

Observation of Brood-Helpers in Breeding Oriental Honey-buzzards

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Introduction

Cooperative breeding or nesting, where more than two individuals of the same species care for a single nest and its young, is an uncommon but recognised social behaviour (Arnold & Owens 1999). This short field report attempts to document observations of cooperative breeding, particularly brood-helpers, among Oriental Honey-buzzard *Pernis ptilorhynchus*.

While cooperative breeding is well recognised in small raptors like the Black-thighed Falconet *Microhierax fringillarius*, there are currently no reports in literature of such behaviour in large raptors like the Oriental Honey-buzzard (Wells 1999; Orta *et al* 2020).

Observations

Nest Observation 1

From 1999 to 2008 I had the opportunity to observe a pair of Oriental Honey-buzzards nesting annually in the golf course opposite my house in Ipoh, Perak, Malaysia. In certain years they would nest on the trees opposite my house and on two occasions the same Oriental Honey-buzzard pair nested twice in the same season.

Between the end of 2007 and early 2008 the Oriental Honey-buzzard pair nested for a 13th time and successfully raised one juvenile. Subsequently I watched them copulating again and later built a nest opposite my neighbour's house for nesting consecutively in the same season. The juvenile was no longer sighted thereafter when incubation for the 14th nesting started in April 2008. Sometime in May 2008 the egg(s) hatched. On 31 May 2008 evening just as I was about to go out, I saw more than 10 crows mob the nest tree. The adult female was protecting the chick(s) in the nest. A short while later the male flew to the nest to assist in protecting the chicks. After a while the male flew to another tree to distract some of the crows away.

I spent a few minutes clapping my hands to try to shoo away the crows but it was of no avail. When I next turned my attention back to the nest there was now another Oriental Honey-buzzard in the nest together with the adult female while the adult male was still on the other tree. I got out my spotting scope and realised that it was the juvenile from the 13th nesting earlier in the year. I got out my camera and took a few quick shots for the record. Plate 1 shows the adult female on the left and the previous year's juvenile on the right. The chick(s) were crouching low and were hidden between the female and juvenile. Later in the evening the juvenile appeared again and continued to return to the 14th nest area until the end of June.

On 08 June 2008 I saw the previous year's juvenile in the nest with a pair of chicks (Plate 2). The juvenile was observed feeding the chicks with some leftover prey that was already in the nest (video link of activity: <https://youtu.be/4ErIPCfk6uo>). After feeding both the chicks the juvenile also ate some of the leftover prey. The adults were not around at that time.



Plate 1: Adult female and juvenile with chicks crouching low down.



Plate 2: Previous year's juvenile in the nest with chicks

These observations show that the previous year's juvenile does come back to visit and is allowed to interact with the current chicks, confirming the presence of brood-helpers in breeding Oriental Honey-buzzards. It is also interesting that the same pair is capable of breeding twice in one season.

Nest Observation 2

On 02 May 2024, from 1045 hrs, I was with a few bird watchers observing a pair of Oriental Honey-buzzards nesting in a park in Ipoh. There were two chicks in the nest. At 1227 hrs the adult female flew into the nest and dropped off a piece of honeycomb. It immediately flew off and perched on a tree near a drain. It subsequently drank some water from a drain, as well as took a quick dip before flying to perch on a tree.

At 1328 hrs a juvenile Oriental Honey-buzzard appeared and also took a drink from the same drain before flying up to perch on a tree, and later on a lamp post. The adult female did not show any hostilities towards the juvenile. At 1353 hrs the adult female flew back to the nest to join the two chicks. At 1401 hrs the juvenile also flew up into the nest and joined the adult female and the two chicks (see Plate 3 and video: <https://youtu.be/Exnt4pylfcY>).



Plate 3: Adult female Oriental Honey-buzzard with juvenile and chicks in nest

The juvenile ate from the leftover honeycomb. At 1404 hrs the adult female flew out from the nest and perched on a nearby tree leaving the juvenile with the chicks (video: <https://youtu.be/PTqSicHdOMk>). After eating from the honeycomb, the juvenile attempted to adjust the branches in the nest. The juvenile then flew out of the nest at 1217 hrs and left.

It is assumed that this was the previous year's juvenile. The juvenile continued to return periodically to the nesting area for around a week and had been observed by a number of bird watchers. It was occasionally seen to help feed the chick.

Nest Observation 3

On 21 September 2023, at another location in Ipoh, where a different pair of Oriental Honey-buzzards were in initial stages of nest-building, the juvenile from the previous season returned for about a week. The juvenile did not help in nest building but stayed around for about a week observing the parents build the nest.

Discussion

Cooperative breeding in raptors may not be observed often but is not uncommon. Kimball *et al* (2003), in a review of the literature, documented 42 different diurnal raptor species where there were "*more than two individuals residing in a group during a nesting attempt*". Of these 34 had evidence of helpers ("*helping observed by extra individuals*"). This report adds Oriental Honey-buzzards to that list.

There is still uncertainty about cooperative breeding in Oriental Honey-buzzard in terms of nest building. In my prior observations (Sein-Chiong Chiu 2005), juveniles from the previous season had been observed trying to help in nest building but invariably they were rebuffed by the adults.

Whether cooperative breeding reported in many raptors, including the Oriental Honey-buzzard, are regular occurrences or occasional events, requires more field observations and reports.

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