DENTON, F. F.
1947 Red-wings feeding on seeds of long-leafed pine. *Oriole*, 12:10.
FLEETWOOD, R. J.
1947 Red-wings feeding on the seeds of loblolly and slash pine. *Oriole*, 12:10.
GRAHAM, E. H.
1941 Legumes for erosion control and wildlife. *U.S.D.A. Misc. Pub.* No. 412. Wash., D.C., 153 pp.
MARTIN, A. C., H. S. ZIM, AND A. L. NELSON
1951 American wildlife and plants. McGraw-Hill Book Co., New York, N. Y., 500 pp.

BROOKE MEANLEY, PATUXENT WILDLIFE RESEARCH CENTER, 9 MARCH 1961

Adaptive feeding in a Ruby-crowned Kinglet.—On 26 January 1961, during a break in a sleet storm, I observed a Ruby-crowned Kinglet (*Regulus calendula*) feeding in an unusual manner. The bird caught my attention as it fluttered, about 8 feet from a well-used walkway, along the base of a wall of a building on the Duke University campus. It first seemed as if it were injured, and I attempted to catch it; but although the bird allowed close approach (4–5 feet), it easily remained out of range. The bird was, in fact, feeding. From the grass which grew between the walk and the wall the kinglet would fly to the wall and either hover close to it, jabbing with its bill into the recesses in the rock, or perch woodpecker-like on the rough surface and explore the depressions more thoroughly. The University buildings are made of rough pieces of a type of metasedimentary rock (known commercially as 'Carolina Slate') possessing numerous crevices. Inspection showed that some of these contained spider webs in which there were occasional remnants of dead, trapped insects. It was upon these that the bird was feeding, as bits of web on the feet and face attested.

Weather conditions probably account for this unusual behavior. A week later (4 February) on the day following a similar storm (a difference in water equivalent of only 0.04 inches), ice coverage of branches was measured. It was then found to vary from 33 per cent to 40 per cent of area in samples which ranged in size from 2.5 to 26 cm in circumference. Small twigs had, in general, no ice; but the trunks of many trees, especially those which were slanted in the direction of the wind, did. The normal feeding behavior of the Ruby-crowned Kinglet has been summarized by Skinner (*in* Bent, 1949. *U.S. Nat. Mus. Bull.*, 196:406) who noted that "they depend chiefly on picking insects from the bark, or catching those that fly from the bark." Under the above conditions of ice coverage, feeding in this manner would be impaired as most of the uncovered area was on the less-accessible bottoms and sides of twigs (however, see below).

Although I could find no references to feeding behavior of the Ruby-crowned Kinglet which mentioned wall-feeding, notes on other kinglet species are instructive. Forbush (1907. "Useful Birds and Their Protection") wrote of the Golden-crowned Kinglet (*R. satrapa*) hovering while feeding at tree trunks. Morris (1903. "A History of British Birds," 3:241) says that in England the Goldcrest (*R. regulus*) in "the extremity of the winter blast. . .will often approach houses in search of food, and enter greenhouses and hothouses." He goes on further to describe the trunk-feeding of this species which is similar to that of the Golden-crowned Kinglet and, in part, to the wall-feeding of the Ruby-crowned Kinglet described above: "It will alight on the branch of a tall tree. . . and after a momentary survey, will dart on its prey reposing on the back of the stem, suspend itself for a moment by a rapid motion of its wings, then return to a branch, again glance at the stem, and flit to it."

Although this particular instance of specialized feeding is of note, the overall effects of the storms on tree-feeding species were probably slight. Most of the ice on branches was lost soon after the storms had passed; more notably, both species of kinglets were observed feeding beneath limbs during the interval before melting—presumedly the usual method under these and similar conditions.

I am grateful to Dr. P. H. Klopfer for reading the manuscript and making several helpful suggestions.—HENRY A. HESPENHEIDE, *Box 5898 Duke Station, Durham, North Carolina, 14 May 1961.*

Some foods of the Yellow Rail in Missouri.—On 17 April 1961, a Yellow Rail (*Coturnicops noveboracensis*) was flushed by fire during an experimental burn at Tucker Prairie (a 160-acre tract of virgin prairie owned by the University of Missouri). The rail was captured alive and taken to the Missouri Cooperative Wildlife Research Unit, photographed and put in a large glass cage. The bird adjusted quickly to its new home and soon gave its pebble-clicking call. It was banded and released on 6 May on Tucker Prairie after being kept captive for 29 days.

TABLE 1
YELLOW RAIL GIZZARD AND DROPPING CONTENTS

Food item	Volume in cc gizzard	Dropping
Plants		
Setaria glauca (yellow foxtail)	0.03 cc	
Acalypha virginica (Three-seeded mercury)	Trace	
Viola sagittata (arrow-leaved violet)	Trace	
Rosa sp. (rose)	Trace	
Unidentified	0.10 cc	
Animals		
Diplopoda		
Millipede	0.05 cc	Trace
Hexapoda		
Carabidae (ground beetle)	Trace	Trace
Formicidae (ant)	Trace	
Eggs		Trace
Gravel	0.04 cc	

On 2 May 1961, David Snyder and I flushed another Yellow Rail on Tucker Prairie. It was flushed twice at 7:00 PM without use of a dog. The rail was collected, prepared as a study skin and the gizzard contents saved.

Many references were checked for food habits of the Yellow Rail, but few specific data were found. Wayne (1905. *Auk*, 22:395–400) mentions finding fresh-water snails in the stomachs of eight birds collected in South Carolina in February. "American Wildlife and Plants" (Martin, Zim, and Nelson, 1951) gives the only extensive listing of Yellow Rail foods. Sixteen stomachs of birds collected in the east (four in winter, four in summer, one in spring and seven in fall) contained beetles, snails, grasshoppers, spiders, ants, fly larvae, true bugs, various crustaceans and eight kinds of plants. Sedge, smartweed, nutrush, and bristlegrass were the most important, plus traces of spike-rush, bulrush, common ragweed, and bayberry.