it climbed up 30 feet to the first branch and then to the knot where the male bird had been cleaning his bill. The fragments adhering to the bark around this knot were examined thoroughly before the weasel started back down the tree. The birds continued to attack and did again knock the animal loose from the tree when it was 20 feet from the ground. These falls did not disturb the weasel. Back on the ground it spent two minutes smelling the bird droppings at the base of the 'cleaning tree' before leaving the neighborhood in the direction of a pine thicket.

"After a period of quiet and normal feeding at 8:08 P. M. the male bird was cleaning his bill at the 'cleaning tree' when the weasel suddenly returned. I heard it on the ground passing near me. When I turned my head it stopped and tried to smell me but I remained quiet and it soon turned its attention in the direction of the noisy young birds in the nest tree. This time the weasel went up another tree—one close to the nest tree. The male bird again attacked, and the weasel started down the tree head first in the manner of a squirrel. When about fifteen feet from the ground the bird again dislodged the animal and caused it to fall. After this it circled the base of the nest tree but did not try to climb again. Soon it left the neighborhood in the same direction as before."

It seems likely from this record that the weasel had visited the birds before the first recording by this observer. Its ability to climb and its persistence in the attempt to get to the nest during these daylight hours may be an indication of what happens to many hole-nesting birds during the dark hours as well as in daylight. The author is of the opinion that we need many more observations of what is going on in the bird world during the twilight hours and during the nights.—R. A. JOHNSON, 98 *East St., Oneonta, New York.*

Flight speed of Wild Turkeys.—While conducting a Wild Turkey investigation in West Virginia, the author has had several opportunities to check accurately the flight speed of these large game birds. On September 11, 1946, a large gobbler was flushed by the car from a mountain road. The gobbler took a few running steps and, with several heavy, powerful strokes of his wings, was soon in the air. For about 50 to 60 yards the bird flew with a rapid and strong wing beat. He then set his wings and sailed for a short distance following this by another series of rapid wing beats. This intermittent wing beat of turkeys in flight has been observed many times by the writer. The gobbler flew directly down the road and was followed closely by the car. A flight speed of 38 to 42 miles per hour was recorded for a distance of approximately one-half mile. The turkey finally veered sharply to the left and sailed out over the forested valley.

Again on October 21, 1946, the writer flushed a flock of 8 to 10 Wild Turkeys from a ridge. In this instance the birds flew close together like a covey of quail and landed on a beech flat below. They flew the entire distance through the forest and it was wonderful to observe their dexterity in flying through the trees. The distance flown was 722 feet in 17 seconds giving an average flight speed of 29 miles per hour. A similar observation was made on December 5, 1946, when three turkeys (one hen and two gobblers) were flushed along a road. Their flight speed for a short distance was checked with the speedometer of the car and found to be around 32 miles per hour. On December 11, 1946, a small flock of three turkeys was flushed along a forest trail. Their flight speed for 370 feet was about 36 miles per hour. Mr. Henry Perkins, resident game manager of Cranberry Game Breeding Area, reported checking the flight speed of a young gobbler with his car on October 10, 1946, when he found the speed to be approximately 32 miles per hour.

These five instances are not comprehensive but do give an indication to the range

of flight speed. The large size of the Wild Turkey often deceives the observer who attempts to estimate the flight speed. Actually the Wild Turkey may be compared to the large airplane which must have considerable wing area and fly fast to provide the necessary lift for the heavy body.—FRED A. GLOVER, *West Virginia Conservation Commission, Elkins, West Virginia.*

Interrelations of House Wren and Bewick's Wren.—The impression has prevailed among ornithologists that House Wrens (*Troglodytes aëdon*) and Bewick's Wrens (*Thryomanes bewickii*) do not ordinarily occupy successfully the same territories. Many observations have been to the effect that when House Wrens enter a territory as invaders the Bewick's Wrens become scarce, or move out entirely.

These observations are certainly correct during the early years following House Wren invasion of Bewick Wren territory. There is every evidence of the incompatibility of the two species, and the latter species is almost invariably the sufferer. In recent years, however, I have seen in a number of situations Bewick's Wrens reestablishing themselves in territory from which they had formerly disappeared. The result has been that both species now breed in the same areas, with seeming compatibility.

At French Creek, Upshur County, West Virginia, Bewick's Wrens were, for many years, abundant, whereas House Wrens were virtually unknown in the region until the early years of the present century. With the invasion of the latter species, however, Bewick's Wrens moved out, virtually disappearing for several years. During recent seasons Bewick's Wrens have reappeared, occupying many of their former nesting niches.

In the valley of the Ohio River (in West Virginia, at least) House Wrens for many years seemed to dominate on the flood plain, with Bewick's Wrens appearing on the escarpments back from the river. As late as ten years ago, Haller, in a study of the birds of four river-valley counties, found that this situation obtained. Within the last decade, however, Bewick's Wrens have moved down on the flood plain, and are now rather common co-occupants with the House Wrens. Burt L. Monroe, of Anchorage, Kentucky, tells me that the wren populations of Kentucky's Ohio Valley counties have had a similar history.

Near my home in Morgantown, West Virginia, a single pair of Bewick's Wrens has occupied an old shed each nesting season for the last six years. There are no other resident Bewick's Wrens near by. Surrounding this territory are dozens of nesting pairs of House Wrens. Despite the abundance of the latter birds, the Bewick's Wrens completely dominate the territory around their chosen home, and I have not witnessed any conflicts between the two species.

Since the clearing of the Appalachian forests, there have been many invasions by bird species formerly absent from the region. These invasions, in most cases at least, have followed the same pattern. First the invader appears as a pioneer; then it becomes locally common and often dominant in certain areas, frequently to the seeming detriment of some other species; and finally it settles down as an accepted member of the community, often considerably reduced in numbers. In this last stage it tolerates, and is tolerated by, other avian neighbors. I believe that Bewick's Wrens as old residents of the West Virginia hill country and House Wrens as recent invaders are now engaged in working out some such *modus vivendi*.—MAURICE BROOKS, *West Virginia University, Morgantown, West Virginia.*

Bank Swallow and Belted Kingfisher nest in man-made niche.—On June 9, 1946, James L. Edwards, Richard S. Thorsell, and the writer discovered a nesting