CONSERVATION UPDATE

Online trade records of Grey-backed Myna *Acridotheres tricolor* may indicate poaching practices in Baluran National Park, East Java, Indonesia

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Illegal and unsustainable trade pose major threats to an increasingly long list of Asian songbirds (Owen *et al*. 2014, Capotosto & Shepherd 2015, Eaton *et al*. 2015, Lee *et al*. 2016). In Indonesia, particularly on the island of Java, keeping songbirds is deeply engrained in local culture (Nash 1993, Marshall *et al*. 2019, Miller *et al*. 2019). Trapping, predominantly to supply the country's domestic market (Chng *et al*. 2015), has already resulted in several bird species declining into local (near-) extinction (Eaton *et al*. 2015). This includes the endemic Black-winged Myna *Acridotheres* spp. complex that has been pushed to the brink of extinction by extensive illegal commercial trapping and is now classified as Critically Endangered on the IUCN Red List (BirdLife International 2018a,b,c).

The Black-winged Myna complex consists of three taxa, each with their distinct morphological features, that were previously considered to belong to a single species. These three taxa are recognised at the species level by BirdLife International (del Hoyo & Collar 2016) as: Black-winged Myna *Acridotheres melanopterus* from West and Central Java (white mantle and rump), Grey-backed Myna *A. tricolor* from East Java (dark mantle, white rump) and Grey-rumped Myna *A. tertius* from Bali (dark mantle and rump) (Vernia *et al*. 2018, Sadanandan *et al*. 2020). The population status of each species varies, with Black-winged Myna considered extinct in the wild since 2018, Grey-backed Myna previously estimated to comprise a few dozen individuals, and Grey-rumped Myna consisting of approximately 200 remaining wild birds (Sadanandan *et al*. 2020).

Recent research has reiterated the previous classification of three subspecies of Black-winged Myna, after finding insufficient genetic divergence to justify full species classifications (Sadanandan *et al*. 2020). The study confirmed that morphological differences between the three forms were due to varying degrees of allelic introgression from the endemic Javan Myna *A. javanicus*, rather than signs of distinct speciation. However, in this paper we consider the three forms as separate species to match the BirdLife taxonomy currently used by the IUCN Red List and the Indonesian Government.

Black-winged Mynas have been protected under Indonesian law since 1979. When the three subspecies were classified as full species in 2016, they all received full protection under Regulation of the Minister of Environment and Forestry no. P.20/MENLHK/SETJEN/KUM.1/6/2018 (later replaced by the current P106/MENLHK/SETJEN/KUM.1/12/2018). Capturing, transporting, keeping or trading of Black-winged Mynas is illegal, with offenders facing penalties of up to IDR 100,000,000 (US$6,935 in March 2021) and/or up to five years in prison under the Act of the Republic of Indonesia (No.5) of 1990 concerning Conservation of Living Resources and their Ecosystems. A license is required for captive breeding and all birds traded should be tagged (see Peraturan Pemerintah No.8, 1999, 14(1) of the Act No.5 1990 and Head of BKSDA Decision Letter Ministry of Environment and Forestry number S601/KKH/MJ/KSDA:/9/2020 dated 22 September 2020).

Through discussions with breeders on Java, we believe the Indonesian Government has given a two-year leeway for people already owning illegal birds to come forward and register them in response to the law now restricting ownership. This two-year grace period ended in September 2020, and although some regions may have extended that deadline, the period presumably ends soon for all of them (Malang Times online news 20 March 2021, KI pers. obs.).

Of the three species, Black-winged Myna is by far the most commonly bred and legally traded in Indonesia. Crossbreeding between the three species is common and pure-bred Grey-backed Mynas and Grey-rumped Mynas are becoming increasingly rare in local markets (Nijman *et al.* 2018, J. Menner pers. comm., A. Tritto pers. comm., SB pers. obs.).

Despite its status as 'totally protected' in Indonesia, the Black-winged Myna complex has constantly been traded in local bird markets over the last few decades (Shepherd 2006, Shepherd *et al*. 2016, Nijman *et al*. 2018). Although trade

numbers were high in the 1990s, Black-winged Mynas and Grey-rumped Mynas remained common in West Java and on Bali respectively (Collar *et al.* 2001), but wild populations plummeted in the 2000s (Braasch 2007). In the early 2010s, the first captive bred Black-winged Mynas were reported in trade to compensate for decimated populations (Nijman *et al.* 2018) as they emerged on online trading platforms. The number of online advertisements remained low, ranging between five and nine posts per year between 2011 and 2018 (Nijman *et al.* 2018). Here we report on an emerging trend of people selling unringed Grey-backed Mynas online as *lokal baluran* [Baluran local], which may indicate past, present or potentially future poaching from Baluran National Park, East Java.

Recent trade observations

Since April 2020, we have received multiple reports of Grey-backed Mynas, purportedly sourced from Baluran NP, being offered for sale online, primarily through publicly accessible social media platforms. Baluran NP is the most important remaining stronghold of the entire Black-winged Myna complex and is one of only two remaining locations where Grey-backed Myna is still known to occur in the wild; the national park is home to the largest known coherent population of this taxon, estimated at a minimum of 50 birds in 2017 (BirdLife International 2018b) and described as consisting of no more than a few dozen individuals in 2020 (Sadanandan *et al.* 2020). Very recent unpublished research suggests that the population size may actually be larger, ranging between 140 and 220 individuals (T. Squires *in litt.* 2021).

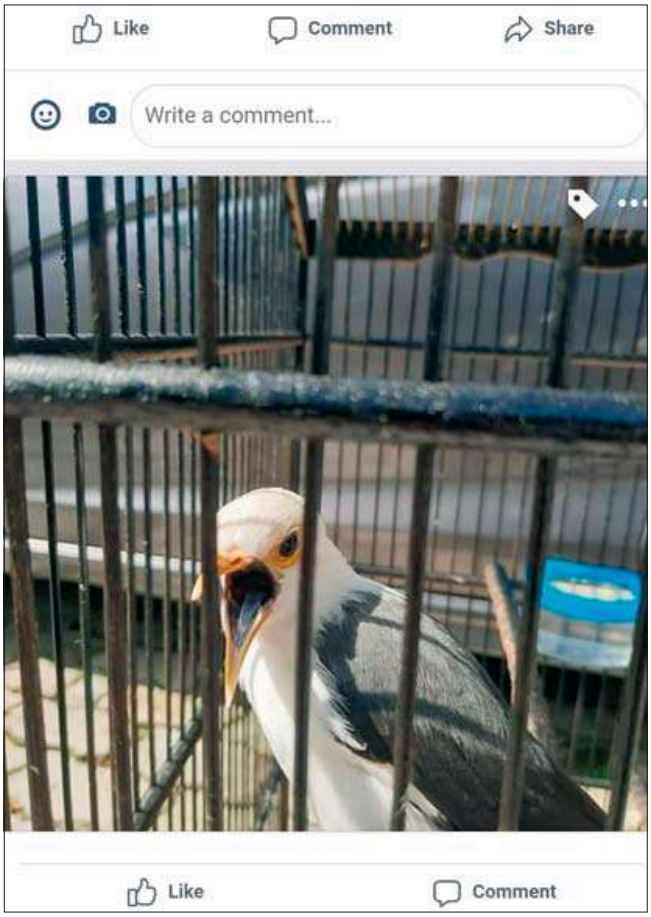
Baluran NP's savanna habitat sustains a large number of ungulates and this is critical for the species, as it is here that it forms symbiotic relationships with Banteng *Bos javanicus* and Water Buffalo *Bubalus arnee* by feeding on skin parasites such as ticks, flies and their larvae. Due to a combination of overgrazing, poaching, loss of savanna habitat and resources competition with domestic cattle, the native ungulate populations have declined significantly, which in turn may have contributed to the global decline of Grey-backed Mynas (Kurniawati *et al.* 2016, Wahyudi *et al.* 2016, Pudyatmoko 2017). Alas Purwo NP is the only other locality where the species has been recorded, although in far lower numbers (BirdLife International 2018b). These two national parks are critical to the long-term survival of the species in the wild.

Our records, which were obtained through opportunistic reviews of social media groups on songbird keeping and trade, show that 19–24 individual Grey-backed Myna were traded between 29 April 2020 and 14 March 2021. Posts were accompanied by images that enabled viewers to identify the birds as pure Grey-backed Mynas, as well as estimate age and verify if they were ringed. From a total of 22 images posted in online ads (Plates 1 & 2), 16 different sellers were identified, suggesting that most of the sales are opportunistic in nature. All the recorded posts in which the location of the seller could be determined originated from eastern Java, and in 12 cases the distance to Baluran NP was less than 150 km. None of the posts provided explicit information about whether the birds were captive bred. Only one of the pictured birds was ringed and three posts stated specifically that the individual(s) on sale were sourced from Baluran NP. This was further confirmed in a WhatsApp conversation between a seller and a potential buyer, in which the selling party disclosed the wild-caught nature of the bird in question, as well as its Baluran NP origin. Wording such as *langka* [rare], *asli baluran* [authentic from Baluran], and *lokal* [local] in the trade adverts further reflected the bird's potential wild origin.

Discussion

The observed trade records are alarming. Although regular captive breeding occurs for Black-winged Myna, and occasionally for Grey-rumped Myna, it remains uncommon for Grey-backed Myna, making the potential offtake of wild individuals an even greater threat to the survival of an already critically small population. The wording in the recorded posts and the geographical locations of the sellers, as well as the images of single birds without leg-rings or signs of hybridisation, all indicate that the birds on offer were not captive bred. The future of the Black-winged Myna complex will depend on coordinated *in situ* protection and may include well-managed captive breeding programmes that focus on retaining genetic diversity and taxonomic purity in contrast to the existing commercial trade (Collar & Butchart 2014, Nijman *et al.* 2018). Each (sub)species within the Black-winged Myna complex is of inherent conservation value, as their unique melanistic traits may serve as visual indicators of local adaptations in future reintroduction efforts (Sadanandan *et al.* 2020).

Our opportunistic observations, which surely do not represent the entire picture, are indicative of the important role that online platforms and social media play in the illegal trade of totally protected bird species in Indonesia and beyond (Gunawan *et al.* 2017, Nijman 2020). They also suggest a potentially high exploitation level of the remaining Grey-backed Myna population in Baluran NP, possibly representing a 10% offtake during the period during which our trade observations were



Plates 1 & 2. Opportunistically collected social media screenshots for the period between April 2020 and March 2021 showing the offering for sale of what appear to be Critically Endangered Grey-backed Mynas *Acridotheres tricolor*. Both posts had a geographical or stated connection to Baluran National Park.

made, even when viewed conservatively. In view of the species' dire conservation status, we consider this to be of high concern.

The illegal trapping of birds in Baluran NP has previously been described as a persisting problem (Winnasis *et al.* 2011). Recent potential population increases seen inside the national park may be attributed to ongoing savanna restoration and anti-poaching activities, with the heavy presence of staff, tourists and research activities providing added protection against trapping (T. Squires pers. comm.). Further savanna restoration projects, as well as monitoring the fortunes of Grey-backed Myna, are planned over the next years in a cooperation between Baluran NP and Copenhagen Zoo (T. Squires pers. comm.). However, demand for songbirds in Indonesia continues to push many species towards extinction and increased efforts to reduce this demand and to enforce legislation to protect species such as those in the Black-winged Myna complex are urgently required.

Recommendations

Indonesia's legislative framework is adequate for the authorities to intervene against the ongoing illegal capture and trade in Grey-backed Mynas 'stolen' from Baluran NP. As such, we strongly encourage the authorities to take immediate action against individuals involved in this crime and to ensure that the penalties given serve as effective deterrents.

We suggest that local NGOs in Indonesia establish a rapid reporting system through which observations of trapping, trading and keeping of Grey-backed Mynas can be swiftly reported to the authorities. In Baluran, we encourage and welcome all activities to protect the remaining population of this species and monitor reproductive trends, population size and nest-box occupancies. The introduction of SMART patrols has proven highly effective in countering potential poaching activities in other Indonesian national parks (Efendi *et al.* 2019). It is possible that, due to the COVID-19 pandemic, the presence of staff and researchers in Baluran NP may have slowed or stopped, leaving the birds more vulnerable to poaching since March 2020. We consider this a potential issue in need of addressing.

Finally, we recommend further monitoring of the trade in both online and physical markets in Indonesia and abroad to track illegal trade, detect emerging trends and to collect information to be used to assist law enforcement actions and to support further conservation activities and planning.

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