CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES
OF WILD FAUNA AND FLORA

Thirtieth meeting of the Animals Committee
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Proposals for possible consideration at CoP18

SPIDER TAIL VIPER (*PSEUDOCERASTES URARACHNOIDES*)

1. This document has been submitted by Iran in relation to agenda item 30.*

2. Committee Members and observers are encouraged to send their comments directly to the Management Authority of Iran at irfocal@yahoo.com and nf4620@yahoo.com (copy to amobaraki@yahoo.com).

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* *The geographical designations employed in this document do not imply the expression of any opinion whatsoever on the part of the CITES Secretariat (or the United Nations Environment Programme) concerning the legal status of any country, territory, or area, or concerning the delimitation of its frontiers or boundaries. The responsibility for the contents of the document rests exclusively with its author.*

CONSIDERATION OF PROPOSALS FOR AMENDMENT OF APPENDICES I

A. Proposal

To transfer all populations of the unlisted yet Spider Tail Viper species *Pseudocerastes urarachnoides*, endemic to Western Zagros Mountains in Iran, to Appendix II of CITES.

a) in accordance with Resolution Conf. 9.24 (Rev. CoP14), Annex 1, criteria A) It is known, or can be inferred or projected, that the regulation of trade in the species is necessary to avoid it becoming eligible for inclusion in Appendix

I in the near future; or

b) in accordance with Resolution Conf. 9.24 (Rev. CoP14), Annex 1, criteria B) It is known, or can be inferred or projected, that regulation of trade in the species is required to ensure that the harvest of specimens from the wild is not reducing the wild population to a level at which its survival might be threatened by continued harvesting or other influences

B. Proponent

I.R.Iran

C. Supporting statement

1. Taxonomy

1.1 Class: Reptilia

1.2 Order: Squamata

1.3 Family: Viperidae

1.4 Genus, species: *Pseudocerastes urarachnoides (*Bostanchi, Anderson, Kami& Papenfus 2006)

1.5 Scientific synonyms: None.

1.6 Common names:

- English: Spider-tailed Horned Viper

1.7 Code numbers: N/A

2. Overview

The purpose of this proposal is to transfer all populations of the species *Pseudocerastes urarachnoides* found in just a few localities in highlands of western Zagros Mountains in IIlan and Kermanshah provinces in western Iran, to Appendix II of CITES.

As a newly described species, there is very few information on its biology and life cycle. Because of lack of sufficient information the species has not been evaluated in IUCN RedList and is considered as Data Deficient (DD). But it seems that according to the populations and recorded localities, their distance and lack of proper contact and relationships, it has the potentials to meet at criteria as an "Endangered" species. The assessment of the species is followed by the national and RedList authorities. The species tolerated considerable pressure caused by desire for collecting that for different manners.

3. Species characteristics

3.1 Distribution

This newly described species is known from the Zagros Mountains of western Iran (Bostanchi *et al*. 2006), ranging from Qasr-e-Shirin to Khuzestan (Fathinia *et al*. 2009). It has been recorded from '70km southwest of Ilam [probably on the road to Amirabad and Mehran], Ilam Province' (the type locality); from '25km south of Qasr-e-Shirin on road to Gilan-e Gharb, Kermanshah Province, at 200m asl' (Bostanchi *et al*. 2006); and most recently from Khuzestan Province (Fathinia *et al*. 2009). The map indicates the extent of potentially suitable habitat, as the species is presumably more widely distributed within the Zagros Mountains and is likely to be present in adjacent areas of Iraq (Fathinia *et al*. 2009). The species is Native (or may be Endemic) to I.R. Iran

3.2. Habitat

The species is found in hilly areas, and is associated with deep cracks in the rocky gypsum substrate habitat (Fathinia *et al*. 2009). Animals can be encountered lying in ambush under small shrubs near to their burrows (Fathinia *et al*. 2009). It has been collected at night from an open level area in an agricultural region (Bostanchi *et al*. 2006). It is possible that it has a specialized diet, and preys on birds (although perhaps not exclusively) (Fathinia *et al*. 2009). The breeding system is not known. There have been some observations on their mating on a tree. It seems that they tend to use the deep splits on the rocks as refugee.

3.3. Biological characteristics

Described in 2006, having 12 year old in the biodiversity world, the species with a very narrow and limited distribution has quite famous story caused by its morphology and behavior, changing to an interesting species to many people around the world. The tail of the snake, resembling a spider, is an amazing evolutionary trait closely related to the feeding behavior of the species as well as making it unique in the world.

There is very few information on the biology of the snake, however, its feeding behavior is well documented and recorded in several times. Spider tail viper is a “bird eating” snake which cleverly uses its tail to attract the small birds, convincing them that they have sound a suitable prey, but trapping them in the venomous fangs of the snake. Like a bait or lure the moving tail attracts the birds to that and trying to take it, they are captured by the snake in a sudden.

Based on the direct observations and fecal samples, the species seems to be bird eating, mainly attacking at small Passeriformes like Larks found in its habitat. There are some records that the snake uses some lizards and arthropods and food too.

As a newly described species, there is very few information on its biology, specially the reproduction and any movement behaviors, needing for more field and research works.

According to the behavior, the species seems to be mainly dependent on small passerine birds and adapted to arid highlands limited to IIlam province and small parts of two other neighboring provinces, Kermanshah and Lorestan. The species is subject to more and extensive research works on biological aspects.

The species is a medium sized horned viper and mainly depends on the scattered trees including *Quercus brantii, Pistacia khinjuk* and *Ficus carica* and shrubs and the rocky beds (mainly Gypsum) as refuge. The habitats situation and the behavior of the species convince that it should have short movement in its habitats.

4. Status and trends

4.1. Habitat trends

Likewise the species, little is known about the habitats too which seems to be untouched in most places and under development and destruction in some other parts. The habittas nearby the border of Ian-Iraq seems to be safer for the species as there is few activities in this areas.

4.2. Demographic data

There is no estimation available of population size of the species from recorded sites However, considering substantial distant between different habitats and very rough topography it appears unlikely that habitat connectivity is playing any role in regional distribution and abundance of *P.urarachnoides*. Evidence based on field observations indicates that this species is rare and lack of reliable data prevents form estimation on the total population and there are currently no exact data available as very few scientific researches have been done. Following this situation, as well as the scattered and small populations, providing clear situation on the population structure and trends is not possible.

4.5. Geographic trends

Until now, the species has been reported only for three provinces in western part of Iran in Zagros Mountains and from more than 50 localities. More research works may lead to introduction of more localities and specimen.

5. Threats

The principal and immediate threat to the species is severe enthusiasm for the illegal collecting for national and international trade. There are some records that the species unfortunately have been illegally traded to some countries in Europe. Based on the official records, there are strong demands for the species in the world. Furthermore, like for the most of the species, habitat destruction and global warming effects, like drought, may affect survival of species.

6. Legal instrument

6.1. National

By Iranian environmental legislation it is proposed by department of the environment to be listed as "*Nationally endangered species* "category, based on the national regulations which in case of approval it would therefore protected by law. Any illegal and not permitted collecting of this snake is subjected fine of 50 million Rials (more than $US 1000 by official currency rate). If game rangers of any regional office of DOE encounter an illegal collector in the field, they are entitled to confiscate the specimens collected and the instrument by which they have been collected.

6.2. International

Pseudocerastes urarachnoides is not legally protected internationally.

7. Species management

7.1. Management measures

The species lacks a formal "conservation action plan" by the Department of the Environment in Iran. But according to need for information some projects on basic information collection have been conducted started. The species has been subject to different works in universities and interested in persons. DEO has planned to prepare the related CAP as soon as possible. Inclusion of the species in CITES Appendix II, would encourage the national interests for the conservation and provide an international base for its conservation.

Besides stopping illegal international commercial trade by listing the snake in CITES appendix II, Iranian and international authorities can initiate a strategic conservation plan for the national protection of the species focusing on:

1- Protection of current known populations in recorded sites. Although formal protection should be developed through a legal instrument under jurisdiction of DOE, it is important to collaborate with local NGOs and individuals to develop an integrated and realistic conservation plan.
2- Systematic monitoring of populations of spider tailed viper in the known habitats, aiming to obtain information on biology, population size, population trends, and population distribution.
3- Developing an *ex situ* conservation plan to secure the species

7.2. Population monitoring

Reptilianian populations are experiencing declining globally caused by different factors namely Habitat loss, environmental deterioration, unsustainable harvesting, contaminants, climate change, and exotic species (Bohme et al 2013). *Pseudocerastes urarachnoides* a an endemic and newly discovered species needs a monitoring program that should aim to answer several important questions specially regarding to demographic characteristics.

7.3. Control measures

7.3.1. International

Placement of *Pseudocerastes urarachnoides* in CITES appendix I is undoubtedly is the most important tool to control the demand from the international markets and put an international conservation tool for the species.

7.3.2. Domestic

In Iran, the Department of Environment (DOE) is responsible for protecting wild animals and plants. This department has general jurisdiction for environmental protection based on the Game and Fish Law (1967) and The Environmental Protection Law (1975). DOE is had put a fine on any harvest on the species and inclusion of the species in the protected wildlife species in "Nationally Endangered" in underway, should be approval soon. Moreover in collaboration with IUCN Redlist and interested scientists, the conservation status of the species should be defined clearly, based on the existing information, by the situation; it is obvious that the spices could meet one of the categories of the threatened species, at least as' Vulnerable". The game guards of DOE in the provinces that the snake is found, are directly responsible for the preventing from any harvest and harm to the species and its habitats.

8. Conclusions

Pseudocerastes urarachnoides is an extremely rare viper that occurs only in small part of I.R. Iran. Ample evidence suggests that populations of this asnake are subject to harvesting for national and international trade. It is therefore recommended that *spider tail snake* be placed in the Appendix II of CITES.