

Hornbills in India's Folklore: A Biocultural Inventory

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Abstract

Biocultural approaches are increasingly recognised as critical for advancing inclusive and grounded conservation practice. Folklore represents an underexplored repository of biocultural knowledge, reflecting relational understandings between people, species, and ecosystems. Here, we document and analyse hornbill-associated folklore from India, drawing on ecological fieldwork conducted between 2015 and 2024, alongside a literature review. Twenty-three narratives were compiled across twelve states and Union Territories, representing nineteen languages, sixteen ethnic groups and five hornbill species. Narratives were coded into three overlapping value typologies — spiritual (sacred associations, symbolism and beliefs), ecological (behavioural and ecological observations), and physical and use values (appearance and material associations). These findings suggest that hornbills function not only as ecologically significant species but also as cultural keystone species embedded within local knowledge systems, languages, and practices. While non-exhaustive, this archive demonstrates how folklore can illuminate socio-ecological dimensions often overlooked in conventional conservation science. By foregrounding such dimensions, this study highlights the potential of interdisciplinary, culturally

informed approaches to strengthen conservation dialogue and practice, and provides a foundation for expanding biocultural understandings of hornbills across their wider global range.

Keywords: Bucerotidae, human-nature connections, cultural knowledge, linguistic diversity

Introduction

The interdependent relationships between people and nature date back to ancient civilizations such as Mesopotamia (4000–3500 B.C.) and the Indus Valley (3300–1300 B.C.), as reflected in ancient art and sculptures (Herren *et al.*, 2002; Adwaith, 2021). At present, Indigenous and local communities manage nearly a quarter of the world's arable land (Garnett *et al.*, 2018), and strong overlaps between linguistic and species diversity are well documented (Maffi, 2005; Hua *et al.*, 2019). Such co-occurrence should not be interpreted as evidence of a simple or universal causal relationship between cultural and biological decline. Rather, studies show that languages can encode unique, place-based ecological

knowledge and that disruptions to language use, land-based practice, and intergenerational transmission can erode parts of that knowledge (Gorenflo *et al.*, 2012; Reyes-García *et al.*, 2013; Carson *et al.*, 2018; Cámara-Leret & Bascompte, 2021; Nemogá *et al.*, 2022). Thus, alongside biodiversity loss, native languages are also declining rapidly, with approximately 2,700 languages estimated to be on the verge of extinction (Maffi, 2005).

These intricate biocultural relationships are often expressed through oral traditions, performing arts, social practices, rituals, and festive celebrations (Díaz *et al.*, 2015; Bridgewater & Rotherham, 2019). Traditional ecological knowledge (TEK), as a key expression of these relationships, represents dynamic, adaptive, and context-specific ways of understanding and engaging with ecosystems. However, TEK systems are increasingly under pressure due to socio-cultural transitions that have resulted in the breakdown of intergenerational knowledge transfer and the growing marginalisation of Indigenous and local communities (Amano *et al.*, 2014). At the same time, TEK offers relational perspectives that challenge dominant nature–culture divides, and can inform more inclusive and grounded conservation approaches (Berkes, 2018; Bridgewater & Rotherham, 2019).

Traditional ecological knowledge, as defined by Berkes, Colding & Folke (2000), refers to a cumulative body of knowledge and beliefs, handed down through generations by cultural transmission, about the relationship of living beings (including humans) with one another and their environment. It evolves through adaptive processes and is transmitted across generations through cultural means including folklore, which serves as an important medium for socio-ecological knowledge transfer.

In many societies folklore is transmitted orally and provides a valuable entry point for understanding TEK with potential for meaningful integration into formal conservation approaches (Berkes, 2018).

Within folklore, mammals and birds often feature prominently due to their sustained interactions with people, ecological significance, and distinctive morphology (Bhalla, 2010; Tidemann *et al.* 2012; Athreya *et al.*, 2018; Bhatia *et al.*, 2021; Gupta & Kumar, 2025). The bird-centric folklore, fables and beliefs among Indigenous communities exhibit intricate knowledge about birds' behaviour, phenology such as migration and habitat use which provide important insights for ecological knowledge and conservation (Delfino, 2024). Among them, hornbills are especially notable for their unique bill morphology and striking colouration. Ethno-ornithological studies from the Philippines document diverse human–hornbill interactions, including the use of hornbill body parts for adornment, food, and traditional medicine (Gonzalez, 2011). Similar accounts from Borneo (Benette, 2000) and Sulawesi (Kinnaid & O'Brian, 2007) describe ritual hunting and symbolic uses of hornbills, while hornbill-centric beliefs, myths, and storytelling traditions further underscore their cultural significance (Gonzalez, 2011; Ved, 2011; Daimai & Parhi, 2021; Parbo, 2026). However, contemporary changes such as urbanization, shifting livelihoods, education, and mobility are reshaping how communities engage with hornbills and the knowledge systems surrounding them. Documenting folklore around the hornbills, therefore, becomes important not only to prevent erosion of biocultural knowledge, but also to understand how human–hornbill relationships evolve across changing socio-ecological contexts (Amin & Ripot, 2018). Documentation alone cannot

halt the erosion of living knowledge systems. It can, however, preserve a partial record at a particular time and identify themes for further community-led inquiry. We therefore treat documentation as an archival and analytical starting point, not as a substitute for continued practice or intergenerational transmission.

India is home to nine species of hornbills, with the Western Ghats and the Himalaya representing two major hotspots that support eight of these species. Populations of several hornbill species in these regions show declining trends (Sheth *et al.*, 2019; SolB, 2023). Interestingly, these two hotspots also mirror the linguistic diversity in the region, Indo-Burma with around 428 languages and Western Ghats and Sri Lanka hotspot with around 40 languages (Connolly *et al.*, 2023). Especially, the Eastern Himalaya has nearly 300 languages, however, most of them are endangered languages due to decreasing number of speakers (Post, 2020). Documenting TEK allows to catalogue the linguistic and ethnological information, design pedagogical material and increase engagement with the communities towards common conservation goals (Kimmerer, 2012; Post, 2020). Our study seeks to archive Indian folklore associated with hornbills as a means to strengthen conservation efforts, and catalyse a broader dialogue on the value of documenting socio-ecological knowledge for posterity. In doing so, it contributes to the recognition of Indigenous knowledge systems while highlighting the deep entanglements between nature and culture.

Methods

Documentation of hornbill-associated folklore emerged opportunistically as a by-product of ecological surveys conducted in the Western

Ghats and the Himalaya between 2015 and 2024. Fieldwork took place across Tamil Nadu, Kerala, Goa, Maharashtra, Karnataka, Uttarakhand, Arunachal Pradesh, Nagaland, and Assam. Community members (one to three at any given time) participated as interlocutors alongside authors PYP and MM during hornbill population monitoring and occupancy research, while also providing logistical support. Because all field interlocutors were men, the field-derived material reflects male perspectives and cannot be treated as representative of the knowledge held within the respective communities. Interactions during this process revealed diverse hornbill-related narratives, which were subsequently recorded by the authors with prior permission.

In locations where the native language was not spoken by the authors, the information was validated by a native speaker. The collected folklore was also shared with local researchers working in the respective regions to further triangulate the narratives. Additionally, relevant literature (published folklore, fables, myths, beliefs, etc.) on hornbill folklore from the Western Ghats and the Himalaya was compiled. Local names were included only when the source documented a semantic or cultural explanation, such as a reference to morphology, vocalisation, sacredness, or social meaning; lexical labels without such context were not treated as standalone items.

The conversations and the review yielded a total of 23 narratives (hereafter, used interchangeably with folklore) from 12 Indian states and union territories including Kerala, Tamil Nadu, Karnataka, Goa, Maharashtra, West Bengal, Arunachal Pradesh, Assam, Nagaland, Uttarakhand, Manipur, and Mizoram. Source precision varied. We distinguish named

communities, including Kadar, Van Gujjar, Sherdukpen, Zeliang, Liangmai, Mihlong, Lakher, Rai Kirat, and Adi, from broader linguistic or regional attributions, including Konkani-speaking, Marathi/Konkan, Tamizh, and Nepali-language traditions. We do not infer a specific ethnic or community identity where a source recorded only a language or region; one northeastern account remains unattributed at a finer scale.

We coded and categorized the narratives into three broad but overlapping value typologies: (a) spiritual, which included folklore indicating sacred associations, symbolism, spiritual connections and beliefs; (b) ecological, encompassing narratives associated with ecological, biological, behavioural, and phenological observations; and (c) physical and use value, which included folklore based on the physical appearance of hornbills, anthropomorphic qualities, and narratives indicating their material value. To ensure consistency in coding and interpretation, we used an inter-coder reliability test in which two researchers (author + Coder 1 & author + Coder 2) independently assigned each folklore to one or more value categories. There was 89.5% and 100% agreement between the two coders, respectively. Disagreements over two folklore between author and coder 1 were resolved through discussion and consensus building.

Results

Our archive is by no means exhaustive, and should be understood as a preliminary attempt to bring together dispersed narratives and acknowledge the diversity and richness of biocultural relationships between hornbills and the communities connected with them.

Across the 23 documented narratives, the species represented included the Great Hornbill (*Buceros bicornis*), Malabar Pied Hornbill (*Anthracoceros coronatus*), Rufous-necked Hornbill (*Aceros nipalensis*), Indian Grey Hornbill (*Ocyrceros birostris*), and Oriental Pied Hornbill (*Anthracoceros albirostris*). The compilation represented nineteen languages from the Western Ghats and Himalaya. An overview of the folklore, including associated communities and biocultural values, is provided in Table 1. Sixteen items (70%) were coded for physical or use values, 14 (61%) for ecological values, and 14 (61%) for spiritual values. Seven items (30%) included all three categories, nine (40%) included exactly two, and seven (30%) included one category. A few examples are presented below:

In the foothills of Western Himalayas in Uttarakhand, Van Gujjars relate Indian Grey Hornbill to the “*lamdor*” – a long cotton rope that is used with a stone tied to it, ablaze and flung into the air to scare away elephants that come near their *dera* (hut) – due to its long and slender tail. This narrative was categorised under “physical and use value” (due to its focus on physical appearance). A narrative from the Sherdukpen tribe of Arunachal Pradesh calls a man who takes care of his wife and children as ‘*Devang Abo*’. *Devang Abo* is a name for the male hornbill as he looks after the female and the chick that are in the nest. It was categorised under “ecological value” (due to the reference to behavioural observation) and “physical and use value” (as it describes an anthropomorphic quality).

In the book titled ‘Speaking to an Elephant and Other Tales from the Kadar’ (Chandi & Ramesh, 2018), a folklore of the Kadar tribe from the Anamalai Hills illustrates a combination

of all three values—ecological, symbolic, and physical/use values. According to the folklore, all the forest animals were going to God's wedding. Most of the large animals and birds reached the celebration on time, but the *Chural Aamai* (Forest Cane Turtle, *Vijayachelys silvatica*) was afraid that he would be late because of his slow pace. The *Ongal* (Great Hornbill) agreed to take the *Aamai* to the wedding ceremony. The *Ongal* instructed the turtle to bite firmly onto his tail during the flight and warned him neither to look down nor to speak, as doing so might cause the *Aamai* to lose his grip and fall. However, the turtle craned his neck to peer down, opened his mouth in amazement, and fell through the canopy of *Surlimaram* (Ceylon Iron wood, *Mesua ferrea*) onto the forest floor, damaging his carapace. The *Ongal* flew to the wedding venue to inform the God about the plight of the *Aamai*, as he could not help the injured turtle himself. After the ceremony, God returned to the place where the *Aamai* had fallen. With the help of black ants, he collected all the pieces of the carapace and carefully stitched them back together. The folklore goes on to describe how God spread grains of leftover rice for *Aamai*, which had missed the feast. Those grains turned into delicate white *kumin* mushrooms, which all tortoises like to eat.

See Table 1 for a more detailed archive of the hornbill narratives collated in this study.

Discussion

Folklore offers a rich repository of collective memory, cultural meaning, and ecological knowledge (Tidemann et al., 2012; Delfino, 2024). The documentation of these biocultural narratives highlights the hornbill's multifaceted role in local and Indigenous knowledge systems. For example, expressions of appreciation and

admiration, cultural taboos linked to hornbills, and attention to their visual and aesthetic qualities highlight relational and ethical dimensions of human–hornbill interactions that extend beyond utilitarian values. Additionally, they also included detailed ecological observations spanning foraging behaviour, vocalizations, breeding biology, and altitudinal migration. Such observations demonstrate how experiential engagement with species is embedded and encoded within cultural narratives, which can potentially complement scientific monitoring.

Beyond their ecological importance, we hypothesize that hornbills function as cultural keystone species (designates those plant and animal species whose existence and symbolic value are essential to the stability of a cultural group over time), reinforcing spiritual beliefs, traditional practices, and community identity (Cristancho & Vining, 2004; Amin & Ripot, 2017; Shackleton et al., 2018). The narratives suggest that hornbills are culturally salient in several contexts, but this compilation does not establish that they are cultural keystone species. Coe and Gaoe (2020) caution that cultural keystone status requires explicit and reproducible, community-specific assessment of dimensions such as naming and terminology, resource and psycho-social functions, irreplaceability, and ecological roles. We therefore present cultural keystone status as a hypothesis for future research rather than as a conclusion. Similarly, the local names and language-based associations in this inventory demonstrate place-based meaning, but the inconsistent recording of language and dialect prevents us from quantifying linguistic diversity or drawing causal conclusions about language loss and conservation outcomes.

Our exploration also documented local names for hornbills across six states and eleven ethnic groups, underscoring how linguistic diversity

reflects place-based relationships with species and ecosystems. The erosion of cultural knowledge and associated practices entails the loss of related vocabularies, weakening relational ties between people and their environments and potentially generating cascading consequences for conservation. Efforts to protect biodiversity are thus likely to falter where community understanding, meaning-making, and connection are weakened (Aswani *et al.*, 2018).

In India, folklore plays an important role in the life and culture of people. It is a rich treasure of human experiences, provides us clues about how the ancient people of India maintained the ecosystems governed by the folkloric traditions (Pramanik & Nandi, 2019). Culturally informed conservation approaches may, therefore, benefit from engaging with folklore and associated knowledge systems as pathways for increased dialogue, awareness and collaboration. Rather than viewing such narratives as static relics of the past, they should be understood as dynamic and evolving expressions of human–nature relationships. In an era marked by conservation conflicts and rapid socio-ecological change, hornbills may serve as shared focal species through which alliances between conservation practitioners, communities, and other actors can be strengthened. Community-based initiatives such as the Hornbill Nest Adoption Programme demonstrate how integrating cultural values and local knowledge can foster more inclusive and context-sensitive outcomes (Rane & Datta, 2015). Due to logistical constraints, this compilation of folklore is not representative of gender, and age-groups. The study therefore cannot evaluate gendered perspectives, regional variation, intergenerational transmission (or lack thereof), and socio-cultural changes. Future research could focus on these aspects.

The sample of narratives documented here

suggests significant scope for future research that intentionally and systematically explores regional variation, gendered perspectives, and changing socio-cultural contexts shaping human–hornbill relationships. Expanding such work could also help bridge the divide between ecological and social sciences, enabling more integrated approaches to addressing our shared vulnerabilities (Kimmere, 2012; Ondimu & Simotwo, 2024).

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Declaration and positionality statement

Authors declare no conflict of interest in this study. Authors would also like to declare their positionality in this study as purely observational and from a lens

Table 1: The biocultural associations of hornbills in folklore of various ethnic and Indigenous communities in India.

No.	Language/ dialects	Folklore	Value typology	Detailed biocultural associations
1	Adi	The Adi tribe of Arunachal Pradesh talk about the abnormal appearance of hornbills when compared with other birds through their belief. They believe that if a lady happens to eat hornbill meat during her pregnancy, it will cause some deformity in the infant. The new-born child may suffer from having disproportionate body parts like hornbills such as their beak.	Spiritual value; Ecological value; Physical and use value	Aesthetic, belief, ecological observation
2	Dimasa	In Dimasa language, Great Hornbill is called " <i>Daoyung</i> ". Killing of <i>Daoyung</i> during the breeding season is considered as a sinful act among Dimadas tribe of Assam. It is believed that killing male <i>Daoyung</i> during their breeding season would leave the female <i>Daoyung</i> and the chick starving inside the nest as he is the primary provider. Thus the killing of male <i>Daoyung</i> would not only result in the death of the male but also the inevitable death of the female and their offspring due to starvation (Parbo, 2026).	Spiritual value; Ecological value; Physical and use value	Belief, ecological observation, anthropomorphic quality
3	Gujjari	In the foothills of Himalayas, Van Gujjars relate Indian Grey Hornbill to the " <i>lamdor</i> " – a long cotton rope that is used with a stone tied to it, ablaze and flung into the air to scare away elephants that come near their <i>dera</i> (a hut) - due to its long and slender tail.	Physical and use value	Aesthetic
4	Gujjari	Owing to the loud vocalizations of the Great Hornbill, Van Gujjars call it ' <i>Margai</i> ' meaning Buffalo. They believe that presence of hornbill nest or roost site in the grazing areas brings good fortune for cattle rearing.	Spiritual value; Ecological value	Belief, behavioural observation
5	Gujjari	Sighting the hornbill in the vicinity of the houses and grazing areas is considered to bring good fortune for cattle rearing. Van Gujjars believe that when hornbill is present around, they will not have troubles in getting cattle grazing permits and will get plenty of grass for their cattle.	Spiritual value; Physical and use value	Belief, material value
6	Kadar	The Kadar tribe of the Anamalai Hills knows that ' <i>Ongal</i> ' – Great Hornbills gather at a huge fig tree from various places to exchange information on where and what is fruiting in the forest. Also to gossip!	Ecological value; Physical and use value	Behavioural observation, anthropomorphic quality

No.	Language/ dialects	Folklore	Value typology	Detailed biocultural associations
7	Kadar	All the forest animals were going to the wedding of <i>Kadavul</i>, the God. Most of the large animals and birds reached the celebration on time, but the <i>Chural Aamai</i> (Forest Cane Turtle, <i>Vijayachelys silvatica</i>) was afraid that he would be late because of his slow pace. Unlike Langurs, the <i>Ongal</i> (Great Hornbill) agreed to take the <i>Aamai</i> to the wedding ceremony. The <i>Ongal</i> instructed the turtle to bite hard onto his tail during the flight and warned him neither to look down nor to open his mouth, as doing so might cause the <i>Aamai</i> to lose his grip and fall. As they took off and soared high above the forest, the animals below chorused in amazement, saying that the <i>Ongal</i> and <i>Aamai</i> were speeding along, jumping and leaping through the sky. The <i>Aamai</i> heard their chanting and craned his neck to look down. The animals below were astonished to see the <i>Aamai</i> flying. The <i>Aamai</i> felt wonderful and, in excitement, opened his mouth to exclaim in wonder. As a result, lost his grip and fell through the canopy of <i>Surlimaram</i> onto the forest floor, badly damaging his carapace. The <i>Ongal</i> could not help the injured <i>Aamai</i>, so he flew to directly to the <i>Kadavul</i> and told him about the plight of the <i>Aamai</i>. After the ceremony, <i>Kadavul</i> returned to the place where the <i>Aamai</i> had fallen. With the help of black ants, he collected all the pieces of the carapace and carefully stitched them back together. As the <i>Aamai</i> had missed the feast, <i>Kadavul</i> spread some leftover rice grains on the ground for him. Those grains turned into delicate white <i>kumin</i> mushrooms, which all tortoises like to eat. The Kadar believe that <i>kumin</i> mushrooms live for only one day, the day of <i>Kadavul</i>'s wedding, and that the <i>Aamai</i> still bears the stitch marks between the pieces of its carapace.	Spiritual value; Ecological value; Physical and use value	Anthropomorphic quality, spiritual symbolism, belief, aesthetic, sacredness
8	Kiranti	A folk tale from the Rai Kirat community tells of three hornbills— the Great Hornbill (GH), the Oriental Pied Hornbill (OPH), and the Rufous-necked Hornbill (RNH)— who were siblings. OPH was the younger brother, GH was the elder sister, and RNH was the younger sister. They were orphans and very poor. One day, OPH felt hungry, but there was no food available. So, the two sisters asked OPH to sleep while they went to search for food in the village. They found food, but when they returned, they mistakenly believed that OPH had died in his sleep. Grieving, they dug a pit and buried him. Afterward, the sisters decided to part ways: RNH chose to live in the higher elevations, while GH went to the plains. When OPH woke up, he realized he had been buried and that his sisters had left him. He decided to live in the area between the plains and the hills. Later, the sisters learned that OPH was alive, and they went in search of him. When they reunited, they agreed to meet every year. This reunion now coincides with the festivals celebrated by the Rai Kirat community, known as "<i>Udauli</i>" and "<i>Ubhauli</i>." <i>Udauli</i> marks the downward migration of animals from the highlands to the plains at the start of winter, while <i>Ubhauli</i> celebrates the arrival of summer.	Spiritual value; Ecological value; Physical and use value	Anthropomorphic quality, belief, ecological and phenological observation

No.	Language/ dialects	Folklore	Value typology	Detailed biocultural associations
9	Konkani	In the Western Ghats, Konkani communities call hornbills “Devpakshi” (the holy bird).	Spiritual value	Sacredness, Spiritual symbolism
10	Malayalam	From Malayalam novels <i>Nadan Premam</i> (Transl. Folk Love) and <i>Oru Deshathinte Kadha</i> (Transl. Story of a place), there is a folklore that explains why casque came to be on the head of the hornbill. There was a young boy who used to give water to the cows of the god. One day, he did not give water to the cows and slept with the <i>Marika</i> (a wooden spoon, or wooden mug). When the god saw that the cows were dying of thirst, he came to see that the boy was sleeping. Immediately, the god placed the <i>Marika</i> on his head. Then he cursed him that he would become a bird with <i>Marika</i> on its head. (Sumasmitha, 2012)	Ecological value	Aesthetic, ecological observation
11	Mara Reih	Ved (2011) refers to the documentation by Parry (1932) from Lakher tribe of Mizoram about their belief about hornbills. It is ‘ana’ (prohibited) however to shoot the cock bird of any of the four kinds of hornbill found in the hills during the nesting season which lasts from March to July. When the hen hornbill hatches out her eggs and brings up her young inside a hollow tree, she never moves out until her nestlings can fly, when the cock removes the clay which encloses her in the nest and lets her out. Meanwhile she is entirely dependent on the cock for all her food. For this reason, Lakher believe that if they shoot the cock, <i>Khazangpa</i> (God) will be angry and punish them, as the hen and her young will inevitably die; hence it is an <i>ana</i> to kill a cock hornbill at this season. Lakher, however, have no scruple whatever about killing and eating a hen and her young. As soon as a man has marked down a hornbill’s nest, he reserves it for himself by driving a bamboo or wooden stake into the trunk of the tree. This is called <i>pahaw</i> . When the young have grown large enough to be worth eating, the finder of the nest robs it and kills and eats the hen and her young. When any one robs a hornbill’s nest, he must place a short piece of bamboo or stick in the nest before he leaves it. This is called <i>masongpa</i> . The belief is that when the cock comes home and finds his family gone, he picks up the piece of stick in his beak, carries it off to the King of Hornbills and tells him that his family has been killed with this stick. The King of the Hornbills, seeing that the hen and her brood have not died because the cock had neglected to feed them, gives the widower another wife. Next year the cock brings his new wife to make a nest in the same hollow tree, and thus affords another feed to the man who has reserved the nest. Once a man has reserved a nest it is his forever, and he believes that so long as he puts a piece of stick in the nest after robbing it, he can take the nest every year with impunity, as the hornbill will always find another mate.	Spiritual Value; Ecological value; Physical and use value	Belief, ecological observation, anthropomorphic quality, Phenological observation
12	Marathi	In the southernmost part of Maharashtra, people say that hornbills never come to ground to drink water. It only drinks water from the rains. The call of hornbills brings the news of the monsoon onset.	Spiritual value; Ecological value	Phenological observation, symbolism

No.	Language/ dialects	Folklore	Value typology	Detailed biocultural associations
13	Marathi	The cackles and loud barks of hornbills get their name as ' <i>Kakaner</i> ' in the Konkan region of Maharashtra.	Ecological value; Physical and use value	Identity, behavioural observation
14	Marathi	When hornbills are seen in the orchards in the Konkan region, people believe that they will have a great harvest that season.	Spiritual value; Ecological value; Physical and use value	Belief, ecological observation, material value
15	Mey/ Sherdukpen	The Sherdukpen tribe of Arunachal Pradesh call a man who takes care of his wife and children as ' <i>Devang Abo</i> '. <i>Devang Abo</i> is a name for the male hornbill as he looks after the female and the chick that are in the nest.	Ecological value; Physical and use value	Anthropomorphic quality, behavioural observation
16	Miri	The Mihlong clan from Mizoram claim to be descended from the Great Hornbill. No member of this clan may kill a hornbill, as they say that if they ever ate Hornbill's meat it would be equivalent to eating their father and mother (Ved, 2011).	Spiritual value	Belief, anthropomorphic quality
17	Naga	During nesting, male hornbills should not feed on fruits alone. If he does so then the female and chick do not accept food from him. The clever male hornbill goes near the waterfall to feed himself and the sound of the flowing waterfall hides the sound of gulping fruits. After the nesting, a female hornbill takes care of the male who is exhausted by searching and providing food at the nest. This folklore is from Nagaland.	Spiritual values; Physical and use value	Anthropomorphic quality, belief
18	Nepali	A Nepali proverb from North Bengal saying when someone is gobbling food without properly chewing it, " <i>Hongrayo ley pangrakhayekojastainakhanu</i> " translates to "Don't eat in the manner like hornbills eat <i>Pangra</i> (name of a fruit)". Hornbills pluck fruits from the tree and store them in a gular pouch, and regurgitate later to feed the inmates or themselves.	Ecological value; Physical and use value	Behavioural observation, anthropomorphic quality
19	Tamizh	The name for the hornbill in Tamizh language is ' <i>iruvachi</i> ' meaning a bird with two mouths/beaks, referring to the large beak and a casque.	Physical and use value	Aesthetic
20	Unknown	In a folklore from northeast India (state unknown), hornbills are thought to be very jealous birds. If male sees another bird around the nest, it won't feed the chick and female. Hence, they choose a very tall and huge tree to nest in.	Ecological value; Physical and use value	Anthropomorphic, ecological observation
21	Zeme	The hornbills collect stones from the river Nbieki and place them in the nest to make it strong and withstand the storm. This folklore comes from the Zeliang tribe from Nagaland. Similar folk stories are known from the catchment of the river Barak that flows through the states of Manipur, Nagaland, Mizoram and Assam.	Physical and use value	Anthropomorphic quality

No.	Language/ dialects	Folklore	Value typology	Detailed biocultural associations
22	Zeme	Sighting a hornbill is considered as a misfortune in many tribes from the north eastern part of the country. The Zeliang community believes that on seeing a hornbill, one will meet with an accident. Many elderly people do not proceed for work if they see one. Some also practice a day-long fasting. Adi Tribe from the Upper Siang, Arunachal Pradesh believe that if you dream of hornbill, it brings bad luck to the family.	Spiritual value	Belief, spiritual symbolism
23	Zeme, Liangmai	One belief from the Zeliang tribe from Nagaland has an elaborate folklore that depicts the beauty of hornbills and their absence in the village. The story goes—"once upon a time, there was a boy in the village. He was living with his father and stepmother after his mother passed away. The stepmother was unkind to this boy and would make him do hard work without giving him good returns or enough food. The boy happened to work in a farm of a very kind couple who owned it. They were very warm and would always invite the boy for lunch on the farm. The boy was hesitant to eat with them, as he was ashamed of his lunchbox. But eventually the couple started sharing their lunch with the boy. The boy requested a <i>mekhala</i> (traditional attire) to the kind lady and wore it. He then asked the couple how he looked. The couple admired his appearance and complimented him on how well the <i>mekhala</i> suited him. He climbed up a tree and asked again, they said, "Good". He climbed even higher up to the tree top and repeated the same question. The couple answered, "Good". The boy turned into the hornbill and flew away. The next day, the hornbill flew over the village. The kind lady asked for her <i>mekhala</i> . Hornbill replied, "I am happy to give you my best tail feather". The couple was delighted to get the best tail feather. The news soon reached the stepmother and she demanded the tail feather. As revenge to her ill-treatment given to him, the hornbill pooped on her head. Stepmother got furious and cursed that hornbill won't be welcomed in their village ever after. The Zeliang tribe believes that this story is the reason behind why they don't see hornbills in their village. A similar folklore is documented from the Liangmai tribe from Nagaland (Daimai & Parhi, 2021)	Spiritual value; Ecological value; Physical and use value	Aesthetic, anthropomorphic quality, belief, ecological observation

of non-Indigenous researchers.

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