

woodhoopoe kleptoparasitism had its origins in this type of interspecific interaction. During the woodhoopoe-woodpecker interaction, the woodhoopoes were under considerable feeding pressure because they were providing food for the breeding female and three nestlings. This may have provided the stimulus for a change from simple nest probing to active attempts at food interception. The observed adjustment of the initial interception suggests that it was a new behavior for the woodhoopoes and that a process of tactical refinement or learning was involved. The woodhoopoe-barbet interaction observed a few months later, when the flock was under little feeding pressure, and the woodhoopoe-flycatcher interaction, when the initial kleptoparasites (WW and WB) were no longer present, point to the adoption of new, opportunistic, feeding behavior by the BD flock. This, together with J. D. Ligon's observations of manure shredding, suggests that certain behaviors may develop by chance and then be culturally transmitted to younger flock members. The fact that dispersal in woodhoopoes takes place only very infrequently implies that any such new behavior pattern may either take many generations to spread through the population or never extend beyond the flock in which it was initiated, as was probably the case with the kleptoparasitic habits of the BD flock.

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Two Pied Flycatcher males feeding nestlings in the same nest.—The Pied Flycatcher (*Ficedula hypoleuca*) is a small (12 g), hole-nesting Old World flycatcher. In different studies, 3–30% of the males were polygynous (Askenmo 1977, Alatalo and Lundberg 1984, Winkel and Winkel 1984). Potentially polygynous males stay with the first female until she has

started laying before they start claiming another nesthole (Alatalo et al. 1987). If the male succeeds in attracting a second female (even trigyny is known; Askenmo 1977, Winkel and Winkel 1984), he usually returns to feed his first brood but he may also aid his second female to a varying degree. Extra-pair copulations (EPCs) are quite frequent in the Pied Flycatcher, at least in the high density conditions of nestbox studies (ca 30%; Alatalo et al. 1987). Despite this, no study seems to have reported more than one male feeding young at the same nest; this note reports one such case.

In 1987 we studied Pied Flycatchers breeding in nestboxes near Lund, southernmost Sweden. Almost all adults were caught in nestboxes when the nestlings were 6 days old, weighed and individually color banded, and their wing length measured. Most of them were captured again 7 days later. On the first day of capture at one of the boxes, on 24 June, two different males were caught in addition to the female. On the basis of plumage characters (Karlsson et al. 1986), both males were judged to be 1 year old; one of them a black morph, the other brownish. The adults' feeding visits to the nestbox were recorded from a blind for 2 h each on 29 and 30 June. Both males were present and each fed the four nestlings. The brownish male fed 19 times on 29 June and 21 times on 30 June, while the dark male fed 7 and 22 times, respectively. During the same periods, the female supplied food 13 and 9 times, respectively. Thus the males' joint share was 76%. Some agonistic interactions between the males were recorded. It was always the brownish male who chased the dark one; however, on 30 June, he was seen quietly looking on while the dark male fed the nestlings. On 1 July, all three birds were again captured while feeding the young.

That two males feed at the same nest has previously been reported in the Bluethroat (*Luscinia svecica*, Arheimer 1987), the Bobolink (*Dolichonyx oryzivorus*, Bollinger et al. 1986), and the Dunnock (*Prunella modularis*), whose variable mating system has been carefully documented (for a summary, see Houston and Davies 1985). In the last-mentioned species, trios consisting of a female and two males occurred regularly. Sometimes the dominant male monopolized the female; in other cases both males copulated with her, the alpha male more often. Interestingly, the feeding shares of the two males reflected their mating success; beta males who had not copulated with the female did not feed nestlings, whereas beta males who had, did so. Was our observation of two male Pied Flycatchers feeding the same brood a similar case? Alatalo et al. (1987) never saw a female Pied Flycatcher solicit copulation from a male other than her mate. However, experiments have shown that females react differently towards a dummy when their own mate is present and when he is absent (G. Smith, pers. comm.). EPCs could be advantageous to the female if they increased the chances that the non-mate would help feeding nestlings. Especially late in the breeding season, when the risk of being a secondary female, and thus of being deserted by the male, is great, EPCs might act as an insurance. EPCs might also increase total male aid, as in Dunnock trios. The observation that the subordinate male made fewer feeding visits to the nest than the dominant male agrees with Houston and Davies' (1985) results for the Dunnock.

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Unusual agonistic behavior in a Green Honeycreeper.—I observed a Green Honeycreeper (*Chlorophanes spiza*) exhibiting unusual behavior in its interactions with Bananaquits (*Coeereba flaveola*) at Asa Wright Nature Center, 12 km north of Arima, Trinidad. The nature center occupies a clearing, heavily planted with ornamental plants, in fairly dense tropical forest. On most days, an abundance of fruit (primarily bananas) and nectar (sugar water) is placed at a series of feeders at the center to attract small birds. While watching these birds at a fruit feeder on the morning of 26 February 1984, I saw a male Green Honeycreeper reach over, pick up a Bananaquit by the wing, and drop it off the side of the feeder. In about 2 min of further watching, I saw the same honeycreeper pick up Bananaquits (which constantly came and went from the feeder) three additional times, both by wing and tail, and drop them from the feeder in the same manner. The action was brief and without struggle. The honeycreeper fed several times, then left, not to be seen again while I watched for another 10 min.

In Trinidad, Green Honeycreepers forage primarily for fruit (63% of 267 observations), while Bananaquits are primarily nectar-feeders (76% of 570 observations) (Snow and Snow, *Auk* 88:291–322, 1971), but they were competing for the same resource in this instance. Bananaquits literally swarmed at the feeders at times, and the larger species (mean weight of Green Honeycreeper 18.2 g, of Bananaquit 10.6 g [Snow and Snow 1971]) disposed of its competitors quickly and effectively, although perhaps only momentarily, by this method. The action seemed to involve less energy expenditure than a threat display or displacement attempt would have.

Birds regularly make bodily contact with each other during agonistic encounters, but the unusual aspect of the presently described one was its calmness. Neither bird called, and perhaps the action was quick enough so the Bananaquit had no chance to struggle before it was dropped. The density of the vegetation precluded my observation of any of them after they were released.

I watched honeycreepers, tanagers and other birds coming to these feeders for a total of about 4 h during my brief stay. Although I saw Green Honeycreepers and Bananaquits feeding at the same feeder several other times, I saw this interaction only on this occasion. As the first bird observed was so persistent in this singular behavior, I expected to see it again, and the other birds I saw subsequently may have been different males, as there were