

the bodies are, for the crucial moment, in fixed relation while blows are exchanged, often with feathers flying from the point of impact. In the smothering whirl of the jaeger's assault there is no pause, feathers do not fly, there is little or no punctuation of blows. The point is that the jaeger, with its bewildering aerobatics, *smothers the flight* of the victim, renders it helpless, flightless, terrified. Psychological warfare plays a large part in bird behavior, and the jaeger's is no more deadly than the formal combats so often tied into territorial activities. Evidently the only records of jaegers' killings are of song birds or small shore birds on the arctic breeding grounds. We have never been able to detect the delivery of any blow that was not vague, indefinable, neither definitely with bill, feet, or wings, but rather mere interference with flight. The non-lethal, perhaps in large part psychological, character of the jaeger's power makes it comprehensible that, on the breeding grounds, as in several instances cited by Bent, the power might be neutralized when the smaller bird possessed the incentive of nest defense.

The average pattern of combat as we have seen it is a series of downward loops, the ensuing rises short at first, then long, like a pitchfork with alternate short tines. The jaeger's first attack, from above, forces the tern down or so interrupts its flight as to cause it to fall. During the fall the jaeger flashes around and below, halting the drop and causing a short rise. This may be oft-repeated, but more or less alternately the tern escapes farther upward. The surrender of the food morsel may occur at any point. On October 8 the fish being taken were Sand Lance (*Ammodytes personatus*) and a small herring, *Culpea pallasii*. We owe the identifications to Dr. Clements of the Nanaimo Biological Station.

(4) *The foot-markings*.—It is a long jump from such matters to the pattern of the feet during immaturity, but this, owing doubtless to its disappearance in a dried skin, seems not to have been described in detail, and its history is peculiar. The photograph shows it well. The pallid-bluish to cold flesh-colored area is at a minimum in the youngest birds represented in the autumn flight. The edge of the dark area recedes, the light area invades the foot progressively with the lighter plumages, whatever ages they may represent; whether gradually throughout the long period or by abrupt stages with the molts, no man, it is safe to say, can tell. There is promise of the achievement of an all-light adult foot and shank. On the contrary, while sporadic latero-ventral speckling still betrays departing immaturity, black scutellar pigment comes flooding back, the long correlation is broken, the color of earliest immaturity is restored, though the black is much more intense. Abrupt change to a strong and permanent color with the first prenuptial molt is, of course, the rule rather than the exception, but rarely if ever with so curious and contradictory a preliminary history. The true scutellae of the toes and the soft skin of the webbing seem to be affected alike. Whether the pallid coloration is pigmentary or merely the native hue of blood and tissue we do not know, but the latter seems probable, in which case we have the phenomenon of a long-continued withdrawal of the pigmentary frontier during the early years, followed by a total invasion on the threshold of maturity.—T. T. McCABE, *Berkeley, California*; KENNETH RACEY, *Vancouver, B. C.*

A peculiar injury to a Robin (*Plate 18, lower figure*).—The mortality among birds from accidental impact is probably very large, for whenever such delicate structures are in any way seriously damaged there seems but little chance for their survival. It is a matter of considerable surprise, therefore, when we find a bird which has

apparently been severely injured and is still able to survive and to carry on its normal pattern of activities despite a serious handicap.

In early April of 1941, a male Robin, *Turdus migratorius*, appeared in the yard at the home of Dr. M. E. Wigham in Saddle River, N. J., and it was at once noted that the body of this bird was pierced by a stick. The Robin established himself there and was almost continually in view at close range so that a detailed study with binoculars was an easy matter.

The stick appeared to enter the back at the left of the backbone and behind the heart and the lungs, penetrating the body in the area of the stomach and kidneys, but just enough to one side to miss them. It would seem that the stick must lie against the left peritoneal wall, as it could hardly go anywhere else without damaging a vital organ. The stick described approximately a right angle with the backbone, and came out of the breast probably through the lower ribs. The projection from the breast seemed to be about a quarter inch closer to the median line than at its point of entry in the back.

About two inches of the stick projected from the back of the bird and about an inch protruded from the breast. The stick was a straight twig about three-eighths of an inch in diameter and had a slightly roughened bark attached.

The Robin conducted himself as a normal bird would. He mated and in early May a family of four young was hatched. At this time he seemed to be a bit awkward in his movements on the ground; in the air his flight was rather deliberate and quite heavy but otherwise normal. He frequently took long flights deep into a nearby field in search of food for the young, returning every few minutes to feed them or perhaps to drive another bird from the vicinity of the nest with all of the energy of a normal Robin.

When the young of the first brood were able to take care of themselves, another nest was built in an adjoining tree and, in early July, a second brood was hatched. The bird still showed no serious restriction in his actions—feeding young, singing, driving intruding birds from the territory.

In late July, Dr. Wigham left on a long vacation, the house was closed, and no further observations were made. At that time, however, the Robin was as active as ever.

There was no surprise felt when the Robin did not reappear in the spring of 1942, for it was almost unthinkable that he could have either undertaken a long migration or could have survived a winter in the north. It was with amazement, therefore, that, in April, 1943, the Robin was again seen on Dr. Wigham's lawn, still carrying the stick. The stick seemed to be a bit shorter where it protruded from the back and both ends of it were rather frayed and brushed out, but otherwise conditions were the same. It was seen at irregular intervals for two or three weeks and then disappeared and was not again found although a search was made in the vicinity.

Through the kindness of Mr. Edward B. Lang, the accompanying photograph (Plate 18, lower figure) was taken which shows the size and position of the twig. CHARLES K. NICHOLS, *American Museum of Natural History, New York, N. Y.*

Bald Eagles nesting in Illinois.—There are no recently published records of the Bald Eagle nesting in Illinois. According to C. T. Black (letter, January 8, 1942), the last nesting record of this species in the state was in 1915, when a nest was found in Piatt County. However, these birds formerly nested in the early 1900's and earlier in Cook, Lake, Marshall, and Putnam counties.