REVIEW OF SIGNIFICANT TRADE

ANALYSIS OF TRADE TRENDS WITH NOTES ON THE CONSERVATION STATUS OF SELECTED SPECIES

ANNEX C: REPTILES AND AMPHIBIANS

Prepared for the

CITES Animals Committee, CITES Secretariat

by the

United Nations Environment Programme
World Conservation Monitoring Centre

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1. Callagur borneoensis

REPTILIA: **EMYDIDAE**

COMMON NAME(S): Painted Batagur (English); Painted Terrapin (English); Émyde peinte de Bornéo (French); Galápago pintado (French)

GLOBAL CONSERVATION STATUS CR - A1bcd (Asian Turtle Trade Working Group 2000a)

DISTRIBUTION AND LOCAL CONSERVATION STATUS

Brunei Darussalam ?:
Indonesia : Kalimantan, Sumatra: Locally wide spread to rare in Sumatra and Borneo (Kalimantan). Rapidly declining. (Honeggar, 1998).
Malaysia : Peninsular Malaysia, Sarawak: The following population estimates have been made for this species: 178 individuals in Terengganu, Malaysia in 1985, 585 in 1990 and 405 in 1995. 160 individuals at Paka-Kerteh, Terengganu, Malaysia in 1990 and 108 in 1995. (Asian Turtle Trade Working Group, 2000a). Individual nesting populations are in general extremely small. Seriously threatened with extinction (Honeggar, 1998). This species is widely distributed, but few large population remain. It is now rarely seen on many rivers where it was once common. On the east coast of Peninsular Malaysia the largest known breeding population is on the Setiu-Chalok and Paka river systems in Terengganu. On the west coast, the largest population exist in Sg. Linggi bordering Negeri Sembilan and Melaka. (WWF Malaysia 2001).
Thailand: Listed as Critically Endangered in Thailand (OEPP 1997). Only one population left (Honeggar, 1998).

By destroying nesting beaches, sand mining has become one of the most serious factors threatening the survival of tropical Asian turtles. Removal of sand from beaches along Asian rivers to supply construction projects, involving the use of large earth moving equipment, has accelerated over the past two decades. Many rivers are becoming devoid of nesting sites for such sand-nesting chelonians as *Batagur baska*, *Callagur borneoensis*, *Kachuga* spp., *Chitra indica*, and *Pelochelys cantorii*. Upriver dams exacerbate the problem by preventing replacement sand from coming downriver while increasing erosion by periodic and unseasonable elevation of water levels. The Kedah River in Malaysia is cited as a case history, exemplifying how the combined effects of sand mining and dams can destroy riverine chelonian populations. Establishment of refuges and zoning of sand mining activities are recommended actions. (Moll, 1997)

A recurring pattern is for collection and export operations to become established at a particular location, collecting turtles through an extensive network of trappers, hunters and middlemen. Collection efforts and capture and export volumes increase rapidly, reach a peak and then decline as accessible populations become depleted and collectors need to venture into new, more distant areas. There is also a corresponding decline in the average size of animals that are traded. Such 'boom-and-bust' cycles at particular locations were noted for species such as *Callagur borneoensis*, *Indotestudo forstenii*, *Manouria emys* and *Cuora amboinensis* in Indonesia. (Asian Turtle Trade Working Group, 2000b).

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INTERNATIONAL TRADE

Gross Exports of live *Callagur borneoensis*

Exporter	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Indonesia	0	0	0	0	0	2	0	245	150	150	18
Malaysia	0	0	0	0	0	0	47	274	7944	6465	428
Thailand	0	0	0	0	0	0	0	0	0	100	0

Export Quotas for *Callagur borneoensis* for years 1997-2002 as submitted to the CITES Secretariat

Country	Term	1997	1998	1999	2000	2001	2002
Indonesia	live			450	180	180	

COMMENT
Recommended for review. This species is a critically endangered and reported exports total over 15000 live specimens since 1997.

2. *Geochelone denticulata*

REPTILIA: **TESTUDINIDAE**

COMMON NAME(S): Brazilian Giant Tortoise (English); Forest Tortoise (English); Tortue de l'Amérique du Sud (French); Morrocoy; Motelo (Spanish)

GLOBAL CONSERVATION STATUS: VU - A1cd+2cd (Tortoise and Freshwater Turtle Specialist Group 1996).

DISTRIBUTION AND LOCAL CONSERVATION STATUS

Bolivia:
Brazil:
Colombia:
Dominica (introduced): Occurs here (Corke, 1992)
Ecuador: Occurs here (Miyata, 1982)
French Guiana:
Guyana:
Peru: Occurs here (Rodriguez et al., 1984)
Suriname:
Trinidad and Tobago:
Venezuela: Occurs here (Rodriguez et al., 1999)

G. denticulata is found throughout Amazonia and in Brazil, Bolivia, Ecuador, Guianas, Peru and Venezuela. Both species present some individual and geographic variation, but there are no recognized subspecies. It is generally restricted to higher sections of the lowlands but may be found up to 800 m. It is restricted to the moist tropical forest, often in the vicinity of water. The ecological and geographical ranges of both species overlap in some regions. 21/km^2 for *G. denticulata* in one area of the Roraima Territory in Brazil. Over one-third of the vertebrates rescued in the flooding of the Guri dam in Venezuela were tortoises. They are now far scarcer in most areas, no doubt due to frequent capture. Both campesinos and Indians capture these slow-moving easily caught tortoises wherever they find them. Sometimes they use dogs, but other, more destructive - and unfortunately ingrained - techniques involve burning dry-season vegetation to facilitate capture. They are in great demand in southern Venezuela for traditional Holy Week dishes, spurring capture for trade in January and February. The importance of this species in rural diets is spurring the exploitation of wild populations. As harvesting advances, it is now suspected that these slow-growing tortoises, requiring several years to reach sexual maturity and of low reproductive capacity, are gradually dwindling in numbers. (Ojasti 1996)

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INTERNATIONAL TRADE

Gross Exports of *Geochelone denticulata*

Exporter	Term	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Brazil	Live	0	0	0	2	0	0	0	0	0	0	0
Colombia	Live	0	0	0	1	0	0	0	0	0	0	0
Guyana	Live	751	199	0	266	470	451	177	674	530	467	407
Indonesia	Live	0	0	0	2	0	0	0	0	0	0	0
Netherlands Antilles	Live	0	0	26	0	0	0	0	0	0	0	0
Peru	Carapaces	0	0	0	0	0	0	0	0	0	0	10
Peru	Live	0	0	0	0	0	0	0	33	1	0	6
Peru	skins	0	0	0	0	0	0	0	0	0	0	10
Suriname	Live	116	237	660	630	505	589	560	455	378	365	415
Trinidad and Tobago	Live	0	0	0	0	0	12	0	0	0	0	0

Export Quotas for *Geochelone denticulata* for years 1997-2002 as submitted to the CITES Secretariat

Country	Term	1997	1998	1999	2000	2001	2002
Guyana	live	704	704	704	704	704	704
Suriname	live	760	692	692	692	692	703

COMMENT
Not recommended for review. Trade appears relatively stable and within quota limits set by the two main exporting countries.

3. Geochelone sulcata

REPTILIA: **TESTUDINIDAE**

COMMON NAME(S): African Spurred Tortoise (English); Grooved Tortoise (English); Tortue sillonnée (French); Tortuga con púas (Spanish)

GLOBAL CONSERVATION STATUS VU A1cd (Tortoise and Freshwater Turtle Specialist Group 1996).

DISTRIBUTION AND LOCAL CONSERVATION STATUS

Chad: The population has plunged because of the war in Chad. There are tortoises in the uninhabited regions near the border with Niger and to the east of Nguigmi (Brahimi, personal communication to Lambert). (CITES, 2000)
Egypt:
Eritrea: Presence in the north and west. One specimen was recently gathered near Asmara; also sighted at Barentu (Dewhurst, personal communication to Lambert). (CITES, 2000)
Ethiopia: Little data, but scarce Sahel environment. Specimens were recently seen 10 kilometres south of the entrance to the Parc National Awash (8° 55' N, 40° 6' E) (Blashford-Snell and Goll, personal communication to Lambert). (CITES, 2000)
Mali: There are several hundreds in the loop of the Niger and in Dogon country. Others have been observed near Mpoti and Gao. They are also found at Douentza, Madougou, Mondoro, Soum (mare) and Dounapen, along the border with Burkina Faso (Diakité, personal communication to Lambert). (CITES, 2000)
Mauritania: According to a recent survey by Arvy (1997), distribution is now limited to the south-western part of the country in the provinces of Assâba, Brakna, Gorgol, Guidimaka, Trarza and also in western Hodh (Lambert 1996). There is a good density of tortoises in the Parc du Diawling. (CITES, 2000)
Niger ?: The Sahel environment is reduced. There are reports of several tortoises. However, there is a good density in the Parc du W (Moore 1997), 6000 specimens according to recent reports by loggers in Niger (Diagne, personal communication). (CITES, 2000)
Nigeria: No recent information. Often reported as absent from Nigeria by authors. There is an unconfirmed report from a station near the Niger by Iverson (1992). (CITES, 2000)
Senegal: Occurs here Diagne, T. 1996. Etude et conservation de *Geochelone sulcata* au Sénégal. Pp. 110-111 in B. Devaux (ed.) Proceedings - International Congress of Chelonian Conservation. Gonfaron, France. Editions SOPTOM.

Somalia ?:
Sudan: There are probably well-established populations in western Sudan in the Kordofan (Gasperetti et al. 1993). This species was reported by Iverson (1992) near Wadi Halfa in the extreme northern part of Sudan near the border with Egypt, but there are no reports of sightings in the extreme southern part of the country. (CITES, 2000)

Many populations of *G. sulcata* are rapidly disappearing, especially in Mali, Chad, Niger, and Ethiopia. In Senegal there are still limited populations in the north and north-east, but there is a lot of overgrazing and desertification here too that is wiping this tortoise out. (Harrold, 2000).

From Mauritania and Senegal to Sudan, Eritrea and Ethiopia, this species is found in a band 500 kilometres wide between the isohyets of 200 and 800 mm; between 12° and 18° north latitude. The band descends to 4° north latitude in the Sudan and rises to 20° north latitude in Mali. The northern limit of its distribution is the Sahara Desert; the southern limit being less defined because this species is found in the Parc du W in Niger, where the climate is more humid. Its presence in Saudi Arabia and Yemen, where it was probably introduced, is not confirmed. (CITES, 2000)

According to recent estimates, the total possible population of this species is probably between 18,000 and 20,000 specimens, distributed as follows: Mauritania, 3000, of which 1000 in the Parc du Diawling; Senegal, 2000; Mali, 1000; Burkina Faso, 50; Niger, 6000, almost all of which are in the Parc du W; Chad, 700; Central African Republic, 2000; Sudan, 4000, perhaps more; Eritrea, 500 (Devaux et al.). The largest populations are in Mauritania, southwestern Niger in the Parc du W, Sudan and north of the Central African Republic. *Geochelone sulcata* is a good-luck charm. There are probably several thousand African spurred tortoises in captivity in the area of distribution of the species, especially in Senegal, both in private possession and in the possession of zoos. (CITES, 2000)

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INTERNATIONAL TRADE

Gross Exports of *Geochelone sulcata*

Exporter	Term	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Cameroon	live	0	0	0	184	25	0	0	0	0	0	0
Egypt	live	0	0	0	0	30	0	0	0	0	0	0
Ghana	live	0	0	110	880	671	10	117	10	0	10	100
Guinea	live	0	0	0	0	0	4	0	0	0	5	0
Indonesia	live	0	0	0	4	0	0	0	0	12	0	0
Mali	live	0	0	0	1973	1569	720	1003	524	214	0	200
Mozambique	live	0	0	0	0	0	0	50	0	0	0	0
Niger	live	0	0	38	0	32	0	0	1	0	0	0
Nigeria	live	0	0	0	0	1	0	0	0	0	0	0
Senegal	carapace	5	1	0	0	0	0	1	0	0	0	0
Senegal	live	23	20	0	6	2	0	2	0	0	0	0
South Africa	live	0	0	2	0	0	0	0	0	0	0	0
Sudan	live	597	74	418	602	561	0	5	92	12	0	0
Tanzania	shells	0	0	0	0	0	0	0	0	1	0	0
Togo	live	147	234	144	60	0	0	0	0	0	0	50
United Arab Emirates	live	12	0	100	0	0	0	0	0	0	0	2
Zambia	live	0	0	0	200	0	320	0	0	0	0	0

COMMENT
Not recommended for review. Trade in wild specimens has decreased in recent years and exports of captive-bred specimens from El Salvador have been increasing.

4. Indotestudo elongata

REPTILIA: **TESTUDINIDAE**

COMMON NAME(S): Elongated Tortoise (English); Pineapple Tortoise (English); Tortue à tête jaune (French)

GLOBAL CONSERVATION STATUS EN A1cd+2cd (Asian Turtle Working Group, 2000)

DISTRIBUTION AND LOCAL CONSERVATION STATUS

Bangladesh: rare and under continuing pressure from human exploitation (Das, 1989, as cited in Das, 1991) Also cited as common (Moll, 1989). (Turtle Survival Alliance, 2003)
Cambodia: Much of the trade through Vietnam comes from Cambodia, where *Indotestudo elongata* is still harvested in great numbers from the wild. (Turtle Survival Alliance, 2003)
China: Guangxi: Endangered (The China Red Data Book of Endangered Animals (Ermi, 1998). (Turtle Survival Alliance, 2003)
India: considered rare in the northcentral and northeastern parts of its range (Moll, 1989 and Das,1988 as cited in Das, 1991). Export prohibited (Thidaker and Sharma, 1985). (Turtle Survival Alliance, 2003)
Lao People's Democratic Republic:
Malaysia: Peninsular Malaysia: considered scarce, but no recent reports (Moll 1989). (Turtle Survival Alliance, 2003)
Myanmar : considered scarce, but no recent reports (Moll 1989). (Turtle Survival Alliance, 2003)
Nepal: apparently consumed locally in Chitwan area (Dinerstein et al, 1988, as cited in Das, 1991). Considered common in Sal forests (Moll, 1989). (Turtle Survival Alliance, 2003)
Thailand: considered scarce, but no recent reports (Moll 1989). (Turtle Survival Alliance, 2003)
Viet Nam: intensively harvested in Central Highlands and is rare (Platt, 1999). 3, One of the most common species in illegal trade. (Turtle Survival Alliance, 2003)

The species has a huge range in Asia and is found from Nepal to Malaysia. There has been no attempt to break this species down into area "types" though it must be kept in mind that as they are found over such a large range that the requirements may vary from tortoise to tortoise as to habitat preferences. The Elongated tortoise is commonly found in the Asian food markets and as a result of this is under dire pressures in its entire range. It is the most common tortoise shipped to the Chinese food markets from Vietnam. *Indotestudo elongata* is primarily a damp forest species though it can be found in dry areas as well. It is a crepuscular tortoise, becoming active in the twilight hours before dawn or after sunset. Its large eyes are well adapted to low light levels. (Senneke,2003)

"*Indotestudo elongata* is perhaps the most common trade species in Vietnam and it appears in most sizeable shipments to China. An abundance of this species at markets in Hong Kong was also described by Lau *et al.* (1995). Wenjun *et al.* (1996) observed *Indotestudo elongata* and *Manouria impressa* "in large quantities" at markets in Guangdong and Guangxi between 1990 and 1994. The species is nationally protected in Myanmar, Bangladesh, Cambodia, Vietnam and Thailand; China: capture permit needed" (CITES , 2000).

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INTERNATIONAL TRADE

Gross Exports of *Indotestudo elongata*

Exporter	Term	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Bangladesh	live (kg)	280000	721010	0	0	0	0	0	0	0	0	0
Cambodia	shells	0	0	0	0	0	0	0	0	1	0	0
China	live	0	0	0	300	1900	1340	650	400	0	4	0
Indonesia	live	0	150	50	0	0	0	227	29	0	0	2

Exporter	Term	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Laos	live (kg)	0	0	0	0	0	0	0	0	0	6000	0
Malaysia	live	928	3202	1244	469	552	760	981	852	530	550	600
Viet Nam	bodies	0	0	0	0	0	0	20	0	0	0	0
Viet Nam	live	0	0	0	0	0	150	2	0	0	0	0

Export Quotas for *Indotestudo elongata* for years 1997-2002 as submitted to the CITES Secretariat

Country	Term	1997	1998	1999	2000	2001	2002
Malaysia	live		1000	1000	500	500	
Malaysia	live (Note: applies to Peninsular Malaysia only)						500

COMMENT
Recommended for review. Reports from Malaysia suggest that the species is scarce, quotas may have been exceeded by a small amount, and status is unknown in Laos.

5. Indotestudo forstenii

REPTILIA: **TESTUDINIDAE**

COMMON NAME(S) Celebes Tortoise (English); Forsten's Tortoise (English); Tortue de Tranvancore (French); Tortue des Celèbes (French); Tortuga marrón de la India (Spanish)

GLOBAL CONSERVATION STATUS EN A1cd+2cd (Asian Turtle Working Group, 2000)
This assessment refers to the Sulawesi population only. The Indian population is threatened separately as I. travancorica. Indonesia has an annual export quota of 450 for the Sulawesi population (S. Platt, pers. comm.). Animals occur in substantial numbers in both the food and pet trade (Asian Turtle Trade Working Group, 2000).

DISTRIBUTION AND LOCAL CONSERVATION STATUS

This is a terrestrial species. The major threats are harvesting for food and for cultural/scientific/leisure activities. In both cases, regional/international trade is ongoing (Asian Turtle Trade Working Group, 2000).

India: Occurrence noted (Das, 1985)
Indonesia: *Sulawesi*: Occurrence noted (Plat *et al.* 2001)

"There is also a corresponding decline in the average size of animals that are traded. Such 'boom-and-bust' cycles at particular locations were noted for species such as *Callagur borneoensis, Indotestudo forstenii, Manouria emys* and *Cuora amboinensis* in Indonesia and *Morenia petersi, Geoclemys hamiltonii, Hardella thurjii* and *Indotestudo elongata* in Bangladesh." (Asian Turtle Trade Working Group 1999). There are potential difficulties Differentiating *Indotestudo forstenii* from *Indotestudo elongata* (Tabaka, 2003)

A status report notes that the status and distribution of the Travencore tortoise, *Indotestudo forstenii* based on a field survey conducted in the Western Ghats of Karnataka, Kerala, and Tamilnadu between 21 October and 30 December 1991, identified stronghold of the several causes for its decline. Paper also describes tortoise habitat morphometry utilization and conservative problems. (Bhupathy and Choudhury, 1995) "Significant range extensions were recorded for several endangered species such as *Aspideretes hurum, Chitra indica, Cyclemys dentata, Melanochelys tricarinata, Geoemyda silvatica,* and *Indotestudo forstenii*." (Choudhury, *et al.* 1997; Sharath, 1998).

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INTERNATIONAL TRADE

Gross Exports of *Indotestudo forstenii*

Exporter	Term	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Indonesia	Bodies	0	0	0	0	0	0	0	6	0	0	0
Indonesia	Carapace	0	0	0	0	0	0	0	3	0	0	0
Indonesia	Live	23	727	232	8	1172	1172	457	443	416	444	136

Export Quotas for *Indotestudo forstenii* for years 1997-2002 as submitted to the CITES Secretariat

Country	Term	1997	1998	1999	2000	2001	2002
Indonesia	live	900	475	450	450	450	400

COMMENT
Not recommended for review. Trade levels from Indonesia have stabalised since 1997 and have remained under quota

6. Manouria emys

REPTILIA: **TESTUDINIDAE**

COMMON NAME(S): Asian Giant Tortoise (English); Asian Tortoise (English); Tortue brune (French)

GLOBAL CONSERVATION STATUS EN A1cd+2cd (Asian Turtle Working Group, 2000)

DISTRIBUTION AND LOCAL CONSERVATION STATUS

Bangladesh:
Brunei Darussalam ?:
China:
India; *Assam***:** Occurrence noted **(**Uetz, 2001)
Indonesia: *Kalimantan, Sumatra***:** Occurrence noted **(**Samedi et al., 2000)
Malaysia: *Peninsular Malaysia, Sabah, Sarawak***:** Occurrence noted **(**Norsham et al., 2000; Lambert et al., 1994)
Myanmar:
Thailand:

The species ranges from northeastern India, south and east to southern China, Myanmar, Thailand, Indo-China, Malaysia, and the islands of Sumatra and Borneo. The species is restricted to tropical forests in the highlands (presumably because populations from the lowlands have already been eaten by humans or disappeared due to habitat loss), and although a true tortoise, spends a lot of time in water. Although largely herbivorous, insects and frogs are also reported as eaten. Unusual among turtles and tortoises is its nest-construction and nest-guarding behaviour. (Das and Ismail, 2002)

Much of the range of this chelonian is in upland parts of Asia in temperate, moist forest habitats that come under the influence of monsoon rains. During the warmer parts of the day these tortoises prefer to soak in pools or to remain in the shade, out of the sun's rays. During the 20th century these tortoises have been recorded from Bangladesh, India, Indonesia, Malaysia, Myanmar, and Thailand. Their status varies from country to country. Because of their heavy exploitation by humans, they are now a species of special concern. One bright note, as far as conservation, is that in parts of Malaysia they may occasionally be found in turtle temples. (McKeown, 1990)

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INTERNATIONAL TRADE

Gross Exports of live *Manouria emys*

Exporter	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Indonesia	65	741	221	4	563	861	480	391	430	407	245
Malaysia	37	226	227	103	174	153	219	48	240	189	164

Export Quotas for *Manouria emys* for years 1997-2002 as submitted to the CITES Secretariat

Country	Term	1997	1998	1999	2000	2001	2002
Indonesia	live	900	475	450	450	450	450
Malaysia	live		300	50	200	200	
	live (Note: applies to Peninsular Malaysia only)						500

COMMENT
Not recommended for review. Trade levels appear to be fairly stable since the late 1990s and quota limits do not appear to be exceeded.

7. Testudo horsfieldii

REPTILIA: **TESTUDINIDAE**

COMMON NAME(S): Afghan Tortoise (English); Central Asian Tortoise (English); Horsfield's Tortoise (English); Tortue des steppes (French); Tortue d'Horsfield (French); Tortuga terrestre afgana (Spanish)

GLOBAL CONSERVATION STATUS: VU A2d (Tortoise and Freshwater Turtle Specialist Group, 1996)

DISTRIBUTION AND LOCAL CONSERVATION STATUS

The range of the Russian tortoise extends from southeastern Russia southward through eastern Iran, northwest Pakistan and Afghanistan. It inhabits dry, barren localities such as rocky deserts and hillsides and sandy or loamy steppes, often at elevations of 5,000 feet (1,500 m) or higher. In these arid regions, the tortoise is frequently found near springs and brooks where grasses and other vegetation are relatively abundant. (Cohen, 1994)

Afghanistan: Occurrence noted (Leviton *et al.*, 1970).
Armenia:
Azerbaijan:
China: Occurrence noted (Zhao *et al.*, 1993).
Iran (Islamic Republic of): Occurrence noted (Anderson, 1979)
Kazakhstan: Occurrence noted (Brushko *et al.*, 1982)
Kyrgyzstan: Occurrence noted (Bannikov *et al.*, 1977)
Pakistan: Occurrence noted (Minton, 1966)
Russian Federation:
Tajikistan: Occurrence noted (Bannikov *et al.*, 1977)
Turkmenistan: Occurrence noted (Bannikov *et al.*, 1977)
Uzbekistan: Occurrence noted (Bannikov *et al.*, 1977)

In the former USSR this species occurs principally on sandy steppes, although loamy habitats have also been recorded. In Pakistan, Minton (1966) found *T. horsfieldi* exhibited a preference for grassy areas close to springs in generally rocky and hilly terrain. This tortoise is reported not to occur in coastal areas, preferring instead the mountains inland. In the former USSR the species is active for only 3 months of the year, usually March, April and May. From late May onwards activity sharply decreases and the tortoises spend most of their time hidden in their burrows. In the northern parts of its range, *T. horsfieldi* hibernates in winter deep within its burrow; in the southern parts of its range aestivation occurs in summer (Ernst and Barbour, 1989). In Pakistan, captive tortoises were observed to bury themselves from October to March and aestivation occurred from June to August (Roberts, 1975). This tortoise is also found at unusually extreme altitudes: Minton (1966) found them at between 1,600 and 2,300 m. A more typical altitude in the former soviet sector of their range would appear to be between 800m. and 1,600 m. (Highfield, 1992).

Despite the tortoise occurrence over the vast territory its population density in many places (sands, salines, stony plains and foothills) is low (0,2--5,1 specimens/ha). Its commercial resources are concentrated in the restricted territory making no more than 3% of the species range where its average abundance is 8,0 specimens/ha and higher. Since 1976 until 1983 there were captured 866,000, or average 108,250 specimens per year. Since 1984 until 1993 297,200 specimens were captured in the natural conditions, or average ca 30 thousands per year. The total size of controlled capture (1976--1993) formed ca 1,096,300 specimens or average ca 61 thousand specimens per year. The main commercial regions are Kerbulak plateau (massif) (77 E, 44 N) and Arys massif (68 30' E, 42 30' N). After the former USSR disintegration the centralized captures of the wild animals, in particular Central Asian tortoise were stopped. At present the conservation of its resources in Kazakhstan actually is not carried out. The explored commercial resources of Central Asian tortoise allow to estimate the present limit of its capture to be 20 thousand specimens annually. (Kubykin, 1999)

In **Kazakhstan**, the most commonly traded species are Marsh Frogs *Rana arvalis* and Horsfield's Tortoise. From 1976 to 1993, 3 356 500 Marsh Frogs, were reported captured and traded in Kazakhstan for terraria, food for other captive animals and laboratory use. From 1976 to 1993, 1 097 300 Horsfield's Tortoises were reported collected and traded in Kazakhstan. The period 1993-1995 was the most active trading period of tortoises between Central Asia, the USA and Japan. The tortoise population experienced a dramatic decline, most likely due to over harvesting which resulted in a decreased annual harvest from over 100 000 in the past, to the current 40 000 to 50 000. In 1993, the Russian CITES Management Authority issued permits to export 11 404 Horsfield's Tortoises from Kazakhstan to companies in Moscow and the Ukraine. Most tortoises were then exported to Spain (5400) and the Czech Republic (4000), followed by USA (1000), Japan (1000), and the Netherlands (4). In 1994, permits were issued for the export of 23 686 Horsfield's Tortoises originating in Kazakhstan to the companies in Moscow and the Ukraine. Most tortoises were re-exported. In 1995, the Moscow-based company received permits to re-export 12 350 Horsfield's Tortoises. (Traffic Europe, 1998)

In **Uzbekistan**, Horsfield's Tortoises destined for export to the West are collected within quotas. Demand for tortoises as pets in Russia, Ukraine and other CIS countries is met by illegal collectors. Large numbers of tortoises are smuggled out of the country, especially by trains but also by private cars. In 1993, the Russian CITES Management Authority processed export permits for 600 tortoises. Reptiles and amphibians are widely traded in Turkmenistan. (Traffic Europe, 1998)

In **Tadjikistan** one thousand Horsfield's Tortoises were exported from Tadjikistan to Sweden in 1996. (Traffic Europe, 1998)

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INTERNATIONAL TRADE

Gross Exports of live *Testudo horsfieldii*

Exporter	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Kazakhstan	0	0	0	0	0	0	0	0	35000	6000	0
Russian Fed.	0	0	11300	4198	3700	3411	3	2002	500	2001	3
former Soviet Union	3966	0	0	0	0	0	0	0	0	0	0
Ukraine	0	1000	675	4000	0	0	0	5000	4000	4572	0
Unknown	0	0	0	0	0	0	2000	0	0	0	0
Uzbekistan	0	0	0	0	0	0	26000	36100	26500	32700	15000

Export Quotas for *Testudo horsfieldii* for years 1997-2002 as submitted to the CITES Secretariat

Country	Term	1997	1998	1999	2000	2001	2002
Kazakhstan	live				39000	40000	
Russian Federation	as re-exports from Uzbekistan	20000	25000				
Russian Federation	as re-exports from Kazakhstan			20000			
Russian Federation	as re-exports from Tajikistan			15000			
Tajikistan	wild-taken					20000	
Uzbekistan			25000	35000			
Uzbekistan	live				35000		
Uzbekistan	live (wild-taken and ranched)					30000	

COMMENT
Not recommended for review. Trade appears to be within quotas.

8. Phelsuma comorensis

REPTILIA: **GEKKONIDAE**

COMMON NAME(S): Comoro Day Gecko (English); Gecko diurne des Comores (French); Phelsume des Comores (French); Geco diurno de las Comores (Spanish)

GLOBAL CONSERVATION STATUS -

DISTRIBUTION AND LOCAL CONSERVATION STATUS

The species is endemic to the **Comoros** (Kluge, 1991).

This species is only known from the island Grande Comore. It is found in higher areas (600 meters and upwards). *P. comorensis* is often found on a variety of pantropic vegetation. (Nationmaster.com 2003)

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INTERNATIONAL TRADE

Gross Exports of *Phelsuma comorensis*

Exporter	Term	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Comoros	live	0	0	0	0	0	0	0	0	4855	2410	994

COMMENT
Recommended for review. Recent trade from the Comoros, where its range is restricted, has been reported.

9. Phelsuma dubia

REPTILIA: **GEKKONIDAE**

COMMON NAME(S): Bright-eyed Day Gecko (English); Dull-green Day Gecko (English); Gecko diurne de Zanzibar (French); Gecko diurne sombre (French); Geco diurno de Zanzibar (Spanish)

GLOBAL CONSERVATION STATUS -

DISTRIBUTION AND LOCAL CONSERVATION STATUS
A widely distributed species occurring in the Comores, Mayotte, Madagascar, Mozambique and the United Republic of Tanzania. Little is known of the status of this species.

Comoros:
Kenya: Occurrence noted (Spawls *et al.* 2002)
Madagascar: Occurrence noted (Glaw *et al.*, 1994)
Mayotte:
Mozambique: Occurrence noted (Spawls *et al.* 2002)
Tanzania, United Republic of: (Spawls *et al.* 2002)

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INTERNATIONAL TRADE
Gross Exports of *Phelsuma dubia*

Exporter	Term	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Comoros	live	0	0	0	0	0	0	0	0	3030	5805	2375
Madagascar	bodies	0	7	0	4	6	0	0	1	1	0	0
Madagascar	live	663	1390	2262	4	1	0	0	0	6	0	0
Tanzania, United Republic of	live	100	109	0	200	374	1385	2976	2132	1854	1994	3225

Export Quotas for *Phelsum dubia* for years 1997-2002 as submitted to the CITES Secretariat

Country	Term	1997	1998	1999	2000	2001	2002
Tanzania, United Republic of	live	2000	2000	2000	2000	2000	2000

COMMENT
Recommended for review. Trade volumes have increased in recent years as a result of imports from Comoros and increased exports from the United Republic of Tanzania.

10. Phelsuma v-nigra

REPTILIA: **GEKKONIDAE**

COMMON NAME(S): Boettger's Day Gecko (English); Gecko diurne de Boettger (French); Phelsume de Boettger (French);

GLOBAL CONSERVATION STATUS -

DISTRIBUTION AND LOCAL CONSERVATION STATUS

Found in coastal regions of the Comores Islands (Grande Comore, Anjouan and Mohéli) and Mayotte. No data are available regarding status. The species may be affected by habitat destruction.

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INTERNATIONAL TRADE

Gross Exports of live *Phelsuma v-nigra*

Exporter	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Comoros	0	0	0	0	0	0	0	0	4295	5749	500

COMMENT

Recommended for review. The species has a very restricted range and trade started in 2000 with over 10000 exported so far.

***11. Uromastyx* spp.**

Uromastyx acanthinura
Uromastyx aegyptia
Uromastyx alfredschmidti
Uromastyx asmussi
Uromastyx benti
Uromastyx dispar
Uromastyx geyri
Uromastyx hardwickii
Uromastyx leptieni
Uromastyx loricata
Uromastyx occidentalis
Uromastyx ocellata
Uromastyx princeps
Uromastyx thomasi

REPTILIA: **AGAMIDAE**

COMMON NAME(S): Spiny-tailed lizards (English); Fouettes-queue (French); Lézards fouette-queue (French)

GLOBAL CONSERVATION STATUS -

DISTRIBUTION AND LOCAL CONSERVATION STATUS

There are approximately 13 species in the genus *Uromastyx*. These lizards are adapted to arid regions and are found from northwestern India throughout southwestern Asia and the Arabian Peninsula to the Sahara of Africa (Moody 1987). Members of this genus are referred to as dab lizards or spiny tailed lizards. There are six species (*U. aegypticus*, *U. ornatus*, *U. ocellatus*, *U. acanthinurus*, *U. hardwicki*, and *U. benti* which are occasionally available in the United States. The other seven species are seldom if ever imported. *Uromastyx aegypticus* is the largest member of the genus with individuals reaching 30 inches or more in total length and weighing several pounds. The other species are usually under 14 inches in total length. Coloration is variable between and within species. *Uromastyx aegypticus* and *Uromastyx hardwicki* are usually dark to light brown. *Uromastyx acanthinurus* can be yellow, green, bright orange or a combination of these colors. *Uromastyx ornatus* are sexually dimorphic with adult males being green or blue green with blotches of yellows and oranges. Females have more subtle yellows, browns, and some orange. (Knapp, 2004)

Behaviour differs between species and even individuals within the same species. Some, *Uromastyx acanthinurus* and *Uromastyx aegypticus*, can be very shy, often retreating to a hide spot when someone approaches the cage. Others, *Uromastyx ornatus*, will often be tame. Individuals differ in their behaviours and you can find exceptions to the above generalizations. Large numbers of *Uromastyx aegypticus* and *U. ornatus* have been imported into the country during the last few years. The U.S. Fish and Wildlife Service estimated that 7,000 members of the genus were brought in 1994. For unknown reasons the death rate for *Uromastyx ornatus* is rumoured to be as high as 80% during the first two months of captivity. *Uromastyx aegypticus* is hardier and with proper treatment adapts to captivity. *Uromastyx acanthinurus* have not been imported from Morocco for several years, however, a few animals occasionally come from Europe and a only two private breeders are known to occasionally produce captive born animals. There is probably less than 100 animals in the United States. This species adjusts well to captivity even if reproductive success is not common. (Knapp, 2004)

Currently, 16 species of *Uromastyx* are recognized, but the taxonomy of the genus has been somewhat confused in recent years, with subspecies being promoted and new species or subspecies being described. Several new species have recently been described such as *Uromastyx alfredschmidti* (Wilms and Böhme, 2001); *U. flavifasciata* and *U. occidentalis* (Mateo *et al*., 1998); *U. leptieni* (Wilms and Böhme, 2000). The distribution ranges of individual species of *Uromastyx* are shown in Table 1. These are based on information provided by the UNEP-WCMC (United Nations Environment Programme-World Conservation Monitoring Centre) database and JNCC (Joint Nature Conservation Committee) checklist for CITES species 2001. Although currently no evidence exists that any of these species is threatened as a whole, and none of these species are listed on IUCN's Red List, the scale of exploitation, including domestic utilisation is likely to lead to local depletions. Some of species are used domestically for food and medicine (Walls, 1996; Anon. 1999). (Knapp, 2004)

Table 1. Distribution of *Uromastyx* species (adapted from Knapp, 2004)

Scientific name	Distribution
*U. acanthinura***	Algeria, Libya, Morocco, Tunisia, Western Sahara?
*U. aegyptia***	Bahrain*, Egypt, Iran, Iraq*, Israel, Jordan, Kuwait, Oman*, Qatar, Saudi Arabia, Syria, United Arab Emirates
U. alfredschidti	Algeria, Libya
U. asmussi	Afghanistan, Iran, Pakistan
*U. benti***	Oman*, Saudi Arabia, Yemen
*U. dispar***	Algeria, Chad, Egypt, Mali, Mauritania, Sudan, Western Sahara
*U. geyri***	Algeria, Mali, Niger
*U. hardwickii***	Afghanistan, India, Pakistan
U. leptieni	Oman*, United Arab Emirates
U. loricata	Iran, Iraq*
U. occidentalis	Western Sahara
*U. ocellata***	Djibouti, Egypt, Eritrea, ? Ethiopia, Somalia, Sudan
U. princeps	Somalia
*U. thomasi***	Oman*, Saudi Arabia, Yemen

* Range States that are not Parties to CITES; **Species for which CITES trade data are available from UNEP-WCMC.
Source: UNEP-WCMC Species Database; TRAFFIC Europe, SRG meeting outcomes

In October 1991, the Egyptian government declared an export ban on *U. acanthinura, U. aegyptia, U. ocellata* and *U. ornata* from its country (CITES Notification No. 662 of 16 January 1992). Until 1995, Egypt was the biggest exporter of *Uromastyx* (and this despite an export
ban for all *Uromastyx* from Egypt that was established in 1991). In 1996, Egyptian exports plummeted and at the same time exports from Mali increased drastically. Since 1996 Mali has been the largest exporter (Knapp, 2004)

Egypt: In October 1991, the Egyptian government declared an export ban on *U. acanthinura*, *U. aegyptia*, *U.ocellata* and *U. ornata* (CITES Notification No. 662 of 16 January 1992). According to the UNEP-WCMC database and JNCC Checklist, Egypt is listed as a range State for only two of these species: *U. aegyptia* and *U. ocellata*; while *U. ornata* is likely to be a synonym *of U. ocellata* and *U. acanthinura* is apparently not reported as occurring in Egypt. Egypt has not submitted annual reports for seven years in the study period (1986-1991). Based on Egyptian export records, the self-declared export ban adopted in late 1991 for *U. acanthinura*, *U. aegyptia* and *U. ocellata* would appear to have been quite successfully implemented; as from 1991 to 1998 Egypt reported virtually no exports of these species. However, looking at importing countries' reports, a very different picture appears ,with hundreds or thousands of specimens of all three species being reportedly imported from Egypt, particularly from 1993 to 1996. Discrepancies between import and export records are common, but in this case the differences are enormous and strongly suggest that animals are being exported in large quantities from Egypt despite the country's self-declared export ban (October 1991, notified to CITES Parties in January 1992). (Knapp, 2004)

Mali: Mali is currently the largest exporter of *Uromastyx* worldwide, however the exports of *Uromastyx* from Mali only started to be reported in 1995. In total Mali, reported the exports of three *Uromastyx* species: *U. acanthinura, U. dispar and U. geyri* and is at the same time the largest exporter for these three species. Mali has been exporting between 13,500 and 26,700 specimens of *U. dispar* per year for the past four years, but it has not yet established an export quota for this species. However, Mali has established an annual export quota of 32,000 specimens of *U. geyri* for 2003. Given that *U. geyri* is Mali's least exported species, with the highest exports not exceeding 3,000 specimens a year, the basis for the quota for this species and the lack of a quota for *U. dispar* seems questionable. In addition, *U. geyri* is restricted to a small area of Mali, in which the estimated total population size is about 7,500 (Joger, pers. comm. to TRAFFIC Europe, 2003). Consequently, the annual export quota of 32,000 specimens exceeds the estimated total population size of this species by more than four fold. *U. maliensis* is not listed in the UNEP-WCMC database nor in the JNCC checklist and is considered by some to be a sub-species of *U. dispar* (Kohlmeyer, 2002). Consequently, no trade in *U.*

maliensis has been reported in the CITES trade database, although some Parties are still including the taxon in their annual reports, such as the USA that declares imports of *U. maliensis* based on information appearing on export permits (TRAFFIC North America, *in litt*. to TRAFFIC Europe, 11 December 2003). (Knapp, 2004)

Ethiopia: Ethiopia has established an annual export quota of 3600 specimens of *U. ocellata* since 2000. However, given the level of exports of this species from Ethiopia the quota does not seem justified, because Ethiopia has only ever exported 46 specimens of *U. ocellata* according to CITES trade data. As there are no data on population sizes in Ethiopia, it is difficult to assess whether exporting 3,600 specimens a year would be detrimental to the population or not. However, following an enquiry by TRAFFIC Europe into the basis for this quota, the Ethiopian Ministry of Agriculture Wildlife Conservation Organization (*in litt.* to TRAFFIC Europe, 2003) informed TRAFFIC Europe that a population survey for *U. ocellata* is planned and that export quotas will be adjusted based on the results of this survey. The SRG of the EU established in March 2001 a negative opinion on the import of *U. ocellata* from Ethiopia based on the grounds that Ethiopia is not a range State. The basis for this assumption is not known, however the information provided by Ethiopia to TRAFFIC Europe and the fact that Ethiopia does establish an export quota for this species since 2000 do suggest that Ethiopia considers itself as a range State for *U. ocellata*. (Knapp, 2004)

Sudan: Sudan has exported three species of *Uromastyx: U. acanthinura, U. aegyptia* and *U. ocellata*, however its total exports are strongly dominated by *U. ocellata*. In March 2003, the EU has suspended imports of wild specimens of *U. acanthinura* from Sudan according to Article 4.6(b) of Council Regulation 338/97. Exports of *U. acanthinura* were only reported in 1996, 1998, 1999 and 2001 and in total accounted to 469 specimens. (Knapp, 2004)

Seizures

Overall, based on data reported by CITES authorities in their annual reports, the number of specimens reported in seizures and confiscation –only 2205 specimens of *Uromastyx* from 1991 to 2001, appears relatively low in comparison with the volume of specimens reported in legal trade (more than 200,000 during the same period). The level of reported seizures and confiscation fluctuates, showing neither an increase nor a decrease over time. Such trends could reflect alternated increases and decreases of illegal activities, but they could also be caused by changes in enforcement efforts and control methods used by customs and police, which are not readily measurable. Of the total 2205 specimens of *Uromastyx* reported seized from 1991 to 2001, 60% were seized live and 39% as dead bodies. The ratio of live specimens to dead specimens was substantially higher for the reported seizures than for specimens reported in legal trade. This could be due to higher mortality rates in illegal shipments. A similar conclusion was drawn in a study of mortality rates in wildlife trade commissioned by the German CITES Scientific Authority, which found that mortality rates are higher for species that are not shipped in accordance with the IATA regulations (Altherr and Freyer, 2001). (Knapp, 2004)

Over 11 years (1991 to 2001), *U. aegyptia* is the species that was seized in the largest quantities and Egypt the country from where most specimens were reported as seizures or confiscation by importing Parties. Of the 1180 specimens exported by Egypt and seized, 79% were *U. aegyptia* and of the 1194 reported seized specimens of *U. aegyptia*, 78% came from Egypt. However, these high records of illegal trade in spiny-tailed or Dabb lizards from Egypt are probably the positive consequence of the export ban adopted by Egypt for three species of *Uromastyx*, in late 1991. This measure concerns in particular *U. aegyptia*, and is probably the main reason for the high rate of seizures for all three species, which are at the top of the list of *Uromastyx* species reported to be seized by CITES Parties. Therefore, *Uromastyx* populations originating from range States other than Egypt, e.g. Mali and Sudan, that do not appear in reported seizures, could in fact be more affected by harvest and exports, due to higher level of permitted trade and the absence of adequate restrictions adopted by the government in charge. The presence on markets of certain products, such as a traditional medicinal oil used by the Muslim community in Malaysia (TRAFFIC Southeast Asia, *in litt*. to TRAFFIC Europe, 15 December 2003), that are advertised as containing derivatives of *Uromastyx* (Dabb lizard) suggest that these species are imported, although neither official trade nor seizures are reported in the CITES database. The latter suggests that, although probably not as significant as the EU and US pet trade, spiny-tailed lizards used for medicinal purposes are illegally imported into Southeast Asia. (Knapp, 2004)

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INTERNATIONAL TRADE

Gross Exports of *Uromastyx* spp.

Exporter	Term	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Uromastyx spp.												
Benin	live	0	0	0	0	0	0	0	0	600	0	0
Egypt	bodies	0	2	0	0	0	0	0	0	0	0	0
Egypt	live	0	127	1408	2810	198	0	294	0	0	0	0
Ghana	live	0	0	0	0	0	0	100	24	0	0	0
Madagascar	live	0	0	0	0	0	32	0	0	0	0	0
Mali	live	0	0	0	0	50	4714	4323	4453	3250	6407	200
Morocco	live	0	0	0	0	100	0	0	0	0	0	0
Sudan	live	0	0	0	302	0	0	0	0	0	0	0
Yemen	live	0	0	0	0	0	601	0	0	0	0	0
Uromastyx acanthinura												
Egypt	live	140	150	622	16	0	0	0	0	0	0	0
Guinea	live	0	0	0	0	0	30	0	0	0	0	0
Mali	live	0	0	0	1000	9475	7914	1692	300	0	1075	0
Mauritania	bodies	0	0	0	0	0	0	0	0	3	0	0
Mauritania	live	0	0	0	0	0	0	0	0	7	0	0
Morocco	bodies	0	0	15	0	0	0	0	0	0	0	0
Morocco	live	9	30	15	20	0	0	0	3	53	0	0
Niger	live	0	0	0	0	0	0	0	0	0	308	0
Sudan	live	0	0	0	0	150	0	200	69	0	50	500
Uromastyx aegyptius												
Egypt	bodies	0	6	0	0	0	0	0	0	0	0	0
Egypt	live	466	411	3968	8855	590	0	379	250	0	0	0
Ghana	live	0	0	0	0	0	0	0	10	0	0	0
Iran	live	0	0	0	0	0	0	1	0	0	0	0
Lebanon	live	0	0	0	20	0	0	0	0	0	0	0
Saudi Arabia	live	50	30	0	0	0	0	19	0	0	6	0
Sudan	live	0	0	0	0	0	0	0	0	0	0	500
Syria	bodies	0	0	0	0	0	0	0	0	1	0	0
United Arab Em.	live	0	0	0	0	0	1300	1550	715	905	608	0
Uromastyx asmussi												
Iran	live	0	0	0	0	0	0	0	0	0	0	3
Uromastyx benti												
Oman	live	0	0	0	0	0	0	8	0	0	0	0
Yemen	live	786	295	0	0	1686	566	0	1500	500	1700	700
Uromastyx dispar												
Ghana	live	0	0	0	0	0	10	0	0	0	0	173
Mali	live	0	0	0	0	2433	967	18012	13578	15303	26955	19366
Zambia	live	0	0	0	0	0	100	0	0	0	0	0
Uromastyx geyri												
Benin	live	0	0	0	0	0	0	0	0	0	850	1235
Ghana	live	0	0	0	0	0	0	0	0	0	0	590
Mali	live	0	0	0	0	2400	1566	0	0	200	3000	532
Niger	live	0	0	0	0	0	0	0	0	0	0	800
Zambia	live	0	0	0	0	0	20	0	0	0	0	0
Uromastyx hardwickii												
Ukraine	live	0	0	0	0	0	0	0	0	250	100	0
United Arab Em.	live	0	0	200	0	0	0	0	0	0	0	0

Exporter	Term	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Uromastyx ocellatus												
Egypt	live	299	100	5781	5406	0	0	0	0	0	0	0
Ethiopia	live	0	0	0	0	0	0	0	0	0	67	172
Lebanon	live	0	0	0	20	39	0	0	0	0	0	0
Sudan	live	0	0	193	638	718	0	1291	1969	2075	1102	1818
Yemen	live	0	0	0	0	0	491	0	397	0	0	0
Uromastyx thomasi												
Oman	live	0	0	0	0	0	0	16	0	0	0	0

Export Quotas for *Uromastyx geyri* for years 1997-2002 as submitted to the CITES Secretariat

Country	Term	1997	1998	1999	2000	2001	2002
Mali	live					32000	32000

COMMENT
Genus selected for review as there has been a general increase in trade across the genus

12. Bradypodion xenorhinum

REPTILIA: **CHAMAELEONIDAE**

COMMON NAME(S): Single Welded-horn Chameleon (English); Strange-horned Chameleon (English); Caméléon de Rüppell (French)

GLOBAL CONSERVATION STATUS -

DISTRIBUTION AND LOCAL CONSERVATION STATUS

Found in **Uganda** and **Democratic Republic of Congo** (Klaver *et al.*, 1997). *B. xenorhinum* is endemic to the montane rainforests of the Ruwenzori Mountains of western **Uganda** and eastern **Democratic Republic of Congo** (Pickering, 2003)

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Pickering, D. 2003. Bradypodion xenorhinum In: Chamowners Web, http://www.adcham.com/html/taxonomy/species/bxenorhinum.html Downloaded on 23 January 2004

INTERNATIONAL TRADE

Gross Exports of live *Bradypodion xenorhinum*

Exporter	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Democratic Republic of Congo	0	0	100	0	0	0	0	0	0	0	0
Uganda	0	0	0	0	0	0	0	0	294	1201	225

COMMENT
Recommended for review. Uganda began exporting the species in recent years and the species appears to have a restricted range.

13. Chamaeleo bitaeniatus

REPTILIA: **CHAMAELEONIDAE**

COMMON NAME(S): Montane Chameleon (English); Side-striped Chameleon (English); Caméléon à deux bandes (French); Camaleón de dos bandas (Spanish)

GLOBAL CONSERVATION STATUS -

DISTRIBUTION AND LOCAL CONSERVATION STATUS

Widely and abundantly distributed throughout east Africa including Ethiopia, Kenya, Somalia, southern Sudan, northern Tanzania, Uganda, and northeastern Congo (Zaire). *C. bitaeniatus* prefers humid regions up to 3,000 m elevation. (Pickering, 2003)

Democratic Republic of the Congo: Occurrence noted (Klaver *et al.*, 1997)
Ethiopia: Occurrence noted (Klaver *et al.*, 1997)
Kenya: Occurrence noted (Klaver *et al.*, 1997)
Somalia: Occurrence noted (Klaver *et al.*, 1997)
Sudan: Occurrence noted (Klaver *et al.*, 1997)
Tanzania, United Republic of: Occurrence noted (Klaver *et al.*, 1997)
Uganda: Occurrence noted (Klaver *et al.*, 1997)

Chamaeleo bitaeniatus is found throughout Kenya, northern Tanzania, eastern Uganda, Ethiopian central Highlands and Somalia (Rand 1963). Its range in Ethiopia and Somalia however seems sketchy and somewhat vague, Bohme and Klaver (1980) also place it in Sudan at the Imatong Mountains where they found it living sympatrically with *C. ellioti* and *C. kinetensis*. Rand (1963) states that it is a species from open plains and valleys to lowland mountain slopes up to 7000'. He also goes on to state that it can be found on the plains north of Mount Kenya, the plains of Guaso Nyira (Kedong Valley, Kenya) and further north to the plains of Addis Ababa in Ethiopia. In addition Rand (1971) places it in the Nguru Mountains, Tanzania and also the lower slopes of Kilimanjaro (Rand 1963) but again no altitude or specific data is given and can only be summised. I myself have received specimens collected from the latter locality along with specimens of *C. rudis* sternfeldi but again no specific collection data was available. All the specimens examined during this study support this and suggest that *bitaeniatus* is indeed a low montane species that does not exceed 7000' in altitude. However, its range and ceiling below this seems sketchy and is not stated in the literature, for example, its apparent range in lowland Ethiopia and Somalia is not listed. Above 7000' it is replaced by both *C. hoehnelii* and *C. schubotzi* on Mount Kenya. Rand (1963) states that bitaeniatus and the former species occur in the same general area and have been collected at the same locality (Loita Plains, Mau Escarpment, Lukenya, Lukenya Hills, Kijabe, Aberdare range). However, it seems that in the places where they are collected together bitaeniatus is at its maximum ceiling of 7000' and that this also represents the lowest altitude at which *hoehnelli* maybe found. Hence this altitude represents a boundary zone between the two species. The altitudinal relationship between *bitaeniatus* and *schubotzi* remains unknown. (Pilley 2000)

REFERENCES

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INTERNATIONAL TRADE

Gross Exports of *Chamaeleo bitaeniatus*

Exporter	Term	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Ethiopia	live	0	0	0	0	0	0	0	0	0	150	0
Guinea	live	0	0	0	0	0	0	0	15	0	0	0
Madagascar	live	0	0	0	0	0	0	19	0	0	0	0
Tanzania	bodies	0	0	0	0	0	0	0	0	0	10	3
Tanzania	live	20	308	559	154	379	970	1920	1478	1210	1003	1254
Uganda	live	0	0	0	0	0	0	0	0	178	2089	640

Export Quotas for *Chamaeleo bitaeniatus* for years 1997-2002 as submitted to the CITES Secretariat

Country	Term	1997	1998	1999	2000	2001	2002
Ethiopia	live					1000	1000
Tanzania, United Republic of	wild-taken	1000	1000	1000	1000	1000	1000

COMMENT
Recommended for review. It appears that the United Republic of Tanzania have exceeded their quotas for several of the years between 1998 and 2002, and Uganda has begun exporting the species.

14. Chamaeleo calyptratus

REPTILIA: **CHAMAELEONIDAE**

COMMON NAME(S): Veiled Chameleon (English); Caméléon casqué (French)

GLOBAL CONSERVATION STATUS -

DISTRIBUTION AND LOCAL CONSERVATION STATUS

Indigenous to the southwestern coastal regions of **Saudi Arabia** and western **Yemen**, the veiled chameleon occupies the wadis and agricultural lands of this otherwise arid region. The nominate form, *C. calyptratus calyptratus* is found in the more southern reaches of the distribution (Yemen and southwestern Saudi Arabia) while *C. calyptratus calcarifer* is found in the more northern part of the species' range (western Saudi Arabia). Recent reports also indicate one or more feral populations of *C. c. calyptratus on* Oahu (G. Homatas, pers. comm.) and Maui. Unlike the feral populations of *C. jacksonii* in Hawaii, *C. calyptratus* is large enough to consume fledgling birds, making them the greater ecological threat to the native fauna. Veiled chameleons are a hardy and prolific species that is relatively easy to breed. (Horgan and Pollock, 2003)

Veiled chameleons are arboreal lizards, meaning they prefer to live high up in trees or lower near the ground in bushes and shrubs. They can live in dry areas and are found on plateaux of mountainous regions, forests and valleys of southern Saudi Arabia and Yemen. They are one of the few species of chameleons that can tolerate wide temperate. (Jones, 2000)

REFERENCES
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<http://www.adcham.com/html/taxonomy/species/chcalyptratus.html> Downloaded on 23 January 2004

INTERNATIONAL TRADE

Gross Exports of live *Chamaeleo calyptratus*

Exporter	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Yemen	402	700	0	510	14	93	0	2749	700	3990	1240

COMMENT
Not recommended for review. Although trade shows a marked increase in trade from the Yemen between 1999 and 2001, the bulk of the trade is in animals bred in captivity in the Czech Republic, Slovakia, El Salvador and Ukraine.

15. Chamaeleo cristatus

REPTILIA: **CHAMAELEONIDAE**

COMMON NAME(S): Crested Chameleon (English); Caméléon crêté (French); Camaleón crestado (Spanish)

GLOBAL CONSERVATION STATUS -

DISTRIBUTION AND LOCAL CONSERVATION STATUS

Cameroon: Occurrence noted (Klaver *et al.*, 1997)
Central African Republic: Occurrence noted (Klaver *et al.*, 1997)
Congo: Occurrence noted (Klaver *et al.*, 1997)
Equatorial Guinea: ***Equatorial Guinea, Bioko*:**
Gabon: Occurrence noted (Klaver *et al.*, 1997)
Ghana ?: May occur (Klaver *et al.*, 1997)
Nigeria: Well known to occur in south–eastern Nigeria, this species was captured probably around Oban (Cross River State) by Talbot (1912), and much more recently both east (at Osomba, see Reid, 1986), and west (at Eket, see AKANI et al ., 1999) of Cross River. Original records of this study also indicate that it is also found in the western portion of the Nigerian forest zone (i.e. at Oredo, western axis of the Niger Delta). (Akani, Ogbalu and Luiselli, 2001)
Togo ?: May occur (Klaver *et al.*, 1997)

Logging in an area of rainforest in Nigeria did not substantially reduce the abundance of chameleons, but had dramatic effects on the specific diversity. In fact, three of the four species became extinct after the changes on the initial habitat (i.e. *C. owenii*, *C. cristatus*, and *R. spectrum*), while one substantially increased its abundance (i.e. C. gracilis). Altitude is likely not an important factor in the distribution of C. cristatus, which was in fact observed both in lowland moist forests and in hilly–montane sites. However, micro–habitat characteristics seem to be important, as both our observations and those of Wild (1994) indicate a strong preference for specific micro–habitats (low, thick, flowering bushes in our case, and "the shrub layer in primary forest" in Wild's case), and thus a restricted habitat selection. Accordingly, *C. owenii*, *C. cristatus*, and *R. spectrum* may be dramatically affected by habitat loss and forest fragmentation. (Akani, Ogbalu and Luiselli, 2001)

REFERENCES

Akani G. C., Ogbalu O. K. and Luiselli, L. 2001. Life–history and ecological distribution of chameleons (Reptilia, Chamaeleonidae) from the rain forests of Nigeria: conservation implications Animal Biodiversity and Conservation vol 24 (2)
Klaver, C. J. J. and Böhme, W. 1997. Chamaeleonidae. *Das Tierreich*, Number 112

INTERNATIONAL TRADE

Gross Exports of *Chamaeleo cristatus*

Exporter	Term	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Cameroon	Bodies	0	0	0	0	0	0	3	0	1	0	0
Cameroon	Live	20	30	405	229	442	633	619	1117	484	732	339
Equitorial Guinea	Live	0	0	0	0	0	0	420	0	30	325	383
Madagascar	Live	0	0	25	0	0	0	6	0	0	0	0
Unknown	Live	0	0	0	0	0	0	0	0	150	0	0

COMMENT
Not recommended for review. Trade appears to be fairly stable.

16. Chamaeleo hoehnelii

REPTILIA: **CHAMAELEONIDAE**

COMMON NAME(S): Helmeted Chameleon (English); High-casqued Chameleon (English); Caméléon à casque élevé (French); Camaleón de casco (Spanish)

GLOBAL CONSERVATION STATUS -

DISTRIBUTION AND LOCAL CONSERVATION STATUS

Endemic to **Kenya** and eastern **Uganda** where it appears to be abundant in the humid, high mountain regions. Night time temperatures frequently drop to around freezing. (James, 2003). *C. h. hoehnelii* is found in *Kenya* above 2000 meters while *C. h. altaeelgonis* is found on Mount Elgon above 3000 meters in **Uganda** (Chameleon care and information centre, 2000).

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INTERNATIONAL TRADE

Gross Exports of *Chamaeleo hoehnelii*

Exporter	Term	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Kenya	Bodies	0	0	0	1	0	0	0	0	0	0	0
Kenya	Live	0	0	0	3	72	0	0	0	0	0	0
Uganda	Live	0	0	0	0	0	0	0	0	229	1749	710
United Republic of Tanzania	live	0	120	25	37	0	0	0	0	0	0	0

COMMENT

Recommended for review. The species has a restricted range in the main exporting country, Uganda, and there have been 2688 exported from Uganda since 2000.

17. Furcifer cephalolepis

REPTILIA: **CHAMAELEONIDAE**

COMMON NAME(S): Comoro Islands Chameleon (English); Caméléon des Comores (French)

GLOBAL CONSERVATION STATUS -

DISTRIBUTION AND LOCAL CONSERVATION STATUS

Endemic to **Comoros (Grand Comoro Island)** (Klaver *et al.*, 1997). This exquisite little chameleon is locally abundant but restricted to the **Grand Comoro Island** (not Mayotte) in the northern part of the Mozambique Channel that separates Mozambique from Madagascar. It inhabits the humid, tropical coastal regions. (James and Pollak, 2003)

REFERENCES

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INTERNATIONAL TRADE

Gross Exports of live *Furcifer cephalolepis*

Exporter	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Comoros	0	0	0	0	0	0	0	0	2471	3510	2047

COMMENT
Recommended for review. The species has a very restricted range and trade started in 2000 with over 8000 reported as exports in three years.

18. Cordylus vittifer

REPTILIA: **CORDYLIDAE**

COMMON NAME(S): Reichenow's Spiny-tailed Lizard (English); Transvaal Girdled Lizard (English); Cordyle de Reichenow (French); Lézard à queue épineuse de Reichenow (French)

GLOBAL CONSERVATION STATUS -

DISTRIBUTION AND LOCAL CONSERVATION STATUS

Angloa: Occurrence noted in south of Angola (Uetz *et al.*, 2001)
Botswana: Occurrence noted (Auerbach, 1987)
Mozambique:
South Africa: Occurrence noted (Branch, 1988)
Swaziland: Occurrence noted (Boycott, 1992)

"One of these is the medium-sized (18 cm total length)Transvaal Girdled *Lizard (Cordylus vittifer*), so-named because a large part of its total distribution range falls within the borders of the former Transvaal province. It also occurs in the northern half of the Free State and is widespread in KwaZulu-Natal, with a few records in south-eastern Botswana, Swaziland and southern Mozambique (Visser 1984, Branch 1998). In the Free State this species may be confused only with the similar looking Cape Girdled Lizard (*C. cordylus*), but the latter occurs only in the south-eastern part of the province (De Waal 1978)." (Bates 2002)

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INTERNATIONAL TRADE

Gross Exports of *Cordylus vittifer*

Exporter	Term	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Mozambique	live	0	0	0	600	0	0	0	0	0	1000	1000
South Africa	bodies	3	0	3	0	0	0	0	0	0	0	0
South Africa	live	0	4	0	0	0	0	0	0	0	0	0

Export Quotas for *Cordylus vittifer* for years 1997-2002 as submitted to the CITES Secretariat

Country	Term	1997	1998	1999	2000	2001	2002
Mozambique	live	1000	1000	1000	1000	1000	1000

COMMENT
Not recommended for review. Exports from Mozambique are within quota. Initial look at the data suggested Mozambique was over quota for 2002 (1599 reported) however further investigation revealed this was due to a year-end reporting issue.