

threatened wildlife offered for sale as exotic or novelty pets. The pink-headed fruit dove *Ptilinopus porphyreus* is endemic to montane forests on the Indonesian islands of Sumatra, Java and Bali. It is categorized as Least Concern (decreasing population) on the IUCN Red List. Seldom seen—the species is shy, silent and inconspicuous (although colourful, especially males), so amongst foliage in tall trees it is difficult to detect—and we have limited information on the species' conservation needs or of any specific threats.

Trade has not hitherto been considered a threat to the species. During 1978–2003 Van Balen & Nijman (*Bird Conservation International*, 2004, 14, 139–152) observed a total of eight individuals for sale in Denpasar, Bali, in 1989, 1993 and 2003. During 2012–2020 our team observed nine in 2018 (in Denpasar and Jakarta) and one in 2019 (Bandung). I have not found any other records of the species in trade.

On 2 January 2022 I searched four dedicated fruit-dove (*punai*) Facebook pages and three online platforms (Tokopedia, Shopee, Bukalapak) for the sale of pink-headed fruit doves (search terms walik ungu and punai ungu). On Facebook I found seven traders (two in Denpasar, and one each in Jakarta, Surakarta, Kediri, Jember and Pemogas) with a total of 33 birds for sale. No prices were given, and prospective buyers were directed to contact sellers via instant messaging services. On the online platforms I found adverts from five traders in Jakarta, Kediri, Ngawi and Surabaya, with at least 23 birds available. On average online traders had slightly more birds on offer than traders in traditional markets ($4.0 \pm \text{SD } 3.4$ vs $2.6 \pm \text{SD } 1.3$). I saw only adult-sized birds, and all must have been taken from the wild. Prices were USD $19.71 \pm \text{SD } 3.72$ for single birds (16 quotes) and USD $105.19 \pm \text{SD } 49.58$ for established pairs (two quotes). Online traders specify that payments will only be accepted via RekBer (an abbreviation for rekening bersama; i.e. the bank account of a trusted third party). Sellers and buyers do not have to meet in person, payments can be processed online, and birds are shipped directly to the buyer's address using motorcycle taxis for short distances, and trains and domestic planes for buyers in more distant locations. In the absence of harvest quotas, this trade is illegal and violates the terms and conditions of these online platforms.

That a 1-day online search for pink-headed fruit doves for sale resulted in evidence of 56 birds, three times the number recorded in physical bird markets over the last 4 decades, is disconcerting. It also demonstrates that even inconspicuous birds—which in the past would have been overlooked—are now traded in sufficient numbers that this could impact wild populations.

VINCENT NIJMAN (orcid.org/0000-0002-5600-4276, vnijman@brookes.ac.uk) Oxford Wildlife Trade Research Group, Oxford Brookes University, Oxford, UK

This is an Open Access article, distributed under the terms of the Creative Commons Attribution licence [CC BY 4.0](https://creativecommons.org/licenses/by/4.0/).

Observation of twins in hippopotamus in Nigeria

The large hippopotamus *Hippopotamus amphibius* is categorized as Vulnerable on the IUCN Red List. In West Africa, threats to the species are exacerbated by high human population densities and significant habitat degradation and loss. In Nigeria, Africa's most populous nation, many hippopotamus populations occur outside protected areas, in lakes, inland rivers and reservoirs; the largest populations yet recorded occur in large reservoirs in the country's northern region (Baker et al., 2020, *Aquatic Conservation*, 30, 1996–2003).

In October 2021, we conducted a census of hippopotamuses at the 300 km² Dadin Kowa Dam Reservoir, on the Gongola River in northeastern Nigeria. Most of the reservoir lies in Gombe State, with smaller areas in Yobe and Borno States. As part of the survey, funded by The A.G. Leventis Foundation, we investigated reports from local farmers of several sightings of a 'mom and two babies'. On two occasions, we observed a single adult female with two calves in flooded farmland along the western side of the reservoir; we also captured the trio in a drone video. On the second visit, one calf was initially resting under a tree c. 150 m from the female and second calf, both of which were mostly submerged in aquatic grasses. At the time of our study, the area around the reservoir was widely covered by farmland, notably guinea corn *Sorghum bicolor*. Local farmers reported observing the trio leave the water to forage in farmland during the day. We did not observe other hippopotamuses in proximity to the female and two calves.

Twins are rare in hippopotamuses. According to data from the Association of Zoos and Aquariums (AZA), of the 561 recorded births among hippopotamuses in AZA institutions from 1880 to 2021, only 6 (1%) were twins. In European zoos from 1850 to 2020, twins were reported < 1% of the time: 11 twins in 1,562 births (data from the European Association of Zoos and Aquaria). Given the precarious status of hippopotamuses in Nigeria, our observation of twins is encouraging. The most recent reports received from local people, in mid December 2021, indicated that both calves had survived, but that the trio may have moved elsewhere because of receding water levels.

We thank the Gombe Goes Green Project and the Gombe State Ministry of Environment for their support.

ADAMU USMAN *Kupto Community, Gombe State, Nigeria.*
SARAH M. FARINELLI *Department of Environmental Science and Public Policy, George Mason University, Fairfax, USA.*
LYNNE R. BAKER (orcid.org/0000-0001-7646-8521, lynnerbaker@yahoo.com) *IUCN Species Survival Commission Hippo Specialist Group, and Institute for Development, Ecology, Conservation and Cooperation, Rome, Italy*

This is an Open Access article, distributed under the terms of the Creative Commons Attribution licence [CC BY 4.0](https://creativecommons.org/licenses/by/4.0/).