Observations at a nest of the Oriental Honey Buzzard

Pernis ptilorhynchus

Devvratsinh Mori

Devvratsinh Mori, Opp. Darbargadh, Wadhwan 363030, Gujarat, India. E-mail: devvratsinhmori@gmail.com
Manuscript received on 15 August 2018.

The Oriental Honey Buzzard Pernis ptilorhynchus is a widespread raptor in the Indian Subcontinent (Naoroji 2006) and fairly common in Gujarat (Ganpule 2016). Details of its breeding in India have been given by Dharmakumarsinhji (1955), Naoroji (2006), and Bhardwaj (2008). Its nest, much like a Black Kite’s Milvus migrans, is placed high above the ground (Dharmakumarsinhji 1955) and placed in suitable crotches six quarters up a leafy tree up to 25 m, usually about 13–17 m and as low as 4 m within or under the canopy foliage (Naoroji 2006). A clutch comprises two eggs; incubation period is given as 42–45 days (Naoroji 2006). Here I add some observational notes on its breeding based on a pair I studied in Jesagpura village (23.14°N, 72.25°E), Kaditaluka of Mehsana District, Gujarat, India.

Nest site

The nest of the Oriental Honey Buzzard was in an agricultural field, on a khijda Prosopis cineraria [46] tree, located adjacent to the main Narmda Canal (Kadi–Surendranagar branch).

The surrounding area had a few more trees, including, neem Azadirachta indica and white fig Ficus virens. There were many large trees, and among them a few trees were of lower height (05–10 m) namely, khijda within a radius of 500 m of the nest tree. There were small pockets of other thorny plants, including, gandobaval Prosopis juliflora, bordi Zizyphus nummularia, desibaval Acacia nilotica, and piludi Salvadora persica. On the surrounding agriculture lands castor Ricinus communis is grown in summer, and in the monsoon, cotton Gossypium sp., and juwar Sorghum sp. The approximate annual rainfall of the area is about 600 mm.

On 22 June 2018 I visited this area on a birding trip with my friends. At 0715 h we saw an adult female Oriental Honey Buzzard flying out of a khijda tree at c.5 m above the ground. Upon checking, we found a nest containing two eggs. A male was also flying around the nesting tree [47] and we left the nesting site immediately. Naoroji (2006) listed 12 types of trees upon which the bird nests, but not the khijda. The timing of this nesting matched the breeding period known for this bird (Ali 1978; Naoroji 2006).
Nest monitoring
On 24 June 2018, at 0645 h, we fixed an automatic motion sensor camera (Cuddeback; Long Range IR Model E2) on a tree near the nest to observe the daily breeding activities from 0700 h to 1915 h; this continued till 06 July, when the second chick was predated. The auto motion sensor camera was situated exactly opposite the nest, on a thick bare branch of the same tree, from where the nest was visible. The trap camera was fixed at the nest level, at a height of 1.5 m and 1 m from the nest. The total period of observation was 16 days; for a total of 384 h of observation (24 h per day). To avoid disturbing the adult birds, the nest was measured (with a tape scale) when they had left the nest. We did measure the eggs. We followed the guidelines mentioned on the Indian BIRDS website (http://www.indianbirds.in/guidelines/).

Nest details
The nest was constructed with dry sticks, twigs (c.30–45 cm thick), and of trees including khijda, gandobaval, neem, and cotton. These nest materials were available within a radius of 1.5 km from the nest tree. The birds brought and used leaves and seeds (both dry and fresh) of neem as nesting materials [48]. Morphometrics of the nest and the nest tree are given in Table 1.

Table 1. Morphometrics of the nest and the nest tree

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height of tree</td>
<td>07 m</td>
</tr>
<tr>
<td>Girth of tree trunk</td>
<td>110 cm</td>
</tr>
<tr>
<td>Height of nest above ground</td>
<td>4.5 m</td>
</tr>
<tr>
<td>Diameter of branch supporting the nest</td>
<td>33.5 cm</td>
</tr>
<tr>
<td>Diameter of nest’s outer circumference</td>
<td>82 cm</td>
</tr>
<tr>
<td>Diameter of nest’s inner circumference</td>
<td>31.5 cm</td>
</tr>
<tr>
<td>Height of nest</td>
<td>20 cm</td>
</tr>
<tr>
<td>Depth of nest cup</td>
<td>11.5 cm</td>
</tr>
<tr>
<td>Nest orientation in relation to nest-tree trunk</td>
<td>West</td>
</tr>
<tr>
<td>Distance of nest from transporter road</td>
<td>1.5 km</td>
</tr>
<tr>
<td>Distance of nest from pathway</td>
<td>100–120 m</td>
</tr>
<tr>
<td>Height of nearest tall trees</td>
<td>15–20 m</td>
</tr>
<tr>
<td>Temperature during the study</td>
<td>28–40°C</td>
</tr>
</tbody>
</table>

Incubation and hatching of eggs
The date of laying was not observed. The clutch comprised two eggs, as documented by earlier works (Ali & Ripley 1978; Dharmkumarsinhji 1955; Naoroji 2006).

Both the birds incubated the eggs. The male offered food to the female or vice-versa, especially when relieving each other from incubation duty [49]. The commonest food item they brought for each other, at that time, was honeycomb wax. They never left the egg unattended, except for the few seconds or minutes it took to change incubation duty. The female spent more time incubating, especially at night. Usually, at night while one bird incubated, the other roosted in the nearest tall tree. When changing places at the nest, the incoming bird rotated the egg slightly, changing its position with the help of its beak and feet.

On 24 June 2018, at 0710 h I noticed a small hole in one egg [50]. After four-and-a-half hours, at 1145 h first chick emerged from the egg. On 25 June I noticed that the other egg was intact. On 26 June the chick was not in the nest. This event happened during the night, and I got white images (over-flashed). So I could not get evidence of what had happened from the cameras. The second chick emerged on 27 June 2018 [51]. Naoroji (1985) stated that generally, in one nesting season, only one chick survives. On the first day the hatchling was covered in dull white down, with black coloured skin in the lores region, and dull pink legs [52]. To prevent disturbing the nesting birds, we did not take morphometric measurements of the chick.
A chick emerged out of the second egg. Both parents are near the nest.

Hatchling of the Oriental Honey Buzzard.

Feeding behavior, feeding frequency, and parental care

There were only two types of food items the adults brought to feed the youngster, during the 14 days our study lasted. Different sized pieces of honey comb wax and unidentifiable bird hatchlings. The diet documented by Naoroji (2006) was more varied and included small rodents, insects such as grasshoppers and termites, reptiles such as the Indian chameleon and other lizards, frogs, and young birds, apart from honeycombs.

The female most often fed the chick, even when the male brought food. Sometimes the male also fed it. The pair brought food to the first chick 23 times over 14 days; out of these the female brought food only three times. Invariably, while one parent fed the chick, the other perched in the nearby tree. We recorded the male bringing the first morsel of the day between 0700 and 0930 h; the last delivery was recorded between 1720 and 1835 h. The highest food delivery frequency was observed between 0730 and 1345 h when the birds did seven trips [53].

Both parents actively cut up the food into tiny pieces, so that the hatchling could feed easily. They spent considerable time cutting up a large piece into smaller pieces; especially when the prey comprised bird chicks or a big chunk of wax. The parents never left the chick alone, especially in the afternoon. The male was often seen shading the youngster from the sun with spread wings; an act rarely performed by the female. Whenever any large bird / bird of prey appeared in the sky, the bird on nest covered the chick with half or full spread wings [54]. From the tenth day onwards, the parents, brought water in their beaks for the chick to drink.
Predation of the chick

On 06 July, at 0753 h, the nine-day old nestling disappeared without a trace from the nest. Although there were potential predators like House Crow *Corvus splendens*, Shikra *Accipiter badius*, Greater Coucal *Centropus sinensis*, jungle cat *Felix chaus*, Indian grey mongoose *Herpestes edwardsii*, and full-sized common Indian monitor *Varanus bengalensis* in the vicinity of the nesting tree, the parents were quite protective of the hatchling. The area was home to other diurnal raptors that could have potentially snatched the youngster: Red-necked Falcon *Falco chiquera*, Black-winged Kite *Elanus caeruleus*, and Short-toed Snake Eagle *Circaetus gallicus*. The female then came to the nest with food (Honeycomb wax) [55], but did not see the nestling in the nest. The female sat for 15-20 minutes in the nest and after that, both the birds left the nesting site [56].

55. Female Oriental Honey Buzzard arrives at an empty nest with a honeycomb.

56. The abandoned nest.

Hence, this fortnight of nest monitoring ended rather abruptly and I could not watch the various stages of the chick’s development. At home the camera data revealed that the nestling was taken by a juvenile Bonelli’s Eagle *Aquila fasciata* [57].

Acknowledgments

I am grateful to Respected Bhavanisinh Mori for his encouragement, Copal Jani, Nilesh Patel, Rushi Pathak, Surajisinh Parmar, and Bhotu Mori for help in field, and Prasad Ganpule and Ashok Mashru for improving this manuscript. I retrieved relevant literature from the online ‘Bibliography of South Asian Ornithology’ (Pittie 2018).

References


