FROM FIELD AND STUDY

Unusual "Bunching" Behavior of Starlings.—On September 2, 1958, while driving southeast of Frederick, Frederick County, Maryland, my wife and I observed a "bunching" reaction of a flock of Starlings (*Sturnus vulgaris*) which seems to be unusual in several respects. A loose flock of about 25 individuals was flying over a plowed field when a Marsh Hawk (*Circus cyaneus*) took flight from the ground or a very low bush. The Starlings immediately closed to a dense group and veered quickly to one side. The harrier made no advance toward the bunched flock, but continued to flap, gaining altitude. When the hawk was about 15 feet off the ground, the bunched Starlings dived upon it from the rear, causing the larger bird to pull quickly to one side and lose about half its altitude. The Marsh Hawk paid no further attention to the flock, which was still densely bunched and flying erratically away from the hawk when we left the scene.

It is unusual that the bunching reaction was given in response to a hawk which exhibited absolutely no signs of attacking the smaller birds. Moreover, the evident aggressiveness of the behavior may also be unusual. Bunching is usually an evasive movement by pursued Starlings (Tinbergen, The Study of Instinct, 1951:169–170). However, it has been reported to have other functions. Tinbergen (Bird Life, 1954:19) mentions that bunched Starlings will fly above a hawk, thus distracting it from hunting. Although the circumstances are not fully described, Tinbergen also notes that "attacks" by bunched birds will actually cause a hawk to flee if it is not hunting too intensively (Social Behavior in Animals, 1953:55). The Starlings I saw definitely appeared to move together in an aggressive attack aimed at actively repelling the Marsh Hawk.

From these various reports, it appears that the bunching behavior may be oriented for evasion (probably when the Starlings' escape motivation is very high), for distraction (when attack and escape motivation are about equal), or for actually causing the predator to flee (when motivation is nearly pure attack).

Behavior which is motivated by simultaneously activated tendencies to attack and escape is by definition "hostile" in current ethological terminology. Moynihan (Auk, 72, 1955:256), in his excellent review of hostile behavior, suggests that most predator-reactions like mobbing and distraction displays "were originally evolved to induce an intraspecific response." It would be interesting to compare the Starling's bunching with other forms of predator-reactions and with intraspecific hostile displays to see what, if any, relationships exist.

Helpful comments on this note were kindly made by Dr. Andrew J. Meyerriecks.—JACK P. HAILMAN, *Bethesda, Maryland, January 26, 1959.*

Cave Swallow Nesting in Building Near Cuatro Ciénegas, Coahuila, México.—In a recent study of Texas populations of the Cave Swallow (*Petrochelidon fulva*), Selander and Baker (Condor, 59, 1957:345–363) call attention to the peculiar distribution of the species in México, where it is known only in the southernmost (Chiapas and Yucatán) and northernmost (Tamaulipas and Coahuila) regions. Since only four localities seem to be given for it in the north of México, one in Tamaulipas and three in Coahuila (Saltillo, Sabinas and Monclova), it seems worthwhile to record observations made in the vicinity of Cuatro Ciénegas, Coahuila.

At the Molino del Rey, a flour mill about three miles from Cuatro Ciénegas, from June 27 to July 2, 1958, I saw a mixed flock of at least 10 Cave Swallows, perhaps 30 Cliff Swallows (*Petrochelidon pyrrhonota*), and a few Barn Swallows (*Hirundo rustica*) hawking daily about buildings and a spring-fed stream. Barn Swallows were nesting in the buildings, but I saw no nests of Cliff Swallows and assumed they were using cliffs in the adjacent mountains.

On June 28, swallows were seen flying in and out of the second story of the mill. Investigation disclosed the occupied nests of three species of birds in one of the well-lighted, unoccupied rooms. A Say Phoebe (*Sayornis saya*) was incubating at a nest built upon a narrow board nailed across two ceiling beams. At the opposite end of the room, perhaps 20 feet away, in a nest fastened on the rough-hewn side of a beam, a Barn Swallow was incubating. Some 10 feet distant on the same beam, a Cave Swallow flushed from its nest and four slightly incubated eggs and flew from the building, giving a low cry. On the floor below this beam lay intact a newly made nest of Cave Swallow, together with