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MAMMALS

(HORNIBILLS OF BORNEO)

(Photos by: Mark Louis Benedict)

Hornbill is a large bird that can be found in many parts of the world. There are 62 species of hornbills that live in Africa, Asia and the Melanesia subregion of Oceania. In Malaysia, we can find 10 species of hornbills. Meanwhile, in Borneo, we can find 8 of them which include the rhinoceros hornbill, helmeted hornbill, oriental-pied hornbill, white-crowned hornbill, bushy-crested hornbill, wrinkled hornbill, black hornbill, and wreathed hornbill. This month, we would like to highlight the hornbills of Borneo.

In Borneo, hornbills can be found in different habitats and environments. The wreathed hornbill can be found high up in montane forests, while the lowland forest is where you can find the bushy-crested, white-crowned, and helmeted hornbills. The wrinkled, black and rhinoceros hornbills are commonly found in primary forests, but they can also be found in peat swamps and tall mangrove forests. The oriental pied hornbill is the most common species on Borneo Island and can be seen in coastal and secondary forests as well as inland rivers.



Rhinoceros hornbill



Wrinkled hornbill

Hornbills have a feature unique amongst birds. They have fused vertebrates which creates a strong neck, enabling them to bear the weight of their casque and bill. The bill can reach up to 33 cm in length. It is used to feed, fight, preen, make a nest and prevent predators like snakes from attacking their vulnerable body parts. We can identify the gender and age of a hornbill by the development of its beak. Another special feature is called the casque which is a hollow protuberance or structure on the top of a hornbill's beak. The casque of each species differs in shape and colour.

Hornbills in Borneo vary in size and body weight. The smallest hornbill is the oriental-pied hornbill. The head to tail length of this species is 55-60 cm. They have a wingspan of 23-36 cm. The bill length for females is 16 cm and 19 cm for males. The average weight of males is 900 g while females is 875 g. The oriental-pied hornbill is black with a white belly. The colour of the bill and casque is a pale yellow with a black base.



Oriental-pied hornbill



Black hornbill (male)

The black hornbill is slightly bigger than the oriental-pied hornbill with a head-to-tail length between 60-65 cm. The males have a whitish-yellow bill, while the females have a black bill with a smaller casque. Another medium-sized hornbill is the bushy-crested hornbill. This species has a dark brown plumage with a light brown base at the tail. The males have black bills while the females have mostly yellowish bills. The other four hornbill species (the wreathed hornbill, white-crowned hornbill, helmeted hornbill, and rhinoceros hornbill) are considered large birds.

The head to tail length ranges from 75 – 127 cm, while the weight range of the four species is between 1,360 g – 2,960 g. The casque on the upper mandible of their bills makes them unique and easy to recognize. The male black hornbill has a white casque and the rhinoceros hornbill has a prominent golden-yellow horn-like casque. The casque of the helmeted hornbill is different from all other hornbill species as its dense ivory-like casque makes up about ten percent of the bird's body weight.



Each species of hornbills produces unique sounds and calls. The wrinkled hornbill makes deep and echoing calls, while a wreathed hornbill produces a harsh call, similar to the sound of a dog barking to maintain flock coherence. The oriental-pied hornbill's call is strident crackling and yacking. The white-crowned hornbill is the softest, and their call sounds like a pigeon. Meanwhile, the helmeted hornbill produces loud, hollow 'toop' notes gaining speed before drawing to a climax of maniacal laughter. The black hornbill makes a coarse, rasping note that recalls a nervous squealing pig. The bushy-crested hornbill calls sound like a shrill yelping sound of young puppies. The largest hornbill in Borneo, the rhinoceros hornbill, makes a series of loud honks and barking-calls as the bird flies off.



Helmeted hornbill



Wreathed hornbill

Hornbills are diurnal, meaning they are active during the day. They primarily eat fruits, figs, and insects. They also consume small birds and mammals during their breeding period because the chick requires protein to grow. Generally, hornbills travel in pairs or small family groups. These two species, the white-crowned hornbill and bushy-crested hornbill are cooperative breeders and are frequently seen in small family groups, whereby all members of the flock help feed the females and the young ones. The other six species of hornbills are frequently seen flying in pairs, and the males will feed the females throughout the breeding season.



Bushy-crested hornbill



Whited-crowned hornbill

Hornbills require big trees to nest and breed as they nest in large hollows found in large tree trunks. Usually, the females are sealed in the nest to protect them from predators. Hornbills cannot excavate their hollows, so they need to find a hollow that is naturally formed or formed by other wild animals such as sun bears and woodpeckers. Hornbills are also known to reuse their nest cavity year after year. The helmeted hornbill is known to have the longest nesting period whereby they can spend between 167 to 172 days in their nest. Hornbills produce a small number of eggs each season, usually between one to five eggs. The average lifespan of hornbills ranges from 35-40 years but they can live up to 50 years in captivity.

Hornbills are an iconic species in Malaysia. The rhinoceros hornbill is the national bird of Malaysia and also the official state animal of Sarawak. In Borneo, hornbills are an important symbol of the Dayak tribe. They resemble the spirit of God, and the Dayaks

believe that when a hornbill flies over their household, it is a sign of good fortune to come. Hornbills are also included in their culture through art, ceremonies, traditional costumes and dance.

Due to many threats such as loss of natural habitat, the population of hornbills has decreased. Many big trees have been cut down, and the hornbills have limited places to nest. A few other organizations have been working together to increase the number of hornbills by creating artificial nest boxes for the hornbills to use for nesting and breeding. These artificial nest boxes will provide an alternative nesting site for the hornbills and help conserve wild hornbills population in our country.



Artificial hornbill nest box

Hornbills play an important role both in forest health and for people. Hornbills need a forest to feed and nest, while forests need hornbills for seed dispersal. We need forests as they are vital for all life on Earth. Hornbills are important to the balance of the forest ecosystem. We need to work together to conserve this magnificent species.