

invariably flew close to the water, perhaps to escape the wind. A warbler at 0659 circled higher and higher above the ship until the bird was out of sight.

A female Yellowthroat was found dead on the ship and given to me. I noted that it had none of the subcutaneous fat reserves characteristic of many warblers that I have banded during fall migrations in past years. After inspecting the abdomen, flanks, and furculum, I dissected the bird and likewise found no visible fat stored in the alimentary tract. The autopsy confirmed its sex, since the specimen appeared to have a partially recrudescing left ovary. The bird seemed to have died of a broken neck, possibly as the result of flying into some part of the ship.

Why should these migrants have been heading north? Lack (*Auk*, 77:171-209, 1960) has recently concluded that in north-temperate regions, fine weather, clear skies, light winds, and, in autumn, cold are favorable for normal, migratory flights. The migration on the morning of the 26th followed a night with clear skies and a north-northwest wind. The synoptic weather map showed a low-pressure area near Bermuda and a high-pressure area over the Eastern United States. Since air movement around a low is counterclockwise, and, conversely, around a high is clockwise, a trough of air should have been moving from the north down the Atlantic coast to the south on that morning. This conclusion is in accord with my observations on the local surface winds. At any rate, all prevailing conditions except the fogged-over sky were not only favorable but were ripe for normal southward migration. Sky cover is known to halt migration. The warbler that circled above the ship may be evidence of confusion in navigation. However, the coastline was visible, and most of the birds were well oriented to the northeast. It seems unlikely that navigational difficulties per se caused the reversal in flight direction.

The emaciated Yellowthroat could indicate that the birds made long flights the previous night and exhausted their lipid reserves. But, in that case, one might expect the birds to settle down on the coast to feed, rather than to reverse the direction of flight.

Recently, Baird and Nisbet (*Auk*, 77: 119-149, 1960) have reviewed northward fall migration along the Atlantic coast, although they had few at-sea records available. They point out that northwestern-flying migrants appear to be re-orienting toward the coast after having "drifted" to sea during the night because of northwest winds. However, the North Carolina flight was to the northeast after a night of northeast winds, and was *parallel* to the mainland coast, not directed toward it. The other explanations for northward fall flights reviewed by these authors (especially p. 134) likewise fail to explain either the occurrence or orientation of the flight. I am indebted to several Navy aerographers who supplied and helped analyze meteorological data, and to other Navy personnel for assistance in observations. Dr. Carl W. Helms helpfully criticized the manuscript. —JACK P. HAILMAN, *Department of Zoology, Duke University, Durham, North Carolina.*

Interspecific Relationships among Birds.—Field observers have often observed birds of one species pursuing individuals of another species. Such interspecific encounters usually occur during the reproductive season, and often involve the chasing or harrying of a larger species by a smaller bird. My own observations in Oregon most frequently involved Sparrow Hawks (*Falco sparverius*) or Brewer's Blackbirds (*Euphagus cyanocephalus*) diving at Red-tailed Hawks (*Buteo jamaicensis*), during April, May, and June. Blackbirds were also seen

pursuing a Turkey Vulture (*Cathartes aura*) near Bend on 29 May 1954, and a Swainson's Hawk (*Buteo swainsoni*) at Silver Lake on 10 June 1954. Observations involving Sparrow Hawks have been reported previously (Roest, *Auk*, 74: 1-19, 1957). If a larger bird of prey is observed chasing a smaller bird of any species, the relationship is interpreted, usually correctly, as predation, but that is not the subject of this note.

The small-chases-large relationship appears to hold for larger forms than those mentioned above as well. A Golden Eagle (*Aquila chrysaetos*) was observed being pestered by a pair of California Gulls (*Larus californicus*) over the Owyhee Reservoir on 10 June 1949, and two Swainson's Hawks were seen chasing a Golden Eagle near Summer Lake on 3 June 1954. I saw a Marsh Hawk (*Circus cyaneus*) pursue a Red-tailed Hawk near Corvallis on 3 December 1950, and on 20 March 1954 one was observed giving chase to a Turkey Vulture in the same general area. In both instances the Marsh Hawk was a female. A Red-tailed Hawk was observed chasing a Turkey Vulture on 24 April 1954 near Bend.

These last observations suggest a possible interspecific dominance hierarchy: Marsh Hawk over Red-tailed Hawk, Red-tail over Vulture. A similar indication may be found in two observations made near Albany, on 30 April 1954. A Brewer's Blackbird was seen chasing a Robin (*Turdus migratorius*), and a short time later a Meadowlark (*Sturnella neglecta*) was observed chasing a Brewer's Blackbird. Unfortunately, such spring observations may mean nothing more than territorial defense of the nesting area.

Fall records may be more significant. In contrast to the blackbird-chases-robin contact mentioned above, on 12 October 1954 several Robins were seen harrying individual members of a large flock of Brewer's Blackbirds feeding in a stubble field near Bend.

Recognition of the other species is certainly an important factor in determining the type of interspecific reaction that will result from a contact. A flock of Canada Geese (*Branta canadensis*) at Mirror Pond Park in Bend, feeding quietly on the grass, became noticeably disturbed at the approach of a large flying bird while it was still some distance away, watching it carefully and edging toward the water. As the bird approached it soon became recognizable as a Raven (*Corvus corax*), and the geese turned back to feeding without further concern.

Although recognition may be an important factor, it is not necessarily a very critical one, as the following observations on a Mute Swan (*Cygnus olor*) at Mirror Park Pond indicate. During the breeding season the male swan was quite active in defending the nest site against Canada Geese that nested nearby, but ignored the geese away from the nest and at other times of the year. In January 1954 a wing-clipped Snow Goose (*Chen hyperborea*) was released in the park. The male swan refused to let the goose enter the water, charging in from as much as 30 meters away to drive the goose ashore. Long-time residents subsequently told me that this (?) swan had behaved very much the same way several years before, when a White Pelican (*Pelecanus erythrorhynchos*) spent a few days in the park during late summer or early fall. The pelican was not tolerated in the water while the swan was anywhere in sight. It seems that any large white bird was sufficient to provoke aggressive behavior by the male swan.

Little work has been done on this subject of interspecific behavior among birds. Further observations, and possibly experiments, especially during the late summer, fall, and winter months, might provide some very interesting conclusions regarding

interspecific dominance relationships, such as those discovered among small mammals by Calhoun (1959, N. Am. Cen. Sm. Mamm., Release No. 10, Adm. Pub., U.S. Dept. Health, Education, and Welfare, Public Health Service). These in turn may enable us to understand the structure of avian communities much better than we now do.—ARYAN I. ROEST, *Biological Sciences Department, California State Polytechnic College, San Luis Obispo, California.*

Nest-Shifting Behavior of the Ashy Wren-Warbler.—The Ashy Wren-Warbler, *Prinia socialis* Sykes, is a common bird found mainly in the central, western and southern parts of the Indian Union, East Pakistan, and Ceylon. Its nesting season ranges from March to September but more commonly immediately after the onset of the monsoon. It is known to build two types of nests (Salim Ali, 1956; Dharmakumarsinhji, 1955). One is similar to that of a tailor bird (*Orthotomus sutorius sutorius* Pennant) and is constructed by arranging fibers in a circular manner inside a funnel formed by one or two leaves stitched together at the margin. The other is an oval bag of woven fibers stitched together with several supporting leaves. I have noticed a third variety in a hedge (*Clerodendron phlomidis*) where the bag of fibers was attached to the slender twigs only by means of cobweb without incorporating the small leaves of the plant. The species is known to require about two weeks for completion of its nest. The clutch size is three or four, and the period of incubation 12 days.

Early in July immediately after the first rains, I noticed in my garden a pair moving about together and copulating on a tree at a height of about five meters from the ground. On 12 July they started building a nest on a plant (*Nyctanthus arboritris*) at about 65 cm. from the ground, both the male and the female participating in the construction. The nest was of the first type, with only two leaves sewn together because the leaves of this plant are large. On the 17th I built a hide at a distance of about one meter from the nest and took photographs. With the click of the camera the bird was visibly restless and agitated. I again took photographs on the 19th. On the morning of the 20th, when I was in the hide watching the birds, to my astonishment I found them by turns removing the nest material bit by bit. They first started with some of the cobweb material and then with the fibers. Each time the bird flew directly to a spot about 30 meters away, and I found that a new nest was being built there with the material of the old nest, this time on another plant (*Lantana camara*) at about the same height. This nest was of the second type, probably because the leaves of this plant were smaller. During the building of the first nest the bird always came to the nest by a circuitous route through shrubs and hedges, and the rate of building was also rather slow. But in the building of the second nest, flight was direct from the original nest to the second; the frequency of the flights to the nest was naturally several times greater. By the evening of the 22nd practically all of the nesting material had been shifted. On the 23rd I watched both the birds bringing material at dusk late in the evening. On the morning of the 24th I noticed in the new nest the first egg of the clutch; the second appeared on the 25th, the third on the 26th, and the 4th on the 27th.

On 6 August I built a hide near this nest and took a few photographs. On the next morning to my surprise I found that all the four eggs had disappeared from the nest and that there were no pieces of the shell to be found anywhere around. However, I did see the bird visit the nest until noon but not later. On the 9th I noticed the pair again selecting a nesting place. They even inspected the