



The Indian Star Tortoise

and the criteria for listing in CITES Appendix I







Executive Summary

Strong evidence suggests that the Indian star tortoise (*Geochelone elegans*) should be transferred to Appendix I of CITES.

The Indian star tortoise is being traded in extremely high volumes feeding a rising international demand for the live pet trade (D’Cruze et al., 2016). This species is also being illegally traded for subsistence and spiritual use (D’Cruze et al., 2016). The IUCN Species Survival Commission Tortoise and Freshwater Turtle Specialist Group (TFTSG) is concerned that the declines in Indian star tortoise populations are much more precipitous than previously thought and can be > 30 per cent inferred from available population data, high levels of exploitation for illegal trade, habitat loss and degradation, and the intrinsic difficulties in counting this species.

Wild Indian star tortoise populations are found only in Sri Lanka, India and Pakistan. To safeguard wild populations, all range States have chosen to adopt strict domestic legislation that prohibits commercial utilization. However, the strong international demand for the species coupled with legal trade and poor enforcement in transit and consumer States has made enforcement difficult for range States.

All three of these range States have formally considered the implications of trade on surviving wild populations of this species. Contrary to the opinion of the CITES Secretariat (P. 87 of the Notification to the Parties No. 2019/018 15 March 2019), the two range States, with the largest wild populations support listing the Indian star tortoise on Appendix I and are co-proponents of the proposal. An Appendix I listing would both strengthen international cooperation by enforcement authorities and result in higher and more deterrent fines and penalties. It would also lead to better regulation of legal international trade in captive-bred specimens of the species for which laundering of wild-caught specimens as captive-bred appears to be a problem.

For these reasons, the Parties should support the proposal to list the Indian star tortoise in Appendix I.

Photo left: The Indian star tortoise is considered the most common tortoise species involved in the international illegal pet trade.



Background

The United Nation's Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) is mandated to ensure that international trade does not threaten the survival of wild plants and animals. Turtles and tortoises are some of the most trafficked species in the world both for the pet trade, food and traditional medicine. Among these the Indian star tortoise (*Geochelone elegans*) found only in Sri Lanka, India and Pakistan, is proven to be the most numerous illegally traded species. It is currently listed in Appendix II of CITES, which provides for some oversight of international trade. However, this is insufficient given the volume of illegal trade, including that from unverified and likely fraudulent captive breeding sources.

An Appendix I listing is warranted for the Indian star tortoise because this species meets the criteria, first and foremost, but

also because an Appendix I listing will send the necessary market signals, add further trade controls, and enhance scrutiny of captive-breeding operations. As detailed below, according to the best available information, the Indian star tortoise meets Criterion C i) and ii) of Resolution Conf. 9.24 (Rev. CoP17), Annex 1, because it has suffered inferred declines on the basis of extremely high levels of exploitation, vulnerability to intrinsic factors such as long generation time and low annual reproductive output, and vulnerability to extrinsic factors, including habitat loss and degradation.

The Indian star tortoise should be transferred to Appendix I at the 18th meeting of the Conference of the Parties to CITES (CoP18).

The criteria for listing in CITES Appendix I

Article II, paragraph 1, of the CITES Convention text states: "Appendix I shall include all species threatened with extinction, which are or may be affected by trade."

Photos left and right: Indian star tortoises illegally collected from the wild and bagged for export in India.



Affected by trade

A species “is or may be affected by trade” if it is known to be in trade and that trade has, or may have, a detrimental impact on the status of the species, or it is suspected to be in trade, or there is demonstrable potential international demand for the species, that may be detrimental to its survival in the wild [CITES Resolution Conf. 9.24 (Rev. CoP17), Annex 5].

Evidence suggests that the Indian star tortoise is traded in extremely high volumes, that this trade has a detrimental impact, and that international demand is growing, primarily for live tortoises to be used as pets. Information also exists that this species is being illegally traded for subsistence and spiritual use.

The Indian star tortoise is considered the most common tortoise species involved in the international illegal pet trade (D’Cruze et al., 2016). Numerically, it is the single most seized species of tortoise or freshwater turtle worldwide (CITES CoP17 Doc. 73, 2016; van Dijk, 2016).

Between 2000 and 2015, at least 34,080 live tortoises and freshwater turtles were recorded as seized by wildlife and customs authorities in 118 different enforcement actions internationally (CITES, 2016). Of these, Indian star tortoises alone accounted for more than 11% of the individual animals seized globally (CITES, 2016). Noteworthy is that during this time nearly two-thirds of all seized live Indian star tortoises (21,316 animals) were detected and seized within India (CITES, 2017). A separate analysis of seizures in India reported by the media between 2011 and 2015 revealed that at least

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8,533 Indian star tortoises were seized and that this species occurred in at least 23% of all such seizure events (223) reported during this time period (Mendiratta et al., 2017).

Highlighting the scale of illegal tortoise trade in India, and the Indian authorities’ efforts to combat this trade, the CITES Secretary-General awarded a Certificate of Commendation to the Wildlife Crime Control Bureau, Ministry of Environment, Forest and Climate Change, India, in recognition of exemplary work conducted to initiate and coordinate a national intelligence-driven law enforcement operation focused on the major Indian states affected by poaching of and illegal trade in live tortoises and turtles. The operation, code-named “Operation Save Kurma”, was conducted from 15 December 2016 to 30 January 2017, and resulted in the seizure of 15,912 live tortoises and turtles and the arrest of 55 suspects (CITES Notification 2017/076). Such efforts by range States are not only indicative of the scale of illegal trade in Indian star tortoise but also highlight the need for stricter multilateral measures involving transit and destination countries to address an escalating transnational problem.

Unpublished data provided by the Customs Department and other law enforcement departments of Sri Lanka, including the navy, police and air force, indicate that between 1997 and 2019 customs and wildlife enforcement authorities seized 5,487 Indian star tortoises in nine different operations, some of which were in transit at sea from Tamil Nadu in southern India to Sri Lanka, which reflects a new, and previously undocumented route and trend (de Silva et al., 2019). Furthermore, this type of illegal trade activity in Sri Lanka appears to be on the increase, as 3,130 Indian star tortoises were seized between 2015 and 2017 alone (Malsinghe et al., 2017; Janssen and de Silva, 2019).

In Thailand, Indian star tortoises were also the most frequent illegally traded tortoise seized by enforcement authorities between 2008 and 2013 (5,966 individuals during 15 cases) and is the most commonly observed tortoise at the Chatuchak Market in Bangkok (Chng, 2014). Additional seizures occurred in Germany, Indonesia, the Netherlands, the Philippines, Slovakia, Spain, the United Kingdom, and the United States, in most cases from air travelers arriving from Asia, as well as some from express mail parcels sent from Asia (CITES, 2017). The fact that animals continue to be widely offered for sale in Asia and elsewhere (on open display in pet shops or on the internet) indicates that the numbers seized are only the tip of the iceberg (van Dijk, 2016).



The species has been included in CITES Appendix II since 1975, allowing international trade only if export permits are issued by the country of origin. None of the three range countries have permitted or recorded legal commercial exports of live, wild-collected specimens since 1999. While some captive breeding occurs at zoos and by private keepers, few of the offspring are traded internationally, and no large-scale commercial captive production facilities are confirmed to exist. Consequently there are concerns that proportions of Indian star tortoise founder stock were not legally exported or bred in captivity in conformity with Res. Conf 10.16 (Rev.) (CITES, 2017).

For example, historically, Jordan is reported to have been the main supplier of live Indian star tortoises despite the fact it is a non-range State that has only received one shipment of 20 live Indian star tortoises of unknown origin (CITES, 2018). Consequently, Jordan has been asked to report on how this founder stock was sourced and how much time was required to build up the breeding population (AC29 Doc. 14.1; AC30 Doc. 13.1, AC30 Doc. 13.2, Resolution Conf. 17.7).

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Massive collection for illegal trade

Studies in southern India show that Indian star tortoises are being illegally collected in the tens of thousands (D’Cruze et al., 2015). Researchers embedded in these communities observed between 100-150 tortoises being gathered every week from the borders of Andhra Pradesh, Karnataka and Tamil Nadu, and being sent out (D’Cruze et al., 2015). In 2014, there was an observed and counted illegal collection of around 55,000 tortoises (in a total of 27 consignments) from a single location in the state of Andhra Pradesh in southern India within a year which was taken by couriers to various points across India (D’Cruze et al., 2015).

There are no comparative estimates of the relative size of Indian star tortoise collection from wild populations from ‘hubs’ such as that observed in Andhra Pradesh, Karnataka and Tamil Nadu in 2014 (D’Cruze et al., 2015). But even by very conservative estimates, should only four such hubs exist, this would equate to approximately 200,000 Indian star tortoises being collected from southern India alone. This is an alarming number, and 10 times higher than an earlier decade old estimate of just 10,000-20,000 individuals that were estimated to have been poached in the entire range of species in India each year (Sekhar et al., 2004; Vyas, 2015).


Even more alarming is the fact that regulated transactions are also likely acting as a cover to facilitate illegal trade of wild individuals using falsified and counterfeit paper work (D’Cruze et al., 2015; Nijman and Shephard, 2015). Legal trade reported by CITES totalled 211 separate trade records between 2004-2013. In total 37,896 individuals were reported by export countries during the same period

(D’Cruze et al., 2015). Although no large-scale commercial captive Indian star tortoise production facilities are known to exist, only 11 out of these 211 separate trade transactions had involved individuals declared as wild sourced animals and 198 (94%) were declared as being for commercial use.

Since no large-scale legal captive breeding facilities are known to exist, this is a strong indication that wild individuals sourced illegally are being laundered as captive bred. Illegal trade, transport, sale and subsequent use, thus, continue to pose a severe threat to wild populations. Large discrepancies in the import and export data to Thailand (D’Cruze et al., 2015) further indicates that trade is on the rise and that illegal laundering of wild animals via legal pathways is taking place. Once Indian star tortoises enter countries that permit legal trade traceability, becomes very difficult (Nijman and Shephard, 2010).

Moreover, habitat loss is also occurring throughout the Indian star tortoise’s range; in particular scrub forest habitat is being converted to orchards and cash crop agriculture, leading to reduction of available area of the preferred habitat type (Vyas, 2006, 2010; de Silva, 2015; D’Cruze et al., 2016). Although the Indian star tortoise is a relatively adaptable species, continued habitat loss is likely to further impact wild numbers (Vyas, 2006; de Silva, 2015; D’Cruze et al., 2016). Additional documented threats faced by this species include accidental mortalities via road kills and agricultural equipment such as brushmowers, and discarded fishing nets (de Silva, 1996, 2003, 2015; Ekanayake et al., 2004; Jayawickrama et al., 2010), as well as deliberate killings to protect crops (de Silva, 2003, 2015).

Conservative estimates indicate that the number of illegally poached tortoises is

10x 
higher than a decade ago.

Marked population decline

Conservation assessments of wild Indian star tortoise populations (that are now more than 20-years-old) showed relatively large populations of this species in India and Sri Lanka, and a smaller sub-population in Pakistan (D’Cruze et al., 2016). These populations are found in scrublands, grasslands, desert edges and rural agricultural landscapes (de Silva, 2003; Fyfe, 2007) and seem to inhabit areas close to human-dominated landscapes (Choudhury et al., 2000; de Silva, 2003) and include protected areas as well (D’Cruze et al., 2016). Studies indicate populations of over 10,000 with an area of occupancy of more than 2,000 km² (D’Cruze et al., 2016). This may seem like good news, but these estimates are now out-dated and irrelevant in light of recent trade studies that are ringing the alarm for the on-going survival of this species.

Based on recent documented levels of seizures, illegal trade, and the suspected future reduction in population size that could occur because of this activity, an IUCN listing of Vulnerable A4cd has been given based on concerns that population reductions of >30% are likely to occur if this exploitation continues or expands (D’Cruze et al., 2016). This echoes separate earlier national CAMP workshop assessments of Indian (Molur and Walker, 1998) and Sri Lankan (de Silva et al., 2000) populations.

The Indian star tortoise is thus inferred to have suffered a “marked decline” in their population sizes in the wild due to high levels of exploitation, decreases in area and quality of habitat, and a high vulnerability to intrinsic factors (low density, late maturity and low fecundity) and extrinsic factors (high levels of habitat loss, degradation, and fragmentation).

CITES Resolution Conf. 9.24 (Rev. CoP17) does not define a “marked decline” specifically, but rather states: “The judgment that a decline is marked is taxon-specific and can be justified by a number of considerations, for example the population dynamics of a related taxonomic group” and that “[A] general guideline for a marked recent rate of decline is a percentage decline of 50% or more in the last 10 years or three generations, whichever is the longer,” noting, however, that those “figures are presented only as examples, since it is impossible to give numerical values that are applicable to all taxa because of differences in their biology.”

Recent trade studies that are ringing the alarm regarding the on-going survival of this species.

Photo bottom: Wild Indian star tortoise populations are found only in Sri Lanka, India and Pakistan.





Additional considerations

Precautionary approach

When considering proposals to amend Appendix I or II, the Parties shall, by virtue of the precautionary approach and in case of uncertainty either as regards the status of a species or the impact of trade on the conservation of a species, act in the best interest of the conservation of the species concerned and adopt measures that are proportionate to the anticipated risks to the species. Given the challenges associated with counting Indian star tortoises in the wild, estimating population sizes and collecting data on rates of the decline is virtually impossible. The IUCN Species Survival Commission (SSC) Tortoises and Freshwater Turtles Specialist Group is concerned that the declines in Indian star tortoise populations are much more precipitous than can be inferred from available population data which is over 20 years old, given extreme levels of exploitation for illegal trade, habitat loss and degradation. For these reasons, the Parties should take a precautionary view and adopt the proposals to list the Indian star tortoise on Appendix I.

Range States agree

Wild Indian star tortoise populations are found only in Sri Lanka, India and Pakistan. In order to safeguard wild populations, all range States have adopted strict domestic legislation that prohibits commercial utilization. However, these national measures and their implementation have not been sufficient to stop illegal trade due to an ever increasing demand from the illegal international pet trade, and inadequate enforcement by transit and consumer States.

All three range States have formally considered the implications of trade on surviving wild populations of this species. Contrary to the opinion of the CITES Secretariat (P. 87, of the Notification to the Parties No. 2019/018 dated 15 March 2019), the two range States with the largest wild populations (India and Sri Lanka) support for listing the Indian star tortoise on Appendix I and are co-proponents of the proposal. Listing would both strengthen international cooperation by enforcement authorities and result in higher and more deterrent fines and penalties.

For these reasons, the Parties should support the proposal to list the Indian star tortoise in Appendix I of CITES.

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