Uromastyx acanthinura Bell, 1825

FAMILY: Agamidae

COMMON NAMES: Bell's Dabb Lizard, Black Spiny-tailed Lizard, Dabb's Mastigure (English); Dob, Fouette-queue Epineux (French); Lagarto de Cola Espinosa Común (Spanish).

GLOBAL CONSERVATION STATUS: Accepted for inclusion in the 2006 IUCN Red List of Threatened Species (IUCNa, *in prep.*) as Near Threatened. Listing is based on a significant decline due to unsustainable harvest for food, medicine and the international pet trade, and because its habitat is being degraded, making the species close to qualifying for Vulnerable under Criteria A2cd (IUCNb, *in prep*.).

SIGNIFICANT TRADE REVIEW FOR: Algeria, Libyan Arab Jamahiriya (LAJ)

Range States selected for review

Range State	Exports* (1994-2003)	Urgent, possible or least concern	Comments
Algeria	0	Least concern	Small quantities (total 92 specimens) reported by Spain as imported from Algeria, country of origin recorded as unknown
Libyan Arab Jamahiriya	20	Least concern	Minimal reported trade.

*Excluding re-exports.

SUMMARY

Uromastyx acanthinura, often known as the North African Spiny-tailed Lizard, is a medium–sized lizard occurring in desert habitats of north-western Africa, with records from the northern part of western Libyan Arab Jamahiriya, Tunisia, the northern half of Algeria, Morocco and the northern part of Western Sahara. All species of *Uromastyx* were listed in CITES Appendix II in 1977.

Uromastyx species are traded internationally for the pet trade. The level of trade is variable between the species. For many years *U. acanthinura* was the dominant *Uromastyx* species in trade. The USA has been the main reported importer of *U. acanthinura*, with considerable numbers also going to Europe and Japan. Trade in the species over the period 1994 –2003 from Algeria and Libyan Arab Jamahiriya, the two main source countries for the species selected for the present review, has been insignificant. The two main exporters were Mali and Sudan, neither of which are considered to be range States for this species, although both exporting and importing countries have recorded specimens as *U. acanthinura* originating from these countries. It seems more probable that this trade involves specimens of other *Uromastyx* species in the *U. acanthinura* complex native to the countries concerned. Following Wilms and Böhme (2000), these are *U. dispar, U. geyri* and *U. alfredschmidti*, the first two of which have been considered by some authorities as forms of *U. acanthinura* and are therefore likely to be classified as such by exporting and importing Parties. Both Mali and Sudan have been selected as States for review of trade in other *Uromastyx* species (*U. dispar* in both Mali and Sudan, *U. geyri* in Mali and *U. ocellata* in Sudan).

An assessment undertaken within the framework of the IUCN Global Reptile Assessment indicates that the species is affected by collection for subsistence use for food and for subsistence and domestic trade for medicine, as well as by collection for export for the pet trade. The draft assessment also indicates that the species is affected by habitat loss, although most other authorities note that the desert habitat of this and other *Uromastyx* species is generally not suitable for extensive conversion to agriculture. However, livestock grazing is likely to affect food availability for this species through direct competition. No population data were available for exporting countries and there seems to be no systematic population monitoring in place to determine non-detriment. However, exports from the countries selected for review by the Animals Committee, Algeria and Libyan Arab Jamahiriya, are minimal and unlikely to be detrimental. Trade from these countries is therefore considered of Least

Concern. Further information is required to confirm the taxonomy of specimens being exported from other countries as *U. acanthinura* and, should exports increase in future, to confirm that exports are within sustainable levels.

SPECIES CHARACTERISTICS

The CITES Nomenclature Committee recommends adoption of Wilms (2001) as the basic reference for *Uromastyx* (COP 13 Doc.9.3.1). Two species recognised in this taxonomy, *U. dispar* (described Heyden, 1827) from northern Sudan and northern Chad, and *U. geyri* (described Müller, 1922) found in southern Algeria, Mali and Niger, are recognised by some as subspecies of *U. acanthinura*. In addition, Joger and Lambert (1996) described *Uromastyx maliensis*, occurring in Mali, as a new species. However, *U. maliensis* is currently considered a synonym for *U. dispar* (UNEP-WCMC, 2006).

Uromastyx acanthinura, commonly known in the pet trade as the North African Spiny-tailed Lizard, is a medium–sized lizard that can reach a total length of 40-43 cm (Gray, undated; Schleich *et al.,* 1996) Large individuals, particularly males in the breeding season, can become very brightly coloured (Bartlet, 2003; Gray, 1995; Walls, 1996).

Following the classification of Wilms and Böhme (2000), the species is confined to north-western Africa, with records from the northern part of western Libyan Arab Jamahiriya, Tunisia, the northern half of Algeria, Morocco and the northern part of Western Sahara. Records from the last of these are close to the northernmost parts of Mauritania and it is conceivable that the species also occurs in this country. Records from elsewhere (e.g. in northern Chad, Mali, northern Niger and northern Sudan as cited in the draft account in the IUCN Global Reptile Assessment, *in prep.*), would appear under the scheme of Wilms and Böhme to be ascribable to other species, chiefly *U. dispar* or *U. geyri*.

U. acanthinura is reported from a variety of desert landscapes where the humidity is usually less than 30% and rainfall sporadic and less than five centimetres per year (Gray, undated). It is found in areas with rocky slopes in mountain valleys with riverbeds and oases (often only seasonally wet), cultivated fields and areas with dense vegetation. Most records are from areas below 1,000 m altitude, although the species has apparently been reported at altitudes of up to 2,000 m in Algeria. It is sedentary, with individuals occupying definite home ranges and exhibiting low rates of movement between food patches. They dig burrows that can be four metres or more in length where they quickly retreat at the first sign of predators. In some areas at least (for example Morocco), the species evidently becomes largely or entirely inactive in winter (Schleich *et al.,* 1996).

Breeding apparently first takes place at around four years of age (Bahiani *et al.*, 1997). Schleich *et al.* (1996) report two clutches being produced at a location in Algeria. Average clutch size is between 8 and 23 eggs. Eggs are laid within the female's burrow and hatch after an incubation period of 8-10 weeks (Bahiani *et al.*, 1997; Schliech *et al.*, 1996; Zug *et al.,* 2001). Hatchlings stay within the burrow system for several weeks to months before leaving (Peters, 1971). Wild-caught adults have reportedly lived 20 years in captivity and may have reached 25 years or more (Bartlet, undated).

Like other *Uromastyx* species, *U. acanthinura* appears to be entirely or very largely herbivorous as an adult; juveniles, in captivity at least, feed enthusiastically on insects and other invertebrates if these are offered (Gray, undated; Pough *et al.,* 2001; Schleich *et al.*, 1996).

Few population data were available. Vernet *et al.* (1988) in a study in a highly arid environment at Beni-Abbes in Algeria estimated densities of *U. acanthinura* at 0.1-1.0 individuals per ha. Schleich *et al*. (1996) concur with Vernet's estimate with more specific estimates of 1.465 per ha at Dj Rhenouma, 0.5-2 at Monts d'Ougarta and 0.1504 in the Grand Erg Occidental region. Robinson (1995) found population densities of the similar and closely related *U. aegyptius* several times that (4.4-6.3 individuals per ha) in a still arid but somewhat more productive environment in Kuwait.

In the absence of any overall population figures we sought to estimate the probable order of magnitude of the species' population using available information on distribution and densities. From the estimated distribution provided by Wilms and Bohme (2000), the approximate extent of occurrence of the species is in the region of 130-140 million ha. Even if the species actually only occupies a relatively small proportion of this area, and at the lower end of the population density estimates given above, its

overall population seems very likely to be at minimum several hundred thousand animals, and quite possibly several million.

Draft assessment undertaken within the framework of the IUCN Global Reptile Assessment (IUCNb, *in prep*.)indicate that the species is affected by collection for subsistence use for food and for subsistence and domestic trade for medicine, as well as by collection for export for the pet trade. However, no data on rates of collection or intensity of exploitation were available. The draft assessment also indicates that the species is affected by habitat loss although most other authorities note that the desert habitat of this and other *Uromastyx* species is generally not suitable for extensive conversion to agriculture. However, livestock grazing is likely to affect food availability for this species through direct competition.

INTERNATIONAL TRADE

Uromastyx species are internationally traded for the pet trade. All species of *Uromastyx* were listed in CITES Appendix II in 1977. For many years *U. acanthinura* was the dominant *Uromastyx* species in trade (Bartlet, 2003; Knapp, 2004). The USA has been the main reported importer of *U. acanthinura*, with considerable numbers also going to Europe and Japan.

Table 1: Exports excluding re-exports of live wild *Uromastyx acanthinura*, 1994-2003

Export Country	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**Total**
Mali	0	1000	9475	7914	1692	300	0	1075	0	0	**21456**
Sudan	0	0	150	0	200	69	309	150	604	175	**1657**
Egypt	622	16	0	0	0	0	0	0	0	0	**638**
Niger	0	0	0	0	0	0	0	308	0	0	**308**
Morocco	30	39	0	0	0	5	54	0	0	0	**128**
Libyan Arab Jamahiriya	0	0	0	0	11	7	0	2	0	0	**20**
Mauritania	0	0	0	0	0	0	10	0	0	0	**10**
Total	**656**	**1055**	**9625**	**7914**	**1903**	**381**	**373**	**1535**	**604**	**175**	**24217**

(Source: CITES trade statistics derived from the *CITES Trade Database*, UNEP World Conservation Monitoring Centre, Cambridge, UK.)
NB: Range States in bold.

COUNTRY ACCOUNTS

Algeria

Status:

Recorded as ranging through northern and central Algeria. The species generally occurs at low elevations (up to 1,000 m) although in the west there are some records in mountains up to 2,000 m (Schleich *et al.*,1996). In the east the species is apparently confined to lower parts of the Grand Erg Oriental (Schleich *et al.*, 1996). The IUCN draft global reptile assessment reports that the species is locally common and abundant in parts of its range in Algeria (IUCNb, *in prep*.).

Management and trade:

No exports of *U. acanthinura* were recorded. Recorded re-exports of *Uromastyx* species from Algeria for the period 1994-2003 were at a very low level: 92 specimens of *Uromastyx acanthinura* and 16 specimens of *Uromastyx* spp., all recorded as imports by Spain and all with origin unknown. All these were recorded as being in trade illegally and all but one specimen have been recorded as “bodies”. Given the low levels of exports, trade from this country is considered Least Concern.

Libyan Arab Jamahiriya

Status:

Throughout eastern Libya below 1,000 m. No information was available on population status.

Management and trade:

Recorded exports of *Uromastyx acanthinura* in the period 1994-2003 were negligible (20 specimens in total; none since 2001). No other *Uromastyx* were recorded as exported. Trade is therefore considered Least Concern.

PROBLEMS IDENTIFIED THAT ARE NOT RELATED TO THE IMPLEMENTATION OF ARTICLE IV, PARAS 2(a), 3, or 6(a)

Apparent misidentification (at least according to CITES taxonomy) or misdeclaration of specimens in trade is clearly a problem in assessing possible impacts of international trade on populations of African *Uromastyx* species: by far the largest declared exports of *Uromastyx acanthinura* over the 10-year period from 1994-2003 were from Mali, a country not recorded as a range State for the species. This trade may therefore have involved other *Uromastyx* species in the *U. acanthinura* complex native to Mali. Exports peaked in 1996 (9,475) and 1997 (7,914), after which reported trade decreased rapidly. Sudan, also not known to be a range State, was the second most important declared exporter of *U. acanthinura* with a total of 1,657 specimens recorded as exported in the period 1994-2003. This trade may also be in other *Uromastyx* species in the *U. acanthinura* complex native to Sudan. Egypt, Niger and Mauritania also recorded some exports of *U. acanthinura*, although none of these is known to be a range State for the species. Following Wilms and Böhme (2000), and assuming that this trade is not in undeclared re-exports, the species involved are likely to be *U. dispar, U. geyri* or in some cases *U. alfredschmidti*. The first two of these have been considered by some authorities as forms of *U. acanthinura* and may well be classified as such by exporters or importers.

Benin exported a significant number of ranched specimens in 2001. No live *U. acanthinura* imports by Benin have been recorded; neither have imports of eggs to Benin been recorded, which calls into question the source of specimens being exported from this country.

REFERENCES

Banhiani, M., Gernigon-Spychlowicz, T., Hammouche, S., and Khannar, F. (1997), Life History of the palm tree lizard or Dob (*Uromastyx acanthinurus*) Herpetology '97; *Abstracts of the Third World Congress of Herpetology 2-10 August 1997*, Prague, Czech Republic. Eds. Zbynek Rocek and Scott Hart.

Bartlet, R.D. (2003). *Spiny-Tailed Agamids (*Uromastyx *and* Xenagama*).* Barron's, Hauppauge, NY, USA.

Bartlet, R.D. *in litt.* (undated). In: Gray, R.L, (undated*).* The natural history, husbandry and captive propogation of the Moroccan Spiny-tailed Lizard *(Uromastyx acanthinurus)* http://www.kingsnake.com/uromastyx/caresheets/MOROCCON1.htm Viewed December 2005.

CITES (2004). Report of the Nomenclature Committee (CoP13 Doc. 9.3.1). Thirteenth meeting of the Conference of the Parties Bangkok (Thailand), 2-14 October 2004.

Gray, R.L, (undated*).* The natural history, husbandry and captive propogation of the Moroccan Spiny-tailed Lizard *(Uromastyx acanthinurus)* http://www.kingsnake.com/uromastyx/caresheets/MOROCCON1.htm Viewed December 2005.

IUCNa (*in prep). 2006 IUCN Red List of Threatened Species*. To be released on the internet in May 2006 on www.iucnredlist.org.

IUCNb (*in prep.).* Global Reptile Assessment species accounts.

Joger, U. and Lambert, R.K. (1996). Analysis of the herpetofauna of the Republic of Mali. Annotated inventory, with description of a new *Uromastyx* (Sauria: Agamidae). *Journal of African Zoology,* **110**: 21-51.

Knapp, A. (2004). *An Assessment of the International Trade in Spiny-tailed Lizards* Uromastyx *with a focus on the Role of the European Union.* TRAFFIC Europe. European Commission, Brussels, Belgium.

Peters, G. (1971). Die inttragenerischen Gruppen und die Phylogenese der Schetterlingsagamen (Agamidae: *Leiolepis*) *Zool. Jb. Syst.* 98:11-130. In: Zug, G.R. Vitt, L.J., Caldwell, J.P., (2001). *Herpetology: An Introductory Biology of Amphibians and Reptile s- Second edition.* Academic Press Inc, Academic Press Inc., San Diego, California, USA.

Pough, F.H., et al., (2001). *Herpetology* – Second Edition Prentice Hall Inc., New Jersey. USA.

Robinson, M.D. (1995). Food plants and energetics of the herbivorous lizard, *Uromastyx aegyptius* microlepis, in Kuwait. *Journal of the University of Kuwait (Science)* **22:** 255-261.

Schleich, H. H., Kästle, W. and Kabisch, K. (1996). *Amphibians and Reptiles of North Africa.* Koeltz, Königstein, Germany, 627. Africa

Vernet, R., M. Lemire, and C.J. Grenot, (1988). Ecophysiological comparisons between two large Saharan lizards, *Uromastix acanthinurus* (Agamidae) and *Varanus griseus* (Varanidae). *J. Arid Environ*., **14**: 187-200.

Walls, J. G. (1996). *Uromastyx and Butterfly Agamids.* T.F.H. Publications. Neptune City, NJ., USA.

Wilms, T. (2001). *Dorschwanzagamen*. Second edition. Herpeton, Offenbach.

Wilms, T. and Böhme, W. (2000). Revision der Uromastyx acantinura – Artengruppe, mit Beschreibung einer neuen Art aus der Zentralsahara (Reptilia: Sauria: Agamidae) *Zool. Abh. Staatl. Mus. Tierk. Dresden* **51**: 73-104.

Zug, G.R. Vitt, L.J., Caldwell, J.P., (2001). *Herpetology: An Introductory Biology of Amphibians and Reptile s- Second edition.* Academic Press Inc, Academic Press Inc., San Diego, California, USA.