



THE PALAWAN FOREST TURTLE UNDER THREAT FROM INTERNATIONAL TRADE

Of the six species of freshwater turtle native to the Philippines, only the Philippine Forest Turtle, or Palawan Forest Turtle *Siebenrockiella leytensis*, is endemic to the country, found only on the Palawan group of islands (Diesmos *et al.*, 2008). Listed as Critically Endangered and among the world's 25 most endangered tortoises and freshwater turtles (Turtle Conservation Coalition, 2011), the species is facing an extremely high risk of extinction in the wild in the immediate future due to a population reduction of at least 80%, projected or suspected to be met within the next 10 years or three generations, based on current levels of exploitation. The extent of occurrence is estimated to be less than 100 km², with a continuing decline, observed, inferred or projected, in area, extent and/or quality of habitat (IUCN, 2012).

The species is fully protected in the Philippines. As well as being one of the world's rarest species of freshwater turtle, the Palawan Forest Turtle is also one of the least known (Diesmos *et al.*, 2004a, 2004b, 2008; Diesmos *et al.*, 2012; Schoppe *et al.*, 2010). Until recently, herpetologists believed that the species, described by Taylor (1920) from two specimens as *Heosemys leytensis* from Leyte, might well be extinct. Only when Timmerman and Auth (1988) reported on a specimen from Palawan which they identified as a Palawan Forest Turtle, did the search for the species resume. It took a decade before its existence in Palawan was confirmed and documented through various studies (Diesmos *et al.*, 2004a, 2004b; Fidenci, 2004; Gavino and Schoppe, 2004; Lopez and Schoppe, 2004; Widmann *et al.*, 2004). Diesmos *et al.* (2004a) describe the rediscovery and provide evidence of the species being endemic to the Palawan faunal region. Morphological and molecular phylogenetic studies subsequently demonstrated that *leytensis* is the sister lineage to the genus *Siebenrockiella* (Diesmos *et al.*, 2005).

Above: Palawan Forest Turtles for sale in a pet market in Manila.

Rediscovery of this protected species has stimulated international demand from hobbyists and collectors. Just months after the rediscovery was published, the Palawan Forest Turtle was available on the international pet markets of Europe, Japan and the USA (Diesmos *et al.*, 2004b). The species is restricted to five municipalities in Palawan, hence collection sites are limited. The species has never been bred in captivity and all individuals in trade are therefore illegal. Despite these facts, the laws are weakly implemented, if at all, and trade in the species continues to flourish. All species noted by the authors to be offered for sale in the Philippines, China, Europe and the USA were declared as captive-bred, except those in China.

LEGISLATION

The Palawan Forest Turtle is listed in Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and is protected in the Philippines under the Republic Act 9147, known as the Wildlife Resources Conservation and Protection Act (or the Wildlife Act). This law prohibits international and domestic trade of wild-caught individuals of this species and violations can lead to fines equivalent to USD120–7150 and/or up to four years' imprisonment; collection permits are limited to research and trade is limited to captive-bred individuals internationally; possession is exceptionally allowed for those who registered with the authorities by 7 March 2005.

HOBBYIST TRADE

Although there is some domestic consumption of Palawan Forest Turtles for food, the greatest threat to the species is the demand for live specimens from international collectors and hobbyists, as is the case for many rare and endemic turtles (Turtle Conservation Coalition, 2011; Horne *et al.*, 2012; Diesmos *et al.*, 2012).

There have been a few convictions for illegal trade in this species but penalties have been negligible: for example, on 8 February 2012, a Chinese national caught arriving in Hong Kong from the Philippines with 60 reptiles in his luggage, including 20 Palawan Forest Turtles, and, again, on 14 June 2012, with a further 43 Palawan Forest Turtles, was fined HKD8000 (USD1030) for the first incident, and sentenced to six weeks in gaol for the second. Under Hong Kong legislation, he could have been sentenced to a maximum penalty of HKD5 million (USD645 000) and two years' imprisonment.

Kadoorie Farm and Botanic Garden (KFBG) in Hong Kong assisted the Agriculture, Fisheries and Conservation Department with the temporary holding and care of the reptiles until they could be returned to the Philippines on 27 April and 1 August 2012, respectively—the first-ever repatriation of wildlife back to the Philippines. The cost of repatriation was borne largely by the Philippines Government. The surviving specimens were cared for by the Katala Foundation Incorporated (KFI)—a Palawan-

based NGO—for quarantine and eventual release. KFI spearheads research and conservation efforts for this species in-situ and holds the only ex-situ assurance colony of the Palawan Forest Turtle. The turtles underwent quarantine and health checks and the first group was released back into the wild in June 2012 after they had been given a clean bill of health and in accordance with IUCN guidelines for the placement of confiscated animals and re-introductions (IUCN, 1998; 2002). The second group remains under the care of KFI while decisions on their final destination are decided. KFI is also lobbying for the protection of the turtles' remaining forest habitat in Palawan through large-scale information education campaigns and the establishment of protected areas for the species.

In a third case during 2012, Regional Maritime Police recovered 27 Palawan Forest Turtles from a bag that had been abandoned on Liminangkong Pier, north-west Palawan. The bag also contained four Asian Leaf Turtles *Cyclemys dentata* and 13 Estuarine Crocodiles *Crocodylus porosus*. The animals had reportedly been destined for Manila, and ultimately for the international market. The animals are in the temporary care of the Palawan Wildlife Rescue and Conservation Centre of the Department of Environment and Natural Resources and their condition is regularly monitored by KFI.

Based on confiscation and seizures data for 2009–2011, the Palawan Forest Turtle is ranked sixth among the 10 most-commonly confiscated species in the Philippines (Schoppe and Acosta, 2011b). Data on mortality during trade are not available but it is known that the species is prone to stress and needs clean and cool waters for its survival (Schoppe, 2010). Fatalities among the three 2012 confiscations ranged from 10–14% for the international confiscations and 26% for those confiscated while still in Palawan (Schoppe, unpublished data).

KFI works with the Philippines CITES Authorities and the Palawan Council for Sustainable Development (PCSD) to conserve the species. Since 2007, KFI is addressing the threats and knowledge gaps with a number of in-situ projects and the maintenance of an assurance colony aimed at conservation breeding (Schoppe and Fernando, 2009; Schoppe, 2010; Schoppe and Acosta, 2010b, Schoppe and Diaz, 2011). In-situ projects include information education campaigns, training on species identification and law enforcement, studies on population size, site fidelity and home range, role in the ecosystem, threats, distribution, and habitat requirements (Acosta *et al.*, 2011; Schoppe, 2009; Schoppe and Acosta, 2010a, 2011a, 2011b, 2012; Schoppe *et al.*, 2010; Schoppe and Ibanez, 2011; Schoppe and Jose, 2011).

RECOMMENDATIONS

As demand for the Palawan Forest Turtle and attempts to smuggle it out of the country increase, so too must monitoring and enforcement efforts. Successful convictions and strong penalties must go hand-in-hand with increased enforcement efforts, in order to serve as deterrents. Protection for the Palawan Forest Turtle needs to improve and an analysis undertaken to assess whether the species meets the criteria for transfer from CITES Appendix II to Appendix I (Horne *et al.*, 2012). More importantly, penalties for individuals found keeping, smuggling or trading this species illegally must be increased significantly if they are to serve as deterrents and ultimately reduce the trade. Research to identify collection sites and trade routes as well as a trade forensic study are urgently needed.



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CONFISCATION OF
PALAWAN FOREST TURTLES,
LIMINANGKONG, PALAWAN,
PHILIPPINES
(TOP AND BOTTOM)

MANILA PET MARKET, 2012
(CENTRE)

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