

## Critically Endangered Ploughshare Tortoises: shells branded to reduce demand

The Ploughshare Tortoise *Astrochelys yniphora* is highly threatened by persistent demand in the black market pet trade. As a result, its numbers in the wild have been drastically reduced to approximately 400 adult specimens. Assessed as being Critically Endangered in the IUCN *Red List of Threatened Species*, these tortoises are stolen by poachers who sell them to unscrupulous traders, mainly in South-east Asia.

The Ploughshare Tortoise is endemic to the Baly Bay area in north-western Madagascar (Leuteritz and Pedrono, 2008) where it is totally protected by law. The species is also listed in Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), making any international commercial trade illegal. Yet demand from some countries, in particular Indonesia, Malaysia and Thailand, combined with low levels of effective enforcement, continue to push this striking species towards extinction (Shepherd and Nijman, 2008; Stengel *et al.*, 2011).

In an effort to raise awareness of the plight of the Ploughshare Tortoise in South-east Asia and to build support to fight illegal trade in the species, four organizations—Durrell Wildlife Conservation Trust, TRAFFIC, the Turtle Conservancy and Wildlife Reserves Singapore—held an event called “Tattoo the Tortoise” on 16 December 2013 at Singapore Zoo. Identification codes were engraved onto the shells of two Ploughshare Tortoises, and while the procedure is painless it is hoped that the unsightly permanent markings will reduce their black market value and allow researchers to monitor individual animals. An additional purpose of the coded engraving is to make the tortoises easily traceable should they ever be found in trade; thus far, of the Ploughshare Tortoises that have been seized in South-east Asia, none has been an engraved specimen. Singapore Zoo currently houses these two Ploughshare Tortoises, which were confiscated by the Agri-Food and Veterinary Authority (AVA) of Singapore in 2009, and will use the pair to establish an “assurance colony”.

The event included presentations by experts working on the conservation of this species and an exhibition aimed at raising public awareness of the illegal trade and conservation needs of Ploughshare Tortoises and other highly threatened tortoises and freshwater turtles.

Based on seizures reported in the media and government statements, at least 86 Ploughshare Tortoises have been seized since 2010. Over 60% of these seizures occurred in Thailand while the rest took place in Madagascar and Malaysia, with at least one of the shipments destined for Indonesia, where the species is frequently exhibited at reptile expositions and for sale in markets. Smugglers are audacious in their efforts to engage in illegal trade in this species: in March 2013, two people were arrested while attempting to enter Thailand via Suvarnabhumi International Airport, Bangkok, in possession of 52 Ploughshare Tortoises and 21 Radiated Tortoises *Astrochelys radiata* (CITES Appendix I) contained in suitcases. One of

the smugglers, a Malagasy woman, was imprisoned, while the other, a Thai man, was released on bail (Shepherd, 2013).

These cases exemplify the urgent need for enforcement agencies to take the illegal trade in this species seriously. Reduced demand for the species in the international pet trade and increased effective enforcement measures are essential to end the decline of this species.

The Turtle Conservancy, whose mission includes maintaining colonies of threatened and endangered tortoises and freshwater turtles, aims to engrave identification marks on all Ploughshare Tortoises in captive-breeding programmes and those remaining in the wild. On 14 January 2014, the Turtle Conservancy’s Behler Chelonian Center in Ventura County, USA, branded the shells of two Ploughshare Tortoises that had been flown in from Taiwan, where they were seized in 2008 (Anon., 2014). Some 150 Burmese Starred Tortoises *Geochelone platynota* (CITES Appendix I) were similarly marked with the help of the Conservancy in October 2013 (Anon., 2014).

### References

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Engraving the shells of Ploughshare Tortoises in an attempt to devalue their appeal to collectors.