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PATTERNS OF WILDLIFE HUNTING AND KILLING IN A MOIST DECIDUOUS FOREST OF BANGLADESH

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Hunting wildlife is a long-standing tradition practiced by humans across generations. For forest-dwelling and adjacent communities, wild animals serve as an essential resource, providing food, supplemental income, cultural significance, and recreational value. However, in recent decades, the rising consumption of wildmeat has emerged as a global conservation issue, as unsustainable hunting threatens local wildlife populations with extinction (Robinson and Bennett, 2000). Reptiles and mammals are the most-hunted groups of animals, which are hunted for meat, skins, traditional medicine, or live capture for the pet trade (Nijman *et al.,* 2012; Scheffers *et al.,* 2019; Marshall *et al.,* 2020; Jaman *et al.*, 2023). In Bangladesh, the class Reptilia is represented by 167 species, of which 38 species are listed as threatened (IUCN Bangladesh, 2015a). Reptiles are found in four major habitat types of the country including forests (both mixed-evergreen and deciduous), wetlands, bushy/grassy/bamboo-covered areas, and homestead vegetations (IUCN Bangladesh, 2015a). The Bengal monitor lizard (*Varanus bengalensis*) is listed as Near Threatened in Bangladesh and Least Concern globally (IUCN Bangladesh, 2015a). This species exhibits an extensive geographic range, distributed from Afghanistan in the west to Vietnam in the east, encompassing numerous South and Southeast Asian countries including Bangladesh, Bhutan, Cambodia, China, India, Indonesia (specifically Java and Sumatra), Iran, Laos, Malaysia, Myanmar, Nepal, Pakistan, Sri Lanka, and Thailand (Papenfuss *et al.*, 2010; IUCN Bangladesh, 2015a). The Bengal monitor lizard exhibits a broad distribution across all major habitat types in the country, including coastal islands (IUCN Bangladesh, 2015a) and deciduous Sal forests (Jaman *et al.*, 2023). In Bangladesh, the class Mammalia is represented by 138 species, of which 38 species are listed as threatened (IUCN Bangladesh, 2015b). The mammalian species of the country inhabit all primary habitat types, including forested areas, wetlands, shrublands, grasslands, bamboo thickets, and homestead vegetations (IUCN Bangladesh, 2015b). The Jungle Cat (*Felis chaus*) is listed as Near Threatened in Bangladesh and Least Concern globally, which

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has a global distribution range in Central Asia, Southern Asia, and Africa (IUCN Bangladesh, 2015b). The Jungle cat has the widest distribution throughout the country including all forest ecosystems as well as homestead vegetation (Khan, 2008; Khan, 2015; IUCN Bangladesh, 2015b). The Himalayan Crestless Porcupine (*Hystrix brachyura*), assessed as Least Concern globally (Lunde *et al.,* 2016), ranges across South and Southeast Asia, including Bangladesh, Bhutan, China, India, and Indonesia (Lekagul and McNeely, 1988; Corbet and Hill, 1992; Lunde *et al.*, 2008; Mallick, 2012; Wilson *et al.*, 2016). In Bangladesh, the Himalayan crestless porcupine is reported from Sundarbans mangrove forest, but the distribution in the country is still unknown (Hasan and Neha, 2019). Unsustainable hunting practices can lead to declines in wildlife populations and alter the demographic structure of species. To control this problem, information on hunting and killing, hunting patterns and techniques, and understanding of factors are prerequisite. But the information on hunting and killing of wildlife in Bangladesh is very scanty. Here, we report occasional hunting events of wildlife in Madhupur National Park, the largest deciduous Sal (*Shorea robusta*) forest in north-central Bangladesh.

During the Mughal era over 400 years ago, the Bhawal-Madhupur Sal Forest tract covered around 500 km^2 and was distributed from the Garo Hills of the Meghalaya state of India to the capital Dhaka city of Bangladesh (Stanford, 1991). It was the hunting ground for Mughal Emperors who hunted Tigers, Rhinoceros, Elephants (Standford, 1991). The northern part of the Bhawal-Madhupur Sal Forest tract was designated as Madhupur National Park covering an area of 8436 ha (24°41.323'N and 90°8.275'E). Recent decades have seen the forest develop a mosaic structure, with alternating dense and sparse vegetation, scrublands, and encroaching human settlements (Naher *et al.,* 2016). A recent survey documented 151 wildlife species in the park, including 15 reptile and 15 mammal species (Monirujjaman and Khan, 2018). Two tribal clans, the Koch and the Mande (Garo) live in and around the forest, are highly dependent on the natural resource for their livelihoods (Rahman *et al.,* 2010).

During primate surveys in Madhupur National Park (MNP), on 21 January 2023, at 1028 h, we recorded a hunting event of Bengal monitor lizard at Goyra Village near Lohoria Deer Breeding Center. Two monitors (one adult and one juvenile) were caught by the hands by three people from the local indigenous community for bushmeat. The hindlimbs, forelimbs, tail, and ventral side of the body of the animals were cut with a sharp- locally made traditional sword named Ram-dao (Figure 1A). The species was identified as *Varanus bengalensis* having a flat and triangular body, grey body coloration on the dorsum with scattered black spots, and a yellowish ventrum (Chowdhuri and Chowdhuri, 2019). On 15 November 2023, at 0930 h, we recorded a killing event of Jungle cat at Chunia village

within the national park boundary. A rope was tied around the neck of the cat and hung it with a bamboo stick after killing (Figure 1B). The cat was killed with a spear, a long-pointed rod used as weapon. There was a prominent injury mark on the left forelimb of the cat. The cat was identified having a brownish straw-coloured coat, long tufted ear, white muzzle, short tail with a pattern of rings and a black tip at the end (IUCN Bangladesh, 2015b). The villagers claimed that, the cat regularly raid their chicken farms and causes economic loss by consuming chickens and destroying eggs. On 03 December, at 1935 h, we recorded another hunting event of Himalayan crestless porcupine in a pineapple garden near Lohoria Deer Breeding Center by a group of ethnic people in Madhupur National Park (Figure 1C). The porcupine was hunted with a spear. The spear was thrown at the porcupine from a distance and it hit in the neck region of the porcupine, and the animal died immediately. The porcupine was identified having short and sturdy limbs covered with brown hairs, one dark band on long dorsal quills and blunt muzzle (Hasan and Neha, 2019)

Wildlife harvesting by indigenous communities represents an important livelihood strategy across global cultures (Ferreira *et al.,* 2009), yet excessive hunting has become a significant threat to biodiversity, contributing to population declines and extinction risks for vulnerable species. The indigenous 'Koch' and 'Garo' communities living in and around Madhupur National Park

Fig.1. Hunted wild animals in Madhupur National Park: A) Bengal monitor lizard, B) Jungle cat, and C) Himalayan crestless porcupine

hunted wildlife for bushmeat occasionally and opportunistically. Informal interviews with indigenous people have revealed that, hunting events generally takes place during winter season. Young and mid-age peoples are mostly involved in

hunting of various wildlife using traditional tools. Although hunting of wild animals largely restricted to trade in different areas but the ethnic communities of this area are tends to hunt only for food. In Asia, available information on wildlife hunting is limited (Corlett, 2007; Alvard, 2000), where micro-level information on hunting by indigenous people is even more sporadic (Griffin and Griffin, 2000; Rao *et al.,* 2005). In Bangladesh, Barkat *et al.* (2021) documented wildlife hunting practices among the 'Santal' and 'Oraon' communities. However, research remains limited on other indigenous groups, including the 'Garo' and 'Koch' communities. This study addresses this gap by investigating contemporary wildlife hunting patterns (both sustained and occasional) among the indigenous communities in Madhupur National Park. We recommend detailed studies on hunting practices and techniques, hunting patterns and intensities, factors, impacts, and mitigation of hunting in the landscape and proper enforcement of laws against hunting.

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LITERATURE CITED

ALAVARD, M. 2000. The impact of traditional subsistence hunting and trapping on prey populations: data from Wana horticulturalists of upland Central Sulawesi, Indonesia. *Columbia Univesity Press, New York*. 214-230 **pp.**

BARKAT, A.I, LIZA, F.T., AKTER, S., SHOME, A.R., and RABBE, M.F. 2021. Wildlife hunting practices of the Santal and Oraon communities in Rajshahi, Bangladesh. *Journal of Threatened Taxa.* **13**(11), 19484-19491.

CORBET, G.B. and J.E. HILL 1992. The Mammals of the Indomalayan Region: A Systematic Review. *Oxford University Press, Oxford.* 488 **pp**.

CORLETT, R.T. 2007. The impact of hunting on the mammalian fauna of tropical Asian forests. *Biotropica*. **39** (3), 292-303.

CHOWDHURY, A.S., and CHOWDHURY, P. 2019. Cruelty to Varanus species of the Barak Valley, Assam, India. *Biawak*. **13**(1), 50-53.

FERREIRA, F.S., S.V., BRITO, S.C., RIBEIRO, W.O. ALMEIDA, and R.R. ALVES. 2009. Zootherapeutics utilized by residents of the community Poco Dantas, Crato-CE, Brazil. *Journal of Ethnobiology and Ethnomedicine*. **5**(1), 1–10

GRIFFIN, P.B., and GRIFFIN, M.B. 2000. Agta hunting and sustainability of resource use in Northeastern Luzon, Philippines. *Columbia University Press, New York*. 325-335 **pp.**

HASAN, M.A.U., and NEHA, S. A. 2019. The Himalayan Crestless Porcupine *Hystrix brachyura* Linnaeus, 1758 (Mammalia: Rodentia: Hystricidae): first authentic record from Bangladesh. *Journal of Threatened Taxa* **11**(12), 14624-14626.

IUCN BABGLADESH. 2015. *Red List of Bangladesh*. Volume 4: Reptiles and Amphibians. IUCN Internation Union for Conservation of Nature, Bangladesh Country Office, Bangladesh. xvi+320 **pp.**

IUCN BANGLADESH. 2015. *Red List of Bangladesh*. Volume 2: Mammals. IUCN International Union for Conservation of Nature, Bangladesh Country Office, Dhaka, Bangladesh. xvi+232 **pp.**

JAMAN, M.F., RABBE, M.F., SAHA, A., SHOME, A.R., and ALAM, M.M. 2023. Wildlife diversity and community structure in northern deciduous forest of Bangladesh. *Journal of Bangladesh Academy of Sciences*. **47**(2): 249-265. https://doi.org/10.3329/jbas.v47i2.68474

KHAN, M.M.H. 2008. *Protected Areas of Bangladesh – A Guide to Wildlife*. Nishorgo Program, Bangladesh Forest Department. 10-29 **pp.**

KHAN, M.A.R. 2015. *Wildlife of Bangladesh: Checklist-cum-Guide*. M.J. Alam, Chayabithi, Dhaka, Bangladesh. 568 **pp.**

LEKAGUL, B. and J.A. McNEELY 1988. *Mammals of Thailand, 2nd Edition*. Darnsutha, Bangkok. 758 **pp**.

LUNDE, D., A.T. SMITH and R.S. HOFFMAN 2008. Order Rodentia–Rodents, pp. 172–275. In: SMITH, A.T. and X. YAN (eds.). A Guide to the Mammals of China. *Princeton University Press, Princeton, New Jersey*. 544 **pp**.

LUNDE, D., K. APLIN and S. MOLUR 2016. *Hystrix brachyura* (errata version published in 2017). The IUCN Red List of Threatened Species 2016: e.T10749A115099298. Downloaded on 19 September 2019. https://doi.org/10.2305/IUCN.UK.2016-3.RLTS.T10749A22232129.en

MALLICK, J.K. 2012. Mammals of Kalimpong Hills, Darjeeling District, West Bengal, India. *Journal of Threatened Taxa.* **4**(12), 3103–3136.

MARSHALL, B.M., STRINE, C., and HUGHES, A.C. 2020. Thousands of reptile species threatened by under-regulated global trade. *Nature Communications*. **11**(1), 4738 pp.

MONIRUJJAMAAN and KHAN, M.M.H. 2018. Wildlife Diversity of Madhupur National Park, Bangladesh. *Jahangirnagar University Journal of Biological Science,* **7**(1), 1-13.

NAHER, H., KHAN, S.I., and AHMED, T. 2016. Population status and distribution of rhesus macaque, Macaca mulatta, in a moist deciduous forest of Bangladesh. *Bangladesh Journal of Zoology,* **44**(1), 11-22.

NIJMAN, V., SHEPHERD, C.R. and SANDERS, K.L. 2012. Over-exploitation and illegal trade of reptiles in Indonesia. *The Herpetological Journal*. **22**(2), 83-89.

PAPENFUSS, T., SHAFIEI BAFTI, S., SHARIFI, M., BENNETT, D. and SWEET, S.S. 2010. *Varanus bengalensis*. The IUCN Red List of Threatened Species 2010: e.T164579A5909661. Available at: http://dx.doi.org/10.2305/IUCN.UK.2010-4.RLTS.T164579A5909661.en. Downloaded on 26 April 2017.

RAO, M., MYINT, T., ZAW, T., and HTUN, S. 2005. Hunting patterns in tropical forests adjoining the Hkakaborazi National Park, north Myanmar. *Oryx*. **39** (3), 292-300.

RAHMAN, M.M., RAHMAN, M. M., and Alam, M. 2010. Disappearing forest tree species diversity in tropical moist deciduous forest and its implications: A case study in the Madhupur tract of Central Bangladesh. *Journal of Forest and Environmental Science*. **26**(3), 161-170.

ROBINSON, J., and BENNETT, E.L. 2000. Hunting for sustainability in tropical forests. *Colombia University Press.*

SCHEFFERS, B.R., OLIVEIRA, B.F. LAMB, I., and EDWARDS, D.P. 2019. Global wildlife trade across the tree of life. *Science.* **366**(6461), 71-76.

STANFORD, C.B. 1991. *The Capped Langur in Bangladesh: Behavioral Ecology and Reproductive Tactics.* Karger Medical and Scientific Publishers.

WILSON, D.E., T.E. LACHER, J. RUSSELL and A. MITTERMEIER 2016. *Handbook of Mammals of the World - Vol. 6. Lagomorphs and Rodents I.* Lynx Edicions, Barcelona, Spain. 987 **pp.**

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