

James Hartshorne has pointed out that in his considerable experience with Bluebirds he has found that 'floor size' of the nesting cavity is of more importance than has generally been realized. Although the birds will accept and use a too-small cavity, proper nest sanitation so important for the young to survive, becomes difficult or impossible, if the nest bottom measures less than 20 square inches. (5" x 5").

Any information from readers on their campaigns to help Bluebirds in New York State would be welcome material for The Kingbird. Editor.

Bluebirds: On the afternoon of October 26, 1962, Mrs. Robert Owens on Rte. 380, about one half mile south of Rte. 20 near Brocton, phoned to say that their backyard had been covered with Bluebirds all afternoon and that if we could come some might still be there. At our visit to her home, we found, so it seemed, a Bluebird on every weed stalk, grape post and tree limb. The birds moved more or less in separate flocks. As a flock moved in, we would count them, keep track of their movements and then estimate numbers in the other flocks.

At one time there was a flock of about 50 in the frontyard, about 50 in the Lombardy Poplars beyond the backyard, about 50 in the grape vineyard and adjoining abandoned meadow and another group of 50 on the back lawn, in apple trees and the rose arbor.

Darkness eventually made it impossible to identify the birds by sight but their presence was made known by their "chirrup" which came from all directions. All evidently left in the night, for the Owens did not see a single Bluebird the next morning.

Mrs. Stanley E. Buck and Mrs. Nina Bates, Bear Lake Road, Brocton

Persistent Flight Behavior in Some Raptorial Birds: In many years of bird study I have observed different mannerisms of hawk flight behavior which have been obviously persistent. One example is the towering of the broad-winged species—Buteos, Eagles, etc — to avoid persecution by other avian adversaries, usually smaller than themselves.

With the Peregrine (*Falco Peregrinus*) of the Falcon group, towering is usually used for a different purpose — that of over-topping its victim, occasionally after chasing it into the upper air. Then there is the Peregrine's headlong pursuit with low, dashing flight as this winged conqueror demoralizes some flock or individual in passing, or when it snatches its victim out of the air, or from a perch. Many of us have seen this spectacular species chase some individual bird, or flock, to all appearances with serious intent and at other times playfully. One tragic example of apparent playfulness was that of a Peregrine which pursued a Barn Swallow high over the ocean one fall afternoon at Jones Beach and followed it so closely in a spectacular downward dive that the unfortunate victim dashed to the waves and was seen no more.

Regarding the serious approach, an almost human trait of "venting its spleen" was noted by the writer in early morning one spring day at Oak Beach. A Peregrine had seemingly fared poorly, as food appeared scarce. To add to the difficulty of its still hunting from a foot-high stub on a bare mud flat in the marshes, was the approach of a quartering Marsh Hawk (*Circus cyaneus*). With no hopes of an early meal, the Peregrine shot into the air and with quick powerful wing strokes made rapid progress over the brown marsh grass. A few hundred yards away and directly in its path arose a flock of about a dozen Canada Geese. These panicked as they saw the dashing hawk and beat a hasty retreat in confusion. The Peregrine added to this by swooping at the leading goose with such a vengeance that it drove it and its nearest companions violently downward for several feet; then apparently satisfied, the powerful hawk, never missing a stroke, soon disappeared at tremendous level flight over the bay islands and out of sight.

A good example of towering to overtop its victim occurred one fall day in Massapequa when a Peregrine, presumably in search of a meal, spectacularly drove a pigeon into the upper air, climbed above it and shot downward for the fatal thrust. The pigeon in this case, however, descended terrifically fast and, with a quick dodge avoided the clutching talons. Just before smashing into the ground the pigeon recovered itself and the Peregrine likewise checked its plunge and then gave