

during flight days have established that the majority of buteos and accipiters pass northeastward over Selkirk Shores State Park, gradually mounting higher and higher. This flight of accipiters and buteos (and particularly the "chimneys" of Broad-winged Hawks) move north along the eastern edges of the Deer Creek marshes and the two Sandy Ponds. Their progression to this point has been steadily northeast and, by the use of southwest winds and/or thermals, steadily higher, so high in fact that unseen groups of circling hawks picked up by binocular use are the rule rather than the exception at the level of Sandy Pond. The progress of the flight beyond Sandy Pond is currently unplotted.

In late April a lesser flight of small falcons, Marsh Hawks, Ospreys, and a few Sharp-shinned Hawks adheres closely to the lake shore and moves steadily east, then north, along the edge of the lake, eventually migrating up the Sandy Pond dunes toward Stony Point and Henderson Harbor. Similar to the first, this flight has not been traced beyond Sandy Pond.

A third feature of this spring flight is the action of certain individuals of two species, the Marsh Hawk and the Rough-legged Hawk. While the majority of these species migrate eastward, then northeastward (in the case of the Rough-legged Hawk) or north along the shoreline of the lake (in the case of the Marsh Hawk), a number of individuals of these species take off from Mexico Point west of the town of Texas and cut across the "corner" of the lake. That some few hawks may do this from even farther west along the south shore of Lake Ontario is evidenced by reports of Marsh Hawks, Rough-legged Hawks, and a few Sparrow Hawks coming from a south-west direction across the lake toward the Sandy Pond dunes, then flying northward parallel to the dunes.

Fall, the traditional hawk flight season along the Pennsylvania ridges and the New Jersey coast, produces but little along Sandy Pond. However, small (30-50 per day) fall hawk flights in this area have been noted at two places. The first is a late August through late September flight, mainly small falcons, Ospreys, Marsh Hawks, and a few Sharp-shinned Hawks, that passes south over the Sandy Pond dunes. This flight peaks in the middle ten days of September when strong northwest winds (20-30 mph) and concomitant "highs" start major migrational movements. The second flight occurs in late October and early November; these birds, mainly Red-tailed, Cooper's, and Rough-legged Hawks, pass east and south of Sandy Pond and Selkirk Shores State Park, roughly parallel to Route 3. The dominant flight species, however, is the non-raptorial Crow. Frequent searching of large groups of migrating Crows will show hawks migrating in the same direction but at a higher altitude. Further work on these latter two flight lanes will be required to determine how extensive they are.

I would particularly like to thank Mrs. Orry Evans and Dr. Walter Spofford for their data collected from the various places mentioned in this note. — Fritz Scheider, 151 Seventh North Street, Syracuse

A Nesting of the Northern Three-toed Woodpecker near Raquette Lake, Hamilton County — On the afternoon of June 9, 1957, a smallish woodpecker was seen flying across to the north side of the Marion River, to alight at a fresh nesting hole in the upper dead section of a live spruce, some forty feet above the ground. Upon its arrival, a second woodpecker flew from the spot to a neighboring dead trunk, while the first thrust its head and shoulders into the opening and began excavating. The birds were obviously Three-toed Woodpeckers, the yellow crown-patch of the male being noted on the second bird as he preened his dishevelled feathers.

Some fifteen minutes later the female backed out of the hole and only at this time was it noticed that her back was not black as in the Black-backed Three-toed Woodpecker (*Picoides arcticus*) but had many small white markings. She was shortly replaced by the male, who also showed the white markings indicating that these were Northern Three-toed Woodpeckers (*Picoides tridactylus*).

The pair exchanged places about six times during the nearly two hours of observation, and when last seen the female had been at the hole for thirty minutes, at last coming out and appearing exhausted, her beak open and feathers in disarray. The nesting tree showed two other holes, one in the living part of the tree, and both high in the tree. The site was a bog of several acres on the north side of the river about a quarter of a mile east of the large ledge marking the inlet of the river into Raquette Lake.

Two trips were made several weeks later to look for the birds, but none was seen either time, and it is believed that the nesting was unsuccessful, perhaps broken up by red squirrels. Since there were old holes in the tree, it is possible that the tree may be occupied another year. — Walter R. Spofford, 766 Irving Ave., Syracuse

The Behavior Pattern of some Ruffed Grouse chicks in captivity (Part 1) — The behavior pattern of wild things, normally an interesting spectacle in the wild state, is profoundly interesting under atypical conditions. This is especially true when young of a certain species are removed from the parents before they have had an opportunity to learn the various responses to the different situations that arise.

These adaptations to given situations are collectively called a behavior pattern and in a large number of species this pattern is very well known. For example, the Pheasant, Wild Turkey, Bobwhite, and most species of wild ducks have been well studied, and in fact the domestic breeding of some of these birds is rapidly becoming a big business.

For the Ruffed Grouse, however, there appears to be no future in this respect. Although many attempts have been made to rear it artificially, most have not been too successful, perhaps due to its inherent wildness or to its susceptibility to diseases when artificially bred.

Therefore, when a chance was offered me to observe the young of this species first hand I was glad of the opportunity. Five one-day old chicks were brought to me after their mother had been hit and killed by a car. They were active and lively but at first refused any type of food offered. Their age was determined by the beak-tooth and by the fact that day-old chicks seldom eat. I placed the birds in a cardboard box and then placed the box over a fairly large dish pan in which I had inserted and lit a 100-watt bulb. This seemed adequate since the day was warm, but as night came on plaintive calls indicated the birds were becoming chilled. Small perforations made in the floor of the box admitted more heat, and this seemed satisfactory.

On the following day the birds were still active and accepted some flies as food. The instinct to be brooded was very strong, and a hand placed on the floor of the box would soon have all five endeavoring to crawl under it. There was absolutely no fear to any measures taken with them. On the third day one chick was found dead, and another on the sixth day. By this time the remainder were taking flies, small garden worms, lettuce cut in small pieces, and they were half heartedly picking at a commercial turkey starter. Water was taken in surprisingly small amounts varied with a taste of milk now and then. The lettuce probably supplemented the moisture that they needed.

By the end of the second week they would each consume several leaves of lettuce per day, plus clover, chick weed, flies, worms, and small grasshoppers. At the start of the third week they were taken out of doors during the warmest part of the day, but they would soon become chilled and indicate a desire to be brooded. During this same period, of course, the birds were beginning to feather out (beginning with the wing feathers). Attempted flights during the first and second weeks were not successful. By the third week they could make a sustained flight of about fifty feet, but they would always come immediately back to me. After the scapulars the breast feathers began to develop. Since this aided materially in keeping the birds warm, they were left out of doors for increasing periods. They were allowed to hunt in the taller grass and they became adept in capturing a variety of insects, but they never wandered far from the person with them.

At the end of three weeks the birds were as happy a trio as one could want. By this time a little top-knot of several feathers had developed on the forward part of their heads and they would erect them at the slightest sound, giving them a very ludicrous appearance and causing many a laugh from the children. By this same time they had developed the characteristic best known as typical of the Grouse. They would seek a small tree and walk about its branches as well as they did on the ground, and at the sound of a dog's bark they would assume the characteristic straight up-and-down pose, standing motionless for several minutes. If on the ground they would slowly sink down and remain quite still.

I must make a few remarks about their peculiar calls. There was the common shrill call so well known to gallinaceous species when cold, the contented chirrup when