

# Great hornbill

## Origin

The Great Hornbill (*Buceros bicornis*) is a large bird found in the tropical forests of the Indian subcontinent, Southeast Asia, and Indonesia. Its origins can be traced back to the Late Eocene epoch, about 35 million years ago when the first hornbills evolved in the northern hemisphere.

Hornbills are believed to have originated in Europe, and then spread to Asia and Africa. The early ancestors of hornbills are thought to have resembled modern-day hoopoes and woodpeckers, and they likely lived in forests where they fed on insects and fruits.

It is not clear exactly how hornbills reached India, but it is believed that they likely dispersed across land bridges that connected the continents during the Oligocene and Miocene epochs, about 30-20 million years ago. During this time, much of the Indian subcontinent was covered by dense forests, which provided ideal habitat for hornbills.

As hornbills evolved, they adapted to a specialized diet of fruit and began to play a crucial role in seed dispersal, particularly in tropical rainforests where they are still found today. They are also known for their distinctive casque, which is a hollow structure on the top of their bill that serves a variety of purposes including amplifying their calls and attracting mates.

## Distribution and Population in India

The Great Hornbill is found in the tropical and subtropical

forests of India, particularly in the northeast and western Ghats region. In India, its distribution extends from the foothills of the Himalayas in the north to the forests of the Western Ghats in the south. It is also found in parts of Northeast India, including the states of Arunachal Pradesh, Assam, Meghalaya, and Nagaland.

The population of Great Hornbills in India is believed to be declining, mainly due to habitat loss, hunting, and poaching. Habitat destruction is a significant threat to the species, as large tracts of forests are cleared for agriculture, infrastructure development, and human settlements.

## Appearance

The Great Hornbill is a large and impressive bird, known for its distinctive appearance and prominent casque on top of its bill. Adult Great Hornbills typically measure between 95 to 120 cm (37-47 inches) in length, with a wingspan of up to 150 cm (59 inches). The weight of an adult Great Hornbill is typically between 2 to 4 kg (4.4-8.8 lbs), with males being slightly larger than females.

The Great Hornbill has black plumage, with white primary feathers and a large, yellow, curved beak. The casque, which is a hollow structure on top of the bill, is pale yellow with a black stripe along the top. Male and female Great Hornbills have similar plumage and physical characteristics, but males are slightly larger than females and have a larger casque.

## Lifestyle

Great Hornbills are typically found in dense, humid forests with high rainfall, and they spend much of their time in the canopy of trees. They are social birds and are often seen in pairs or small groups. They are also known for their distinctive calls, which can be heard over long distances.

Great Hornbills typically mate for life, and both parents are involved in raising the young. The female lays one to two eggs in a tree cavity, which is then sealed with a mixture of mud, faeces, and food. The female remains inside the cavity, while the male brings her food, until the chicks are old enough to break out of the nest. The young are fed regurgitated fruit, insects, and small animals, and they remain with their parents for several months until they are old enough to fend for themselves.

## **Food Habits**

Great Hornbills are primarily frugivorous, and their diet consists mainly of fruit, particularly figs. They also feed on insects, small mammals, and reptiles.

## **Habitats**

The Great Hornbill prefers humid, tropical and subtropical forests with high rainfall, and they are typically found at elevations below 1500 metres. They are particularly dependent on large trees with hollow cavities, which they use for nesting and roosting. They can be found in a range of weather conditions, but heavy rain and strong winds can disrupt their feeding and breeding activities.

## **Vulnerable Species**

The Great Hornbill is listed as vulnerable on the International Union for Conservation of Nature (IUCN) Red List of Threatened Species. It was first listed as vulnerable in 1988, and its conservation status has not improved since then.

The Great Hornbill is vulnerable primarily due to habitat loss, hunting, and poaching. Deforestation and other forms of habitat destruction have led to the fragmentation and loss of forests, which are essential to the survival of the Great

Hornbill. These birds require large areas of undisturbed forest for breeding, feeding, and roosting, and the loss of such habitats has led to a decline in their populations.

Hunting and poaching are also significant threats to the Great Hornbill, particularly for their casques, which are used in traditional medicine and as decorative items. These birds are also hunted for their meat and feathers. The combination of habitat loss and hunting has led to a decline in the population of Great Hornbills in many parts of their range, including in India, where they are legally protected under the Wildlife Protection Act.

## Protected Areas

In India, the Great Hornbill is protected under the Wildlife Protection Act of 1972, which prohibits hunting, poaching, and trade of the species. Several protected areas have been established in the country to safeguard the Great Hornbill and its habitat.

Pakke Wildlife Sanctuary is located in the East Kameng district of Arunachal Pradesh and is home to a diverse range of flora and fauna, including the Great Hornbill. Namdapha National Park is located in the Changlang district of Arunachal Pradesh and is one of the largest protected areas in the country. It is home to a wide variety of wildlife, including the Great Hornbill. Eaglenest Wildlife Sanctuary is located in the West Kameng district of Arunachal Pradesh and is known for its rich biodiversity, including the Great Hornbill. Periyar National Park is located in the Cardamom Hills of Kerala and is known for its diverse range of wildlife, including the Great Hornbill. Silent Valley National Park is located in the Nilgiri Hills of Kerala and is home to a range of wildlife, including the Great Hornbill.

Khao Yai National Park is located on the Thailand-India border, and it is known for its rich biodiversity, including

the Great Hornbill.

These protected areas, along with others in India and neighboring countries, are critical to the conservation of the Great Hornbill and other wildlife. They provide crucial habitats for these species, while also offering opportunities for research, education, and ecotourism.