

lowed very close observation. In order of descending preference, the food items were; buds of American elm, *Ulmus americanus*, (23 percent); berries of red cedar, *Juniperus virginiana*, (14 percent); seeds of white pine, *Pinus strobus*, (12 percent); acorns of pin oak (8.8 percent); buds of willows (7 percent); flowers of American elm (5 percent); fruits of American elm (5 percent); acorns of white oak, *Quercus alba*, (4.5 percent); buds of sweetgum, *Liquidambar styraciflua*, (3 percent); acorns of red oak, *Quercus rubra*, (2.3 percent); buds of red maple, *Acer rubrum*, (2 percent) and buds of fire cherry, *Prunus pensylvanica*, (2 percent). The remaining 11.4 percent consisted of unidentified food items.

Individual plants showed varied amounts of damage due to the parakeets' attention. Most individuals and species showed slight damage, but all the American elms in the area had the top one meter of their crowns completely stripped of buds, flowers, and fruits. Such trees presented a bizarre, scalped appearance when they leafed out. Most of the willows in the area also showed severe damage, probably the result of the birds' use of this group of plants as both food and nest material.

From our limited data, it seems likely that the Monk Parakeet deserves its current status as potential pest. If the pair we observed had not disappeared or had been part of the normal flock of 15-50 (U.S.D.I. op. cit.), damage to the park's vegetation would have been quite substantial.—WILLIAM M. SHIELDS, THOMAS C. GRUBB, JR. and ANTHONY TELIS, *Department of Biology, Livingston College, Rutgers University, New Brunswick, New Jersey 08903 (Present address TCG, Jr.: Department of Zoology, Ohio State University, Columbus, Ohio 43210). Accepted 22 January 1974.*

Evidence of the breeding of Saw-whet Owls in western North Carolina.—Pearson, Brimley, and Brimley (Birds of North Carolina. Bynum Printing Co., Raleigh. 1959) regarded the Saw-whet Owl (*Aegolius acadicus*) as a casual winter visitor to North Carolina, while the A. O. U. Checklist (Lord Baltimore Press, Baltimore, 1957) stated that the owl breeds "south [only] to central Ohio, West Virginia, and Maryland" in the eastern United States. Nevertheless, Stupka's (Migrant, 17:60-62, 1946) records of the Saw-whet Owl in the Great Smoky Mountains marked the beginning of a growing body of evidence, reviewed by Simpson (Chat, 32:83-89, 1968), that has established that the bird is regular in spring and summer in regions of suitable habitat in the mountains of western North Carolina and eastern Tennessee. Numerous records have been obtained there during the months of March through September, with reports coming from the Great Smoky, Roan, Pisgah Ridge, Black, Plott Balsam, and Great Balsam mountains. Within these ranges, records have been largely confined to elevations above 5,000 feet, in forests of Fraser fir (*Abies fraseri*) and red spruce (*Picea rubens*). These boreal forests reach their southern limit in the eastern United States at Tanasee Bald, Transylvania County, North Carolina, where frequent reports of Saw-whet Owls establish the species' presently known southern limit in the eastern United States during the breeding season.

Single Saw-whet Owls in the distinctive, chocolate-brown juvenal plumage have been reported in western North Carolina on four occasions, beginning in 1965. The first observation was by Peake (Chat, 29:110-111, 1965) on 10 July 1965, at 6,100 feet, on Richland Balsam in the Great Balsam Mountains, Jackson County. A. L. Schiffman (pers. com.) observed another on 1 September 1965, at 5,200 feet, on the southeast slope of Potato Knob in the Black Mountains, Buncombe County. Conley Moffett and Brad

Hawkins (Simpson, Chat, 36:39-47, 1972) captured a juvenile Saw-whet Owl in a mist net on 2 September 1965, at 5,800 feet, on Mt. Mitchell in the Black Mountains, Yancey County. The owl was banded and a documentary color photograph was sent to the National Photoduplicate File in Laurel, Maryland (accession no. 372-1T). Kenneth C. Parkes (pers. com.) has examined the photograph and reports that the bird is in the first prebasic (postjuvinal) molt, with the plumage indicating that the individual is a young of the year. The most recent sighting is that by Peter G. Range of a uniformly chocolate-brown juvenile on 2 September 1972, at 5,600 feet, on Devil's Courthouse in the Pisgah Ridge Mountains, Transylvania County. Devil's Courthouse is less than one mile northeast of Tanassee Bald and is the southernmost locality at which a juvenile has been reported in the North Carolina mountains.

Migration data from various localities in the eastern United States (Mueller and Berger, Bird-Banding, 38:120-125, 1967; Simpson, Chat, 32:83-89, 1968; Davis, Kingbird, 16, 1966) indicate that the earliest migratory movements of the Saw-whet Owl occur in late September and early October. The four records of individuals in juvenal plumage, all with dates at least one month prior to the species' known migratory period, combine with spring-summer records of adults to provide strong evidence that the Saw-whet Owl breeds south into the mountains of western North Carolina.—MARCUS B. SIMPSON, JR., *Department of Pathology, Yale University School of Medicine, 310 Cedar Street, New Haven, Connecticut 06510* and PETER G. RANGE, *514 Laurel Avenue, Johnson City, Tennessee 37601. Accepted 21 November 1973.*

Notes on asynchronous hatching and nestling mortality in White-necked Ravens.—Asynchronous hatching is a common characteristic of bird species with long nestling periods and unpredictable food supplies (Lack, Ibis, 89:302-305, 1947). Although most passerines have short nestling periods with synchronous hatching, many corvids, with their comparatively longer nestling periods, hatch asynchronously. In the British Isles, for example, all seven native corvid species are asynchronous in hatching (Lockie, Ibis, 97:341-369, 1955), as are Common Crows (*Corvus brachyrhynchos hesperis*) in California (Emlen, Bird-banding, 13:143-154, 1942). Recently, however, Davis and Griffing (New Mexico State University Agr. Exp. Sta. Res. Rep. No. 231, 1972) concluded that in White-necked Ravens (*Corvus cryptoleucus*), "hatching was nearly simultaneous." They examined 11 nests in May and June 1971, at approximately weekly intervals, and observed that newly hatched ravens from the same nest were usually of equivalent size. Contrary to their conclusions, I have found that White-necked Ravens hatch asynchronously.

In conjunction with physiological studies, I followed physical and behavioral development of nestlings in mesquite (*Prosopis juliaflora*) communities in southern New Mexico, approximately 30 km west of Las Cruces. In the summers of 1972 and 1973, I studied seven raven nests containing eggs that hatched. These nests were visited each afternoon to record hatching of the eggs. Hatchlings were then tagged with color bands, which I replaced with larger sizes as the birds grew. I continued to visit nests, after hatching of the young, at least every other day for the first ten days and at intervals of less than five days after that. Birds were usually weighed, measured, and examined for developmental and behavioral changes at each visit. Nestling data pertinent to this discussion are summarized in Table 1. The interval between the hatching of the first and last nestling was three days for three nests, four days for three nests, and five days for one nest.