

or more of the following: (1) variable stimulus intensity, (2) the caller's position in the nest inhibiting movement and obstructing our observation, and (3) individual variation.

The behavior of the captive nestlings described here and of adult chickadees reported by Ficken et al. (1978) and Dixon (1983) parallels that of free-living birds in nest cavities. In all instances, the chickadees hissed when disturbed while entrapped in a confined space from which their escape was thwarted. In such a context, the survival value of the hiss probably lies in its ability to startle and deter a potential predator.

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Nestling Great Crested Flycatcher parasitized by larval fly (*Protocalliphora hirudo*).—Nestling birds often are parasitized by blow fly larvae (*Protocalliphora* spp.) (Diptera: Calliphoridae), hematophagous parasites that attack nestlings of many nidicolous birds (Gold and Dahlsten, *Wilson Bull.* 95:560–572, 1983). To the best of our knowledge, this note reports the first known occurrence of *P. hirudo* in the Great Crested Flycatcher (*Myiarchus crinitus*).

On 8 July 1984, we found a nesting Great Crested Flycatcher on the ground at 1080 m in Giles County, Virginia, in an Appalachian mixed-oak forest. The nestling, which was near fledging, had 5 larvae imbedded subcutaneously. Four larvae were located about the head and one larva was in the right wing wrist joint. The larvae were collected, reared to adulthood and identified.

P. hirudo apparently is the only Nearctic species in the genus whose larvae are obligate subcutaneous parasites (Bedard and McNeil, *Can. Entomol.* 111:111–112, 1979). All other *Protocalliphora* are intermittent ectoparasites that live in the nest material (Gold and Dahlsten 1983).

Gold and Dahlsten (1983) reported a single *P. hirudo* larva in the cavity-nesting Mountain Chickadee (*Parus gambeli*). The other North American records for birds infested by *P. hirudo* are for open-cup nesters, probably due to the ease with which ornithologists can find these nests and examine nestlings. Species recorded include: Savannah Sparrows (*Passerculus sandwichensis*, Bedard and McNeil 1979), Wilson's Warblers (*Wilsonia pusilla*, Rausch, Aquilo Ser. Zool. 13:1–4, 1974), Chipping (*Spizella passerina*) and Vesper sparrows (*Pooecetes gramineus*, Bennett, Ph.D. diss., Univ. Toronto, Toronto, Ontario, Canada, 1957), Goldfinches (*Carduelis* spp.), and Yellow Warblers (*Dendroica petechia*, Hicks, Iowa State J. Sci. 46:123–338, 1971).

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