CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES
OF WILD FAUNA AND FLORA

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Sixteenth meeting of the Conference of the Parties
Bangkok (Thailand), 3-14 March 2013

CONSIDERATION OF PROPOSALS FOR AMENDMENT OF APPENDICES I AND II

A. Proposal

Delist the extinct *Chaeropus ecaudatus* from Appendix I in accordance with the Resolution Conf. 9.24 (Rev. CoP15). The species does not meet the biological criteria (Annex 1) and trade criteria (Annex 5) for Appendix I.

The precautionary measures referred to in Annex 4 A1 and D are not considered to be required for this proposal. Paragraph 1A requires species listed on Appendix I to be first transferred to Appendix II so that the impact of any trade can be monitored. Australia considers that it is not necessary to first transfer the species to Appendix II as it is extinct, has not been in trade and is never likely to be in trade. Paragraph D states that species regarded as possibly extinct should not be deleted from Appendix I if they may be affected by trade in the event of their rediscovery. Retaining the species on Appendix I with the annotation of 'possibly extinct' is not warranted because in the unlikely event of its rediscovery will not be affected by trade.

B. Proponent

Australia[*], as requested by the Animals Committee, to delete the species from Appendix I (AC26 WG1 Doc.2).

C. Supporting statement

1. Taxonomy

1.1 Class:	Mammalia	
1.2 Order:	Peramelemorphia	
1.3 Family:	Chaeropodidae	
1.4 Species:	*Chaeropus ecaudatus* (Ogilby, 1838)	
1.5 Scientific synonyms:	*Chaeropus castanotis* Gray, 1842 Chaeropus occidentalis Gould 1845	
1.6 Common names:	English:	Pig-footed bandicoot
	French:	Bandicoot à pieds de porc; Bandicoot pieds de cochon
	Spanish:	Bandicot de pies porcinos; Cangurito piedecerdo

[*] *The geographical designations employed in this document do not imply the expression of any opinion whatsoever on the part of the CITES Secretariat or the United Nations Environment Programme concerning the legal status of any country, territory, or area, or concerning the delimitation of its frontiers or boundaries. The responsibility for the contents of the document rests exclusively with its author.*

1.7 Code numbers: A-102.004.001.001

2. Overview

As part of the periodic review of the Appendices, the Animals Committee recommended that the extinct pig-footed bandicoot (*Chaeropus ecaudatus*) be removed from Appendix I (AC 26 WG1 Doc. 2). The recommendation was made based on information provided by the Australian Scientific Authority for consideration at the 26th meeting of the Animals Committee (Geneva, March 2012).

C. ecaudatus was one of many species nominated by Australia for inclusion in the Appendices when CITES first came into force on 1 July 1975. It was listed as a precautionary measure as the species was not subject to trade and at the time, was considered extinct.

The pig-footed bandicoot was discovered in 1896 in Victoria, Australia. The species had an extensive range across Queensland, New South Wales, Northern Territory, Western Australia and South Australia (Harper, 1945). Historical accounts suggest that it was always a rare species across its range. It was last seen in 1843 in Western Australia, 1857 in New South Wales, the 1920s in South Australia and 1960s in Northern Territory (Flannery, 1960; Burbidge *et al.,* 1998).

Changes in fire regimes and grazing by sheep and cattle are likely to have been the primary causes of extinction of the pig-footed bandicoot by reducing its food availability (Newsome, 1971; Burbidge and Johnson, 1998). Consequently, trade was not considered to be a factor causing the extinction of the species and is not considered to be a risk in the unlikely event that the species is rediscovered.

3. Species characteristics

3.1 Distribution

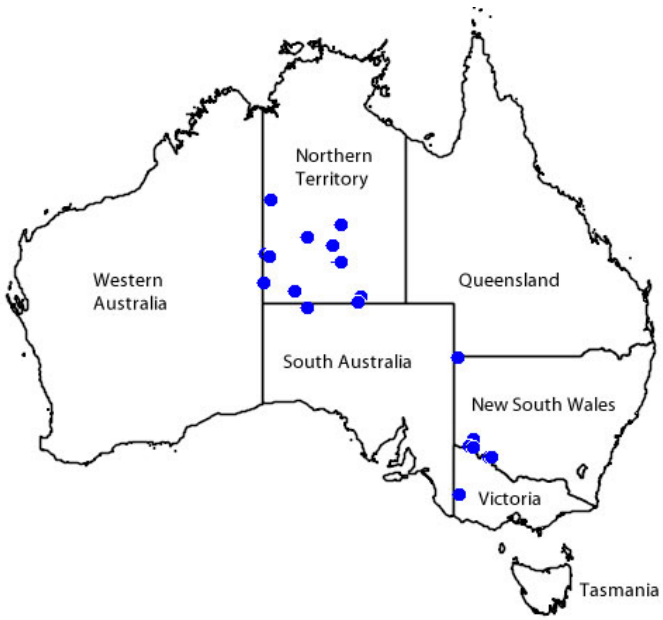

Figure 1 Map of occurrence records for the pig-footed bandicoot, *C. ecaudatus* (Atlas of Living Australia, 2012).

The former range of the pig-footed bandicoot was extensive and included the interior parts of Queensland, New South Wales, Victoria, Western Australia and South Australia (Harper, 1945).

The type specimen was collected in 1896 from a few miles south-east of the convergence of the Murray and Murrumbidgee Rivers in Victoria, Australia (Mitchell, 1838; Wakefield, 1966). Krefft (1866) collected eight specimens from the Murray River in New South Wales, not far from Mitchell's collection site of the type specimen.

C. ecaudatus was also recorded in South Australia from the western bank of Lake Eyre North, South Australia in 1907 and the south west of Lake Eyre in 1920 (Jones, 1924). Sightings were also recorded in 1926 from the Musgrave Ranges and the lower Barcoo River in the north-east of South Australia.

There are only a few records of the pig-footed Bandicoot from western Queensland (Longman, 1930) and the Swan River and Rawlinna districts in Western Australia (Gould, 1863; Shortridge, 1910; Glauert, 1933; Waterhouse, 1846). The species was also recorded in the Tanami Desert in the Northern Territory up until the 1960s (Flannery, 1990). The pig-footed bandicoot was always considered to be rare across its former range (Flannery, 1990).

3.2 Habitat

In Victoria, the habitat of the pig footed bandicoot was grassy plains. Elsewhere it favoured open woodland with a grass and shrub understorey (Wakefield, 1966). In the arid zones it inhabited sand dunes and sand plains sometimes with hummock and tussock grasses (Johnson and Burbidge, 1998).

3.3 Biological characteristics

Little is known about the biology and behaviour of *C. ecaudatus*. The pig-footed bandicoot was largely nocturnal, although some reports suggest that it was active during the day (Flannery 1990). It excavated a squat in which it built a nest of dried grass, leaves and twigs, lined with soft grasses (Burbidge *et al.,* 1988). In woody areas it also sought shelter in hollow logs (Harper, 1945). The Aboriginals of central Australia reported that the pig-footed bandicoot rested by day in grassy nests and ran with great speed in a smooth gallop when pursued (Johnson and Burbidge, 1998).

Females had a pouch that opened towards the back with eight teats, although no more than two young were observed at a time. From the size of its pouch, no more than four young could have been carried at any one time (Flannery, 1990). Reports suggest that the breeding season and birth of young was around May to June (Flannery, 1990).

3.4 Morphological characteristics

Figure 2 Taxidermied pig-footed bandicoot at the Melbourne Museum, Australia.

The pig-footed bandicoot weighed around 200 g and was described as having an extremely delicate and graceful appearance (Ogilby, 1838). *C. ecaudatus* had a head and body length of 230–250 mm and tail length of 100–150 mm (Flannery, 1990). The ears were long, elliptical and nearly naked and the muzzle long, narrow and tapering (Harper, 1945). It had long slender limbs and only two functional toes on the front feet bearing some resemblance to the cloven foot of a pig (Johnson and Burbidge, 1998). The hind foot had a single toe (Seebeck *et al.,* 1990).

The fur above was coarse and orange-brown in colour transitioning to fawn and the underparts were white (Thomas, 1888). Animals from Western Australia were greyer in colour and Harper (1945)

considered them to constitute a separate subspecies. The tail was black above, gray below and on the sides (Harper, 1945).

3.5 Role of the species in its ecosystem

The pig-footed bandicoot is believed to have been a herbivore, and more precisely a grazer, based on the examination of the wear of its molars (Wright *et al.,* 1991), structure of the digestive system (Hume, 1982) and observations of their faecal pellets (Dixon, 1988; Gould, 1863; Krefft, 1866).

4. Status and trends

4.1 Habitat trends

The former habitat of the pig-footed bandicoot has been subject to changes in fire regime and extensive grazing by sheep and cattle (Johnson and Burbidge, 1998; Newsome, 1971).

4.2 Population size

There is little information available on the population sizes of *C. ecaudatus*. John Austin commented that the species was sighted in large numbers during his journey in 1854 from Perth north to Shark Bay via the Mt Magnet area (Glauert, 1948). Krefft (1866) noted that the pig-footed bandicoot was exceedingly rare in the Murray River region of New South Wales and Victoria at the time of European settlement.

4.3 Population structure

There is no information available on the population structure of the pig-footed bandicoot.

4.4 Population trends

There is no information on population trends of the pig-footed bandicoot. Historical accounts indicate that the species was always rare within its range (Flannery, 1990).

4.5 Geographic trends

The last confirmed records of the pig-footed bandicoot was in 1843 for Western Australia and in 1857 for New South Wales (Flannery, 1990). Aboriginal testimony indicates that the pig-footed bandicoot disappeared from arid South Australia between 1910 and 1920 (Burbidge *et al.,* 1988). There were reports from Aboriginals in the Northern Territory that suggest the pig-footed bandicoot survived until the 1960s in the Tanami Desert and areas west of this region (Flannery, 1990).

5. Threats

The reasons for the extinction of the pig-footed bandicoot are unknown. Collapse of the *C. ecaudatus* populations was rapid after European settlement. Population declines preceded the establishment of the European rabbit (*Oryctolagus cuniculus*) and European red fox (*Vulpes vulpes*) (Aitken, 1979; Rolls, 1969) but feral cats (*Felis catus*) were established. Feral cats may have contributed to its decline.

The most likely cause of extinction of the pig-footed bandicoot was alteration to their habitat. Changes in fire regimes coincided with declines in the Aboriginal population during the 19th century. The mosaic burning practices of the Aboriginals encouraged patches of fresh new growth which would have favoured the pig-footed bandicoot as it was a grazer (Johnson and Burbidge, 1998). Sheep and cattle introduced in large numbers by the Europeans may have also affected habitat structure and food availability for the pig-footed bandicoot (Newsome, 1971).

6. Utilization and trade

6.1 National utilization

There is no trade in the pig-footed bandicoot as the species is considered extinct. Historical data indicates that the species was never subject to trade activities.

6.2 Legal trade

There are no records of legal trade in *C. ecaudatus*.

6.3 Parts and derivatives in trade

There were no parts or derivatives used in trade.

6.4 Illegal trade

There was, and is currently, no indication of illegal trade in the pig-footed bandicoot.

6.5 Actual or potential trade impacts

The pig-footed bandicoot was not subject to trade before its extinction. Over-collecting was found not to be a cause of its extinction. Should the species be rediscovered, it is unlikely that there would be any trade activity for this species. Any potential trade in this species would be strictly regulated under Australian domestic law (see 8.3.1).

7. Legal instruments

7.1 National

The pig-footed bandicoot, *C. ecaudatus*, is listed nationally as Extinct under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

7.2 International

The species is listed as Extinct under the International Union for Conservation of Nature (IUCN) Red List 2012 (Burbidge *et al.,* 2008). *C. ecaudatus* is listed in Appendix I under CITES. Permits are required for the import and export of CITES Appendix I listed species.

8. Species management

8.1 Management measures

No management measures are currently taking place as the species is considered extinct.

8.2 Population monitoring

The species is considered extinct.

8.3 Control measures

8.3.1 International

The EPBC Act regulates trade in CITES listed and Australian native wildlife and their products. Export of live Australian native mammals is strictly prohibited for commercial purposes but may be exported for specific non-commercial purposes (e.g. for research, education or exhibition). As an Australian native mammal an Australian export permit would be required for the export of *C. ecaudatus* even if it was delisted from CITES.

8.3.2 Domestic

If the species was rediscovered, any take from the wild would be strictly regulated by the relevant Australian domestic environmental legislation.

8.4 Captive breeding and artificial propagation

Captive breeding programs were not established before the extinction of *C. ecaudatus*.

8.5 Habitat conservation

There are no conservation measures currently being undertaken across its former range.

8.6 Safeguards

Should the species be rediscovered, *C. ecaudatus* will be afforded protection from international trade by provisions of Australian wildlife law (the EPBC Act).

9. Information on similar species

The pig-footed bandicoot was readily distinguishable from other bandicoots by its characteristic front feet with two functional toes that resembled a pig's hoof. The fourth toe of the hind foot was much larger than the others and the only functional toe on the hind foot (Flannery, 1990).

10. Consultations

The species was endemic to Australia prior to its extinction and therefore consultation with other range States is not required.

11. Additional remarks

None

12. References

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