

Stolen Wildlife

Why the EU needs to tackle smuggling of nationally protected species



Sandra Altherr

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November 2014

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Left: *Calotes nigrilabris* © Cherubino Right on top: seizure of *Woodworthia brunneus* © Department of Conservation, New Zealand Right bottom: *Abronia lythrochila* from Mexico, sold at reptilie fair in Hamm, Germany © Pro Wildlife Back: *Ceratophora stoddartii* from Sri Lanka © Kalyanvarma

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EVA MAYR-STIHL

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1 Executive Summary

Due to its large area, its wealthy clients and the absence of internal trade barriers and controls the European Union (EU) is a main destination for smuggled animals. Reptiles are an easy target for criminal groups as they often survive over long periods under bad conditions, they are silent goods in suitcases or parcels, and a variety of species is fetching prices of several thousand Euros per specimen.

By far not all reptiles, which are sought-after in the international pet trade, are covered by the international trade regulations of CITES, the Convention on International Trade in Endangered Species, and the EU's regulations on wildlife trade (Council Regulation (EC) No 338/97). However, many of these internationally unprotected species are fully protected in their country of origin, through prohibitions of capture and/or export. Many of these species are listed in the threatened categories of the IUCN global or National Red Lists and often illegal exploitation for the pet trade is estimated to be a serious or even the major threat to their survival. But once these species have been successfully smuggled out of their country of origin, trade within the EU is legal – contrary to the commitment of the European Union to the Rio de Janeiro Convention on Biological Diversity, including the recognition of sovereign rights of States over their own biological resources.

Pro Wildlife analysed price lists of reptile traders and adverts in leading European online platforms and among the most expensive species found those that are nationally protected within their range, e.g. the earless monitor lizard, *Lanthanotus borneensis*, from Indonesia (about 8,000 Euro/pair), the forest gecko, *Mokopirirakau granulatus*, from New Zealand (up to 5,300 Euro/ pair), the fringed arboreal alligator lizard, *Abronia fimbriata*, from Guatemala (2,800 Euro/pair), and the rhino-horned lizard, *Ceratophora stoddartii*, from Sri Lanka (2,200–2,500 Euro/pair). Species that are endemic, rare or have special biological features (e.g. viviparity, eye-catching markings and colours, unique taxonomic status) in general fetch higher prices. Biodiversity hotspots are highly attractive for the smugglers, especially when range states have limited enforcement capacities and/or corruption is facilitating illegal activities.

The present report documents a high value business, which is focusing on those species that are nationally protected in their country of origin, but freely and legally available in the EU. It provides case studies for more than 30 reptile species from ten different countries with high value species in the pet trade: Australia, Guatemala, Indonesia, Japan, Kenya, Mexico, New Zealand, Sri Lanka, Tanzania, and Vietnam. Traders from several EU Member States are involved – but traders from Hong Kong, Japan and Russia are also offering such nationally protected species for the EU market.

Cooperation between source and importing countries is essential to prevent illegal trade of wild species for international markets. Range states' efforts to safeguard their native species from over-exploitation will inevitably fail if they are not assisted by appropriate action by governments in the main consumer markets. The EU as a major importer of live reptiles carries significant responsibility in stemming the illegal trade in species that are protected in their range states.

While enforcement authorities within the EU currently do not have a legal basis to seize animals, which are protected in their range state only, and to prosecute offenders, the Lacey Act in the United States makes all activities in violation of national laws in the country of origin a criminal and punishable act in the United States.

There is a strong justification for the EU to enact new legislation and to prohibit the import, trade and re-export of species that are protected in their countries of origin. The U.S. Lacey Act could be used as a model in order to support conservation measures in range states.

2 Introduction

Over the last few years, poaching and illegal trade of wildlife have increasingly received international attention on the political level, resulting in several high-level meetings, conferences and resolutions. The illegal wildlife trade has escalated, and is now estimated at US\$ 19 billion worldwide (TRAFFIC 2012) – and the European Union is a main consumer market (HAKEN 2011; ENGLER & PARRY-JONES 2007). While the political debate and media reports mainly focus on the alarming situation of flagship species such as rhinos, elephants and tigers, criminal activities also seriously affect smaller species, such as reptiles. Though these are often overseen in the public debate, they are nevertheless highly sought after by collectors in wealthy nations - despite or because of their precarious conservation status.

The European Union is increasingly aware of its key role as a destination for illegally obtained wildlife: In 2007, an EU Action Plan¹ came into force aiming to better enforce the policies of CITES and the EU's wildlife trade regulations. In 2014, the EU Commission launched a stakeholder consultation and held an expert conference on wildlife trafficking and is presently reviewing "the existing policies and measures at EU level so as to enable the EU to react more effectively to the current crisis situation" (EU COMMIS-SION 2014). However, so far the EU's activities to combat wildlife crime are limited to those species that are listed in the CITES Appendices and in the Annexes of the EU Council Regulation on wildlife trade.

Reptiles are an easy and lucrative target for criminal gangs as they often survive over long periods under bad conditions, they are silent goods easily stuffed into suitcases or parcels, and a variety of species is fetching prices of several thousand Euros per specimen. The EU is a main destination for high-priced, rare and nationally protected species – such as arboreal alligator

lizards (Abronia spp.) from Mexico, rhino horn lizards (Ceratophora stoddartii) from Sri Lanka, earless monitors (Lanthanotus borneensis) from Borneo or bush vipers (Atheris desaixi) from Kenya. These and other species are openly offered on websites (NIJMAN & SHEPHERD 2009; AULIYA 2003), in social media and at reptile trade fairs in e.g. Germany, the Netherlands, Spain and other countries. Case studies in the present report focus on countries that are characterised by high species richness and/or endemism and that do have national protections in place. Endemic species often have small populations and a limited distribution, making them inherently vulnerable to extinction - and traders are aware of an especially lucrative business with such rarities (LYONS & NATUSCH 2013; PIANKA 2012; HALL et al. 2008; LAMOREUX et al. 2006).

Articles in pet publications sometimes underline the absence of CITES protection for such species, but do not note the national protection status (e.g. BREEDERS' EXPO EUROPE 2011a, b; MOHR & CABRERA 2013). Certain pet keepers are seeking special creatures for their private collections, such as rare nationally protected species, which may achieve prices of several thousands of Euros/pair - and EU enforcement authorities currently do not have legal instrument available for seizures or penalties when illegally acquired animals are traded within the EU. Hence, the burden to protect such species remains solely with the countries of origin – an unmanageable task, in particular for nations with limited resources and capacities.

CITES regulations are the most relevant tool to regulate international trade in endangered species but listing species on the CITES Appendices is a slow process, often hampered by the lack of biological and trade data and sometimes political or economic objections. To date the EU does not even record imports of species other than those listed in the EU regulations (with only patchy records of the trade in species listed in Annex D). In contrast, the US LEMIS Database is recording all imports and exports of fauna and

¹ Commission Recommendation: identifying a set of actions for the enforcement of Council Regulation (EC) No 338/97 on the protection of species of wild fauna and flora by regulating trade therein, 13 June 2007, 2007 O.J. (L159) 45, available at http://eur-lex.europa.eu/legal-content/EN/TXT/PD F/?uri=CELEX:32007H0425&from=EN

flora; the U.S. Lacey Act makes any illegal capture and export in the country of origin a criminal act in the USA if the animals are sent to the U.S. or if U.S. citizens are involved in the illegal activities in other countries. The Lacey Act enables the US enforcement authorities to break up international reptile smuggler rings, including those operating with the participation of EU citizens. The Lacey Act could be used as an example for similar legislation in the EU, as already mentioned by the German CITES Authorities in response to the EU Commission's consultation against wildlife trafficking (BMU 2014).

Extract of the US Lacey Act, 16 USC 3371 – 3378:

"It is unlawful for any person ... (2) to import, export, transport, sell, receive, acquire, or purchase in interstate or foreign commerce-- (A) any fish or wildlife taken, possessed, transported, or sold in violation of any law or regulation of any State or in violation of any foreign law;..."

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2.2	2 Uroplatus lineatus subadult-adult 700/pair (females regenerating tails), single male 260				
2.2	2 Uroplatus lineatus CB13 700/pair				
2.2	2 Uroplatus fimbriatus subadult-adult 700/pair				
2.2	2 Uroplatus sikorae adult 380/pair				
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1.0) Otocryptis wiegmanni adult 290				
Ot	her lizards:				
1.1	L Shinisaurus crocodilurus adult, male with scoliosis 600/pair				
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Figure 1: Pricelist by a Russian trader for the reptile fair Terraristika in Hamm, Germany. Yellow marked species are covered in this report.

3 Case Studies

3.1 Asia

3.1.1 Sri Lanka

National legislation:

In accordance with Section 30 of the 'Seventh amendment to the Fauna and Flora Protection Ordinance (FFPO) of Sri Lanka in 1993 all reptiles except the five highly venomous land snakes (*Bungarus caeruleus, Bungarus ceylonicus, Naja naja, Daboia russelii* and *Echis carinatus*: Schedule I) are protected species, thus must not be collected even outside of wildlife protected areas. A permit from the Department of Wildlife Conservation (DWC) is mandatory for any *ex-situ* or *in-situ* activity that involves protected species of reptiles. Ranching and breeding of any reptile species is not permitted in Sri Lanka (SOMAWEERA *in litt.* 2013b). Section 40 of the FFPO completely prohibits the export from Sri Lanka of any reptile whether dead or alive; or the eggs or skin of any reptile; or any other part of a reptile, without a permit from the Director General of the DWC. Exceptions are only possible for the promotion of scientific knowledge. This section forms a part of the Customs Ordinance. *Ceratophora spp.* and *Cophotis ceylanica* are even classified as strictly protected species, resulting in significantly higher fines for any trade in these species.

In 2010, a delegation of 14 German pet traders travelled to Sri Lanka, examining export options for endemic reptiles (ZZF 2010). However this idea was severely opposed by environmental activists and lawyers in the country (PARANAMANNA 2011; ANONYMOUS 2010; FERNANDO 2010; HETTIARACHCHI 2010), thus was not continued.

Biodiversity: Sri Lanka is a mega-hotspot of reptile fauna and is home to at least 208 described reptile species (UETZ & HOŠEK 2014; WEERAKO-ON 2012; BAHIR & SURASINGHE 2005; PETHI-YAGODA & MANAMENDRA-ARACHCHI 1998), with many more new species being discovered and awaiting description. 122 reptile species, including almost 75 percent of its lizard fauna, are endemic (AMARASINGHE *et al.* 2014; SOMA-WEERA & SOMAWEERA 2009; LIVING NATIONAL TREASURES undated) and 37 species are geographical relicts. A further 15 taxa are endemic at subspecies level (SOMAWEERA 2013a).

Illegal trade: In February 2012, six foreigners, among them one Belgian and one German citizen, were sentenced to fines for catching a common garden lizard (*Calotes versicolor*) and several amphibians in Sri Lanka without permit (RODRIGO 2012). While this case made international headlines it was by far not the only smuggling activity: It is only since a relatively short period of time that rare species from Sri Lanka are being regularly offered at European websites. There is strong evidence that a considerable number of reptiles are now smuggled out of the country each year:

Online adverts in Europe concern the most attractive but at the same time rarest species, such as Ceratophora stoddartii (rhino horn lizard), Cophotis ceylanica (pygmy lizard), Calotes nigrilabris (black cheeked lizard), Lyriocephalus scutatus (hump snout lizard), and Otocryptis wiegmanni (Sri Lankan kangaroo lizard). Each species is micro-endemic and restricted to very small areas of forest, especially C. stoddartii and Cophotis ceylanica, which makes these species extremely vulnerable to extinction (SOMA-WEERA & SOMAWEERA 2009). Given their unique microclimatic and habitat requirements, most of the above species are threatened with extinction. Currently Lyriocephalus scutatus is listed as Vulnerable; while Ceratophora stoddartii, Cophotis ceylanica and Calotes nigrilabris are listed as

Endangered at a national level (WICKRAMASING-HE 2012): Traders of these species are mainly based in Germany, Switzerland, Italy, France, Poland and Russia (see figures 1–6). Prices of up to 2,200 Euro/pair clearly indicate the value of these rare species that were obviously smuggled out of Sri Lanka (see figure 1).

Scientists and conservationists in the country are worried about the increasing illegal capture of and trade in such species (SOMAWEERA 2013b; KRVAVAC 2014).



Figure 2: online advert by Facebook for the reptile trade fair in Germany, trader from Italy / Screenshot (6 November 2014)



Figure 3: online advert at Facebook for a reptile trade fair in Germany, trader from Russia / Screenshot



Figure 4: online advert at www.terraristik.com for a reptile trade fair in Germany by a trader from Italy / Screenshot



Figure 5: online advert at Facebook by a seller from France / Screenshot



Figure 6: online advert at www.terraristik.com by a trader from Switzerland, although marked as German citizen / Screenshot

3.1.2 Indonesia

National legislation:

For a variety of reptile species, including some species listed in CITES App. II, Indonesia has a quota system for collection and export, which is set annually. However, 31 native reptile species² are fully protected under national legislation (Dilindungi PP No. 7/1999) and harvesting from the wild is prohibited. These are for example the Borneo earless lizard, *Lanthanotus borneensis* (under its former name *Varanus borneensis*), and the New Guinea snapping turtle, *Elseya novaeguineae*; both species are neither covered by CITES nor by the EU regulations). Furthermore, the capture of wild *Morelia viridis* and *Varanus prasinus* is strictly prohibited in Indonesia, while both are only listed in CITES Appendix II and EU Annex B.

Biodiversity: Indonesia is one of the 17 megadiversity countries (MITTERMEIER & MITTER-MEIER 2004). Presently, scientists recognise about 709 reptile species for Indonesia (UETZ & HOŠEK 2014) – a number that is steadily increasing due to new descriptions and taxonomic reviews. 291 reptile species are endemic (LIVING NATIONAL TREASURES undated). Accordingly, Indonesia's herpetofauna diversity may even reach that of Australia and Mexico (ISKANDAR & ERDELEN 2006).

Illegal trade: Recent studies document a substantial capture of certain wild reptile species in Indonesia, which is in violation of national legislation. NATUSCH & LYONS (2012) reported that for at least 44 percent of Indonesia's wildcaught reptile and amphibian species either the annually established national quotas were exceeded or animals were collected in protected areas. While EU enforcement authorities have hardly any options to identify such specimens as enforcement of national quotas is difficult to retrace, the situation is different for species that are strictly prohibited in Indonesia: In May 2014, Pro Wildlife was informed that German nationals had travelled to West Kalimantan in search of the earless monitor lizard, Lanthanotus borneensis (see figure 8). This monotypic species (the sole member in the family Lanthanotidae) is endemic to Borneo, is the only monitor lizard that is not included in the genus Varanus spp., and as such so far is not covered by CITES. For decades the species was only known from Sarawak (Malaysia) and as late as 2012 was for the first time recorded in West Kalimantan, the Indonesian part of Borneo (YAAP et al. 2012). Due to its unique adaptation for living underground and for its rare availability this species is termed the "Holy Grail" by reptile keepers (TRAFFIC 2014). The Borneo earless lizard is – although not yet assessed in the IUCN Red List - considered extremely rare and is totally protected in Sarawak (Malaysia) and nationally protected in Indonesia; hence, any export from both range states is illegal (AULIYA 2014; NIJMAN & STONER 2014). Nevertheless, already in early June 2014 - only a few weeks after Pro Wildlife had been informed about ongoing collections in Borneo - the first online advertisements by a German and a Czech trader were displayed in the internet. The specimens were offered for the world's largest reptile fair, the Terraristika in Hamm, Germany (see figure 9), for 7,500 and 8,000 Euro per pair; since then prices have even further increased to 10,000 Euro/pair. In reaction to these activities, TRAFFIC published a report and urged the Governments in Indonesia and Malaysia to propose a listing in CITES Appendix I – and as an immediate interim action to list this species in CITES Appendix III (NIJMAN & STONER 2014).

² Batagur baska, Caretta caretta, Carettochelys insculpta, Chelodina novaeguineae, Chelonia mydas, Chitra indica, Dermochelys coriacea, Elseya novaeguineae, Eretmochelys imbricate, Lepidochelys olivacea, Natator depressa, Orlitia borneensis, Chlamydosaurus kingi, Gonychephalus dilophus, Hydrasaurus amboinensis, Tiliqua gigas, Lanthanotus (listed under its former nomenclature Varanus) borneensis, Varanus gouldi, Varanus indicus, Varanus komodoensis, Varanus nebulosus, Varanus prasinus, Varanus timorensis, Varanus togianus, Morelia (listed under its former nomenclature Chondropython) viridis, Python molurus, Python timorensis, Crocodylus novaeguineae, Crocodylus porosus, Crocodylus siamensis, Tomistoma schlegelii

Apart from *L. borneensis* other nationally protected Indonesian endemic species are occasionally available in the European pet trade, such as the New Guinea snapping turtle, *Elseya novaeguineae* (see figure 7) and the giant bluetongue skink, *Tiliqua gigas* (see figure 10). However, prices for both species, which are e.g. offered by German, Dutch and Belgian traders, are significantly lower than for the Borneo earless lizard. *Tiliqua gigas* occurs in several countries, but references in adverts to the Indonesian province "Merauke" are strong indications that these specimens were exported in violation of national legislation.

Shipments to EU member states of such nationally protected species so far do not require any EU import permit. In contrast, for EU Annex B species import permits should be based on valid export CITES documents from Indonesia. As Indonesia, in line with its national legislation, should not issue export permits for wild-caught Morelia viridis, legal import into the EU should not be possible at all. The large-scale laundering of wild-caught M. viridis has been well documented: About 80 percent of green tree pythons, exported as "captive-bred", have been taken from the wild (LYONS & NATUSCH 2011). For this reason, the EU enforcement authorities should promptly initiate ecto- and endoparasite examination for specimens of Morelia viridis. Wild-caught specimens are for some clients more attractive than captive-bred ones, which is the reason why some traders after the import of laundered specimens openly offer them as indeed wild-caught – as it regularly happens via traders from Austria and France for specimens from the regions Jayapura and Aru.



Figure 7: online advert at www.terraristik.com for a reptile trade fair in Germany by a trader from the Netherlands / Screenshot



Figure 8: Lanthanotus borneensis © Indraneil Das



Figure 9: online advert at www.terraristik.com by a trader from Czech Republic / Screenshot



Figure 10: online advert at www.terraristik.com by a trader from Germany / Screenshot

3.1.3 Japan

National legislation:

The Law for the Conservation of Endangered Species of Wild Fauna and Flora (LCES) only applies for CITES Appendix I species and some migratory birds. Very few of Japan's non-CITES reptile species are designated as protected species under Japan's national legislation for ecological or cultural reasons, e.g. as local or national "Natural Monument" under The Law for the Protection of Cultural Properties (Act No. 214 of 30 May 1950). For example all subspecies of Kuroiwa's ground gecko, *Goniurosaurus kuroiwae*, are designated a local "Natural Monument" (Okinawa population since 1978, Kagoshima population since 2003) and any capture, transfer or trade of such species, including Goniurosaurus kuroiwae, the Kurowai's ground gecko, needs a permit. Kanari & Xu (2012) noted: "According to the Agency for Cultural Affairs, from the time the species… were designated as protected species up to the present, the Agency has not given permission to alter the present conditions of any commercial or trade purposes…. Therefore there is no possibility that any individuals of these species have been supplied for commercial trade legally." Furthermore, *Cuora* (flavomarginata) evelynae is designated a "Natural Monument" in Japan since 1972 and *Geoemyda japonica* since 1975.

Biodiversity: The number of recorded species in Japan has significantly increased over the last decade. Presently, Japan is home to at least 114 recorded reptile species, of which about 42 are endemic (UETZ & HOŠEK 2014; LIVING NATIONAL TREASURES undated).

Illegal trade: The Okinawan Ground Gecko, Goniurosaurus kuroiwae, is restricted to several islands of the central part of the Ryukyu Archipelago. While on a global level the species is classified by IUCN as Endangered (OTA 2010), its subspecies G. k. toyamai and G. k. yamashinae are assessed as "Critically Endangered" in Japan's national Red List 2012 (KANARI & XU 2012). As a "Natural Monument" the species is – although not a CITES-species – nationally protected and must not be caught or sold. Nevertheless, illegal capture from the wild is frequent (NAKAMURA et al. 2014) and specimens of Goniurosaurus kuroiwae are offered at websites by traders from the Czech Republic, Germany, Sweden, and Japan at about 120 Euro/individual (see figures 11, 12).

Similar cases exist for the Ryukyu Black-breasted Leaf Turtle (*Geoemyda japonica*) and the Ryukyu yellow-margined Box Turtle (*Cuora (flavomarginata) evelynae*). Both species are listed in CITES Appendix II and EU Annex B, are classified by IUCN (ASIAN TURTLE TRADE WORKING GROUP 2000) as "Endangered" and in Japan's National Red List of 2012 as "Vulnerable". Wild populations of C. evelynae and Geoemyda japonica, both designated a "Natural Monument" in Japan, are in decline due to inter alia ongoing illegal offtakes (KANARI & XU 2012; YASUKAWA & OTA 2008). Similar to Goniurosaurus kuroiwae no permits for collection and trade for this species have been issued since 1975, which raises questions about the legal origin of Geoemyda japonica specimens in online adverts from traders in Japan, Germany and Hong Kong for the European market: References to a locality in Japan, e.g. to "Kume Island" (see figure 12) are suspect as well as specimens that are openly marked as wild-caught ("WC", see figure 13). G. japonica is on sale for 1,000 Euro/ specimen, while price for *C. evelynae* is about 700 Euro/animal (see figure 14). In these cases CITES export permits should be questioned and further bilateral enquiry with Japan's CITES Authorities should be a matter of course.



Figure 11: online advert at Facebook, closed group "International trade for geckos", trader from France / Screenshot



Figure 12: online advert at www.terraristik.com by a trader from Japan for a reptile trade fair in Germany / Screenshot



by a trader from Germany / Screenshot



Figure 14: online advert at www.terraristik.com by a trader from Hong Kong / Screenshot

3.1.4 Vietnam

National legislation:

Both the Decree on Management of endangered, precious and rare forest plants and animals (Decree 32/2006/ND-CP) and the Governmental Decree No 163 list a small number of reptile species (mainly CITES species), for which commercial trade is strictly prohibited. For all other forest animals the catching, trapping and caging of forest animals must be permitted by competent State bodies, in accordance with the Law on Forest Protection and Development No. 29/2004/QH11.

Biodiversity: Vietnam has one of the richest herpetofauna in the world with at least 460 reptile species, and this number is still increasing (UETZ & HOŠEK 2014; ZIEGLER & NGUYEN 2010). About 117 of these species are estimated to be endemic (LIVING NATIONAL TREASURES undated).

Illegal trade: In its Report on the Review of Vietnam's Wildlife Trade Policy the CITES Authorities stated: "... illegal wildlife trade such as large mammal and reptile trade have posed lots of difficulties for the wildlife survival, especially endemic and endangered species" (CITES Vietnam 2008).

Only in 2011, scientists described a new gecko species from the remote Hon Khoai Island in Vietnam and with regard to its spectacular colors named it Cnemaspis psychedelica (GRISMER et al. 2010). Due to scarce information the psychedelic rock gecko is so far neither assessed by IUCN, nor protected by CITES nor protected by Decree 32/2006/ND-CP; however public access to its only location is prohibited: Hon Khoai Island is a military area, permission to enter this island is generally not given and it seems very unlikely that the Forest Protection Department has issued collection permits for foreigners (NGUYEN in litt 2014; GRISMER et al. 2010; GRISMER in litt. 2013). Nevertheless, in late 2013, psychedelic geckos appeared for the first time at European online advert platforms and in Facebook, being described as "the most beautiful gecko in the world" (see figure 15). Since then the species was regularly on sale, offered by Russian, Spanish (see figure 16) and Czech traders. In June 2014, we found online adverts for at least nine pairs of the psychedelic gecko – assuming that the different traders are not connected - to be sold at the reptile trade fair Terraristika in

Hamm. While the local price from dealers is only about 50 USD (NGO VAN *in litt*. 2014), market price in Europe is up to 2,500–3,500 Euro/pair. This profit margin makes smuggling out of Vietnam highly profitable.

Cnemaspis psychedelica is not the only species from Hon Khoai on sale: In March and July 2014, a Russian trader offered several pairs of *"Cyrtodactylus sp.* undescribed species from Hon Khoai Island, southern Vietnam".



Figure 15: online advert at Facebook, closed group "Rare Reptiles Classifieds – EUROPE", trader from Russia / Screenshot

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1.1 Psychedelic gecko. Cnemaspis psychedelica		

Figure 16: online advert at www.terraristik.com by a trader from Spain for German reptile trade fair / Screenshot

3.2 Latin America

3.2.1 Mexico

National legislation:

NORMA Oficial Mexicana NOM-059 lists threatened native species, including those "in danger of extinction" (P), "threatened" (A), and "subject to special protection" (Pr) (SEMARNAT-2010). In accordance with Article 420 of the Código Penal (Criminal Code) both capture and any commercial activity with wild species of flora and fauna that are endemic, in danger of extinction, threatened, rare, or subject to special protection is prohibited without proper permit. Over the last decade the Mexican Authorities issued export permits for four *Abronia* species: *A. graminea* for commercial purposes, and *A. taeniata*, *A. oaxacae*, and *A. ornelasi* for scientific purposes only, indicating that any type of commercialization of the latter species is strictly forbidden. All exports were exclusively to the USA, while for *A. deppii*, *A. martindelcampoi* and *A. lythrochila* no exports were permitted at all (CONABIO 2014).

Biodiversity: Mexico is one of the 17 megadiversity countries (MITTERMEIER & MITTERMEIER 2004). With at least 890 reptile species Mexico is considered to hold the second largest reptile diversity worldwide, after Australia (UETZ & HOŠEK 2014; BIODIVERSIDAD MEXICANA 2012). More than half of these species is found nowhere else (LIVING NATIONAL TREASURES undated; FLORES-VILLELA & CANSECO-MÁRQUEZ 2004). Many endemic species are thought to be in a precarious conservation situation, including several *Abronia* species (WILSON *et al.* 2013 a,b).

Illegal trade: In recent years, arboreal alligator lizards (Abronia spp.) have become popular in European pet trade - a trend that has been pushed by articles on husbandry in reptile keeper magazines (e.g. LANGNER 2014 a,b; WAGNER undated). Mexico is home to 18 of the 28 species of this genus - with 16 of them being endemic to Mexico. While Mexico allowed exports of bromeliad arboreal alligator lizard (Abronia taeniata, listed under category Pr = Special Protection) to the USA for scientific purposes only, the species is nevertheless regularly on sale in European pet trade. Traders from e.g. Czech Republic, Germany, Netherlands, Russia, Sweden, Spain and United Kingdom are offering this species for 900-1,300 Euro/specimen (e.g. figure 17).

Some traders even offer higher numbers of individuals and a broad range of Abronia species, including *Abronia deppii* and *Abronia lyth-rochila* (see figures 17–20). Both species are

endemic, nationally listed as threatened (A) and no export permits were given by the Mexican Authorities (CONABIO 2014). Black market prices for *A. deppii* and *A. lythrochila* are 300–1,000 Euro per specimen, some of them openly labelled as wild-caught (see figure 20). Furthermore, *A. martindelcampoi* has been offered by traders from Spain (see figure 21) and United Kingdom, with the British trader asking for 1,000 GBP each (corresponding with about 1,250 Euro). This species has been described only in 2003 and is classified by IUCN as Endangered (CANSECO-MÁRQUEZ *et al.* 2007; FLORES & SÁNCHEZ 2003). For all three species Mexico never issued an export permit.

Alarmed by an increasing presence of the different *Abronia* species in the EU pet market and their precarious conservation situation, Mexico submitted a Document for the 27th meeting of the CITES Animals Committee in April 2014 (AC27 Inf.16) and held a side event on the precarious situation of this genus, of which most species are prone to extinction due to a very limited distribution range and a low reproductive output. Mexico and Guatemala are planning to propose listing of the genus *Abronia* spp. in the CITES Appendices (see also section 3.3.2).

International awareness for the smuggling of *Abronia* is increasing, also among the traders:

Only recently online adverts from two Spanish traders were published, who stated to have "real paperwork" and "with CITES" (see figures 19 and

21), although these non-CITES species so far do not need any documents within the EU.

Smuggling of endemic and nationally protected species out of Mexico is not limited to *Abronia*, but also affects other species, such as the Mexican spiny-tailed iguana: One decade ago the trade in *Ctenosaura pectinata* was obviously limited to local trade within Mexico (FITZGERALD *et al.* 2004), but the species is now available in the international pet trade (see figure 22), where it is occasionally offered for about 1,500 Euro/ pair. The species, originally endemic to western Mexico but introduced to the southern USA, has not yet been assessed by IUCN but is nationally classified as threatened (A) and commercial exports are prohibited.



Figure 17: online advert at www.terraristik.com by a trader from the Netherlands for German reptile trade fair / Screenshot



Figure 18: Abronia deppi at reptil trade fair in Hamm offered by a Spanish trader © Pro Wildlife



Figure 19: online advert at www.terraristik.com by a Spanish trader / Screenshot



Figure 20: online advert at www.terraristik.com by a German trader / Screenshot



Figure 21: online advert at www.terraristik.com by a Spanish trader / Screenshot



Figure 22: online advert at www.terraristik.com by a German trader / Screenshot

3.2.2 Guatemala

National legislation:

In accordance with Decree 4-89 of the Protected Areas Act harvest of and trade in the species is prohibited for individuals of Category 1 and 2 in the national list of endangered species. *Abronia campbelli* is listed in Category 1, which contains species threatened with extinction, for which collection from the wild and export are totally banned. *A. fimbriata* and *A. gaiophantasma* are listed in Category 2, which contains endemic species that can only be used for scientific, research conservation breeding purposes (Duchez 2013; CONAP 2009).

Biodiversity: An estimated 262 reptile species are native to Guatemala (UETZ & HOŠEK 2014), with 19 of them being endemic, such as several *Abronia* and *Norops* species (LIVING NATIONAL TREASURES undated).

Illegal trade: Guatemala is home to ten *Abronia* species, eight of which are endemic; hence their capture from the wild and export is prohibited (DUCHEZ 2013). Some of these species are extremely poor known and rare in nature – nevertheless they recently entered the EU pet market:

The Campbell's Alligator Lizard, **Abronia campbelli**, only known from Potrero Carrillo-La Pastoría, Jalapa in east-Central Guatemala, was only described in 1993 and was since then not observed for almost one decade (ARIANO-SÁN-CHEZ & TORRES-ALMAZÁN 2010). Due to a very restricted distribution of 18 km², an estimated population size of less than 500 specimens and high pressure from illegal pet trade, it has been recently classified by IUCN as Critically Endangered (ARIANO-SÁNCHEZ *et al.* 2013). In 2010, 47 individuals were seized from illegal pet trade (ARIANO-SÁNCHEZ *et al.* 2013); since then the species was repeatedly offered at a European online platform (see figure 23).

The fringed arboreal alligator lizard, *Abronia fimbriata*, and the brilliant arboreal alligator lizard, *Abronia gaiophantasma*, are only known from small mountainous areas in Guatemala (CAMP-BELL & FROST 1993). In 2014, both species have been classified by IUCN as "Endangered", both are mainly threatened by habitat loss, but also present in the illegal pet trade (ARIANO-SÁN-CHEZ *et al.* 2014; ACEVEDO *et al.* 2014). They are nationally protected by Decree 4–89 and both capture and export are illegal (DUCHEZ 2013, CAMPBELL 2014). Nevertheless, in May 2014, specimens of both *Abronia gaiophantasma* and *Abronia fimbriata* were offered in the EU pet market for the first time (see figure 24). Reportedly, two pairs were sold for 2,800 Euro/pair and the German trader exported more specimens soon. Indeed, the same trader again published online adverts for both species in July and August 2014.

Only four weeks after Mexico had highlighted the precarious situation of *Abronia* sp. at the 27th meeting of the CITES Animals Committee, Guatemala – triggered by the seizure of 30 specimens of arboreal alligator lizards at Frankfurt Airport – contacted the EU Commission, asking for support for an emergency CITES Appendix II listing for *Abronia* spp. by postal voting. This unusual procedure was justified with the utmost urgency of that matter (CONAP 2014).



Figure 23: online advert at www.terraristik.com by a trader from unknown nationality / Screenshot



Figure 24: online advert at www.terraristik.com by a German trader. Pairs were sold for 2,800 Euro each / Screenshot

3.3 Africa

3.3.1 Kenya

National legislation:

Until recently, the Wildlife Conservation and Management Act of 1976 was the principal domestic legislation regarding wildlife. It outlawed any trapping of animals, dealing in and importing or exporting of animal products without a licence. The Wildlife Act was replaced by the Wildlife Conservation and Management Act, 2013487 ("New Act"), which came into force in January 2014 and is aiming to increase penalties and deterrent effect (DLA PIPER 2014).

Biodiversity: Kenya is home to at least 276 reptile species, with diversity hotspots such as the Eastern Arc Mountains and the Kitobo Forest (UETZ & HOŠEK 2014; MALONZA *et al.* 2011; BURGESS *et al.* 2007). At least 21 reptile species are endemic, including *Atheris desaixi* and *Bitis worthingtoni* (LIVING TREASURES undated).

Illegal trade: For decades Kenya's reptiles have been targeted by smugglers - and several species reach high prices in the international pet trade. The Mt. Kenya bush viper, Atheris desaixi, is endemic to Kenya, where it has only been recorded in two separate localities. The primary threats are trade and habitat destruction (KENYA 2004a). Several traders from e.g. Austria, Germany and Sweden are offering Atheris desaixi at the website www.terraristik.com (see figures 25–28) - with some of the specimens openly declared as wild-caught. For two males and three females 4,000 Euro were requested (see figure 26) – a price that reflects the rarity of this endemic species and scarce availability in the international pet market: While not yet assessed in the IUCN Red List it is classified in Kenya's national Red List as Vulnerable and commercial export permits are not issued (KAHUMBU in litt. 2013). Already in the past this precious species has been targeted by smugglers, with the aim to sell it in the European market (SMITH 2011, KENYA 2004a). The EU Scientific Review Group started a discussion on trade in Atheris species within the Scientific Review Group, in February 2014.

Furthermore, German and Czech traders regularly advertise "*Bitis arietans* Lake Nakuru" for prices of 120 to 350 Euro. While these African puff adders were labelled as "captive-bred" and the species is home to several African countries, the reference to Lake Nakuru, a national park in Kenya, is remarkable. The new Wildlife Act of 2014 lists *Bitis arietans* as a protected species and no permit for collection and export for commercial purposes is said to have been issued (KA-HUMBU *in litt.* 2013).

The Kenyan horn viper, **Bitis worthingtoni**, has been the subject of several smuggling cases, with USA, Canada, Germany and the Netherlands as countries of destination (KENYA 2004b; GITONGA 2013). At CITES CoP13 a CITES listing proposal failed and hence the species remains internationally unprotected. In 2013, a British citizen was arrested in Kenya for trying to smuggle six individuals of this endemic snake to Germany (AFP 2013). In closed Facebooks groups this species is occasionally offered (see figure 28).



Figure 25: online advert at www.terraristik.com by a trader from Sweden for German reptile trade fair / Screenshot



Figure 26: online advert at www.terraristik.com by a trader from Austria / Screenshot



Figure 27: online advert at www.terraristik.com by a German trader / Screenshot



Figure 28: online advert at Facebook, closed group "International Trade For Venomous Snakes", trader from Germany / Screenshot

3.3.2 Tanzania

National legislation:

While the Wildlife Conservation Act 2009 (WCA), which replaced the Wildlife Conservation Act of 1974, only refers to CITES species, the Forest Act 2002 bans any capture and removal of listed wild animals from forest reserves without a special licence. About 40 % of the country's expanse is designated as protected area.

Biodiversity: Tanzania is home to about 360 native reptile species (UETZ & HOŠEK 2014), with at least 86 of them being endemic (LIVING NATIONAL TREASURES undated). The Eastern Arc and Coastal Forests of Tanzania are among the world's 25 biodiversity hotspots (BURGESS et al. 2007; MYERS et al. 2000). MENEGON et al. (2011) warn: "Tanzania's biodiversity is unparalleled on mainland Africa, and nowhere is this more evident than in its forest herpetofauna. However, the endemics for which the nation is so renowned are seriously threatened by habitat loss, disease and overexploitation for the wildlife trade. The latter is largely unmanaged, often illegal and increasingly pervasive. Collection from the wild is mostly unsustainable and has reached a level whereby it represents perhaps the biggest threat to Tanzania's amphibians and reptiles."

Illegal trade: For decades now Tanzania has been a major exporter of live reptiles to Europe, the USA and Japan (UNEP-WCMC 2007; STEIN-METZ *et al.* 1998). While the majority of native species is not protected from trade, for some species exports are not permitted without special permits, including *Lygodactylus williamsi*, the turquoise gecko: With its intense coloration the "electric blue gecko" is attractive for hobbyists, resulting in high pressure on wild populations: About 15 percent of the total population were collected within a six-year period only (2004–2009) (FLECKS *et al.* 2012a).

Most of *L. williamsi*'s range is within the Forest Reserves of Kimboza and Ruvu. These reserves are protected by the Forest Act, 2002, which strictly prohibits the unlicensed collecting of wildlife. According to officials of the Tanzania Wildlife Research Institute collection and export of this species have never been licensed; hence, wild-caught specimens are illegally collected and

exported under fake names, e.g., as L. capensis (FLECKS et al. 2012a), and then sold in large numbers e.g. at reptile trade fairs (UNEP-WCMC 2013; see figure 29). Wild populations collapsed after a period of intense collections, resulting in the IUCN classification as Critically Endangered (FLECKS et al. 2012b). While the species would qualify for an Appendix I listing, Tanzania failed to propose a CITES listing of this highly threatened species at CoP16. As a consequence, and after more than two years of internal discussion the EU's Scientific Review Group (SRG) and Committee on Trade in Wild Fauna and Flora (COM), the EU's CITES scientific and management authorities, agreed in September 2013 to include L. williamsi in EU Annex B (EU COM 2013) as an urgent case, though the listing will only come into force in November 2014 (OHM in litt. 2014).

L. williamsi is an exceptional case, for which the EU has taken stricter domestic measures, however only after years of internal discussions. However, other rare species that are highly sought after in the pet trade remain unprotected.



Figure 29: online advert at www.terraristik.com by a trader from Poland for German reptile trade fair / Screenshot



Figure 30: *L. williamsi*, sold at reptile fair in Hamm, Germany © Pro Wildlife

3.4 Oceania

3.4.1 New Zealand

National legislation:

Since 1996, all native reptile species are fully protected by the Wildlife Act 1953. Any hunting, collection or export is only allowed under permit.

Biodiversity: New Zealand's long geographic isolation and its active geological past have produced a unique herpetofauna, whose diversity is still under-estimated under present taxonomy (NIELSEN *et al.* 2010). In 2010, the genus *Hoplodactylus* was revised and divided into several genera, including *Naultinus, Woodworthia, Dactylocnemis* and *Mokopirirakau* (NIELSEN *et al.* 2010). At present, 71 reptile species are recorded in New Zealand (UETZ & HOŠEK 2014), of which 61 are endemic (LIVING NATIONAL TREASURES undated).

Illegal trade: Despite being nationally protected New Zealand's endemic species are highly sought-after in the international pet trade, mainly because of their attractive coloration and markings, their live-bearing reproduction, and finally their rare availability in the international pet market, which presently leads to prices of up to 5,300 Euro/pair, e.g. for forest geckos, Mokopirirakau granulatus (NEW ZEALAND 2002, see also figure 1). In 2002, New Zealand had tried to list the two genera Hoplodactylus spp. and Naultinus spp. in CITES Appendix II (NEW ZEALAND 2012), and when the proposal failed, both genera were listed in CITES Appendix III in 2003 at New Zealand's request. However, illegal exports, mainly to the EU, continue and several traders openly offer specimens for sale at the European market (NEW ZEALAND 2013a, b). New Zealand's enforcement authorities regularly screened European websites and were able to photo-identify offered specimens, which had been poached in their natural range. The Appendix III listing was insufficient to prevent illegal trade. In 2013, New Zealand successfully proposed a listing of Naultinus spp. in CITES Appendix II. After the EU implementation of this CoP16 decision, seizures of illegally caught specimens could be achieved

in Germany in December 2013 and August 2014.³ According to the New Zealand Department of Conservation German nationals are in disproportionate numbers involved in smuggling geckos out of New Zealand (NEW ZEALAND 2013b).

While Naultinus is now covered by CITES App. II, all other New Zealand geckos - formerly under the genus Hoplodactylus, now split under the new taxonomy (NIELSEN et al. 2011) - remain in Appendix III. This is the case for e.g. Woodworthia brunneus (Canterbury gecko), Woodworthia maculata (New Zealand common gecko) and Mokopirirakau granulatus (forest gecko), which are sold at reptile trade fairs for about 2,200 (both Woodworthia species) and 5,300 Euro/pair (M. granulatus) (see figure 1, 31, 32). Furthermore, Dactylochnemis pacificus, the Te Paki gecko, restricted to the North Island and its offshore islands, is offered for 1,700 Euro/specimen. Such offers constrain that New Zealand geckos are still in the focus of reptile smugglers.



Figure 31: online advert at www.terraristik.com by a trader from Germany / Screenshot



3 www.sn-online.de/Schaumburg/Stadthagen/Stadthagen-Stadt/Geckos-illegal-eingefuehrt; www.focus.de/regional/rheinland-pfalz/ kriminalitaet-illegaler-gecko-haendler-aufgeflogen-23-tiere-beschlagnahmt_id_4044747.html

3.4.2 Australia

National legislation:

In Australia, export of wildlife is strictly regulated under the nation's key environment legislation – the Environment Protection and Biodiversity Conservation Act 1999, which came into force in July 2000. Commercial export of native animals may only be permitted for dead specimens from approved sources, for live reptiles no export is allowed (DEPARTMENT OF THE ENVIRONMENT 2014b).

Biodiversity: Being one of the 17 mega-diversity countries Australia is known for its enormous herpetological diversity: With at least 917 recognised reptile species Australia's herpetofauna is outstanding, and approximately 93% are endemic (CHAPMAN 2009; MITTERMEIER & MITTERMEIER 2004).

Illegal trade: Interesting biological behaviour, such as viviparity, makes Tiliqua rugosa (formerly known as Trachydosaurus rugosus) highly attractive for private collectors. This species is traded as bobtail lizard or shingleback lizard. With record prices of up to 15,500 Euro, Tiliqua rugosa is among the most expensive non-CITES species in the black market for live reptiles (WYLER & SHEIKH 2008). Smuggling attempts are regularly uncovered by Australian authorities, with the bulk of smugglers coming from Japan and Hong Kong (AAP 2013, 2011). Within the period 1998–2013, more than 180 specimens were seized in West Australia (AAP 2013). However, despite the fact that no legal exports from Australia are permitted, Tiliqua rugosa is also offered on European websites, by traders from e.g. France, Germany and Hong Kong; at present, prices may fetch 5,500 Euro/pair (see figure 33).

A similar case is *Saltuarius* spp., the Australian leaf-tailed gecko. These animals appear very similar to *Uroplatus*, but are in contrast to the Malagasy leaf-tailed geckos not listed under CITES. Although strictly protected in and endemic to Australia, specimens of Wyberba leaf-tailed geckos (*Saltuarius wyberba*) and Rough-throated leaf-tailed geckos (*Saltuarius salebrosus*) are on sale for about 350–500 Euro per specimen, adult females may even fetch more than 1,000 Euro/ specimen. In 2012 and 2013, online offers from Russia and USA were made for *Saltuarius* for sale at the reptile trade fair in Hamm, Germany (see figures 34, 35).





Figure 34: online advert at www.terraristik.com by a trader from Russia / Screenshot



by a trader from the USA / Screenshot

4 Conclusions

- This report, based on case studies from ten countries and more than 30 species, highlights the illegal capture and export of reptiles, which are protected in their range states, to the pet market of the European Union, where they are openly advertised for sale and traded.
- The ten countries covered in this report that are currently impacted by illegal trade include Australia, Guatemala, Indonesia, Japan, Kenya, Mexico, New Zealand, Sri Lanka, Tanzania, and Vietnam. There is ample evidence that protected reptiles from many other countries are also caught and exported illegally for the European market (MOBARAKI 2014; FENDT 2014; ISAACS 2014). In addition, though this report is focussing on the trade in reptiles, which are highly sought after in the EU pet trade, they are not the only species protected in their countries of origin and illegally exported to the EU, but other taxonomic groups are affected as well.
- · About half of the nationally protected species covered in this report are classified as Critically Endangered, Endangered or Vulnerable in the global IUCN Red List of threatened species or National Red Lists. For several other species biological data and information on the status of wild populations are so scare that they have not yet been assessed - among them species such as the Borneo earless monitor lizard (Lanthanotus borneensis) and the psychedelic gecko (Cnemaspis psychedelica), which are thought to be very rare by several researchers. For many of these species illegal exploitation for the pet trade is a serious problem or even the most significant threat to their survival in the wild (e.g. NIJMAN & STONER 2014; ARIANO-SÁNCHEZ et al. 2013; GRISMER 2013; SOMAWEERA 2013a; FLECKS et al. 2012a; FLORES-VILLELA & SANTOS-BARRERA 2007).
- Rarity of a species drives it's price in the high-end pet trade (LYONS & NATUSCH 2013, BROOK & SODHI 2006, HALL *et al.* 2008):

Accordingly, nationally protected species, especially when they are threatened, endemic, or showing special biological features (e.g. viviparity, bright colours, attractive markings, or a unique taxonomic status), can fetch prices of several thousand Euros, such as 2,800 Euro/pair for fringed arboreal alligator lizards (*Abronia fimbriata* from Guatemala), 5,300 Euro/pair for the Australian forest gecko (*Mokopirirakau granulatus*) or even 8,000 Euro/pair for the earless monitor lizard (*Lanthanotus borneensis* from West Kalimantan, Indonesia). As prices rise the incentive for illegal capture and trade increases, thereby increasing the threat to wild populations.

- Once such rare and nationally protected specimens have been smuggled out of their country of origin, import into, and sale within, the EU are legal – contrary to the commitment of the European Union to the *"Rio de Janeiro Convention on Biological Diversity"*, including the recognition of sovereign rights of States over their own biological resources.
- Enforcement staff in EU Member States so far has no legal means to take action against individuals or businesses trading in such nationally protected animals. This huge legal gap allows a shadowy business with extremely high profits, comparable with those for CITES Appendix I and II species, but no risk of legal consequences. Some criminal gangs are believed to specialise in this low risk business of trading illegal animals, with the EU being a main destination.
- The turquoise dwarf gecko, *Lygodactylus williamsi*, is an exceptional case, for which the EU has taken stricter domestic measures because of its precarious conservation status and excessive trade in Europe. However, other rare species that are highly sought after in the pet trade remain unprotected.
- Animal trafficking has emerged as a significant cybercrime: Social media and specialized

online platforms facilitate the sale of smuggled animals allover Europe. Via internet traders and clients arrange their meeting points at large reptile fairs with an international reach. The growing use of the internet in wildlife trafficking necessitates a global response and harmonization of national enforcement efforts is needed to effectively combat wildlife crime (IZZO *et al.*2010).

- Co-operation between source and importing countries is essential to prevent illegal trade of wild species for international markets. Range states' efforts to safeguard their native species from over-exploitation will inevitably fail if they are not assisted by appropriate action in main consumer markets. The EU as a major importer and consumer of live reptiles carries significant responsibility to take the essential steps to combat the illegal trade in species protected in their range states.
- · The EU carries responsibility as a main consumer market and it would be unjustified to limit strategies to combat wildlife trafficking to internationally protected species (i.e. CITES) only: Instead conservation measures must include highly threatened species that are protected in their countries of origin but freely available on the international market, as a result of illegal offtake and smuggling out of their range state. Such a legal approach has long been in effect in the United States: The "Lacey Act" makes it unlawful to import, export, transport, sell, receive, acquire, or purchase wildlife that are taken, possessed, transported, or sold either in violation of U.S. or foreign law.⁴

Recommendations

Based on these findings Pro Wildlife recommends the following measures to the EU:

- The EU should pass new legislation, making import, sale, purchase and re-export of specimens, which have been captured, traded or exported in violation of laws in the country of origin a criminal act within the EU. In the absence of CITES regulations such stricter domestic measures are the only option to prevent the continued illegal trade in countless species that are prohibited from capture or commercial trade and export in their countries of origin.
- In support of such legislation, a database should be established, detailing prohibitions on capture, trade and export of wildlife in range states.
- Such a database would not only benefit threatened species that are not internationally protected, but would also help the EU to enforce trade restrictions for Annex B species, which are protected under national regulations.
- EU authorities should be aware that some traders fraudulently declare their animals to have been bred in captivity, when in reality offspring is from gravid females, which give birth or lay eggs soon after the smuggling event. In addition, even for truly captive bred individuals of species, which are nationally protected in their range state and for which legal exports have never been permitted, the question on the legality of the breeding stock remains and EU authorities should verify the validity of captive breeding claims and cross-check with authorities in the range state, before permitting imports.

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