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The Pond Sliders *Trachemys scripta* (Thunberg in Schoepff, 1792) (Reptilia Emydidae) are pets or toys?

Mauro Grano[1] & Christian Galmuzzi[2]

[1]Via Valcenischia 24, 00141 Rome, Italy; email: elaphe58@yahoo.it - ORCID: 0000-0001-8188-6234
[2]24/4 Moo 8 Tawanhook soi 24 Klong 5 Klong Luang Pathum Thani, Thailand

ABSTRACT The Pond Slider *Trachemys scripta* (Thunberg in Schoepff, 1792) (Reptilia Emydidae) is a major invasive species in freshwater habitats across the world. For decades, the main cause of individuals' occurrences in the wild was the illegal release of pet animals. Unfortunately, the small size and ease of breeding have encouraged the trade of this species. The new trend of Thai traders has made this animal a real toy, with even greater risks for the environment.

KEY WORDS Alien species; Terrapin; cartoons; Pets Market; Bangkok.

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INTRODUCTION

The Invasive Alien Species are those species that successfully establish their territory outside their native range, often through human-mediated activities, and cause a significant threat to the local biodiversity and ecosystems (Lososová et al., 2021). Invasive species pose a significant threat to native biodiversity in various forms like occupying a niche, resource exploitation, predation and possibly more, eventually leading to complete or local faunal extinctions (Doherty et al., 2016). Besides their impact on the native biodiversity, invasive species also pose a severe threat to agricultural productivity and health risk using carrying disease vectors from the native range (Cowie, 2000; Paini et al., 2016). They also cause significant damage to the ecosystem and local economies (Born et al., 2005). Native to the USA and adjacent Mexico, *Trachemys scripta* (Thunberg in Schoepff, 1792) (Reptilia Emydidae), commonly known as the North American pond slider, is considered the most ubiquitous, abundant, and invasive terrapin in the world (Parham et al., 2020). *Trachemys scripta*, and mainly the subspecies *elegans* (red-eared slider), has dramatically expanded its global distribution due to the pet trade and is now present on all continents except Antarctica (Kitowski & Pachol, 2009; Liuzzo, 2020). Marsh turtles of the *Trachemys* genus are voracious omnivorous species and are considered a threat to native species; has been found to compete for basking, food, and nesting sites with native pond turtles (Polo-Cavia et al., 2009; Grano & Cattaneo, 2015; Grano, 2020). The combination of low price, small size as juveniles, vivid coloration, and media influences (e.g., highly popular cartoons) has led to its global popularity as pets, with millions traded annually (Cadi et al., 2004; Bringsøe, 2006; Lockwood et al., 2019; Mohanty & Measey, 2019). It has been traded since the 1950 being an extremely popular pet worldwide (Ficetola et al., 2012). Sold as easy-to-keep pets at only a few centimetres in size, sliders are often released by their owners into natural and semi-natural wetlands when they get too large and require higher maintenance (Cadi & Joly, 2003; Lever, 2003;

Prévot-Julliard et al., 2007; Kitowski & Pachol, 2009; Crescente et al., 2014; Maceda-Veiga et al., 2019).

MATERIAL AND METHODS

A visit to the Chatuchak Animal Market (Bangkok, 587, 10 Kamphaeng Phet 2 Rd Khwaeng Chatuchak, Thailand) in July 2024 by one of the authors (CG) allowed us to see the new trend offered for sale by some Thai traders: hundreds of small *Trachemys* sp. with the carapace decorated with floral motifs and cartoon-themed drawings (Figs. 1, 2).

The Bangkok market, called Chatuchak market due to the area of Bangkok where it is located, is the largest market dedicated to the sale and display of pets in all of Southeast Asia and is considered the largest weekend market in the world. With more than 15,000 vendors, it has four areas dedicated exclusively to the trade of animals. The photographs in this paper were taken at two general pet retailers (not specialized in reptiles). The decorations placed on the turtles's shells were made by applying waterproof adhesive labels.

DISCUSSION AND CONCLUSIONS

At European level, the import of *Trachemys scripta*, including hybrids, is prohibited. In order to deal more effectively and organically with the issue of invasive alien species (IAS), the European

Figure 1. Chatuchak Animal Market (Bangkok, 587, 10 Kamphaeng Phet 2 Rd Khwaeng Chatuchak, Thailand).

Union issued Regulation No. 1143/2014, which lays down rules to prevent, minimize and mitigate the negative effects on biodiversity caused by the introduction and spread, whether deliberate or accidental, of IAS species within the Union, as well as to minimize and mitigate the impact these species may have on human health or the economy. *Trachemys scripta* has been listed by the IUCN as one of the 100 invasive alien species (Lowe et al., 2000) with the greatest impact on habitats and native species, so this American pond turtle has been placed on the IAS list. In addition, the Council of Europe designed a voluntary code of conduct to raise awareness within the pet industry and among owners and keepers of pets and provide practical guidance to reduce further the chances of pet species becoming invasive in Europe. Unfortunately, these prohibition rules are not applicable worldwide. In addition, other similar species are known as alternatives, have been reported as substitutes for *Trachemys scripta*, and pose a threat to the environment and native species. The release of exotic animals is illegal and involves the use of large human and economic resources for the removal and management of trapped animals (Zuffi et al., 2015). There is already a bad habit of buying young tortoises for children given their extreme adaptability even to non-optimal breeding situations. As time passes, the tortoise and the child grow and while on the one hand the difficulties in managing the animal increase, on the other hand the interest in the no longer small tortoise is gradually lost. The great danger posed by the sale of these little turtles decorated with themes dear to children is that they will be considered as real toys, and inevitably abandoned as soon as the initial enthusiasm has lost. Finally, it is worth highlighting that there is an urgent need to develop an international program and a strong policy on the management of invasive species to stop the future impacts of these species on local biodiversity.

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