

Warbler (*Oporornis philadelphia*), taken near Cheat Bridge, Randolph County, West Virginia, June 14, 1945. Both birds appeared to be in healthy condition.

Two species of wood warbler, the Olive-backed Warbler (*Parula pitiayumi*) and the American Redstart (*Setophaga ruticilla*) have previously been recorded as hosts for this organism (Erickson, Auk, 57: 114-119, 1940). As far as we have been able to determine, *Sarcocystis* has not previously been recorded from the species mentioned above.

Spindler and Zimmerman (J. Parasitol. suppl. to Vol. 31: 13, Dec., 1945) reported the species infecting swine to be a fungus (*Aspergillus* sp.), rather than a protozoan. It is possible that the avian species will be found to have a similar life cycle.—GEORGE H. BREIDING, *Ohio State University, Columbus, Ohio*, and ROBERT L. RAUSCH, *University of Wisconsin, Madison, Wisconsin*.

Parasitic Dipterous larvae from the nasal cavity of a nestling magpie.¹—An interesting variation in the parasitic habits of *Protocalliphora avium* Shannon and Dobroscky was observed while rearing a nestling magpie, *Pica pica hudsonicus*. Jellison and Philip (1933) recovered numerous larvae and puparia of *P. avium* from nests of magpies and crows in western Montana. From five magpie nests they took 108, 187, 190, 343, and 373 larvae, respectively. Avian erythrocytes were demonstrated in the foregut contents of dissected larvae. The magpie nestlings appeared healthy, with only minute lacerations on the breast to indicate feeding by the maggots.

Arnold (1919) and others have recovered *Protocalliphora* larvae on and in fledglings, with death of some birds attributed to maggot attacks. Recovery of larvae was reported from wounds in the body and head of nestlings, although no infestations of the nasal cavities were reported.

On the afternoon of June 3, 1939, the writer obtained near Bozeman, Montana, a nestling magpie, still unable to stand by itself. Movement was detected in both nares, but the nature of the infesting forms could not be determined. From the right naris there came a slight black exudate. A nest was improvised for the young bird, with a white cloth lining the bottom of the nest box. During the same evening the bird was examined in semi-darkness, and a maggot was found protruding from the right naris. The first attempt to grasp this larva was unsuccessful as it retreated quickly when exposed to illumination. The specimen was finally extracted by using a bent pin. Movement was still detectable deep in the nasal cavity. The following morning (June 4) a second maggot was collected, in this instance from the cloth lining of the nest box. The next morning (June 5) four more larvae had fallen to the floor of the nest box. No further movement could be detected in the nasal cavities of the bird, although observation was difficult. On the succeeding morning (June 6) four more larvae were found in the nest box. These were the last specimens recovered from this bird. During the four days of larval emergence the nestling magpie showed no irritability other than that provoked normally by hunger. There was no evidence of the skin lesions reported by several authors.

Six larvae were placed in sand. None had pupated on June 10; two puparia were present on June 16. A single adult fly emerged on July 3. Dr. C. W. Sabrosky has identified this specimen as *Protocalliphora avium* Shannon and Dobroscky.

¹ Contribution from the Department of Zoology and Entomology, Montana State College, Agricultural Experiment Station. Paper No. 192 Journal Series.

LITERATURE CITED

ARNOLD, W. W.

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JELLISON, W. L. AND PHILIP, C. B.

1933. Faunae of nests of the magpie and crow in western Montana. *Can. Ent.*, 65: 26-31.—D. D. PLETSCHE, *Agricultural Experiment Station, Montana State College, Bozeman, Montana.*

A Contribution to the Food Habits of the European Magpie (*Pica p. pica*).—During the winter of 1946 I found a roosting place of Magpies near the village of Kovorce, Slovakia, in a thicket of blackthorn (*Prunus spinosa*) and virgin's bower (*Clematis vitalba*) about 160 m. long and 20 m. wide. Some 50 birds roosted here in the winter and 11 pairs nested in 1946, the minimal distance between two nests being 3 m. In March I found 250 pellets, averaging 17 x 29 mm. in size and 1.1 grams in weight. They contained 254.16 g. of vegetable matter, 22.48 g. of animal matter, and 12.36 g. of mineral matter. The vegetable matter consisted of: weed seeds—smartweed (*Polygonum*), charlock (*Sinapis arvensis*), corn cockle (*Argostemma githago*), couch grass (*Agropyrum repens*), speedwell (*Veronica*), brome grass (*Bromus sterilis*), chess (*B. arvensis*), the last two most important; cultivated grain—maize (*Zea mays*), wheat (*Triticum*); seeds and haws—dog rose (*Rosa canina*), very abundant, blackthorn, English hawthorn (*Crataegus oxyantha*), black locust (*Robinia pseudacacia*). The animal food consisted of 8.29 grams of vertebrates: bones of house mouse (*Mus musculus*), harvest mouse (*Mus minutus*), field vole (*Microtus arvalis*), spermophile (*Citellus citellus*), common mole (*Talpa europea*), white-toothed shrew (*Crocidura leucodon*), pig (*Sus scrofa domestica*), dog (*Canis domesticus*), Yellow Bunting (*Emberiza citrinella*), Skylark (*Alauda arvensis*), Partridge (*Perdix p. perdix*), an undetermined bird; 5.7 grams of mollusks: shells of snails (*Helicella obvia*, *Monacha incarnata*, *Era tridens*, *Abida frumentum*); 8.49 grams of arthropods: Coleoptera—weevil (*Otiiorhynchus*)—very abundant, dung beetles (*Geotrupes*), carrion beetles (*Silpha*, *Aphodius*); Dermoptera—earwig (*Forficula auricula*) 319 cerci. The mineral matter consisted of grit, fragments of brick and porcelain.

I think that much of the grit and seeds was taken incidentally with animal food. Particularly interesting is the relatively great number of earwigs eaten, about 160 individuals. This is the first paper based on pellet analysis of the Magpie in Slovakia. Further study and collecting of pellets were not possible because the roosting place was destroyed by men in the summer of 1946. I wish to thank Prof. Babor of Bratislava University for determination of the snails, Dr. Korbel, Curator of Zoology, Bratislava Museum, for determination of the arthropods, and Mr. W. L. McAtee and Mrs. Margaret M. Nice of Chicago for advice in writing this report.—FRANK TURČEK, *Forester, State Research Institute for Forest Protection and Wildlife, Banská Štiavnica, Czecho-Slovakia.*

Marsh Hawk kills Baldpate.—On September 21, 1943, at about 1:15 P. M., I observed a Marsh Hawk kill an apparently normal and healthy Baldpate. The method and proficiency with which the capture was made would lead one to believe that the procedure had been successfully tried before.

The hawk (a dark-colored bird, probably an adult female) was first seen hovering and diving over a small flock of Baldpates in a narrow slough about one mile south of Upham, North Dakota. Three or four ducks were diving as the hawk maneuvered over the water. One bird was apparently then singled out for attention and the others flew or swam a short distance away. As the individual reappeared at the surface the hawk dropped close with the legs carried away from the body. This caused