

BEHAVIOR-WATCHING FIELD NOTES

by Donald and Lillian Stokes, Carlisle

Field Notes on Behavior

We want to thank readers for continuing to send us their superb observations on bird behavior. If you have sent us material and we have not yet printed it, have faith; it will appear in future issues of BOEM. If you have not yet sent us notes on interesting behavior you have seen, please do; we would love to hear from you. Our address is 52 Nowell Farm Road, Carlisle, MA 01741.

Edith Andrews had some marvelous observations of a Gray Catbird. The bird had a habit of perching on the roof of a beehive, peering at the emerging bees, and swooping down to pick them off the hive or the ground. The bird did not go after just any bee, but seemed to be selective. Edith noticed that the bees chosen were very large, suggesting that they might be the stingless drone bees. At one point she clearly distinguished both a drone and a worker on the hive edge, and the bird picked off the drone. Nantucket, 6/23-30/82.

Comment. A beehive is a ready source of food, and it is certainly not beyond the bird's ability to distinguish the two types of bees. It makes you wonder how it first learned the difference. If the bird got stung by the first bee it caught, why would it try again? The trial and error needed to learn the difference between the two bees seems to suppose a fair amount of stamina and persistence on the part of the bird.

Mark Lynch and Sheila Carroll watched a Sedge Wren (formerly Short-billed Marsh Wren) "perched in a small, bare bush. It sang constantly, affecting a rather extreme position: its head and tail were thrown so far back they touched at times." Between songs the bird rotated 30-60 degrees to the left or right. This display made its buffy undertail coverts highly visible. Nearby a Yellow-billed Cuckoo began to sing and dove down at the wren, "barely missing it." Blandford, MA, 5/30/82.

Comment. Although all wrens are pictured in field guides with their tails cocked up, this is not the normal position of the birds. It is a display usually given in response to danger or during aggression between males. Both the Marsh and Sedge Wren do an extreme version of this during territorial advertisement and during some courtship. In this display, called fluff-out, the bird raises both head and tail and fluffs breast feathers. The wings may also be quivered slightly, and the bird often rotates its body side to side. Why the Yellow-billed Cuckoo flew at the wren is

a good question. Perhaps other readers could shed light on this. Mark and Sheila also add the fine comment "... when many people see rare or unusual birds in Massachusetts, the experience of just 'seeing' the bird overrides critical observation of any behavior."

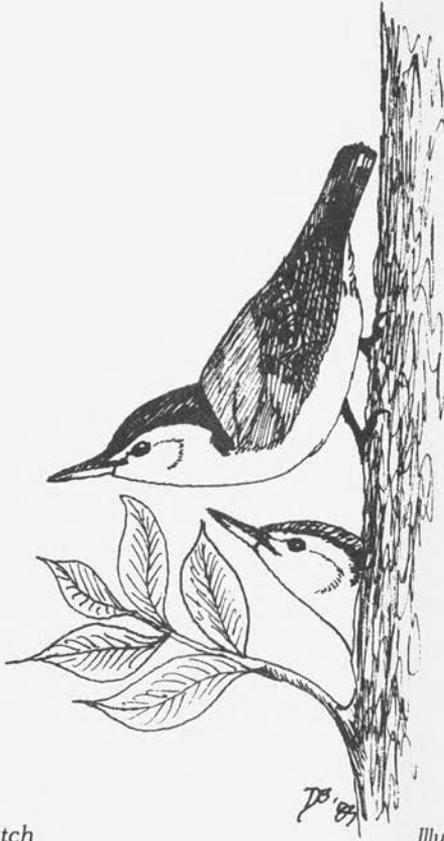
Jim Berry located and approached the nest of a pair of Solitary Vireos. It was three and a half feet above the ground in a Hazelnut bush and right beside a cabin. In it were three vireo eggs and one Cowbird egg. "When I once approached nest to check eggs, the female flew off chattering. The male's reaction was to fly over and sing rather than scold." Otisfield, Me, 5/30/82.

Comment. The Solitary Vireo is known for being a very calm bird near the nest, in some cases allowing observers even to touch the incubating bird. Unlike many other vireos, both sexes of Solitary Vireo are believed to share in incubation. It has also been suggested that the female may occasionally sing on or near the nest. The song of the vireo male often serves to keep the female aware of his location. In Jim's observation, if we have the sexes right, the male may have given song to announce his location after hearing a warning call from the female.

Jim Berry also writes in response to our comment on Screech Owls in the June 1982 "Behavior-Watching Field Notes" (Stokes, Donald and Lillian Stokes. 1982. Behavior-Watching Field Notes. Bird Observer of Eastern Massachusetts 10, No. 3:139). In this comment we suggested that the monotone call of the Screech Owl is a courtship note given from February to July, that the "screech" is a contact note given from August to January. This idea came from an article by Fred Hough in a 1960 issue of The Auk (Hough, Fred. 1960. Two Significant Calling Periods of the Screech Owl. The Auk 77:227-228). Jim says that he has heard both calls all through the year. We agree with him, for we also heard both calls together this last September. We and Jim would be interested in more observations on the timing and circumstances of Screech Owl vocalizations.

Behavior-Watching in the Months Ahead

We usually think of breeding behavior as only occurring in spring and summer, but the more one looks at the behavior of birds, the more their actions contradict our stereotyped notions of their lives. The White-breasted Nuthatch is a marvelous example of a bird that gives its most exciting courtship performance on the coldest January mornings! Starting in midwinter, the male will leave his night roost hole at dawn and fly to a prominent perch. There, with the first light gleaming on his white breast, he will give his courtship song - a ringing "werwerwerwerwer" - quite unlike the usual "ip" and "ank-ank" nuthatch notes. He will accom-



White-breasted Nuthatch

Illustration by Denise Braunhardt

pany his singing with the song-bow display, in which he elongates his head and neck and bows up and down with each repetition of the song. Between songs he may sway back and forth. In less intense performances he may just raise and then lower his head. Unmated males do more intense courtship displaying than mated ones. The female will come from her roost hole, which is usually some distance away, and join her mate. They will then go off and forage, giving "ip" calls. On other occasions, when she is listening to him, she may remain motionless, as if in a trance.

Another highlight of nuthatch winter courtship is mate-feeding. The male obtains food (perhaps from a place where it has been stored, or maybe from your feeder) and flies to the female, and she takes it in her bill. Sometimes she won't take it until it is pounded up and presented again. During courtship male and female nuthatches also give a curious whistled call that sounds like "pheeoo." The male may give this and then pursue the female in chases. The female gives this prior to copulation.

All of these nuthatch activities begin in midwinter and continue into nesting time in April. The courtship singing is most sustained in winter. Although this singing indicates territorial ownership, it is mainly directed toward a mate. Nuthatches stay in a large fixed range throughout the year, and use a portion of it for a nesting territory. They retain the same mates from year to year until something happens to one of them; then the other will try to obtain a new mate.

It is interesting to wonder why birds differ so much with respect to timing of courtship. Nuthatches have intense and prolonged courtship beginning in winter. They are birds whose large permanent range (up to forty-five acres) and food storing habits provide them with a margin of energy to spend on this type of behavior. How different this is from the behavior of species such as the later-arriving migrants, whose life patterns may necessitate condensed courtship and immediate nest building.

Behavior Research Articles

Stuebe, M. M. and E. D. Ketterson. 1982. A Study of Fasting in Tree Sparrows and Dark-eyed Juncos. The Auk 99:299-308.

In winter, many birds develop deposits of fat on their bodies each day. These are believed to enable them to last through the long cold nights and possibly through bad storms when they cannot forage. In this study, juncos and Tree Sparrows were compared in terms of the size of their fat reserves, their ability to go without eating, and their behavior during fasting. It was found that juncos store a greater percentage of their body weight in fat than do Tree Sparrows. At temperatures a little above freezing, a junco can fast about forty-three hours or through a night, a day, and another night. Tree Sparrows can fast at the same temperature for only about thirty hours, or one night and a day, but not the whole of another night. When the fat reserves become low, the birds become hyperactive. This may serve to help them find food and possibly create body heat. With less body fat, Tree Sparrows become hyperactive sooner than juncos.

The researchers tried to discover why the two species, which have similar habitats and habits, differ in their ability to fast. It was thought that the birds might differ in some other respect, such as heat conservation at night. But the birds were again similar in that both lower their body temperature $1^{\circ}\text{--}2^{\circ}\text{C}$ at night (not like the chickadee, which lowers its by $10^{\circ}\text{--}12^{\circ}\text{C}$); both roost in similar locations; and neither species huddles together during roosting.

Although the differences in the fasting ability of these two species could not be explained, one suggestion was that there may be costs to having more fat, such as decreased mobility. For the smaller Tree Sparrow, which feeds more in the open, this might mean greater vulnerability to predators.

DONALD and LILLIAN STOKES are authors, naturalists, and educators. Don has a new book coming out in March called A Guide to Observing Insect Lives, and he and Lillian have just finished a second volume to A Guide to the Behavior of Common Birds, which will be available in the fall of 1983.



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PARK WATERFOWL CENSUS

This January the Massachusetts Division of Fisheries and Wildlife will be conducting a "park" waterfowl census. A park duck is defined as a bird spending at least part of the day in close company of humans and with access to artificial feed (e.g., bread). The place where birds are being fed need not be an official park, just a place where ducks congregate and people feed them.

If you know of a flock of waterfowl being fed, please send the name of the pond, town, the number and kinds of ducks (by species if possible), and your name, address and phone number in case the biologists need further information.

The Division is also running an inland goose census. In this case they are not interested in whether or not the geese are being fed. They just want to know how many geese are wintering on inland ponds, lakes and golf courses. Geese that winter inland are probably home grown birds, unlike the migrants that winter on the coast. Those birds are counted each year during an aerial inventory but the numbers of geese that winter on inland areas are unknown. Because of the changing pattern of over-wintering goose populations throughout the flyway, better data is needed on these impressive birds. Please send your goose information to the same address.

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