




Local impact, global challenge: the role of domestic markets in the illegal wildlife trade

MELISSA ARIAS^{*1} , HANNAH N.K. SACEY²  and RESHU BASHYAL³ 

The illegal wildlife trade commonly conjures up harrowing images of mutilated tigers, elephants or rhinoceroses hunted by armed poachers and trafficked by international crime syndicates to fulfil the demands of rich elites. Such disturbing images have drawn global attention to illegal wildlife trade, and this is now a prolific research and conservation space. Although much remains to be learnt about this dynamic threat, advances have been made in regulation and enforcement and in changing the behaviours of traders and consumers, particularly in relation to high-value, charismatic species.

However, as researchers and conservationists working in Africa, Asia and Latin America, the images that come to our minds when we think about illegal wildlife trade involve a wider diversity of smaller, less charismatic species, and a complex web of cultures, practices and needs. Our concern is that although domestic wildlife markets in source countries have received less research and conservation attention, their impact is considerable. They involve high volumes that exert strong pressures on many species, including some that are highly threatened, operate under less enforcement scrutiny, are often embedded within ambiguous legal frameworks, and respond to complex socio-cultural dynamics and traditions. Despite the complexity and challenges, understanding and addressing illegal wildlife trade in domestic markets should be a global concern, as its effects are felt widely. Fortunately, this is now being acknowledged, and local voices are starting to describe the realities of the domestic illegal wildlife trade, as illustrated by the articles in this issue of *Oryx*, which offer valuable insights into the characteristics of wildlife trade in source areas and domestic markets across the world.

Domestic markets across Africa, Asia and Latin America are characterized by their diversity of species and purposes, and their high volumes. In Bangladesh, domestic markets boast a high diversity and abundance of wild and domestic, exotic and native, low- and high-value, common and threatened species of birds, reptiles and mammals suited to every taste and budget (Uddin et al., 2024). Markets elsewhere include rare species such as the Endangered Goliath frog in Cameroon (Tasse Taboue et al., 2024), and other frog species sold in local food markets across West Africa

(Sacey et al., 2023). Amongst plant and fungal taxa, some—such as the caterpillar fungus in the Himalayas (Bashyal & Roberts, 2024; Fan & He, 2024)—are traded in huge quantities, raising concerns regarding sustainability.

The purposes behind wildlife trade in domestic markets are equally varied. Species belonging to the same order can be used for different purposes, requiring different interventions. Such is the case of tortoises and hard-shell and soft-shell turtles in domestic markets in India, which are sold both as pets and meat (Sengottuvel et al., 2024). Threatened and high-value species are not exclusive to international markets, and species such as tigers and jaguars are also valued by local consumers, driving the trade in wildlife parts, derivatives and processed goods to supply both local and international cultural and medicinal demands (Uddin et al., 2024; Elwin et al., 2024).

Although domestic wildlife markets may not always resemble the organized, sophisticated, criminal networks of international wildlife trade, they involve many actors and methods, and can permeate beyond national confines. Domestic markets may arrange themselves into few or many trade nodes depending on the taxa and purposes behind the trade. For instance, tortoise and hard-shell turtle pet trade networks in India tend to be decentralized, with a large number of actors, whereas soft-shell turtle wild meat trade networks are more centralized, with a small number of key actors controlling the trade (Sengottuvel et al., 2024). In some cases, wildlife trade concentrates around specific hotspots, such as Chennai in southern India, which is a central node for the domestic and international bird and reptile pet trade (Kalra et al., 2024; Sengottuvel et al., 2024), whereas in others it is dispersed across urban, peri-urban, and rural markets (Uddin et al., 2024). Intermediaries help to perpetuate wildlife trade in domestic markets by providing financial incentives to local hunters and by forging links with international markets, as in the case of the trade in Goliath frogs in Cameroon (Tasse Taboue et al., 2024) and of passerine birds in Brazil (Silva et al., 2022).

Like international trade, domestic wildlife markets adapt quickly to changing conditions and opportunities of wildlife availability, access, connectivity, seasonality and enforcement. Large fluctuations in the quantity, diversity and type of species have been detected in Bangladeshi domestic markets in response to the changing seasons, with impassable roads in the wet season offering protection from enforcement (Uddin et al., 2024).

*Corresponding author, melissaarias@gmail.com

¹Amazon Coordination Unit, World Wildlife Fund, Lima, Peru

²Centre for Biodiversity Conservation Research, Legon, Accra, Ghana

³Greenhood Nepal, New Baneshwor, Kathmandu, Nepal

Mirroring international illegal wildlife trade, domestic markets are increasingly taking advantage of social media platforms, which provide a convenient way for traffickers to advertise their products. Gluszek et al. (2021) highlighted the increased use of digital platforms as a key concern across Mesoamerica, with rare and threatened species finding their way to both national and international consumers through online trade, including the caterpillar fungus (Bashyal & Roberts, 2024), invasive turtles (Liu et al., 2021), saiga (Roberts et al., 2022) and ivory (Yeo et al., 2024). However, it is commendable that some platforms are removing flagged listings and raising awareness about illegal trade, including in relation to the domestic trade ban on ivory in Singapore (Yeo et al., 2024). Nevertheless, further evaluations of online wildlife trade are required, to improve conservation interventions and prevent the expansion of illegal wildlife markets in this way.

International wildlife markets tend to focus on trade in high-value, threatened species regulated by international laws, demanding specialized traders and sophisticated methods to circumvent transboundary enforcement. Domestic wildlife trade, however, is facilitated by lower national enforcement capacities and weaker wildlife conservation laws. The lower risks mean that the domestic wildlife trade can afford to be less selective, less constrained in volume, and can offer business opportunities to traders with varying levels of experience. In Bangladesh, wildlife trade is often an opportunistic livelihood option for rural people, coinciding with patterns of unemployment dictated by the economy and the seasons (Uddin et al., 2024). Nevertheless, the country's domestic markets are consistently filled with large volumes and a diversity of species, as traders function under the conviction that authorities are unlikely to pay attention to the trade or to interfere with the livelihood activities of the poor (Uddin et al., 2024). The lower risk of enforcement in domestic markets is exemplified by the trade in animal body parts from a prison in Bolivia, where inmates produce goods such as wallets, hats and purses made with jaguar and boa skins for sale in local physical markets, with the permission of the prison's director (Elwin et al., 2024). The products are sold openly in markets near the prison, despite the illegality of this enterprise.

Illegal wildlife trade interventions targeting domestic suppliers and consumers require careful and nuanced consideration of the socio-cultural complexities behind the trade, and a rights-based and ethical approach (Newing et al., 2023). Concerns over the criminalization of vulnerable communities and the negative effects of one-size-fits-all approaches have been raised in the past (e.g. Cooney & Jepson, 2006), and continue to be relevant today as interventions to curb illegal wildlife trade enter the complex arena of domestic and cultural markets. The articles in this issue highlight the diversity of and conservation

concern about the domestic wildlife trade and demonstrate the breadth of research being carried out on this topic. *Oryx* has a tradition of publishing detailed and high-quality analyses of local conservation concerns that turn out to have global importance. This issue is no exception.

This Editorial and the *Oryx* articles cited herein are available as a virtual issue at cambridge.org/core/journals/oryx/virtual-issues.

References

- BASHYAL, R. & ROBERTS, D.L. (2024) A systematic survey of online trade in the caterpillar fungus *Ophiocordyceps sinensis*. *Oryx*, 58, 29–37.
- COONEY, R. & JEPSON, P. (2006) The international wild bird trade: what's wrong with blanket bans? *Oryx*, 40, 18–23.
- ELWIN, A., ASFAW, E., VIETO, R. & D'CRUZE, N. (2024) Going over the wall: insights into the illegal production of jaguar products in a Bolivian prison. *Oryx*, 58, 25–28.
- FAN, B. & HE, J. (2024) Mapping the *Ophiocordyceps sinensis* value chain: actors, profits and social institutions in south-west China. *Oryx*, 58, 38–47.
- GLUSZEK, S., ARIANO-SÁNCHEZ, D., CREMONA, P., GOYENECHEA, A., LUQUE VERGARA, D., MCLOUGHLIN, L. et al. (2021) Emerging trends of the illegal wildlife trade in Mesoamerica. *Oryx*, 55, 708–716.
- KALRA, S., DAVIES, A., MARTIN, R. & POONIA, A. (2024) Insights from the media into the bird trade in India: an analysis of reported seizures. *Oryx*, 58, 69–77.
- LIU, S., NEWMAN, C., BUESCHING, C., MACDONALD, D., ZHANG, Y., ZHANG, K. et al. (2021) E-commerce promotes trade in invasive turtles in China. *Oryx*, 55, 352–355.
- NEWING, H., FISHER, M., BRITAIN, S., KENRICK, J. & MILNER-GULLAND, E.J. (2023) How can we advance equitable, rights-based conservation? *Oryx*, 57, 273–274.
- ROBERTS, D., MUN, K. & MILNER-GULLAND, E.J. (2022) A systematic survey of online trade: trade in saiga antelope horn on Russian-language websites. *Oryx*, 56, 352–359.
- SACKEY, H., MCNAMARA, J., MILNER-GULLAND, E.J. & NTIAMOA-BAIDU, Y. (2023) The bushmeat trade in northern Ghana: market dynamics, drivers of trade and implications for conservation. *Oryx*, 57, 216–227.
- SENGOTTUVEL, R., MENDIS, A., SULTAN, N., SHUKLA, S., CHAUDHURI, A. & MENDIRATTA, U. (2024) From pets to plates: network analysis of trafficking in tortoises and freshwater turtles representing different types of demand. *Oryx*, 58, 78–89.
- SILVA, S., BRAGA, B., BRASIL, L., BAIA-JÚNIOR, P. & GUIMARÃES, D. (2022) The use of Passeriformes in the eastern Amazonia of Brazil: culture encourages hunting and profit encourages trade. *Oryx*, 56, 218–227.
- TASSE TABOUE, G.C., NTENE SOH, B.C., KOUMBO TAGAGOM, U.B., TCHASSEM FOKOOU, A.M., NGUEGUIM, J.R., GONWOUO, N.L. et al. (2024) Local perceptions, hunting and export of the Endangered Goliath frog *Conraua goliath* in Cameroon. *Oryx*, 58, 15–24.
- UDDIN, N., ISLAM, A., AKHTER, T., ARA, T., HOSSAIN, D., FULLSTONE, C. et al. (2024) Exploring market-based wildlife trade dynamics in Bangladesh. *Oryx*, 58, 56–68.
- YEO, H.H.T., NG, S.J.W., LEE, J.S.R., SOH, M.C.K., WONG, A.M.S., LOO, A.H.B. & ER, K.B.H. (2024) A systematic survey of the online trade in elephant ivory in Singapore before and after a domestic trade ban. *Oryx*, 58, 48–55.