

## A community rallies around hornbill habitat to aid conservation

K.A. Shaji

5 years ago



Hornbills at Athirapilly-Vazhachal. Photo by Rahana Habeeb.

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- *A community-based conservation initiative involving the Kadar tribal community in Kerala is completing two decades of protecting a unique hornbill habitat in the Athirapilly-Vazhachal-Nelliyampathy forests.*
  - *Athirapilly-Vazhachal-Nelliyampathy is the only region where all four south Indian species of hornbills are found.*
  - *While poaching, habitat destruction and human interference during nesting season have been restricted to some extent through the conservation efforts, climate change is a new*

*threat to the hornbill population.*

As you enter the Athirappilly-Vazhachal-Nelliampathy forests in the southern Western Ghats, you're welcomed with a heavy whooshing sound from the canopies of large trees. For a moment, you might mistake it for the sound of flying jets. This is the sound of the magnificent great hornbill, locally called Malamuzhakky, roughly translated to bird with a deep call that resonates in the mountains.

“There was a time when we poached them for meat and collected their eggs to add to herbal concoctions with questionable medicinal value. The practice ended completely in the last two decades and now we are undertaking the safekeeping of the birds and their nests,” said Senthil Kumar, a conservation activist hailing from the local tribal community, the Kadars.

“Our nine settlements of 174 families inside these forests had a dubious legacy as poachers and predators. But we are fast shrugging it off in our earnest bid to live in perfect harmony with nature and to safe keep these evergreen rainforests for future generations,” he said.

As per the [information](#) available with Kerala Institute for Research Training and Development Studies of scheduled castes and scheduled Tribes (KIRTADS), Kadars are a “primitive tribe” from the forests of Palakkad and Thrissur districts of Kerala. In Malayalam, Kadar means forest dwellers. The tribe lives in small communities and used to practice a nomadic lifestyle and shifting cultivation, growing rice and millets. They also hunted birds (including hornbills) and small animals. There are only about 1848 Kadars in Kerala now, as per the State Tribal Welfare Department. With their lives affected by modern amenities, the lifestyle of the Kadars has also changed with the times.

Hornbills at Athirappilly-Vazhachal. Photo by Rahana Habeeb.

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## **Saving the hornbills trumps dam project**

Around two years ago, the traditional Kadar village gatherings (*gramasabhas*) had passed resolutions against the controversial Athirappilly hydroelectric project in their region. According to the environmental impact study by the Kerala State Electricity Board in 2002, the project was estimated to destroy the habitat of about 196 bird, 131 butterfly and 51 odonate species. The region's animal population would be affected in addition to this.

What was significant about the resolution was its invoking of clauses of the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, which ensures community forest rights for tribals. It was reportedly the [first time](#) that central legislation aimed at tribal welfare was invoked for forest protection.

As per clauses in the forest rights act, no government or private project can be implemented in a forest area without the approval of the tribal *gramasabhas*. The 23-metre high dam was expected to submerge 104 hectares of forest land, apart from causing irreparable damages to the livelihood concerns of the local community.



The Athirapilly waterfall. Photo by K. K. Najeeb.

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“Despite our best efforts, the 163-MW hydroelectric project is still under active consideration of Kerala State Electricity Board and if it gets implemented, the first casualty will be the region’s rich hornbill population,” warned Geetha Vazhachal, chieftain of the tribal community and the first woman in this position among tribal communities in Kerala.

According to conservationists, the unique low-elevation (180 m MSL) riparian forest of Athirappilly-Vazhachal-Nelliampathy is the only location where you can find all four south

Indian species of hornbills — the great Indian hornbill (*Buceros bicornis*), Malabar pied hornbill (*Anthracoceros coronatus*), Indian grey hornbill (*Ocyceros birostris*) and Malabar grey hornbill (*Ocyceros griseus*). Incidentally, the great hornbill is the state bird of Kerala.

“This forest region is the only available nesting location for the highly endangered Malabar pied hornbills in Kerala. They are endemic to low elevation forests in limited locations of south Asia,” explains Sheik Hydar Hussain, a researcher on the region’s hornbill population.



All four south Indian species of hornbills are found in the unique low-elevation riparian forest of Athirappilly-Vazhachal-Nelliampathy. Photo by Rahana Habeeb.

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All species of hornbills have an umbilical relationship with rain forests. Forests undisturbed by humans are crucial for their survival and with forests being impacted, the hornbill population has dwindled too across the entire subcontinent in recent years. The birds nest in the natural hollows of high-canopy trees and remain extremely sensitive to disturbances. Their long bills may prevent them from binocular vision, but their sharp eyes and good hearing alert them to the slightest movement on the forest floor.

## **Local youth turn conservationists**

Among those credited for making Kadars the sentinels of the hornbills of the region is K.H. Amitha Bachan, a researcher and consultant to Kerala Forest Department and the World Wildlife Fund-India Ecological Monitoring Programme, and the organisation under his leadership- Western Ghats Hornbill Foundation (WGHF). In the last two decades, WGHF partnered with Kerala Forest Department for getting 72 Kadar youth involved in the task of hornbill habitat protection. The initiative, which began with the protection of 57 nests, has now expanded to safekeeping 114 nests.

The youth keep close vigil against poaching by helping the forest department in preventing illegal felling of nesting trees and preventing other youth from their community from joining poaching rings. They strengthen the forest habitat by engaging in wildfire prevention and planting trees. They also ensure human interference is restricted in these regions during the nesting season, which normally begins in December.



The WGHF at work. Pictures by special arrangement.

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The WGHF, which started as a small group of hornbill lovers in 1999, has now turned into a success story in the implementation of community-based conservation programmes. The foundation has conducted several scientific studies and research on the movement, food

habits and habitat peculiarities of hornbills. In the process of protecting the hornbill population, it has made large scale interventions in protecting the otherwise precarious rainforests and improving living standards of Kadar tribes.

“There is a significant increase in the hornbill population in the last two decades. The number of nests has increased because of the lack of poaching. In the process of safekeeping the hornbills, we have identified 23 different species of nesting trees of which 60 percent are found only in the Western Ghats. Thirty percent of them are endangered,” said Bachan. According to him, the river Chalakudy which flows through Athirapilly and Vazhachal is the lifeline for the bird population.

The tribal youngsters who work with the foundation have got training in monitoring and conserving the birds. Now they are also equipped to conduct scientific surveys and data collection.

“Other than hornbill conservation, our focus is developing a system for long-term monitoring of the rainforest ecosystem. Channelising the traditional wisdom and efficiency of the Kadar youths, the foundation is now watching the changes in nesting of birds, changes in habitat and effects of deforestation. Through them, we are in the process of developing a long-term monitoring system to assess changes in the rainforest and that is crucial for future conservation activities,” says K. T. Anitha, who works with the foundation.

## **Hornbills have no predators other than human beings**

According to the IUCN Red List, the great hornbill is evaluated as a “vulnerable” species while the Malabar pied hornbill as “near threatened”. The population of the Indian grey hornbill is stable and not decreasing. The Malabar grey hornbill is not globally threatened but it faces threats in the Western Ghats region, according to the WGHF. The two larger species, great hornbill and Malabar pied are also placed under Schedule 1 of the Wildlife Protection Act, which affords the highest levels of protection.



Hornbills at Athirapilly-Vazhachal. Photo by Rahana Habeeb.

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Other than poaching, what threatened hornbills in Athirappilly region was the powerful timber mafia that used to fell huge trees crucial for the survival of the birds. Now the tribal vigilantes are active against the mafia and no timber smuggling is happening in any part of the forests.

While comparing with other rivers in Kerala, Chalakudy has the highest number of dams built as part of hydroelectrical projects. “The river has half a dozen dams and all of them are coming inside the Athirappilly-Vazhachal forests. Their construction and maintenance too had contributed immensely to the damages suffered already by the riparian ecosystem,” says S. V. Vinod, another conservationist.

“A healthy population of hornbills signifies a healthy ecosystem. So the hornbill conservation measures in the region are helping comprehensive protection of the environment of the Western Ghats stretch. Now the forest department and the foundation are also in the process of protecting and planting more trees of the seven species in which hornbills live,” said Bachan. The trees include Pali (*Palaquium ellipticum*), Elavu (*Bombax ceiba*), Thanni (*Terminalia bellirica*), Kalpayin (*Dipterocarpus indicus*), Kulavu (*Kingiodendron pinnatum*),

Vellakil (*Dysoxylum malabaricum*), and Vellapayin (*Vateria indica*).

“Hornbills have no predators other than human beings. In the last two decades, the foundation has contributed enormously to make humans friendly with the bird and its natural habitat. The forest department has benefitted a lot through its intervention,” said S. Muraleedharan, a retired divisional forest officer.



The WGHF at work. Pictures by special arrangement.

Because of the proximity to numerous plantations of tea, coffee and teak, the forest region is always under the threat of fire. In 2004, the forests had sustained severe devastation due to massive fires spread from plantations. Now the foundation and tribals work to avoid forest fires, most of which are human-made.

Displaced many times because of the construction of dams, Kadars have regularly faced the issues of habitat and livelihood destruction. They turned jobless and engaged in menial works in local shops and eateries near the Athirapilly waterfall, a major tourist destination in Kerala. Now, the conservation work ensures a fixed monthly income for the youth involved.

“What we are telling to the outer world is that no conservation would be possible without

cooperation of the local community, especially the aborigines. Integrating their traditional wisdom with modern-day scientific approach would definitely yield results,” said Bachan, who hails from Kodungallur, a coastal town near Thrissur.

“In our process, we are treating the tribals as an inseparable part of the given ecosystem. They require equal attention along with animals, birds, trees and other constituents of the forest ecosystem. Economic support also crucial for tribals as that would ultimately turn them, protectors,” he said.

The hornbill guards are now trained in using cameras and operate GPS systems. They record the whole process of conversation. It’s estimated that the region now has 184 hornbills and they are enjoying a safe habitat.

However, the recurring Kerala floods of the last two years had adverse effect on the hornbill population with the floods washing away seven nests. “Climate change is firmly gripping our region too. It is posing a new threat to hornbills,” said Bachan.



In the last two decades, WGHF partnered with Kerala Forest Department for getting 72 Kadar youth involved in the task of hornbill habitat protection. Pictures by special arrangement.

Read more: [Saving the hornbill with crowdsourced data](#)

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