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TWO INSTANCES OF KLEPTOPARASITISM IN PASSERINES

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Abstract.—Kleptoparasitism among passerines is rare. We report two instances of kleptoparasitism, one with an adult Worm eating Warbler (*Helmintheros vermivorus*) acting as a kleptoparasite on a female Black and white Warbler (*Mniotilta varia*) and one with a male Indigo Bunting (*Passerina cyanea*) acting as a kleptoparasite on a female Worm eating Warbler. In both instances parents were disturbed while feeding fledglings. This combination may occur infrequently, which would explain why kleptoparasitism is rarely observed among small passerines.

DOS CASOS DE KLEPTOPARASITISMO EN PASSERINOS

Sinopsis.—El kleptoparasitismo entre passerinos es raro. Informamos dos casos de kleptoparasitismo, uno con un individuo de *Helmintheros vermivorus* actuando como kleptoparásito de una hembra de *Mniotilta varia* y otro de un macho de *Passerina cyanea* quitándole el alimento a una hembra de *Helmintheros vermivorus*. En ambos casos los adultos fueron perturbados, mientras alimentaban pichones. Esta combinación es poco frecuente lo que podría explicar la razón por la cual el kleptoparasitismo ha sido observado tan raras veces en passerinos.

Kleptoparasitism, or food piracy, among and on birds in the order Passeriformes is relatively rare (Brockmann and Barnard 1979). Perhaps such rarity is related to the food habits of most species in this taxon. Most passerines eat small invertebrates, fruits, or seeds. Such items are usually consumed rapidly and provide little reward or opportunity for kleptoparasitism. In fact, 12 of the 23 passerines reported by Brockmann and Barnard (1979) to exhibit kleptoparasitism were corvids or laniids which parasitized species that consume large prey. Furthermore, most passerines that suffer kleptoparasitism also feed on large prey (Brockmann and Barnard 1979).

During the breeding season, parent birds increase handling time of prey because food is transported to nestlings for consumption. In addition, the relatively larger prey carried by many passerines to their nests (e.g., Root 1967) may represent a larger benefit for kleptoparasites. Thus, passerines feeding nestlings might be more susceptible to kleptoparasitism. Boyle (1966) observed a House Sparrow (*Passer domesticus*) rob a Winter Wren (*Troglodytes troglodytes*) that was carrying a "beakful" of food to a nest. We are not aware of other published records of kleptoparasitism

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for passerines feeding young. The purpose of this paper is to report two incidents of kleptoparasitism involving three species of passerines.

On 5 Jun. 1991 while searching for nests in a mature upland hardwood forest in western Virginia, CJK observed a female Black-and-white Warbler (*Mniotilta varia*) carrying a moth. She approached to within 10 m of CJK, began chipping, and flew rapidly between perches, suggesting that her nest or fledglings were nearby. After 2–3 min, an adult Worm-eating Warbler (*Helmintheros vermivorus*) joined the female Black-and-white Warbler on a perch, approached her, removed the moth from her bill, and flew out of sight. The Black-and-white Warbler made no effort to chase or discourage the Worm-eating Warbler either before or after the moth was stolen. In an effort to induce the Black-and-white Warbler to reveal the location of her offspring, the observer concealed himself behind a shrub approximately 20 m from the Black-and-white Warbler, and made further observations through binoculars. Although the female Black-and-white Warbler continued to chip, she began to forage and soon had an unidentified prey item. At this point, at least one recently (3–4 d) fledged Black-and-white Warbler was observed. Before the adult Black-and-white Warbler was able to feed the fledgling, a Worm-eating Warbler again approached the female in an apparent attempt to obtain the second prey item. This second incident was probably unsuccessful as the Black-and-white Warbler and fledgling(s) flew away from the Worm-eating Warbler.

A similar incident was observed on 2 Jun. 1996, also in a mature upland hardwood forest in western Virginia. While searching for nests, RJC observed a female Worm-eating Warbler (sex determination based on continuous observations of both parents at the nest in which the male sang) carrying a caterpillar. As before, she approached to within 10 m of the observer, began chipping, and flew rapidly among several perches for several minutes. After backing away and observing the bird for 5–10 min from about 20 m away, the bird flew and the observer moved closer to where the nest/young was believed to be located. The female Worm-eating Warbler soon approached with another caterpillar in her bill and again began to chip vigorously. Suddenly, a male Indigo Bunting (*Passerina cyanea*) landed on the perch next to the warbler, removed the caterpillar, and flew out of sight. The observer then retreated again to observe the Worm-eating Warblers from approximately 20 m. The female and her mate chipped occasionally, but continued to forage and feed what were later determined to be at least two recently (2–3 d) fledged young.

During the breeding seasons of 1990 and 1991, several additional interactions between Black-and-white Warblers and Worm-eating Warblers were observed by CJK. None of these additional observations involved kleptoparasitism. However, the frequency and nature of the interactions may favor development of food piracy. On 4 Jun. 1991 a female Black-and-white Warbler that was carrying food (probably a lepidopteran larva) was disturbed by the observer. She began to chip and fly rapidly between perches. She was joined by a Worm-eating Warbler which perched nearby

and approached in a manner similar to the individual observed on 5 June. The Worm-eating Warbler repeatedly approached the female Black-and-white Warbler but did not obtain the prey. In this incident, both species chipped and behaved as if young were in the vicinity; however, no young of either species were observed.

On 5 Jun. 1990 a late-stage (approximately 1 d from fledging) Worm-eating Warbler's nest was approached twice within two hours. The adult Worm-eating Warblers carried prey items, changed perches rapidly, and chipped continually. A single Black-and-white Warbler approached the adult Worm-eating Warblers several times on both occasions. Although no food piracy was observed, the Black-and-white Warbler perched within 0.5 m of the adult Worm-eating Warblers several times.

Discussion—Two circumstances were common to the kleptoparasitic interactions that we observed: The hosts were feeding fledglings and were disturbed by the presence of an observer. In the observed cases, the host females delayed, by several minutes, delivery of a relatively large prey item to her offspring (the delay was likely due to presence of the observer). However, simply increasing the amount of time adults carry food is not enough to produce kleptoparasitism. Four independent events were observed where adult birds delayed delivery of food to young in the presence of a potential kleptoparasite. However, in only two cases was food piracy observed. Other researchers have found that age and experience of kleptoparasites, and seasonal factors influence rates of food piracy (e.g., Brockmann 1980, Brockmann and Barnard 1979, Burger and Gochfeld 1979) perhaps these factors played a role in our observations as well.

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