

NOTES and SHORT COMMUNICATION

AN ANALYSIS OF SEIZURES OF TOKAY GECKO *Gekko gecko* IN THE PHILIPPINES

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ABSTRACT – The Tokay Gecko *Gekko gecko* is traded internationally in the millions annually for use in traditional medicines and to a lesser extent, for the pet trade. The vast majority of Tokay Geckos are collected in the wild and apparent captive-bred individuals may be in fact wild-caught as well. A get-rich-quick scheme involving the trade of Tokay Gecko across Southeast Asia began in 2009. Foreign buyers were purportedly willing to pay PHP1,000,000-500,000,000 (USD20,000-10,000,000) for Tokay Geckos weighing 300-1,000g per individual to cure human immunodeficiency virus (HIV/AIDS), impotence, and cancer. Seizure data between 2010 and 2012 from seven islands in the Philippines documented 24 cases involving 2,092 Tokay Gecko individuals. A proposal to list the Tokay Gecko in the CITES Appendix II was submitted by the Philippines, European Union, India, and the United States to monitor, regulate, and assist in preventing illegal and unsustainable trade and was eventually accepted by the Parties during the 18th meeting of the Conference of Parties (CoP18) in August 2019. We strongly recommend CITES Parties make full and effective use of CITES in preventing over-exploitation of the Tokay Gecko.

Keywords: CITES, Gekko gecko, Illegal Wildlife Trade, Philippines

INTRODUCTION

In the Philippines, the Tokay Gecko *Gekko gecko* (Fig. 1) is one of the most conspicuous and well-known geckos due to its widespread distribution, relatively large size, familiar vocalization, and presence in human dwellings (Brown and Alcala, 1978). Though listed as being Least Concern by the IUCN Red List of Threatened Species (Lwin et al., 2019), the Tokay Gecko is traded internationally in the millions annually to meet demand for use in traditional medicines, especially in China (Nijman et al., 2012; Caillabet, 2013; Nijman and Shepherd, 2015), but also in Vietnam (Nash, 1997) and other countries. Tokay Geckos are also traded live as pets, but to a much lesser extent (Sy, 2015; Sy, 2018). The vast majority of Tokay Geckos are harvested from the wild (Nijman et al., 2012; Nijman and Shepherd, 2015). Some farming exists in China and Vietnam, but output from these operations do not meet demand (Caillabet, 2013). Claims of mass commercial breeding in Indonesia are also reported, but it is likely that the specimens exported from this country are wild-caught, and merely laundered under the guise of being captive-bred (Nijman and Shepherd, 2015).



Figure 1. The Tokay Gecko is a conspicuous lizard throughout its range. Photo © Emerson Y. Sy

The Tokay Gecko has been used extensively in traditional medicine in parts of Asia for hundreds of years. An investment scam, fuelled by false advertisements that promised huge pay offs to hunters and investors that could produce unrealistic weight of 300-1000g per Tokay Gecko individual started to spread across Southeast Asia especially in Indonesia, Malaysia and the Philippines in 2009. Alleged buyers were apparently willing to pay PHP1,000,000 (USD20,000) for a Tokay Gecko weighing 300 grams each and up to PHP500,000,000 (USD10,000,000) for a specimen weighing 1,000 grams each. Many individuals were deceived by unscrupulous individuals who sold them regular-sized Tokay Geckos weighing less than 100 grams each for USD100-6,000 each in the false hope that they can fatten up Tokay Geckos to the target size of more than 300 grams and sell to foreign buyers (Sy, unpubl. data). The consumption of gigantic Tokay Gecko tongues and internal organs can purportedly cure human immunodeficiency virus (HIV/AIDS), impotence, and cancer (Anon, 2011; Caillabet, 2011; Caillabet, 2013). This led to the Tokay Gecko being hunted heavily across Southeast Asia and parts of South Asia for a purpose other than traditional medicine trade (Caillabet 2011; Caillabet, 2013; Lwin et al., 2019). Some officials alarmed by the sudden demand called for a senate investigation (Villar, 2011) and a local government of Bohol Province issued a prohibition on catching and selling of Tokay Geckos (Obedencio, 2011).

As more people became aware and interested in the get-rich-quick Tokay Gecko investment scam, several unscrupulous groups capitalized on it. Investors were tricked into believing that they purchased gigantic Tokay Geckos which they could apparently resell immediately at a huge profit, but received Green Iguanas *Iguana iguana* upon opening the package (Chua, 2011). The scam was also used as a cover to rob would-be investors at gunpoint (Anon, 2011b; Manabat and Zambrano, 2011). In 2011, A Malaysian national who went to southwestern Philippines to buy Tokay Geckos was kidnapped by a kidnap-for-ransom group and was held in captivity for a year (Pareño, 2011; Associated Press, 2012).

Shortly after this sudden boom in trade, the Philippine Department of Health (DOH) and World Health Organization (WHO) released a statement stating there is no scientific evidence supporting the claims of a HIV/AIDS cure (Anon, 2011a; Lim, 2011). The DENR also released a statement to warn wildlife collectors and traders that it is illegal to trade any wildlife in the Philippines without a permit (Anon, 2011c). The scam unravelled when people who invested in the Tokay Gecko investment scheme realized that the animals in their possession would not grow to the marketable size and there were no real buyers. The rate of Tokay Gecko exploitation in the Philippines for investment slowly declined in 2012 onwards (Sy, unpubl. data).

The Tokay Gecko is reportedly in decline in the Philippines (CITES MA of the Philippines *in litt.* to the CITES SA of the United States, 2018 [in](#): Proposal 28). Illegal and unsustainable trade in the Philippines is a threat to a growing list of indigenous species (Gonzalez et al., 2018). Efforts to mitigate the threat to Tokay Gecko, and to reduce levels of illicit wildlife trafficking, are encumbered by a dearth of evidence and useful information needed to design and implement effective conservation interventions. This study is intended to assist in meeting this need.

METHODOLOGY

Seizure records from 2008 to 2018 were requested from the Philippines' Department of Environment and Natural Resources-Biodiversity Management Bureau (DENR-BMB), and Palawan Council for Sustainable Development Staff (PCSDS). Additional information was collated from news articles. Locations of seizures were recorded and, where possible, information regarding origin and destination of the contraband shipments was identified. The volumes and commodity (e.g. live, dried, derivatives) were also recorded. Finally, recommendations have been made to support current and future interventions designed to prevent illegal and unsustainable trade in this species.

RESULTS

We collated a total of 24 seizure cases involving Tokay Gecko between 2008 and 2018. There were no seizures of Tokay Geckos from 2008-2009 and 2013-2018. The DENR-BMB and PCSDS seizure records documented 21 cases and we found additional three cases from news articles (Table 1).

A total of 2,092 Tokay Geckos intended for trade in the investment scheme was seized by the authorities. Most of the seizures ($n = 20$) occurred in 2011 and accounted for 93% of total Tokay Geckos seized in this study. No additional seizures were documented after the one case in 2012 shown above.

Seizure locations were spread across seven islands, with close to 74% of the seizures occurring on two islands – Luzon ($n = 10$) and Mindanao ($n = 8$) (Table 2).

Table 1. Tokay Gecko seizures in the Philippines between 2010 and 2012.

Year	Location	Island	Quantity of Geckos	Number of Seizures
2010			124	3
	Zamboanga City Port area	Mindanao	59	
	Bgy Concepcion, Puerto Princesa City	Palawan	65	
2011			1,944	20
	Aliaga, Nueva Ecija	Luzon	19	1
	Cagayan de Oro City	Mindanao	3	2
	Calbiga, Samar	Samar	4	1
	Calbiran, Biliran	Biliran	30	1
	Davao City	Mindanao	34	2
	General Santos City	Mindanao	1,974	2
	Imus, Cavite	Luzon	11	1
	Lipa City, Batangas	Luzon	2	1
	Mactan-Cebu International Airport	Mactan	12	2
	Manila City, NCR	Luzon	11	1
	Municipality of Tubigon	Bohol	15	1
	Paranaque City, NCR	Luzon	43	1
	Pasay City, NCR	Luzon	7	1
	Pasig City, NCR	Luzon	64	2
	Quezon City, NCR	Luzon	15	1
2012			24	1
	San Pedro, Laguna	Luzon	24	
Grand Total			2,092	24

Table 2. Locations and number of Tokay Gecko seizures in the Philippines.

Biliran	1
Bohol	1
Luzon	10
Mactan	2
Mindanao	8
Palawan	1
Samar	1
Total	24

DISCUSSION

In Southeast Asia, illegal and unsustainable trade in wildlife threatens the conservation of numerous species (Duckworth et al., 2012; Nijman et al., 2012; Eaton et al., 2015), and the Philippines is no exception (Cruz et al., 2007; Gonzalez et al., 2018; Gomez and Sy, 2018; Sy, 2018). While there is no scientific study to support claims that Tokay Gecko population in the Philippines is declining, the species is traded in unsustainable and vast numbers from across their range, largely to supply demand in China, or for use in traditional Chinese medicine in other parts of Asian region. Further, the demand for Tokay Geckos as pets, as well as investment scams claiming that consumption of Tokay Gecko parts can cure HIV/AIDS and other serious medical conditions can lead to a spike in collection and trade activity, which in turn puts intense pressure on an already fragile population.

While the Philippine Wildlife Conservation and Protection Act of 2001 allows proponents to apply for collection of wildlife for trade, the DENR has not issued permits for commercial trade of Tokay Geckos. The trade of Tokay Geckos as pets in the Philippines is negligible since most reptile enthusiasts are not interested in keeping common native species and prefer to keep non-native species (Sy, 2018).

To counter unsustainable trade, the Philippines, along with the European Union, India, and the United States have submitted a proposal to the Convention on International trade in Endangered Species of Wild Fauna and Flora (CITES) Secretariat for the 18th meeting of the Conference of the Parties (CoP18) to list the Tokay Gecko in Appendix II (CoP18 Doc 105.1 Annex 2). The lack of data on trade in non-CITES-listed species can be of great conservation concern as the actual level of trade remains undetected, and unregulated (Janssen and Shepherd, 2018).

In August 2019, the listing of the Tokay Gecko in Appendix II of CITES was accepted by the Parties. This listing will be advantageous for a number of reasons, including allowing for regulation of trade, recording and monitoring of trade volumes, and assisting in preventing illegal international trade. We strongly recommend CITES Parties make full and effective use of CITES in preventing over-exploitation of the Tokay Gecko.

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STATEMENT OF AUTHORSHIP

EYS and CRS conceptualized the study and contributed equally to the writing of the paper. EYS collated the data.

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