

Illegal Trade in Wildlife Species in Beirut, Lebanon

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Abstract

Between February and September 2014, we performed a survey of 23 animal markets in Beirut. Trade in wild animals including reptiles, birds and mammals comprise a large volume (25704 specimens). The estimated value of wildlife trade in Lebanon in the visited shops and during the study period is 431371 US\$, out of which 97 % is for birds. This number indicates the economical importance of wildlife trade in Lebanon. Due to the high demand by the public, birds constituted the majority of the traded species which consisted mostly of cage-bred or imported species. Lebanon's biodiversity is not threatened by the trade of wild species, except for some species like the Spur-thighed tortoise. However, the risk of transmission of diseases due to trade in wildlife is evident. The prices of traded animals varied according to their conservational status, their origins (local, captive-bred, imported or smuggled), supply and demand, and specific features of species. Highest prices were observed when all factors are combined (i.e. case of the Macaw parrot). Most (64%) traded species are not listed under any appendix of CITES, only 16 species are listed under Appendix-II and one species is listed under Appendix-III. Regarding IUCN status of traded species, five species are considered vulnerable, one is endangered, one is near threatened and the rest are considered as least concern. Furthermore, most (70%) of the shops visited were in poor conditions, while shops in excellent conditions are exclusively the licensed shops. Hence, law enforcement and regulation of wildlife trade will have a positive impact on not only shop conditions, but also on animals well being, reduced degree of mortality in trade, reduced smuggling, and consequently a better conservation of wildlife in Lebanon.

Key words

Lebanon, animal trade, birds, CITES, reptiles, mammals.

Introduction

Knowledge on animal trade in the Middle East is continuously increasing and several publications have been produced over the past decade. AMR *et al.* (2007) studied the illegal trade in reptiles in the principal animal market in Damascus, Syria, and they have stated the presence of more than 10 shops specialized in selling live local birds, reptiles and mammals. SOORAE *et al.* (2008) also studied trade in the United Arab Emirates. They have provided notes on the implementation of CITES, focusing on the trade in wildlife as pets and they stated that birds are the most popular species in the pet trade in the Emirates, followed by reptiles and marine/fresh-

water species for aquaria. In Kuwait, a survey undertaken in 2010 found 17 species of raptors being offered for sale, of which three were listed in the IUCN Red List (AL-SIRHAN & AL-BATHALI, 2010). EID *et al.* (2011) identified 23 CITES-listed bird species on sale at the Friday Public Market in Jordan, and one CITES-listed reptile species. ALOUFI & EID (2014) studied the illegal animal trade from the Tabuk area at the Kingdom of Saudi Arabia. Their study showed birds as the dominant species in trade followed by reptiles and mammals. They have also discussed potential conservation impact related to trade.

Table 1. Bird's species recorded during the survey and their prices.

Family	Scientific Name	Common Name	CITES Status	No. of birds	Price/Bird (US\$)	Total Price (US\$)
Accipitridae	<i>Buteo rufinus</i>	Long Legged Buzzard	II	1	66	66
Cardinalidae	<i>Cardinalis cardinalis</i>	North Cardinal	NC	21	NA	NA
Columbidae	<i>Streptopelia senegalensis</i>	Laughing Dove	NC	54	20	1080
Corvidae	<i>Corvus cornix</i>	Black Hooded Crow	NC	4	83	332
	<i>Cyanocitta cristata</i>	Blue Jay	NC	9	43	387
Emberizidae	<i>Emberiza melanocephala</i>	Black-headed Bunting	NC	75	4	300
Estrildidae	<i>Lonchur aoryzivora</i>	Java Sparrow	II	11	NA	NA
	<i>Taeniopygia guttata</i>	Zebra Finch	NC	2979	4	11916
Falconidae	<i>Falco biarmicus</i>	Lanner Falcon	NC	4	86	344
	<i>Falco tinnunculus</i>	Kestrel	II	46	40	1840
Fringillidae	<i>Carduelis cannabina</i>	Common Linnet	NC	30	3	90
	<i>Carduelis carduelis</i>	Goldfinch	NC	6011	33	198363
	<i>Carduelis spinus</i>	Siskin	NC	19	55	1045
	<i>Fringilla coelebs</i>	Chaffinch	NC	36	3	108
	<i>Serinus canaria</i>	Canary	NC	8915	26	231790
	<i>Serinus syriacus</i>	Syrian Serin	NC	29	25	725
	<i>Spinus spinus</i>	Eurasian Siskin	NC	84	5	420
Muscicapidae	<i>Luscinia megarhynchos</i>	Common Nightingale	NC	8	26	208
Passeridae	<i>Passer domesticus</i>	House Sparrow	NC	74	3	222
Phasianidae	<i>Alectoris chukar</i>	Chukar	NC	109	33	3597
Ploceidae	<i>Euplectes afer</i>	Yellow-crowned Bishop	III	9	26	234
Psittacidae	<i>Agapornis fischeri</i>	Love Birds	II	203	40	8120
	<i>Alisterus capularis</i>	Australian Parrot	NC	1	50	50
	<i>Amazona autumnalis</i>	Red-lord Amazon	II	7	550	3850
	<i>Ara ararauna</i>	Macaw Parrot	II	2	1600	3200
	<i>Cacatua alba</i>	Cockatoo White Parrot	II	4	1100	4400
	<i>Melopsittacus undulatus</i>	Budgerigar	NC	5444	12	65328
	<i>Nymphicus hollandicus</i>	Cockatiel	NC	95	60	5700
	<i>Platyercus eximius</i>	Eastern Rosella Parrot	II	8	100	800
	<i>Poicephalus senegalus</i>	Senegal Parrot	II	6	173	1038
	<i>Psittacula krameri</i>	Rose-ringed Parakeet	III	1	66	66
	<i>Psittacuser ithacus</i>	African Grey Parrot	II	169	346	58474
	<i>Psittacuser ithacus timneh</i>	Tanzanian Grey Parrot	II	10	190	1900
	Pycnonotidae	<i>Pycnonotus anthopygos</i>	Yellow-vented Bulbul	NC	418	18
Ramphastidae	<i>Ramphastos sulfuratos</i>	Keel-billed Toucan	NC	1	1500	1500
Sturnidae	<i>Acridotherestrictis</i>	Common Myna	NC	3	80	240
Turdidae	<i>Turdus merula</i>	Eurasian Blackbird	NC	10	20	200
Tytonidae	<i>Tyto alba</i>	Barn Owl	II	3	93	279
Upupidae	<i>Upupa epops</i>	Common Hoopoe	NC	22	16	352

In Lebanon, illegal wild animal trade was surveyed by DAKDOUK (2009). He reported tens of thousands of animals being imported, exported or re-exported from Lebanon each year, including Chimpanzees, *Pan troglodytes* (CITES Appendix I) and CITES-listed reptiles. In May 2013, Lebanon officially ratified the CITES agreement.

Lebanon is considered rich in its fauna diversity where a total of 261 species of fish, 55 species of reptiles, 395 species of birds, and 61 species of mammals were recorded to date. Beirut is the capital and largest city of the Lebanese Republic and is considered of strategic importance to wildlife trafficking due to its location as a crossroad between the three continents of Asia, Africa and Europe and the gateway to the east. In addition,

the political problems, security situation and the delay in forcing CITES convention, ratified on 26 of May 2013, lead to uncontrolled illegal animal trade and smuggling over the Lebanese land (ABI SAID, personal communications).

Although no exact figure was produced to estimate the trade volume of wild animal species every year from Lebanon, notes on the illegal wild animals trade were provided by DAKDOUK (2009). In addition, it is estimated that around 40 locations in the country that keep exotic pets on private or public display from zoos to pet stores and even family homes, although trafficking of exotic pets is illegal in Lebanon (ABI SAID, personal communications). In addition, DAKDOUK (2009) highlighted the importance of the Spur-thighed Tortoise as a pet animal

in the Lebanese Market which requires further enforcement and monitoring. This paper reports on the findings of a recent study undertaken by authors at local markets in Beirut: It will shed the light on the magnitude of illegal trade in wild reptiles, birds and mammals.

Methodology

A total of 23 animal markets located at Airport road, Chiyah, Ghobeiri, Hadath, Chouwaifat, Ouzaii, Hamra, Ras al nabe', Barboor, and Sunday Market at Sin El fil in Beirut were surveyed. The visited shops included four importing shops, two distributor shops and 17 gross shops. Only 19 shops agreed to collaborate in the survey where they were visited once a month or at least eight times over the period between February and September 2014. During each visit, information related to species found in trade, number of individuals of each species was obtained. In addition, the vendors were asked about prices and specimens available and only these items found in sales were recorded. The origin of species was collected when available and photographs were taken when appropriate.

Results

Over the study course, 43 animal species (N=25,329 specimens) belonging to 23 families were recorded. Birds constituted the majority of species in trade with 39 species (98%, N=24935 specimens) followed by reptiles and mammals which consisted of two species each (< 1%, N=320 specimens and < 1%, N=76 specimens, respectively).

Birds species of the family Fringillidae constituted by far the most traded specimens in the animal market visited during the survey period (N=15124 specimens), while species belonging to family Accipitridae and Ramphastidae showed the least number of specimens in trade (single specimens for each). In addition, the Canary, *Serinus canaria* was the most traded species with a total of 8915 specimens followed by Goldfinch, *Carduelis carduelis* and Budgerigar, *Melopsittacus undulatus* with 6011 and 5444 specimens, respectively. The least frequently traded species with single specimen for each, were the Australian Parrot, *Alisterus scapularis*, Long Legged Buzzard, *Buteo rufinus*, Rose-ringed Parakeet, *Psittacula krameri*, Keel-billed Toucan, *Ramphastos sulfuratos*. Prices of birds ranged between \$1600 for the Macaw Parrot, *Ara ararauna*, and \$3 for three species which are the Common Linnet, *Carduelis cannabina*, Chaffinch, *Fringilla coelebs* and House Sparrow, *Passer domesticus* (Table 1). The majority of birds species recorded were included listed as least concern species based on the IUCN Red Lists, except the Syrian Serin, *Serinus syriacus* which is listed as a vulnerable species (Fig. 1).

In addition, results showed that 25 species of traded birds were not listed in CITES appendices (98%;

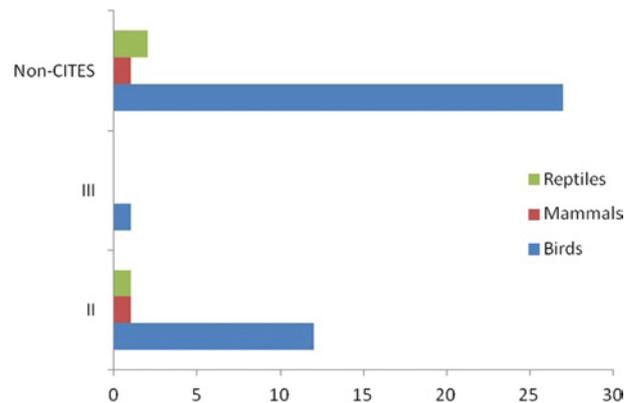


Fig. 1. Number of species according to their CITES status.

N=24455 specimens) while 14 species were included within CITES appendices (2%, N=480 specimens). CITES-listed species included 12 species (N=470 specimens) from appendix II and two species (N=10 specimens) from Appendix I. Love Bird, *Agapornis fischeri* was the most frequent (203 specimens) CITES listed-species in trade, followed by African Grey Parrot, *Psittacus erithacus*. The least frequent CITES listed-species recorded in trade with a single record for each were Long Legged Buzzard, *Buteo rufinus* and Rose-ringed Parakeet, *Psittacula krameri* (Table 1). Generally, prices for CITES-listed species were higher than for non-listed species, however, the Keel-billed Toucan; *Ramphastos sulfuratos* a non-CITES-listed species was traded with the second highest price (\$1500).

Reptiles were represented by two species belonging to two families: The Spur-thighed Tortoise, *Testudo graeca* (N=316 specimens) which is a vulnerable species based on the IUCN RedLists and the Water Snake, *Natrix tessellata* which is considered as a least concern species (N=4 specimens). Despite that the Spur-thighed Tortoise was listed on CITES appendix II, it was sold with a cheaper price of \$6 compared to \$14 for the water snake, a non-CITES listed species (Fig. 1).

No CITES-listed species were reported from the mammals in trade and only two species with a least concern status based on IUCN Red Lists belonging to two families, were recorded. These are the Vervet Monkey, *Chlorocebus pygerythrus* (N=17 specimens) and Persian Squirrel, *Sciurus anomalus* (N=57 specimens). Prices ranged between \$36 for the Persian Squirrel to \$393 for the Vervet Monkey.

According to the sellers, some local and migrant birds had been captured during the migration season in Lebanon such as Common Linnet and Goldfinch, despite that the later was smuggled in huge numbers from Syria. Other bird's species were bred in captivity such as Chukar, Canaries, and Budgerigar. Imported birds from different countries in Africa, Belgium, and Holland were also reported with notes on smuggling through Syria especially for the Parakeet family such as the Rosella Parrots, and the African Gray Parrots. Reptiles had either been trapped or collected in Lebanon such as the spur-thighed

tortoises and their captive breeding remains questionable. As for mammals, Persian squirrels are captured in the wild, while the Vervet monkeys were imported from various countries

Discussion

The huge number of specimens in trade reflects the high demand on wild animals, especially birds, due to the economic profits from this business. The estimated value of the traded animals in the visited shops during the study period reached US\$ 616034 where birds contributed to the majority of this value.

Contrary to countries in Europe, demand for reptiles and mammals is very limited in Lebanon, whereas the highest demand is focused on birds. This is in accordance with results obtained from neighboring countries such as Jordan, Saudi Arabia and the UAE, where birds constituted the majority of species found in trade (EID *et al.*, 2010, ALOUFI & EID, 2014, SOORAE *et al.*, 2008). This can be mainly attributed to the preferences of Lebanese to birds since birds are easier to handle than other groups of animals and require less space (personal communication). On the other hand, illegal trade in reptiles in Syria is on a higher level, where at least five species were found in trade in very high numbers of individuals (AMR *et al.*, 2007).

Generally, it was found that CITES- listed birds species were sold with higher prices if compared to the non CITES- listed species. These results were in accordance with COURCHAMP *et al.* (2006) who reported that CITES listed species are more expensive than non- CITES species. This was noted also from other regions such as Jordan (EID *et al.*, 2010) and Saudi Arabia (ALOUFI & EID, 2014). When the species is rare, its harvest cost is high and consequently the price will be high. Rarer species are harder to find and require greater hunting skills and more time, hence they become very costly and prestigious to own. In addition, banned trading in some species decreases its availability in the market. Thus, it must be smuggled and that is full of risks, and so consequently, the price will be high.

On the contrary, the Spur-thighed Tortoise, a CITES-listed species, was sold with a cheaper price compared to the water snake, a non CITES- listed species. This is attributed mainly to the large supply and low demand, as tortoise species can be raised in specialized farms, but they are not for local demand as most of them are exported (DAKDOUK, 2009). In contrast, the price of Spur-thighed tortoise in UAE was high (US\$ 14-190) since it is imported and there is no supply (SOORAE *et al.*, 2008).

DAKDOUK (2009) reported that an export ban for *T. graeca* was established in 2004, since trade in this species is popular in the pet trade in Lebanon, which explains the high number of the traded specimens of this species. Nevertheless, there is a high number of wild and captive specimens exported which raises concerns in Lebanon, especially because this species is considered

vulnerable according to IUCN, which means it is facing a high risk of extinction in the wild. Similarly, in Morocco, LAMBERT (1979) suggested that the net effect of collecting *T. graeca* might have reduced pre-trade population levels by as much as 86%.

Most of the visited shops (70%) are in poor conditions and most of these shops are not licensed. On the other hand, pet shops that are in excellent conditions (8%) are licensed, they expressed their approval for participating in the project since their business and their products are all legal. It is worth mentioning here that the status of the shops reveals if they are licensed or not.

Law enforcement and regulation of wildlife trade will have a positive impact on not only shop conditions, but also on animals well being, reduced degree of mortality in trade, reduced smuggling, and consequently a better conservation of wildlife in Lebanon.

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