

SHORT COMMUNICATION

Live non-human primate trafficking in Bangladesh: A growing threat to the remaining populations

Marjan Maria^{1,2,3} , Mst Sadia Afrin Shimu^{3,4} and Hassan Al-Razi^{4,5}

¹Plumploris e.V., Mergelteichstraße 80, Dortmund, Germany.

²Nocturnal Primate Research Group, School of Social Sciences, Oxford Brookes University, Oxford, UK.

³Delta Biodiversity Research and Conservation Lab, Catholic Mission Road, Sreemangal, Bangladesh.

⁴Faculty of Life and Earth Science, Department of Zoology, Jagannath University, Dhaka, Bangladesh.

⁵Department of Anatomy, Physiology, and Human Biology, School of Human Sciences, The University of Western Australia, 35 Stirling Highway, Perth WA 6009 Australia.

Corresponding author: Hassan Al-Razi (hassan.alrazi@research.uwa.edu.au)

<https://zoobank.org/C9679EE9-F2FC-44B2-BE69-801DF829CE9E>

ABSTRACT. Despite being crucial to forest ecosystems and biodiversity, primates globally face severe threats from trafficking, driven by demands for pets, traditional medicine, and biomedical research. Primate trafficking is a little-known issue in Bangladesh and has not been well-documented. This study investigates the recent trends and patterns of primate trafficking in Bangladesh from January 2021 to June 2024, utilizing secondary data from online news portals. We documented 19 trafficking incidents involving 32 primates across ten districts. Five species were identified as trafficked, with the capped langur, Bengal slow loris, and Western Hoolock Gibbon being the most affected. Traffickers predominantly targeted juveniles due to their manageability and appeal. Most of the animals were sourced from the Chattogram division and transported using public transport, with most interceptions made by the Bangladesh Police. Our findings highlight a structured trafficking network and call for comprehensive studies to trace the trafficking routes and economic transactions. This study underscores the urgent need for enhanced conservation measures, stricter enforcement of wildlife protection laws, and regional cooperation to combat primate trafficking effectively.

KEYWORDS. Bengal slow loris, capped langur, conservation, Phayre's langur, threat, Western Hoolock Gibbon.

Primates naturally inhabit tropical and subtropical regions, especially in forests, apart from a few exceptions (Kalbitzer and Chapman 2018). They are a vitally important part of the forest ecosystem and play key roles in predator-prey dynamics, seed dispersal, pollination, forest regeneration, and carbon sequestration (Brodie et al. 2021). Additionally, as our closest biological relatives, primates are crucial models for studying human ecology and evolution (Estrada et al. 2017). Despite being an important part of the ecosystem, the primate population is declining rapidly globally. Nearly 69% of primate species are currently threatened with extinction, and around 94% of species have populations that are declining (Garber et al. 2024). Whereas in 2017, 60% of species were threatened, and for 75% of species population was declining (Estrada et al. 2017). Habitat loss, logging, mining, hunting,

illegal trading or trafficking are rising threats to primates all over the world (Garber et al. 2024).

The main purposes of primate trafficking are use as pets, consumption, traditional medicine, or use in bio-medical experiments (Estrada et al. 2017, Nijman et al. 2023, Garber et al. 2024). Primate trade is a huge industry. The legal export market value of a single primate species, the Long-tailed macaque, *Macaca fascicularis* (Raffles, 1821), from ten countries between 2010 and 2019 was estimated at USD 1.25 billion (Hansen et al. 2022a). The free-ranging population of a particular primate species can decline due to trafficking (Badihi et al. 2024, Garber et al. 2024). For example, 80% of the wild population of Barbary macaques, *Macaca sylvanus* (Linnaeus, 1758), declined where the illegal trafficking is one of the major reasons (van Uhm 2016). Primate trafficking is not only a

threat to the primate population but also to humans and other animals. It can cause disease transmission between humans, primates, and other animals (Oliveira and Santos 2023).

Bangladesh is a densely populated small country in South Asia. Forested lands in this country are highly fragmented, with only a few remaining forest patches scattered in the northeast, southeast, and southwest, totalling about 9.82% of the total land area (BFD 2021). Despite its dense population and limited forest area, this country is home to nine non-human primate species. Although according to IUCN Bangladesh (2015), there were ten primate species in Bangladesh. Most recently, *M. fascicularis* became locally extinct (Hansen et al. 2022b). Seventy-eight per cent of primate species in this country are under the threatened category, and most of them are surviving in the last remaining forest patches (IUCN Bangladesh 2015, Al-Razi et al. 2019, 2020, Maria et al. 2022). Primates of this country are pressured by habitat loss, road accidents, electrocution, and hunting (IUCN Bangladesh 2015, Al-Razi et al. 2019, Maria et al. 2022). Thus, trafficking poses a serious threat to the primate population that remains. Though IUCN Bangladesh (2015) mentioned illegal trade as a major threat for 26.5% of the country's mammalian species, there is no published document available on the recent scenario of primate trading and trafficking in Bangladesh, except for the work by Uddin et al. (2022). In this study we presented the very recent scenario of primate trafficking in Bangladesh.

For this study, we used only secondary data. Published news and social media posts are the data sources for wildlife trafficking. As we found the same information from online news portals and social media, we chose online news portals as a more reliable data source. Besides these, online news portals provide more detailed information than social media posts. Online news portals were searched for information that matched the information published between January 2021 and June 2024. We selected this period because, the aim of this study was to present the very recent scenario of primate trafficking in Bangladesh. We used the Google search engine to harvest data from different national news portals. We used the search terms: 'trafficking', 'trading', 'confiscate' and 'rescue' with 'primate', 'monkey', 'langur', and 'loris' in Bengali and English. To get the detailed information, we read the entire news very carefully. We collected the date of incidents, place of rescue, place of capture, destination, name of the species, and number of individuals. We mostly determined the age of the primates as adults, sub-adults, and juveniles directly from the news. All the news were published after seizing the animals. In the news, the name and age of the species were confirmed by the forest staff

(different employees of the Bangladesh Forest Department, especially ranger and divisional forest officer) who were on the spot or by a wildlife expert. For 15 incidents, age was directly mentioned in the news. For four cases, we determined the age from the photos provided in the news. We used Google Maps to extract geographical coordinates from the locations mentioned in the sources. If an exact location was not specified, we used the central point of the subdistrict for all records (Shah and Khan 2020). Using 19 data points, we prepared a map showing trafficking incidents by QGIS (version 3.32.0). To visualize the figures, we used R version 4.3.1 (R Development Core Team 2023).

According to the data, a total of 19 primate trafficking incidents were recorded from January 2021 to June 2024, resulting in the rescue of 32 individuals. From catching to crossing the border, trafficking incidents have taken place in a total of ten districts (Fig. 1A). The same number of trafficking incidents occurred in both 2022 and 2023 ($n = 8$). However, the number of rescued individuals differed, with ten individuals being rescued in 2022 and 16 in 2023 (Fig. 1B). It was found that among the eight species of primates in Bangladesh, five species were trafficked. We identified the Capped langur, *Trachypitecus pileatus* (Blyth, 1843), ($n = 12$) as the most trafficked primate in Bangladesh, followed by the Bengal slow loris, *Nycticebus bengalensis* (Lacépède, 1800), ($n = 9$) and the Western Hoolock Gibbon, *Hoolock hoolock* (Harlan, 1834), ($n = 6$). Among the total number of trafficked individuals, 47% were adults, 20% were subadults and 33% were juveniles (Table 1). The increase in the total percentage of adults is due to the high percentage of adult Bengal slow loris, which was 89%, and 11% of them were subadults. For capped langurs, the percentage of adults, subadults, and juveniles was the same (33% for each age group). As for Western Hoolock Gibbons, 50% were juveniles, 17% were subadults, and 33% were adults. The majority of the rescued animals were rescued by the Bangladesh police ($n = 25$), followed by the Bangladesh Forest Department and the Border Guard Bangladesh (Fig. 1C). We were able to determine the exact destination of the animals in 68% of trafficking cases.

Table 1. Number of different age groups for all trafficked primates.

Species	Total	Juvenile	Sub-adult	Adult
<i>Trachypitecus pileatus</i>	12	4	4	4
<i>Nycticebus bengalensis</i>	9	0	1	8
<i>Trachypitecus phayrei</i>	4	3	1	0
<i>Hoolock hoolock</i>	6	3	1	2
<i>Macaca mulatta</i> (Zimmermann, 1780)	1	0	0	1

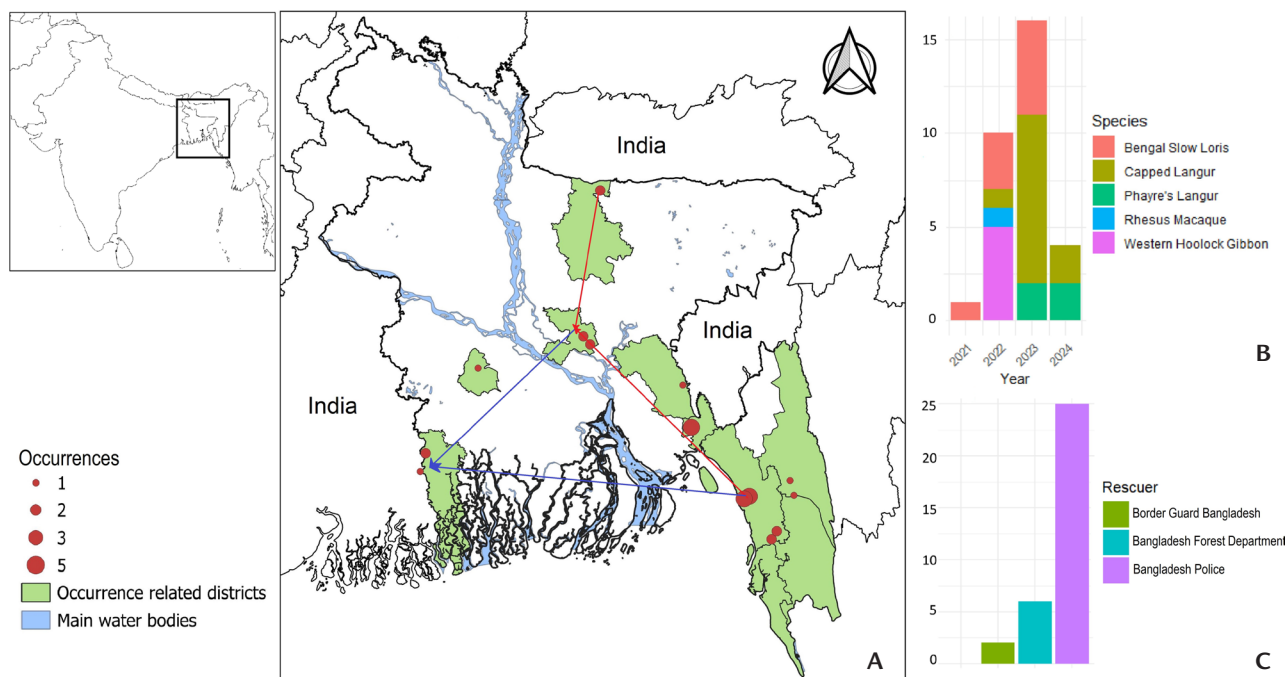


Figure 1. (A) Map showing locations and frequencies of primate trafficking incidents; here, red dots show the places from where the animals were confiscated. Red arrows indicate local destinations for trafficked primates, while blue arrows indicate international destinations. (B) Number of different primate species trafficked every year. (C) Number of animals rescued by different government organizations.

In this study, we identified five primate species, with the highest number for capped langur. Capped langur is a globally vulnerable species and its population is declining (Das et al. 2020). We uncovered the largest primate trafficking operation for this species. In November 2023, five *T. pileatus* were rescued from the traffickers. For this trafficking, the collector received 70000 BDT (800 USD) to collect and transport the langurs to Dhaka. The second highest trafficking primates was Bengal slow loris. Lorises are frequently traded for pet keeping (Nekaris and Jaffe 2007), traditional medicines (Starr et al. 2010), and the photo prop trade (Osterberg and Nekaris 2015). In India and Myanmar, trading and trafficking are already identified threats to Bengal slow loris (Radhakrishna et al. 2010, Nijman et al. 2014, Nekaris et al. 2020), but in Bangladesh, there were no published documents on slow loris trafficking. Incidents of slow loris trafficking have been frequent in recent years. Western Hoolock Gibbon is a globally endangered species and the only ape known to occur in Bangladesh (IUCN Bangladesh 2015, Brockelman et al. 2019). There are only around 450 individuals of the species in Bangladesh (Naher et al. 2021), therefore, the record of six individuals being

trafficked in three years is alarming. The same situation is true for Phayre's leaf-monkey, *Trachypithecus phayrei* (Blyth, 1847). It's a globally Endangered species with a declining population. Previously, there was no record of trafficking of this species in Bangladesh (IUCN Bangladesh 2015, Al-Razi and Naher 2021).

All 32 individuals mentioned here were collected in their natural habitat. We were able to identify the exact place of collection in 68% of incidents. All the individuals were collected in four districts (Chattogram, Rangamati, Bandarban, and Cox's Bazar) in the Chattogram division of the southeast region. The major portion of the evergreen and semi-evergreen forests of Bangladesh exist in this region (IUCN Bangladesh 2015). There is a trafficking chain for primate trafficking; local agents (first party) collect the animals with the help of forest-adjacent people and transfer them to either Chattogram or Dhaka. If the first party hands the animal over to the second party in Chattogram, the second party transfers the animal to a third party in Dhaka. The third party then sends the animals to the border area of the Khulna division and then to India. In one case, animals were sent to Cox's Bazar district to send them to Dhaka (Fig. 1A).

We did not find the exact price of the animals in this study except for one incident of capped langur (mentioned above).

From the study, it was found that traffickers prefer to target juvenile (or sub-adult) animals for trafficking. According to Nijman (2005), juvenile primates are in high demand for trading. We assume the reason behind this could be that juvenile primates look cute and are easier to train and handle. Another reason could be the easier transport. Traffickers can easily carry small primates and hide them anywhere. For the Bengal slow loris, the situation was different. Since the Bengal slow loris is a small primate, traffickers mostly captured adults from the wild. Though several previous research mentioned that to collect the baby, female primates are killed (Nijman 2005, Freund et al. 2017). We did not get any information about the collecting process of the primates and what was the fate of the other group members of the group for living primates.

For transporting the animals, traffickers primarily used public transport. Most often, primates were confiscated from inter-city buses. Primates were transported by bus in two ways: either the members of the trafficking gang carried the animals themselves or they used bus staff to transport them. The Bangladesh Police (especially highway police) seized the majority of the trafficked primates, especially during their regular searches on the Dhaka-Chattogram highway. Besides the Bangladesh Police, the Forest Department of Bangladesh and the Border Guard Bangladesh also seized the primates. Bangladesh police identified the traffickers as members of an international trafficking gang. These gang members send primates to Kolkata, India, but the animals' final destination remains unknown. We recommend a detailed study in Bangladesh and India to find out the final destination of the primates and how much money is transacted at each step of trafficking.

This study reveals a concerning rise in primate trafficking in Bangladesh. The data indicate a well-organized trafficking network targeting primarily juveniles, posing a severe threat to the country's primate populations. Although the actual number of trafficking incidents is likely higher than reported, as some traffickers may successfully evade detection and prosecution by law enforcement. Effective intervention requires enhanced conservation strategies, stricter law enforcement, and international collaboration to disrupt these trafficking networks and protect these vital components of forest ecosystems. Immediate actions are necessary to prevent further declines and ensure the survival of these threatened species.

LITERATURE CITED

- Al-Razi H, Naher H (2021) Status of Phayre's langur *Trachypithecus phayrei* in Satchari National Park Bangladesh. Asian Primates Journal 9(1): 10–19.
- Al-Razi H, Hasan S, Ahmed T, Muzaffar SB (2020) Home range, activity budgets and habitat use in the Bengal Slow Loris (*Nycticebus bengalensis*) in Bangladesh. In: Nekaris KAI, Burrows A (Eds) Evolution, Ecology and Conservation of Lorises and Pottos. Cambridge University Press, Cambridge, 193–203. <https://doi.org/10.1017/9781108676526.019>
- Al-Razi H, Maria M, Muzaffar SB (2019) Mortality of primates due to roads and power lines in two forest patches in Bangladesh. Zoologia 36: e33540. <https://doi.org/10.3897/zoologia.36.e33540>
- Badihi G, Nielsen DRK, Garber PA, Gill M, Jones-Engel L, Maldonado AM, et al. (2024) Perspectives on Conservation Impacts of the Global Primate Trade. International Journal of Primatology 45: 972–999. <https://doi.org/10.1007/s10764-024-00431-9>
- BFD (2021) Bangladesh Forest Department. <https://bforest.gov.bd/> [Accessed: 12/07/2024]
- Brockelman W, Molur S, Geissmann T (2019) *Hoolock hoolock*. The IUCN Red List of Threatened Species 2019: e.T39876A17968083. <https://doi.org/10.2305/IUCN.UK.2019-3.RLTS.T39876A17968083.en> [Accessed: 09/07/2024]
- Brodie JF, Williams S, Garner B (2021) The decline of mammal functional and evolutionary diversity worldwide. Proceedings of the National Academy of Sciences of the United States of America 118: e1921849118. <https://doi.org/10.1073/pnas.1921849118>
- Das J, Chetry D, Choudhury A, Bleisch W (2020) *Trachypithecus pileatus* (errata version published in 2021). The IUCN Red List of Threatened Species 2020: e.T22041A196580469. <https://doi.org/10.2305/IUCN.UK.2020-3.RLTS.T22041A196580469.en> [Accessed: 09/07/2024]
- Estrada A, Garber PA, Rylands AB, Roos C, Fernandez-Duque E, Di Fiore A, et al. (2017) Impending extinction crisis of the world's primates: Why primates matter. Science Advances 3: e1600946. <https://doi.org/10.1126/sciadv.1600946>
- Freund C, Rahman E, Knott C (2017) Ten years of orangutan-related wildlife crime investigation in West Kalimantan, Indonesia. American Journal of Primatology 79(11): 22620. <https://doi.org/10.1002/ajp.22620>
- Garber PA, Estrada A, Shanee S, Svensson MS, Arregoitia LV, Nijman V, et al. (2024) Global wildlife trade and trafficking contribute to the world's nonhuman primate conservation crisis. Frontiers in Conservation Science 5. <https://doi.org/10.3389/fcsc.2024.1400613>
- Hansen ME, Ang A, Trinh TTH, Sy E, Paramasivam S, Ahmed T, et al. (2022a) *Macaca fascicularis*. The IUCN Red List of Threatened Species 2022: e.T12551A221666136. <https://doi.org/10.2305/IUCN.UK.2022-2.RLTS.T12551A221666136.en>

- org/10.2305/IUCN.UK.2022.2.RLTS.T12551A221666136.en [Accessed: 27/06/2024]
- Hansen MF, Gill M, Briefer EF, Nielsen DRK, Nijman V (2022b) Monetary value of live trade in a commonly traded primate, the long-tailed macaque, based on global trade statistics. *Frontiers in Conservation Science* 3: 839131. <https://doi.org/10.3389/fcsc.2022.839131>
- IUCN Bangladesh (2015) Red List of Bangladesh. International Union for Conservation of Nature, Dhaka, vol. 2, 232 pp.
- Kalbitzer U, Chapman CA (2018) Primate responses to changing environments in the anthropocene. In: Kalbitzer U, Jack KM (Eds) *Primate life histories, sexroles, and adaptability: essays in honour of Linda M. Fedigan*. Springer International Publishing, Cham, 283–310.
- Maria M, Al-Razi H, Akbar A, Muzaffar SB, Nekaris K (2022) Artificial canopy bridge use by primates and other arboreal mammals in a fragmented tropical forest of northeast Bangladesh. *Folia Primatologica* (93): 1–12.
- Naher H, Al-Razi H, Ahmed T, Hasan S, Jaradat A, Muzaffar SB (2021) Estimated density, population size and distribution of the endangered Western Hoolock Gibbon (*Hoolock hoolock*) in Forest Remnants in Bangladesh. *Diversity* 13: 490. <https://doi.org/10.3390/d13100490>
- Nekaris KAI, Al-Razi H, Blair M, Das N, Ni Q, Samun E, et al. (2020) *Nycticebus bengalensis*. The IUCN Red List of Threatened Species 2020: e.T39758A179045340. <https://doi.org/10.2305/IUCN.UK.2020-2.RLTS.T39758A179045340.en>. [Accessed: 12/10/2024]
- Nekaris KAI, Jaffe S (2007) Unexpected diversity of slow lorises (*Nycticebus* spp.) within the Javan pet trade: implications for slow loris taxonomy. *Contributions to Zoology* 76(3): 187–196.
- Nijman V (2005) An assessment of trade in gibbons and orangutans on Java and Bali, Indonesia. *TRAFFIC South-east Asia*, Kuala Lumpur, 49 pp.
- Nijman V, Morcatty TQ, El Bizri HR, Al-Razi H, Ang A, Ardiansyah A, et al. (2023) Global online trade in primates for pets. *Environmental Development* 48: 100925. <https://doi.org/10.1016/j.envdev.2023.100925>
- Nijman V, Shepherd CR, Nekaris KAI (2014) Trade in Bengal Slow Lorises in Mong La, Myanmar, on the China Border. *Primate Conservation* 28: 139–142. <https://doi.org/10.1896/052.028.0112>
- Oliveira A, Santos R (2023) Infectious diseases of neotropical primates. *Brazilian Journal of Veterinary Pathology* 16(1): 1–34.
- Osterberg P, Nekaris KAI (2015) The use of animals as photo props to attract tourists in Thailand: a case study of the slow loris *Nycticebus* spp. *TRAFFIC Bulletin* 27: 13–18.
- R Development Core Team (2023) R: A Language and environment for statistical computing. R Foundation for Statistical Computing, Vienna. <https://www.R-project.org>
- Radhakrishna S, Datta-Roy A, Swapna N, Sinha A (2010) Population Survey of the Bengal Slow Loris, *Nycticebus bengalensis*, in Meghalaya, Northeast India. *Primate Conservation* 25: 105–110. <https://doi.org/10.1896/052.025.0102>
- Shah MNA, Khan MK (2020) OdoBD: An online database for the dragonflies and damselflies of Bangladesh. *Plos One* 15(4): e0231727. <https://doi.org/10.1371/journal.pone.0231727>
- Starr C, Nekaris KAI, Streicher U, Leung L (2010) Traditional use of slow lorises *Nycticebus bengalensis* and *N. pygmaeus* in Cambodia: an impediment to their conservation. *Endangered Species Research* 12: 17–23.
- Uddin N, Islam A, Akhter T, Ara T, Hossain D, Fullstone C, et al. (2022) Exploring market-based wildlife trade dynamics in Bangladesh – CORRIGENDUM. *Oryx* 58: 133–133. <https://doi.org/10.1017/s0030605322001466>
- van Uhm D (2016) Illegal wildlife trade to the EU and harms to the world. In: Spapens T, White R, Huisman W (Eds) *Environmental Crime in Transnational Context*. Routledge, London, 59–82.

 Submitted: July 12, 2024

Accepted: December 18, 2024

Editorial responsibility: Guilherme S.T. Garbino

Author Contributions

MM: Conceptualization, Data Curation, Methodology, Writing–Original draft, Writing–review & editing. MSAS: Data Collection, Writing–Original draft. HR: Conceptualization, Data Curation, Investigation, Methodology, Writing–Original draft, Writing–review & editing.

Competing Interests

The authors have declared that no competing interests exist.

How to cite this article

Maria M, Shimu MSA, Al-Razi H (2025) Live non-human primate trafficking in Bangladesh: A growing threat to the remaining populations. *Zoologia* 42: e24047. <https://doi.org/10.1590/S1984-4689.v42.e24047>

Published by

Sociedade Brasileira de Zoologia at Scientific Electronic Library Online – <https://www.scielo.br/zoool>

Copyright

© 2025 The Authors.