

1 beetle, a bostrichid; 3 Diptera, 2 being bibionids; 3 Hymenoptera; and numerous fragments of other insects.

Three Wright's Flycatchers, *Empidonax wrighti*, were collected in Mill Hollow of Logan Canyon on June 18, July 3 and 15. Contained food consisted of 2 Hemiptera; 1 leafhopper; 1 stonefly; 3 adult caddis-flies; 20 Coleoptera including 1 click beetle, 1 scolytid, 4 leaf beetles, and 1 weevil; 1 larval Lepidopteron; 14 Diptera including 1 crane fly, 2 bibionids, 1 robber fly, 1 therevid; 10 Hymenoptera including 1 vespid and 3 winged ants.

A Western Flycatcher, *Empidonax difficilis difficilis*, collected in Richard's Hollow between Logan and Blacksmith Fork Canyons, July 9, contained 1 Homopteron, the aphid *Mindarus abietinus*; 1 Hemipteron; 8 beetles including 2 weevils and 1 leaf beetle; 5 Diptera including 1 green-bottle fly; 6 Hymenoptera, including 1 braconid and a flying ant.

An Olive-sided Flycatcher, *Nuttallornis mesoleucus*, was taken in upper Mill Hollow of Logan Canyon on July 3; this contained 10 Coleoptera including 3 cerambycids, *Toxotus morio*, and 1 scarabaeid; 2 adult Lepidoptera; 2 Diptera; 4 Hymenoptera, 2 being ichneumons.—J. S. STANFORD AND G. F. KNOWLTON, *Utah Agricultural Experiment Station, Logan, Utah.*

**Food of the Ruddy Turnstone.**—While returning from a boat trip to Bull Island, and Cape Romain National Wildlife Refuge, South Carolina, on November 11, 1941, the writer passed a power-boat on the Intercoastal Waterway pulling a large barge loaded with oysters being taken to market. The oyster barge was drawn about 60 to 65 feet behind the power-boat. A flock of 27 Ruddy Turnstones (*Arenaria interpres morinella*), working as individuals, and without apparent regard for others of their kind, were busy feeding on the small invertebrates—small mollusks, crabs, amphipods, isopods, and shipworms—that were adhering to the wet oysters. Repeatedly the birds were noted turning over the oysters in search of additional food.—CLARENCE COTTAM, *Fish and Wildlife Service, Washington, D. C.*

***Ilex opaca* as a late winter food for birds.**—Visits on March 9 and 23, 1941, to woodland areas near Wayside, Maryland, revealed that songbirds, in this portion of the southern Maryland peninsula, were concentrated in the several holly (*Ilex opaca*) groves of that area. Both resident and migratory species utilized these groves for shelter and as a source of food. On the former date, a single Red-eyed Towhee and several Bluebirds and Cardinals were observed swallowing *Ilex* berries, while at the latter time, a lone White-throated Sparrow joined hundreds of Robins in consuming these fruits. The large flocks of migrating Robins, seen then, perched several dozen in each pistillate tree and ate greedily from 7 a. m. to 1 p. m., with but a slight reduction in numbers and avidity during the latter part of this period. Although numerous on March 9, the holly fruits were perceptibly diminished in abundance by the afternoon of March 23.—GEORGE A. PETRIDES, *Conservation Commission, Charleston, West Virginia.*

**Use of certain *Elaeagnus* species.**—Several ornamental species and varieties of *Elaeagnus* with juicy, pink fruits have been introduced into the southeastern United States. Use of their fruit by birds for food has not previously been recorded. Because these plants have promise for erosion control, wildlife-habitat improvement, and human consumption, limited field collections were made recently by biologists of the Soil Conservation Service. It appears significant that all birds taken near *Elaeagnus* were found to be eating the fruit. Dr. Alfred Rehder, Curator

of the Herbarium, Arnold Arboretum, Harvard University, Jamaica Plain, Massachusetts, identified the *Elaeagnus* species referred to in the accompanying records.

Fruits of *Elaeagnus umbellata* var. *parviflora* ripen during July and early August, remaining on the plant from four to six weeks. This variety, which we refer to as 'summer *Elaeagnus*,' has escaped rather widely from cultivation into the woods near Raleigh, Pittsboro, and Charlotte, North Carolina, and Athens, Georgia. (There may be other localities where the plant is becoming naturalized, and if so, the author would be pleased to learn of them.) It appears to occur where birds have dropped the seeds beneath trees where the plant flourishes and fruits in an edge or semi-understory of partial shade. It also seeds naturally in old roadways, gullies, and similar sites where flood water doubtless aids in its distribution and natural culture. It is pleasing as an ornamental hedge and may be adaptable for use as a field hedge. The fruit of this species is used rather extensively in making wines and jellies. It is pleasing to the taste and is reported to be eaten by Domestic Fowl. The stone is not digested by birds—only the juicy fruit is of benefit. The silvery scales are easily identified in the stomach, as is likewise true of the stone.

The following records were obtained from stomachs analyzed by the author (the material is on file in the Bureau of Biological Survey, Washington, D. C.):

ROBIN, August, 1939, Floyd, Athens, Georgia.

CATBIRD, July 14, 1939, Hunt, Raleigh, North Carolina.

BROWN THRASHER, July 14, 1939, J. B. Hunt, Raleigh, North Carolina; July 21, 1939, Davison, Charlotte, North Carolina; July 27, 1939, E. V. Floyd, Athens, Georgia.

YELLOW-BREASTED CHAT, July 21, 1939, Davison, Charlotte, North Carolina.

CARDINAL, August 1, 1939, Hunt, Raleigh, North Carolina; August 1, 1939, Floyd, Athens, Georgia.

The fruits of *Elaeagnus umbellata* ripen in October and remain on the plant until January, a period of eight to fourteen weeks. We refer to it as 'fall *Elaeagnus*' to differentiate between it and var. *parviflora*. The writer knows of its escape from cultivation in but two places—Spartanburg, South Carolina, and Mocksville, North Carolina. The following records were obtained from stomachs examined by the author:

EASTERN MOURNING DOVE, January 5, 1940, Pollock, Mocksville, North Carolina.

MOCKINGBIRD, October 2, 1939, Becker, Spartanburg, South Carolina; October 15, 1939, Davison, Spartanburg, South Carolina; October 20, 1939, Hunt, Franklinton, North Carolina.

CATBIRD, October 2, 1939, G. B. Becker, Spartanburg, South Carolina.

ROBIN, January 5, 1940, Pollock, Mocksville, North Carolina.

EASTERN HERMIT THRUSH, January 2, 1940, S. Z. Pollock, Mocksville, North Carolina.

CEDAR WAXWING, January 2, 1940, Pollock, Mocksville, North Carolina.

*Elaeagnus pungens* var. *reflexa*, a species which remains evergreen in the southeastern states, ripens its fruit in late February and March. We call it 'winter *Elaeagnus*' to include the closely related species and varieties without confusion with the deciduous species. I observed Cardinals, Juncos, and other small birds eating the fruit of this or a related species in Atlanta, February 26, 1939. Again, at the same place on April 13, 1940, Cedar Waxwings, Brown Thrashers, and small birds were just finishing the crop which was both late and comparatively scant in 1940 after very severe winter temperatures. (In the upper Piedmont practically the whole crop was destroyed.) Beneath the trees near these plants,

the seeds were numerous from the droppings. This plant is reproducing naturally beneath the older bushes in Atlanta, Georgia, and at Clemson, South Carolina. It might be desirable in the field as well as an ornamental because of its evergreen foliage and spring fruiting but I am not yet familiar with its dependability for fruit or its adaptability to field conditions. I obtained the following stomach record:

ROBIN, April 11, 1940, Auburn, Alabama.

Since the three forms of juicy, pink-fruited *Elaeagnus* referred to above are preferred foods of many resident and migratory birds, they are being tested both in the nursery and in the field to determine their adaptability to sites for which shrubs are suitable in land-use patterns of southern farming, and the possibility of establishing them in hedges, on woodland borders, and in gullies by direct seeding alone or in combination with other shrubs.—VERNE E. DAVISON, U. S. Soil Conservation Service, Spartanburg, South Carolina.

**Nesting habits of the Spotted Sandpiper.**—The Spotted Sandpiper (*Actitis macularia*) is quite a common bird in Regina, Saskatchewan but the first occasion, in many years of study, which enabled me to keep definite and continuous data on the nesting habits, occurred in 1934.

On June 3, I discovered the nest in a field in which an attempt was being made to eradicate brome grass. There were numerous very light patches of the grass still growing, the rest of the ground being bare and loose. The nest was located to the north of a clump of this grass and 14 feet away from a thicket of lilac and ash trees which afforded a splendid windbreak as well as a screen for the purpose of making observations. The nearest open water was 450 yards away.

Although many details were noted, a summary of important events may be best.

June 3, discovery of nest; 3 eggs; both birds present.

June 4, 8:30 a. m.; 3 eggs; both birds present.

June 4, 5:15 p. m.; 3 eggs; both birds present.

June 5, 8:30 a. m.; 4 eggs; both birds present.

June 7, 8:30 a. m.; incubating; for the first time only one bird present.

June 20, 5:30 p. m.; for the first time 'injury feigning' was fully exhibited. On other occasions prior to this there were indications of it, but this was the first complete performance.

June 25, 8:30 a. m.; incubating; 'injury feigning'; no sign of hatching.

June 25, 12:15 p. m.; 2 eggs hatched, 3rd chipped.

June 25, 7:25 p. m.; all eggs hatched; one of the young damp and sitting on a portion of the shell.

June 26, 8:30 a. m.; nest vacant and family twenty yards from the nest.

The period of incubation, if commenced immediately the fourth egg was laid, could be considered as between June 5 at 8:30 a. m. and June 25 at 7:25 p. m., or 20 days.

The family remained within fifty yards of the nest until July 14, on which day two young and an adult were seen, but no trace of them thereafter.

I may say that, when the nest was found, I noted bearings and set inconspicuous markers. The following year (1935) a Spotted Sandpiper built on exactly the same spot that was occupied the previous year, although the field had been cultivated in the spring. The patch of grass sheltering the nest had survived and was quite similar to the previous year. My markers on the edge of the field for cross bearings were intact.