HORNBILL NEST ADOPTION PROGRAM

Mid-term Report 2024



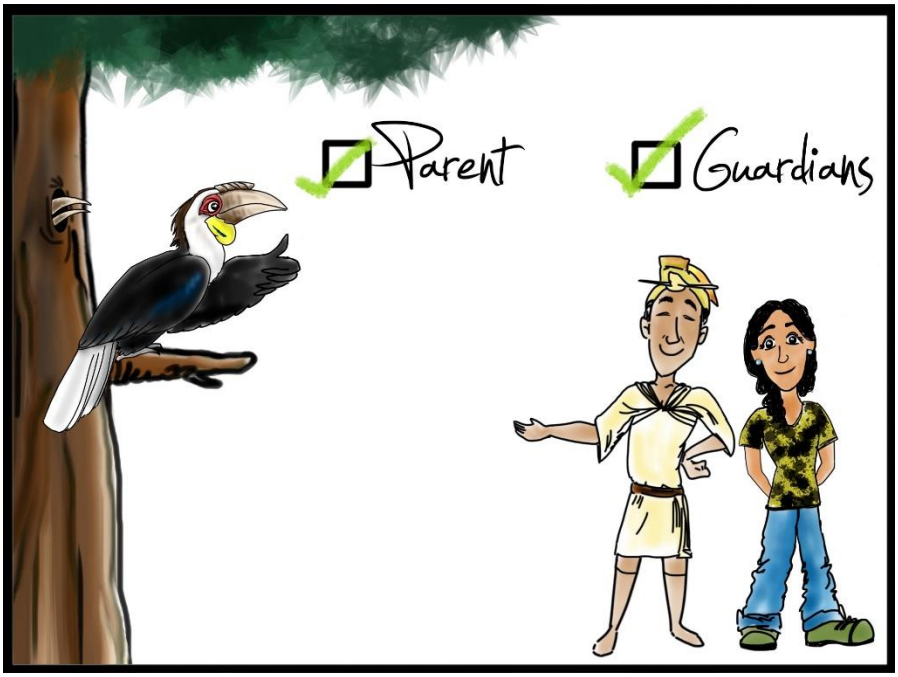
Photo: Budhiram Tai

Saving hornbill homes with communities

The Pakke Tiger Reserve and the adjoining forests is an important habitat for four hornbill species found in India. While the Pakke Tiger Reserve is a designated protected area, the adjoining Reserved Forests are also inhabited by humans who have lived and shared this landscape for many generations.

In order to conserve hornbills in a human-dominated landscape, it was important to consult and collaborate with communities and other stakeholders. The Hornbill Nest Adoption Program (HNAP), commenced in 2012 to protect hornbills, forging a partnership between communities, the state forest officials and non-local researchers/conservation practitioners.

The HNAP operates on the principle of "shared parenting". This model involves community members as "nest protectors" with funding sourced from individual donors and institutions. Nest protectors monitor hornbill nesting, roost sites and conduct surveys to estimate hornbill population. From 2012, the team have located over 37 hornbill nest trees in the Papum RF, resulting in the successful fledging of approximately 206 chicks of three hornbill species- the Great, Wreathed and Oriental-Pied hornbill.



Illustrator: Arjun Srivathsa

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Photo: Turuk Brah

Nest monitoring in Papum Reserved Forest



The Oriental Pied hornbill (Nest WH/OPHD3) male bringing a clod of mud for the female to seal the nest.
Photo: Budhiram Tai



A Wreathed hornbill male (Nest WHB1) with food for the female and the chick.
Photo: Taring Tachang

In this breeding season of 2024, the nest protectors monitored 27 hornbill nests out of 33 nests, out of which only 12 nests are active (Table 1). Out of the 12 active nests, 11 nests are of the Oriental Pied hornbill and only 1 nest is of a Wreathed hornbill. Out of the 27 available nests, only 44% are active or occupied this year.

In the RF, there are 4 WH nests, of which only one is active this year. None of the 5 Great hornbill nests known from the RF are active this year. In two of the Great hornbill nest trees, our team has observed Great hornbills visiting but both the trees have remained inactive this year. The maximum number of nests in the RF are of OPH (18) and 11 out of this total are active.

We are not sure if the existing cavities have become unsuitable for nesting or if there are any other reasons for the low nest occupancy by the Great and Wreathed hornbills in the RF this year. There has been similar worrying news from the Western Ghats where in many places, Great hornbills have not initiated nesting (Wildlife News: Now Afoot in Western Ghats, a Great Hornbill Mystery, Deccan Herald, 2024).

Nest monitoring will continue until the end of the hornbill breeding season to help us determine the nesting outcomes and nesting duration at each nest.

Table 1. Hornbill nests in Papum RF in 2024

Hornbill species	Total nests	Monitored Nests	Active nests
Great Hornbill	7	5	0
Wreathed hornbill	4	4	1
Oriental Pied hornbill	22	18	11
Total	**33**	**27**	**12**

Nest monitoring in Pakke Tiger Reserve



An Oriental Pied hornbill (OPH 37) delivering food at the nest.
Photo: Khem Thapa

In this breeding season of 2024, the team monitored 29 nests out of which 20 nests are active and being used by hornbills for nesting. The 20 active nests comprise of13 Great hornbill, 5 Wreathed hornbill and 2 Oriental Pied hornbill nests. The team also

located two new Wreathed hornbill nests this year. Nest monitoring will continue until the end of the hornbill breeding season to help us determine the nesting outcomes and nesting duration at each nest.

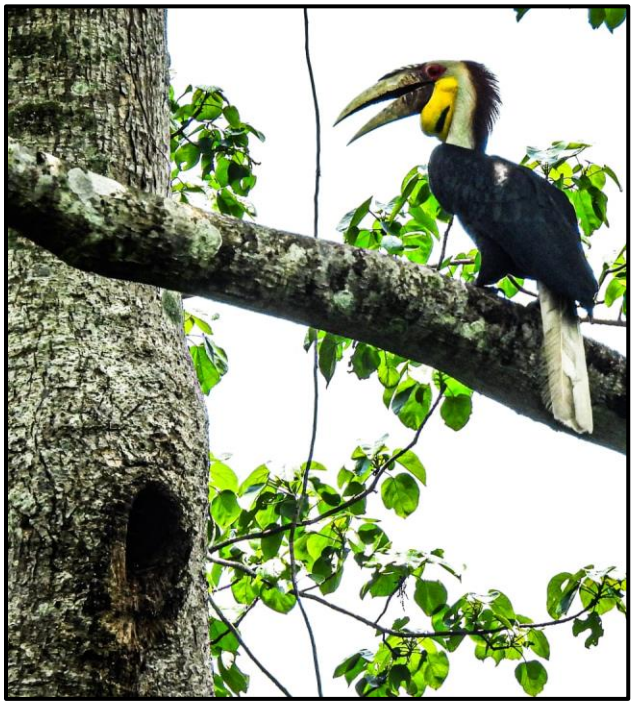
Table 2. Hornbill nests in Pakke TR in 2024

Hornbill species	Total nests	Monitored Nests	Active nests
Great Hornbill	**15**	**15**	**13**
*Wreathed hornbill	**10**	**10**	**5**
Oriental Pied hornbill	**4**	**4**	**2**
Total	**29**	**29**	**20**

***** Two new nests found in 2024



The Great hornbill female after exiting the cavity (WH/GH4 nest). The chick will remain in the cavity for a few weeks before fledging. Photo: Turuk Brah



The male Wreathed hornbill during a feeding visit at WH 64 nest. This is a new nest found by the team this year. Photo: Turuk Brah

Nesting initiation in the Papum RF and Pakke TR in 2024

In the RF, the female entry dates for the Oriental Pied hornbill ranged from April 10th -18th for five active nests (late compared to other years), and the female entry date for the lone active Wreathed hornbill nest was March 28th.

In Pakke TR, female entry dates for five of the 13 active Great hornbill nests (where nest entry dates could be obtained) ranged between March 15 and March 26, exact female entry dates were not known for any of the five active Wreathed hornbill nests. Female nest entry date could be obtained for only one of the Oriental Pied hornbill nests and this occurred on April 16th.

Table 3 provides the female nest entry dates that were obtained during this year's nest monitoring in the RF and the TR.

Table 3. Female nest entry dates for Papum RF and Pakke TR in 2024

Hornbill species	Papum RF	Pakke TR
Great Hornbill	NA	March 15 to 26 (n = 5)
Wreathed hornbill	March 28 (n = 1)	NA
Oriental Pied hornbill	April 10 to 18 (n = 5)	April 16 (n=1)

Tree climbing workshop and hornbill nest repairs

In December 2023, we organized a tree-climbing workshop for our Pakke field staff and nest protectors which was conducted by Dr. Vivek Ramachandran from the National Centre for Biological Science (NCBS), Bangalore. The workshop aimed to provide a refresher training on climbing skills for the team to climb trees using ropes. This skill is useful for our team to check and repair hornbill nests and to install artificial nest boxes and/or camera traps in the canopy for monitoring. The team climbed one inactive OPH nest tree (Nest ID OPHA/M4) during the training and found that the nest floor had completely collapsed in this tree, and it was hollow for a long way through the inside of the main trunk. Therefore, this nest cannot be repaired.



Khem Thapa trying his luck shooting the fishing line with the catapult to get the climbing rope up a tall hornbill nest tree during the training. Photo: Aparajita Datta

After the training, the team visited a couple of other nest trees that had remained inactive in the past few years. In one of the Oriental Pied hornbill nest trees (Nest ID

- OPHA/M2), our team observed that the cavity opening had become smaller and believed that the hornbills were unable to enter the cavity for nesting. The nest protectors climbed the tree and widened the cavity opening. We are pleased to report that this nest was used by an Oriental Pied hornbill pair for nesting this year. This nest tree had been last used for nesting in 2021 and had remained inactive in 2022 and 2023.



Tajik Tachang and Taring Tachang, nest protectors, up in the canopy checking on the status of a hornbill cavity that was inactive.





This Oriental Pied Hornbill nest (Nest ID OPHA/M2) was repaired in Dec 2023 and was occupied by an Oriental Pied hornbill pair this year. It had been inactive for 2 years.
Photos: Vijay Tachang and Prem Tok

Long-term monitoring of hornbill roost sites

The nest protectors continue to monitor the roost sites across the Papum RF throughout the year. In the Papum Reserve Forest, the nest protectors monitored 20 hornbill roost sites over 962 observation days from October 2023 to April 2024. Out of the 20 sites, 11 sites were used for roosting during this period. In five of the sites (Darlong village, Jolly jungle, Jolly church, Jolly river and Jolly top) hornbills used the sites for more than 10 days, whereas in the other sites roosting occurred for only a few days. Wreathed hornbills used four sites – Darlong village, Firing nala, Jolly river and Tanda Pahad, whereas Oriental Pied hornbill used seven sites – Dibru nala, Jolly jungle, Jolly (near church), Jolly river, Jolly top, Jolly-Palling and Lanka 4km, for roosting. The Jolly River was used by Wreathed hornbills in October, but the site was later used by the Oriental Pied hornbill.



The Darlong village roost site was used the most for roosting by Wreathed hornbills (seen on 68 days out of 126 observation days). The number of individuals visiting ranged from 1 to 42 birds. The Jolly river site was used the most by the Oriental Pied hornbill (seen on 19 days out of 60 observation days). The numbers ranged from 2 to 6 birds. This site was also used by Wreathed hornbills on 8 days out of the 60 observation days.



Budhiram Tai, nest protector and Gaonburra of Darlong village has been monitoring the Darlong roost site since 2012.

Hornbill roosting in the Pakke landscape

During the late nineties, communal roosts of Wreathed hornbills inside and outside Pakke Tiger Reserve were located and monitored. Mixed roosts with both Great and Wreathed hornbills also occurred. Inside the reserve, some evenings revealed over 200 Wreathed hornbills coming to roost. In later years, our monitoring of distant roosts became irregular due to other commitments and added work, but we continued to receive updates of hornbill roosting flocks from the Forest Department officers and the STPF staff. Since 2016, through the Hornbill Nest Adoption Program, the nest protectors have been monitoring these roost sites along the Pakke River in the Papum RF.

This year, our team were reporting lower numbers of Wreathed hornbills using the roost sites outside Pakke TR. We suspected that they may be roosting inside Pakke TR along the cliffs near patches of the *Livistona jenkinsiana* palm (known as Tokko in Assamese). This species which has supra-annual fruiting, had a heavy and extended fruiting this year.

Our suspicions were confirmed, when in January, this year on several days, our colleagues Bibi, Peter, Khem, Turuk, Noopur and Sana observed 300 plus Wreathed hornbills roosting for several days along the Khari nala around the same place that Aparajita had seen them back in 1998-99.

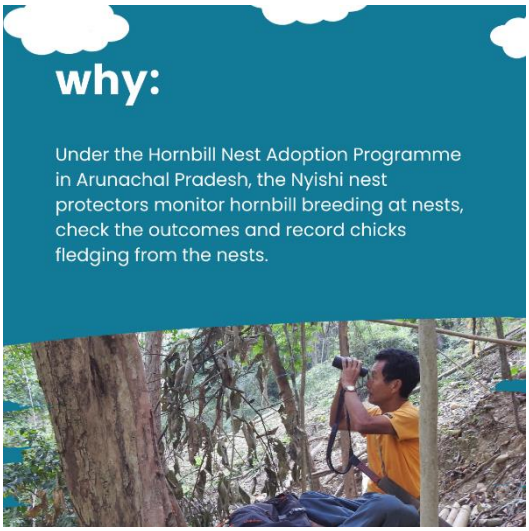


Over 300 Wreathed hornbills were observed coming to roost along the Khari nala inside the Pakke Tiger Reserve
Photos: Noopur Borawake

Cameras for conservation

In January this year, we had shared an appeal for support towards procuring pre-loved/used cameras and/or donation to purchase some new cameras. Until then, we had just one functional Nikon camera that was used by the nest protectors on a rotation basis and a few small point and shoot cameras that were not useful for good photos.







We were thrilled to receive immense support from several hornbill parents and friends of HNAP towards this appeal. With the support received and the existing HNAP funds, we purchased 5 new Nikon P950 cameras and also received 3 additional pre-loved cameras. These cameras are now being used for documentation by the nest protectors and field research team in Arunachal Pradesh and north Bengal.

We would like to thank Mr. Ramesh Adkoli, Dr. Shomita Mukherjee, Mr. Ulhas Anand, Dr. Suhel Quader, Mr. Maitreya Sukumar and Ms. Tara Sandhu for supporting this appeal.



Nest protectors Kaja Keyang and Tajek Wage on their way to monitor hornbill nests.



Prem Tok, the youngest nest protector, at the base of a hornbill nest tree that he watches over.

Strengthening local partnerships

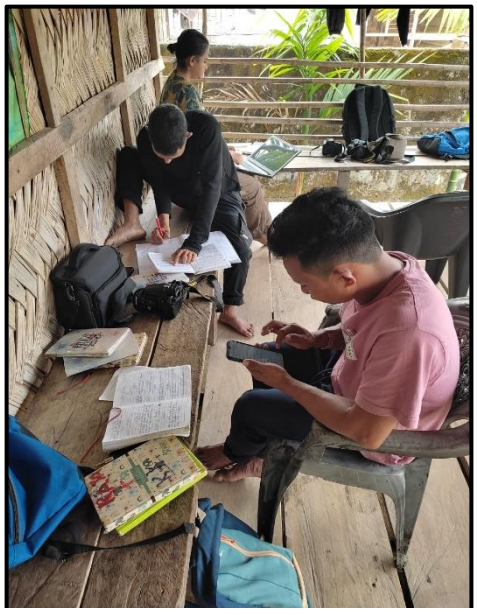
The Hornbill Nest Adoption Program (HNAP) operates on a collaborative, community-led model.

In addition to the dedicated team of nest protectors, a key local partner is the Vivekananda Kendra Vidyalaya Alumni Association (VKVAA), Pakke Kessang District Unit. Their commitment to nature conservation and community welfare has been a vital support for HNAP's initiatives in the area.



Members of the Vivekananda Kendra Vidyalaya Alumni Association (VKVAA), Pakke Kessang District Unit along with the nest protectors and the HNAP coordinators.





The HNAP's weekly meetings are attended by the nest protectors, coordinators and representatives of the VKV Alumni Association.

Community welfare – renovation of Government School toilet

In 2023, as part of the HNAP's community welfare, we contributed towards the complete renovation of a block of toilets in A2 village's Government Residential School. A total of 4 toilet units were completely renovated, which included fixing the roof and the walls and fitting new toilet pans. Additionally, the block was given a fresh coat of paint. The renovation was completed before the school reopened after the summer break for the returning students.



Renovated toilets in Government Residential School, A2 village.


ADOPT A NEST
to help hornbills
Hornbill Nest Adoption Program
How funds will be utilised
• Salaries of the HNAP local co-ordinator and nest protectors
• Field equipment for the nest protectors
• Medical expenses for the nest protectors
• Logistics and local travel
Impact on ground
• Protection of hornbills and nests
• Successful fledging of chicks
• Employment of community members
• Building a network of conservation leaders
• Monitoring of hornbills

Adopt a hornbill nest

We thank you for your continued support towards the Hornbill Nest Adoption Program (HNAP) and we hope that you continue to support and find value in our work. Details for donation towards the HNAP are shared below:

The bank account details for Indian nationals to transfer the funds are:

For Salaried employees
Section - 80 G (Exemption 50%)
Name: Nature Conservation Foundation
A/C No: 912010039076365
A/C type: Savings
IFSC code: UTIB0000151
Bank Name: Axis Bank Ltd
Branch: VV Mohalla, Mysore

For Professionals
Section - 35 (Exemption 150%)
Account Name: Nature Conservation Foundation
A/C No: 912010067967491
RTGS/NEFT/IFSC code: UTIB0000151
Bank Name: Axis Bank Ltd
Branch : VV Mohalla, Mysore

OR
You can also donate on our NCF link here.

OR
You can send us a cheque in the name of '**Nature Conservation Foundation**'
The address is:
Smita Prabhakar
1311 12th Main Vijayanagar 1st Stage
Opp Kodava Samaj
Mysore 570 017.

Note: We **cannot** accept cash donations or cash deposits.

If you do transfer the funds, please do send us an e-mail with PAN number, name and address of the person to whom the receipt must be issued for IT exemption.

For foreign donations, kindly write to us at –chaithra@ncf-india.org or hnap@ncf-india.org

Hornbill nesting updates from West Bengal

Buxa Tiger Reserve

In 2017, we started a hornbill research and conservation work in northern West Bengal in collaboration with Nature Mates Nature Club. Since then, we have conducted extensive research on hornbill ecology, including hornbill nest monitoring, in Buxa Tiger Reserve.

In 2024, the team is currently monitoring a total of 34 hornbill nests out of 39 known nests. Out of the monitored nests, 22 nests are active this year - 5 Great hornbill, 13 Oriental Pied hornbill, 2 Wreathed hornbill and 2 Rufous-necked hornbill nests (Table 4). Five new nests were located by the team this year - 4 of Oriental Pied hornbill and 1 of Rufous-necked hornbill.

Table 4. Hornbill nests in Buxa TR in 2024

Hornbill species	Total	Monitored	Active
Great hornbill	7	7	5
Wreathed hornbill	3	3	2
Rufous-necked hornbill	8	5	2
Oriental Pied hornbill	21	19	13
Total	**39**	**34**	**22**

Nesting initiation occurs earlier in Buxa TR compared to the sites in Arunachal Pradesh. Buxa TR and Mahananda WLS are located further west (88-89 degree E), while Papum RF/Pakke TR are at 92 degree E. Latitudinally, they occur at similar latitudes with Buxa/Mahananda being at 26 degree N, while Pakke TR is at 27 degree N.

Table 5. Hornbill nest entry dates for Buxa Tiger Reserve in 2024

Female entry dates	Great hornbill (n=2)	Oriental Pied hornbill (n=10)	Wreathed hornbill (n=1)
Mean	March 2	March 24	March 30
Range	Feb 29 – March 4	March 17– April 8	NA



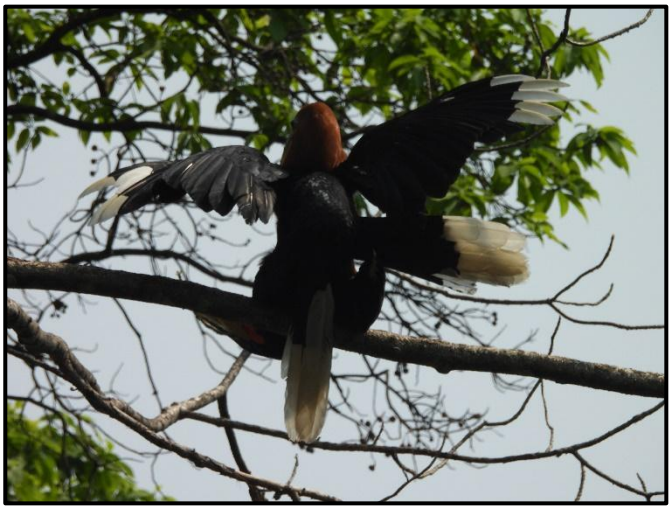
A Great hornbill male during a feeding visit at the MH_RNH/GH nest tree
Photo: Shilpita Mandal

In and around the Mahananda Wildlife Sanctuary

In December 2021, we also expanded our hornbill research to Latpanchar in the Kurseong Forest Division and the Mahananda Wildlife Sanctuary. The work initiated includes estimating hornbill population, monitoring tree phenology, community engagement and monitoring hornbill nests.

In 2024, two Rufous-necked hornbill (RNH) nests and one Great hornbill (GH) nest are active around Latpanchar in the Kurseong Forest Division and one Rufous-necked hornbill nest is active in the Mahananda Wildlife Sanctuary. The RNH female entry took place on April 2nd and April 6th for two nests, we were unable to determine the female entry in one of the other RNH nest. The Great hornbill female entry took place on March 28th.

Monitoring of these nests are ongoing to document nesting activities and the breeding biology of the two hornbill species from this site.

A Rufous-necked hornbill pair seen performing courtship and mating before initiating nesting in Latpanchar. Photos: Sikander Dewan




Feeding visits by the male at the active Rufous-necked hornbill (DD_RNH) and Great hornbill (BRD_GH) nests. Photos: Sikander Dewan

Hornbill Nest Adoption Program

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