- Lyon, B. E. 1993. Conspecific brood parasitism as a flexible female reproductive tactic in American Coots. Anim. Behav. 46:911–928.
- ROHWER, F. C. AND S. FREEMAN. 1989. The distribution of conspecific nest parasitism in birds. Can. J. Zool. 67:239–253.
- SAYLER, R. D. 1992. Ecology and evolution of brood parasitism in waterfowl. Pp. 290–322
 in Ecology and management of breeding waterfowl (B. D. J. Batt, A. D. Afton, M. G. Anderson, C. D. Ankney, D. H. Johnson, J. A. Kadlec, and G. L. Krapu, eds.). Univ. Minnesota Press, Minneapolis, Minnesota.
- SEMEL, B. AND P. W. SHERMAN. 1986. Dynamics of nest parasitism in Wood Ducks. Auk 103:813–816.
- STUTZENBAKER, C. D. 1988. The Mottled Duck: its life history, ecology, and management. Texas Parks and Wildl. Dept., Austin, Texas.
- TITMAN, R. D. AND J. K. LOWTHER. 1975. The breeding behavior of a crowded population of Mallards, Can. J. Zool. 53:1270-1283.
- Weller, M. W. 1956. A simple field candler for waterfowl eggs. J. Wildl. Manage. 20: 111-113.
- Yom-Tov, Y. 1980. Intraspecific nest parasitism in birds. Biol. Rev. Cambridge Philos. Soc. 55:93–108.

WILLIAM P. JOHNSON, School of Forestry, Wildlife and Fisheries, Louisiana Agricultural Experiment Station, Louisiana State Univ. Agricultural Center, Baton Rouge, Louisiana 70803; FRANK C. ROHWER, School of Forestry, Wildlife and Fisheries, Louisiana Agricultural Experiment Station, Louisiana State Univ. Agricultural Center, Baton Rouge, Louisiana 70803; AND MICHAEL CARLOSS, Louisiana Dept. of Wildlife and Fisheries, 2415 Darnall Road, New Iberia, Louisiana 70560. Received 13 April 1995, accepted 1 Sept. 1995.

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Eight new host species for the parasitic blow fly genus *Protocalliphora* (Diptera: Calliphoridae).—Larvae of *Protocalliphora* blow flies (Diptera: Calliphoridae) are obligate hematophagous parasites that reside in nests of birds with nidicolous young where they intermittently attach to the nestlings to feed. Only one species of *Protocalliphora*, *P. braueri*, is known to be an obligate subcutaneous parasite (Sabrosky et al. 1989). *Protocalliphora* blow flies appear to have little host specificity (Bennett and Whitworth 1992), and, with the exception of birds whose nest structure is not conducive to blowfly retention and development (e.g., loosely arranged stick nests, very wet nests), eventually all nidicolous bird species within the range of these blow flies are likely to be recorded as hosts (Sabrosky et al. 1989).

During a three-year study of interactions between *Protocalliphora* blow flies and Neotropical migratory bird species, bird nests were collected from study plots in Arkansas in the Ozark National Forest, in 1991, 1992, and 1993, and from the Ouachita National Forest in 1993. In Idaho, nests were collected during 1992 and 1993 from Targhee National Forest. Nests were located and monitored following the protocols detailed in Martin and Geupel (1993). When the nests were no longer active (i.e. after fledging, death, or depredation), they were collected in plastic bags, taken to the laboratory, and searched for *Protocalliphora* larvae and pupae. Larvae were collected from nestlings and fledglings whenever noted. The larvae and pupae were reared to maturity and identified using the taxonomic key provided

in Sabrosky et. al. (1989). Voucher specimens were deposited in the Univ. of Arkansas Museum of Entomology.

I recorded eight new host species for this parasitic genus of blow flies. In Arkansas, *P. deceptor* larvae were collected from Acadian Flycatcher (*Empidonax virescens*), Hooded Warbler (*Wilsonia citrina*), and Bachman's Sparrow (*Aimophila aestivalis*) nests. Larvae of *P. braueri* were collected from the nests of Black-and-white Warbler (*Mniotilta varia*) and Kentucky Warbler (*Oporornis formosus*). Subcutaneous larvae of *P. braueri* were collected from Kentucky Warbler nestlings and from a single Yellow-throated Vireo (*Vireo flavifrons*) fledgling. In Idaho, an unknown species of *Protocalliphora* larvae was collected from Veery (*Catharus fuscescens*) nests and *P. metallica* and an unknown *Protocalliphora* species from MacGillivray's Warbler (*Oporornis tolmiei*) nests. Unknown species could not be identified due to damage incurred during transport. These appear to be the first records of *Protocalliphora* parasitism in these bird species.

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LITERATURE CITED

Bennett, G. F. and T. L. Whitworth. 1992. Host, nest, and ecological relationships of species of *Protocalliphora* (Diptera: Calliphoridae). Can. J. Zool. 70:51-61.

MARTIN, T. E. AND G. R. GEUPEL. 1993. Nest-monitoring plots: Methods for locating nests and monitoring success. J. Field Ornith. 64:507-519.

SABROSKY, C. W., G. F. BENNETT, AND T. L. WHITWORTH. 1989. Bird blow flies (*Protocalliphora*) in North America (Diptera: Calliphoridae), with notes on the Palearctic species. Smithsonian Institution Press, Washington, D.C.

MIA REVELS, Dept. of Biological Sciences, Univ. of Arkansas, Fayetteville, Arkansas 72701. Received 20 April 1995, accepted 1 Sept. 1995.

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Observations of shorebird predation by snapping turtles in eastern Lake Ontario.—Accounts of snapping turtle (*Chelydra serpentina*) predation on birds other than waterfowl are rare. These include Laughing Gull (*Larus atricilla*) (Alexander 1921), Semipalmated Sandpiper (*Calidris pusilla*) and Lesser Yellowlegs (*Tringa flavipes*) (Street 1989), and the possible predation of a Forster's Tern (*Sterna forsteri*) chick (Fraser 1994).

The present observations were made at a freshwater dune ecosystem at the Nature Conservancy's El Dorado Beach Preserve in Jefferson County, New York. Thick, partially-submerged algal mats accumulate there annually in the shallow embayments of Lake Ontario. Large quantities of a green, filamentous algae (*Cladophora glomerata*) break off from underwater rocky substrates when the lake temperature exceeds 25°C, as in late summer (Vetterle 1976). The resulting offshore algal mats entrap invertebrates, including freshwater crustaceans, gastropods, and insects and some vertebrates such as small fish. This concen-