GENERAL NOTES

Unusual Feeding Behavior of a Hairy Woodpecker.—While conducting an investigation of foraging behavior and resource partitioning in Downy (*Picoides pubescens*) and Hairy (*P. villosus*) woodpeckers last winter, I noticed a peculiar behavior in the Hairy.

A female was foraging on cattails (*Typha* sp.) in an old elm marsh, surrounded by mixed deciduous hardwood/conifer lowlands. The bird flew to one cattail shaft, perched on its side, and pecked a few times at the plant. She then flew to another plant, perched on its side as before, and again pecked into the plant. She flew off and landed on yet another plant, perched, and pecked in much the same fashion as in the previous two accounts. The date of this foraging behavior was 10 March 1978.

I know of no literature citations indicating this plant as a foraging site, and no behavior of this sort has appeared in the literature. The stalks on which the woodpecker was perched were dried and above the water level. Often lepidopteran larvae such as *Synclita occidentalis* are found in the stalks of such plants as cattails and water lilies (*Nymphaea* sp.), but usually under water (Curry, unpubl. data). It was also too early in the season for nymphs to be emerging—offering little support to the hypothesis that the bird was perhaps feeding on the nymphs that climb the stems of aquatic vegetation to make their final melt and fly away as adults. This unusual behavior can be explained by assuming that *P. villosus* might have been taking terrestrial arthropods that were crawling up the cattail stalk. Normal foraging sites for these birds are Maples (*Acer* sp.), White Birch (*Betula pendula*), White Pine (*Pinus strobus*), and other trees (Kilham, L. *Wilson Bull.*, **77:** 134–145, 1965.).—JEFFREY A. CHAMBERS, *Department of Biology, Central Michigan University, Mt. Pleasant, MI 48858.* Received 14 November 1978, accepted 15 May 1979.

Group Adherence in Emigration of Common Terns.—In a series of papers on the population ecology of the Common Tern (*Sterna hirundo*), O. L. Austin (*Bird-Banding*, **22:** 1, 1951) described a phenomenon he called group adherence, meaning that when breeding birds were displaced from a traditional breeding site by any of a number of factors, they were likely to move as a unit, either joining another existing colony or pioneering at a new site. While studying the dispersal of Common Terns forced from part of the colony at Cedar Beach, Long Island, New York (see Gochfeld, *Kingbird*, **26:** 63, 1976) during construction of a sewage outfall pipeline, I gathered evidence that supported, in part, the concept of group adherence.

On 8 July 1977, a pair of incubating terns was nest-trapped as part of a group of birds nesting on the proposed construction site. In 1978, no birds nested on the cleared site, but on 22 June 1978, these two birds were captured on adjacent nests, about 2.2 m apart, at West End Beach, 19 km to the west. Another bird taken on a nest about 5 m away had also been banded in 1977 on the construction site, within 20 m of the abovementioned pair. Of the 450 ± 25 pairs that had nested on the construction site in 1977, 60% had been banded, and in 1978 some of these birds were recaptured elsewhere at Cedar Beach, at a new salt marsh colony 6 km away, at West End Beach, and at Breezy Point, Brooklyn, about 70 km to the west. Thus the displaced birds had gone their separate ways. Nonetheless the discovery of three birds close together at another colony is an example of group adherence on a small scale. This shows that a pair of terns might emigrate together as part of a group, settle within a short distance of each other, but pair with other birds. If pairing were a function of two birds returning to the same territory in successive years and thus finding their previous mate, it would not be surprising to find a realignment when birds emigrating together settled in a new colony. However, Austin (*Bird-Banding*, **18:** 1, 1947) found that it was rare to find a marked tern with a new mate when its former mate was also found. The outcome of the 1977 mating of this pair was not known, and it is possible that mate change might occur as a consequence of reproductive failure.

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DeSylva for encouragement in planning this long-term study. O. L. Austin, Jr. provided valuable criticisms as a referee. Laurie Farber, Darrell Ford, Robert Gochfeld, and Carl Safina participated in the fieldwork.—MICHAEL GOCHFELD, *N. J. State Department of Health, Box 1540, Trenton, NJ 08625.* Received 28 March 1979, accepted 23 July 1979.

A Laparotomy Technique for Nestling Birds.—Laparotomy has been used frequently to study avian reproductive cycles and to identify sex in monomorphic species, although details of technique are infrequently reported (Risser, 1971; Lawson and Kittle, 1973). The procedure has usually been used only on adult birds; to my knowledge only Howe (1976) has reported laparotomizing nestlings, and he was unsuccessful with birds under 12 days old. As part of a study of reproductive strategies of Red-winged Blackbirds (*Agelaius phoeniceus*), it became desirable to identify the sex of much younger nestlings. This proved to be possible as early as the day after hatching with the laparotomy technique described here, which I have used on over 700 nestling Red-wings, mostly 1–3 days old. Mean weights at these ages ranged from 6.3 g for day 1 birds to 12.7 g for day 3 females, and 14.2 g for day 3 males.

Each bird was anesthetized in a wide-mouthed 350-cc jar containing a cotton ball moistened with 0.5–1 ml of methoxyflurane (Metofane; Pitman-Moore Inc., Washington Crossing, NJ), an inhalant that is safer and more effective than ether (Gandal, 1969). Exposure of 1.5–2 min was found to induce an adequate and safe level of anesthesia. Young nestlings (but not older ones) tended to breathe irregularly in the anesthetic jar, often stopping temporarily. Perhaps because of this, the depth of anesthesia attained was variable, and sometimes a longer exposure was required. The frequency with which it was necessary to refresh the anesthetic was also variable; in the long run, I anesthetized roughly 10 birds per ml of methoxyflurane.

The small size of the nestlings necessitated using a 9× dissecting microscope, which in turn necessitated carefully positioning the bird with the sagittal plane horizontal so that the gonad could be viewed vertically. This was accomplished by securing the bird, left side up, to a small plexiglass sheet with three pieces of lightweight adhesive tape, one extending the right leg ventrally, one extending the left leg caudally, and one holding the thorax in place and keeping the left wing out of the way.

An initial incision about 3–5 mm long was made in the skin anterior to the left thigh, and the bird was placed on the stage of the microscope. Using fine-pointed watchmaker's forceps, I then made a small puncture in the intercostal muscles near the tip of the uncinate process just ventral to the anterolateral margin of the kidney, which is visible through the muscles. This site is typically in the first intercostal region that is entirely clear of the lung, which is usually the last intercostal region. It was usually necessary to retract the sartorius muscle slightly in order to expose the site, especially in older birds. It is essential to locate the puncture exactly to avoid damage to the kidney and to minimize damage to the underlying abdominal air sac.

I inserted a pair of fine, blunt, curved forceps into the intercostal incision, enlarging it sufficiently to admit a second pair of similar forceps. By probing alternately with these two forceps, underlying organs could be pushed away from the ventral face of the kidney. In very young nestlings, the abdominal air sac is tightly pressed against the kidney and must be separated from it carefully; in birds several days old this is more easily done. Most young birds had a large thin-walled sac of clear amber fluid immediately ventral to the kidney, and it was usually necessary to rupture the membrane and drain some of the fluid by inserting tightly twisted pieces of gauze bandage into the incision. The fluid appears to be associated with the yolk sac and may be the remnant of an extraembryonic fluid. It disappears (from the gonadal region, at least) by the time birds are several days old.

Finally, the gut and spleen were pushed aside sufficiently to expose the gonad, which could be found in the middle of a triangular frame of landmarks composed dorsally of the kidney, ventrally of the superior mesenteric artery, and posteriorly of the anterior end of an intestinal loop. The gonad can be identified without necessarily probing deeply enough to expose the latter landmarks, but when there is any doubt the artery is an