
First record of international trafficking of Critically Endangered long-beaked echidnas (*Zaglossus* sp.)

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ABSTRACT

The illegal wildlife trade is a major threat to an increasingly long list of species, and nowhere is this threat greater than in Southeast Asia. The demand for live animals from Southeast Asian countries for the exotic pet trade threatens a wide variety of species, including some already on the brink of extinction. Here we report on seizures made of the Critically Endangered western long-beaked echidna *Zaglossus bruijnii*, which took place in the Philippines in 2014. The animals originated from Indonesia where they are totally protected by law. Indonesia, however, remains a major source of illegally acquired wildlife for the international trade and it is imperative that actions is taken, nationally and internationally, to reduce current levels of illegal trade and ultimately to ensure species like the western long-beaked echidna are no longer threatened.

ABSTRAK

Perdagangan satwa ilegal merupakan ancaman utama yang memperpanjang daftar jenis yang terancam, bahkan tidak ada tempat lain dimanapun yang ancamannya melebihi Asia Tenggara. Permintaan terhadap satwa hidup dari berbagai negara Asia Tenggara sebagai hewan peliharaan eksotis mengancam jenis-jenis yang sangat bervariasi, termasuk jenis-jenis yang mengalami ancaman kepunahan. Pada tulisan ini kami memaparkan tindakan pencegahan perdagangan Ekidna-barat moncong-panjang *Zaglossus bruijnii* yang terjadi di Filipina pada tahun 2014. Satwa-satwa tersebut berasal dari Indonesia dimana spesies ini dilindungi penuh oleh peraturan yang berlaku. Indonesia, bagaimanapun juga merupakan sumber utama satwa liar ilegal yang diperdagangkan secara internasional dan sangat mengagumkan bahwa berbagai aksi telah dilakukan baik secara nasional maupun internasional, untuk mengurangitingkat perdagangan satwa liar saat ini dan terutaa sekali untuk meyakinkan bahwa jenis-jenis seperti Ekidna-barat moncong-panjang tidak lagi terancam.

Keywords CITES, echidna, Indonesia, monotreme, wildlife trade, *Zaglossus*

INTRODUCTION

Recently, there has been an apparent rise in the trade in short-beaked echidnas *Tachyglossus aculeatus* to supply international demand for exotic pets, and for zoos (Beastall and Shepherd, 2013). The trade in short-beaked echidnas is largely, if not completely, in violation of legislation in range countries, with some of the specimens being passed off as being commercially bred in captivity (Beastall and Shepherd, 2013) which is unlikely to be true. All animals entering the international trade appear to be sourced in Indonesia (Beastall and Shepherd,

2013), though short-beaked echidnas also occur in Australia and Papua New Guinea (PNG) (Aplin et al., 2016). Recently, there has been evidence of long-beaked echidnas *Zaglossus* species illegally entering the international trade as well.

Long-beaked echidnas are slow-moving, nocturnal monotremes that reach up to 75 cm in length, and weigh 5 to 10 kg (Leary et al., 2016a). Little is known of their life history, but it is presumed that they reproduce slowly, raising one young at a time, are long-lived (Leary et al. 2016a), and occur in low densities (Leary et al., 2016b). There are three species of long-beaked echidna in the genus *Zaglossus*, all of which occur in Indonesia (Table 1). One species, eastern long-beaked echidna *Zaglossus bartoni*, occurs in Papua New Guinea

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(PNG) as well, and one, western long-beaked echidna *Zaglossus bruijnii*, occurs in Australia, though it may now be extinct there (Leary et al., 2016b). Attenborough's echidna *Zaglossus attenboroughi* is known from a single specimen collected in 1961 from the Cyclops Mountains in the extreme north of Papua Province, Indonesia (Leary et al., 2016c).

Two species of long-beaked echidnas are assessed as being Critically Endangered, and one as Vulnerable (Table 1). All are vulnerable to hunting, with hunters using trained dogs to locate the otherwise extremely difficult to find animals (Leary et al., 2016b). Hunting is largely for local use, and local trade is limited (Leary et al., 2016a).

International trade

There appears to be very little international trade in long-beaked echidnas, legal or otherwise. All species of the genus *Zaglossus* were listed in Appendix II of CITES in 1977 (UNEP-WCMC, 2017), and according to the CITES Trade Database, a total of only six permitted transactions of live long-beaked echidnas have taken place since the time of their listing in 1977 to present (Table 2), comprising 13 individual animals. The animals were identified to a species level in only three of the cases, all being the Critically Endangered western long-beaked echidna *Zaglossus bruijnii*. In the remaining three cases, the species were identified to a genus level only. In only one of the cases was

Table 1. The four species of extant echidna, their range countries, and status as assessed by the IUCN Red List of Threatened Species (AU: Australia, ID: Indonesia, PNG: Papua New Guinea)

Species	Range countries	IUCN Red List status
Short-beaked echidna (<i>Tachyglossus aculeatus</i>)	ID, AU, PNG	Least Concern
Attenborough's echidna (<i>Zaglossus attenboroughi</i>)	ID	Critically Endangered
Eastern long-beaked echidna (<i>Zaglossus bartoni</i>)	ID, PNG	Vulnerable
Western long-beaked echidna (<i>Zaglossus bruijnii</i>)	ID, AU (possibly extinct in AU)	Critically Endangered

Table 2. International trade of live long-beaked echidnas (*Zaglossus* species) (1977-2017) as reported by CITES (AU – Australia, ID – Indonesia, GB – Great Britain (UK), GY – Guyana, NL – the Netherlands, TW – Taiwan, US – United States)

Year	Taxon	Importer	Exporter	Origin	Import quantity	Term	Purpose	Source
1981	<i>Zaglossus bruijnii</i>	GB	TW		1	live	T	
1985	<i>Zaglossus spp.</i>	NL	ID		1	live	S	
1985	<i>Zaglossus spp.</i>	US	GY		5	live	T	
1986	<i>Zaglossus bruijnii</i>	GB	US	PG	1	live		
1987	<i>Zaglossus spp.</i>	US	AU		2	live	Z	
1993	<i>Zaglossus bruijnii</i>	AU	GB		3	live	Z	W

the source identified, as being wild-caught (W), though it can be presumed that all came from the wild, as there is no known captive breeding of any of these species. While the exporting countries are listed in each case, it is unfortunate that in only one case, in 1986, the country of origin is listed – in this case Papua New Guinea (PNG), although Indonesia and Australia are listed as exporters in two of the cases respectively. Three of the countries for which no origin of the animals is named are not range countries. In five of the cases, the purpose of the trade is listed, with one being for science (S), two being for commercial trade (T) and two being for zoos (Z). Given that long-beaked echidnas are protected by law in all range countries, it is not known what provisions were used for wild capture and export?

Recently two seizures of the Critically Endangered western long-beaked echidna *Zaglossus bruijnii* were made in the Philippines in 2014. The first was made on 15 February 2014 at Lipata Port in Surigao City, Surigao del Norte Province, Mindanao Island, with three live western long-beaked echidnas along with other Indonesian wildlife being seized. The smuggled wildlife was transported by a van from Sarangani Province and were about to be loaded onto a ship en route to Manila when intercepted (Catoto, 2014). The second was made less than a week later on 21 February 2014 in mid-sea off the Municipality of Glan, Sarangani Province, Mindanao Island, with one live long-beaked echidna along with other Indonesian reptiles, mammals, and birds being seized (BMB-DENR, unpublished report). To the authors knowledge, these are the first records of long-beaked echidnas seized in the Philippines, or anywhere outside the range countries.

In the Philippines, the Wildlife Resources Conservation and Protection Act / Republic Act No. 9147 of 2001 accords legal protection to native and non-native wildlife. Section 27 of the Act prohibits the killing, maltreating, collecting, hunting, possessing, transporting, and trading of wildlife without permits from the Department of Environment and Natural Resources. Under this

Act, all the echidnas were seized by joint action by of the Department of Environment and Natural Resources, Philippine National Police, Philippine Coast Guard, and Philippine Ports Authority. The animals had been placed in plastic crates and wire cages and smuggled in by boat from Indonesia. The echidnas that were seized at the Lipata Port in Surigao City apparently escaped and the fate of the animal in Municipality of Glan is unknown, though it is thought to have died. The suspects involved in smuggling of the long-beaked echidnas and other Indonesian wildlife were charged in court for illegally possessing and transporting wildlife.

DISCUSSION

With the exception of marine species, most taxonomic groups studied so far are more threatened in Southeast Asia than anywhere else on Earth. Therefore, the Asian Species Action Partnership (ASAP) was established to develop and implement actions with the aim to prevent the extinction of any of the region's Critically Endangered species (Rao et al., 2014). Indonesia alone has 24 Critically Endangered mammals, more than any other country in the region. Illegal and unsustainable trade poses an immediate threat to many of the region's Critically Endangered species and urgent intervention is necessary. Unfortunately, the scale and seriousness of the illegal threat and the urgent need to intervene is often not recognized or adequately addressed (Rao et al., 2014).

Wildlife is frequently smuggled into the Philippines from Indonesia to meet demand there or to be trafficked on to other countries from there (eg. Shepherd, 2005). Indonesia is a major supplier of illegally-sourced wildlife, supplying the international demand for exotic pets with a wide variety of species (Nijman and Shepherd, 2009; Nijman et al., 2012). All species of long-beaked echidnas are protected by law in Indonesia, but as is the case with many other species protected in Indonesia, illegal collection, trade and international trafficking is a threat. Considering the limited existing knowledge about long-beaked echidnas,

and given that all three species are threatened, with two being Critically Endangered, investigations should be carried out to determine where they are captured, where they are sold and if the demand for echidna is on the rise? The identity of the species should be determined and recorded in all future seizures and registered in a database, so that data can be used to measure if these species are indeed subject to an increasing demand, following which appropriate actions can be taken.

RECOMMENDATIONS

The authors recommend that the central governments of Indonesia and the Philippines act to raise the profile of wildlife trafficking, especially within departments based at ports of entry and exit to the country, to enhance efforts to deter smuggling. The authors also suggest that the governments of both Indonesia and the Philippines increase collaborative efforts to reduce trafficking of wildlife between the two countries. The Philippines is encouraged to improve its facilities for holding and caring for seized wildlife, to prevent escapes and reduce mortalities. Finally, the authors suggest that all echidna range countries increase collaborative efforts to better understand the status and conservation needs of echidnas, and work together to prevent illegal exploitation.

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