

THOSE FASCINATING HORNBILLS

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Natural-growth rainforest are most suited for hornbill populations. | Photo Credit: Getty Images

The logo for India's upcoming G20 presidency was officially unveiled recently at the Hornbill festival in Nagaland. This popular festival showcases the art, culture and cuisine of Nagaland. It also brings attention to a family of some of the largest, most magnificent birds in our country.

The Great Hornbill is found in the Himalayan foothills, the Northeast and the Western Ghats. It is the state bird of Arunachal Pradesh and Kerala. With a wingspan of five feet, it presents an awesome (and noisy) spectacle while landing on a perch. The wreathed hornbill, the brown hornbill and the rufous-necked hornbill are slightly smaller, and only found in Northeast India. A great place to spot the oriental pied hornbill is the Rajaji National Park, Uttarakhand. The Malabar grey hornbill's loud 'laugh' echoes in the Western Ghats. The smallest of the group, the Indian grey hornbill is found all over (except the Thar Desert), and is often spotted in urban settings such as Theosophical Society gardens in Chennai.

Their large, heavy beaks pose some limitations — for balance, the first two vertebrae are fused. Hornbills can move their heads as in 'yes', but have difficulty in saying 'no'. Large beaks are also seen in toucans from Central and South America — an example of convergent evolution — as both birds have the same feeding ecology.

Hornbills prefer tall trees for their nests (breast height being 1.5 metres or more). There is a mutualism between these birds and the trees where they nest. As large fruit-eating birds, hornbills play a vital role in dispersing the seeds of about 80 rainforest trees. Some trees, such as the cup-calyx white cedar suffer a 90% decline in seed dispersal beyond the parent tree when hornbill populations decline, negatively impacting the biodiversity of forests.

The towering Tualang tree of Southeast Asia is so entwined in folklore that it is considered a taboo to fell this tree. It is the preferred habitat of the helmeted hornbill. The fruiting season coincides with the birds' reproductive cycle. Traditional ecological knowledge stresses the value of hornbills in dispersing the seeds, which are expectorated from the throats of the birds. "When the seeds sprout, the hornbills hatch", a saying goes.

Unfortunately, tall trees are the first targets of illegal logging, and so there has been a slow

decline in hornbill numbers, as reflected in bird counts. Slow, because these birds are long lived (up to 40 years). Their large size makes them prone to being hunted. The helmeted hornbill of Sumatra and Borneo is critically endangered because its helmet-like casque (a horny outgrowth over the skull), called red ivory, is highly prized. Luckily, the casque of the Great Hornbill is not suitable for carving.

Hornbill populations appear to be faring better in South India, The Nature Conservation Foundation, Mysuru, has collected data to show that forest plantations are not as suited for hornbill populations as natural-growth rainforest, although nests are sometimes built in non-native silver oaks.

The adaptable nature of hornbills is also seen in their feeding on the fruits of the African Umbrella tree, which has been introduced as a shade tree in our coffee plantations.

(The article was written in collaboration with Sushil Chandani who works in molecular modelling. sushilchandani@gmail.com)

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