Source : www.thehindu.com Date : 2019-02-18

GREAT INDIAN HORNBILLS CAN ADAPT TO MODIFIED HABITAT: STUDY

Relevant for: Environment | Topic: Biodiversity, Ecology, and Wildlife Related Issues

Habitat preservation: Conservation of native tree species essential for their survival | Photo Credit: Pooja Pawar

Amid a changing environment, with natural homes of birds getting depleted as natural forests make way for plantations and other such modified terrain, comes the good news of how the great Indian hornbill (*Buceros bicornis*) adapts to such change. A group of researchers from NCBS-TIFR in Bengaluru and Nature Conservation Foundation in Mysuru observed eight hornbill nests, three located in contiguous forests and five located in modified habitats such as coffee plantations. They found that the birds followed similar nesting behaviour but adapted to the changed environment. The study is published in the journal *Ornithological Science*.

The team chose to study the great Indian hornbills nesting in the Anamalai hills. For comparison, the researchers located the study in the modified habitat in the Valparai plateau and the contiguous forests in the Anamalai Tiger Reserve and the Vazhachal Reserve forests. The modified habitat included tea, coffee and cardamom plantations and tribal settlements.

“Most of the nests were known to us as we have been studying hornbills and monitoring them for many years now. Some of the nests were discovered during the study with the help of local tribal assistants,” says T R Shankar Raman of Nature Conservation Foundation and an author of the paper, in an email to *The Hindu*. Describing the mode of observation, he says: “We started monitoring nests from the beginning of breeding season in December. After the females had entered the nests, we conducted direct nest observations on multiple nests using standard field protocols and taking care not to disturb the birds…All observations were done manually.”

Hornbills are secondary cavity nesters and choose cavities formed in large trees for nesting. Also they are monogamous, and the female, after copulation, seals herself in the hole until the initial breeding period of two-four months is over. During this time, the female and the young ones are fed by the male bird, with fruit such as figs and animal matter. So, in principle, along with other threats such as hunting, modified land use, ensuing forest fragmentation, felling of large trees with the potential for nesting, the loss of fruit bearing trees could also affect hornbill nesting habits. “Great hornbills may adapt to habitat modification provided that their key requirements for food and nesting are fulfilled in the habitats like coffee and forest fragments,” says Pooja Pawar from NCBS-TIFR and the first author of the paper.

Considering that hornbills use same nest over years, protection of these known nest trees and retention of large trees that can be potential nests is absolutely essential. In addition, it would be necessary to have a diversity of native tree species, particularly figs, laurels and other food plants, the study concludes. “We also highlight the potential of rainforest fragments and coffee plantation for conservation of hornbills outside of protected areas,” she adds.

What is mutualism? How many carbon atoms does a Furan ring have? For answers, and more interesting questions, take this quiz.

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