

A. Proposal

Transfer of *Testudo kleinmanni* from CITES Appendix II to Appendix I

B. Proponent

Republic of Egypt

C. Supporting Statement

1. Taxonomy

11. Class: Reptilia
12. Order: Testudines
13. Family: Testudinidae
14. Species: *Testudo kleinmanni* Lortet 1883
Synonyms: *Pseudotestudo kleinmanni*
15. Common name(s): Egyptian Tortoise

2. Biological data

21. Distribution

Egypt, Israel, Libya. Discontinuous from Qaminis, Libya, on the eastern shore of the Gulf of Sirte in the west to the central Negev Desert ca. 90 km east-southeast of Gaza (Buskirk, 1985) in the east. Its range may extend to Lebanon (Iverson, 1992) in the east; considered to be generally restricted to within 90 km of the Mediterranean coast (Mendelssohn in Groombridge, 1982 revised by Geffen in Buskirk, 1985);

Egypt: confined to the northern part of the country in low-lying areas along the Mediterranean coast and including Sinai. There are several records from further inland, which some authors believe to be introductions (Buskirk, 1985); some may be viable and, therefore, extend the range to ca. 120 km and, possibly, 175 km from the sea (Baha el Din, 1992, 1993).

Israel: restricted to sandy areas and dunes with small bushes in the northern Negev desert (Geffen and Mendelssohn, 1982); the total estimated area of suitable habitat is 1000 km² (H. Mendelssohn *in litt.*, to IUCN/SSC Trade Specialist Group, 1992).

Libya: not well known. Iverson (1992) reports eight specific locality records and two additional general areas where the species has been reported from or is likely to occur. Khalifa (*in litt.*, to IUCN/SSC Trade Specialist Group, 1993) reports that it is found within El-Koufe National Park.

Tortoises from Libya show some differences in facial patterning from those within Egypt and Israel, and may represent an unrecognised subspecies.

22. Population

Listed as Vulnerable in the IUCN Reptilia and Amphibia Red Data Book (Groombridge, 1982) and in the 1994 IUCN Red List (IUCN, 1994). The three main threats to the survival of the species are: intensive collection by professional collectors for the pet trade; extensive habitat destruction; and widespread ecological changes that have allowed for natural and "un-natural" predators to increase and invade the habitat of the species (Baha el Din, 1993).

The species occurs naturally at low densities [densities in Israel have been reported as disparately as ca. 5 animals per km² (Groombridge, 1982) and 27 per km² (Geffen, 1985 in Geffen and Mendelssohn, 1991)]. Mendelssohn (in Groombridge, 1982) estimated a world population of ca. 10,000 animals. According to Baha el Din (*in litt.* to IUCN/SSC Trade Specialist Group, 1991), this is likely to be an underestimate: although populations in Egypt have declined drastically during the past 50 years and local populations have been virtually exterminated, Libya is believed to harbour large populations. There is no published information on the populations of the species in Libya, which are believed to be the current source of specimens entering international trade.

Egypt: Populations of the species have been extirpated or severely reduced due to: destruction of its coastal habitats from urban development and large-scale reclamation and agricultural schemes (North Sinai as well as the coastal area west of Alexandria) (Baha el Din, 1993); over-grazing and predation (e.g., dogs, corvids); and commercial collection since early this century (Baha el Din, *in litt.*, to IUCN/SSC Trade Specialist Group, 1991).

Candy (*in litt.*, to A. Highfield, 1990) reported that local hunters and wildlife experts in Egypt reported that the remaining populations of this species in Egypt are found in the vicinity and west of Mersa Matruh and in northern Sinai. However, more recent information has been provided as a result of a field survey initiated by the IUCN Turtle Recovery Program of the IUCN/SSC Tortoise and Freshwater Turtle Specialist Group and the Centre for Biodiversity and Conservation, American Museum of Natural History. This survey has revealed a dramatic population decline in all areas in Egypt where the species has been historically known to occur. Baha El Din (*in litt.*, to IUCN/SSC Trade Specialist Group, 1994) reports that through field surveys and interviews with local herders throughout the coastal plain of Egypt and in northwest Sinai he has collected reliable information on only three sightings in recent years, and has documented huge habitat destruction throughout much of the former range (see below). One report was of two animals observed in Spring 1994, 30 km east of Salum on the Libyan border the other was of a single tortoise collected in Spring 1993 on the southeast margin of lake Bardawil in northern Sinai. His preliminary conclusion on the basis of this fieldwork is that the species is "technically" extinct in Egypt because any remaining relict populations are too disjunct to form viable population units.

Israel: Geffen and Mendelssohn (1988) identified destruction of habitat by off-road army vehicles, over-grazing and agriculture as the main threats to this species. Increased predation by ravens and crows, who hunt with greater success due to the absence of vegetation cover, is also a factor (Groombridge, 1982). While these authors considered legal protection to be effective in removing commercial collection as a threat, they viewed this protection as irrelevant in reducing the habitat threats to the species. They predicted that unless several large nature reserves are established in the northern Negev desert, no large populations of the species would survive in a few years' time. According to H. Mendelssohn (*in litt.*, to IUCN/SSC Trade Specialist Group, 1992), a 220 km² reserve at Holot Agur is planned but has not yet been approved.

Libya: Nothing is known of the species' status in Libya. Although no subspecies are recognized, specimens from Libya are reported to be much more reddish in colour with different head markings and, like the Israeli specimens, bear reduced or no abdominal markings, a rare trait in Egyptian specimens (Buskirk *in litt.*, to IUCN/SSC Trade Specialist Group, 1992). Baha el Din (1993) received an unconfirmed report that in 1991/92 a large *T. kleinmanni* population in Libya was destroyed by agricultural workers, who consider the species a pest.

23. Habitat

Stubbs (1989a) reports that the species is restricted to desert environments. These areas have an average air temperature of 20°C and a mean maximum of 30°C and a mean minimum of 12°C. Rain falls in winter only, with an annual average of 50-200mm. This corresponds to the Saharo-Arabic bioclimatic region. The principal vegetation in these areas is a sparse scrubby association dominated by *Artemesia monosperma*. Schleich (1984) reported that the habitat used in Libya, where the species favours crevices and bushes as cover sites, differs from that in Israel, where rodent burrows are chiefly utilized (Buskirk, 1993).

Habitat destruction appears to be the main threat to the species survival across its range. Baha El Din (*in litt.*, to IUCN/SSC Trade Specialist Group, 1994) reported massive loss and fragmentation of known habitats due largely to over-grazing, ploughing, irrigation schemes, tourist developments and vehicles, particularly along the north coast, west of Alexandria. He also reported that a large scale agricultural reclamation scheme, aimed at irrigating 400,000 acres of dunes in north Sinai, over the next 10 years was already underway, and concluded that few remaining patches of suitable habitat remain scattered across the species range in Egypt.

3. Trade data

Most of the utilization of this species has been documented in Egypt and to have served domestic and international markets.

31. National utilization

Local uses included pets, fertility medicine, and "research" (Baha el Din, 1993). In the 1980s, most of the commercial collecting was restricted to Egypt focusing on local populations and local markets, involving a few thousand animals per year.

The opening of the border between Egypt and Libya in 1990 resulted in an upsurge in trade in the species from populations in Libya, and hundreds appeared in markets, shops and even in cardboard boxes along the streets in Cairo (Hoath, 1990); 500 tortoises were recorded on a single day in one of the many animal markets in Egypt (L. Candy, *in litt.*, to A. Highfield, 1990). Based on regular visits to local pet markets during 1989-1992, tens of thousands of *T. kleinmanni* are estimated to have been imported into Egypt from Libya (Baha El Din, *in litt.*, to IUCN/SSC Trade Specialist Group, 1993). An estimated 80% of these were destined for local markets, with the remainder exported. More recently, according to Baha el Din (1993), the number of *T. kleinmanni* offered for sale in Cairo pet markets has been much lower than in previous years.

However, imports from Libya apparently continue and any tortoise found by local herders is automatically collected for sale: 850 individuals were recorded in cages in a Cairo pet shop on a single day in 1993, and, during 1994, Baha El Din (*in litt.*, to IUCN/SSC Trade Specialist Group, 1994) reported one local dealer in Salum claimed to be able to supply >2000 animals if requested. The same dealer noted however, that even in Libya the numbers of animals are rapidly declining.

32. Legal international trade

Historical records point to large numbers of this species having been exported from Egypt to European markets until the early 1970s, when local populations of the species were much reduced.

International trade as reported to CITES during 1983-1988 totalled 36 individuals only, of which 25 were exports from Egypt, although Baha El Din (*in litt.*, to IUCN/SSC Trade Specialist Group, 1991) estimates that

the actual number of individuals exported annually from Egypt during that period was more likely in the region of 200. Importing countries are further likely to have included the Middle East. The reported massive increase in trade between Libya and Egypt between 1989 and 1992 was also suggested by CITES statistics, which record the export of 110 and 1001 individuals from Egypt in 1989 and 1990, respectively. The 17 *T. kleinmanni* exported from Israel in 1989 were reportedly re-exports of tortoises from Egypt; they were not of Israeli origin (J. Buskirk *in litt.*, to IUCN/SSC Trade Specialist Group, 1993) (Table 1).

Table 1. Reported countries of origin (or exporting country if no original source reported) and quantities of transactions in *Testudo kleinmanni* reported to CITES.

	1986	1987	1988	1989	1990
LIVE					
Countries having or possibly having populations of <i>T. kleinmanni</i>					
Israel				17	
Egypt	25			110	1001
Countries without wild populations of <i>T. kleinmanni</i>					
Poland		10	1		

33. Illegal trade

Although Egypt prohibited exports of this and several other reptile species in 1991, exports evidently continue, particularly to the U.S. According to Buskirk (*in litt.*, to IUCN/SSC Trade Specialist Group, 1993), dozens, "perhaps hundreds," of this species were imported into the United States in 1992, selling for prices as high as US\$ 325 per animal. In 1993, the species was reported to still be widely available in the United States, where a single importer reported importing 5,000 individuals into the country by mid-1993 (TRAFFIC Europe, 1993). However, prices have dropped to \$95-175 and are still on the decline because recent import levels are so high (Weissgold, *in litt.*, to TRAFFIC International, 1993). Since captive breeding of this species has been exceptionally infrequent (Buskirk, 1993), this trade relies primarily or wholly on wild-caught animals. Buskirk (*in litt.*, to IUCN/SSC Trade Specialist Group, 1993) reports that there is considerable variation in the appearance of these animals, suggesting that collectors are targeting several populations; in addition, he and others have noticed that many of these recently imported tortoises are different in appearance from the Israeli and Egyptian forms, suggesting that they are actually of Libyan origin. This also appears to be the case with ca. 30 tortoises imported from Egypt to the Budapest Zoo in 1992.

34. Potential trade threats

341. Live specimens

Baha El Din (*in litt.*, to IUCN/SSC Trade Specialist Group, 1993) considers trade to be the greatest threat to the largest remaining population of the species in Libya and that thousands are imported annually through the land crossing between Egypt and Libya at Salum.

342. Parts and derivatives

Not applicable.

4. Protection status

41. National

Egypt: According to IUCN (1986), Egypt does not have specific legislation for the implementation of CITES, and existing legislation for protected areas and wild animal conservation is used. Legislation generally takes the form of decrees, and penalties for violations are provided. *T. kleinmanni* was not specifically protected under any of these decrees until the adoption of Ministerial Decree 1403 of October 1991, which prohibited its export (CITES Notification No. 662). The species may benefit from additional protection through the establishment of protected areas.

There do not appear to be any import controls for CITES-listed species in Egypt, and it is unknown whether imports and re-exports of the species are permitted under the Egyptian legislation.

Israel: The species is legally protected and there is no collection for trade (H. Mendelsohn, *in litt.*, to TSG, 1992).

Libya: This species, and all species of tortoise, are covered by a resolution by the Minister of Agriculture in favour of their protection and to prevent trading and export (Khalifa, *in litt.*, to IUCN/SSC Trade Specialist Group, 1993).

42. International

Listed on Appendix II of CITES. US Federal Law prohibits the routine commercial sale of any turtle or tortoise with a carapace length of less than 4"; however, few male *T. kleinmanni* reach that size.

43. Additional protection needs

Stubbs (1989a) recommends the establishment of protected areas for the species in Israel and Egypt as a priority. He further states that an area of 40-50 km² between Agur and Halutza sands on the Israel-Egypt border is proposed as a major reserve area. In Egypt, habitat protection is similarly required but in conjunction with strict enforcement of legal restrictions governing the collection of tortoises. Khalifa (*in litt.*, to IUCN/SSC Trade Specialist Group, 1993) reports that since protection measures have been implemented "a lot" of tortoises have been re-introduced to the El-Koufe National Park, an area of 8500 hectares of suitable habitat.

5. Information on similar species

All species and subspecies of *Testudo* (broadly distributed throughout the Mediterranean region with some populations further east) superficially resemble *T. kleinmanni*. They all appear to be declining in numbers because of widespread habitat destruction and fragmentation, and from the long-term effects of large scale collecting for the pet trade (Stubbs, 1989b). The natural, low density population structure of these species can only be maintained in unfragmented, extensive habitat units. All Testudinidae species (with the exception of those on Appendix I) are listed on Appendix II of CITES.

6. Comments from countries of origin

7. Additional remarks

8. References

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