WHAT'S HATCHING?

Official Newsletter of the Maryland & DC Breeding Bird Atlas 3 **ISSUE NO 26 | APR 2023**





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BIRD OF THE MONTH

Ravens are continuing a decades-long reclamation of their range in eastern North America.

TIPS AND TRICKS

Nocturnal atlasing can feel enigmatic. Andrew Rapp provides his perspective on maximizing success.

OUT OF THE ARCHIVE

What two breeding species were added to Maryland's list in 1951?

ISSUE NO 25 | DEC 2022

Black Vultures were last highlighted here in the November 2020 newsletter, when Mikey Lutmerding had found an egg four days earlier than the previous early egg date of March 14, documented in 1952. On February 16, Mikey checked the site he'd had a pair nesting at since 2016, and found two eggs. Based on earlier visits with no eggs, Mikey calculated that the first egg was laid on either February 14 or 15. Black Vultures may be a common bird now, but in 1895 Kirkwood wrote that they were regular only as far north as North Carolina, and cited a single exceptional record of four Black Vultures from Montgomery County.



"Quoth the Raven 'Nevermore."

-- Edgar Allen Poe



Common Raven by <u>Bryan</u> <u>Calk/Macaulay Library</u>

eBird Tip: Zero-species checklists

If you are atlasing and haven't detected any birds by the end of the checklist, submit that list! This is especially common during nocturnal atlasing; if you don't submit that checklist, no one will know you were doing any atlasing.

Want to learn more about nocturnal atlasing? Join Andrew Rapp virtually for a Q&A session on April 12.

Nocturnal Q&A Session
Speaker: Andrew Rapp
Wednesday, April 12, 2023
7:00–8:00 PM

Video call link: https://meet.google.com/uwwbpnx-bde



I don't have to tell you, it's spring! In the last couple of days, I've had my first Osprey, thrasher, and Tree Swallows of the year. House Sparrows, House Finches, and starlings are all building nests in my yard, I found a goose nest, and I watched a Fish Crow picking up clumps of grass for lining its nest today. The warming weather and the surging bird activity make it even more difficult than usual to be inside at the computer.

Heading into year four of the Atlas, our emphasis will be on completing blocks and moving effort into areas that haven't been atlased as much. We are doing well, but we have a lot of work still ahead of us.

When it comes to identifying which

blocks to go to, the simplest method is to use a Google Earth overlay that Caroline County Coordinator Rich Downs developed. Color-coded pins for each block show how far a block is from its completion targets, and clicking on the pin provides information about the block's adoption status, it's completion progress, and species that haven't been coded yet that were found there in BBA2.

There are also PDF files for each block that show where and when atlasing has occurred in a block, how many species have been reported from each location, and the block's target species. I like to print these out so I can mark them up throughout the season; the major downside of these maps is that, due

to dataset download constraints, they can't be updated throughout the summer.

If you are able to, please consider adopting a block. If you have adopted a block that is complete or nearly complete, please adopt another one. This helps County Coordinators out tremendously, and ultimately results in more focused, effective atlasing. To adopt a block, just <a href="mailto:e

We're also organizing some "block parties" for this year. These are opportunities to head out with a group of folks and intensively atlas an area over a couple of visits. Baltimore County Coordinator Paul Kreiss wrote an article explaining the details. I'd encourage you to consider organizing your own similar effort; for maximum effectiveness, just let the selected block's county coordinator know that you will be atlasing there. This will help their planning and prevent accidentally doubling that work—after all, the more communication the better!

There are a lot of blocks that are close to being complete, but there are still plenty that have a long way to go. Whether you'd prefer to clean up a block or you'd rather start (almost) from scratch, there's a block for you.

--Gabriel



Let's spread that effort out! The number on each county is the hours of atlasing effort in that county for BBA3. Counties with more hours are brighter blue than counties with fewer hours. Unsurprisingly, counties that have higher populations have more effort in them. If you want to maximize the impact of your atlasing, consider heading to a more rural county and helping out there (might I suggest, say, Somerset County??).



Most of the time when you see a raven, its size is hard to appreciate because there's not much there for context. Usually, it's somewhat distant and, more often than not, flying. But ravens are enormous, and their size is quickly appreciated if you have the opportunity to see them next to a bird like an eagle or a crow.

In eastern North America, raven populations declined tremendously during the 19th century. Declines were so steep that multiple states expressly stated in the 20s and 30s that extirpation was a distinct possibility. Writers in West Virginia, Pennsylvania, and even Minnesota all warned of pending local extinction, and it's possible that ravens were briefly absent from Maryland's breeding avifauna. Garrett and Allegany counties had reports of raven nests in the late 1800s, but the next nest wasn't reported until the 1930s. The entire eastern

population of ravens appeared to undergo a synchronous decline and then a subsequent expansion beginning in the 1950s.

Declines appear to have been due to a combination of habitat lossparticularly logging—and shooting, trapping, and poisoned baits. As forest regrew and matured and predator persecution decreased, it seems ravens were able to reclaim parts of their former range. Food availability may also restrict their density in a region, and its unclear how competition with crows, vultures, and eagles may be impacting their distribution. Regardless, across eastern North America they are continuing a decades-long reclamation of their range. Their use of humanmade nest sites in the Piedmont—as BBA2 coordinator Walter Ellison correctly predicted—is allowing them

to expand into parts of the state they have never been documented nesting in before.

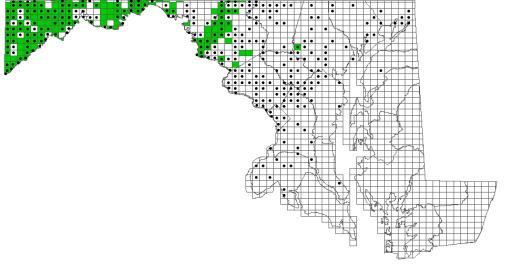
Top Tips

- Record the direction they're flying
- Check communications towers and large light poles for nests
- Be mindful of non-breeding floaters

Habitat

Ravens are most common in western Maryland, but since BBA2 they have become increasingly common in the Piedmont and sightings south of there are not scarce. In fact, a nest in Charles County represents the first raven documented breeding in Maryland's Coastal Plain, and recurring sightings of a raven in Chestertown could eventually result in an Eastern Shore nest.

Common Ravens will nest in cliffs, trees, large light poles, communications towers, bridges, and the like. When nesting in cliffs, they almost always select a location with an overhang, preferably facing south or west. Conifers are preferred when nesting in trees; usually the nest is in a crotch near the top with some overhanging cover. Young



Common Raven breeding distribution map from the Maryland & DC Breeding Bird Atlas 2 (2002–2006) and Atlas 3 (2020–2022). Green fill indicates a BBA2 Common Raven breeding observation in that block, while black dots represent coded BBA3 observations.

ravens are messy and will defecate over the edge of the nest after they are a couple of weeks old. The whitewash can show up well, depending on the nest site substrate. Nests apparently build up quite an odor as well, but atlasing by scent is still a rather undeveloped technique.

Pairs maintain a territory throughout the year, and the size of their territory appears to be related to food availability. In places where territory size has been measured, it varies hugely, from 15 mi² in Minnesota to 0.6 mi² in California. In Virginia, nests were reported to be regularly spaced about every 6 km. There, more sites were available than pairs, indicating nest site availability was not the limiting factor for local raven density.

Identification

Common Ravens are fairly straightforward to identify as a corvid—they're a large black bird. But separating ravens from crows can be a bit trickier, particularly if they are silent. A raven's tail is more wedgeshaped than a crow's fan-shaped tail. Ravens glide and soar more than crows do, and they are more acrobatic

in the air—including doing barrel rolls! If you have a closer view of a raven, the heavy bill is noticeable and the bill's base is covered by feathers. Raven's throats also have hackles that crows lack.

Behavior and Phenology

Common Ravens are permanent residents, although ravens don't nest until 2-4 years of age and these nonbreeding birds wander widely. Raven pairs begin laying an average of five eggs early in the year. In 2021, a Virginia pair laid their first egg on January 1. Nest building begins the week before egg-laying. Ravens will reuse nest sites, but they may have multiple sites to pick from within their territory. Incubation lasts 20-25 days, and the blue-eyed juveniles fledge 5-7 weeks later. Fledglings appear to remain on the natal territory for a few more weeks before leaving to form flocks with other juveniles.

Late December-March: Courtship, pair formation, nest building, egg laying

March–May: Incubation, fledglings



Common Raven are large birds, but their size doesn't always come across. This figure compares **Bald Eagle (back silhouette), Common Raven (middle white silhouette), and American Crow (front silhouette)**. The median wingspan provided in the respective birdsoftheworld.org species account was used as the comparison value (Bald Eagle, 81 in; Common Raven, 53 in; American Crow, 33 in).

May-July: Fledglings, feeding young

Breeding Codes

Ravens are most easily detected by voice and they are often seen flying fairly high. Their home range can cover multiple blocks and they can travel quite far to forage. It's worth noting the direction a raven is flying in during the first half of the year; these comments may help triangulate a potential nest location. The male feeds the female and both feed the chicks, so—like most birds—males make frequent trips to the nest during the breeding season.

Raven pairs will defend their nest site from potential threats, but they may also exhibit less aggressive, more evasive behavior. One Oregon study found that in areas with a lower human population, ravens were more likely to be aggressive towards humans in their nest defense. Conversely, ravens that lived near more people were more likely to leave the nest site quietly, presumably to avoid attracting attention to the nest. Regardless of their response around humans, ravens will often attack hawks and crows perceived to be a threat, and seeing this aggression is an indication that the nest site is likely quite close by.

Juveniles have a pink-lined mouth, while adults' mouths are all black. The chicks' raspy begging calls are loud, and can reportedly be heard from up to a mile away.

Habitat: Ravens can travel far from the nest site during the breeding season, but a raven in an area with a potential nest site nearby is a suitable candidate for code H (habitat). Singing: Their complex, varied vocalizations are not considered songs, and singing codes (S, S7, and M) should not be applied.

Pairs: Two adults acting cohesively can be considered a pair (code P), but birds calling at or near each other may be territorial rivals so use caution when interpreting raven interactions.

Territorial: Pairs will defend their territory against intruders and chases of these intruders can extend for miles.

Courtship: Displays occur throughout the year and include aerial acrobatics as well as bowing, fluffing, bill-snapping, and preening each other.

Probable nest site: Visits—especially repeated visits—to a reasonable nest site, such as a stand of conifers or a cliff, should receive code N (visiting a probable nest site).

Agitation: Chasing hawks, crows, or even vultures should receive code A (agitated bird).

Nest construction: Code CN (carrying nest material) should be used when a raven is seen flying with sticks, grasses, or other nest construction materials. When you see a raven at the nest site building the nest, use code NB (nest building).

Used nest: A classic raven nest is a large stick nest (15–60 in wide) under a cliff overhang surrounded by whitewash. Be careful not to confuse nests on other structures with Osprey or eagle nests, and be especially cautious with nests built in trees. To get an idea of what a raven nest looks like, check out these images on Macaulay Library.

Active nest: A nest with an adult on it should be coded ON (occupied nest), unless you are very fortunate and can see eggs (code NE) or, later in the breeding season, you can see the chicks in the nest (code NY).

Young: Family groups will exist for several weeks, and can be coded as Recently Fledged Young (code FL). If an adult feeds one of these fledged birds, it should be coded as Feeding Young (code FY).

Carrying food: Ravens will carry food back to their nest, but like other corvids, will also carry food to eat undisturbed. If you suspect a raven carrying food is heading to a nest, it's perfectly acceptable to use the CF code—just provide an explanation in the comments section about why you used that code.

If you're interested in learning more about ravens, corvid expert Dr. John Marzluff has a talk recorded on YouTube about relationships that ravens have with people and other wildlife.

Author: Gabriel Foley

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ATLASER SPOTLIGHT

Kari McPartland (@vikarioushikes), from Frederick, loves birding and hiking in Maryland.



Where is your favorite place to atlas?

Maryland has so much variety, but it has to be my local patch that Frederick County Coordinator Kathy Calvert introduced me to: Libertytown Park. It's an impressive county park in the Maryland Piedmont. It is not birded very much so you never know what you'll find, and the habitat is very good with fields and marshes. My favorite atlas moments are last summer when we had multiple nesting Yellow-breasted Chat, and most recently when we heard an American Woodcock displaying on a nocturnal count.

What is the best thing about atlasing?

Finding nests! There is nothing better than watching a bird long enough to see it disappear for a second and realize-that's a nest!! Whether a long pursuit or a happy accident, a junco oven, nuthatch cavity, or a known bald eagle mansion, it's always so exciting. And then the icing on the cake is that you get to code it! Even outside of peak breeding I've gotten a lot of enjoyment spotting the nests that appeared all over my neighborhood once the trees lost their leaves for the winter, and puzzling over who might have occupied them.

What bird best reflects your personality?

Great Blue Heron because they are patient and focused. I also equally enjoy solitude and large groups (winter heron vs. summer colony!)

What made you interested in birds?

It wasn't one big thing but many little things that built up to turn me into a birder. I loved nature as a kid; Bald Eagles and Peregrine Falcons and our backyard chickens. In high school in Anne Arundel County, I remember sitting with a friend looking up at the bird nesting on the stadium lights, seeing the bird's funny mask and realizing I KNOW what that bird is— "it's an Osprey!" For the next 10 years the Portlandia "put a bird on it" skit sums up my bird amour until my thenboyfriend-now-husband got me my first pair of binoculars and a bird feeder for my 24th birthday. Then another friend invited me on a trip to the Galapagos, my uncle showed me his bird list from his college ornithology class, and my very own life list was started in 2018 with a Bluefooted Booby!



What bird do you particularly like?

Wood Thrush because they are always surprised and a little awkward. I love their journeys and of course their songs. All the thrushes are tough enough to spot and ID that it never fails to give a thrill. Their nests can be at eyelevel. A treasure of the Maryland Mountains.



What's our biggest conservation issue?

I think that the biggest issue in conservation today is the same question conservationists have been puzzling for decades: how do we build a conservation ethic in the general population? Or in other words, how do we get people to care about nature?

Two books I read this year (and I do recommend reading side-by-side if you haven't already!) are Aldo Leopold's *Sand County Almanac* (1949) and Robin Wall Kimmerer's *Braiding Sweetgrass* (2013). They both have beautiful and insightful and even similar things to say about the importance of developing a conservation ethic in the general public, and also suggest solutions to how to go about that. In many ways I think birding is an answer, and introducing others to birding: many small acts of noticing the natural beauty in your own backyard, no matter what your backyard may be.

There are a lot of very worthy and important conservation topics out there. Of course, we need to stop burning fossil fuels ASAP. Greening our grid and electric vehicles will help get us there. Land conservation has really caught my attention lately as important in making our natural communities more resilient, and is timely with the Maryland the Beautiful Act and "Green Infrastructure" corridor initiatives. I could go on! And all of this comes naturally to a community with an ingrained conservation ethic.

Have you been involved with other atlases?

Not prior, but during I have also atlased in the NC and NY atlases!

You can take binoculars, a field guide, and what other item?

My bucket hat!



Who would you go atlasing with?

I should really say my spouse Tyler because he'll make sandwiches, and he is a fabulous birding partner to me all the time. But since you said ANYONE I have to go with the late Chan Robbins, inventor of atlasing, famous Maryland ornithologist, author, and birder. I'd love to ask him about his sanctuary that was donated to MOS in his name. Overall though this was a very difficult question because there are so many local birding celebrities and great birders that I would love to go atlasing with!

You should know...

Kari will be a panelist at the 75th MOS Convention this spring! The event's theme is "The Next 75", and as part of that theme, there will be a panel discussion about where MOS has come from, where it is heading, and how it should get there.

The convention will be at the Wisp Resort in Garrett County from May 19–21. Find out more info at mosconvention.org



TIPS AND TRICKS

Nocturnal Notes by Andrew Rapp

Nocturnal atlasing can be intimidating as you venture into unfamiliar areas in the dark, but it is the gateway to a whole new birding experience.

Nocturnal species are some of the most challenging to monitor during breeding bird atlases. The goal of this article is to equip you with some tips and tricks to safely and effectively atlas at night.

Preparation

The most important part of nocturnal atlasing preparation is to identify habitats, identify access, and alleviate risks of human interference. Preparation is necessary to optimize your time in the field during nocturnal atlasing. Since it is more challenging to see the habitats around you, you want to be familiar with places to stop during your atlasing. Start by studying satellite imagery of your targeted atlas block. Using this imagery, you can identify the different landcover types and see the habitats that are available, accessible, and likely to contain nocturnal birds. Some map applications have access to street view which can allow you to determine the type and maturity of forest if the satellite imagery is not conclusive. After identifying areas that show promise for nocturnal species, look for roads that offer access to the particular habitat. When determining roads to survey, identify pull offs, avoid congested areas, and target features that serve as barriers from neighborhoods. Not only does the risk of a collision make congested areas more dangerous, the noise they

produce can render quiet owl calls impossible to hear. I also try to avoid neighborhoods, because it is an easy way to make the occupants uncomfortable and get the cops called on you which can, at best, disrupt an entire night of atlasing. If it is impossible to avoid neighborhoods due to a block's location, then I look to shield myself from houses. To shield myself, I look for a gap between houses that offers a little more habitat access and helps me not have to stand directly in front of someone's house. If there is no way to avoid being surrounded by houses and there seems like valuable nocturnal potential, then you must make a point of making yourself known. Stay on sidewalks and wear blaze orange or some reflective color that makes yourself highly visible. Be very intentional about where you are looking, do not look directly at a house for prolonged periods, scan continuously. I will sometimes exaggerate my scanning when cars are passing, intentionally looking at an obvious tree or even looking up into the sky away from houses.

General Detection Tips

Owls are most often heard at night but it is not uncommon to hear Barred, screech, and Great Horned Owls calling in the middle of the day. Owls look for undisturbed locations to roost during the day, so generally look for secluded forested habitats to locate owls. Unlike owls, nightjars are most vocal right at dusk and dawn and become more infrequent as it gets darker. Full or near full moon conditions early in the breeding season are ideal for detecting vocalizing nightjars.

Species-specific Tips

Eastern Screech-Owl – Screech-owls are widely distributed across the state and one of the easiest species to detect on nocturnal surveys. They can be found in most any type of forest as long as there is a place for them to hide. The best way to detect this species is to use playback continuously for several minutes. Their winnowing calls can be incredibly quiet and can be easily missed in a loud neighborhood.

Great Horned Owl – Great Horned
Owls are widely distributed in mature



deciduous and coniferous forests with an open area in close proximity. Great Horned Owls are more difficult to call in, unlike screech and Barred Owls, so make sure to put yourself in suitable habitat and be patient. I often hear them in the background when enjoying displaying woodcocks. Sometimes the best way to find great horns is by checking your local hawk nests in late winter for their ear tufts.

Barred Owl – Barred Owls prefer swamps, river floodplains, mountain slopes, and streams. Anywhere with water and mature woods is ideal. Barred Owls can be easily called in like screech-owls using playback. Later in the summer, Barred Owls can become less responsive, but they will still fly into your tape so keep your eyes out for flying owl shadows.



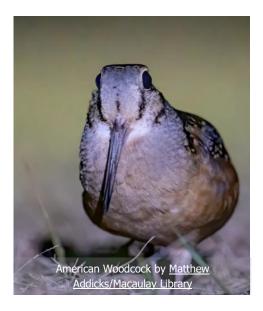
Barn Owl – Barn Owls are strongly dependent on human-built structures for their survival and breeding. When using natural structures in the east, they can occur in dense thickets of pines or in large trees with wide cavities. Barn Owls prefer overgrown farm fields, grasslands, and marshes.

Northern Saw-whet Owl – Saw-whets are very secretive in much of their southern Appalachian range. If you are surveying in higher altitudes and find yourself in a dense coniferous forest it is always worth trying a tape. Their call is similar to screechowls, but it can be incredibly quiet when responding to tape so be aware the response may be quiet. More often, saw-whets are detected giving their rising alarm call.

Eastern Whip-poor-will — Whips typically select disturbed habitats with an open area for hunting and shrubs that will protect their roosting. This can come in the form of powerline cuts, young pine plantations, recent burn areas, reclaimed mines, shale outcroppings, and cove forests. Whips prefer younger pine plantations because as the trees mature the Chuck-will's-widows tend to take over the same habitat.

Chuck-will's-widow – Chucks select pine woods with a scrubby underbrush. This can come in the form of coastal saltmarsh edges, pine plantations, and natural pinewoods. They are typically found on the Eastern Shore and southern Maryland but it is always worth checking for range expansions.

Common Nighthawk – Nighthawks can breed in undisturbed dunes, cities, and occasionally fields surrounded by continuous woodland at higher elevations. Dunes with little disturbance that are allowed to grow up are a perfect habitat for nighthawks. Occasionally, nighthawks breed around large farms or gravel pits with forests and rivers in close proximity.



American Woodcock – The best time to detect woodcocks is late winter and early spring when they are vocalizing and performing their display flights at dusk and dawn. Woodcocks use successional habitats or woodland edges. Without access to property, they are practically undetectable except when performing their display flights and calling.

Playback

Playback can be an incredible tool for detecting nocturnal species, but should be used responsibly. Once you have detected the target species, turn off the tape to reduce your overall disturbance. Playback can also bring in silent target species or 'bycatch'. I find screech-owls that were at first silent can become riled up when playing Barred Owl in close proximity. Larger owls will sometimes come in to check out screech-owl tape, so always be scanning for shadow movements. Again, if you have detected a species do not continue to harass and disturb them.

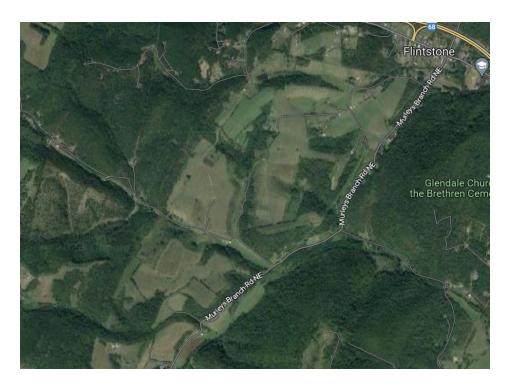


Figure 1: This is roughly the block of Flintstone CW. This block is currently devoid of nocturnal atlasing and has minimal diurnal coverage. I want to use this block as an example of how to select sites to target for nocturnal coverage. Take some time to identify the different landcover types and where roads can be used to access the habitats.



Figure 2: I have zoomed into a habitat in Flintstone CW that has nice successional habitat with a forested edge. This looks perfect to try for American Woodcock and Great Horned Owl. I marked a potential spot to pull off the road that would give good access to the target habitats. I would hit this spot right at dawn or dusk to optimize chances for woodcock.



Figure 3: Here I zoomed into a wooded patch with close proximity to a small stream. This spot has potential for Eastern Screech-Owl and Barred Owl. I would try playing screech-owl for a few minutes, waiting, trying Barred Owl for a minute, and then trying screech-owl again (the "EBE strategy"). The marked spot is best to try from with its close proximity to the forest and stream.

Author: Andrew Rapp



Nocturnal Q&A Session

If this article piques your interest, join Andrew on April 12 for a Q&A session. Andrew has a B.S. in Biology, Environmental Science, and Policy and has worked on various avian research projects, including the Virginia, Connecticut, Maryland-DC, and North Carolina breeding bird atlases. Andrew will expand on the information presented here and answer questions about the techniques he uses for atlasing at night.

This talk will be held virtually on **Wednesday**, **April 12 from 7:00 to 8:00 PM**.

Video call link:

https://meet.google.com/uww-bpnx-bde

Or dial: (US) +1 862-244-5956 PIN: 654 172 446#

More phone numbers: https://tel.meet/uww-bpnx-bde?pin=5648643149646

FROM THE FIELD



Prothonotary Warbler by Laura Wolf/Macaulay Library







OUT OF THE ARCHIVE

Summary of Maryland Nest Records, 1951

Willis, E. 1952. Summary of Maryland Nest Records, 1951. Maryland Birdlife. 8(4-5):35-43.

The nesting season is probably the most interesting season of the birding year. At no other time are birds so tame and easily observed as when they are at the nest; some incubating birds, such as the Blue-headed Vireo, will occasionally allow one to touch them. In this little-explored field, each person who determines the incubation or nesting period of a species experiences the thrill of the pioneer; and it may be that you in finding and observing a nest will discover facts new to science. Observations of the home-life of birds, of their courtship and pairing, and of their devotion to eggs and young, always provide a host of pleasant experiences.

Finding a nest is usually simple. Perhaps the first sign of the presence of a nest will be the male proclaiming his territory with loud songs from a conspicuous perch. Or perhaps a pair, nervous at one's presence, will give away a nest. There is very likely to be a nest if one adult or the other, especially the female, calls constantly or is carrying food or nesting material. At this stage, it helps very much to know the general location of a typical nest; the Audubon Bird Guide and Audubon Water Bird Guide (Pough and Eckleberry) are good references. If one retires some distance away or hides nearby, one of the pair may go to the nest; "rushing" the site may flush the adult from the nest. Occasionally, the calls of young birds may draw one's attention to the dark shape in the foliage or the little hollow in the ground which serves as a nest.

So far, 48 of the 176 species which have been recorded nesting in Maryland in past years have not been reported in these nesting summaries (1949-1951). Some of these, such as the Green Heron, Broadwinged Hawk, Whip-poor-will, Nighthawk, Fish Crow, Black and White Warbler, Pine Warbler, and Eastern Meadowlark, certainly afford good opportunities for alert observers. For birders who wish to add to the above 176 species, there are such nests as those of the Wild Turkey, Ring-necked Pheasant, Alder Flycatcher, Hermit Thrush, and Mourning Warbler to look for. Be sure to report all nests which you find on the Society's nest cards or by letter.



Ninety-nine of the 176 species were reported in 1951; selected notes on these species follow. Underscored dates or localities indicate exceptionally early or late records, or first records for a county.

PIED-BILLED GREBE - One young seen on Lake Roland June 15 (Charles Buchanan).

BLACK-CROWNED NIGHT HERON - Nesting colony at Blackwater Refuge (W.S. Webster).

LEAST BITTERN - Three Strawberry Point nests (Willis) with 2, 4, and 3 eggs. Eggs in nests, May 27-June 30; young left on June 24, July 1, July 10. Incubation 18-20 days, young in nest 9-12 days.

MALLARD - Eleven eggs in Middle River nest, May 5-7, destroyed (Willis). Six young at Forest Glen, Montgomery Co., May 30 (F.C. Cross).

WOOD DUCK - Two broods with a female (25 birds in all) at Lake Roland, July 4 (Pearl Heaps, Alice Kaestner). At Patuxent Refuge, 10 incubating hens (one brood each) produced 116 ducklings; first egg laid Mar. 10; young hatched about May 2 to June 25 (Clark G. Webster).

TURKEY VULTURE - Nest under brush-pile at edge of woods in Greensboro had 2 eggs by May 1, 2 young in nest, May 27-June 9 (Marvin Hewitt).



RED-TAILED HAWK - Immature seen at Greensboro, July 17 (Hewitt).

RED-SHOULDERED HAWK - Building, 35 feet up in oak tree, Apr. 14, at White Marsh (Douglas Hackman).

BALD EAGLE - Adult near Greensboro nest 80 feet up in pine, Apr. 6-18 (A.J. and R.B. Fletcher). Young in nest at Gunpowder Neck, Apr. 6 (Imhof).

OSPREY - Two nests. Five young banded in ground nest on island off South Point, Worcester Co., July 7 (J.H. Buckalew).



RUFFED GROUSE - Female flew off new nest by Wolf Swamp, May 30; later deserted (C.S. Robbins).

BOB-WHITE - Seven chicks with female, Middle River, Aug. 19 (Willis). Five late young with pair at Gibson Is., Oct. 20 (Abbotts).

CLAPPER RAIL - Eight eggs in Robins Marsh nest, July 20 (R.E. Stewart).

AM. OYSTERCATCHER - Young barely able to fly banded on July 3 and a larger young banded on July 12, island off South Point (Buckalew, Stewart).

KILLDEER - Six nests reported, each with 4 eggs, as early as Apr. 10 (Willis) and as late as <u>July 15</u>-second-brood nest (Denton, Fletchers). Young hatched early morning of June 2 at Frederick (Martha K. Slemmer).





WOODCOCK - Small young at Middle River, Apr. 27 (Willis).

UPLAND PLOVER [SANDPIPER] - Egg broken by mowing machine found at Worthington Valley, Baltimore Co., June 3 (M.O.S. trip).

SPOTTED SANDPIPER - Two young, one egg in Strawberry Point nest, June 24 (Willis).

LAUGHING GULL - Eleven nests with 1 to 3 eggs each in Robins Marsh, Worcester Co., July 11 (Buckalew, Stewart). Second Maryland nest record.

GULL-BILLED TERN - Twenty-five pairs on islands off South Point and 3 pairs on Sinepuxent islands, a large increase. Sixteen young banded <u>July 12</u>, and two nests with 3 eggs each found (Buckalew, Stewart).

FORSTER'S TERN - 713 nests in Robins Marsh, July 11, 496 with eggs (61 with 1, 173 with 2, 262 with 3); 143 young banded nearby.



Some late nests with eggs, July 20, when 110 young were banded (Buckalew, Stewart).

COMMON TERN - 340 young banded off South Point and 135 on Sinepuxent islands, July 12; 100 or more nests with eggs. 202 young banded, July 20, off South Point (Buckalew, Stewart).

LEAST TERN - Fifteen nests with eggs, <u>July</u> <u>20</u>, 9 young banded on July 12 at Ocean City (Buckalew, Stewart).

BLACK SKIMMER - 153 young banded off South Point and 119 on Sinepuxent islands, July 12. Late nest with eggs, <u>July 20</u>, at Ocean City (Buckalew, Stewart, Clark Webster).



MOURNING DOVE - Ten nests reported. Two eggs in Unity nest, Apr. 4 (Tommy Low) and 2 in White Marsh nest, Aug. 30 (Hackman); two young left Baltimore nest, Sept. 6 and 8 (Lena Picker). Young in one Middle River nest 17 days.

YELLOW-BILLED CUCKOO - Six nests. Three eggs in Garrett County nest, June 17 (M.O.S. trip). Two eggs in White Marsh nest Aug. 28 (Hackman) and two young, 1 egg in late Middle River nest, Sept. 13-16 (Willis).

BARN OWL - First young hatched in Blackwater Refuge tower, Apr. 13 (W. Steele Webster).

BARRED OWL - Two young in nest 15 feet up in oak stub, Apr. 28-May 14 at White Marsh

(Hackman).

SAW-WHET OWL - One young in partial juvenile plumage in Wolf Swamp, <u>Garrett</u> <u>Co.</u>, June 16 (Robbins, M.O.S.); adult seen there in May; second Maryland record of young birds.

CHIMNEY SWIFT - Five nests. Adults broke twigs off trees, May 20-June 16 (Willis). Young in Patuxent Refuge nests July 27-Aug 10 (Robbins).

RUBY-THROATED HUMMINGBIRD - Two eggs in Bittinger nest, June 16 (M.O.S. trip) and young in Choptank River nest, Aug. 1 (Hewitt).



FLICKER - Five nests. Building at Middle River, Apr. 15-May 13, young out of nest, June 10 and July 17. Nest heights, 10 feet 7 inches to 38 feet.

PILEATED WOODPECKER - Large young in nest 25 feet up in dead cherry, June 15, Garrett County above Gorman (Robbins).

RED-HEADED WOODPECKER - Pair courting in Baltimore, May 24, at new nest hole in maple (Pearl Heaps, Alice Kaestner).

Parents fed 3 young out of Leakin Park nest, July 17 (Brandenburg).

HAIRY WOODPECKER - Young in nest at Patuxent Refuge, May 21, and on Backbone Mountain above Gorman, May 31 (Robbins, Stewart).



DOWNY WOODPECKER - Young in Middle River nest, May 31-June 5 (Willis).

EASTERN KINGBIRD - Building at White Marsh, May 25, and incubating June 2 (Hackman). Two young out of nest at Patapsco Flats, June 15 (Brandenburg). Last young left on July 15 at Middle River (Willis). Seven nests, 10-54 feet up; median, 30 feet.

[GREAT] CRESTED FLYCATCHER - Three newspaper-box nests. Building May 26 and June 18 near Baltimore (Duvall Jones). Three young in Berwyn nest, Aug 4 (Dr. J.S. Cooley). Young fed in Denton nest box, June 25 (Fletchers).

EASTERN PHOEBE - Seven nests. Building, Apr. 21, Middle River (Willis). Two young in Patuxent Refuge nest, July 13 (Stewart), built May 4-10, had young June 2 and 3. Two N.W. Baltimore nests.





LEAST FLYCATCHER - Nest in crotch of sapling at Lake Roland (A.A. Brandenburg, Alice Kaestner).

EASTERN WOOD-PEWEE - Building, May 30 (Willis). Young of one brood out about July 26, and young fell from second brood nest 40 feet away, Sept. 16; it was still on ground below, half-feathered and fed by adult, Sept. 19, Middle River (Willis). Late young fed at Denton, Oct. 1 (Fletchers). Heights of 7 nests, 15 to 49 feet, median 20 feet.

HORNED LARK - Three nests. Three eggs at Middle River hatched on $\underline{\text{Mar. }25}$ (destroyed by Apr. 5-Willis); four eggs Apr. 13. Several young in later nest between tire ruts of road (O.W. Crowder).



TREE SWALLOW - Two nests on Gunpowder Neck (T.A. Imhof).

BANK SWALLOW - About 50 nests in gravel pits at White Marsh May 30-June 5 (Hackman).

ROUGH-WINGED SWALLOW - Building, May 1 (Denton, Fletchers) and June 9 (Greensboro, Marvin Hewitt).

BARN SWALLOW - 97 nests reported, 46 from Patuxent Refuge (Robbins) and 24 from Philip J. Ottenritter at Fishers Farm, Baltimore CO. (supervised by David E. Davis). Two to 7 eggs were laid (mean, 4.4). Building on May 1 (Denton, Fletchers) and as late as July 13 on the third nesting of the same pair (uncertain success, first



broods). Eggs of last nesting at Fletchers; were laid July 17-20, hatched by Aug. 5. Two broods frequently raised, and even in same nest-approximately a week in several cases (Robbins, Ottenritter) between young leaving and first egg of second brood. Incubation period reported about 15-16 days, young in nest about 18 or 19 days in four cases each. However, both were quite variable. Occasionally the stay in the nest was as long as a month. All nests were on man-made structures, between 7 feet and 14 feet up.

CLIFF SWALLOW - Probably eggs were in 48 occupied nests on and \underline{in} barn near Bittinger, Garrett Co., June 16 (M.O.S. trip).

PURPLE MARTIN - Last young left Denton nest

between Aug. 24 and 28 (Fletchers). Report from Duvall Jones (Rosedale) on 8 nests: about 2 weeks were spent building nests, 17-20 days incubating, and 22-29 days in the nest; clutches of 3 to 5 eggs, mean 4. There was 81% success. The first set was completed on May 29, and young left that nest on July 13.

BLUE JAY - Ten nests found, 7 successful. At Middle River, building Apr. 9 and July 9, incubating Apr. 20 and as late as <u>July 30</u>, young out of nest May 30 and Aug. 16 (late). Building Apr. 28 at Denton (A. May Thompson); second Eastern Shore nest record. Nests from 11 feet, 3 inches to 41 feet; mean, 26.4 feet.



CROW - Nest 65 feet up in red spruce at Wolf Swamp contained large young, May 30-June 2 (Robbins).

CAROLINA CHICKADEE - Nine nests reported. Excavating at Lake Roland, Apr. 6 (Alice Kaestner). One young out of nest and 2 young in nest, May 11 near Gaithersburg, Montgomery Co. (J.W. Taylor, C.H. Mayhood). Eggs in Patuxent Refuge box as late as May 29, young in as late as June 14 (Robbins).

TUFTED TITMOUSE - Four nests. Four eggs on May 6, 3 young left on June 6 at Middle River (Willis). Four young in Denton nest June 30 (Roger Adams).

BROWN-HEADED NUTHATCH - Adults feeding



young in Elliot Is. nest, May 6 (Tom Hallowell, Robbins).

HOUSE WREN - Thirty-six nests. First egg laid at Patuxent Refuge on May 9; clutch size of 16 first brood nests, 5 to 7 (mean, 5.9); 13 second brood nests, 4 to 6 (mean, 5.0) (Robbins). Three eggs were in Berwyn nest, July 29 (Robbins).

BEWICK'S WREN - Carrying food to young in nest box, Dan's Mountain, Allegany Co., on May 12 (Leonard Llewellyn).

CAROLINA WREN - Five nests reported, in such situations as roll of roofing paper (M. Butenschoen, Denton), fertilizer sack (Hackman, White Marsh) and tin can (Fletchers, Denton). Five young left Middle River nest, May 13 (with parents June 13), and Bengies Point nest after Aug. 14 (Willis).





LONG-BILLED MARSH WREN - Forty-one nests at Middle River; 45.4% of the eggs laid produced fledglings. First set completed May 24, last July 28; first young hatched June 6 and last Aug. 11, showing 14-day incubation period; young left June 19 and as late as Aug. 24, showing 13-14 day stay in nest. Nests placed 1 foot, 7 inches to 4 feet 10 inches high; median, 3 feet, 1 inch. Mean clutch, 4.0 eggs; extremes 2 to 5 (Willis).

MOCKINGBIRD - Fourteen nests found, heights 3 to 15 feet (median, 8 feet). Building Apr. 11, first set complete by Apr. 22.

Three broods of one pair left the nest May 25, July 5, and Aug. 13 (Willis). Two young out of the nest were fed on Aug. 24 at Denton (Fletchers).

CATBIRD - Forty-six nests, clutches 1 to 4 eggs (mean, 3.3). At Middle River, 60% of young left safely. Courtship display seen



Apr. 29 at Middle River; first building, May 2. The earliest nests had eggs laid May 11-14, hatched May 26, and young left June 6 (Robbins at Berwyn, Willis at Middle River). The latest eggs were laid July 29-31 at Middle River, but possibly short-tailed young near Denton nest, Aug. 25 (Fletchers), came from a later clutch. Incubation 13-14 days, young in nests 10-11 days. Nests from 2 feet, 3 inches to 20 feet; median, 6 feet.



BROWN THRASHER - Eighteen nests, five clutches each of 2 eggs, 3 eggs, and 4 eggs. Courtship seen Apr. 16 at Middle River, where only 37% of young left nests safely. Nest almost completed Apr. 22, set completed May 1 and hatched May 13 (Willis). First young out on May 30 at Denton and one incubating there July 7 (Fletchers). Bob-tailed young caught, July 22, at place where first-brood young had been out June 7 (Willis). Incubation and stay of young in nest 12-13 days. Two ground nests, and one 14 feet up; median, 5 feet.

ROBIN - Seventy-five nests reported; about 60% of the 53 at Middle River produced one or more fledglings. Twenty sets of 4 eggs reported, eleven of 3. Two eggs in early Halethorpe nest, Apr. 5 (I.E. Hampe). Young of first brood left nest commonly from May 14 (Denton, Fletchers), to June 7, with some begging afterward and scattered broods out until the first second-brood young left about June 20. A pair which had young out

on May 15 at Rosedale was building the second nest, May 18 (Jones). Second and third-brood young left nests before the end of July, except for two young which left an extremely late Denton nest, <u>Aug. 25</u> (Fletchers). Incubation 12 days (7 cases) and young in nest 11 to 15 days (usually 13). Nests 4 to 50 feet high; median, 12 feet, 8 inches.

WOOD THRUSH - 47 nests, about 57% of young leaving safely. Clutches 2 to 5 eggs, mean 3.24. They were building May 5, with first eggs laid May 12-15. The first young hatched on May 27. Young of first brood left June 9 to June 27 or 30. First young of second brood left July 22, and last left nest Aug. 14-late. The banded young called after parents to Aug. 30. Young left one nest on June 12, and second-brood young left same nest, July 24-16 days between young leaving and start of second-brood clutch (Willis). Median nest height, 8 feet, 7 in.; extremes, 4 feet and 24 feet.



EASTERN BLUEBIRD - Twenty-five nests reported. Four young left White Marsh nest about May 31 (Hackman), about same time as the two earliest Denton nests (one of which had 5 eggs, May 1-Fletchers). Last of second-brood young were in Denton nest, Aug. 10 (Fletchers).

BLUE-GRAY GNATCATCHER - Nest 40 feet up in elm, Marshall Dierssen game refuge near Seneca, May 22 (Taylor, Mayhood).

CEDAR WAXWING - Building at Lake Roland, June 11 (Alice Kaestner). Adults at White Marsh nest, June 29 (Hackman).



STARLING - Building Apr. 2-27, earliest first-brood young out May 16 (hatched about Apr. 25, allowing for 21-day stay determined at one nest) and most were out by May 28. Second-brood young were fed June 17, left nest July 8. A nest which 4 young left on May 22 had 5 eggs in re-lined nest, June 2 (Willis).

WHITE-EYED VIREO - Last of 4 young left Greensboro nest, June 28 (E. Bilbrough).

YELLOW-THROATED VIREO - Building at Lake Roland, May 6 (Mrs. Kaestner). At Middle River, 4 eggs, June 3; young left June 24 (Willis).

BLUE-HEADED VIREO - Three eggs and 2 of Cowbird in Backbone Mt. nest June 1 (Robbins). Cowbird young removed June 2; one dead nearly-grown young vireo and one egg were in the nest June 15.





RED-EYED VIREO - Eight nests reported, only 2 successful. One stole paper from Wood Thrush nest, May 27. First set laid June 6-8; young left nests between July 5 and Aug 8; immatures fed to Sept. 16 (Willis).

WARBLING VIREO - 2 young out of nest fed by parents at Jones Falls, Baltimore, June 18 (Miss Brandenburg).

PROTHONOTARY WARBLER - Four young and one Cowbird egg in rotted beam of old house at Pennyfield, <u>June 11</u> (Taylor, Mayhood). Parents fed young in Denton nest-gourd, June 30 (Fletchers).

NASHVILLE WARBLER - Nest with 4 eggs at
Wolf Swamp, Garrett Co., May 30 (Stewart,



Robbins); the 4 young two-thirds grown, June 16 (Robbins and M.O.S.); first Maryland nest record.

YELLOW WARBLER - Eleven Middle River nests (Willis), 6 successful. Two to five eggs were laid; mean, 3.8. Two clutches were completed by May 20, young hatched on June 1 and left about June 10 (12-day incubation, 9-day stay in nest). Young left nest on July 1 and were still fed (perhaps Cowbird) in another nest, July 10. Nests from 2 feet, 8 inches to 32 feet; median, 5 feet.



BLACK-THROATED BLUE WARBLER - Female carried nest material in Wolf Swamp, Garrett Co., June 3 (Stewart).

BLACKBURNIAN WARBLER - Female was building nest 55 feet up in red spruce at Wolf Swamp, May 31 (Robbins).

YELLOW-THROATED WARBLER - Nest with 4 young in pine tree near Cobb Island, Charles County, June 9 (Taylor).

OVEN-BIRD - Three early young out of nest on May 29 at Patuxent Refuge (Robbins).

LOUISIANA WATERTHRUSH - Young out of nest were fed in Gwynn Falls Park, June 18 (Miss Brandenburg).

[COMMON] YELLOW-THROAT - Two Middle River nests. Young left nest June 9 and July 17; male fed juvenile, Aug. 8 (Willis).

YELLOW-BREASTED CHAT - Four nests; 4 eggs

June 2-9 (Willis) and 3 eggs July 6 to 19 (Hackman). Young left Middle River nests July 4 and 9. Nest heights 2 feet, 3 inches to 3 feet.

AM. REDSTART - Building at Lake Roland, Apr. 26 and May 17 (Mrs. Kaestner). Female on Leakin Park nest, June 16, and fed 3 young out of nest, June 26 (Miss Brandenburg).

ENGLISH [HOUSE] SPARROW - Courtship seen, Apr. 6, at Middle River. Building Apr. 14. Half-grown young, Frederick Co., Apr. 27 (Rod Smith). First young left nest May 13, last fed in nest Aug. 30 (Willis). Late young fed on Oct. 20 at Gibson Island (Mrs. Vinup).



RED-WING - Seventy-eight Middle River nests; 53.6% of the eggs laid produced fledglings. There were 5 clutches of 2 eggs, 45 of 3, and 21 of 4 (mean, 3.23). Three early young out of nest, May 12, came from clutch completed Apr. 20 and hatched May 1, allowing for 11-12 day incubation period determined from five nests and 10-11 day brooding period determined from four nests. Last young left the nest July 29. Median nest height for cat-tails, 1 foot 10 inches; extremes, 1 foot and 3 feet, 6 inches. Nests in bushes were from 1 foot, 8 inches to 7 feet (median, 3 feet, 2 inches).

ORCHARD ORIOLE - Seven nests reported. Building at Middle River May 15 (Willis). Five young hatched, June 6, at Denton



(Roger Adams). Three young out of nest were fed at Denton, Aug. 2 (Fletchers).

BALTIMORE ORIOLE - Six nests. Building at Lake Roland, May 6 and May 14 (Mrs. Kaestner). Young left Denton nest, June 9 (Fletchers). Immatures in family group begged from female at Middle River, Aug. 2 (Willis).

PURPLE GRACKLE - One Denton nest (Fletchers) and 25 in Middle River woods (Willis). Building from Mar. 21 until Apr. 27. Set of 5 eggs laid Apr. 6-10, hatched Apr. 21, young left May 4 (early). Adults carried food as late as July 10. Nests from 10 to 48 feet; mean, 31.6 feet.

COWBIRD - Cases of parasitism: Wood Thrush, 1 (Fletchers); Blue-headed Vireo, 1 (Robbins); Red-eyed Vireo, 1 (Miss Brandenburg); Prothonotary Warbler, 1 (Taylor, Mayhood); Yellow Warbler, 4 (Willis); Am. Redstart, 2 (Miss Brandenburg); Orchard Oriole, 1 (Willis);



Cardinal, 1 (Willis); Chipping Sparrow, 4 (Fletchers, Mae Sterling, Hackman); Song Sparrow, 2 (Willis). An egg was in the Cardinal nest, May 10, and young left on June 1. Young left Hackman's Chippy nest, July 3.

SCARLET TANAGER - Adults were at White Marsh nest, July 3 (Hackman). Young left Middle River nest, July 31 (Willis).

CARDINAL - Twelve nests, most successful. One set of 2, six of 3, and two of 4 eggs. Two early young just out of Middle River nest, May 7, came from clutch hatched on Apr. 28. Three eggs were laid, July 15-17, 7:20 to 8 A.M. each day, in Pikesville nest; the first two young hatched on July 28 and the third, July 29 (12-day incubation). Young left on Aug. 8 (9-10 day stay in nest) and were still fed, Aug. 27 (Miss Carrie Lipscomb). Grown young were fed Sept. 18 at Middle River (Willis). Nesters were from 4 feet to 14 feet, 6 inches; median, 5 feet, 10 inches.

ROSE-BREASTED GROSBEAK - Female with fecal sac, Garrett County, June 23-24 (Taylor).

INDIGO BUNTING - Female fed grown young at Sandy Point, Sept. 9 (Jones, Jack Weaver, Willis).

DICKCISSEL - Four fresh eggs in nest at Ashton, <u>Washington Co.</u>, June 15 (Robbins).

GOLDFINCH - Young out of nest, Aug. 23, at Laurel (Robbins), and young begged from



parents, Oct. 21, at Strawberry Point (Willis), where two nests were found, one with a 6-egg clutch.

TOWHEE - Four successful Middle River nests (Willis), on ground except for one 5 feet, 3 inches up. Three young left earliest nest, June 1, and three more left secondbrood nest of same pair, July 15. Young left nest on Aug. 14, 21 days after completion of 3-egg clutch, July 24. Flying young were fed at Gibson Island, Sept. 19 (Mrs. Vinup).

SAVANNAH SPARROW - Young barely able to fly in pasture near Oakland, Garrett Co., June 3 (Stewart); first positive evidence of Maryland nesting.

VESPER SPARROW - Two Denton nests (Fletchers), both on ground in pasture, with 4 eggs, May 11 (young in nest May 18-27, 9 days), and 3 eggs on July 8, 2 of which hatched; they left about July 24.

CHIPPING SPARROW - Twenty-one nests found, 2 to 20 feet up (median 10 feet). Denton nest built by May 1 (Fletchers). Young out of nest on Backbone Mt., June 1 (Robbins). Building Denton nest, Aug. 7; young left between Aug. 25 and 27 (Fletchers). Sets of 2 to 4 eggs.

FIELD SPARROW - Eleven nests, four sets of 4 eggs and three sets of 3. One egg in Middle River nest, May 6. Young hatched May 18-19 and left May 28 from Denton nest (Fletchers). Building on July 17 at White Marsh (Hackman).

SONG SPARROW - Twenty-six nests; some 55% of young left Middle River nests safely. Sets of 2 to 5 eggs; mean, 4.7. Building, Apr. 21, first egg, Apr. 26. First-brood young left between May 20 and about June 13, second-brood young between June 26 and July 27, and third-brood young between about Aug. 5 and Sept. 1 (Middle River, Willis). First-brood nests from ground to 1 foot, 2 inches; second-brood from ground to 5 feet, 10 inches, and third brood from 11 inches to 6 feet; median, 1 foot, 2 inches.

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