

# Hope for the rarest hornbill in the world (commentary)

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Commentary by Bee Choo Strange on 13 March 2018



- *There are three Critically Endangered hornbill species in the world. The rarest, the Sulu hornbill in the Philippines, is little studied, does not occur in any protected areas, and is in imminent danger of extinction.*
- *In January 2018, a team of conservationists from the Philippines, Thailand, and Singapore visited the only known habitat of this bird to assess its status and make recommendations regarding its survival.*
- *Five individuals were located, as well as a potential nesting site. Work will continue this year to train local rangers in hornbill study techniques; the patches of forest where the Sulu hornbill clings on should be granted legal protection from logging, hunting, and human encroachment.*

- *This post is a commentary. The views expressed are those of the author, not necessarily Mongabay.*

Of the 32 hornbill species found in Asia, three are currently considered Critically Endangered with global extinction, according to IUCN criteria. One of those, the helmeted hornbill

(<http://www.iucnredlist.org/details/22682464/0>) (*Rhinoplax vigil*), is currently the focus of a conservation project by a recently formed Helmeted Hornbill Working Group. Another, the rufous-headed hornbill (<http://www.iucnredlist.org/details/22682517/0>) (*Rhabdotorrhinus waldeni*), is being studied under a project supported by BirdLife International.

Meanwhile, the Sulu hornbill

(<http://www.iucnredlist.org/details/22682447/0>) (*Anthracoceros montani*) has the smallest population of any of the Critically Endangered hornbill species and must in fact be considered the rarest and most endangered hornbill in the world. Its distribution range has shrunk, its population has collapsed, and the species is in imminent danger of disappearing altogether — yet it has received no conservation attention.

The Sulu hornbill — “tawsi” in the local language — is endemic to the Philippines, occurring only on islands in the Sulu Archipelago between Mindanao and Borneo. It is the sole member of the *Bucerotidae* family within its area and was described as widespread and abundant at the time of its discovery in 1880. Since then, the population has crashed. Today, the only viable breeding population of the Sulu hornbill known to exist is found on the small island of Tawi-Tawi, where a mere 100 square kilometers (close to 25,000 acres) of suitable forest remains, according to the IUCN (<http://www.iucnredlist.org/details/22682447/0>). The total global population is estimated to be about 40 individuals.



*Parts of a hill where the Sulu hornbill has been found has been illegally logged by villagers who moved into the area in recent years. Photo by Bee Choo Strange.*

Complicating survey work, the Tawi-Tawi island and the Sulu area in general are not safe: there are active insurgents operating in this region. Two European birdwatchers were abducted on Tawi-Tawi in February 2012 while looking to photograph the hornbill. One of them escaped in 2014 (<https://www.rappler.com/nation/77162-european-birdwatcher-escape-abu-sayyaf>), but a Dutch national is still believed to be held captive, although he has most likely been moved to another island, possibly Jolo.

To facilitate the study and conservation of the Sulu hornbill, Dr. Pilai Poonswad and I visited Tawi-Tawi in January 2018. Dr. Poonswad is Emeritus Professor of Faculty of Science at Mahidol University in Bangkok; she has studied hornbills in Thailand since 1978 and founded the Thailand Hornbill Project. She also founded the Hornbill Research Foundation in 1993 to branch out and share the team's experience with governments and NGOs in the rest of Asia. Recently, she has agreed to be one of the advisers in the newly re-established Hornbill Specialist Group (<https://www.iucn.org/ssc-groups/birds>) under the auspices of the IUCN Species Survival Commission.

Before our site visit, biodiversity surveys on Tawi-Tawi were conducted by staff of the Philippines Biodiversity Conservation Foundation from September 30 to October 2, 2017. Some two or three Sulu hornbills were seen together in various patches of forest on the island, usually a pair together. The maximum sighting this century was 10 birds seen in one area in 2014 (*Paguntalan et al. 2017*), all mature individuals. No immature birds have been reported within the last 20 years. In May 2015, a local villager reported seeing the nesting cavity of a Sulu hornbill, with a chick inside, in a large fallen dipterocarp tree. Other than that, there are no nesting records for this species, and little is known about its habitat requirements, breeding habits, or ecology in general. It feeds on fruits and some animal prey such as insects and small lizards. It seems to depend on large forest trees for nesting, but will fly up to one kilometer into nearby plantations and agricultural land to feed.

As mentioned, traveling in the Sulu archipelago is not safe. To visit the Sulu hornbill habitat on Panglima Sugala, Tawi-Tawi Province, we needed the co-operation of Mayor Rejie Sahali, Colonel Romulo "Bim" Quemado, and the marine soldiers of the Philippines Marine Corps. Our main target was the secondary forest at Upper Malum. Traveling was difficult and even our military escort vehicle got stuck in the mud several times while traveling the 12 kilometers to the site. We reached an elevation of some 250 meters, although the hill further inland goes to about 500 meters above sea level.

During our visit, we managed to locate a total of five Sulu hornbills. Perhaps most importantly, coming back from the hill one of the rangers spotted a hornbill emerging from a hole in a tree. Pilai established that this was a hole produced by a large woodpecker, most likely a White-bellied Woodpecker (*Dryocopus javensis*). Although this doesn't constitute a confirmed nesting record, we decided to watch the potential nesting tree the following day in the hope that the male or female would check out the nest hole again.



*A possible nest hole of a Sulu hornbill. Dr. Pilai Poonswad indicated that the hole is made by a large woodpecker, likely the white-bellied woodpecker. Photo by Bee Choo Strange.*

Most Asian hornbills start their breeding at the onset of the cool-dry season, when the forest trees flower and ripe fruits are abundant in time for chick rearing. Females of all hornbills in the *Bucerotidae* family will enter a nesting cavity in a large, living tree after copulation. She will then seal the nest hole with her feces, regurgitated food, and mud until it is an elongated vertical slit, large enough for the male to deliver food to the female and later the chick or chicks. She will stay there until her young fledge.

Unfortunately, no hornbills returned to the hole we had observed, as there was disturbance by the locals — on-going logging at the site using chainsaws.

The forest patch where the Sulu hornbill occurs now is only about 10 square kilometers in area (a little under 2,500 acres). It is currently not protected in any way; in fact, there are no nature reserves or national parks in the Tawi-Tawi Province at all. Of utmost priority is to gazette the remaining quality forest on the island as protected area, safe from logging operations, mining, hunting, and intrusion from settlers.

Mayor Rejie and Colonel Bim are working with Philippines authorities to gazette the site as a wildlife sanctuary. The municipality has employed six Tawsi rangers from the village near the forest to survey and safeguard the local hornbill population. Pilai also recommended a survey to identify

figs and other food and nest trees of the hornbills, as well as installation of artificial nest boxes at the site with the aim of providing nest holes, as there may not be sufficient trees for the birds to nest. There are plans for a program to be put in place to engage with the villagers to plant fig trees and other hornbill food trees and also trees that provide nest holes for the species.

Once the security situation in the area is normalized, this beautiful terrain could ideally be opened up as an eco-tourism site for everyone to visit and enjoy. Apart from the hornbills, there are some six species and 23 subspecies of birds endemic to the Sulu region, i.e. found nowhere else in the world (*Paguntalan et al. 2017*).

In the meantime, more studies are needed to improve our understanding of the Sulu hornbill's requirements. Towards the end of our visit, it was decided to bring some of the rangers and other local conservationists for training with the Hornbill Research Foundation at their facilities in the Khao Yai National Park in Thailand. There they will learn plant phenology, tree climbing techniques, and other skills essential for hornbill studies.

Locally in the Philippines, there is an increased awareness of the importance of biodiversity studies and conservation. It is encouraging that, with co-operation from national officials and decision makers, we are now starting an international support program that is bringing hope to the last remaining population of the Sulu hornbill.



*A pair of Sulu hornbills, male on the left and female on the right. Picture taken at site. Photo by Nicky Icarangal.*

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