

## TOP 10 NOMINATION FORM

**2020 Topic:** Illegal wildlife (plants and animals) trafficking and unsustainable trade

### Species must meet these qualifications:

- Must be native U.S. species or international species with significant U.S. demand
- Must be experiencing substantial decline (do not have to be threatened/endangered listed)
- Must be directly or indirectly impacted
  - Direct: exploited as trophies, pets, medicines, etc.
  - Indirect: impacted by imported exotics or imported disease vectors (e.g., chytrid)

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**Nominated Species** (Common Name & Scientific Name): Tokay gecko/*Gekko gecko*

### Question 1: Threat to the Species

How is the species and/or its habitat threatened by illegal wildlife trafficking and/or unsustainable trade? Note the extent of the threat and whether it is direct or indirect. Include references to relevant scientific studies. Does the species face any associated political threats?

Millions of tokay geckos are traded annually for use in traditional Chinese medicines. Gecko parts can supposedly be used to treat ailments like asthma, diabetes and skin disorders, but there is no scientific evidence backing up these claims. Demand for medicinal purposes has increased enormously since rumors circulated in 2009 that extracts from the lizard could cure HIV/AIDS.<sup>1</sup>

A smaller but still significant percentage of tokay geckos are exported for the international pet trade, primarily to the European Union and United States. This represents a larger phenomenon of skyrocketing demand for exotic pets. The U.S. plays an outside role as the largest consumer of live wildlife, with the pet trade responsible for the majority of the millions of live animals imported annually.<sup>2</sup> According to trade data from the USFWS Law Enforcement Management Information System, between 2007-2016 the US imported 179,681 live tokay geckos with the vast majority (96%) captured from the wild and the remainder reportedly captive bred.<sup>3</sup>

Indonesia is the largest known exporter of tokay geckos, although the number of exports from other Southeast Asian countries is thought to number in the millions annually as well. Indonesia

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<sup>1</sup> <https://www.traffic.org/publications/reports/trade-in-tokay-geckos-in-se-asia/>

<sup>2</sup> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5357285/>

<sup>3</sup> <https://cites.org/sites/default/files/eng/cop/18/prop/060319/E-CoP18-Prop-28.pdf>

places quotas on harvest and export of wild-caught wildlife, and in 2019 the quotas for tokay geckos was set at 1.8 million animals (up from 25,000 in 2018), of which 21,250 were allotted for the pet trade and 1,778,750 were for medicinal/other consumption purposes.<sup>4</sup>

The Indonesian government claims that most exported tokay geckos are bred in captivity, but commercial breeding serves as a cover for the laundering of millions of wild-caught geckos. An analysis by TRAFFIC found that, “In order to produce one million adult-sized geckos a facility would require 140,000 breeding females, 14,000 breeding males, 30,000 incubation containers in continuous use year-round, and some 112,000 rearing cages. Basic care of these Tokay Geckos would require hundreds of staff to be employed and a constant supply of food, all of which would have significant additional costs...We argue that the investments in terms of infrastructure, space, financial commitments and staff are not matched by the amount of money that can be made from the export of Tokay Geckos.”<sup>5</sup>

The plundering of wild geckos has resulted in steep population losses in recent years. Scientists have confirmed declines as high as 50 percent in China, Vietnam, Thailand, Myanmar, Indonesia, the Philippines and Bangladesh.<sup>6</sup>

As a result of these threats, the tokay gecko was listed on Appendix II of CITES in August 2019. This listing, which took effect in November 2019, is a step in the right direction because the requirement of an export permit for wild-caught specimens will provide some insight into the scope of the trade. However, the international trade of these geckos remains legal, and the lack of restrictions on exports of captive-bred geckos provides additional incentive to launder wild-caught specimens.

## **Question 2: Role of the Species**

What is the ecological and/or scientific importance of the species? Note if it is a keystone species and describe its role in its environment. Include references to relevant scientific studies.

Tokay geckos are native to southeast and east Asia. Black-spotted tokay geckos are found in northern Vietnam and mainland China, while red-spotted tokays are located in southeast Asia, including in Bangladesh, Nepal, the Philippines, Thailand, Indonesia and the Indo-Australian Archipelago. Their habitat is rainforest, where they live in trees, but they have adapted to human presence and are also found on the ceilings and walls of homes.<sup>7</sup>

As with other reptiles, tokay geckos are an important component of the food web within their ecosystems. They are a food source for predators such as birds and other larger reptiles,

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<sup>4</sup> <https://therevelator.org/tokay-gecko-trafficking-protection/>

<sup>5</sup> <https://www.traffic.org/site/assets/files/6060/adding-up-the-numbers.pdf>

<sup>6</sup> <https://www.scientificamerican.com/article/a-once-common-gecko-is-vanishing-from-parts-of-asia/>

<sup>7</sup> <https://nationalzoo.si.edu/animals/tokay-gecko>

including snakes. Their diet consists of insects, and the geckos are important for controlling pest populations such as cockroaches and locusts.

### **Question 3: Message**

What is the most important message about this species for decision-makers and the public?

The desire to own rare and unique animals as pets comes as a significant cost. The seizure and international sale of wild tokay geckos is devastating both for the welfare of the animals and for the preservation of wild populations. It is not only gecko survival that is impacted; removing one animal from an ecosystem has a ripple effect, disrupting the web of life in unpredictable and harmful ways. The US has a responsibility to curtail the market for these geckos within its own borders, both at a personal level and at a policy level. People must stop purchasing them as pets so as to decrease demand, and the government must reevaluate its regulation of the importation of live, wild species.

### **Final Selections**

If my nomination is selected for inclusion in the report, I would like the first draft of the species profile for the report to be written by (choose one):

You (ESC), and then my NGO will edit the profile and approve the final draft.

Me (my NGO). I understand that I (and other participating writers) will need to adhere to ESC's writing guidelines.

**Deadline:** May 8, 2020

**Send to:** top10@endangered.org