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Ingestion of Grit by Wood Warblers

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Use of grit as an aid to digestion by granivorous and herbivorous birds is widely reported in the general literature. Ingestion of grit apparently begins quite early in life. Crook (1975) observed a parent Chipping Sparrow (*Spizella passerina*) feeding grit to fledglings, one of which began pecking grit for itself.

Hauser (1962) examined pellets cast by a captive Blue Jay (*Cyanocitta cristata*) received when about 2 weeks old, with "no feather tufts protruding from the sheaths of the tail feathers." The first pellet, composed of food provided by the parent birds, contained iridescent bits of beetle wings, a few small flat reddish seeds, and three small, sharp-edged pebbles, two of flint-like stone and one of quartz.

Only recently have bird students begun to report ingestion of grit by insectivorous birds as anything more than unusual behavior. Jenkinson and Mengel (1970) found ingestion of stones to be widespread among goatsuckers. Brown (1976) watched Purple Martins (*Progne subis*) gathering bits of gravel and slivers of glass from an urban roadside during April, May, and June of 1975. Barlow and Klass (1963) observed swallows picking up gravel or sand. Barrentine (1980) found grit in the stomachs of 80% of the nestling Barn Swallows (*Hirundo rustica*) he examined at 1 to 16 days of age. He suggests grit may be used as an aid to the digestive processes, as a mineral supplement, or both.

From January through early June 1982 I conducted a systematic study of the birds of mainland Dare County, N.C., for the North Carolina State Museum in cooperation with the U.S. Fish and Wildlife Service. Thus I was observing the same birds from the time they established breeding territories through the fledging of first broods. Some of the early nesters had begun second nests before the study ended. While wood warblers were feeding young, I noticed adults of several species pecking at the sandy roadways. Birds engaged in this behavior were quite fearless and allowed me to approach within 10 feet before moving a short distance and resuming the pecking. Brown (1976) reported similar behavior for Purple Martins. Careful examination of the ground at each site revealed no insects, seeds, or other food items. I concluded that the birds were picking up grit.

Onset of nesting by the Pine Warbler (*Dendroica pinus*) was noted on 31 March when a female was seen carrying nesting material. A female Pine Warbler was seen pecking sand on Long Curve Road on 1 May. I was present at this stop no more than 10 minutes on any one date.

Black-throated Green Warblers (*D. virens*) arrived on the nesting grounds on or about 30 March. Nest construction was noted on 18 April. On 16 May a male and a female of this species were seen carrying food and pecking in sand at the edge of Sawyer Lake Road. Prairie Warblers (*D. discolor*) also arrived on the nesting grounds about 30 March. On 16 May two adults of this species were carrying food and pecking sand on Sawyer Lake Road.

On this same date a female Northern Parula (*Parula americana*) visited the roadway and appeared to be seeking grit, but no pecking was actually observed. I was present at the 300-yard Sawyer Road census route no more than 30 minutes on 16 May.

On 31 May 1983 David S. Lee and I saw a Yellow-throated Warbler (*D. dominica*) pecking sand on the rim of a Carolina bay in Bladen County, N.C.

I have found no mention of grit in any readily available reference on the food habits of wood warblers. Nonetheless, the above observations strongly suggest that feeding of grit to nestlings is widespread among the Parulinae. Contribution 1983-9 of the North Carolina Biological Survey.

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BRIEFS FOR THE FILES

HARRY E. LeGRAND JR.

(All dates 1983 unless otherwise indicated; SBC = Spring Bird Count)

COMMON LOON: Ricky Davis observed eight in flight over Beaverdam Reservoir in northern Wake County, N.C., on 24 April.

PIED-BILLED GREBE: Twelve grebes at Falls Lake in eastern Durham County, N.C., on 22 May probably were breeding individuals (Ricky Davis, Harry LeGrand).

NORTHERN FULMAR: John Fussell found a dead fulmar on the beach at Pine Knoll Shores, Carteret County, N.C., on 18 March. Two or three were observed by Lloyd Davidson about 15 miles E of Ocracoke, N.C., in mid-March.

BLACK-CAPPED PETREL: Rarely seen off Cape Lookout, N.C., were two approximately 38 miles SSE of the cape on 18 April (Wayne Irvin).

LEACH'S STORM-PETREL: A petrel identified as either a Leach's or a Band-rumped was seen 60 miles SE of Charleston, S.C., on 17 April by Dennis Forsythe and party. [The marks of "forked tail" and especially "bounding flight" appear to rule against Band-rumped in favor of Leach's.—HEL] Two Leach's were seen off Morehead City, N.C., on 19 June by Wayne Irvin.

AMERICAN WHITE PELICAN: Two birds, probably overwintering individuals, were observed by Ed Blich on 6 April at Charleston.