This behavior has been reported (this note; Brackbill, Wilson Bull. 78:316, 1966; Recher and Recher, Auk 89:896, 1972) for every North American ardeid except *Bubulcus ibis, Egretta garzetta, Nycticorax nycticorax* and the 2 bitterns. Reynolds (Br. Birds 58: 384, 1965) and the Rechers have discussed the possibility that the behavior prevents the spread of endoparasites.

Another habit which might have that value was shown by the Yellow-crowns. They went ashore to disgorge undigestible material and then promptly reentered the stream. I saw this sequence 3 times, including once by an immature bird. A fourth time, a heron that had caught a small crayfish carried it a few meters to a sand bar, biting it to death on the way, placed it on the ground, disgorged, ate the crayfish and reentered the stream. Only once did I see a Yellow-crown regurgitate into the water. I find no mention of this behavior in the literature, and have no data on disgorging by other herons.—Hervey Brackbill, *2620 Poplar Drive, Baltimore, MD 21207.* *Accepted 6 Oct. 1975.*

Mourning Dove, Common Grackle cleaning bills.—Reviewing avian bill-wiping, Clark (Wilson Bull. 82:284, 1970) comments that he has not seen this done by Mourning Doves (*Zenaida macroura*). These doves visit my window feeding shelf in numbers, and in the frequent fights that occur tufts of small feathers are sometimes torn out. Usually these at once fall or blow away, but occasionally one sticks to the attacker's bill. Since 1962 I have noted that 1 bird dislodged such a tuft by shakes of the head, and 6 birds wiped it off by a stroke of the foot; I have never seen the bill wiped on the feeder rim or floor. I have also 5 times seen Common Grackles (*Quiscalus quiscula*) brush things off the bill with a foot; this species is on Clark's list of wipers.—Hervey Brackbill, *2620 Poplar Drive, Baltimore, MD 21207.* *Accepted 6 Oct. 1975.*

Cliff Swallow breeding in south-central Florida.—The breeding range of the Cliff Swallow (*Petrochelidon pyrrhonota*) in the southeastern United States has been expanding in recent years and the first breeding records for Georgia and South Carolina were reported from Hartwell Dam on the Savannah River in 1965 (Tedards, Chat 29:95–97, 1965). On June 1975, I discovered 9 Cliff Swallow nests beneath U. S. Highway 441 bridge (Lat. 26°59'N, Long. 80°37'W) across the St. Lucie Canal, Port Mayaca, Martin Co., Florida. The bridge is located about 200 m east of Lake Okeechobee. This locality is approximately 840 km south of the nearest known nesting site at Hartwell Dam, Georgia–South Carolina line. How long Cliff Swallows may have been nesting in Martin County is unknown. No additional colonies were found during a search within a radius of 32 km from Port Mayaca.

Four visits during June to the Florida colony revealed that 2 nests were used by swallows, 3 by House Sparrows (*Passer domesticus*), and 4 were empty. I watched as 2 young fledged from one nest on 10 June; the other nest contained much smaller nestlings. An adult male in breeding condition (right testis, 9.5 × 7.5 mm, left, 11.5 × 7.5 mm) was collected on 17 June from the nest where young had fledged. I knocked the nest down to retrieve the specimen and found that it contained 2 fresh eggs. This specimen (NMNH 567576) of the nominate race and eggshell fragments are at the U. S. National Museum. Adults were still feeding young in the remaining nest on my last visit to the site on 19 June.

The nests were located at the top of 2 sets of concrete pillars supporting the bridge spans. Each set of pillars is connected at the top by a concrete cap and by a large transverse beam just below the cap. Such structures create artificial "cliff" faces protecting

the mud nests from wind and rain. The 2 active nests were 3.3 m above the water (bottom of nests to water). The "neck" of the nest at which fledging was observed had broken off prior to 10 June or it was never completed before being used. The other active swallow nest was the gourd-shaped mud structure typical of the species. Three of the other 7 nests were intact and 4 had the "neck" partly broken or missing. Variation in the "neck" is well known (Gross, *In* U. S. Natl. Mus. Bull. 179, 1942).

I wish to thank Roxie C. Laybourne, U. S. National Museum, for confirming the subspecies of the specimen.—PAUL W. SYKES, JR., *U. S. Fish and Wildlife Service, Patuxent Wildlife Research Center, Field Station, P. O. Box 2077, Delray Beach, FL 33444.* *Accepted 28 Oct. 1975.*

Minimum temperature for feeding by Purple Martins.—Allen and Nice (Am. Midl. Nat. 47:606–665, 1952) stated that Purple Martins (*Progne subis*) "seem able to withstand several days of cold weather and to be able to feed at surprisingly low temperatures...." Sprunt (Bent, U.S. Natl. Mus. Bull. 179:489–509, 1942) on the other hand (and many authors since) wrote that severe cold so eliminated insects that martins died from starvation. However, I have been unable to find any published information on the exact minimum temperatures at which martins are able to successfully forage.

In 1974 and 1975 I investigated the minimum temperature at which martins successfully fed and studied the behavior of Purple Martins in temperatures below that minimum in north central Texas (Sherman, Grayson Co.). While martin deaths due to starvation may be infrequent in north central Texas, there are many days on which cool weather restricts activity and feeding.

On days of cold weather I closely watched a backyard martin colony containing 7 martin houses and noted temperatures periodically. I also noted temperatures whenever martins left their houses and were seen flying nearby, erratically wheeling and presumably hawking for insects. The numbers of martins present at the colony varied from 5 at the time of their arrival to at least 30 near the end of March. Temperature measurements were obtained with a thermometer attached to the outside of a window screen. Possible temperature differences between the level of the window and the level of the martin houses I believe were negligible.

The major difficulty I had was in determining if martins were actually feeding. Purple Martins are far-ranging feeders and rarely feed near their colonies. However, when I observed the birds twisting and hawking, I assumed they were foraging successfully. I also assumed that the birds were foraging successfully when all the martins present at the colony disappeared in the afternoon and did not return until nightfall. It is unlikely that the birds would consume energy needed for flight unless they were finding food, especially at cooler than average temperatures.

On days of temperatures 13°C or above, martins presumably located ample food. Days of cold weather varied from the time of the martins' arrival in Sherman on or about 14 February throughout March. Only on 2 occasions did temperatures below 13°C extend for longer than a 2-day period.

On 14 days during February and March, 1974 and 1975, I recorded temperatures of 6°C or lower. Martins spent most of each of these days inside the martin houses. On 4 days with temperatures of 9°C during the afternoon, the martins remained away from the houses the entire afternoon.

On one occasion during 1974 I recorded temperatures of 6°C or lower for a 3-day period. On the first 2 days of this period, the martins' territorial defense and pair bonds were maintained. Although singing and flight were reduced, trespassing martins and