

## Transfer of *Shinisaurus crocodilurus* from Appendix II to Appendix I

### Proponents: China, Viet Nam and European Union

**Summary:** The Chinese Crocodile Lizard *Shinisaurus crocodilurus* is the only living member of the family Shinisauridae<sup>1</sup>. It is a semi-aquatic lizard ca. 40cm in length that occurs in undisturbed and densely vegetated rocky streams in tropical evergreen broadleaf forests in southern China and northern Viet Nam. Adults have a territory of around 10m<sup>2</sup>. In the wild maturity is reached at two to four years of age. Pregnancy lasts between nine and 11 months and between two and 12 fully developed young are born into the water. The species was included in Appendix II in 1990.

The current population is estimated at 950 individuals in China and fewer than 100 in Viet Nam. In 1978 China's total population was estimated at about 6000 individuals decreasing to about 2500 individuals in 1990. Sub-populations are fragmented due to loss of habitat, with 19 known in China (of 10-350 individuals) in an area of ca. 460km<sup>2</sup> and three in Viet Nam (of 17-22 mature individuals) spread over an area of about 1500km<sup>2</sup>. The Chinese sub-populations are the most studied, and show significant population declines over the last 30 years, ascribed to collection for the pet trade and local consumption and use in traditional medicine. Five sub-populations appear to have been extirpated completely, and the remaining 19 have recorded declines of up to 90%. At some streams in Viet Nam, this species was reported to have declined or disappeared between 2013-2014, due to increased accessibility to the area, and electrofishing<sup>2</sup>.

Three of the eight Chinese sub-populations fall within protected areas, although only one of these is considered not under threat. The sites of the other Chinese populations are believed to be affected by agricultural conversion, logging and water pollution. All three Vietnamese sites fall within protected areas but are surrounded by cultivated lands, preventing migration between sites. At least one site is affected by coal mining, and ongoing developments such as new roads and tourist and religious sites have increased accessibility to the habitat.

Collection for the international pet trade and domestically for food and traditional medicine is regarded as the major cause of the recent population decline. Anecdotal evidence suggests locals caught as many as 50 per day to sell at markets, until the numbers became too few to collect.

There is demand for this species for the pet trade, and it is available for sale at local and international reptile markets; there is also apparently considerable trade on internet platforms.

The CITES Trade Database records an average of about 23 live individuals in trade each year for the period 2004-2014, except for 2005 when 400 live individuals were recorded as exported from Lebanon and originating in Kazakhstan (although no corresponding export has been reported from Kazakhstan).<sup>3</sup> Other than this the largest recorded exporter is Germany. The largest importers are Germany, Japan, Thailand and USA. Virtually all this trade has been recorded as in captive-bred animals. This is believed to be implausible, as the species has been reported to be challenging to keep and to suffer high levels of mortality in captivity<sup>2</sup>.

Multiple dealers have reported that wild-caught specimens from China have been labelled as captive-bred. Several dealers in Viet Nam advertise specimens for sale from "farms" but there is no evidence of breeding facilities sufficient to support this, and one Vietnamese hobbyist reported that "farmed" specimens were in fact wild-caught<sup>2</sup>.

Although captive-breeding techniques for this species are improving there is concern that the level of demand is much greater than captive production could supply.

*Shinisaurus crocodilurus* has been a Class I protected species in China since 1989, meaning no unauthorised collection or trade may take place. In Viet Nam the species is not explicitly protected, although such protection is under consideration and it is an offence to hunt or trap an animal in a protected area. There are conservation programmes including breeding and monitoring for *Shinisaurus crocodilurus* in place in both China and Viet Nam.

*Shinisaurus crocodilurus* is classified in the IUCN Red List as Endangered (2014)<sup>4</sup>.

**Analysis:** *Shinisaurus crocodilurus* appears to have a restricted and fragmented area of distribution, with a small population each of whose sub-populations is small. The population is also believed to have undergone a marked decline, ascribed to habitat destruction and collection for the pet trade and local consumption. It

would therefore appear to meet the biological criteria for inclusion in Appendix I. The species is or may be affected by trade, as defined in Annex 5 of the Resolution.

**Reviewers:** M. Auliya and S. Altherr.

**References:**

Information not referenced in the Summary section is from the Supporting Statement.

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<sup>1</sup> Pianka, E.R. & Vitt, L.J. (2003) *Lizards: Windows to the Evolution of Diversity*. University of California Press, Berkeley, California.

<sup>2</sup> van Schingen, M.U., Schepp, C.T., Nguyen, P.T.Q. & T. Ziegler (2015) Last chance to see? A review on the threats to and use of the Crocodile Lizard. *TRAFFIC Bulletin* 27:19–26.

<sup>3</sup> UNEP-WCMC (2015) CITES Trade Database, UNEP World Conservation Monitoring Centre, Cambridge UK. Available at: <http://trade.cites.org/>.

<sup>4</sup> Nguyen, T.Q., Hamilton, P. & Ziegler, T. (2014) *Shinisaurus crocodilurus*. The IUCN Red List of Threatened Species 2014.