

# Carolina Birds and Birders

. . . with Willie Morrison

## What on Earth is Anting?

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On 3 March 1964 I saw five Starlings anting outside our dining room window, and life in the Potter household never has been the same since. Newly named editor of *Chat*, I could think at the moment of nothing more than getting enough information to write a good field note. Subsequent correspondence with the late Rhett Chamberlain encouraged me to try to watch systematically for anting in wild birds, to collect specimens of the ants used, and to try to shed some light upon the perennial question, "Why do birds ant?" Nearly 8 years later I still do not know *why* birds ant, but I can answer plenty of questions about the who, what, where, when, and how of anting behavior.

The house in Zebulon had a glass-paned back door that could be watched easily from the kitchen and utility room. Outside this door were two mature sapsucker riddled pecan trees and the remains of an old apple orchard. Grass was scarce under the trees, and several large ant colonies could be seen with the aid of a field glass. First thing every morning and at least once every 2 hours thereafter until dark I stood at the back door and watched for anting. If I saw any Starlings or Blue Jays within the orchard plot as I went about my housework, I would watch until they left the yard because I had previously noted that birds of these species are prone to ant. During the 29 months of regular watching, I recorded 15 episodes of anting involving 25 birds of 6 species. In September 1966 we moved into our new house on a wooded lot in the country 3.5 air miles from Zebulon. During the next two years, without especially watching for anting, I saw 10 additional episodes involving 20 birds of 6 species. Eventually these 25 observations formed the basis for a 22-page paper that appeared in the October 1970 issue of *Auk*, the journal of the American Ornithologists' Union, as "Anting in Wild Birds, Its Frequency and Probable Purpose." And now for the questions:

*Is anting uncommon behavior for wild birds?*

No, it is just seldom seen and reported.

*How do birds act when they ant?*

Birds may ant either actively or passively, combine the two forms, or alternately ant and engage in some other activity such as feeding or preening. While anting the bird may perch on the ground, on a relatively small plant, or on any part of a tree all the way from the main trunk to the terminal branches. I have seen a bird move back and forth from a tree to the ground several times, anting a few times between each movement. It has surprised me to see how variable anting behavior can be.

In active anting the bird picks up ants with the bill and inserts them among the feathers with stereotyped motions. In the classic anting posture one wing is lifted slightly from the body and rotated until the tips of the primaries touch the ground at right angles, and simultaneously the tail is twisted to the side of the body and brought forward until it touches, or very nearly touches, the wing. The bird then uses the ants to

anoint the feathers, more often than not those of the wing. (For color photographs of birds anting see National Geographic Society's *Song and Garden Birds of North America*, pages 192-193.) The bird may crush the ants or hold them in a position so they can spray their acid excretions on the feathers.

In passive anting the bird flattens its body against the ground either at mounds or in the path of a moving column and allows the ants to crawl among the feathers. Then the bird removes the ants with the same motions used in active anting. There is usually no way to tell whether the bird is anting or sunbathing until it begins to remove the ants.

PLEASE NOTE: Sometimes preening birds will raise and rotate a wing in a manner similar to the anting posture, but the tail is not brought forward and ants are not picked up. Sometimes anting birds do not bring the tail forward, but the jerky movements of picking up and inserting the ants in the plumage distinguish this behavior from ordinary preening.

#### *What species of birds are most likely to ant?*

Over 200 species of small land birds have been seen anting in various parts of the world either in the wild or in captivity. From North and South Carolina there are more anting records for Starlings and Robins than any other species, with Blue Jays running a poor third.

Other birds known to have anted in the Carolinas include Brown Thrasher, Catbird, Cardinal, Rufous-sided Towhee, House Sparrow, Slate-colored Junco, Yellow-shafted Flicker, and Prothonotary Warbler. Doris Hauser of Fayetteville has seen both squirrels and birds anting.

#### *Where am I most likely to see birds anting?*

While birds do ant in the woods, most of the published accounts give the locations as driveways, sidewalks, lawns, and meadows. These are mostly open urban or suburban sites where birds are easily seen without being disturbed by the approaching bird. The alert housewife who cooks, washes dishes, folds laundry, or sews beside a window is far more likely to see anting in wild birds than is the person conducting active field studies.

Once I spotted a Blue Jay anting while I was driving down one of Zebulon's busiest streets. Fortunately I managed to circle the block and confirm the sighting without causing an auto accident, but I do not recommend this as a method of bird study.

#### *When am I most likely to see birds anting?*

Birds may ant from early March to late November, but the great majority of records for temperate North America fall between mid-May and the end of the first week in October. Apparently few adults ant before young of the first brood are ready, or very nearly ready, to leave the nest. At Zebulon more individual birds of more different species anted in August than in any other month of the year. More birds anted in the early morning hours (before 10:00) than in late afternoon or at midday.

#### *Does weather influence anting activity?*

I think so, but more evidence is needed to confirm my findings. So far at Zebulon there is an excellent correlation between precipitation and anting. Of my 25 anting episodes, 19 took place within 72 hours after rainfall. The most intensive anting took place within 48 hours after rainfall during and following prolonged wet spells in August, such as those associated with the passing of tropical storms. Autumn mornings when fog doesn't clear until mid-morning are also good times to look for anting.

#### *How old are birds when they ant?*

In her classic study of the Song Sparrow, Margaret M. Nice found that hand-reared birds began anting at 36 and 37 days of age. My own records show more anting by juveniles than by adults, but this is probably because juvenile birds outnumber adults during the peak of the anting season. I have noted that juvenile Robins appear to be particularly prone to ant if they become wet while molting into first winter plumage.



#### *Why do birds ant?*

To the best of my knowledge no one can give a positive answer to this question. Two popular theories are that birds ant 1) to rid themselves of ectoparasites, or 2) for the pleasure of self-stimulation. While each of these statements might logically explain certain cases of anting, I do not think that either one covers all the data now available on anting behavior.

The second thesis seems quite likely to be true when one considers the large number of birds that use strange objects like moth balls, lighted cigarettes, and walnut hulls for dressing their feathers while assuming anting postures. Could anting be the avian version of drug addiction? Not very likely. Those who study the development of animal behavior say that a widespread and stereotyped pattern like anting must have had a functional origin. These researchers tend to believe that anting helps birds reduce or prevent ectoparasite infestations.

While I was studying anting at Zebulon, Elizabeth Teulings was gathering data on bird parasites at Chapel Hill, N. C. When we compared notes, I was astounded to learn that parasite infestation is low during the same summer months when anting is at its peak (July, August, September.) Months of major anting activity coincide with the postnuptial and postjuvenile molts for most of the species I studied. The one Slate-colored Junco anting record falls within the early March period for the prenuptial head molt of that species, and this is the only bird I have seen scratching its head during an anting episode. Putting these facts together, I concluded there must be some significant relationship between anting and molting. Perhaps birds ant to soothe skin irritated by new feather growth or to help remove the waxy substance that coats the skin during molts. There may be some other reason such as hardening the newly emerged feathers or softening the sheaths from which the feathers emerge. More observations of wild birds and controlled experiments with captive birds will be needed to provide an adequate explanation for the apparent correlation between anting and molting.

#### *What should CBC members do if they see a bird anting?*

Many published accounts of anting are incomplete, lacking even such fundamental data as the day of the year. Detailed reports are badly needed. If you see a bird anting,

please fill in as much as you can of the outline below and send the information to me for publication in *Chat*.

Date anting took place:

Time of day:

Locality:

Species of bird:

Age of bird:

Sex of bird:

Form of anting (active or passive):

Feathers treated and number of treatments:

Related behavior:

Condition of plumage (evidence of parasite infestation or molting, if any):

Weather conditions at time of anting:

Number of days since last local rainfall:

General weather conditions for last several days:

Comments:

Observer:

Mailing address:

The reason for most of the data requested will be obvious to those of you who have read this article. The topic of related behavior probably deserves further explanation. When a bird ants, it may be in a state of ecstasy and appear to be completely unaware of its surroundings. On the other hand it may ant and feed alternately in a very casual manner, drive away other birds that want to visit the ant hills, or dust and sunbathe in conjunction with anting.

Sometimes the related behavior may be even more interesting to the observer than the anting itself. At 6:03 AM on 29 August 1967 two molting juvenile Robins anted beside the driveway of our home near Zebulon. The first made only a few treatments, but the second anted steadily until 6:15. This bird on several occasions picked up in its beak a twig of white oak having 13 small to medium-sized leaves still attached and swept the ground with it by turning the head 180 degrees, apparently in a successful attempt to locate more ants in the leaf litter. The bird picked up the same twig too many times for the action to have been merely an accident. I had read about birds in far away places using twigs to obtain food, but seeing a Robin using a tool in my own yard was undoubtedly the most exciting birding experience of my life.

The study of anting is much like putting together a jig-saw puzzle. The ornithologist must fit into place many small bits of information before he can see the big picture. To gather data as quickly as possible the scientist studies birds in captivity, exposing them to ants under controlled conditions. This is no doubt useful, but there is still a need for abundant data on anting by wild birds that must compete for nesting sites, mate, rear young, find food, survive storms, watch for predators, and even migrate. Such a body of knowledge can come only from patient watching and careful note taking by dozens—perhaps even hundreds—of amateur bird students. The persistent watcher may even be rewarded by a glimpse of tool use by some exceptional Robin or Starling. It won't be as much fun as a trip to the Galapagos to see Darwin's Woodpecker Finch in action, but it will be less expensive and will help answer the question, "Why do birds ant?"

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