is interesting that both the wrens heard by Thomas and by me were rendering faithful reproductions of the songs of closely related forms, and it may be relevant too to note that Armstrong (*op. cit.*) believes that the Winter Wren (*Troglodytes troglodytes*) does not learn its song but can perform it without having heard others of its species. On the other hand, probably the best argument for caution in explaining a bivalent repertory by assuming hybridization is presented by Lanyon's study of sympatric Eastern and Western Meadowlarks (*Sturnella magna* and *S. neglecta*) (1957. *Publ. Nuttall Orn. Club*, 1:1–67). Although there have been a number of cases of individual meadowlarks with both Eastern and Western songs, Lanyon found that males learn their songs and sometimes those of the other species, and he concluded that there is no clear instance of hybridization in the wild.—VAL NOLAN, JR., *Indiana University, Bloomington, Indiana, 4 December 1959.*

House Wrens and Bewick's Wrens in Northern Ohio.—In the spring and summer of 1957 I observed the nesting of a pair of Bewick's Wrens (*Thryomanes bewickii*) in Pepper Pike Village (Cleveland), Cuyahoga County, Ohio. This in itself was a rare and noteworthy occurrence, but even more noteworthy was the fact that the Bewick's Wrens occupied a nesting territory directly adjoining the nesting territory of a pair of House Wrens (*Troglodytes aëdon*).

Sutton (1930. *Wilson Bull.*, 42:13), writing of the nesting wrens of Brooke County, West Virginia, concludes that "the House Wren and Carolina Wren may inhabit precisely the same region without friction; but the House Wren and Bewick's Wren, or the Bewick's Wren and Carolina Wren, evidently do not." Referring to the Bewick's Wren and the House Wren in the vicinity of Johnson City, Tennessee, Tyler and Lyle (1947. *The Migrant*, 18:28–29) state that "when these two wrens meet, they fight to the death." Pough (1946. Audubon Bird Guide, Eastern Land Birds, p. 100) asserts that, "In parts of the Midwest this species [Bewick's Wren] appears to be extending its range northward at the expense of the house wren. Neither will tolerate the other on its breeding territory."

On the afternoon of 21 April 1957, I discovered the male Bewick's Wren in a scrub field area in Pepper Pike Village and observed it for several hours during which time it sang repeatedly. At first it seemed to be wandering about over the field, stopping to sing in the few scattered trees, but later in the afternoon it kept to a small, abandoned orchard at one side of the field. I did not return to the area until 4 May, when I found a pair of Bewick's Wrens in the orchard. They were there on 5 May as well, but on neither day did I hear the male singing.

On the evening of 6 May, I again visited the orchard, finding both Bewick's Wrens there. At about 7:30 PM, for the first time I heard a House Wren in the orchard. Shortly thereafter the male Bewick's Wren and the House Wren began to fight—chasing each other in short flights through the tangled branches of several fallen apple trees in the center of the orchard or occasionally ascending into the crowns of standing trees. Then for some three to four minutes the disputants separated, the House Wren all the while keeping up a vehement scolding. Following this interlude the two birds resumed their fighting which quickly reached its peak of intensity. The scene of this encounter was the dense leafy crown of a fallen apple tree; thus my view of the birds was largely obscured. Occasionally, however, I caught glimpses of them when they flew down among the tussocks of grass beneath the tree, and it seemed that they were actually in physical contact at those times. Throughout the fighting, which lasted for 10 to 12 minutes with only momentary pauses, both birds kept up a furious outcry. One of them (which one I could not determine) uttered a strange squealing note. At the conclusion of these separate encounters, or sometimes just before the close, the Bewick's Wren would often break into song but would

utter only the four opening notes. Throughout the period of fighting, the female Bewick's Wren was nearby and called *plit* repeatedly. When the dispute finally ended, the male Bewick's Wren flew to the topmost branch of a large apple tree in the middle of the orchard and sang his full Song Sparrow-like song as well as a briefer song consisting of first a subdued buzz and then several sweet, clear notes.

Both the Bewick's Wrens and a pair of House Wrens were in the orchard on the morning of 8 May, but they did not engage in fighting. The House Wrens kept to the west end of the orchard, where the male, which sang frequently throughout the morning, was busily cleaning out a cavity in a dead stub of a pear tree. The Bewick's Wrens confined their activities to the eastern half of the orchard.

From 8 May through 15 June, I visited the orchard eight times and spent a total of 17½ hours there. At no time did I observe any conflict between the two species of wrens, nor did I ever see either species go beyond what was approximately the mid-line of the orchard. Located at this mid-line was the large apple tree from which the Bewick's Wren sang at the conclusion of the fight on the evening of 6 May, and from which it sang frequently thereafter. Just once, on the afternoon of 10 May, I observed both the Bewick's Wrens and the male House Wren simultaneously in the central portion of the orchard; the latter was singing. At all other times the House Wrens held to the western half, the Bewick's Wrens to the eastern half, though both species often foraged outside the orchard itself but in areas adjacent to their respective halves. Of the two territories, that of the Bewick's Wrens was considerably the larger. These birds sometimes flew about 200 feet north of the orchard to feed among a brush-grown pile of rocks and rubble, whereas the House Wrens did not go more than 80 or 90 feet beyond the orchard.

On the morning of 9 June, I discovered the nesting site of the Bewick's Wrens in a woodpecker's hole in the dead branch of a fallen apple tree. The branch was parallel to the ground, with the entrance hole on the underside. Both male and female were carrying food to the young. Meanwhile, the House Wrens were nesting in the cavity in the pear tree at the west end of the orchard. The orchard measured 217 feet long and 195 feet wide, and the nest sites of the two wrens were 125 feet apart. The nest site of the Bewick's Wrens was 82 feet in from the east end of the orchard; the site of the House Wren's nest was about 10 feet in from the west end.

When I visited the orchard again on 15 June, the Bewick's Wrens were feeding their five bob-tailed fledglings assembled in the leafy crown of a large fallen apple tree. The House Wrens were still carrying food to their young in the nest in the pear tree. On my final visit on 7 July, the two adult House Wrens and one or two young birds were foraging through the west end of the orchard. In a large hawthorn tree about 100 feet beyond the northwest end of the orchard, two Bewick's Wrens fidgeted about and buzzed frequently.

In the spring and early summer of 1958 I visited the orchard several times but never observed either species of wren there nor anywhere in the immediate vicinity.

According to Williams (1950. Birds of the Cleveland Region, p. 104, 106), the House Wren is a "common migrant; common summer resident" in the vicinity of Cleveland, Ohio, but the Bewick's Wren is a "rare migrant; rare summer resident." Williams cites just one nesting record for the Bewick's Wren: in 1944 at Kent, which is on the southeastern periphery of the Cleveland region. A more recent nesting occurred in the summer of 1952 near Mogadore Lake, which is also at the extreme southeastern boundary of the Cleveland region (Wiley, 1952. *Cleveland Bird Calendar*, 48,3:3). Also, and concurrent with the 1957 nesting of the Bewick's Wrens in Pepper Pike Village, a pair nested successfully in Cuyahoga Falls, Summit County, which is about 25 miles south of Cleveland (Wiley, 1957.

Cleveland Bird Calendar, 53,3:13). The nesting in Pepper Pike Village is the first authentic record for Cuyahoga County.

Elsewhere in northern Ohio the Bewick's Wren is considered rare. Thus to the east of Cleveland, in Ashtabula County, Hicks (1933. *Wilson Bull.*, 45:187) described this species as "very rare and not definitely known to breed." To the west (Toledo), Campbell (1940. *Birds of Lucas County*) described it as "the rarest of the wrens which visit Lucas County." Even in the central portion of Ohio, in the vicinity of Columbus, the Bewick's Wren is classed as an uncommon summer resident (Borror, 1950. A Check List of the Birds of Ohio).—DONALD L. NEWMAN, *14174 Superior Road, Cleveland Heights 18, Ohio, 15 February 1960.*

An albinistic Carolina Wren.—Gross (*In* Bent, 1948. *U.S. Natl. Mus. Bull.*, 195:127) reports albinism apparently rare in the Troglodytidae. Since then Bond (1949. *Cassinia*, No. 37:23) has recorded a completely albinistic House Wren (*Troglodytes aëdon*). On 6 December 1959, I banded a Carolina Wren (*Thryothorus ludovicianus*) which when at rest showed a white stripe near the outer edge of each wing, and a touch of white on each side of the lower back. I found that primaries Nos. 5 and 6 in each wing were white to within about half an inch of their tips, where they began shading into normal color, and that one secondary covert in each wing was white to within a short distance of the tip. —HERVEY BRACKBILL, *2620 Poplar Drive, Baltimore 7, Maryland, 9 December 1959.*

Neonates and incubation period of Chimney Swift.—An egg of the Chimney Swift (*Chaetura pelagica*), determined to be fresh by candling on 14 June 1958, was hatched in a forced-draft incubator on 30 June. The pink-skinned neonate hatched 372±11 hours after initiation of artificial incubation. In two other eggs of this clutch that failed to hatch, embryonic development was indiscernible on the sixteenth day. Robert E. Stewart of Laurel, Maryland, donated this clutch from his chimney and Aelred Geis donated another day-old specimen from that locality that was hatched in nature for corroboration.

The incubation period in the artificial incubator of 372±11 hours (15.50±.46 days) contrasts with the incubation period in nature in this species. Whereas MacNamara (1918. *Ottawa Nat.*, 32:39–42) noted a period of 16 days, the period is obviously lengthened considerably by adverse environmental conditions: 19 days has been noted most frequently (Amadon, 1936. *Auk*, 53:216–217; Kendeigh, 1952. *Illinois Biol. Monographs*, 22:1–356; and Sherman, 1952. Birds of an Iowa Dooryard). In the Common Swift (*Apus apus*), the Lacks (1951. *Ibis*, 93:501–546) have shown that the period varies between 18.5 and 24.5 days. The secondary effects of moisture loss from the eggs in depressing egg temperatures may be an important cause of variability, for chimneys are notoriously drafty nesting sites. The methods and conditions of incubation in this study were as previously standardized (Wetherbee, 1959. Artificial incubation of wild birds' eggs and developmental condition of neonates, University Microfilms). The swiftlet looked much like a neonatal passerine except that the toenails, which were duskily pigmented, were extraordinarily long and gracefully pointed, not short and hooked. This character of the toenails was noted previously in another apodiform, the Ruby-throated Hummingbird (*Archilochus colubris*) (Wetherbee, *loc. cit.*). There was also a blunt alular spur, not pigmented, on the swift at hatching. The long toenails are undoubtedly of adaptive significance in clinging to the precariously situated shelf-like nest and also in actual locomotion (see Kennard, *in* Bent, 1940. *U.S. Nat. Mus. Bull.*, 176:275).

The neonates had no down. Four nestlings in the pin-feather stage I took at Gainesville, Florida, also have no signs of natal down. Other workers have noted the absence of natal