

porting area of approximately 324 cm² beneath the nest. Conventionally constructed, the nest had a total depth of roughly 7.8 cm, a diameter of 16 cm for its tighter portion, and a central cup about 10 cm in diameter. After departure of the birds the empty nest weighed about 250 grams.

The nest appeared to be difficult to reach for non-human terrestrial predators. Furthermore, it was relatively well protected from the weather; even during heavy downpours no water came through the roof onto the nest.

In searching the literature I found one prior record of unconfined Blue Jays nesting in a building. A. D. DuBois (cited in Bent, *U. S. Nat. Mus. Bull.*, **191**: 37, 1946) observed a nest located "in one of the roof trusses" of a large pavilion with open sides. The congeneric Steller's Jay (*C. stelleri*) has been apparently more commonly found as an inside nester (Bent, *loc. cit.*, p. 67). The variation in nest sites in these species is of particular interest in that it bridges the gap between open-nesting and a condition which in certain respects is equivalent to hole-nesting.

The balance used in this study was provided through a grant from the University of Connecticut Research Foundation.—George A. Clark, Jr., Biological Sciences Group, Univ. of Connecticut, Storrs, Connecticut 06268.

Analysis of the 1966 and 1967 Returns of Chimney Swifts at Kent, Ohio.—In 1966 a total of 33 banded Chimney Swifts returned to the campus of Kent State University. This number is one less than during the preceding year which maintains a downward trend over the past three years. These had been banded over the following years: 1956 (1), 1957 (4), 1958 (4), 1959 (3), 1960 (1), 1962 (4), 1963 (2), 1964 (5), and 1965 (9). The first date of return was 17 April which is the earliest for the return of Chimney Swifts recorded locally. Two birds returned to the campus on that date in 1966. That night one was found in air shaft G4, (a seven-year-old bird which was one of the last to leave during the preceding fall), and the other was in air shaft V1 following a day of bright sunshine and a warm southerly breeze. Each successive day brought in additional returns over a period of about two weeks, but during evenings of unseasonably cool weather the number of resident swifts declined. With return of mild weather, the birds soon came back to the campus and occupied their usual air shafts. As far as sex has been determined, 12 are known to be males and 10 to be females.

Eleven pairs nested on the campus and, in addition, there were two threesomes which completed nesting. Thirteen swifts nested in the same air shaft as they did the previous year. Six pairs continued as mates in the same chimney as in 1965. (Two of these pairs acquired an all-season visitor forming a threesome for the season.) Another pair remained mated to each other, but shifted their nesting site from shaft E1 to shaft D1, where the female had nested between 1959-64. One bird returned to nest in shaft D4 where it nested in 1963 and 1964 but not in 1965. Another one continued nesting in its former shaft but with a new mate. Male swift No. 21-194777 (10 years of age) returned with his mate No. 24-167608 to shaft S1 where they had been mates for the past eight years. The male soon disappeared and was subsequently found dead six miles from the campus. The female then moved into shaft Q2 for nesting with a new mate. One pair had been mated in the same shaft G4 since 1962, and another one had nested in shaft M1 since 1961. Eight returns did not nest on the campus, but several of these were possibly immature and several were not captured until after the nesting season began. The last record for the season was noted on 9 October 1966 when a single resident swift was left on the campus.

In 1967 there were only 31 returns which had been banded in the following year-groups: 1957 (4), 1958 (2), 1959 (3), 1960 (1), 1962 (2), 1963 (1), 1964 (4), 1965 (6), and 1966 (8). Nine of these are known to be males, and nine females. The first return to the campus arrived on 14 April which has been the first date of return for the past three years. Four birds spent the night on the campus at that time, but the following day the weather turned cold and rainy and these early birds left immediately. Soon they came back again, and the numbers in general increased over the following month, but for three additional periods the number of resident swifts declined for a few days with the advent of unseasonably cold weather.

Eventually 11 pairs completed nesting in the air shafts of our campus. Two of these pairs had temporary visitors with them for certain evenings. There was

also one threesome in which a visitor remained with the mated pair throughout the season. One pair began nest building in shaft G3, and then moved into the adjoining shaft G4 where a complete nest was constructed. Another pair started a nest in one chimney (and possibly a second in another chimney), but failed to complete either one. Four pairs remained mated and nested in the same shaft as in the previous year. One of these pairs nested together in shaft G4 for six years, and another pair was mated in shaft V1 over the same period of time. A third pair has remained mated and nested in shaft U1 for nine consecutive years. One of the nesting birds in 1967 was the all-season visitor in the threesome during the season of 1966. Five returns did not nest on the campus, and another one was found dead locally. The last date for a resident swift to remain on the campus was 23 September 1967. Usually all of the swifts do not leave this early, but the fall season that year was notably cool.

The last report in this series on Chimney Swift returns was published in *Bird-Banding* 37 (2): 120-121. 1966.—Ralph W. Dexter, Dept. of Biological Sciences, Kent State Univ., Kent, Ohio, 44240.

White-Headed Cardinal.—A white-headed female Cardinal (*Richmondena cardinalis*) was initially observed at my feeding station, Green Point, Union Township, Lebanon County, Pennsylvania, on 29 December 1966. Thereafter, I saw this individual almost daily until 3 March 1967. On 19 March, in an adjacent conifer plantation, I found sufficient physical evidence to indicate that this Cardinal had been lost to predation.

The feathers on the head, nape, throat, and upper one-third of the breast of this bird were white. The bill and crest feathers, on the other hand, were typical female Cardinal coloration, as was the remainder of the plumage. The pupils of the eyes were black. Ross (1963. *Cassinia* 47: 2-21) noted 8 other sight records of Cardinals exhibiting albinistic tendencies.

In addition to this bird, 4 female and 5 male Cardinals, all of normal coloration, fed at the station. No timidity was exhibited by the white-headed female, nor was any antagonism shown against it by the other Cardinals or songbirds present.

My feeding station is located in an apple tree immediately surrounded by lawn. Adjacent are grass fields, scattered hardwood trees, and several small conifer plantations. The site is located in a narrow valley between the Blue Mountain and the Second Mountain of the Appalachian chain. The predominant forest type is oak-hickory. Farm land, reverting farm land, woodlots, and scattered home-sites are found throughout the valley. Fred E. Hartman, Division of Research, Pennsylvania Game Commission, R. D. #2, Jonestown, Pa. 17038.

Band Size for Common Puffins in Newfoundland.—This note reports the band size found to be the best fit for Common Puffins (*Fraterecula arctica*) at Great Island, Ferryland, Newfoundland (47° 11'N., 52° 48'W.).

In association with a breeding biology study of the Common Puffin I banded 666 adults and 830 young. From this banding I found that band size 6, which the Bird-Banding Manual states is the size most frequently used, is not suitable. The smaller band size 5 was used instead.

While adult puffins exhibited some individual variation in tarsus size, in almost all cases where the use of band size 6 was attempted it proved to be loose fitting and could be easily pulled off over the ankle joint and toes. On fledged young that were almost ready to abandon their nest burrow, band size 6 was so loose that it was completely unusable. Band size 5 was subsequently used, and seemed to be a perfect fit for adults and satisfactory for the young. This smaller band was still loose enough to be able to move freely up and down the tarsus of adults, but not large enough to slip over the ankle joint. None of the banded young that were revisited at their burrow before they had departed had lost their band.

These banding results suggest that banders should be prepared to use the smaller band size 5 when banding puffins along the eastern Atlantic coast instead of the size 6 band recommended in the Bird-Banding Manual. Interpopulation differences undoubtedly account for this discrepancy in band size. However, banders supplied with both band sizes will be able to use their own judgment and avoid unnecessary band losses.—David N. Nettleship, Department of Zoology, McGill University, Montreal, Canada.