

the year before, 3 m from the ground; 4 m higher up a pair of Red-headededs were trying to start an excavation in the face of much harassing from other Red-headededs (Kilham, Auk, in press).

Trees chosen by the 2 species differed also in that those used by Red-headededs usually contained numbers of old holes from previous years. As a result of this latter situation, Red-headededs on the plantation shared stubs in one case with Starlings (*Sturnus vulgaris*), once with Common Flickers (*Colaptes auratus*), and once with a flying squirrel (*Glaucomys volans*). It thus seemed that Red-headededs may be more prone to share nest trees with other species, an observation concurred in by Reller (pers. comm.) although she cites an exception (op. cit.). Jackson (op. cit.) in contrast, found that Red-bellieds characteristically nested in trees with more than one hole in Kansas. These discrepancies among observers are of interest in indicating that nest-site preferences can vary with underlying ecologic conditions. A main finding that seems to emerge is that wherever studied, whether in Illinois, Kansas, or in South Carolina, Red-headededs and Red-bellieds do exhibit differences in their choices of nest sites.

Another parameter serving to lessen interspecific competition it would seem, is time of onset of breeding seasons; Red-headededs, being irregularly migratory and nesting later than the resident Red-bellieds (Jackson, op. cit.) and Kilham (Auk 75:318-329, 1958; Wilson Bull. 70:347-358, 1959).—LAWRENCE KILHAM, *Dept. of Microbiology, Dartmouth Medical School, Hanover, NH 03755. Accepted 8 Dec. 1975.*

**Ground foraging and rapid molt in the Chuck-will's-widow.**—In a detailed study of the annual molt of the Chuck-will's-widow (*Caprimulgus carolinensis*) Rohwer (Auk 88:485-519, 1971) inferred that some individuals might be missing so many feathers in late stages of the molt that they would have trouble flying. When growing primaries 8 and 9, Chuck-will's-widows lose all 10 of their rectrices, more or less simultaneously, and are missing up to  $\frac{1}{4}$  of the primary surface of each wing (all at the critical tip), as well as nearly  $\frac{1}{4}$  of the secondary surface area. At this same time the rictal bristles are also lost simultaneously.

Rohwer (op. cit.) felt it unlikely that Chuck-will's-widows in such an intensive molt could forage aerially but little more could be said of the matter at that time, partly because of the also suggestive fact that only a single specimen molting either primary 8 or 9 had been preserved. This was a bird shot by Sutton (Bull. Okla. Ornithol. Soc. 2:9-11, 1969) at the Oklahoma Biological Station. Students had flushed it from an earthen ledge near the bottom of a deep erosion gully tangled with shrubs, vines, roots, and dead branches. It was flushed again from the same area when Sutton collected it. He reported finding the area strewn with feathers, and was able to find 9 of the 10 molted rectrices, many remiges and a great number of smaller feathers.

Mengel (Wilson Bull. 88:351-353, 1976) recently collected the second known specimen in late stages of the molt. His bird was flushed 4 times before it was shot; he reported its flight as "direct and somewhat slow and labored," a striking descriptive contrast to the normally buoyant flight of a Chuck-will's-widow. The most remarkable fact concerning Mengel's specimen was that it was virtually emaciated, weighing only 86.7 g, a value 27.5% below the normal summer weight of 119.6 g (mean of 12 specimens). Sutton's (op. cit.) specimen was normal in weight (117.1 g).

The question raised by Rohwer's report on the intensity of the molt in its late stages and by the specimens taken by Sutton and Mengel is "How do Chuck-will's-widows forage in this period of intensive molt?" One possibility, suggested both by the many feathers

found at the secluded resting site of Sutton's specimen and by the emaciated condition of Mengel's specimen, is that they forage very little. Another possibility is that they forage terrestrially. In watching Chuck-will's-widows walking about on roads swallowing pebbles, Jenkinson and Mengel (Condor 72:236-237, 1970) give the impression that they might easily forage on the ground. An extensive search of the literature, however, reveals no information on ground foraging by Chuck-will's-widows; thus, we report the following observations.

On the evening of 23 June, 1974, in a residential suburb of Fort Myers, Lee Co., Florida, Butler repeatedly observed a Chuck-will's-widow capturing squirrel tree frogs (*Hyla squirella*) from a black-top road surface. The incident occurred in the light cast by a street lamp where the frogs were plentiful, presumably attracted to insects. On several occasions the bird alighted on the road near its intended prey and then captured a frog unaided by wings or feet and swallowed it. Once the initial attack was evaded by a timely series of leaps, but the bird again flew close to the frog and captured it. Similarly, in 1972 Clifford G. Richardson (pers. comm. to Butler) observed a Chuck-will's-widow capturing frogs beneath a street light near his home on Pine Island, Lee Co., Florida.

These observations of Chuck-will's-widows foraging on frogs are significant, not so much because they add an unknown food item to the species' diet, but because they prove ground feeding to be a fact. An apparent difficulty with the ground feeding hypothesis is the very short legs of Chuck-will's-widows; but this may be resolved by the fact that both Sutton's and Mengel's specimens could, indeed, fly. Thus, while individuals in the most intense stages of the molt might be incapable of the sort of maneuvers required to capture flying insects, they could, perhaps, move to points of prey concentration where ground feeding, such as that reported here, might pay. Furthermore, terrestrial foraging would likely be facilitated by the absence of the rictal bristles, thus explaining their simultaneous replacement.—SIEVERT ROHWER, *Dept. of Zoology and Washington State Museum, Univ. of Washington, Seattle 98195*, and JAMES BUTLER, *College of Forest Resources, Univ. of Washington, Seattle 98195*. Accepted 8 Dec. 1975.

**Feeding responses of fall migrants to prolonged inclement weather.**—September 1975 was unusually cold in northwestern Ohio. A light frost on 14 September was the earliest ever recorded, and temperatures remained 3 to 6°C below normal each day thereafter until October. The migration peak for many passerines occurred between 23 and 27 September during a period of heavy cloud cover, gusty winds, frequent rain, and cool temperatures (range 8-16°C). Our home in a wooded area near Toledo, Ohio is surrounded by fruit-bearing shrubs including yews (*Taxus* sp.) and Tartarian honeysuckle (*Lonicera* sp.). During the fall migration many frugivorous species feed at these shrubs; between 23-27 September these species were joined by birds not normally noted for frugivory.

The minimum number of normally non-frugivorous birds eating fruit and the fruits selected (H = honeysuckle, Y = yew) were as follows: flycatcher (*Empidonax* sp.), 1(H); Tennessee Warbler (*Vermivora peregrina*), 1(H); Magnolia Warbler (*Dendroica magnolia*), 1(H); Bay-breasted Warbler (*D. castanea*), 4(Y); Blackpoll Warbler (*D. striata*), 1(Y); Ovenbird (*Sieurus aurocapillus*), 1(Y). In addition, a Ruby-crowned Kinglet (*Regulus calendula*), 2 immature Chestnut-sided Warblers (*D. pensylvanica*) and a male American Redstart (*Setophaga ruticilla*) investigated both yews and honeysuckles but were not actually observed eating berries.