CONSIDERATION OF PROPOSALS FOR AMENDMENT OF APPENDICES I AND II

Other proposals

A. PROPOSAL

Transfer of *Malacochersus tornieri* from Appendix II to Appendix I

B. PROPONENT

Kenya and the United States of America.

C. SUPPORTING STATEMENT

1. Taxonomy

1.1 Class: Reptilia

1.2 Order: Testudinata or Chelonii

1.3 Family: Testudinidae

1.4 Species: *Malacochersus tornieri* (Siebenrock, 1903)

1.5 Scientific synonyms: None

1.6 Common names: English: Pancake tortoise
Spanish: Tortuga de cuña
French: Tortue de tournier

1.7 Code numbers:

2. Biological Parameters

2.1 Distribution: The distribution of *M. tornieri* is scattered from central Kenya southward through central Tanzania (Hatcher ,1997; Highfield, 1996; Kirkpatrick, 1997, Klemens, 1996; Klemens and Moll, 1995; Moll and Klemens, 1996; Raphael *et. al*., 1994). The species' habitat requirements are extremely rigid. These animals live only where rock crevices of suitable dimensions are found in thorn scrub and savannah of the Somalia-Masai floristic region (Klemens and Moll, 1995; Moll and Klemens, 1996; Raphael *et.al*., 1994). They may also be found in the relatively moister Zambezian floral region where suitable microhabitat is present (Moll and Klemens, 1996). There are no published records of the species occurring outside Kenya or Tanzania.

2.2 Habitat availability: Klemens and Moll (1995) recognized that the species habitat was over-grazed by cattle and goats, but were unable to assess whether this impacted the survival of the populations. In Kenya, populations are threatened by clearance of thorn scrub for agricultural purposes (WCMC *et al*. 1991). When live specimens are collected for trade, their rock crevices are destroyed, causing localized habitat destruction.

2.3 Population status: There are no known estimates of the total population or number of individuals in the wild. The size of the population in captivity is unknown.

2.4 Population trends: In the wild *M. tornieri* generally produce a single egg per clutch and several clutches may be laid per year (Ernst and Barbour, 1989; Highfield, 1996; Klemens and Moll, 1995; Moll and Klemens, 1996). Eggs are laid in July or August, and hatching occurs around December (Highfield, 1996). In captivity there is also a low reproductive potential with single egg clutches the most common size, with larger clutches often having

low fertility (Hatcher, 1997; Highfield, 1996; Kirkpatrick, 1997). The overall reproductive rate in captivity and the wild is low (Hatcher, 1997; Highfield, 1996; Kirkpatrick, 1997).

IUCN (1996) lists the species as "vulnerable" (defined as declining at a rate of 20% in ten years or three generations, based on an index of abundance appropriate for the taxon or actual or potential levels of exploitation). Results of preliminary surveys indicated that in less than 10 years of intensive collection, the pancake tortoise has become severely threatened throughout its range in Tanzania (Klemens and Moll, 1995; Klemens, 1996). Relatively healthy pancake tortoise populations may still exist in remote and inaccessible areas of Tanzania. However, if intensive collection of this species continues, these isolated populations will be at risk, depending upon their geographic location and accessibility (Klemens and Moll, 1995).

2.5 Geographic trends: The nature, rate, and extent of decrease in range area or number of sub-populations is unknown.

2.6 Role of the species in its ecosystem: Grasses, leaves, seeds and nuts constitute the majority of the species' diet. Small predatory mammals, such as mongooses (*Herpestes inchneumon*), prey on pancake tortoises (Kirkpatrick, 1997). However, not enough is known about the species' role in its ecosystem to predict the consequences to other species that might be caused by depletion of the species.

2.7 Threats: The primary threats to *M. tornieri* are increase in trade and habitat destruction. The peculiar flattened profile of this species combined with a lizard-like behavior makes *M. tornieri* distinguishable from other tortoises and has heightened its appeal for both zoological institutions and private collections (Kirkpatrick, 1997; Klemens and Moll, 1995; Moll and Klemens, 1996). This desirability has affected the native populations of *M. tornieri* due to exploitation for the pet trade (Kirkpatrick, 1997; Klemens and Moll, 1995; Raphael *et. al*., 1994).

In a recent study of Tanzanian populations, no significant threats other than commercial collection were identified (Klemens and Moll, 1995). Although Klemens and Moll (1995) reported over-grazing by goats and cattle in areas inhabited by the species, they were unable to assess the impact of this on the species. In Kenya, populations are threatened by clearance of thorn scrub for agricultural purposes (WCMC *et al*., 1991)

WCMC *et al*. (1991) reported populations of the species to be "declining" and that collection has had a considerable impact on wild populations. The species is classified as "heavily exploited" or "generally threatened" by the IUCN/SSC Tortoise and Freshwater Turtle Specialist Group Action Plan (1989).

3. Utilization and Trade

3.1 National utilization: In Tanzania, recent research reported no domestic use of the species, except that Hadza women living in the Yaedachini Game Controlled Area above Lake Eyasi are reported to eat them (Klemens and Moll, 1995).

3.2 Legal international trade: *M. tornieri* has been listed on Appendix II of CITES since 1975 (Klemens, 1996). The species' unusual appearance and behavior make it popular in the live pet trade (WCMC et al 1991), where specimens fetch up to $400 each in the United States (Central Florida Reptile Farm dealer list - 1995). International trade data gathered by the World Conservation Monitoring Center, show an increase in levels of international trade in the species as shown in Tables 1 and 2:

3.3 Illegal trade: The large numbers of *M. tornieri* exported from non-range states, mostly Mozambique and Zambia, suggest illegal trade in specimens collected in Kenya or Tanzania. WCMC trade data also shows that although the CITES Standing Committee recommended that Parties not accept commercial shipments of the species from Tanzania beginning in 1995 under Resolution Conf. 8.9, specimens have been exported from Tanzania and imported by CITES Parties. Moreover, despite a European Union ban on importation of the

species since 1988, several European Union members have reported importing the species.

3.4 Actual or potential trade impacts: Recent studies in Tanzania have demonstrated that collection for trade decreased population densities and changed age-class compositions toward a larger number of juveniles in wild populations, as compared to undisturbed populations (Kirkpatrick, 1997; Klemens and Moll, 1995). Klemens and Moll (1995) concluded that the species is exploited at unsustainable levels and that populations were depleted in suitable habitats because of commercial exploitation. Isolation of suitable habitats coupled with limited dispersal abilities and low recruitment rates make recovery of depleted populations unlikely (Klemens and Moll, 1995). Consequently, Klemens and Moll (1995) recommended the adoption of a moratorium on the collection and trade in the species.

3.5 Captive breeding or artificial propagation for commercial purposes: Many specimens are held in zoos and private collections (Honegger, 1979), although the total size of the captive population is unknown. Although the species has been bred in captivity (Kirkpatrick, 1997), there are no known operations breeding the species in a closed system (producing F2) for commercial purposes on a large scale.

Table 1. Exports of *M. tornieri*

Exporting country	1990	1991	1992	1993	1994	1995	1996	1997	1998
Argentina	0	0	1	0	0	0	0	0	0
Burundi	0	10	0	0	0	0	0	0	0
Chile	0	0	1	0	0	0	0	0	0
Denmark	0	0	0	0	0	0	1	0	0
Germany	0	0	1	0	0	0	0	0	0
Mozambique	0	0	0	0	0	0	0	2,125	0
Netherlands	0	0	316	0	0	0	0	0	2
Switzerland	0	1	0	0	0	0	0	0	0
Tanzania	61	58	5	0	0	100	0	404	0
United Arab Emirates	0	0	0	0	0	0	0	2	0
United States	0	242	145	0	0	16	5	4	0
Zambia	0	0	0	0	0	600	0	0	0
Total	61	311	468	0	0	716	6	2535	2

Note: Underlined numbers indicate re-exports.

Table 2. Imports of *M. tornieri*

Importing country	1990	1991	1992	1993	1994	1995	1996	1997	1998
Czech Republic	0	0	0	0	0	0	0	0	4
France	0	0	0	0	0	0	0	350	0
Japan	230	229	135	0	60	156	250	0	0
Malaysia	0	150	0	0	0	0	0	0	0
South Africa	0	0	0	0	0	0	0	12	0
Switzerland	4	25	0	0	0	0	0	0	0
United States	369	5168	605	0	51	100	0	21	0
Total	603	5572	740	0	111	256	250	383	0

4. Conservation and Management

4.1 Legal status

4.1.1 National: Kenya banned the export of the species in 1981 without written permission of the Minister for the Environment and Natural Resources (Legal Notice 152; 25 September 1981). Although Kenya allowed 300 specimens to be exported to Japan in 1998 (Paula Kahumbu, personal communication), Kenya does not intend to allow additional exports (*ibid*).

Tanzania protects the species under the Wildlife Conservation (National Game) Order, 1974. Tanzania had established an annual export quota of 20 specimens, but seizure of a shipment of 500 specimens in the Netherlands in March 1991 and WCMC trade data demonstrate violation of the quota.

4.1.2 International: The species was listed on CITES Appendix I in 1975. On 20 January 1995, the CITES Standing Committee recommended to Parties that they not accept exports of the species from Tanzania. However, not all Parties are complying with this request (see Section 3.2 of this proposal). The European Union (EU) banned the importation of the species in March 1988 (WCMC *et al*., 1991), but there is trade with members of the EU (see Section 3.2 of this proposal).

4.2 Species management

4.2.1 Population monitoring: There is no population monitoring of the species.

4.2.2 Habitat conservation: The only habitats that are protected are those that happen to fall within the boundaries of protected areas.

4.2.3 Management measures: There are no national management programs for the species.

4.3 Control measures

4.3.1 International trade: Other than CITES, there are no other relevant international control measures for trade in the species.

4.3.2 Domestic measures: Kenya banned the export of the species in 1981 without written permission of the Minister for the Environment and Natural Resources (Legal Notice 152; 25 September 1981). Tanzania protects the species under the Wildlife Conservation (National Game) Order, 1974. Tanzania had established an annual export quota of 20 specimens, but according to WCMC data, the quota has been exceeded.

5. Information on Similar Species

There are no other species in the genera.

6. Other Comments

Kenya has consulted with Tanzania and the full document was forwarded for the attention of the Management Authority in Tanzania.

7. Additional Remarks

As shown above, *M. tornieri* meets the biological and trade criteria of Resolution Conf. 9.24 necessary for inclusion in Appendix I because:

a) the wild population has a restricted area of distribution and is characterized by fragmentation or occurrence at very few locations (criterion B (I));

b) wild populations are highly vulnerable to over-exploitation due to its biological characteristics (low reproductive capacity) (criterion B (iii));

c) there has been an observed decrease in the number of individuals and area of distribution (criterion B (iv)); and

d) there has been a decline in the number of individuals in the wild has been observed as ongoing (criterion C (i)).

8. References

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