
Protection from exploitation needed for the endemic Sulawesi Bear Cuscus *Ailurops ursinus* in Indonesia

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ABSTRACT

Illegal trade in wildlife in Indonesia is rampant, and includes many little-known species, such as the Sulawesi Bear Cuscus *Ailurops ursinus*. Too often the trade in less charismatic species goes unnoticed, with many being pushed towards extinction. Sadly, few, if any, effective interventions are put in place to prevent further declines. The demand for the Sulawesi Bear Cuscus appears to be small but growing both nationally and internationally and increasingly, carried out on online platforms, making enforcement of existing policies difficult. Legal protection for Sulawesi Bear Cuscus in Indonesia is inadequate, obstructing effective enforcement efforts. Furthermore, the species is not listed in the Appendices of the Convention on International Trade in Endangered Species (CITES), making international control impossible. Here we examine the trade in Indonesia's bear cuscus species and make recommendations for more effective prevention of illegal trade at national and international levels.

ABTRAK

Perdagangan ilegal satwa liar di Indonesia merajalela dan melibatkan banyak spesies-spesies yang kurang dikenal, seperti Kuskus Beruang Sulawesi, *Ailurops ursinus*. Seringkali, perdagangan spesies-spesies yang kurang karismatik terjadi tanpa disadari sehingga banyak yang akhirnya terdorong menuju kepunahan. Sangat disayangkan bahwa usaha campur tangan yang efektif untuk mencegah penurunan jumlah yang terus terjadi ini bisa dibilang sangat sedikit, bahkan mungkin tidak ada. Permintaan untuk Kuskus Beruang Sulawesi nampaknya masih kecil, namun mulai meningkat baik pada skala nasional maupun internasional. Selain itu, perdagangannya semakin banyak dilakukan secara daring, sehingga membuat upaya penegakan hukum yang berlaku saat ini menjadi sulit. Perlindungan hukum bagi Kuskus Beruang Sulawesi di Indonesia belum cukup. Hal ini menghalangi upaya pelaksanaan hukum yang efektif. Belum lagi, spesies ini tidak ada di dalam daftar apendiks Konvensi Perdagangan Internasional Spesies Terancam (CITES), sehingga pengawasan serta pengendalian internasional menjadi tidak mungkin dilakukan. Pada tulisan ini, kami menelaah perdagangan spesies Kuskus Beruang di Indonesia dan memberikan rekomendasi untuk pencegahan perdagangan ilegal yang lebih efektif di tingkat nasional maupun internasional.

Keywords: Bear cuscus, *Ailurops ursinus*, exploitation, illegal trade, Indonesia

INTRODUCTION

The Sulawesi Bear Cuscus *Ailurops ursinus* is endemic to Indonesia, found only on Sulawesi and surrounding islands of Butung, the Peleng Islands, the Togian Islands, and possibly Muna (Flannery, 1995; Nowak, 1999; Salas et al, 2008). It is the largest and most primitive species of the Family Phalangeridae (Dwiyahreni et al, 1999) and one of two species of this genus in Indonesia.

Very little is known of the natural history of this species (Nowak, 1999) or of the conservation status. The Sulawesi Bear Cuscus is currently assessed as being Vulnerable by the IUCN Red List of Threatened Species, with threats to its survival including habitat loss, hunting by local people for food, and capture for the pet trade (Salas et al, 2008). While trade is listed as a threat, the scale and dynamics of the trade are relatively unknown. International trade is not mentioned in published literature and is not specifically mentioned as a

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threat in the IUCN Red List assessment of this species (Salas et al., 2008).

Indonesia is home to at least one more Ailurops species, the Talaud Bear Cuscus *A. melanotis*, known with certainty only from one location, Salibabu Island, within the Talaud Islands, which is less than 100 km². (Flannery and Helgen, 2016). A bear cuscus has also been reported from Sangihe (the largest island in the Sangihe Island group), though the taxonomic identity of this species remains to be confirmed (Flannery and Helgen, 2016). The Talaud Bear Cuscus is assessed as being Critically Endangered by the IUCN Red List and is severely threatened by hunting and habitat loss (Flannery and Helgen, 2016). The Talaud Bear Cuscus is listed as a protected species in Indonesia under the Act of the Republic of Indonesia No.5 of 1990 concerning conservation of living resources and their ecosystem. There is no indication this species is being commercially bred for export.

While the Sulawesi Bear Cuscus was not specifically listed as a protected species under Indonesian legislation, the entire Phalangerid family was provided with blanket protection under Government Regulation No. 7/1999 concerning the preservation of flora and fauna. There is also a specific mention of this species being totally protected on an Indonesian government website that lists a complete version of the protected mammals of Indonesia: <http://dlh.grobogan.go.id/info-lh/berita/54-daftar-satwa-langka-mamalia-indonesia-yang-dilindungi>. The inclusion of the Sulawesi Bear Cuscus on the protected species list may have afforded it some level of safeguard from capture and trade; however, in August 2018, the Government of Indonesia launched a revised list of protected species (Ministerial Regulation No.92/2018), and the Sulawesi Bear Cuscus is now absent from this list, as is the blanket protection for the genus.

The hunting and trade in animals that are not protected are regulated under Regulation of the Minister of Forestry No. 447/Kpts-II/2003 concerning administration directive of harvest or capture and distribution of wild specimens. This

regulation states that an annual quota is set for all animals that can be captured in the wild. Catching animals for which no quota has been set, in excess of quota that have been set, or outside provinces for which quotas have been set, is deemed illegal, even when the species concerned is not legally protected. There is no quota for the Sulawesi Bear Cuscus, however, while this theoretically provides protection from commercial exploitation, no punishments for transgressions are stated under this law and, therefore, this regulation is difficult to enforce.

Capture of breeding stock is permitted on a case-by-case basis by the Indonesian Institute of Sciences, to allow registered breeders to export live offspring as pets, but it is not known how many animals have been removed from the wild for this purpose.

As the Sulawesi Bear Cuscus and the other Ailurops species are not listed in the Appendices of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), there is no current mechanism in place to monitor, regulate or control the international trade in this species. There is also no system to record reports of international trade or incidents of illegal trade, seizures or enforcement actions relating to this species.

In addition to Indonesia having a thriving domestic illegal wildlife trade (Shepherd, 2010; Nijman et al., 2012; Eaton et al., 2015), wildlife is also frequently smuggled from Indonesia to neighbouring countries, such as the Philippines, where it is sold to meet local demand, or smuggled on to further international destinations (Shepherd, 2005; Shepherd and Sy, 2017). In the Philippines, the Wildlife Resources Conservation and Protection Act of 2001 accords protection to native and non-native wildlife. Individuals or organisations are required to obtain relevant permits from the Department of Environment and Natural Resources (DENR) to collect, import/export, possess, trade, and transport wildlife. Wildlife without permits can be seized in favour of the State.

Recently, there have been anecdotal reports of

Sulawesi Bear Cuscus being harvested live from the wild for the international pet trade, yet little is known of this trade, the legality of it or the potential impact on wild populations. As such, this paper intends to shed light on the trade in this species, to call for transparency in the trade of this species and open the door for further potential research, national and international regulation and conservation initiatives.

METHODS

In July 2018, a rapid online trade survey was carried out to identify and compile incidences of trade in Sulawesi Bear Cuscus from 2012-2018. The survey was made across 45 different Indonesian wildlife trade Facebook groups. Searches were conducted using the key words “kuskus beruang” (bear cuscus) in the Facebook search bar with the tab “Your Groups” selected under the filter options. The number of members in groups ranged from 324 – 148,816. When an advertisement was identified to be selling a Sulawesi Bear Cuscus, information was collected on the location, price, and the number and size of individuals advertised. No personal data about the sellers were collected and no interaction with sellers took place.

A letter requesting information regarding legal trade, captive breeding and export of Sulawesi Bear Cuscus was sent 30 August 2018 to the Head of Section of Wildlife Traffic Control, the Head of Section of Captive Breeding and the Deputy Director of Species Utilization in the Indonesian Government. Further information on the trade in this species in Indonesia was obtained from wildlife trade researchers, as well as published and unpublished literature.

In the Philippines, a survey was conducted in 30 Facebook groups engaged in wildlife trade in the Philippines in July 2018 to monitor the availability of this species in the online platform. Facebook is known to be a major venue of illegal wildlife trade in the Philippines (Sy, 2018).

Further information on the trade in this species was obtained in the Philippines by reviewing data from

seizure records of the Biodiversity Management Bureau-DENR (BMB-DENR), DENR region 12, newspaper articles, and from wildlife researchers.

As one of the few countries that record imports of non-CITES species, import and export data for the United States of America (USA) was also checked, and was obtained from the US Fish and Wildlife Service (USFWS) Law Enforcement Management Information System (LEMIS) covering the period 2000-2014. LEMIS specifies the content of each shipment with either a species code, a genus code or a more general code (e.g. NONR= Non-CITES reptile), with the latter more common in larger shipments (Schlaepfer et al., 2005). Here, we searched for data specifically labelled as *Aliurops ursinus*.

Observations

Illegal wildlife trade within online trade and hobbyist groups is rampant. A survey of Facebook groups between 2012 and 2018 yielded a total of 31 unique advertisements (Figure 1) selling Sulawesi Bear Cuscus, with a total of 44 individuals offered for sale. Number of advertisements found annually from 2012 to 2017 remained stable until a sharp rise in the number of advertisements was observed in 2018. Of these, 21 advertisements contained just one animal and 10 included more than one individual (ranging from 2 – 5). Fifteen different Facebook groups had advertisements selling Sulawesi bear cuscus, of which one was a secret group, 10 were closed groups and 4 were public groups. Within these groups, 25 different traders were identified to be selling Sulawesi Bear Cuscus, and of these, six traders posted more than one advertisement. The prices ranged from IDR 1,200,000 (USD 70.00) to 3,500,000 (USD 230) for one Bear Cuscus individual (n = 6). Traders stated that the preferred method of payment was via REKBER (rekening bersama – transfer via a third-party joint account) (n = 18) followed by cash on delivery (n = 2). The majority of traders were located in East Java (13), followed by Jakarta (4), Sulawesi (2), West Java (1) and Central Java (1).

In November 2017, a man was arrested in South Sulawesi for attempting to sell three Sulawesi Bear

Table 1. Numbers of adverts selling Sulawesi Bear Cuscus per year (2012-2018).

2012	2013	2014	2015	2016	2017	2018
1	2	3	2	3	3	17

Cuscus online, along with a variety of other species of birds and mammals from Sulawesi (<http://news.metrotvnews.com/read/2017/12/20/804811/polda-sulsel-tangkap-residivis-pedagang-satwadilindungi>).

There is anecdotal information that at least one wildlife breeder in Jakarta has been granted permission to obtain wild-caught parent stock to attempt to breed Sulawesi Bear Cuscus for commercial sale. However, details about this were not publicly available and there have been no responses to inquiries sent to the relevant government authorities in Indonesia. Sulawesi Bear Cuscus are not listed in the Indonesian Government's annual harvest and quota list for 2018, but special permission may have been granted.

Illegal trade in wildlife smuggled out of Indonesia to the Philippines is common. On 7 August 2012, 17 Sulawesi Bear Cuscuses were seized in Barangay Calumpang, General Santos City, South Cotabato Province, Mindanao Island, the Philippines. Five suspects, including one Indonesian and four Filipino nationals, were arrested by the Maritime Group of the Philippine National Police and DENR. The Sulawesi Bear Cuscuses were most likely destined to privately-owned zoological parks that are in constant search for novel and unusual animals to exhibit. South Cotabato Province has been implicated as a key entry point utilised by traffickers for smuggled Indonesian wildlife.

The authors did not observe Sulawesi Bear Cuscus for sale online in the Philippines, but this may be due to trafficker's preference to deal directly with private collectors.

LEMIS

The USA LEMIS database reports the import of 151 Sulawesi Bear Cuscus and the export of two specimens. The majority of the transactions are described as Garment (GAR) and Hair (HAI) or other products and are exported by, or originate

from, New Zealand. The attached generic name "Possum" suggests that these transactions are mistakenly documented as *Aliurops ursinus* but are actually Common Brushtail Possums *Trichosurus vulpecula*. The latter is a widespread agricultural invasive species in New Zealand, introduced for the fur industry.

Fourteen specimens are documented to originate from Indonesia, of which 10 are also documented as Possum and declared as Garment. The remaining four animals, of which two are documented as *A.u.togianus*, are documented as Specimen (Scientific or Museum). These four specimens were imported from Australia with Indonesia listed as its origin. Two out of four were imported for scientific purposes, the remaining two were exported with an unknown purpose code (N). The data available in the LEMIS database suggest that the majority of documented trade consists of misidentified animals and do not consist of Sulawesi Bear Cuscus. The remaining transactions, while they do originate from Indonesia, likely consist of scientific specimens and not live animals. There does not appear to have been any documented import of live Sulawesi Bear Cuscus in the USA.

DISCUSSION AND RECOMMENDATIONS

Considering the demand for wildlife as pets and given the ease in finding this species for sale on online platforms, illegal trade of Sulawesi Bear Cuscus is likely common in Indonesia, especially in the main cities on Java. Surveys carried out in Facebook wildlife trade groups found a total of 31 unique advertisements that rose from one to 17 per year in the period from 2012 to 2018. A total of 44 individual Sulawesi Bear Cuscus were observed for sale in these sites, some of which were open or public groups. The spike in trade observed in 2018 could be due to an increase of animals in trade or highlight a general shift from physical market to online trade (Chng and Bouhuys, 2015; Bergin et al., 2017). Nevertheless, while there has been some enforcement action targeting online traders, it has clearly not been enough to deter the trade, in view that the online trade seems to be increasing.

Online trade is more difficult to police than physical markets as traders can set up anonymous accounts or use fake names when making a transaction (Krishnasamy and Stoner, 2016; Morgan and Chng, 2017). This has been complicated further with an increase in use of the REKBER transfer system, which was the preferred method of payment observed in this survey. In the REKBER system, a third-party bank account is used so that no recordable transaction takes place between the trader and the buyer, making it difficult for police to link the two criminals or prove any illegal activity took place.

The online trade in Sulawesi Bear Cuscus appeared to be limited to the Islands of Sulawesi and Java, with the province of East Java having the highest incidences of trade. In East Java, the capital city Surabaya is a known destination and transit point for smuggled wildlife from Kalimantan, the Moluccas, Papua and Sulawesi (Chng and Eaton, 2016). The larger numbers of traders recorded in East Java therefore may indicate that this existing trade route is also being used to smuggle Bear Cuscus from Sulawesi into Java.

Enforcement efforts to prevent illegal hunting and trade in bear cuscus species in Indonesia is weak (Flannery and Helgen, 2016) and it is highly likely that enforcement officers globally do not have the skills to identify the species, especially as international trade appears to be rather sporadic, and as the species is not listed in the appendices of CITES. We encourage the Government of Indonesia, as the only range country, to place the genus *Ailurops* in Appendix III of CITES, or to propose it be listed in Appendix II, to gain the international community's assistance in preventing illegal international trade of Sulawesi Bear Cuscus. CITES member countries would be obligated to seize specimens of this species in trade without the required permits. Listing the species in CITES would also provide a mechanism for monitoring and recording of trade.

As this species has been seized in the Philippines, it is clear that some illegal international trade in Sulawesi Bear Cuscus persists as well. The Philippine wildlife authorities will continue to seize wildlife without proper permits as and when detected; however, the scale of the undetected

trade is not known, nor is the demand in countries beyond the Philippines for this species. Furthermore, illegal trade to other countries with high demand for wildlife from Indonesia has yet to be investigated, although no such commercial trade to the USA appeared in a search of LEMIS data. We encourage individuals and/or organisations monitoring trade in wildlife to publicise seizures or other information pertaining to the trade in *Ailurops* species to further assist in understanding the impact of trade on these species and to assist in the planning and implementation of appropriate conservation interventions.

The recent revision of the list of species protected under the Government Regulation No.7, 1999, Concerning the preservation of flora and fauna omits the Sulawesi Bear Cuscus, leaving this species vulnerable to exploitation. We encourage the Government of Indonesia to list the Sulawesi Bear Cuscus as a protected species under the Government Regulation No.7, 1999, Concerning the preservation of flora and fauna, especially since the zero-quota status of the species is in itself difficult to enforce.

Anecdotal information suggests that permission has recently been given to at least one commercial breeder of wildlife in Indonesia to harvest specimens from the wild for use as breeding stock to supply offspring for the pet trade. Indonesia requires that species bred in captivity for commercial sale are second generation (F2) production, and it is highly unlikely that any second-generation stock exist, given permission to breed this species has apparently only been granted recently. The Government of Indonesia is encouraged to make this information publicly available, to assist authorities in other countries, as well as conservation organisations, better determine the legality of specimens in trade. Finally, we ask that the IUCN Red List authorities for the Sulawesi Bear Cuscus recognise commercial trade at national and international levels as a potential risk to the survival of the species in the IUCN Red List assessment, and thus encourage researchers, enforcement agencies and policy makers to include the threat of trade in future conservation and regulatory interventions.

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