House Sparrows (*Passer domesticus*) were not tolerated. But on the third day territorial defense was abandoned; several birds of the same sex entered and remained in the same room of the martin house. A group of martins gathered on the south side of one of the martin houses, and birds of the same sex huddled together with no display of hostility.

All of the martins present at the colony spent most of the day and night of the third day in the largest of the 7 martin houses—this house was at least twice the size of the others. I counted as many as 10 martins using the same room for roosting on that night. Under normal circumstances only a pair at a time roosts in one room, and other martins are not allowed to perch on the porch in front of that pair's room.

In 1975 one martin at this colony and 3 at nearby colonies died following a 4-day period in mid-March when temperatures were 6°C or lower. These were the first martin deaths I could attribute to cold weather in the Sherman area since I began studying martins in 1969. During this cold period in 1975, the martins displayed behavior similar to that I observed in 1974.

Thus it appears, based on observations during 1974 and 1975, that Purple Martins in north central Texas cannot successfully forage at temperatures of or below 6°C, but that they can forage to some extent at 9°C, and at temperatures of 13°C they seem to be able to locate ample food to sustain their existence.

I am grateful to Warren M. Pulich, Sr., for suggestions on the preparation of the manuscript.—Charles R. Brown, *2601 Turtle Creek Drive, Sherman, TX 75090.* *Accepted 13 Nov. 1975.*

How do cowbirds find and select nests to parasitize?—The widely accepted conclusion that female Brown-headed Cowbirds (*Molothrus ater*) usually, if not always, find and select nests to parasitize by watching the host's building activities (Hann, Wilson Bull. 49:145–237, 1937; Hann, Wilson Bull. 53:211–221, 1941) is based primarily on 2 frequent observations: (1) female cowbirds spend long periods surveying their surroundings and watching the building of nests (Norris, Wilson Bull. 59:83–103, 1947; Mayfield, The Kirtland's Warbler, Cranbrook Inst. Sci., Bloomfield Hills, Michigan, 1960; Mayfield, Wilson Bull. 78:162–166, 1961; Norman and Robertson, Auk 92:610–611, 1975); and (2) cowbirds usually synchronize their laying with the brief egg-laying period of the host (Hann, Wilson Bull. 53:211–221, 1941; Walkinshaw, Wilson Bull. 61:82–85, 1949).

Despite this evidence, it can be objected that occasional observations of female cowbirds attentively watching nest-building do not justify the conclusion that most host nests are found in this way. Also, synchronization of the parasite's laying with that of the host is not perfect, for cowbirds are known to lay during inappropriate stages of the host's nesting cycle (Hann, op. cit., 1941; Mayfield, op. cit., 1960; Norman and Robertson, op. cit.) as well as in abandoned, empty nests (Nolan, pers. comm.). It could be argued that cowbirds find many nests simply by searching and parasitize them whatever their stage of development (see, e.g., Norman and Robertson, op. cit.). But if hosts usually accept only cowbird eggs laid during their own egg-laying period, ejecting those laid at other times, cowbird eggs laid after the host's laying has ended would rarely be found. Rothstein (Am. Nat. 105:71–74, 1971) points out that ejected eggs will go unobserved and absence of parasite eggs is insufficient evidence to conclude that none was laid. However, the likelihood that stage-dependent differences in host acceptance actually occur is reduced by Rothstein's observations (Condor 77:250–271, 1975; Auk 93:675–691, 1976) that the stage of the host's nesting cycle (egg-laying vs. incubation) is not a strong factor affecting acceptance or rejection of cowbird eggs in all but one of the 30 species that he tested; the exception is the Cedar Waxwing (*Bombycilla cedrorum*), which tends to accept during incubation and to reject during egg-laying.

In light of these plausible objections, we think the conclusion that cowbirds usually find nests by watching the host's building activities ought to be tested experimentally. Such an experiment might consist of exposing suitable nests supplied with eggs to potential cowbird parasitism, thereby eliminating the host's building and other activity around the nest. An opportunity to observe any cowbird parasitism of experimentally furnished nests was provided to us as the by-product of an experiment in which we investigated factors that might affect the nest-predation rate in old-field habitats.

Our experimental design was as follows: Each week between 4 May 1975 and 26 July 1975, 20 nests (12 to 14 of Cardinals, *Cardinalis cardinalis,* and 6 to 8 of American Robins, *Turdus migratorius*) collected after their owners had stopped using them were placed in typical nest sites in old-field habitat (10 ha) on the Bachelor Estate of Miami University, Oxford, Ohio. Two Japanese Quail (*Coturnix coturnix*) eggs were placed in each. An even dispersion of the 20 experimental nests over the study area was achieved each week by dividing the tract into 40 plots and placing each nest near a site chosen at random within alternating plots. We made daily visits to 10 of the nests, none to the other 10. After 6 days all surviving nests and eggs were collected; the next day the experiment was repeated using some new nests and all new eggs and sites. Thus during 12 weeks we exposed nests for 6 days apiece in 240 locations. Controls were nests of Field Sparrows (*Spizella pusilla*), Red-winged Blackbirds (*Agelaius phoeniceus*), Yellow-breasted Chats (*Icteria virens*), Indigo Buntings (*Passerina cyanea*), and Cardinals that bred on the study area and in adjacent fields; the number of cowbird eggs these nests received was recorded. These species were selected because they were the only ones that we know were parasitized on the study area and adjacent fields in 1975.

No experimental nest received a cowbird egg, although cowbirds were common on the study area. The intensity of cowbird parasitism on hosts' nests varied seasonally, so we compared the frequency of parasitism of experimental nests exposed and free of predation and weather interference for 6 days with that of the foregoing parasitized species during each month: May, none of 47 experimental nests and 11 of 29 hosts' nests ($\chi^2 = 17.9$, df $= 1$, $P < 0.001$); June, none of 51 experimental nests and 12 of 25 hosts' nests ($\chi^2 = 25.6$, df $= 1$, $P < 0.001$); and July, none of 61 experimental nests and 8 of 22 hosts' nests ($\chi^2 = 20.6$, df $= 1$, $P < 0.001$).

These results are consistent with the idea that activity of the host at its nest is important in determining which nests female cowbirds find and select to parasitize. The only other experimental approach to this question seems to have been made by Laskey (Wilson Bull. 62:157–174, 1950), who ". . . put up dummy nests of several sorts, placing in them Bluebird (*Sialia sialis*) eggs from deserted nests and marked House Sparrow eggs. These eggs disappeared, but no Cowbird eggs were laid in the nests."

One serious objection that can be raised about our experimental design is the use of Japanese Quail eggs. Although some hosts reported by Friedmann (U.S. Natl. Mus. Bull. 233, 1963), such as the Brown Thrasher (*Toxostoma rufum*) and the Wood Thrush (*Catharus mustelina*), lay large eggs (27.3 × 19.8 mm and 25.4 × 18.6 mm, respectively) (Bent, U.S. Natl. Mus. Bull. 195, 1948; 196, 1949), the quail eggs are considerably larger (31.7 × 24.5 mm) than the eggs of the observed hosts on the study area (Cardinal, 24.8 × 18.5 mm; redwing, 24.8 × 17.6 mm; chat, 21.9 × 16.9 mm; Indigo Bunting, 18.7 × 13.7 mm; Field Sparrow, 17.9 × 13.5) (Bent, U.S. Natl. Mus. Bull. 203, 1953; 211, 1958; 237, 1968). Although we regard egg-size to be a problem (cf.

King, Am. Zool. 13:1259) and think that future tests should use smaller eggs, as Laskey (Wilson Bull., op. cit., 1950) did, our results do provide a systematic experimental test of, and are consistent with, the widely held conclusion that the activity of the host is important in determining which nests female cowbirds select to parasitize.

We thank Miami University for permission to work on the Bachelor Estate and Val Nolan Jr., Michael W. Monahan, and David R. Obsorne, who also provided the quail eggs, for reading a draft of this note.—CHARLES F. THOMPSON AND BRADLEY M. GOTTFRIED, *Dept. of Zoology, Miami Univ., Oxford, OH 45056.* (Present address CFT: *Dept. of Biology, State Univ. College, Geneseo, NY 14454*). *Accepted 8 Dec. 1975.*

White-throated Swifts following farm machinery.—On 15 December 1973 between 1435 and 1445 in the Avra Valley, 25 km northwest of Tucson, Pima Co., Arizona we observed approximately 50 White-throated Swifts (*Aeronautes saxatalis*) following a harvester. The harvester was first observed traveling north to south in a quarter section field of sorghum. A large cloud of dust was carried 200 m from the machine by a westerly wind. The swifts, flying in a counterclockwise elliptical circuit on the leeward side of the machine, entered the dust cloud ca. 3 m from the harvester then turned downwind and flew 100–150 m before circling back upwind. This behavior continued until the harvester reached the southern edge of the field where it slowed to turn about. During this pause the dust cloud dissipated and the swifts ceased circling, quickly rose to an altitude of 150–200 m, and dispersed over a broad area. When the harvester began cutting again, the swifts rapidly congregated and resumed their counterclockwise circuit in the new dust cloud. Although we were not close enough to observe prey capture, we presume the swifts were taking insects disturbed by the harvester. Several species of birds are known to benefit from the disturbance created by agricultural machinery, however we could find no records for swifts.—STEPHEN M. ALDEN AND G. SCOTT MILLS, *Dept. of Ecology and Evolutionary Biology, Univ. of Arizona, Tucson, Arizona 85721.* *Accepted 17 Dec. 1975.*

Common Terns feed on mole crabs.—I camped on Ocracoke Island, Hyde Co., North Carolina on 21–23 July 1973. On my first visit to the ocean beach I noted Common Terns (*Sterna hirundo*) flying over the wave-washed sand, picking up and eating small prey. Observations from a distance of 10 m or less with a 10 × 40 binocular revealed that the birds were capturing and eating small mole crabs (*Emerita talpoida*). These crabs were frequently exposed momentarily by a wave breaking on the sand after which they rapidly burrowed back into the sand. An inspection of the wave-washed zone of the beach revealed that the mole crab population was several orders of magnitude greater than I have observed on any Carolina beach in my 7 years of regular visits to the coast. A handful of sand randomly taken from the appropriate zone of the beach usually yielded at least 1 crab, sometimes 3 or 4. The crabs were all quite small, ranging approximately 1.5–2.5 cm long. I scanned up and down the beach and estimated that about 70 terns were hunting for crabs in about 1 km of beach. No Common Tern was observed over the water and no other species of tern was observed hunting for crabs. Least Terns (*Sterna albifrons*) were observed catching fish 5–100 m offshore, Gull-billed Terns (*Gelochelidon nilotica*) were seen catching insects in the interior of the island, and Royal Terns (*Thalasseus maximus*) and one Sandwich Tern (*Thalasseus sandvicensis*) were seen flying over the area.