Orville Crowder, Leonard M. Llewellyn, Mrs. Helen Miller, C. S. Robbins, R. E. Stewart, and Kenneth Wilson show that this species occurs as a local summer resident throughout Garrett and Allegany Counties and in the western part of Washington County. The eastern-most colony recorded was located on Great Tonoloway Creek in Washington County, about l ½ miles east of Hancock. Formerly, this species occurred regularly as a summer resident in one section of Baltimore County (Kirkwood, 1895 – *The Birds of Maryland*).

Short-billed Marsh Wren [Sedge Wren] (*Cistothorus platensis*)

Numerous winter records of this species have been made during the past two years by John H. Buckalew, Ira N. Gabrielson, Brooke Meanley, Roger T. Peterson, C. S. Robbins, and R. E. Stewart. These records show that this species occurs commonly as a winter resident in the tidal marshes of Somerset and southern Dorchester Counties, and somewhat sparingly in the coastal marshes of Worcester County.

Author: Robert E. Stewart