May 2018

Joint Response from

- Ornamental Fish International (OFI, the Netherlands)

- the Reptile & Exotic Pet Trade Association (REPTA, UK)

- Deutsche Gesellschaft für Herpetologie und Terrarienkunde e. V. (DGHT, Germany) and

- European Pet Organization (EPO, the Netherlands)

against the IAS proposal listing of the common kingsnake *Lampropeltis getula*

Summary of response from OFI, REPTA, DGHT and EPO

- We are opposed to any proposal to implement a trade ban on this species at the EU wide level. Given that this risk assessment is confined to the Mediterranean and Steppic bioregions, there is justification for a regional listing approach ONLY.
- The species is only known to be invasive in the Canary Islands, the situation there is due to the lack of large ground predators and the complete lack of competing species completely different. There is no reasonable proof that the species could establish in mainland Europe, even though climate and nutritional demands are probably met in the Mediterranean region because of the competition from European snake species.
- The impact of introducing a snake species is a region without a natural existing snake population is massive. The European regions where establishment is possible have, with the possible exemption of some islands, already a natural snake population, this means establishment is less likely and impact will most likely be much less.
- As noted by Filz et al. (2018), we would support their opinion that: "*A complete ban of exotic pet reptiles doesn't appear as a viable solution to compensate the current methodological errors in predicting and monitoring species invasions. Such attempts have already been shown to rather promote the illegal trade of exotic pets than to limit propagule pressure"* (Scalera, 2007 as cited by Filz et al. 2018).
- We hereby disagree with the statement in the RA that this species is imported in large numbers to Europe given that its popularity in the commercial trade has declined. Although this species remains popular within the hobbyist community, we would advise that it is difficult to put an economic value on the trade in this species across the whole of the EU. However, we consider that it would be reasonable to speculate that the trade in this species is not significant and the value of the trade would be in the estimated region of less than 5 (five) million Euros.

- It is important to note that this species is not a communal species and will therefore be kept as individuals. Therefore, any accidental release will be a stochastic and rare event when compared to the numbers, which are kept.
- The invasion risk via intentional release could be mitigated against by large-scale educational campaigns whereby organisations such as ourselves could assist and also via the suggestion by Filz et al. (2018) that: "*keeping and competence certifications issued by skilled authorities e.g. herpetological associations"*.

We firstly thank the European Commission for inviting stakeholders to provide their responses to the latest proposals for IAS listings (2018). We hereby respond to the Risk Assessment for *Lampropeltis getula* in our capacity as representing the pet industry and herpetologists.

Our response in relation to this Risk Assessment is set out below in accordance to the format of the relevant Risk Assessment and the relevant page number of the Risk Assessment with more general species specific comments made which are considered pertinent to this RA based on our collective expertise.

Species specific information on Lampropeltis getula as provided by DGHT (Germany) and REPTA (UK)

Taxonomy

Scientific Name: *Lampropeltis getula* (Linnaeus, 1766)
Common Name: Common Kingsnake
Synonym(s): *Coluber getulus* Linnaeus, 1766

Lampropeltis getula is a complex of subspecies:

L. g. california	California kingsnake*
L. g. floridana	Florida kingsnake
L. g. getula	Eastern kingsnake
L. g. holbrooki	Speckled kingsnake*
L. g. nigra	Black kingsnake*
L. g. nigrita	Mexican black kingsnake
L. g. splendida	Desert kingsnake*
L. g. meansi	Apalachicola Lowlands kingsnake

*note: *Lampropeltis californiae* (BLAINVILLE 1835), *holbrooki*, *nigra*, and *splendida* have been revalidated to species status by PYRON & BURBRINK 2009. The general acceptance of this taxonomic revision is unclear.

Habitat

Primary habitat varies by subspecies. Common kingsnakes can be found in forests, grasslands, deserts, and urban areas. Microhabitats of most subspecies include: under wood or lumber, in trash piles, barns, along stone walls, on sunny railroad embankments, in stump holes, or in sunny clearings. Coastal subspecies like Florida kingsnakes and some eastern kingsnakes can be found along the edges of swamps, marshes, and dikes. Other subspecies, such as California kingsnakes and black desert kingsnakes are restricted to arid areas. Elevation also varies by subspecies. For example, California kingsnakes have the widest range in elevation, from the Pacific coastline to 915 m. Eastern kingsnakes (123 to 305 m) and black kingsnakes (153 to 305 m) share similar limited elevation ranges. Speckled kingsnakes can be found at elevations up to 610 meters.

Distribution

This species' range extends from the Pacific to the Atlantic coast of North America, from southwestern Oregon, Nevada, southern Utah, southern Colorado, southeastern Nebraska, southern Iowa, Illinois, southern Indiana, southern Ohio, West Virginia, and New Jersey in the United States, south to southern Baja California, northern Sinaloa, San Luis Potosi, Tamaulipas, Texas, the U.S. Gulf Coast, and southern Florida.

Trade history

Common kingsnakes have long been in trade, earliest records of imports into the UK date back to the 1930's. During the 1970's with the emergence of captive breeding the common kingsnake became one of the most commonly kept and bred snakes.

It is difficult to put an economic value to the pet trade across the whole of the EU on this species, but it would be reasonable to speculate it would not be significant < 5mEuros.

Risk Assessment Raised issues

Page 9, Ch3

We would question as to whether it is appropriate to include a reference from a well known animal rights organisation e.g. PETA, given that there will be inherent bias.

Page 19, A7 (Socio-Economic benefits)

Lampropeltis getula is without any doubt a popular snake among snake keepers. Its husbandry is quite easy and it is certainly no problem to get it to breed under the right conditions. Also handling of these snakes is no problem whatsoever. Due to its popularity among keepers this species is quite common - **but only in herpetoculture,** that is within the hobbyist community. Its popularity in terms of the commercial trade has declined.

It is not correct, that this snake species gets imported in large quantities into Europe and there is totally no evidence for imports to Europe in high numbers , as mentioned in the relevant section. **The European livestock in this species relies significantly on captive bred individuals respectively offspring hatched out in Terrariums within the EU**. It is not the case that *Lampropeltis getula* is escaping or gets abandoned by keepers in whole Europe/ in every member state in large numbers. Furthermore, *Lampropeltis getula* might only be seen as a potential problem in some southern parts of Europe. In the vast majority of all member states of the European Union this species is currently not invasive and it won't due to their climate conditions throughout the year. Other than as being invasive this **species plays no significant role and no threat for local biodiversity. *Lampropeltis getula* is not listed as an invasive species by the Species Survival Commission, nor by the ISSG (Invasive species specialist group of IUCN).**

And that is even though the ISSG is monitoring the situation constantly and collecting country-specific data, which are available to be seen in. We like to point out that this is also applicable for countries which would theoretically meet the climate needs for *L. getula* named Greece, the Baltic states, Italy, southern France, Portugal or even Spain. Only for Spain there is an exception with the island of Gran Canaria. While *L. getula* is no problem on the Spainish mainland, it is invasive on Gran Canaria. DIISE (Database of Island Invasive Species Eradications) has listed it for about 20 years on this island. Nowadays the species is spreading out in the northwestern parts of the island while most time it could only be located in the East of the island. In this phase it is a thread for local wildlife, often endemic species.

But we like to point out, that this is not a new problem on Gran Canaria and so far local authorities as well as Spain's federal authorities have not taken actions in this matter.

Page 33 1.18 and 1.19

This sector assesses the probability of establishment of the species in spite of competition and predation. The risk is assessed to be moderately high. There is no scientific backing for this relatively high risk. Instead considering that the species is widely kept and does quite regularly escape, the fact that the only establishment of this species is in a competitor and predator free environment suggests that the species is unlikely to establish in an environment with predators and competition with a high confidence.

Page 34-35 1.23

The mentioned biological characteristics are, as stated, a result of the availability of food and the lack of competition/ predators. This situation will be completely different by an establishment in mainland Europe.

Page 36 1.24

The capacity to spread for this species is low with a high certainty (Anguiano & Diffendorfer (2015) indicate *L. getula* only shows small spatial movement patterns.)

Page 36 1.27

Despite its popularity as a pet and regular documented escapes the species has only become invasive in a single region without natural competition or predators. Based on this observation the likeliness of establishment in Europe should be considered low with a high level of confidence. We would also note that in relation to the Canary Islands, it would appear that this region is the bwk zone according to the Koppen-Geiger climatic zone map. In relation directly to the Canary Islands, Filz *et al*. (2018) consider the factors which enabled this species to become invasive included environmental factors such as temperature, air and the "lush" terrain. It should also be borne in mind that another important factor was that the prey species in this region "*would not have had time to evolve evasive patterns*" (Filz et al., 2018). It should also be noted that this species is not suitable as a communal species and is therefore kept only on an individual basis. Therefore, release events will tend to be stochastic and rare as any potential escapes would be of an individual only.

Page 37 1.29

In this answer only climate is evaluated, factors like food availability, competition and predation should also be considered. When also considering those factors the response should be unlikely at most with a high level of confidence.

Page 40 2.4

Unaided dispersal over the ocean in large numbers should be considered very unlikely.

Pag 43 2.15

Considering that the species is widely kept, also in suitable regions, is likely to escape and still has no known establishment in Europe (apart from the Canary islands, which are incomparable), there is no

reason to believe that climate change will lead to a larger amount of establishment since the species is already clearly unable to establish even in climatologically suitable regions.

Page 44- Magnitude of impact

In this section the impact in the Canary Islands is used as a model to predict the impact in the rest of Europe. The impact of introducing a snake in a previously snake free environment is likely to be massive. But since most of Europe has indigenous snakes of the same size this is not a proper comparison.

Conclusion

It is accepted that the Common kingsnake, or rather the California kingsnake *L. g. californi*a has become an invasive species in the Spanish overseas territory of Gran Canaria. However, there are no records of the species being established on the European mainland, despite the fact the species has been wildly kept and bred for over fifty years. The biotope of the Canary Island is substantially different to that of the European mainland.

Evidence the Common kingsnake could be a threat to biodiversity across the EU is at best weak, the risk assessment (Contract No 07.0202/2016/740982/ETU/ENV.D2) whilst extensive is solely biased on speculation, which is not supported by any credible evidence. The use of an exception to force a rule is never good science.

The economic argument against a listing is poor, estimated trade value less than 5 million Euros. However, the argument against a prohibition is very persuasive on grounds of personal (citizens) enjoyment. The Common kingsnake remains one of the most popular pet snakes and is widely kept across the EU by hobbyists. Although data on numbers kept across the EU it would be in terms of hundreds of thousands. Again, we would reiterate that this species is not a communal species and would be kept as an individual.

In relation to any proposal for an EU wide trade ban, in the opinion of Scalera (2007, as cited by Filz et al. (2018): "*A complete ban of exotic pet reptiles doesn't appear as a viable solution to compensate the current methodological errors in predicting and monitoring species invasions. Such attempts have already been shown to rather promote the illegal trade of exotic pets than to limit propagule pressure".*

In summary, we can see no evidence as presented in this RA that would give a justification for restrictions aimed at banning the keeping or trade of *Lampropeltis getula.*

References:

- Anguiano, M.P. and Diffendorfer, J.E. (2015). Effects of fragmentation on the spatial ecology of the California Kingsnake (*Lampropeltis californiae*). *Journal of Herpetology*, 49(3), pp. 420-427.
- Filz, K., Bohr, A. and Lötters, S. (2018). Abandoned Foreigners: is the stage set for exotic pet reptiles to invade Central Europe? *Biodiversity and Conservation*, 27(2), pp. 417-435.
- Pyron, R. Alexander; Frank T. Burbrink (2009). LINEAGE DIVERSIFICATION IN A WIDESPREAD SPECIES: ROLES FOR NICHE DIVERGENCE AND CONSERVATISM IN THE COMMON KINGSNAKE, LAMPROPELTIS GETULA. *Molecular Ecology* 18: pp. 3443–3457
- Study on Invasive Alien Species – Development of risk assessments to tackle priority species and enhance prevention. Contract No 07.0202/2016/740982/ETU/ENV.D2