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Conservation Status of the Terrestrial Snakes of the Arabian Peninsula

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Conservation Status of the Terrestrial Snakes of the Arabian Peninsula

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Contents

Executive Summary ..... **v**

Conservation Status of the Terrestrial Snakes of the Arabian Peninsula **1**

Introduction 3
General Assessments 4
Taxon Assessments 5
Geographical hot spots and areas of high study priority 17
Threats 19
Recommendations 22
Actions 24
References 25

APPENDIX 1: Taxon Data Sheets & Distribution Maps **26**

APPENDIX 2: Collection of Tissue for DNA Studies **207**

APPENDIX 3: Participants List **208**

Cover Photo: Arabian Horned Viper *Cerastes gasperettii* © Johannes Els

List of Figures

Figure 1. Diversity hot-spots. 17

Figure 2. Hot-spots for Vulnerable and Near Threatened species. 18

Figure 3. Areas with little historical data. 19

Figure 4. Distribution of Buri's Thread Snake (*Myriopholis burii*) in the Arabian Peninsula. 31

Figure 5. Distribution of Nurse's Thread Snake (*Myriopholis nursii*) in the Arabian Peninsula. 36

Figure 6. Distribution of the Large-snouted Thread Snake (*Myriopholis macrorhynchus*) in the Arabian Peninsula. 41

Figure 7. Distribution of the Javelin Sand Boa (*Eryx jaculus*) in the Arabian Peninsula. 46

Figure 8. Distribution of the Arabian Sand Boa (*Eryx jayakari*) in the Arabian Peninsula. 51

Figure 9. Distribution of Hardwick's Rat Snake (*Platyceps ventromaculatus*) in the Arabian Peninsula. 56

Figure 10. Distribution of the Wadi Racer (*Platyceps rhodorachis*) in the Arabian Peninsula. 61

Figure 11. Distribution of the Elegant Racer (*Platyceps elegantissimus*) in the Arabian Peninsula. 66

Figure 12. Distribution of Thomas' Racer (*Platyceps thomasi*) in the Arabian Peninsula. 71

Figure 13. Distribution of Manser's Racer (*Platyceps manseri*) in the Arabian Peninsula. 76

Figure 14. Distribution of the Variable Racer (*Platyceps variabilis*) in the Arabian Peninsula. 81

Figure 15. Distribution of the Common Egg Eater (*Dasypeltis scabra*) in the Arabian Peninsula. 86

Figure 16. Distribution of the Crowned Dwarf Snake (*Eirenis coronella coronella*) in the Arabian Peninsula. 91

Figure 17. Distribution of Fennell's Dwarf Snake (*Eirenis coronella fennelli*) in the Arabian Peninsula. 96

Figure 18. Distribution of the Arabian House Snake (*Lamprophis fuliginosus arabicus*) in the Arabian Peninsula. 101

Figure 19. Distribution of the Crowned Leaf-nosed Snake (*Lytorhynchus diadema*) in the Arabian Peninsula. 106

Figure 20. Distribution of Gasperetti's Leaf-nosed Snake (*Lytorhynchus gasperettii*) in the Arabian Peninsula. 111

Figure 21. Distribution of the Hooded Malpolon (*Malpolon moilensis*) in the Arabian Peninsula. 116

Figure 22. Distribution of the Afro-Asian Sand Snake (*Psammophis schokari schokari*) in the Arabian Peninsula. 121

Figure 23. Distribution of the Aden Black-headed Snake (*Rhynchocalamus arabicus*) in the Arabian Peninsula. 126

Figure 24. Distribution of Clifford's Diadem Snake (*Spalerosophis diadema cliffordi*) in the Arabian Peninsula. 131

Figure 25. Distribution of the Arabian Cat Snake (*Telescopus dhara dhara*) in the Arabian Peninsula. 136

Figure 26. Distribution of Anderson's Burrowing Asp (*Atractaspis (microlepidota) andersoni*) in the Arabian Peninsula. 141

Figure 27. Distribution of Ein Geddi's Burrowing Asp (*Atractaspis (microlepidota) engaddensis*) in the Arabian Peninsula. 146

Figure 28. Distribution of the Arabian Cobra (*Naja arabica*) in the Arabian Peninsula. 151

Figure 29. Distribution of the Black Desert Cobra (*Walterinnesia aegyptia*) in the Arabian Peninsula. 156

Figure 30. Distribution of the Puff Adder (*Bitis arietans arietans*) in the Arabian Peninsula. 161

Figure 31. Distribution of Hoofien's Horned Viper (*Cerastes cerastes hoofieni*) in the Arabian Peninsula. 166

Figure 32. Distribution of the Arabian Horned Viper (*Cerastes gasperettii*) in the Arabian Peninsula. 171

Figure 33. Distribution of the Northeast African Carpet Viper (*Echis pyramidum*) in the Arabian Peninsula. 176

Figure 34. Distribution of Khosatzki's Saw-scaled Viper (*Echis khosatzkii*) in the Arabian Peninsula. 181

Figure 35. Distribution of Burton's Carpet Viper (*Echis coloratus coloratus*) in the Arabian Peninsula. 186

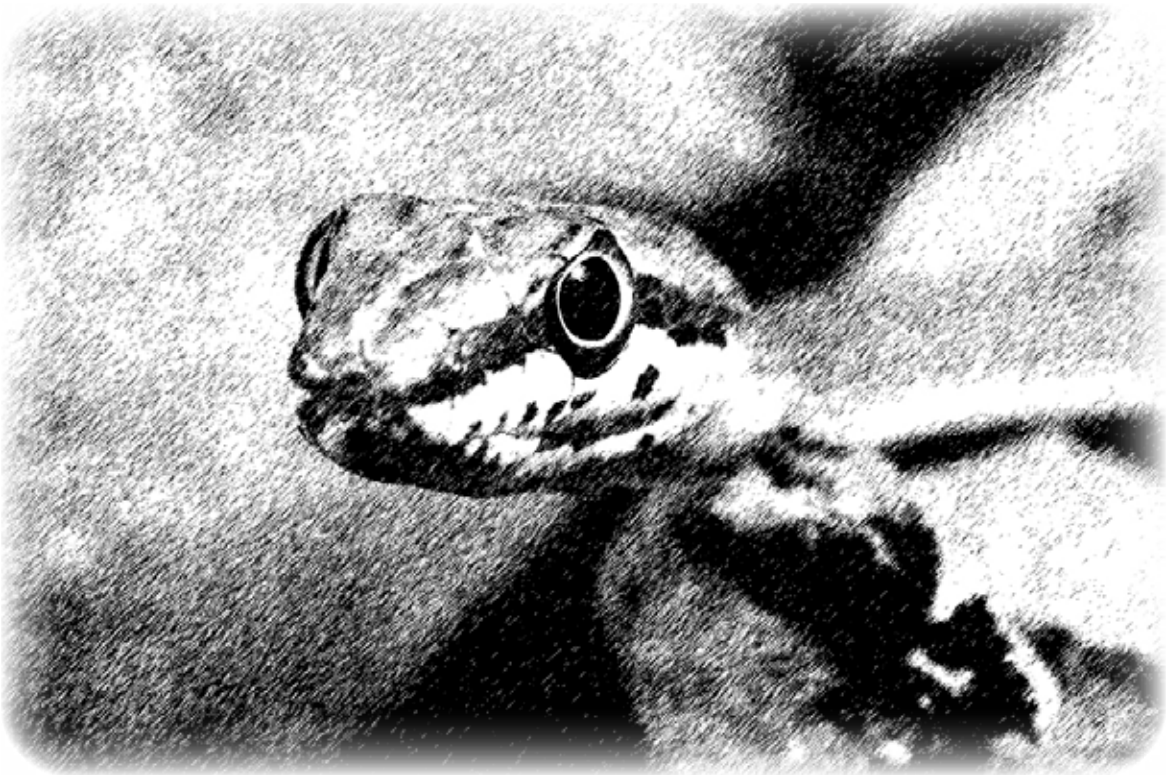
Figure 36. Distribution of the Oman Carpet Viper (*Echis omanensis*) in the Arabian Peninsula. 191

Figure 37. Distribution of the Sindh Saw-scaled Viper (*Echis carinatus sochureki*) in the Arabian Peninsula. 196

Figure 38. Distribution of the Persian Horned Viper (*Pseudocerastes persicus*) in the Arabian Peninsula. 201

Figure 39. Distribution of Field's Horned Viper (*Pseudocerastes fieldi*) in the Arabian Peninsula. 206

Executive Summary



Region of Assessment

The study area is defined as the Arabian Peninsula and includes Saudi Arabia, Kuwait, Bahrain, Qatar, the United Arab Emirates, Oman, and Yemen.

Species to be Assessed

The snake fauna of the region, based on the most recent review (Egan 2007), comprises 53 species (55 described taxa) from a diversity of families (Table 1). This is a considerable increase from the 44 species discussed for the same region by Gasperetti (1988). However Egan (2007) includes accounts of problematic species whose taxonomic status remains unresolved and a number of species historically reported from the region whose presence on the peninsula has not been recently confirmed.

Moreover an additional species *Myriopholis yemenicus*, has been added to the Arabian snake fauna (Broadly & Wallach 2007). With these provisos, the final diversity of snakes in the region remains subject to certain refinements (see below), but can basically be considered well-known.

Species with problematic taxonomy

A number of snakes are of problematic taxonomy and assessment of their conservation status requires further surveys and taxonomic study. These include:

a) Status of *Eirenis coronella fennelli*: Although morphologically re-assessed by Sivan & Werner (2003) the distributions remain allopatric with no evidence of introgression. Molecular studies may resolve whether Arabian *fennelli* should be treated as a separate species.

b) Status of *Atractaspis engaddensis*/*andersoni* complex: With the proposed restriction of *A. microlepidota* to West Africa (Trape *et. al.* 2006), the status of Middle East and Arabian burrowing asps assigned to *A. microlepidota* remains problematic. Molecular studies may resolve the specific status of Arabian *andersoni*.

c) Status of saw-scaled vipers (*Echis*) from Hauf, on the Yemen-Oman border (specimen, D. Egan); and Taif, Saudi Arabia (photograph Dr Saud Al-Farraj). Recent revisions of saw-scaled vipers of the Arabian region (Babocsay 2003, 2004) have increased the number of taxa known from the region. However, the specimen and photograph of the saw-scaled vipers from Hauf and Taif do not fit any of the four known taxa of *Echis* that occur on the Arabian Peninsula, and indicate that further studies on these problematic snakes are required.

d) Status of Arabian thread snakes (*Myriopholis* spp.): Thread snakes often have localised distributions and may thus be of conservation concern and subject to localised threats. Arabian thread snakes previously placed in the genus *Leptotyphlops* have been placed in the new genus *Myriopholis* (Andalsteinsson *et. al.* 2009) A recent revision of thread snakes (*Leptotyphlopidae*) in north-east Africa and adjacent Arabia (Broadley & Wallach 2007) considers four species to be present in Yemen, including *M. yemenicus* which is revived from synonomy of *M. nursii* and has been added to the Arabian snake fauna in Egan (2007). It is known only from the single type specimen, of vague locality - 'Yemen'. Further studies on these small, fossorial snakes, and their affinities to species on Socotra (*M. wilsoni*, *M. filiformis* and *M. macrurus*) and adjacent Somalia are required before their distributions, and thus conservation status, can be assessed.

Species of problematic occurrence

The presence of a number of species within the region remains problematic. Most are based on Scortecci's (1932) report on the collections of Capt. E. Dubbiosi, which were reportedly from Yemen. However, the Dubbiosi collection may have been mixed with specimens collected elsewhere (see discussion in Gasperetti 1988). These include: *Eryx colubrinus*, *Natrix tessalata*, *Philothamnus semivariegatus*, *Lycophidion capense*, *Meizodon semiornatus*, *Brachyophis revolli*, *Macrovipera lebetina* (*obtusa*?). None have been subsequently collected in the Arabian Peninsula, and for this assessment they are not considered part of the Arabian snake fauna.

Another species (*Rhynchocalamus melanocephalus*) is recorded from Egypt, through the northern Middle East and possibly does occur in the extreme north of Saudi Arabia but its occurrence has not been confirmed in the region.

Introduced species

A single parthenogenetic snake, the flower pot snake (*Rhamphotyphlops braminus*) has been introduced into Arabia. This Asian species has become almost cosmopolitan in distribution due to the ease with which it is transported in association with garden plants. For this assessment it is not considered part of the Arabian snake fauna.

Marine species

Ten species of sea snake have been recorded from Arabian waters, almost solely within the Arabian Gulf. Little is known of their biology or the threats that they face in the marine environment, and they have therefore been excluded from this conservation assessment.

Summary of Assessment

With the addition of *Myriopholis yemenicus* the snake fauna of Arabia now comprises 54 species and 56 taxa (two species having subspecies within the region). It was decided to exclude the two possible new species of *Echis* from any further discussion as their taxonomic status as distinct species or subspecies has not been confirmed.

Species not assessed include:

- Ten marine snake species (*Astrotia stokesii*, *Enhydrina schistosa*, *Hydrophis cyanocinctus*, *Hydrophis lapemoides*, *Hydrophis ornatus*, *Hydrophis spiralis*, *Lapemis curtus*, *Microcephalophis gracilis*, *Pelamis platura* and *Praescutata viperina*) as there is insufficient data;
- Seven snakes of problematic occurrence in Arabia (*Eryx colubrinus*, *Natrix tessalata*, *Philothamnus semivariegatus*, *Lycophidion capense*, *Meizodon semiornatus*, *Brachyophis revolli*, *Macrovipera lebetina* (*obtusa*?), and one species (*Rhynchocalamus melanocephalus*) that may occur in the Arabian Peninsula but its presence has still not been confirmed;
- One introduced species (*Rhamphotyphlops braminus*).

Species assessed:

A total of 37 taxa were assessed 20 at regional level and 17 at global level, including:

- *Myriopholis macrorhynchus macrorhynchus* Large-snouted Thread Snake
- *Myriopholis nursii* Nurse's Thread Snake
- *Myriopholis burii* Buri's Thread Snake
- *Myriopholis yemenicus* Yemen Thread Snake

- *Eryx jaculus jaculus* Javelin Sand Boa
- *Eryx jayakari* Arabian Sand Boa
- *Platyceps ventromaculatus* Hardwick's Rat Snake
- *Platyceps rhodorachis* Wadi Racer
- *Platyceps elegantissimus* Elegant Racer
- *Platyceps variabilis* Variable Racer
- *Platyceps thomasi* Thomas' Racer
- *Platyceps manseri* Manser's Racer
- *Dasypeltis scabra* Rhombic Egg Eater
- *Eirenis coronella coronella* Crowned Dwarf Snake
- *Eirenis coronella fennelli* Fennell's Dwarf Snake
- *Lamprophis fuliginosus arabicus* Arabian House Snake
- *Lytorhynchus diadema* Crowned Leaf-nosed Snake
- *Lytorhynchus gasperettii* Gasperetti's Leaf-nosed Snake
- *Malpolon moilensis* Hooded Malpolon
- *Psammophis schokari schokari* Afro-Asian Sand Snake
- *Rhynchocalamus arabicus* Aden Black-headed Snake
- *Spalerosophis diadema cliffordi* Clifford's Diadem Snake
- *Telescopus dhara dhara* Arabian Cat Snake
- *Atractaspis (microlepidota) andersoni* Anderson's Burrowing Asp
- *Atractaspis (microlepidota) engaddensis* Ein Geddi's Burrowing Asp
- *Naja arabica* Arabian Cobra
- *Walterinnesia aegyptia* Black Desert Cobra
- *Bitis arietans arietans* Puff Adder
- *Cerastes cerastes hoofieni* Hoofien's Horned Viper
- *Cerastes gasperettii* Arabian Horned Viper
- *Echis pyramidum pyramidum* North East African Carpet Viper
- *Echis (pyramidum) khosatzkii* Khosatzki's Saw-scaled Viper
- *Echis carinatus sochureki* Sindh Saw-scaled Viper
- *Echis coloratus* Burton's Carpet Viper
- *Echis omanensis* Oman Carpet Viper
- *Pseudocerastes persicus persicus* Persian Horned Viper
- *Pseudocerastes fieldi* Field's Horned Viper

Of the 20 regional assessments carried out only two species, *Pseudocerastes persicus* (NT) and *Eryx jaculus* (VU), were considered to be under threat with all the others species being considered as Least Concern. The remaining 17 species were assessed at the global level; of these two species *Myriopholis yemenicus* and *Rhynchocalamus arabicus* were Data Definite, three species *Myriopholis nursii*, *Cerastes cerastes hoofieni* and *Echis khosatzkii* were considered to be Near Threatened and four species *Myriopholis burii*, *Platyceps thomasi*, *Platyceps manseri* and *Lytorhynchus gasperettii* were considered Vulnerable. The snake species provisionally assessed as Threatened in Arabia are summarised in Table 2. All species placed in the Vulnerable category have very restricted areas of occupancy (<10 localities) some of which are subject to habitat loss of some form or extent.

Table 1. Summary by Family of Arabian Snake Fauna

				Type of Assessment		Status			
Family	**Species**	**Taxa**	**Presence**	**Global**	**Regional**	**DD**	**LC**	**NT**	**VU**
Typhlopidae	1	1	1	0	0	-	-	-	-
Leptotyphlopidae	4	4	4	2	2	1	2	-	1
Boidae	3	3	2	1	1	-	1	-	1
Colubridae	16	17	14	6	8	1	10		3
Lamprophiidae	2	2	1	1	0	-	1	-	-
Psammophiidae	2	2	2	1	1	-	2	-	-
Atractaspidiidae	2	3	2	1	1	-	2	-	-
Natricidae	1	1	0	0	0	-	-	-	-
Elapidae	12	12	12	1	1	-	2	-	-
Viperidae	11	11	10	4	6	-	7	3	-

Table 2. Summary of Threatened Arabian Snakes

Species	**Status**	**Criteria**	**Assessment**
Myriopholis burii	Vulnerable	B1, B2c	Global
Myriopholis nursii	Near Threatened	Restricted range & possible habitat threats	Global
Eryx jaculus	Vulnerable		Regional
Platyceps thomasi	Vulnerable	B1, B2c	Global
Platyceps manseri	Vulnerable	B1, B2c	Global
Lytorhynchus gasperettii	Vulnerable	B1, B2c	Global
Cerastes cerastes hoofieni	Near Threatened	Restricted range & possible habitat threats	Global
Echis khosatzkii	Near Threatened	Restricted range & possible habitat threats	Global
Pseudocerastes persicus	Near Threatened	Restricted range & possible habitat threats	Regional

Further Research Required

For a fuller, definitive conservation assessment of Arabian snakes further research is recommended. This includes:

Field Surveys

Further field surveys should particularly target snake species of problematic taxonomy, rarity and/or problematic occurrence. These include:

- Two (possible) new species of saw-scaled viper (*Echis*) from Hauf (Yemen-Oman border) and Ta'if (Saudi Arabia);
- Two rare species, currently known only from one (*Myriopholis yemenicus*) or two (*Rhynochalamus arabicus*) specimens from Yemen.
- Old records of seven species recorded from Yemen (Scortecci 1932) but not subsequently recorded from the Arabian Peninsula (e.g. *Eryx colubrinus*, *Natrix tessalata*, *Philothamnus semivariegatus*, *Lycophidion capense*, *Meizodon semiornatus*, *Brachyophis revolli*, and *Macrovipera lebetina* (*obtusa*?)).

Hot spots

Two centres of high snake diversity were identified, both of which would benefit from additional field surveys. These were the highlands of SW Yemen and the Dhofar region of southern Oman.

Taxonomic problems

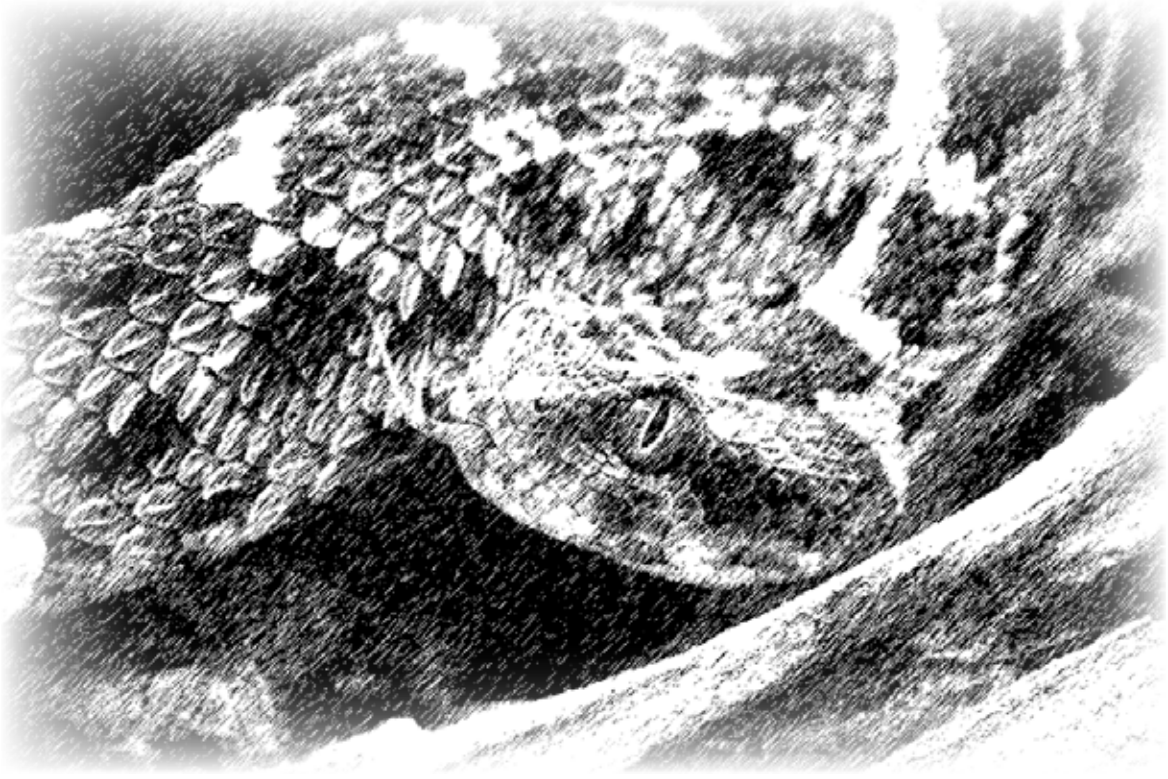
A number of taxonomic problems require further study. Tissues (blood, liver or muscle) from fresh specimens should be collected in 90% Ethyl Alcohol (EtOH) for molecular studies. A number of researchers are currently investigating phylogenetic relationships within the problem genera and could be approached to assist in the resolution of these problems. They include:

- *Echis sp*. Dr Wolfgang Wuster (Bangor, UK) has been undertaking phylogenetic studies on Afro-Asian viperids for sometime, including Arabian *Bitis*, *Cerastes* and *Echis*.
- A preliminary phylogeny of Leptophyphlopid snakes has appeared (Adalsteinssohn *et. al.* 2009), and Arabian species should be included in further studies.
- *Atractaspis engaddensis/andersoni* The genus *Atractaspis* remains one of the enduring taxonomic problems among African snakes. A long-running morphological study (Hughes, in prep.) is underway, but molecular studies are urgently required.
- *Eirenis c. coronella / E. c. fenneli* The status of these small colubrine snakes should be studied in a general assessment of phylogenetic relationships among Afro-Asian colubrines.
- *Lamprophis 'arabicus'* A preliminary phylogeny of *Lamprophis* and related snakes is currently in progress (Kelly *et. al.* in prep), and Arabian house snakes could be included in this study.

Biology and Threats

Further studies on the biology, habitat requirements, diet and distribution of Arabian sea snakes are desperately required. These aspects of basic biology are required if potential threats to sea snakes in the marine environment are to be assessed accurately. The escalating demand for building material in the coastal region possess particular threat to isolated limestone mountains and outcrops. The impacts of this extraction on the native herpetofauna remains poorly assessed.

Conservation Status of the Terrestrial Snakes of the Arabian Peninsula



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1.Introduction

1.1 The geography of the Arabian Peninsula in the context of snakes

The region covered by this assessment is Peninsular Arabia, including Saudi Arabia, Yemen, Oman, United Arab Emirates, Qatar, Kuwait and Bahrain. Socotra was omitted as this archipelago is biogeographically distinct from mainland Arabia. Jordan was not assessed, but snake records from the southern regions, close to the border with Saudi Arabia, were taken into consideration where no trans-border habitat distinction occurs.

The Arabian Peninsula is primarily an arid zone consisting of a vast interior of sand desert, gravel plains and mountains. Most of the Arabian coastline is fringed with a mountain periphery, with watersheds facing the sea being relatively moister than those facing inland. Within these primary features are a variety of ecological zones and habitats, from cool mountain plateau, Monsoon belts and coastal plains, to hyper-arid shifting sand dunes and gravel plains. From an evolutionary perspective, Arabia is unique in that it is a former junction between Africa, the Palearctic and Asia and contains fauna with all three affinities.

The Western Mountains (Northwestern Saudi Arabia to Southwestern Yemen) form the Northeastern portion of the African Rift Valley (western aspect) and are separated from mainland Africa by the Red Sea. Although snakes of all three affinities occur in the region, there is a predominance of snakes with a direct African affinity, the forbearers of which have occupied Arabia either via Sinai, or across the former land bridge between Eritrea/Djibouti and Southwestern Yemen which is now the Bab el Mandeb straits. The southern parts of the region receive more rainfall and constitute the western side of what is known as the afro-tropical belt, hosting many species with no specific adaptations to arid environments. The mountains of Northwestern Yemen attain altitudes of over 3 500 meters above sea level.

The central, southern mountain complex, known as the Hadramaut range, is primarily a hyper-arid zone that consists of lower altitude dry mountain plateaus and deep wadis, and acts as an ecological barrier between non-arid adapted species to the west, and those occurring in the monsoon belt of Dhofar in the east. This range once represented an extension of the Afro-tropical species in pre-history, but has since desertified, fragmenting populations of non-arid adapted species. The fauna from this region still has a strong African element but animals of all three affinities are present.

Dhofar is an extension of the southern complex and represents the eastern extremity of this feature. This area receives annual monsoon rains from Asia and is thus relatively greener. Many of the species occurring in the southwestern Afro-tropical belt are also found here as a remnant. The area is noted for its high level of endemism.

The eastern mountain complex extends from the Musandam mountains of Oman in the north, through eastern UAE and down to Ras al Had in northern Oman. They form the western aspect of a fault between Iran and Arabia. They consist of arid mountains with a few perennial streams. Rainfall is highest in the south of this feature, particularly in the high Jebel Akhdar complex (3 000 m.a.s.l.) of northern Oman and to a lesser degree in the Musandam peninsula. The Eastern watershed is relatively better vegetated due to coastal precipitation. Much of the fauna in the region is of Asian affinity, with several species occurring in Arabia as well as Iran.

The remainder of the peninsula (the interior and southeast) consists of low lying sand desert, volcanic remnants, gravel plains and mountain belts, or mosaic habitats, all of which are considered hyper-arid. Snakes of various affinities are found throughout.

The Arabian Gulf consists of shallow, warm and sheltered waters, generally less than 80 meters in depth, perfect for the many sea snakes inhabiting this region. This gulf is an extension of the Indo-Pacific complex. The coastal waters get progressively deeper further south, as they enter the Gulf of Oman and the Arabian Sea. The continental shelf on the southern coast drops vertically, to more than 1000 meters in depth, effectively excluding all but the pelagic sea snake from moving further west. Further factors excluding sea snake migration include the relatively cooler waters, and the unprotected nature of the southern coastline, resulting in rougher seas. No sea snakes have been recorded in the Red Sea and the most westerly record is from the Gulf of Aden (*Pelamis platura*).

1.2 Diversity and rate of endemism

With the inclusion of *Myriopholis yemenicus*, there are 56 recorded taxa on the Arabian Peninsula, of which several will most certainly be reclassified and possibly split up further. With evidence of two potentially new species of *Echis (*neither of which appears to have been scientifically described) the snake fauna of Arabia could increase to 58 taxa.

The existing recorded taxa consist of 56 species and subspecies from 32 genera and 8 families, of which 7 taxa are problematic and may be erroneous reports. One family, consisting of a single genus and species is introduced.

There are a total of 15 (27% of total recorded taxa) endemic taxa consisting of 6 families and 11 genera, with western Yemen hosting the most species, followed by the Dhofar region of Oman.

2. General Assessments

2.1. Objectives of the assessment

The primary objectives of this conservation assessment are as follows:

- To ascertain the conservation status of snakes on the Arabian Peninsula, following IUCN guidelines, for inclusion in the Red Data Book.
- To highlight species where a deficiency in data hinders accurate assessment.
- To raise awareness to scientists and field workers in the region, as to the importance of data collection and sampling.
- To formulate a set of initial, tangible recommendations that will aid in increasing our knowledge of the true conservation status of Arabian Snakes. This will form a stronger basis against which further recommendations can be made to initiate conservation measures.
- To make a preliminary assessment of any specific threats to snakes based on the literature and knowledge available.

2.2. Type of assessment

As the main focus of the workshop was to assess the conservation status of species within peninsular Arabia, all non-endemic species were assessed on a regional level, unless they have a very limited global distribution (i.e. the biggest percentage of their global distribution falls within Arabia). Endemic species, and species extant in Arabia with a limited global distribution, were assessed on a global level.

2.3. Preparations

A preliminary draft assessment of Arabian snakes was made by Damien Egan (BCEAW) prior to the workshop, based on available literature (see cited references). Draft maps, in 25km² increments, were also produced in digital and hard format based only on confirmed point localities in the literature and confirmed records from the Breeding Centre for Endangered Arabian Wildlife. All reference material was supplied in the form of briefing material on the table. Wireless Internet access was available for cross referencing. Taxon data sheets were provided to each delegate in hard format and were installed in template form on a computer, to be filled in as each species was covered.

3. Taxon Assessments

3.1. Preliminary review of the checklist of Arabian snakes

After introductions, the group reviewed 58 taxa on the combined knowledge of the delegates and the summarized assessments based on existing literature. This process was to establish an order of species assessment, prioritizing endemic species. It was also to establish which snakes could not be assessed due to lack of data or problematic occurrence due to possibly erroneous records. Introduced species and the sea snakes (as they are largely data deficient) were also not assessed. As time constraints would have hindered the thorough assessment of each species, this step was agreed upon by the entire group.

3.1.1. Species of problematic occurrence on the Arabian Peninsula

Seven species were acknowledged but instantly omitted from further assessment on the basis that they were all recorded from single specimens and no locality data was provided by the collector (Capt. Emilio Dubboisi). None of these species has been recorded since the original collection record (all collected in the 1920's and reported by Scorttecci, in 1932). Following is a list of the seven species of problematic occurrence in Arabia:

- Egyptian sand boa *Eryx colubrinus* (Boidae)
  This species is recorded from Northern Kenya to the Nile Valley, one specimen is reported from Arabia with no locality details.
- Cape wolf snake *Lycophidion capense* (Lamprophidae)
  This species is common and widespread in Sub-Saharan Africa. It is recorded from one specimen allegedly collected in Arabia. No locality details are available.
- Semi-ornate snake *Meizodon semiornatus* (Colubridae)
  This is a widely distributed species from southern and eastern Africa. There is one record from the Arabian Peninsula with no locality information.
- Spotted bush snake *Philothamnus semivariegatus* (Colubridae)
  This species is common and widespread across sub-Saharan Africa. One record with no locality data exists for Yemen.

- Dice snake *Natrix tessalata* (Natricidae)
  A widely distributed Palearctic species extant in the northern parts of the Middle East. One specimen was reported from Yemen. There was some discussion of the possibility that this species, which also occurs in the Azraq oasis in Jordan, may be extant in the far north of Saudi Arabia. This has not been substantiated.
- Revoil's short snake *Brachyophis revoili* (Atractaspidinae)
  A rare and localized snake from the Somalian coast. One specimen was reported from Yemen with unknown locality data.
- Levantine viper *Macrovipera lebetina* (Viperidae)
  A species with a wide range from North Africa, Mediterranean Europe through to Asia. The subspecies *Microvipera lebetina obtusa* is extant in the northern Middle East countries. One specimen was alleged to have been recorded from Yemen with no locality data.

3.1.2. Introduced species

One species, the flowerpot snake *Rhamphotyphlops braminus* (Typhlopidae), was recognized as an introduced species. This is a commonly introduced species that reproduces by parthenogenesis. It is known worldwide although it most likely originates in Western Asia. It is known to occur in points throughout the Arabian Peninsula. This species was not assessed due to the fact that it is an artificial introduction, although it's presence was acknowledged.

3.1.3. Snakes extant within the region but not assessed due to data deficiency

There was some reluctance among the group in regards to assessing the 10 species of sea snakes occurring in the Arabian Gulf and the Arabian Sea, as sampling of sea snakes has historically been biased towards those areas where coastal fishing activities are conducted. Apart from a few scattered localities elsewhere, there is insufficient data to make any further assessment.

The sea snakes extant within the region's waters include:

- Stoke's sea snake *Astrotia stokesii*,
- Beaked sea snake *Enhydrina schistosa*
- Annulated sea snake *Hydrophis cyanocinctus*
- Arabian Gulf sea snake *Hydrophis lapemoides*
- Ornate sea snake *Hydrophis ornatus ornatus*
- Yellow sea snake *Hydrophis spiralis spiralis*
- Short sea snake *Lapemis curtus*
- Small-headed sea snake *Microcephalophis gracilis*
- Pelagic sea snake *Pelamis platura*
- Viperine sea snake *Preascutata viperina*

All sea snakes were appended in a recommendation for further, specific studies on distribution, dynamics, general ecology and potential threats facing them. An accurate assessment was impossible because of the complete lack of knowledge regarding the distributions, life-histories and dynamics of sea snakes within Arabian waters. It was agreed to include them in the discussions as time permitted, but the group were unable to give any accurate assessments due to data deficiency. Pritpal Soorae of the Environment Agency, Abu Dhabi made available a number of new localities of some of the species from the UAE, which were added to the distribution maps.

3.1.4. Species of possible occurrence in Arabia

Palestine black-headed snake *Rhynchocalamus melanocephalus.* This species is recorded from Egypt, through the northern Middle East and possibly the extreme north of Saudi Arabia. As its occurrence has not been confirmed in the region, this species was not assessed, but was acknowledged as a possible Arabian Peninsula species.

3.1.5. Undescribed Species

Evidence of two vipers from Hauf and Ta'if that did not fit any of the four known taxa of *Echis* that occur on the Arabian Peninsula was presented. As neither of the species appears to have been scientifically described, they could not be accurately assessed and therefore could not be assigned a conservation status.

Undescribed saw-scaled viper *Echis* sp. 1
This specimen, most likely a member of the *E. pyramidum* complex, was collected near Hauf, in Yemen. Samples have been prepared for DNA analysis to ascertain its taxonomic status. The specimen is preserved at the Breeding Centre for Endangered Arabian Wildlife, Sharjah, UAE.

Undescribed saw-scaled viper *Echis* sp. 2
A photograph, supplied by Dr. Saud, near Ta'if in the Asir Mountains, clearly depicts an *Echis* species that does not conform to any morphological keys, being completely distinct from any other known *Echis* in the region. A specimen is not available at present and we hope that genetic material will become available in the future.

3.2. Individual taxon assessments

Following is a brief report of discussions of the snakes of Arabia. They have been placed in taxonomic order in this report, but were discussed as prioritized by the workshop members as mentioned (3.1). Taxon data sheets and maps (Appendix 1) were completed for each assessed taxon.

Buri's thread snake *Myriopholis burii*

This rare snake is endemic to western Yemen and was assessed on a global level. It is only known from two specimens collected NNE of Aden. It has an area of occupancy and area of occurrence of approximately 25km². One population is recognized. *M. burii* was assigned Vulnerable status based on the literature that was available.

A recommendation is made for further sampling in its known region of occupancy and adjacent areas to ascertain its full range, and for genetic material to be collected for molecular taxonomic study. No immediate threats to the population appear to be present but the species is extremely localized and this area is subject to increasing rural agricultural use.

Nurse's thread snake *Myriopholis nursii*

This snake is not endemic, but the bulk of its recorded distribution falls within Arabia, with a small population known from Somalia. Within Arabia it is known from two populations; one in western Saudi Arabia and southwestern Yemen and a second in the vicinity of Muscat in Northern Oman. The species was assessed on a global level. It has an area of occupancy of 575km², with an area of occurrence of over 75,000km².

The northern Oman population of *M. nursii* was assigned Near-Threatened status, whereas the western population was assigned Least Concern status.

It was suggested by Prof. William R. Branch that the eastern population near Muscat could represent an introduced population. Dr. Khaled Al Rasbi commented on the occurrence of a similar species found around temporary human habitations in the sand dunes to the interior of Muscat. This was later thought to be an introduction through soil importation and no specimens were available for examination. Further scientific study is required before a conservation assessment can be made.

Threats were identified in the form of large-scale coastal development in the Oman Mountains and development to a lesser degree in the region of Saudi Arabia where the species occurs.

A recommendation is made for further sampling, particularly in the Oman Mountains, and for comprehensive genetic studies to be done.

Large-snouted thread snake *Myriopholis macrorhynchus*

This is a widespread species that occurs from West Africa to western Asia. It has a wide distribution within the Arabian Peninsula. *M. macrorhynchus* was assessed on a regional level. It has an area of occupancy of 525km² and an area of occurrence of over 20,000km². It was agreed that the Arabian distribution of this species probably represents one population, but it is uncertain to what level it is artificially introduced with growing media and cultivated plants. It is assumed that specimens recorded from the western Emirates, for example, are introduced, as this species is not arid-adapted.

M. macrorhynchus was assigned Least Concern status.

No major threats were recognized that affect this species. Recommendations are made for collection and sampling to ascertain taxonomic status throughout their distribution.

Yemen thread snake *Myriopholis yemenicus*

This very rare snake, know only from a single specimen, was revived from the synonymy of *M. nursii* (Broadley &Wallach 2007) and was an addition to the discussion. It is only known from the type specimen and is supplied with nonspecific locality data, i.e, "Yemen". Based on the complete lack of data for the range of this species, it could not be accurately assessed and is therefore considered Data Deficient.

Javelin Sand Boa *Eryx jaculus*

This species is widespread from North Africa and Mediterranean Europe, as far east as China. Within Peninsular Arabia it is only known from two confirmed specimens and one unconfirmed photographic record, in the far northeast of Saudi Arabia on the Kuwait border. As the Arabian records represent less than 1% of this species global distribution, *E. jaculus* was assessed on a regional level. It has an area of occupancy of 25km², with an area of occurrence of less than 400km².

E. jaculus was assigned Regionally Vulnerable status.

Military activity, as is inherent in border areas was listed as a possible threat, but was not confirmed. The snakes' presence in Arabia represents a peripheral potion of the global population.

Recommendations are made generally for the region for more sampling and field studies on possible threats. No recommendations were made specifically for this species.

Arabian sand boa *Eryx jayakari*

This species has been recorded in the sand deserts throughout the Arabian Peninsula and is considered widespread. It is endemic to the region and has been assessed on a global level. The area of occupancy is 19,750km², and the area of occurrence is well over 40,000km².

E. jayakari has been assigned Least Concern status.

There are several general threats affecting this species, but no known immediate threats to the overall population.

No recommendations have been made for this species

Hardwick's rat snake *Platyceps ventromaculatus*

This species has been recorded from eastern Arabia, some of the Gulf Islands, Iran and Pakistan. It is known from marshes and agricultural areas, and peripheral sandy areas in eastern Saudi Arabia, Qatar, Bahrain and Abu Dhabi Emirate (including onshore islands where it may have been introduced). Two populations were identified: one on mainland Arabia and the second on Bahrain. This snake's range in Arabia comprises less than 1% of the global population and was assessed on a regional level. It has an area of occupancy of 300km², and an area of occurrence probably more than 3,200km².

P. ventromaculatus was assigned Least Concern status.

Some threats that were identified included; increasing salinity of freshwater marshes as a result of over-utilization of freshwater resources by man, as well as habitat destruction for human urban development. None of these threats appear to have a direct influence on the current populations as a whole. This species is well known to thrive in areas of artificial cultivation.

No recommendations were made for this species.

Wadi racer *Platyceps rhodorachis*

This species has a global distribution from Libya, east to Turkmenistan, including most rocky habitats on peninsular Arabia. *P. rhodorachis* was assessed on a regional level. The species represents one population covering an area of occupancy of over 3,275km², and an area of occurrence of over 40,000km².

P. rhodorachis represent one of the most common Arabian land snakes and was assessed as Least Concern.

There are no immediate threats facing population as a whole.

No recommendations were made for this species.

Elegant racer *Platyceps elegantissimus*

This species is recorded from Palestine and Jordan, south to eastern and central Saudi Arabia. The recorded distribution of this species in Arabia represents one population. *P. elegantissimus* was assessed on a regional level. It has an area of occupancy of 425km², and a total area of occurrence of around 10,800km².

P. elegantisimus was assigned the status of Least Concern. Although seldom found and quite rare, this species is widespread and well-represented.

Threats in the form of human developments exist, and are increasing within its range, there are none however, posing a threat to the overall population.

No recommendations were made for this species.

Thomas' racer *Platyceps thomasi*

This rare species is only recorded from the Dhofar region of Oman and the adjacent Yemen border. It occupies coastal plains and mountain habitat. It is endemic and was assessed on a global level. One population is considered to exist, with an area of occupancy of 50km², and a total area of occurrence around 75km².

P. thomasi was assigned Vulnerable status, due to the very limited distribution of this species and the fact that threats might affect a portion of the population in the form of coastal plain development.

Recommendations are made to intensify field studies in the general Dhofar region, and in southeastern Yemen. No specific conservation recommendations were made for this species.

Manser's black snake *Platyceps manseri*

This rare endemic is recorded from southwestern Saudi Arabia and Western Yemen. It was assessed on a global level. *P. manseri* has an area of occupancy estimated at 25km², and a total area of occurrence of 25km². It is known from only 5 specimens within a very limited range.

There is some level of conflicting data regarding the taxonomy in relation to its close ally, *P. variabilis*.

P. manseri was provisionally assigned Vulnerable status, although details of specific threats could raise the assessment to Endangered.

No immediate threats to this species were currently recognized for this species, but its known range is so small that the area should be 'flagged' against future development.

Further sampling is recommended in the snake's area of occurrence, as well as further genetic studies to confirm its taxonomic status.

Variable racer *Platyceps variabilis*

This species is endemic to western Yemen and was assessed on a global level. The species is known from the highland regions of Ta'iz and Sana'a and is considered relatively common locally. It is considered to be one population. *P. variabilis* has an area of occupancy of 50km², and a total are of occurrence of 400km².

P. variabilis was assigned Least Concern status.

No immediate threats were identified for this species.

Recommendation was made for further genetic studies throughout this species' range, as well as that of *P. manseri* to establish taxonomic status in relation to the closely allied *P. manseri*.

Common egg eater *Dasypeltis scabra*

This common species is recorded throughout sub-Saharan Africa to Egypt, as well as western Yemen and Southern Saudi Arabia. One population is recognized. *D. scabra* was assessed on a regional level, had an area of occupancy of 275km², and a total area of occurrence of 1,775km².

D. scabra was assigned Least Concern status. Although not widespread in Arabia, the species is well represented and not considered particularly rare.

There are no immediate threats to the Arabian population of *D. scabra*.

The taxonomy of this species needs a Pan-African revision. Three new species were recently described from West Africa (Trape & Mane 2006), and further cryptic species are being revived in southern Africa (Broadley & Bates, in prep.). The taxonomic status of the Arabian population also requires re-assessment.

Crowned dwarf snake *Eirenis coronella coronella*

This species is recorded throughout the northern Middle East, entering peninsular Arabia in the eastern province of Saudi Arabia, and was assessed on a regional level. There is thought to be one regional population of this species and it is well represented. The species has an area of occupancy of 75km², and a total area of occurrence of 350km² within Arabia.

E. c. coronella was assigned Least Concern status.

There are no direct threats to the Arabian population of this species.

Fennel's dwarf snake *Eirenis coronella fenneli*

This endemic subspecies is recorded from the Asir Mountains of Western Saudi Arabia. It was assessed on a global level. The area of occupancy is 100km², with a total area of occurrence of 1,425km².

E. c. fenneli was assigned Least Concern status.

Although considered locally rare, and known from few specimens, the habitat between localities is continuous and there are no perceived declines in range or population size.

There are no specific threats to *E. c. fenelli*.

A recommendation is made for taxonomic studies on this subspecies in the light of the possibility of it being elevated to species level. The most recent work has been morphological, and complimentary molecular studies are recommended.

Crowned leaf-nosed snake *Lytorhynchus diadema*

This common species has been recorded from North Africa, the Mediterranean, the Middle East and Western Asia. Within Arabia, it is known from suitable habitat throughout the region. The Arabian distribution of this species represents one population. *L. diadema* was assessed on a regional level. It has an area of occupancy of 1,350km², and a total area of occurrence of more than 28,400km².

L. diadema was assigned Least Concern status.

There are no direct threats to the Arabian population of this species.

Gasperetti's leaf-nosed snake *Lytorhynchus gasperettii*

This endemic species is recorded from the southeastern Asir Mountains of Saudi Arabia. It is only known from seven specimens, has an area of occurrence of 75km², and an area of occupancy of 150km². Records of this snake represent one population.

L. gasperettii was assessed on a global level and was assigned Vulnerable status.

The range of this snake is very restricted, but no immediate threats have been recognized to the population. Any future development, however, could have a marked impact on the species.

Aden black-headed snake *Rhynchocalamus arabicus*

This snake is known from a single specimen in the region of Aden, Yemen. The holotype is well documented and the species was assessed on a global level. The known area of occurrence and the area of occupancy is less than 25km².

R. arabicus was not assigned a conservation status as it is known from a single specimen. It was considered Data Deficient.

Possible threats to the species cannot be assessed due to the vague provenance of the type.

More intensive research and further sampling is recommended.

Clifford's diadem snake *Spalerosophis diadema cliffordi*

This species is recorded from North Africa, as far east as Iran. It occurs in suitable habitat throughout the region. A single population is thought to occur in Arabia, and the species is considered very common, particularly in the west of its range. *S. d. cliffordi* was assessed on a regional level. It has an area of occurrence of 1,850km², with an area of occupancy of 36,800km².

S. d. cliffordi species was assigned Least Concern status.

There are no specific threats affecting the Arabian population as a whole.

Arabian cat snake *Telescopus dhara dhara*

This species is known from North and East Africa through to the Middle East. In Arabia, it is known from the central mountains of Saudi Arabia and most of the mountain periphery. *T. d. dhara* was assessed on a regional level and its distribution within Arabia most likely represents one population. This species is considered common throughout much of its range. It has an area of occurrence of 1,550km², with an area of occupancy of 26,400km².

T. d. dhara was assigned the status of Least Concern.

There are no specific threats to the Arabian population of this species.

Arabian house snake *Lamprophis fuliginosus arabicus*

This species is known from western Yemen, where is considered common. Its area of occupancy is estimated at 100km², and its area of occurrence is around 575km². *L. f. arabicus* was assessed on a global level. One population of this species is recognized.

L. f. arabicus was assigned Least Concern status.

No threats were identified for this species.

Recommendations are made for sampling the species for genetic studies, as revisions of this genus in Africa have revealed deep genetic divergences that will require reappraisal of the existing taxonomy and description of new species (C. Kelly, in prep.).

Afro-Asian sand snake *Psammophis schokari schokari*

This common species is recorded from Northwest Africa, through the Middle East as far East as Nepal. In Arabia it is known from suitable habitat throughout the entire region in a single population. This species was assessed on a regional level. It has an area of occurrence of 3,475km², with an area of occupancy of 4,600km².

P. s. schokari was assigned Least Concern status.

There are no specific threats to the Arabian population of this species.

False cobra, hooded malpolon *Malpolon moilensis*

This common snake is recorded from Northwest Africa to the Middle East. It is known from suitable habitat throughout peninsular Arabia. The species was assessed on a regional level. It has an area of occurrence of 2,650km², and a total area of occupancy of 44,000km². One population is thought to exist.

M. moilensis was assigned Least Concern status.

There are no direct threats facing the Arabian population.

Anderson's burrowing asp *Atractaspis (microlepidota) andersonnii*

This endemic taxon is recorded from the Northern Asir Mountains of Saudi Arabia south to Yemen and east to Dhofar in Oman. The Hadramaut range in Yemen probably forms an ecological barrier which likely spits the species' distribution into at least two populations, one in Dhofar and Southeast Yemen, and one in the Eastern complex, penetrating some distance into the Hadramaut complex. It's occurrence within the Hadramaut complex is not clearly understood. It was assessed on a global level and has an area of occurrence of 250km², and an area of occupancy of 6,400km². The species is considered reasonably common throughout most of its range.

A. (m.) andersonii was assigned Least Concern status.

There are no direct threats to this species' populations at present.

Further taxonomic studies on the species are required as typical *A. microlepidota* is restricted to West Africa (Trape *et. al.* 2006), and East African and Arabian populations representatives may be specifically distinct.

Ein-Geddi burrowing asp *Atractaspis (microlepidota) engaddensis*

This subspecies is recorded from Sinai through to the eastern and central mountains of Saudi Arabia, and is replaced by *A. (m.) andersoni* at the northernmost extremity of the Asir mountain complex. The species was assessed on a regional level and has an area of occurrence of 325km², and a total area of occupancy of 8,000km². The Arabian distribution of this species is considered a single population and represents over 60% of the global population.

A. (m.) engaddensisi was assigned Least Concern status.

There are no specific threats to the Arabian population of this subspecies.

Arabian cobra *Naja arabica*

This endemic species is recorded from the southwestern mountains of Saudi Arabia and Yemen, through the Hadramaut to Dhofar in Oman. It was recently validated as a full species (Trape *et. al.* 2009). Its distribution within Hadramaut is fragmented and unclear, and there may be upwards of three distinct populations. This species was assessed on a global level. It has an area of occurrence of 1,400km², with a total area of occupancy of 12,000km².

N. arabica was assigned Least Concern status.

Threats were identified in the form of commercial collection of snakes for venom extraction (Saudi Arabia) and apparently for the pet industry (Saudi Arabia). None however have been confirmed to have an effect on the overall populations.

Desert black snake, black desert cobra *Walterinnesia aegyptia*

This species is recorded from North Africa to the Middle East. Within Arabia, it is known from Northeast and Central Saudi Arabia with some occurrence in the Northwest. There is some speculation of the species' occurrence in Qatar (Per com: Fran Gillespie), but this is yet to be confirmed. It was assessed on a regional level and a single population was identified. It has an area of occurrence of 425km², with an area of occupancy of 12,400km². Although locally considered to be rare, this snake is well represented over a large range.

W. aegyptia was assigned Least Concern status.

Potential threats were identified in the form of the development of gravel plains in parts of its range. Recommendations included further field studies and intensive field work in Qatar and peripheral parts of its range.

Puff adder *Bitis arietans arietans*

This widespread species is known throughout Sub-Saharan Africa, northeast Africa, the Asir Mountains of southwestern Saudi Arabia, Yemen as far east as Dhofar. The occurrence of this species in Arabia represents less than 1% of its global distribution. *B. a. arietans* was assessed on a regional level. *B. a. arietans* is considered common in southwestern Arabia, but less so in Dhofar. It has an area occurrence of 1,025km², and an area of occupancy of 7,200km². At least two populations are recognized, one in southwestern Arabia and the second in Dhofar. Its occurrence in the Hadramaut complex is not well understood, but informal accounts of the species' occurrence in the Seiun area suggest fragmented populations may occur there.

B. a. arietans was assigned Least Concern status.

No immediate threats were identified for the species as a whole, although coastal plain development in Dhofar may represent a potential threat in the future.

Hoofien's horned viper *Cerastes cerastes hoofieni*

This endemic subspecies has a limited distribution in the coastal plains of southwestern Saudi Arabia and adjacent Yemen. It was assessed on a global level. It has an area of occurrence of 150km², and an area of occupancy of 1,350km². One population is recognized.

C. c. hoofieni was assigned Near Threatened status based on its limited distribution.

No immediate threats were identified for this subspecies.

Recommendations are made for genetic study on this subspecies to determine its exact taxonomic status, and to assess its entire range in relation with the sympatric Arabian horned viper *Cerastes gasperettii*.

Arabian horned viper *Cerastes gasperettii*

This common and widespread near-endemic species is known throughout the Arabian Peninsula in vegetated sand deserts. It has an area of occupancy of 3,325km², and an area of occurrence of 50,800km². *C. gasparetti* was assessed on a global level.

C. gasperettii was assigned Least Concern status.

Threats were identified regionally in the form of off-road driving (notably in the UAE), but could not be confirmed to have a significant impact on the population as a whole.

Northeast African saw-scaled viper *Echis pyramidum*

This represents a widespread and taxonomically unresolved complex, particularly in Southern Yemen. The species, as it is currently known, is found from northeast Africa, through Sinai, to western Saudi Arabia and Yemen. It has an area of occupancy of 550km², and an area of occurrence of 9,200km², and was assessed on a regional level. At present, one population is recognized.

E. pyramidum was assigned Least Concern status.

Various general threats were recognized throughout much of this species' range, but none were considered to have a direct impact on the population as a whole.

Khosatzki's saw-scaled viper *Echis khosatzkii*

This species has recently been revived from the *E. pyramidum* complex and is known from the Dhofar region of southern Oman, and possibly in southwestern Yemen. It has a known area of occupancy of 150km², and an area of occurrence of 525km². One population of this species is recognized. *E. khosatzkii* was assessed on a global level.

E. khosatzkii was assigned Near Threatened status on the basis of a limited natural range, with relatively few records, and potential threats to a large potion of its known range. Threats were identified in the form of urban development, already in progress in parts of the Dhofar coastal plains, and planned for the future. As much of the range is at sea level, sea level fluctuations caused by global warming could also pose a threat to this species.

Burton's carpet viper *Echis coloratus coloratus*

A widespread and common species, *E. coloratus* is known from northeast Africa, Sinai, and western Saudi Arabia to southern Arabia. Two populations are presently recognized, one along Western Saudi Arabia and Yemen, entering the Hadramaut, and a second, seemingly isolated population in Dhofar. It has a known area of occupancy of 1,525km², and an area of occurrence of 24,400km². It was assessed on a regional level.

E. c. coloratus was assigned Least Concern status

Although general threats affect this species, none are recognized to have a significant impact on the populations on the whole. Recommendations are made to intensify sampling in the areas between the areas (Hadramaut, Hauf, Western Dhofar) between populations and to obtain more genetic material.

Oman carpet viper *Echis omanensis*

E.omanensis was described as a distinct species endemic to the Al Hajar Mountain complex of Northern Oman and the UAE (Babocsay 2004). It was previously confused with *E. coloratus*. One population is recognized extending the length of the Al Hajar Mountains, primarily on the Eastern watershed. It has a known area of occupancy of 875km², and a known area of occurrence of about 1,000km². *E. omanensis* was assessed on a global level.

E. omanensis was assigned Least Concern status.

Threats were identified in the form of massive coastal development throughout the region, as well as water-yielding wadis increasingly being used for recreational activities. Due to this species being widespread, resilient and non-specific in habitat requirements, these threats are not regarded as having a significant impact on the species as a whole.

Sindh saw-scaled viper *Echis carinatus sochureki*

This common and widespread species is known from the Arabian Peninsula in vegetated sand deserts throughout the Eastern Province of Saudi Arabia, Qatar, the United Arab Emirates, and north-eastern Oman. Elsewhere it is known from Pakistan and coastal Iran. It has an area of occupancy in Arabia of 725km², and an area of occurrence in the region of 2,000km². It was assessed on a regional level, and was assigned Least Concern status.

Threats were identified regionally in the form of off-road driving (notably in the UAE), but could not be confirmed to have an impact on the population as a whole.

Persian horned viper, False-horned viper *Pseudocerastes persicus*

This snake is known from the mountains and plateaus of Iran, Pakistan and Afghanistan. In Arabia it is known from the Al Hajar mountain complex at altitudes above 600m, but generally much higher. It has an area of occupancy of 175km², and an area of occurrence of around 400km². *P. persicus* was assessed on a regional level.

P. persicus was assigned Regionally Near Threatened status.

Threats are recognized in the form of mountain development, road building, quarrying and global warming, as this species seems to be dependant on the relatively cooler temperatures of the higher mountains.

Field's horned viper, Field's false-horned viper *Pseudocerastes fieldi*

This snake is known from northern Iran through to Sinai and the extreme north of Saudi Arabia on the border with Jordan. It has an area of occupancy of 75km² and an area of occurrence of 2,100km². *P. fieldi* was assessed on a regional level.

P. fieldi was assigned Least Concern status

No direct threats are recognized for this species within Arabia and the Arabian distribution represents only a small fraction of the global distribution.

4. Geographical hot spots and areas of high study priority

By layering the distribution maps of assessed species, certain areas become clearly evident as snake 'hot-spots'. These are those parts of the Arabian Peninsula that contain vulnerable species, high species diversity and low levels of field studies and sampling. The most notable diversity hot-spots include western Yemen and Dhofar, in Oman.

4.1. Snake hot-spots

4.1.1. Diversity hot-spots

This map represents the layered distribution (area of occupancy) of the taxa assessed during the course of the workshop. The individual taxon distribution markers are set at 7% transparency increments, producing a 7% quantitative darkening with each overlap. Areas that reveal themselves as species rich include (1) Mountain hinterland near Riyadh, (2) Asir Mountains, (3) Southwestern Yemen, (4) Dhofar and (5) the Eastern Mountain complex.

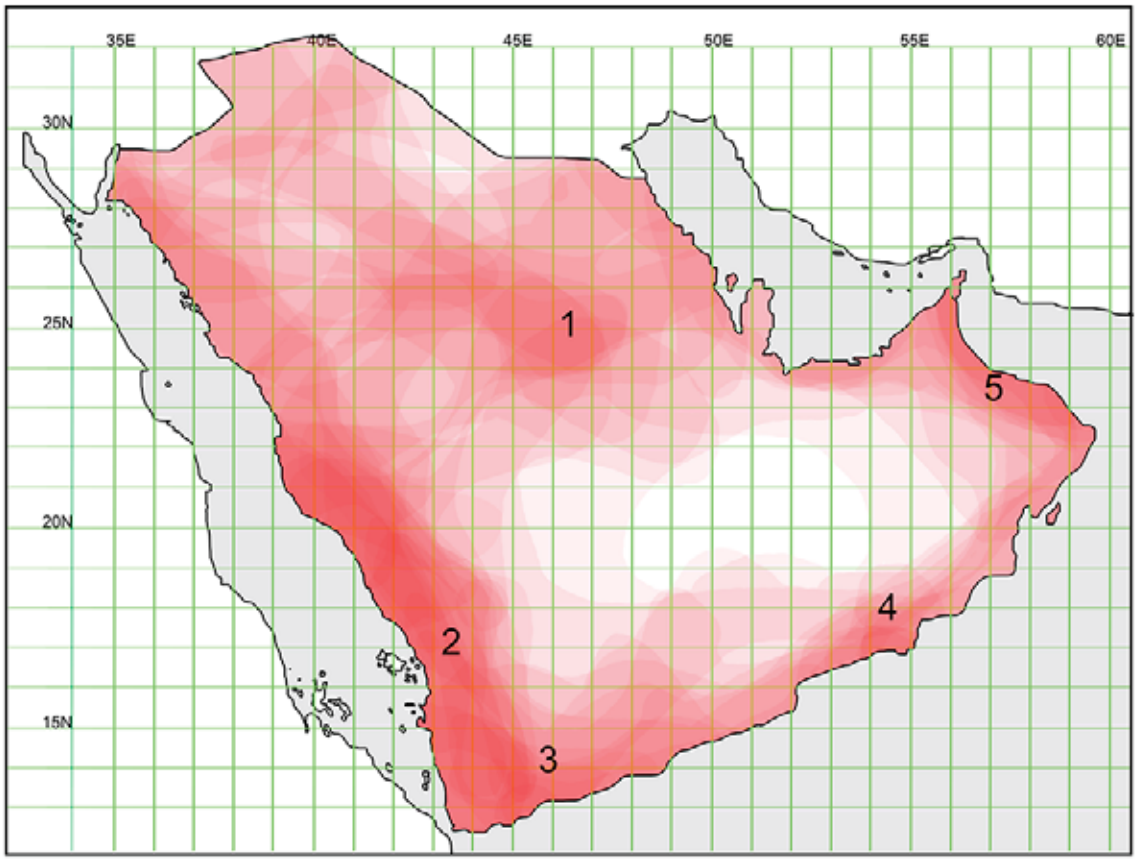

Figure 1. Diversity hot-spots.

4.1.2. Species assigned near-threatened and vulnerable status

Figure 2 shows a collective layering of only species assigned to Near-threatened or Vulnerable status. When taking species diversity and rate of field study into consideration, this information would place particular priority to southwestern Yemen and Dhofar.

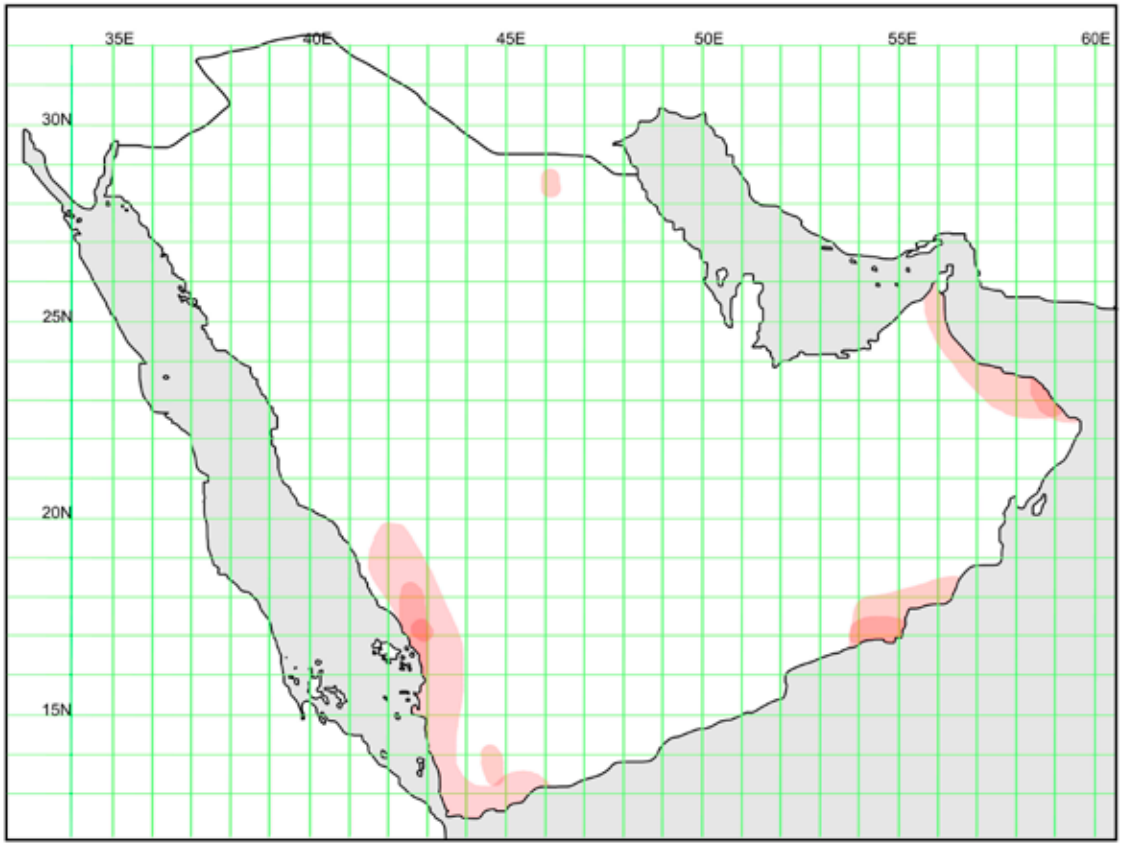

Figure 2. Hot-spots for Vulnerable and Near Threatened species.

4.2. Areas with little historical data

A review of the current literature revealed that there is a general lack of consistent sampling and publishing throughout the region. Some areas, however, have been subjected to far less sampling. The map above depicts the general areas historically subjected to less than normal collection.

1) Northern Saudi Arabia/Jordan border region
2) Northeastern Saudi Arabia/Kuwait border region and Eastern Province of Saudi Arabia
3) The Central Rub Al Khali sand desert complex
4) Southwestern Yemen
5) Hadramaut region of Yemen further to the Oman border
6) Dhofar
7) Coastal waters of the Arabian Gulf

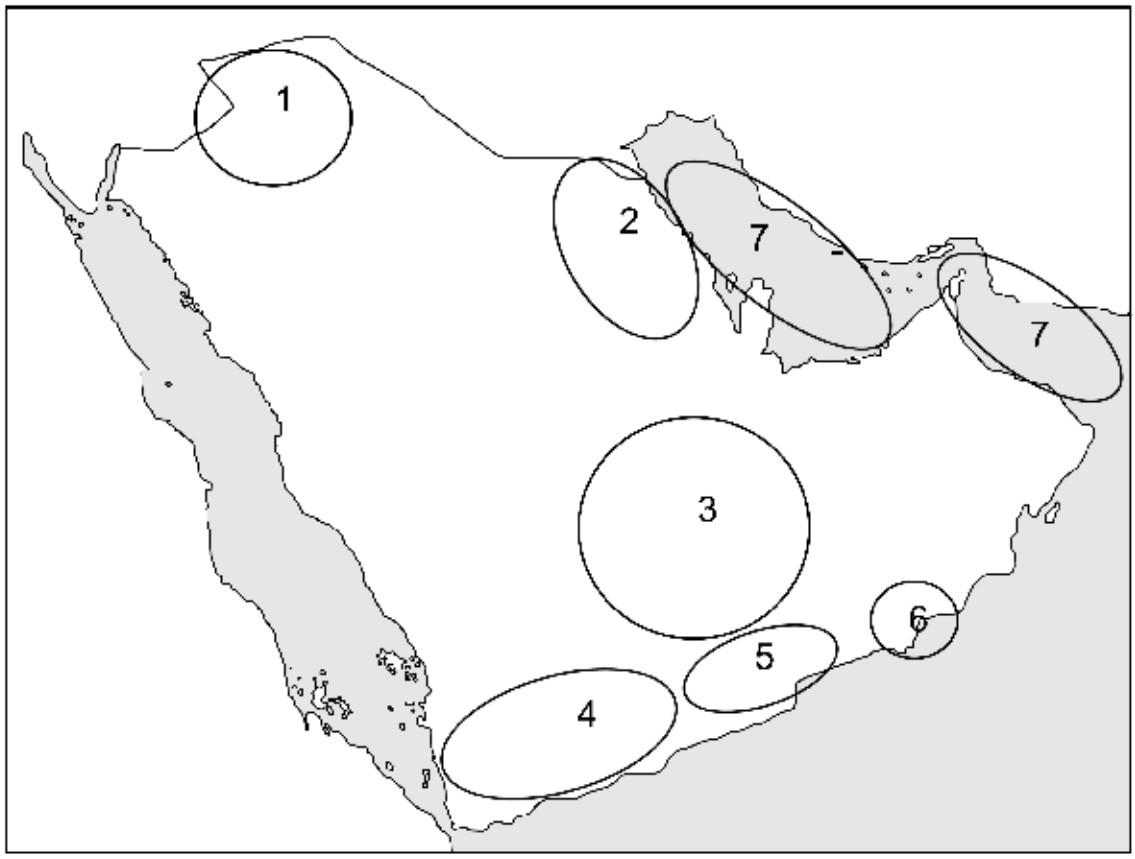

Figure 3. Areas with little historical data.

5. Threats

5.1. General threats

Most threats identified affect all species that have a range that fall within the threat zone. The majority of these threats do not appear to be great enough to have impact on entire taxa, or populations thereof. It was agreed to adopt a conservative approach when assessing threats as in most cases there is insufficient research to substantiate objective threat levels. Most reports of threats comprise anecdotal observations. A list of confirmed general threats that affect Arabian snakes is discussed below.

5.1.1. Quarrying

This activity is prevalent throughout mountainous areas of Saudi Arabia, Oman, UAE and Yemen. It is especially prevalent in the United Arab Emirates, where large-scale rock quarrying is being conducted in the eastern mountains to supply construction companies with building materials. This activity has amplified with the construction of artificial islands in Dubai and elsewhere. Apart from rock, quarrying for gypsum is conducted in medium to large scale in ecologically sensitive areas in Yemen, such as in the Hadramaut. Concerns are raised regarding the indiscriminate and often informal spread of quarrying without sufficient environmental impact assessments being conducted.

5.1.2. Urban development

A general lack of urban planning throughout the region has resulted in a random sprawl of urban structures into natural areas. Industrial areas often arise on desert gravel plains, and in turn give rise to smaller peripheral industry and human habitation. This creates a chain-reaction of roads and other infrastructure which effectively fragments the given habitat considerably. Coastlines and scenic mountain areas are being developed at an unprecedented rate to accommodate the tourism industry, particularly in Oman and UAE.

5.1.3. Off-road driving

The use of 4x4 vehicles and quad bikes for recreational purposes is a popular activity throughout the sand deserts of the region, particularly Saudi Arabia, Qatar, Oman and UAE. It is a well-advertised tourist activity that generates much foreign currency in some of these countries. It is also a very popular weekend activity of locals and resident expatriates alike. To a lesser extent, residents and locals use the desert for daily thoroughfare and contribute to the deterioration of the quality of the habitat.

The negative effects of off-road driving are both directly evident, and more complex and longer-term. Apart from reptiles being directly crushed from vehicle collisions, the surface of normally stable dunes is constantly being broken, allowing for very rapid erosion and dehydration of the dunes. Plants are natural dune-binding agents and cannot withstand repetitive traffic. Seeds establish better in stable dune conditions, so far less plants will be found in areas with high levels of off-road driving. As plants form the basis for all desert food webs, a decline in plant-eating species, many of which are primary prey items for snakes, will result in a decline in all other species, snakes included. The crust of sand found on stable dunes is essential for many prey species, such as lizards and rodents to dig burrows.

Off-road driving in the mountainous areas, commonly (and appropriately) referred to as wadi bashing, is another activity that is on the increase. It is uncertain to what extent this sport damages the environment, but the increase of human activity in remote areas generally results in a decline in the quality of the habitat.

5.1.4. Over-grazing

As with off-road driving, over-grazing by domestic livestock such as camels, goats, sheep, cattle and donkeys, causes a dramatic change in the desert flora profile. Apart from competing for food with indigenous herbivorous fauna, the reduction in dune-binding plants results in erosion. Other negative impacts from the presence of livestock includes continuous trampling of habitat (particularly where these herds are resident all year round), and the succession of inedible plants on the landscape.

5.1.5. Over-utilization of freshwater resources

This is a continuing problem that was identified as crucial to the several endemic freshwater fish, amphibian, chelonian and invertebrate species of Arabia in previous conservation meetings. Pumping of water for agriculture, domestic and municipal reasons have significantly lowered the water table throughout the region, and continue to do so. In some areas, like Bahrain, this has had the effect of existing freshwater bodies becoming salinated and nearing a quality that would be unfit to sustain the present ecology. The general lowering of the water table would naturally have a major impact on water-dependant snakes, but would also reduce the biodiversity locally, which will have an effect throughout the food web.

5.1.6. Global climate change

As much of the Arabian Peninsula is low-lying land, close to sea level, the increase of temperatures predicted globally will cause a massive reduction in habitat in these areas. Habitat will alter throughout the region and it is likely that species will experience major changes in their distribution and the size of their population. False-horned vipers, for example, tend to inhabit cooler higher mountains that the Oman carpet vipers avoid. A few degrees increase in temperature could result in an increase in carpet viper range and the Persian horned vipers being out-competed to extinction.

5.2. Specific threats

The following table illustrates the threats facing snakes assessed during this workshop.

P- Represents threats taking place in the present

F- Represents perceived threats for the future

If in *Italics* these are general threats that likely do not have an impact on a taxon as a whole, or populations thereof.

If **BOLD** these a specific threat that may have a negative impact on the taxon, or population.

* - species where one population is being affected by a threat whilst others may not.

Species	Quarrying	Urban Dev.	Offroad Driving	Over-grazing	Fresh-water	Collecting	Climate change	Other
Myriopholis macrorhynchus		*P F*						
M. nursii		**P F*** *P F**						
M. burii		*P F*						
Eryx jaculus			*P F*					**Military activitry**
Eryx jayakari		*P F*	*P F*	*P F*				
Platyceps ventromaculatus		*P F*		*P F*	*P F*			
P. rhodorachis	*P F*	*P F*			*P F*			
P. elegantissimus		*P F*						
P. variabilis		*P F*						
P. thomasi		**P F**		*P F*			*P F*	**Restricted range**
P. manseri		*F*						**Restricted range**
Dasypeltis scabra		*F*						
Eirenis c. coronella		*P F*	*P F*	*P F*				
E. c. fennelli		*P F*						**Restricted range**
Lamprophis fuliginosus arabicus		*P F*						
Lytorhynchus diadema		*P F*	*P F*	*P F*				
L. gasperettii		*F*						**Restricted range**

Species	Quarrying	Urban Dev.	Offroad Driving	Over-grazing	Fresh-water	Collecting	Climate change	Other
Malpolon moilensis		*P F*	*P F*	*P F*				
Psammophis schokari		*P F*	*P F*	*P F*				
Rhynchocalamus arabicus		*F*						**Restricted range**
Spalerosophis diadema cliffordi	*P F*	*P F*		*P F*				
Telescopus dhara	*P F*	*P F*						
Atractaspis (microlepidota) andersoni		*P F*						
Atractaspis (m.) engaddensis		*P F*						
Naja arabica	*F*	*P F*			*P F*	*P F*		
Walterinnesia aegyptia		*P F*	*P F*	*P F*		*P F*		
Bitis arietans arietans				*P F*				
Cerastes c. hoofieni		*F*	*P F*	*P F*				
C. gasperettii		*P F*	*P F*	*P F*		*P F*		
Echis pyramidum	*F*					*P F*		
E. khosatzkii		**P F**		*P F*			**F**	
E. carinatus sochureki		*P F*	*P F*	*P F*				
E. coloratus	*P F*	*P F*		*P F*	*P F*	*P F*		
E. omanensis	*P F*	*P F*		*P F*	*P F*			
Pseudocerastes persicus	*P F*	*P F*		*P F*			*F*	**Restricted range**
P. fieldi		*P F*						

6. Recommendations

6.1. Field study

The vast majority of records for snakes in Arabia are now more than 20 years old, with proportionately little having been contributed between the 1980's and the present. A recommendation is made for field workers, scientists.

6.2. Taxonomic studies

A strong recommendation is made to revise the taxonomic status, by means of genetic studies, of several taxa in the region. The following are appended specific recommendations for taxonomic studies:

1) *Myriopholis*. All members of this genus (previously placed in the genus *Leptotyphlops*) are recommended for taxonomic study.
2) *Eirenis coronnella fenneli*.
3) *Atractaspis*. Both species occurring in the region require intensive taxonomic work in light of their closest African allies having been revised and reclassified.

4) Echis. This genus is currently under revision and subject to intensive taxonomic scrutiny. A recommendation is made for the continuation of this in light of at least two species that may not have been described. The distributions and habitat requirements of species in Dhofar and adjacent Yemen is largely unknown, and intensifies collection in this area is recommended.

6.3. Recommendations for data deficient species not assessed, but confirmed from the Arabian Peninsula.

Snakes extant within the Arabian Peninsula and adjacent waters, but represented by insufficient data to make a conclusive assessment, were given individual recommendations, although in most cases general blanket recommendations apply to all concerned. The following is a list of these snakes, with specific recommendation appended to each:

6.3.1. Yemen Thread snake *Myriopholis yemenicus*

Intensified sampling of the genus *Myriopholis* throughout Yemen is recommended to ascertain the exact area of occurrence of this species, and its taxonomic relationship with other members of the genus. This taxa lacks specific locality data.

6.3.2. Aden black-headed snake *Rhynchocalamus arabicus*

Further sampling is required within the vicinity of Aden, Yemen, to ascertain the area of occurrence of this species. Presently it is only known from the type specimen.

6.3.3. Sea snakes, including the following species:

Stoke's sea snake *Astrotia stokesii*,
Beaked sea snake *Enhydrina schistosa*
Annulated sea snake *Hydrophis cyanocinctus*
Arabian Gulf sea snake *Hydrophis lapemoides*
Ornate sea snake *Hydrophis ornatus ornatus*
Yellow sea snake *Hydrophis spiralis spiralis*
Short sea snake *Lapemis curtus*
Small-headed sea snake *Microcephalophis gracilis*
Pelagic sea snake *Pelamis platura*
Viperine sea snake *Preascutata viperina*

A general recommendation is made for sea snakes throughout Arabian waters for further field research. Information is required for habitat requirements, life-cycles, population dynamics, distributions and population densities, migration and ultimately threats for Arabian *Hydrophiidae* in general and for specific taxa.

6.4. Recommendations for threats

6.4.1. Field surveys in areas perceived to be under threat.

It is recommended that formal environmental impact surveys be implemented in areas where environmental threats are perceived to occur, in order to ascertain the exact nature and extent of the perceived threat.

6.4.2. Environmental impact assessment.

It is recommended that environmental impact assessments (EIA's) be carried out prior to any form of human development or proposed activity within the region. This is a process whereby the level of threat to the environment or particular taxa can be predicted, so that measures can be taken to prevent excessive harm. This should be mandatory on a government or municipal level and make use of NGO's.

7. Actions

It is premature to report on actions as this still falls under the banner of recommendations. Only one action has been undertaken as a result of this conservation workshop.

Standardised guidelines for the collection, documentation and preservation of reptiles for scientific use have been prepared (see Appendix 2).

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APPENDIX 1

Taxon Data Sheets & Distribution Maps

Conservation Workshop for the Fauna of Arabia
Taxon Data Sheet

Working Group: Snakes Date: 3-5 February 2008

1. Taxonomy

1A. Scientific Name (Genus, species & subspecies): *Myriopholis burii*

Authority: (Boulenger) Date: 1905

1B. Synonyms (with authority & date):

1C. Common Name(s) with language/region:
Buri's thread snake

2. Distribution

2A. Historical Distribution (last 100 years):
NNE of Aden, Yemen

2B. Current Distribution (illustrate on map):
See 2A

2C. Habitat of the taxon (ecosystem level):
SW Arabian foothills: Savannah

2D. Habitat specificity (elevation, etc.):
Less than 100m Above sea level- mostly agricultural land

2E. Migration: ○ Yes ◉ No ○ Unknown

If Yes, describe:

3. Number of Populations & Subpopulations in which the Taxon is distributed:

Location of each:	Approx. Area Occupied:	Approx. No. of Individuals:
1	25km2	

4. Population Trends

4A. Is the Population: ○ Increasing ○ Decreasing ○ Stable ◉ Unknown

4B. If declining, what has been the rate of decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has the population decline occured?

4C. If stable or unknown, do you predict a future decline in the population size? ◉ Yes ○ No

If Yes, please specify rate and factors e.g. habitat loss, trade, etc.:

5. Habitat Status

5A. Is the habitat distribution: ○ Continuous ○ Fragmented ◉ Unknown

5B. Is there any change in the range of the habitat where the Taxon occurs? ○ Yes ○ No ◉ Unknown
If Yes, is it: ○ Decreasing in Area ○ Increasing in Area

5C. If decreasing what has been the decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has this decline occured?

5D. Do you predict a future decline in the habitiat? ○ Yes ◉ No

If Yes, what do you predict that decline will be? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years do you predict the decline will occur?

5E. State the primary cause of this change:

5F. Is there any change in the quality of the habitat where the Taxon occurs? ○ Yes ○ No ◉ Unknown

If Yes, is the habitat quality: ○ Declining ○ Improving

5G. State the primary cause of this change:

6. Threats

	Present	Future		Present	Future
Pollution	☐	☐	Disease	☐	☐
Urban Development	☐	☒	Hybridization	☐	☐
Road Kills	☐	☐	Decline in prey species	☐	☐
Damming	☐	☐	Loss of habitat	☒	☒
War	☐	☐	Genetic problems	☐	☐
Recreational activities	☐	☐	Grazing	☐	☐
Hunting (recreation or retail)	☐	☐	Habitat fragmentation	☒	☒
Harvest for medicine	☐	☐	Predation	☐	☐
Harvest for food/timber	☐	☐	Interspecific competition	☐	☐
Poisoning	☐	☐	Livestock competition (food, etc.)	☐	☐
Pesticides	☐	☐	Livestock conflicts (retaliation kills)	☐	☐
Persecution	☐	☐	Introduced species (non-livestock)	☐	☐
Trade of animals/parts	☐	☐	Nutritional disorders	☐	☐

Other (please specify):

6B. Would these threats result in (perceived or inferred) population decline? ○ Yes ○ No ◉ Unknown

Comment:

7. Trade

7A. Is the Taxon in trade? ○ Yes ◉ No ○ Unknown

If Yes, is it: ○ Local ○ Regional ○ International ○ Commercial

7B. Parts in trade:

☐ Skin ☐ Fur ☐ Hair ☐ Horn ☐ Bones ☐ Glands

☐ Meat ☐ Products ☐ Live Animal ☐ Taxidermy ☐ Organs

Comments/Other threats (please specify):

8. Data Quality

8A. Are the estimates you have supplied based on:

☐ Census or monitoring ☐ General field studies ☒ Informal field studies ☒ Literature
☐ Hearsay/popular belief ☐ Museum studies/records ☐ Indirect information from trade, etc.

9. Studies (field) conducted over the last 10 years (indicate the year of study not the year of publication):

Researchers	Location	Year	Topic

10. Conservation Status

10A. IUCN Red List Category: Global: Not listed Regional: Not listed

10B. National Red Data Book:
Not listed

10C. Workshop Assessment of Regional Red List Category: Vulnerable

10D. CITES: Not listed

10E. National Wildife Legislation:
Not listed

10F. Other Legislation (please specify):

10G. List existing Protected Areas within the Taxon's range:

Protected Area	Country	Size (km^2)

10H. Recommended Protected Areas for the Taxon:

Area	Country	Size (km^2)

10I. Are there any Regional Conservation/Protection Action Plans: ○ Yes ◉ No ○ Unknown

If Yes, please list them:

11. Supporting Research

11A. Is research recommended? ◉ Yes ○ No

If Yes, what type of research would you recommend?

☒ Surveys ☐ Genetics ☒ Taxonomic ☒ Life History ☐ Public Awareness
☐ Trade ☐ Monitoring ☐ Reintroduction ☒ Human Impact
☐ Other (please specify):

12. Management

12A. What management is recommended for the Taxon?

☒ Habitat management ☐ Wild population management ☐ Captive breeding
☒ Monitoring ☐ Translocation ☐ Sustainable Use
☐ Public Awareness ☐ Limiting Factor Management ☐ Genome Research Banking
☐ Law Enforcement ☐ Work in Local Communities ☐ Address Policy Makers
☒ Other (please specify):

13. Captive Breeding

13A. Is captive breeding recommended for the taxon: ○ Yes ◉ No

13B. If captive breeding is recommeded , is it for:

☐ Species recovery ☐ Reintroduction ☐ Research ☐ Husbandry

☐ Education ☐ Preserve live genome

13C. Do Captive stocks already exist? ○ Yes ○ No ○ Unknown

If Yes, list the facilities:

Facility	Country	Males	Females	Unknown	Total

13D. Does a coordinated Species Management Plan exist? ○ Yes ○ No ○ Unknown

If Yes, list the participating institutions:

If Not, is a Species Management Plan recommended: ○ Yes ○ No

If Yes, list the institutions that should participate:

13E. Level of captive breeding recommended:

☐ Captive breeding program not neccessary ☐ Initiate program within 3 years

☐ Maintain existing program as it is ☐ Intensify existing program ☐ Decrease existing progam

13F. Are the techniques established for captive breeding?

☐ Techniques are known for this or similar taxon ☐ Some techniques are known for this or similar taxon

☐ Techniques not known for this or simialr taxon ☐ Unknown

14. Sources/References (complete citation):

Egan, D. 2007. Snakes of Arabia. A field guide to the Snakes of the Arabian Peninsula and its Shores. Motivate Publishing.

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15. Compilers

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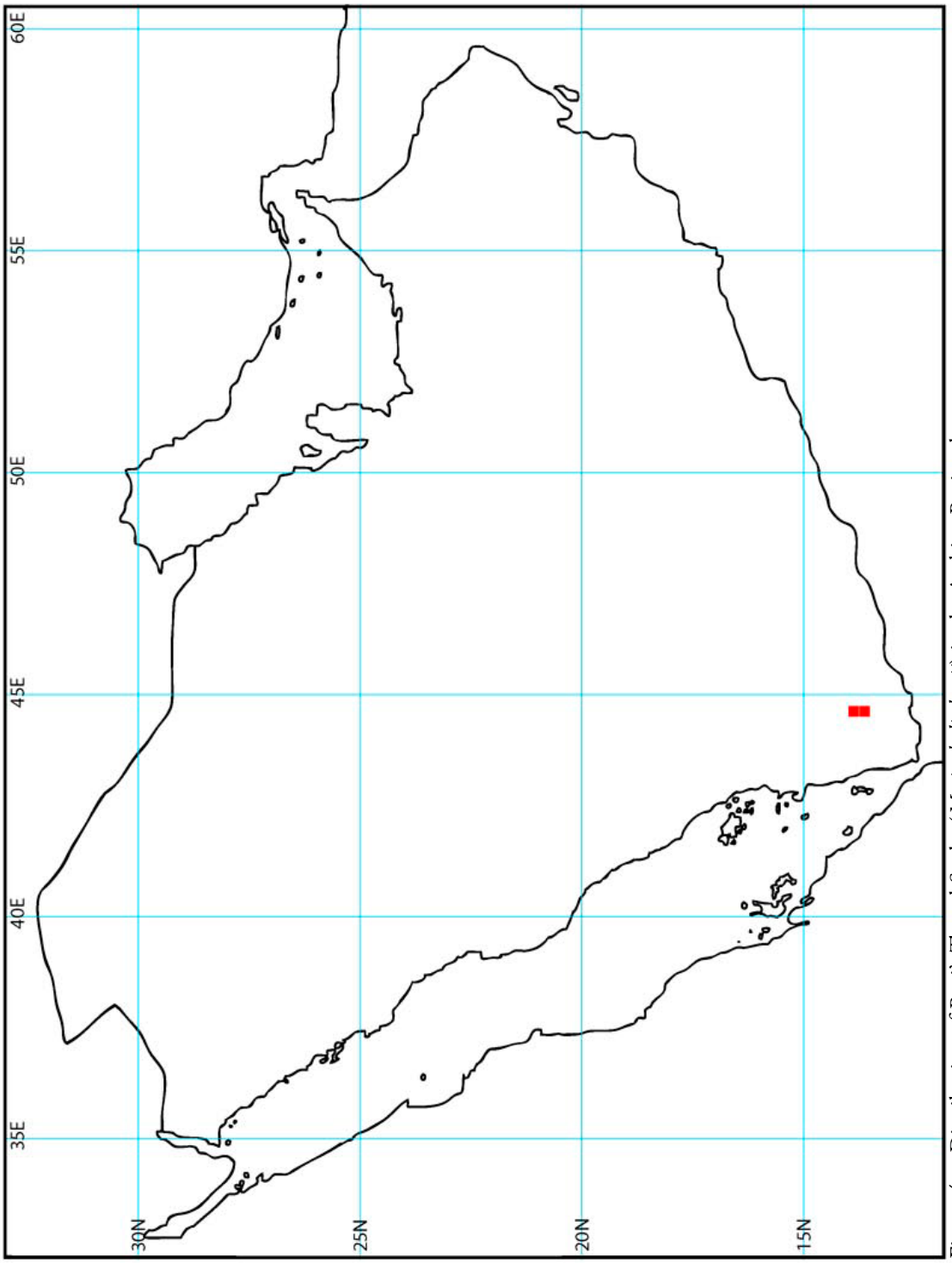

Figure 4. Distribution of Buri's Thread Snake (*Myriopholis burii*) in the Arabian Peninsula.

Conservation Workshop for the Fauna of Arabia
Taxon Data Sheet

Working Group: Snakes Date: 3-5 February 2008

1. Taxonomy

1A. Scientific Name (Genus, species & subspecies): *Myriopholis nursii*

Authority: Anderson Date: 1896

1B. Synonyms (with authority & date):
refer Gasparettii FSA VOl 9

1C. Common Name(s) with language/region:
Nurse's thread snake

2. Distribution

2A. Historical Distribution (last 100 years):
SW Saudi Arabia, western Yemen and eastern Oman, near Muscat.

2B. Current Distribution (illustrate on map):
See 2A

2C. Habitat of the taxon (ecosystem level):
Varied: including SW Arabian foothills and savannah, coastal plains and agricultural land.

2D. Habitat specificity (elevation, etc.):
Non-specific, found at varying altitudes.

2E. Migration: ○ Yes ◉ No ○ Unknown

If Yes, describe:

3. Number of Populations & Subpopulations in which the Taxon is distributed:

Location of each:	Approx. Area Occupied:	Approx. No. of Individuals:
Red Sea watershed and SW Yemen	> 75 000km2	Unk
Eastern Oman near Muscat	25km2	Unk

4. Population Trends

4A. Is the Population: ○ Increasing ○ Decreasing ○ Stable ◉ Unknown

4B. If declining, what has been the rate of decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has the population decline occured?

4C. If stable or unknown, do you predict a future decline in the population size? ○ Yes ◉ No

If Yes, please specify rate and factors e.g. habitat loss, trade, etc.:

5. Habitat Status

5A. Is the habitat distribution: ○ Continuous ◉ Fragmented ○ Unknown

5B. Is there any change in the range of the habitat where the Taxon occurs? ◉ Yes ○ No ○ Unknown

If Yes, is it: ◉ Decreasing in Area ○ Increasing in Area

5C. If decreasing what has been the decline? ◉ <20% ○ >20% ○ >50% ○ >80%

Over how many years has this decline occured?

5D. Do you predict a future decline in the habitiat? ◉ Yes ○ No

If Yes, what do you predict that decline will be? ◉ <20% ○ >20% ○ >50% ○ >80%

Over how many years do you predict the decline will occur? 10 years.

5E. State the primary cause of this change:
Rapid urban development of Omani east coast.

5F. Is there any change in the quality of the habitat where the Taxon occurs? ◉ Yes ○ No ○ Unknown

If Yes, is the habitat quality: ◉ Declining ○ Improving

5G. State the primary cause of this change:
Urban development.

6. Threats

	Present	Future		Present	Future
Pollution	☐	☐	Disease	☐	☐
Urban Development	☒	☒	Hybridization	☐	☐
Road Kills	☐	☐	Decline in prey species	☐	☐
Damming	☐	☐	Loss of habitat	☒	☒
War	☐	☐	Genetic problems	☐	☐
Recreational activities	☐	☐	Grazing	☐	☐
Hunting (recreation or retail)	☐	☐	Habitat fragmentation	☐	☒
Harvest for medicine	☐	☐	Predation	☐	☐
Harvest for food/timber	☐	☐	Interspecific competition	☐	☐
Poisoning	☐	☐	Livestock competition (food, etc.)	☐	☐
Pesticides	☐	☐	Livestock conflicts (retaliation kills)	☐	☐
Persecution	☐	☐	Introduced species (non-livestock)	☐	☐
Trade of animals/parts	☐	☐	Nutritional disorders	☐	☐

Other (please specify):

6B. Would these threats result in (perceived or inferred) population decline? ◉ Yes ○ No ○ Unknown

Comment:
Urban expansion in range of eastern population.

7. Trade

7A. Is the Taxon in trade? ○ Yes ◉ No ○ Unknown

If Yes, is it: ○ Local ○ Regional ○ International ○ Commercial

7B. Parts in trade:

☐ Skin ☐ Fur ☐ Hair ☐ Horn ☐ Bones ☐ Glands
☐ Meat ☐ Products ☐ Live Animal ☐ Taxidermy ☐ Organs

Comments/Other threats (please specify):

8. Data Quality

8A. Are the estimates you have supplied based on:

☐ Census or monitoring ☒ General field studies ☒ Informal field studies ☒ Literature
☐ Hearsay/popular belief ☒ Museum studies/records ☐ Indirect information from trade, etc.

9. Studies (field) conducted over the last 10 years (indicate the year of study not the year of publication):

Researchers	Location	Year	Topic

10. Conservation Status

10A. IUCN Red List Category: Global: Not listed Regional: Not listed

10B. National Red Data Book:
Not listed

10C. Workshop Assessment of Regional Red List Category: Near Threatened

10D. CITES: Not listed

10E. National Wildife Legislation:
Not listed

10F. Other Legislation (please specify):

10G. List existing Protected Areas within the Taxon's range:

Protected Area	Country	Size (km^2)

10H. Recommended Protected Areas for the Taxon:

Area	Country	Size (km^2)

10I. Are there any Regional Conservation/Protection Action Plans: ○ Yes ◉ No ○ Unknown

If Yes, please list them:

11. Supporting Research

11A. Is research recommended? ◉ Yes ○ No

If Yes, what type of research would you recommend?

☒ Surveys ☐ Genetics ☒ Taxonomic ☐ Life History ☐ Public Awareness
☐ Trade ☐ Monitoring ☐ Reintroduction ☒ Human Impact
☐ Other (please specify):

12. Management

12A. What management is recommended for the Taxon?

☒ Habitat management ☐ Wild population management ☐ Captive breeding
☐ Monitoring ☐ Translocation ☐ Sustainable Use
☐ Public Awareness ☐ Limiting Factor Management ☐ Genome Research Banking
☐ Law Enforcement ☐ Work in Local Communities ☐ Address Policy Makers
☐ Other (please specify):

13. Captive Breeding

13A. Is captive breeding recommended for the taxon: ○ Yes ◉ No

13B. If captive breeding is recommeded , is it for:

☐ Species recovery ☐ Reintroduction ☐ Research ☐ Husbandry

☐ Education ☐ Preserve live genome

13C. Do Captive stocks already exist? ○ Yes ◉ No ○ Unknown

If Yes, list the facilities:

Facility	Country	Males	Females	Unknown	Total

13D. Does a coordinated Species Management Plan exist? ○ Yes ◉ No ○ Unknown

If Yes, list the participating institutions:

If Not, is a Species Management Plan recommended: ○ Yes ◉ No

If Yes, list the institutions that should participate:

13E. Level of captive breeding recommended:

☒ Captive breeding program not neccessary ☐ Initiate program within 3 years

☐ Maintain existing program as it is ☐ Intensify existing program ☐ Decrease existing progam

13F. Are the techniques established for captive breeding?

☐ Techniques are known for this or similar taxon ☐ Some techniques are known for this or similar taxon

☐ Techniques not known for this or simialr taxon ☒ Unknown

14. Sources/References (complete citation):

Egan, D. 2007. Snakes of Arabia. A field guide to the Snakes of the Arabian Peninsula and its Shores. Motivate Publishing.
Gasperetti, J. 1988. Snakes of Arabia. Fauna of Saudi Arabia 9: 169-450
Schatte, B & Desvolgnes, A. 1999. The Herpetofauna of southern Yemen and the Soqotra archipelago. Museum d'Histoire Naturelle. Geneve.
Schatte, B & Gasparetti, J.A. Contribution to the herpetofauna of Southwestern Arabia. Fauna of Saudi Arabia. Vol 14
Scortecci, G. 1932. Rettili deilo Yemen. Atti deila. Societa Italiana di Scienze Naturalie del Museo Civico Storia Naturale di Milano 71: 39-49
Van der Kooij, J. 2001. The Herpetofauna of the Sultinate of Oman. Part 4: Terrestrial Snakes. Podarcus
Broadley, D. G & Wallach, V. 2007. A revision of the genus Leptotyphlops in northeastern Africa and southwestern Arabia (Serpentes: Leptotyphlopidae) Zootaxa 1408:1-78

15. Compilers

William Branch, Damien Egan, Tony Phelps, Declan O'Donovan, Gavin Nel, Saud A. Al Farraj, Pritpal Soorae, Ehad Eid, Haithem Al Aamri, Peter Arras, Neelofa Ali, Masaa Al Jumaily, Khaled Al Rasbi and Patrick Paillat

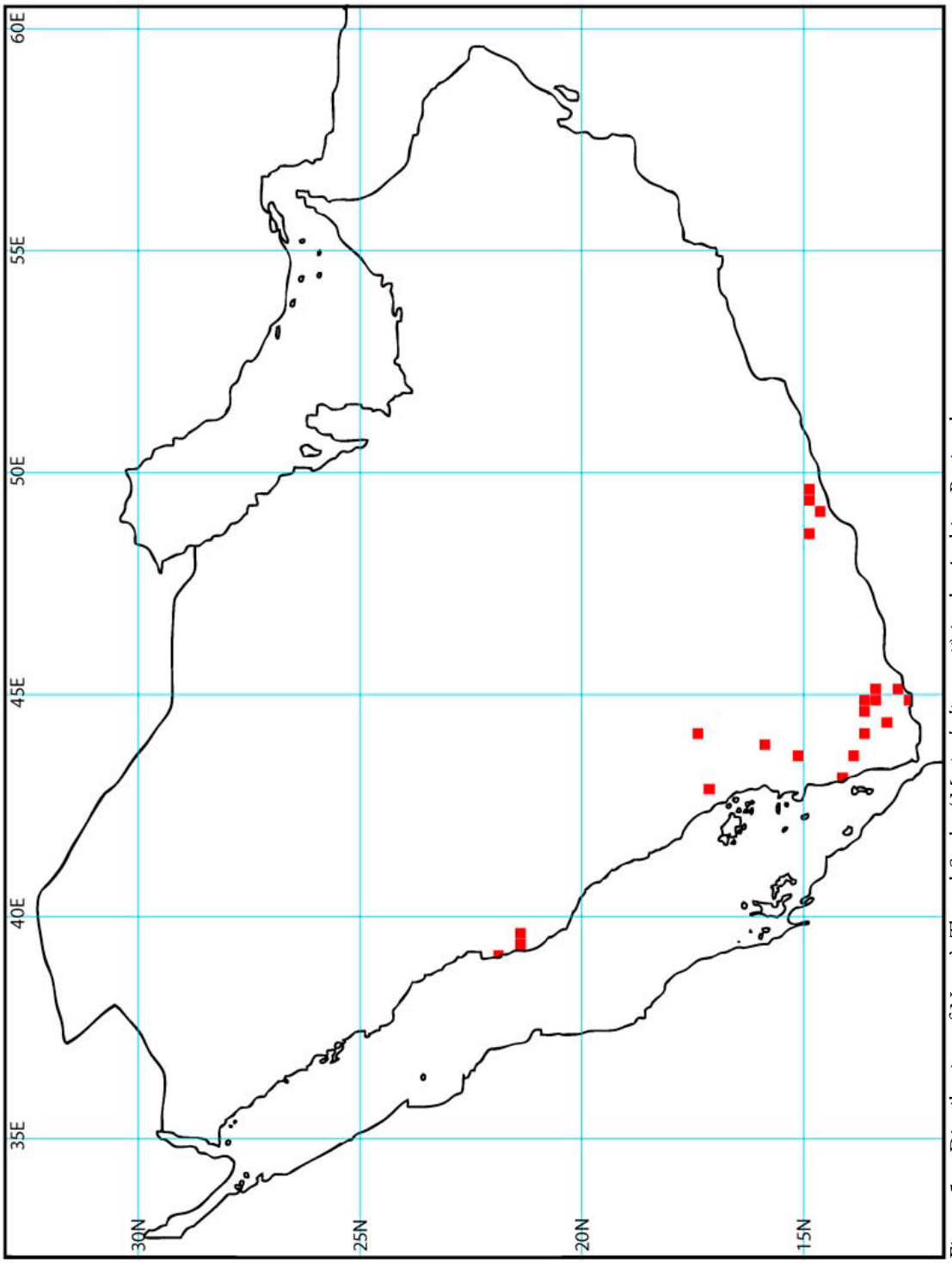

Figure 5. Distribution of Nurse's Thread Snake (*Myriopholis nursii*) in the Arabian Peninsula.

Conservation Workshop for the Fauna of Arabia
Taxon Data Sheet

Working Group: Snakes Date: 3-5 February 2008

1. Taxonomy

1A. Scientific Name (Genus, species & subspecies): *Myriopholis macrorhynchus*

Authority: (Jan) Date: 1860

1B. Synonyms (with authority & date):
see Gasparettii FSA VOl 9

1C. Common Name(s) with language/region:
Large-snouted thread snake

2. Distribution

2A. Historical Distribution (last 100 years):
West Africa to Western Asia, including wide, scattered Arabian distrubtion

2B. Current Distribution (illustrate on map):
See 2A

2C. Habitat of the taxon (ecosystem level):
Varied from coastal plain, montain watershed to inland mountains.

2D. Habitat specificity (elevation, etc.):
Fossorial- generalist

2E. Migration: ○ Yes ◉ No ○ Unknown

If Yes, describe:

3. Number of Populations & Subpopulations in which the Taxon is distributed:

Location of each:	Approx. Area Occupied:	Approx. No. of Individuals:
	Over 20 000km2	

4. Population Trends

4A. Is the Population: ○ Increasing ○ Decreasing ○ Stable ◉ Unknown

4B. If declining, what has been the rate of decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has the population decline occured?

4C. If stable or unknown, do you predict a future decline in the population size? ○ Yes ◉ No

If Yes, please specify rate and factors e.g. habitat loss, trade, etc.:

5. Habitat Status

5A. Is the habitat distribution: ○ Continuous ◉ Fragmented ○ Unknown

5B. Is there any change in the range of the habitat where the Taxon occurs? ○ Yes ○ No ◉ Unknown
If Yes, is it: ○ Decreasing in Area ○ Increasing in Area

5C. If decreasing what has been the decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has this decline occured?

5D. Do you predict a future decline in the habitiat? (•) Yes ( ) No

If Yes, what do you predict that decline will be? (•) <20% ( ) >20% ( ) >50% ( ) >80%

Over how many years do you predict the decline will occur? 20

5E. State the primary cause of this change:
Urban and agricultural development

5F. Is there any change in the quality of the habitat where the Taxon occurs? (•) Yes ( ) No ( ) Unknown

If Yes, is the habitat quality: (•) Declining ( ) Improving

5G. State the primary cause of this change:
Urban and agricultural development

6. Threats

	Present	Future		Present	Future
Pollution	☐	☐	Disease	☐	☐
Urban Development	☒	☒	Hybridization	☐	☐
Road Kills	☐	☐	Decline in prey species	☐	☐
Damming	☐	☐	Loss of habitat	☒	☒
War	☐	☐	Genetic problems	☐	☐
Recreational activities	☐	☐	Grazing	☐	☐
Hunting (recreation or retail)	☐	☐	Habitat fragmentation	☒	☒
Harvest for medicine	☐	☐	Predation	☐	☐
Harvest for food/timber	☐	☐	Interspecific competition	☐	☐
Poisoning	☐	☐	Livestock competition (food, etc.)	☐	☐
Pesticides	☐	☐	Livestock conflicts (retaliation kills)	☐	☐
Persecution	☐	☐	Introduced species (non-livestock)	☐	☐
Trade of animals/parts	☐	☐	Nutritional disorders	☐	☐

Other (please specify):

6B. Would these threats result in (perceived or inferred) population decline? ( ) Yes (•) No ( ) Unknown

Comment:

7. Trade

7A. Is the Taxon in trade? ( ) Yes (•) No ( ) Unknown

If Yes, is it: ( ) Local ( ) Regional ( ) International ( ) Commercial

7B. Parts in trade:

☐ Skin ☐ Fur ☐ Hair ☐ Horn ☐ Bones ☐ Glands
☐ Meat ☐ Products ☐ Live Animal ☐ Taxidermy ☐ Organs

Comments/Other threats (please specify):

8. Data Quality

8A. Are the estimates you have supplied based on:

☐ Census or monitoring ☐ General field studies ☐ Informal field studies ☒ Literature
☐ Hearsay/popular belief ☐ Museum studies/records ☐ Indirect information from trade, etc.

9. Studies (field) conducted over the last 10 years (indicate the year of study not the year of publication):

Researchers	Location	Year	Topic

10. Conservation Status

10A. IUCN Red List Category: Global: Not listed Regional: Not listed

10B. National Red Data Book:
Not listed

10C. Workshop Assessment of Regional Red List Category: Least concern

10D. CITES: Not listed

10E. National Wildife Legislation:
Not listed

10F. Other Legislation (please specify):

10G. List existing Protected Areas within the Taxon's range:

Protected Area	Country	Size (km^2)

10H. Recommended Protected Areas for the Taxon:

Area	Country	Size (km^2)

10I. Are there any Regional Conservation/Protection Action Plans: ○ Yes ◉ No ○ Unknown
If Yes, please list them:

11. Supporting Research

11A. Is research recommended? ◉ Yes ○ No

If Yes, what type of research would you recommend?

☐ Surveys ☐ Genetics ☒ Taxonomic ☐ Life History ☐ Public Awareness
☐ Trade ☐ Monitoring ☐ Reintroduction ☐ Human Impact
☐ Other (please specify):

12. Management

12A. What management is recommended for the Taxon?

☐ Habitat management ☐ Wild population management ☐ Captive breeding
☐ Monitoring ☐ Translocation ☐ Sustainable Use
☐ Public Awareness ☐ Limiting Factor Management ☒ Genome Research Banking
☐ Law Enforcement ☐ Work in Local Communities ☐ Address Policy Makers
☒ Other (please specify):

Further taxonomic research on populations to ascertain status accurately

13. Captive Breeding

13A. Is captive breeding recommended for the taxon: ○ Yes ◉ No

13B. If captive breeding is recommeded , is it for:

☐ Species recovery ☐ Reintroduction ☐ Research ☐ Husbandry

☐ Education ☐ Preserve live genome

13C. Do Captive stocks already exist? ○ Yes ◉ No ○ Unknown

If Yes, list the facilities:

Facility	Country	Males	Females	Unknown	Total

13D. Does a coordinated Species Management Plan exist? ○ Yes ◉ No ○ Unknown

If Yes, list the participating institutions:

If Not, is a Species Management Plan recommended: ○ Yes ◉ No

If Yes, list the institutions that should participate:

13E. Level of captive breeding recommended:

☒ Captive breeding program not neccessary ☐ Initiate program within 3 years

☐ Maintain existing program as it is ☐ Intensify existing program ☐ Decrease existing progam

13F. Are the techniques established for captive breeding?

☐ Techniques are known for this or similar taxon ☐ Some techniques are known for this or similar taxon

☐ Techniques not known for this or simialr taxon ☒ Unknown

14. Sources/References (complete citation):

Egan, D. 2007. Snakes of Arabia. A field guide to the Snakes of the Arabian Peninsula and its Shores. Motivate Publishing.

Gasperetti, J. 1988. Snakes of Arabia. Fauna of Saudi Arabia 9: 169-450

Schatte, B & Desvolgnes, A. 1999. The Herpetofauna of southern Yemen and the Soqotra archipelago. Museum d'Histoire Naturelle. Geneve.

Schatte, B & Gasparetti, J.A. Contribution to the herpetofauna of Southwestern Arabia. Fauna of Saudi Arabia. Vol 14

Scortecci, G. 1932. Rettili deilo Yemen. Atti deila. Societa Italiana di Scienze Naturalie del Museo Civico Storia Naturale di Milano 71: 39-49

Van der Kooij, J. 2001. The Herpetofauna of the Sultinate of Oman. Part 4: Terrestrial Snakes. Podarcus

Broadley, D. G & Wallach, V. 2007. A revision of the genus Leptotyphlops in northeastern Africa and southwestern Arabia (Serpentes: Leptotyphlopidae) Zootaxa 1408:1-78

15. Compilers

William Branch, Damien Egan, Tony Phelps, Declan O'Donovan, Gavin Nel, Saud A. Al Farraj, Pritpal Soorae, Ehad Eid, Haithem Al Aamri, Peter Arras, Neelofa Ali, Masaa Al Jumaily, Khaled Al Rasbi and Patrick Paillat

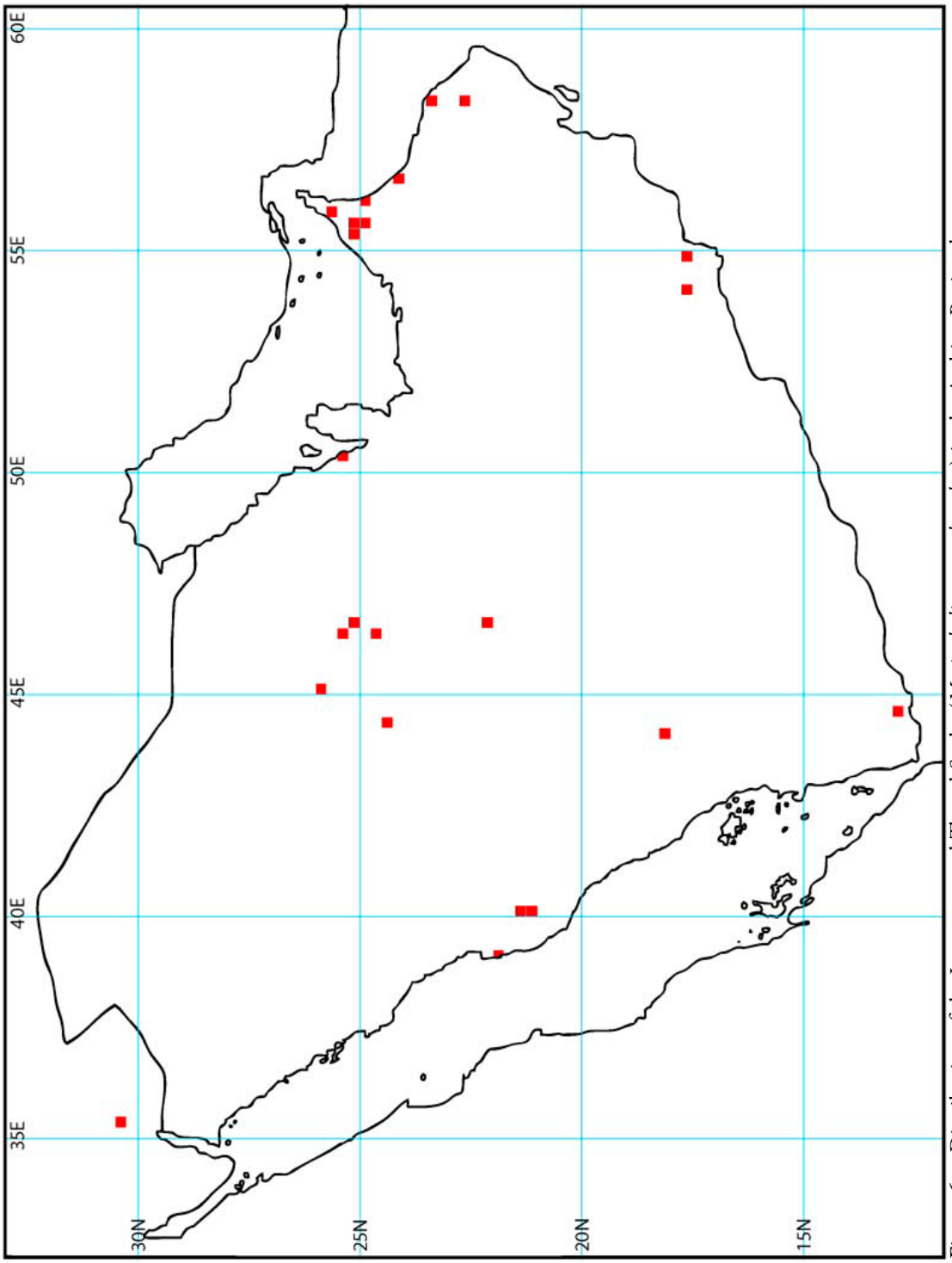

Figure 6. Distribution of the Large-snouted Thread Snake (*Myriopholis macrorhynchus*) in the Arabian Peninsula.

Conservation Workshop for the Fauna of Arabia
Taxon Data Sheet

Working Group: Snakes **Date:** 3-5 February 2008

1. Taxonomy

1A. Scientific Name (Genus, species & subspecies): *Eryx jaculus*

Authority: (Hasselquist & Linnaeus) Date: 1758

1B. Synonyms (with authority & date):

1C. Common Name(s) with language/region:
Javelin sand boa, Eurasian sand boa. (English)

2. Distribution

2A. Historical Distribution (last 100 years):
North Africa and Mediterranean east to China. NE Saudi Arabia

2B. Current Distribution (illustrate on map):
See 2A.

2C. Habitat of the taxon (ecosystem level):
Arabian Desert and East Sahero-Arabian xeric woodland

2D. Habitat specificity (elevation, etc.):
Varied, but generally vegetated areas with loose soil or sand

2E. Migration: ○ Yes ◉ No ○ Unknown

If Yes, describe:

3. Number of Populations & Subpopulations in which the Taxon is distributed:

Location of each:	Approx. Area Occupied:	Approx. No. of Individuals:
1	25km2	2 confirmed specimens

4. Population Trends

4A. Is the Population: ○ Increasing ○ Decreasing ○ Stable ◉ Unknown

4B. If declining, what has been the rate of decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has the population decline occured?

4C. If stable or unknown, do you predict a future decline in the population size? ○ Yes ◉ No

If Yes, please specify rate and factors e.g. habitat loss, trade, etc.:

5. Habitat Status

5A. Is the habitat distribution: ◉ Continuous ○ Fragmented ○ Unknown

5B. Is there any change in the range of the habitat where the Taxon occurs? ○ Yes ○ No ○ Unknown

If Yes, is it: ○ Decreasing in Area ○ Increasing in Area

5C. If decreasing what has been the decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has this decline occured?

5D. Do you predict a future decline in the habitiat? ○ Yes ◉ No

If Yes, what do you predict that decline will be? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years do you predict the decline will occur?

5E. State the primary cause of this change:

5F. Is there any change in the quality of the habitat where the Taxon occurs? ◉ Yes ○ No ○ Unknown

If Yes, is the habitat quality: ◉ Declining ○ Improving

5G. State the primary cause of this change:

6. Threats

	Present	Future		Present	Future
Pollution	☐	☐	Disease	☐	☐
Urban Development	☐	☐	Hybridization	☐	☐
Road Kills	☐	☐	Decline in prey species	☐	☐
Damming	☐	☐	Loss of habitat	☐	☐
War	☐	☒	Genetic problems	☐	☐
Recreational activities	☐	☐	Grazing	☐	☐
Hunting (recreation or retail)	☐	☐	Habitat fragmentation	☐	☐
Harvest for medicine	☐	☐	Predation	☐	☐
Harvest for food/timber	☐	☐	Interspecific competition	☐	☐
Poisoning	☐	☐	Livestock competition (food, etc.)	☐	☐
Pesticides	☐	☐	Livestock conflicts (retaliation kills)	☐	☐
Persecution	☐	☐	Introduced species (non-livestock)	☐	☐
Trade of animals/parts	☐	☐	Nutritional disorders	☐	☐

Other (please specify):

6B. Would these threats result in (perceived or inferred) population decline? ◉ Yes ○ No ○ Unknown

Comment:

7. Trade

7A. Is the Taxon in trade? ◉ Yes ○ No ○ Unknown

If Yes, is it: ○ Local ○ Regional ◉ International ○ Commercial

7B. Parts in trade:

☐ Skin ☐ Fur ☐ Hair ☐ Horn ☐ Bones ☐ Glands

☐ Meat ☐ Products ☒ Live Animal ☐ Taxidermy ☐ Organs

Comments/Other threats (please specify):

8. Data Quality

8A. Are the estimates you have supplied based on:

☐ Census or monitoring ☐ General field studies ☒ Informal field studies ☒ Literature
☐ Hearsay/popular belief ☐ Museum studies/records ☐ Indirect information from trade, etc.

9. Studies (field) conducted over the last 10 years (indicate the year of study not the year of publication):

Researchers	Location	Year	Topic

10. Conservation Status

10A. IUCN Red List Category: Global: Least concern Regional: Not listed

10B. National Red Data Book:
Not listed

10C. Workshop Assessment of Regional Red List Category: Vulnerable (regional)

10D. CITES: Not listed

10E. National Wildife Legislation:
Not listed

10F. Other Legislation (please specify):
Least concern- CITES II

10G. List existing Protected Areas within the Taxon's range:

Protected Area	Country	Size (km^2)

10H. Recommended Protected Areas for the Taxon:

Area	Country	Size (km^2)

10I. Are there any Regional Conservation/Protection Action Plans: ○ Yes ◉ No ○ Unknown

If Yes, please list them:

11. Supporting Research

11A. Is research recommended? ◉ Yes ○ No

If Yes, what type of research would you recommend?

☐ Surveys ☐ Genetics ☒ Taxonomic ☒ Life History ☐ Public Awareness
☐ Trade ☐ Monitoring ☐ Reintroduction ☒ Human Impact
☐ Other (please specify):

12. Management

12A. What management is recommended for the Taxon?

- ☐ Habitat management
- ☒ Monitoring
- ☐ Public Awareness
- ☐ Law Enforcement
- ☐ Other (please specify):
- ☐ Wild population management
- ☐ Translocation
- ☒ Limiting Factor Management
- ☐ Work in Local Communities
- ☐ Captive breeding
- ☐ Sustainable Use
- ☐ Genome Research Banking
- ☐ Address Policy Makers

13. Captive Breeding

13A. Is captive breeding recommended for the taxon: ○ Yes ○ No

13B. If captive breeding is recommeded , is it for:

- ☐ Species recovery
- ☐ Reintroduction
- ☐ Research
- ☐ Husbandry
- ☐ Education
- ☐ Preserve live genome

13C. Do Captive stocks already exist? ○ Yes ○ No ○ Unknown

If Yes, list the facilities:

Facility	Country	Males	Females	Unknown	Total

13D. Does a coordinated Species Management Plan exist? ○ Yes ◉ No ○ Unknown

If Yes, list the participating institutions:

If Not, is a Species Management Plan recommended: ○ Yes ◉ No

If Yes, list the institutions that should participate:

13E. Level of captive breeding recommended:

- ☐ Captive breeding program not neccessary
- ☐ Initiate program within 3 years
- ☐ Maintain existing program as it is
- ☐ Intensify existing program
- ☐ Decrease existing progam

13F. Are the techniques established for captive breeding?

- ☒ Techniques are known for this or similar taxon
- ☐ Some techniques are known for this or similar taxon
- ☐ Techniques not known for this or simialr taxon
- ☐ Unknown

14. Sources/References (complete citation):

15. Compilers

William Branch, Damien Egan, Tony Phelps, Declan O'Donovan, Gavin Nel, Saud A. Al Farraj, Pritpal Soorae, Ehad Eid, Haithem Al Aamri, Peter Arras, Neelofa Ali, Masaa Al Jumaily, Khaled Al Rasbi and Patrick Paillat

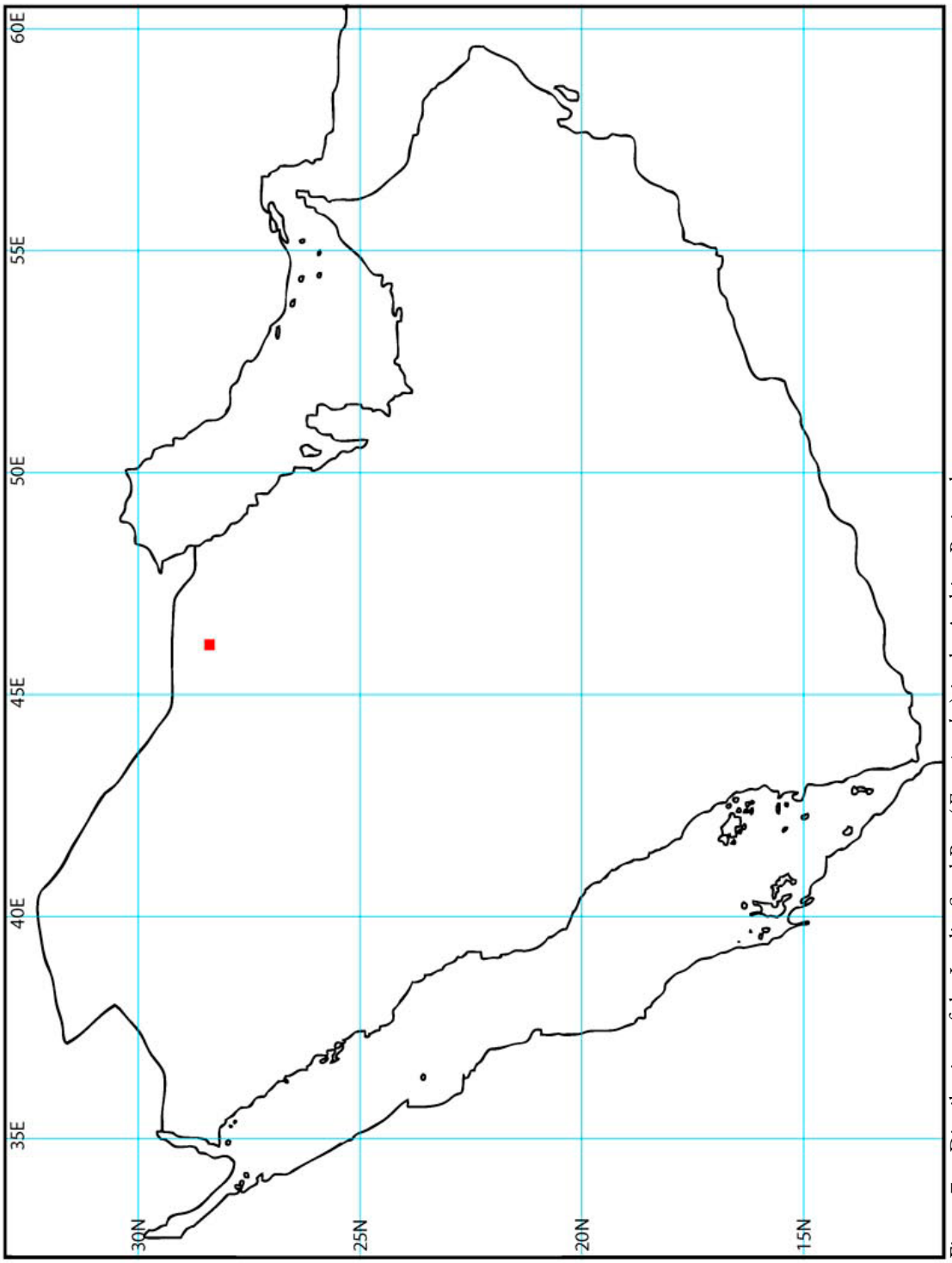

Figure 7. Distribution of the Javelin Sand Boa (*Eryx jaculus*) in the Arabian Peninsula.

Conservation Workshop for the Fauna of Arabia
Taxon Data Sheet

Working Group: Snakes Date: 3-5 February 2008

1. Taxonomy

1A. Scientific Name (Genus, species & subspecies): *Eryx jayakari*

Authority: Boulenger Date: 1888

1B. Synonyms (with authority & date):

1C. Common Name(s) with language/region:
Arabian sand boa (English)

2. Distribution

2A. Historical Distribution (last 100 years):
Endemic- throughout the Arabian Peninsula in suitable habitat

2B. Current Distribution (illustrate on map):
See 2A

2C. Habitat of the taxon (ecosystem level):
Sand desert

2D. Habitat specificity (elevation, etc.):
All soft sand desert

2E. Migration: ○ Yes ◉ No ○ Unknown

If Yes, describe:

3. Number of Populations & Subpopulations in which the Taxon is distributed:

Location of each:	Approx. Area Occupied:	Approx. No. of Individuals:
Across the entire region	19 750 km2	

4. Population Trends

4A. Is the Population: ○ Increasing ○ Decreasing ◉ Stable ○ Unknown

4B. If declining, what has been the rate of decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has the population decline occured?

4C. If stable or unknown, do you predict a future decline in the population size? ◉ Yes ○ No

If Yes, please specify rate and factors e.g. habitat loss, trade, etc.:

5. Habitat Status

5A. Is the habitat distribution: ◉ Continuous ○ Fragmented ○ Unknown

5B. Is there any change in the range of the habitat where the Taxon occurs? ◉ Yes ○ No ○ Unknown

If Yes, is it: ◉ Decreasing in Area ○ Increasing in Area

5C. If decreasing what has been the decline? ◉ <20% ○ >20% ○ >50% ○ >80%

Over how many years has this decline occured?

5D. Do you predict a future decline in the habitiat? ○ Yes ○ No

If Yes, what do you predict that decline will be? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years do you predict the decline will occur?

5E. State the primary cause of this change:

Urban development

5F. Is there any change in the quality of the habitat where the Taxon occurs? ○ Yes ○ No ○ Unknown

If Yes, is the habitat quality: ◉ Declining ○ Improving

5G. State the primary cause of this change:

Urban sprawl, off road recreational driving, highways.

6. Threats

	Present	Future		Present	Future
Pollution	☐	☐	Disease	☐	☐
Urban Development	☒	☒	Hybridization	☐	☐
Road Kills	☐	☐	Decline in prey species	☐	☐
Damming	☐	☐	Loss of habitat	☒	☒
War	☐	☐	Genetic problems	☐	☐
Recreational activities	☒	☒	Grazing	☐	☐
Hunting (recreation or retail)	☐	☐	Habitat fragmentation	☒	☒
Harvest for medicine	☐	☐	Predation	☐	☐
Harvest for food/timber	☐	☐	Interspecific competition	☐	☐
Poisoning	☐	☐	Livestock competition (food, etc.)	☐	☐
Pesticides	☐	☐	Livestock conflicts (retaliation kills)	☐	☐
Persecution	☐	☐	Introduced species (non-livestock)	☐	☐
Trade of animals/parts	☐	☒	Nutritional disorders	☐	☐

Other (please specify):

6B. Would these threats result in (perceived or inferred) population decline? ○ Yes ◉ No ○ Unknown

Comment:

7. Trade

7A. Is the Taxon in trade? ◉ Yes ○ No ○ Unknown

If Yes, is it: ○ Local ○ Regional ◉ International ○ Commercial

7B. Parts in trade:

☐ Skin ☐ Fur ☐ Hair ☐ Horn ☐ Bones ☐ Glands

☐ Meat ☐ Products ☒ Live Animal ☐ Taxidermy ☐ Organs

Comments/Other threats (please specify):

8. Data Quality

8A. Are the estimates you have supplied based on:

☐ Census or monitoring ☐ General field studies ☒ Informal field studies ☒ Literature
☒ Hearsay/popular belief ☐ Museum studies/records ☒ Indirect information from trade, etc.

9. Studies (field) conducted over the last 10 years (indicate the year of study not the year of publication):

Researchers	Location	Year	Topic

10. Conservation Status

10A. IUCN Red List Category: Global: Not listed Regional: Not listed

10B. National Red Data Book:
Not listed

10C. Workshop Assessment of Regional Red List Category: Least concern (Global)

10D. CITES: Appendix 2

10E. National Wildife Legislation:
Not listed

10F. Other Legislation (please specify):

10G. List existing Protected Areas within the Taxon's range:

Protected Area	Country	Size (km^2)
At-Tubayq, Al Khunfah, At Taysiyah, Al Jalaliyah, Hawtat Bani Tamim, Saja Umm ar Rhimth, Mahazat As Said, Uruk Bani Ma'arid, Arabian Oryx reserve, DDRC, Ras Al Khor, Abu Dhabi Oryx reserve		

10H. Recommended Protected Areas for the Taxon:

Area	Country	Size (km^2)

10I. Are there any Regional Conservation/Protection Action Plans: ○ Yes ◉ No ○ Unknown

If Yes, please list them:

11. Supporting Research

11A. Is research recommended? ○ Yes ◉ No

If Yes, what type of research would you recommend?

☐ Surveys ☐ Genetics ☐ Taxonomic ☐ Life History ☐ Public Awareness
☐ Trade ☐ Monitoring ☐ Reintroduction ☐ Human Impact
☐ Other (please specify):

12. Management

12A. What management is recommended for the Taxon?

- ☐ Habitat management
- ☐ Wild population management
- ☐ Captive breeding
- ☐ Monitoring
- ☐ Translocation
- ☐ Sustainable Use
- ☐ Public Awareness
- ☐ Limiting Factor Management
- ☐ Genome Research Banking
- ☐ Law Enforcement
- ☐ Work in Local Communities
- ☐ Address Policy Makers
- ☐ Other (please specify):

13. Captive Breeding

13A. Is captive breeding recommended for the taxon: ○ Yes ◉ No

13B. If captive breeding is recommeded , is it for:

- ☐ Species recovery
- ☐ Reintroduction
- ☐ Research
- ☐ Husbandry
- ☐ Education
- ☐ Preserve live genome

13C. Do Captive stocks already exist? ◉ Yes ○ No ○ Unknown

If Yes, list the facilities:

Facility	Country	Males	Females	Unknown	Total
BCEAW	UAE	?	?	?	?

13D. Does a coordinated Species Management Plan exist? ○ Yes ◉ No ○ Unknown

If Yes, list the participating institutions:

If Not, is a Species Management Plan recommended: ○ Yes ◉ No

If Yes, list the institutions that should participate:

13E. Level of captive breeding recommended:

- ☐ Captive breeding program not neccessary
- ☐ Initiate program within 3 years
- ☒ Maintain existing program as it is
- ☐ Intensify existing program
- ☐ Decrease existing progam

13F. Are the techniques established for captive breeding?

- ☒ Techniques are known for this or similar taxon
- ☐ Some techniques are known for this or similar taxon
- ☐ Techniques not known for this or simialr taxon
- ☐ Unknown

14. Sources/References (complete citation):

Egan, D. 2007. Snakes of Arabia. A field guide to the Snakes of the Arabian Peninsula and its Shores. Motivate Publishing.

Gasperetti, J. 1988. Snakes of Arabia. Fauna of Saudi Arabia 9: 169-450

15. Compilers

William Branch, Damien Egan, Tony Phelps, Declan O'Donovan, Gavin Nel, Saud A. Al Farraj, Pritpal Soorae, Ehad Eid, Haithem Al Aamri, Peter Arras, Neelofa Ali, Masaa Al Jumaily, Khaled Al Rasbi and Patrick Paillat

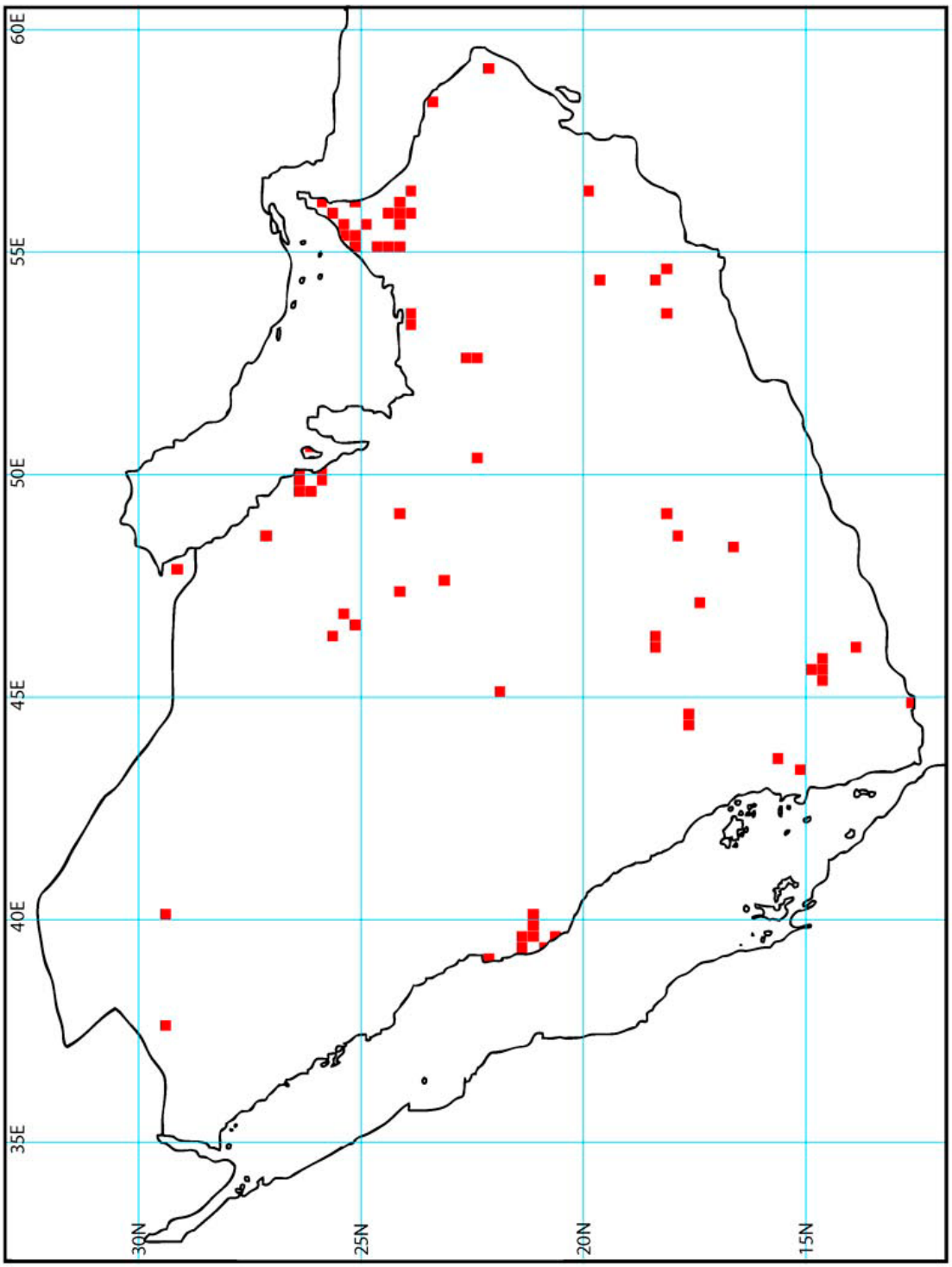

Figure 8. Distribution of the Arabian Sand Boa (*Eryx jayakari*) in the Arabian Peninsula.

Conservation Workshop for the Fauna of Arabia
Taxon Data Sheet

Working Group: Snakes **Date:** 3-5 February 2008

1. Taxonomy

1A. Scientific Name (Genus, species & subspecies): *Platyceps ventromaculatus*

Authority: (Gray) Date: 1834

1B. Synonyms (with authority & date):

1C. Common Name(s) with language/region:
Hardwick's rat snake

2. Distribution

2A. Historical Distribution (last 100 years):
Eastern Arabia to Pakistan, Iran and offshore islands

2B. Current Distribution (illustrate on map):
See 2A

2C. Habitat of the taxon (ecosystem level):
Varied: Arabian desert and east Sahero-Arabian xeric woodlands. Persian Gulf desert and semi desert

2D. Habitat specificity (elevation, etc.):
Generally close to sea level in plains, marshland and island habitats

2E. Migration: ○ Yes ◉ No ○ Unknown

If Yes, describe:

3. Number of Populations & Subpopulations in which the Taxon is distributed:

Location of each:	Approx. Area Occupied:	Approx. No. of Individuals:
Mainland Arabia- Eastern Emirates and Oman	300km2	Unknown
Bahrain	25km2	Unknown

4. Population Trends

4A. Is the Population: ○ Increasing ○ Decreasing ◉ Stable ○ Unknown

4B. If declining, what has been the rate of decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has the population decline occured?

4C. If stable or unknown, do you predict a future decline in the population size? ○ Yes ◉ No

If Yes, please specify rate and factors e.g. habitat loss, trade, etc.:

5. Habitat Status

5A. Is the habitat distribution: ○ Continuous ◉ Fragmented ○ Unknown

5B. Is there any change in the range of the habitat where the Taxon occurs? ◉ Yes ○ No ○ Unknown

If Yes, is it: ◉ Decreasing in Area ○ Increasing in Area

5C. If decreasing what has been the decline? ◉ <20% ○ >20% ○ >50% ○ >80%

Over how many years has this decline occured?

5D. Do you predict a future decline in the habitiat? ○ Yes ○ No

If Yes, what do you predict that decline will be? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years do you predict the decline will occur?

5E. State the primary cause of this change:

Urban sprawl in both populations

5F. Is there any change in the quality of the habitat where the Taxon occurs? ◉ Yes ○ No ○ Unknown

If Yes, is the habitat quality: ◉ Declining ○ Improving

5G. State the primary cause of this change:

Salination of freshwater marshes from over-utilization of ground water.

6. Threats

	Present	Future		Present	Future
Pollution	☒	☒	Disease	☐	☐
Urban Development	☒	☒	Hybridization	☐	☐
Road Kills	☐	☐	Decline in prey species	☐	☐
Damming	☐	☐	Loss of habitat	☒	☒
War	☐	☐	Genetic problems	☐	☐
Recreational activities	☐	☐	Grazing	☐	☐
Hunting (recreation or retail)	☐	☐	Habitat fragmentation	☐	☐
Harvest for medicine	☐	☐	Predation	☐	☐
Harvest for food/timber	☐	☐	Interspecific competition	☐	☐
Poisoning	☐	☐	Livestock competition (food, etc.)	☐	☐
Pesticides	☐	☐	Livestock conflicts (retaliation kills)	☐	☐
Persecution	☐	☐	Introduced species (non-livestock)	☐	☐
Trade of animals/parts	☐	☐	Nutritional disorders	☐	☐

Other (please specify):

6B. Would these threats result in (perceived or inferred) population decline? ○ Yes ○ No ○ Unknown

Comment:

7. Trade

7A. Is the Taxon in trade? ○ Yes ◉ No ○ Unknown

If Yes, is it: ○ Local ○ Regional ○ International ○ Commercial

7B. Parts in trade:

☐ Skin ☐ Fur ☐ Hair ☐ Horn ☐ Bones ☐ Glands

☐ Meat ☐ Products ☐ Live Animal ☐ Taxidermy ☐ Organs

Comments/Other threats (please specify):

8. Data Quality

8A. Are the estimates you have supplied based on:

☒ Census or monitoring ☐ General field studies ☒ Informal field studies ☒ Literature
☐ Hearsay/popular belief ☐ Museum studies/records ☐ Indirect information from trade, etc.

9. Studies (field) conducted over the last 10 years (indicate the year of study not the year of publication):

Researchers	Location	Year	Topic
P. Soorae	Abu Dhabi Islands		

10. Conservation Status

10A. IUCN Red List Category: Global: Not listed Regional: Not listed

10B. National Red Data Book:
Not listed

10C. Workshop Assessment of Regional Red List Category: Least concern

10D. CITES: Not listed

10E. National Wildife Legislation:
Not listed

10F. Other Legislation (please specify):

10G. List existing Protected Areas within the Taxon's range:

Protected Area	Country	Size (km^2)

10H. Recommended Protected Areas for the Taxon:

Area	Country	Size (km^2)

10I. Are there any Regional Conservation/Protection Action Plans: ○ Yes ◉ No ○ Unknown

If Yes, please list them:

11. Supporting Research

11A. Is research recommended? ◉ Yes ○ No

If Yes, what type of research would you recommend?

☐ Surveys ☐ Genetics ☒ Taxonomic ☐ Life History ☐ Public Awareness
☐ Trade ☐ Monitoring ☐ Reintroduction ☒ Human Impact
☐ Other (please specify):

12. Management

12A. What management is recommended for the Taxon?

☐ Habitat management ☐ Wild population management ☒ Captive breeding
☐ Monitoring ☐ Translocation ☐ Sustainable Use
☐ Public Awareness ☐ Limiting Factor Management ☒ Genome Research Banking
☐ Law Enforcement ☐ Work in Local Communities ☐ Address Policy Makers
☐ Other (please specify):

13. Captive Breeding

13A. Is captive breeding recommended for the taxon: (•) Yes ( ) No

13B. If captive breeding is recommeded , is it for:

☐ Species recovery ☐ Reintroduction ☒ Research ☐ Husbandry

☒ Education ☐ Preserve live genome

13C. Do Captive stocks already exist? (•) Yes ( ) No ( ) Unknown

If Yes, list the facilities:

Facility	Country	Males	Females	Unknown	Total
BCEAW	UAE	3	2		5

13D. Does a coordinated Species Management Plan exist? ( ) Yes (•) No ( ) Unknown

If Yes, list the participating institutions:

If Not, is a Species Management Plan recommended: ( ) Yes (•) No

If Yes, list the institutions that should participate:

13E. Level of captive breeding recommended:

☐ Captive breeding program not neccessary ☐ Initiate program within 3 years

☒ Maintain existing program as it is ☐ Intensify existing program ☐ Decrease existing progam

13F. Are the techniques established for captive breeding?

☐ Techniques are known for this or similar taxon ☐ Some techniques are known for this or similar taxon

☐ Techniques not known for this or simialr taxon ☒ Unknown

14. Sources/References (complete citation):

Egan, D. 2007. Snakes of Arabia. A field guide to the Snakes of the Arabian Peninsula and its Shores. Motivate Publishing.

Gasperetti, J. 1988. Snakes of Arabia. Fauna of Saudi Arabia 9:169-450

Van der Kooij, J. 2001. The Herpetofauna of the Sultinate of Oman. Part 4: Terrestrial Snakes. Podarcus.

15. Compilers

William Branch, Damien Egan, Tony Phelps, Declan O'Donovan, Gavin Nel, Saud A. Al Farraj, Pritpal Soorae, Ehad Eid, Haithem Al Aamri, Peter Arras, Neelofa Ali, Masaa Al Jumaily, Khaled Al Rasbi and Patrick Paillat

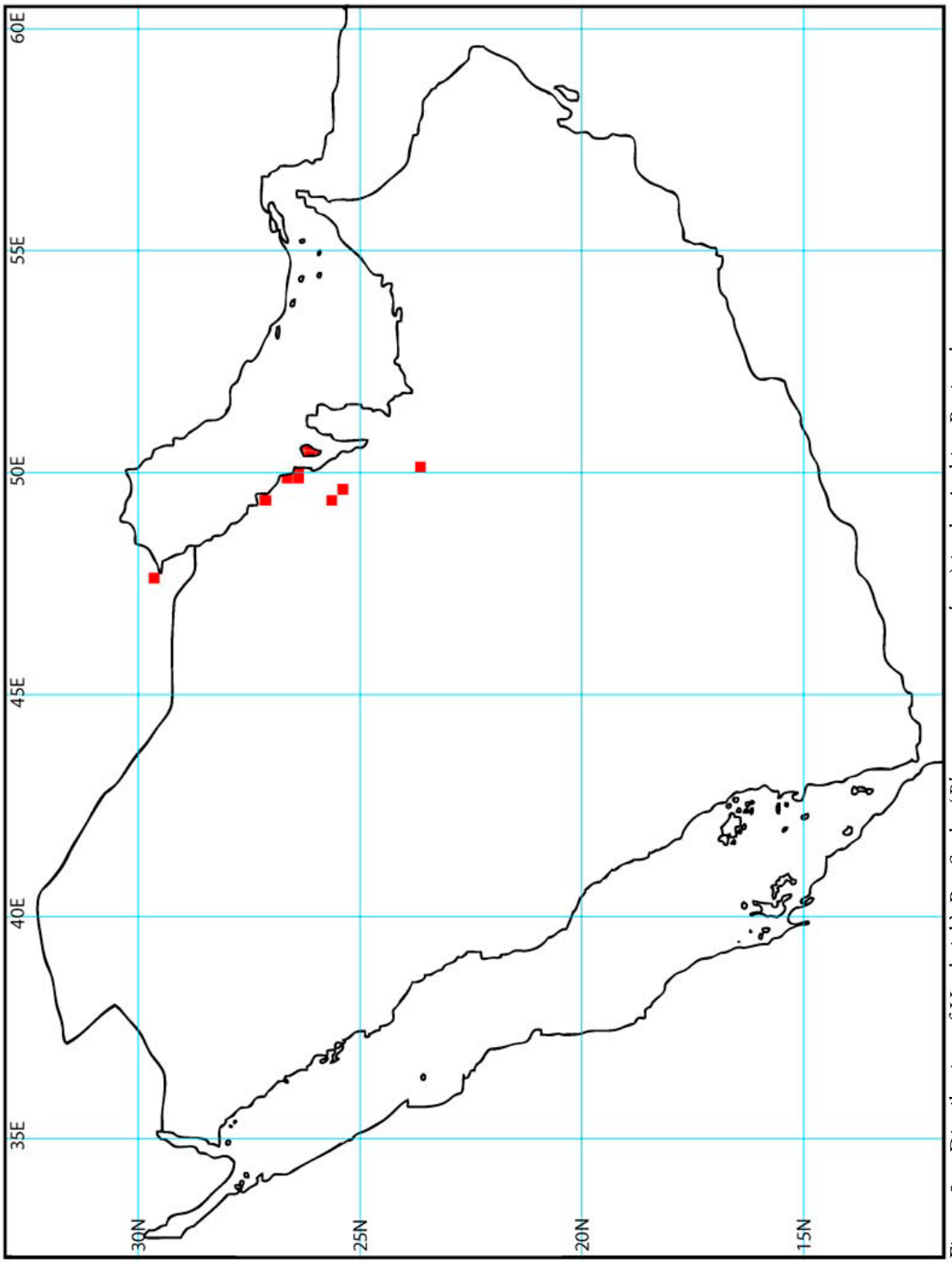

Figure 9. Distribution of Hardwick's Rat Snake (*Platyceps ventromaculatus*) in the Arabian Peninsula.

Conservation Workshop for the Fauna of Arabia
Taxon Data Sheet

Working Group: Snakes **Date:** 3-5 February 2008

1. Taxonomy

1A. Scientific Name (Genus, species & subspecies): *Platyceps rhodorachis*

Authority: (Jan) Date: 1865

1B. Synonyms (with authority & date):

1C. Common Name(s) with language/region:
Wadi racer, Jan's cliff racer

2. Distribution

2A. Historical Distribution (last 100 years):
From Libya to Turmenistan with distribution throughout the Arabian Peninsula

2B. Current Distribution (illustrate on map):
See 2A

2C. Habitat of the taxon (ecosystem level):
Varied

2D. Habitat specificity (elevation, etc.):
Rocky areas at all altitudes as well as coastal plains and agricultural land

2E. Migration: ○ Yes ◉ No ○ Unknown

If Yes, describe:

3. Number of Populations & Subpopulations in which the Taxon is distributed:

Location of each:	Approx. Area Occupied:	Approx. No. of Individuals:
Throughout Arabian Peninsula in suitable habitat		

4. Population Trends

4A. Is the Population: ○ Increasing ○ Decreasing ◉ Stable ○ Unknown

4B. If declining, what has been the rate of decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has the population decline occured?

4C. If stable or unknown, do you predict a future decline in the population size? ○ Yes ◉ No

If Yes, please specify rate and factors e.g. habitat loss, trade, etc.:

5. Habitat Status

5A. Is the habitat distribution: ◉ Continuous ○ Fragmented ○ Unknown

5B. Is there any change in the range of the habitat where the Taxon occurs? ◉ Yes ○ No ○ Unknown
If Yes, is it: ◉ Decreasing in Area ○ Increasing in Area

5C. If decreasing what has been the decline? ◉ <20% ○ >20% ○ >50% ○ >80%

Over how many years has this decline occured?

5D. Do you predict a future decline in the habitiat? (•) Yes ( ) No

If Yes, what do you predict that decline will be? (•) <20% ( ) >20% ( ) >50% ( ) >80%

Over how many years do you predict the decline will occur? 10

5E. State the primary cause of this change:

Urban development, stone quarrying

5F. Is there any change in the quality of the habitat where the Taxon occurs? (•) Yes ( ) No ( ) Unknown

If Yes, is the habitat quality: (•) Declining ( ) Improving

5G. State the primary cause of this change:

Quarrying, Urban development

6. Threats

	Present	Future		Present	Future
Pollution	☐	☐	Disease	☐	☐
Urban Development	☒	☒	Hybridization	☐	☐
Road Kills	☐	☐	Decline in prey species	☐	☐
Damming	☐	☐	Loss of habitat	☒	☒
War	☐	☐	Genetic problems	☐	☐
Recreational activities	☐	☐	Grazing	☐	☐
Hunting (recreation or retail)	☐	☐	Habitat fragmentation	☐	☐
Harvest for medicine	☐	☐	Predation	☐	☐
Harvest for food/timber	☐	☐	Interspecific competition	☐	☐
Poisoning	☐	☐	Livestock competition (food, etc.)	☐	☐
Pesticides	☐	☐	Livestock conflicts (retaliation kills)	☐	☐
Persecution	☐	☐	Introduced species (non-livestock)	☐	☐
Trade of animals/parts	☐	☐	Nutritional disorders	☐	☐

Other (please specify):

6B. Would these threats result in (perceived or inferred) population decline? ( ) Yes (•) No ( ) Unknown

Comment:

7. Trade

7A. Is the Taxon in trade? ( ) Yes (•) No ( ) Unknown

If Yes, is it: ( ) Local ( ) Regional ( ) International ( ) Commercial

7B. Parts in trade:

☐ Skin ☐ Fur ☐ Hair ☐ Horn ☐ Bones ☐ Glands

☐ Meat ☐ Products ☐ Live Animal ☐ Taxidermy ☐ Organs

Comments/Other threats (please specify):

8. Data Quality

8A. Are the estimates you have supplied based on:

☐ Census or monitoring ☐ General field studies ☒ Informal field studies ☒ Literature
☐ Hearsay/popular belief ☐ Museum studies/records ☐ Indirect information from trade, etc.

9. Studies (field) conducted over the last 10 years (indicate the year of study not the year of publication):

Researchers	Location	Year	Topic

10. Conservation Status

10A. IUCN Red List Category: Global: Not listed Regional: Not listed

10B. National Red Data Book:
Not listed

10C. Workshop Assessment of Regional Red List Category: Least concern

10D. CITES: Not listed

10E. National Wildife Legislation:
Not listed

10F. Other Legislation (please specify):

10G. List existing Protected Areas within the Taxon's range:

Protected Area	Country	Size (km^2)
Presumed to occur in all protected areas within the region		

10H. Recommended Protected Areas for the Taxon:

Area	Country	Size (km^2)

10I. Are there any Regional Conservation/Protection Action Plans: ○ Yes ◉ No ○ Unknown

If Yes, please list them:

11. Supporting Research

11A. Is research recommended? ◉ Yes ○ No

If Yes, what type of research would you recommend?

☐ Surveys ☐ Genetics ☒ Taxonomic ☐ Life History ☐ Public Awareness
☐ Trade ☐ Monitoring ☐ Reintroduction ☐ Human Impact
☐ Other (please specify):

12. Management

12A. What management is recommended for the Taxon?

☐ Habitat management ☐ Wild population management ☐ Captive breeding
☐ Monitoring ☐ Translocation ☐ Sustainable Use
☐ Public Awareness ☐ Limiting Factor Management ☒ Genome Research Banking
☐ Law Enforcement ☐ Work in Local Communities ☐ Address Policy Makers
☐ Other (please specify):

13. Captive Breeding

13A. Is captive breeding recommended for the taxon: ◉ Yes ○ No

13B. If captive breeding is recommeded , is it for:

☐ Species recovery ☐ Reintroduction ☐ Research ☐ Husbandry

☒ Education ☐ Preserve live genome

13C. Do Captive stocks already exist? ○ Yes ○ No ○ Unknown

If Yes, list the facilities:

Facility	Country	Males	Females	Unknown	Total
BCEAW	UAE	?	?	?	?

13D. Does a coordinated Species Management Plan exist? ○ Yes ◉ No ○ Unknown

If Yes, list the participating institutions:

If Not, is a Species Management Plan recommended: ○ Yes ◉ No

If Yes, list the institutions that should participate:

13E. Level of captive breeding recommended:

☐ Captive breeding program not neccessary ☐ Initiate program within 3 years

☒ Maintain existing program as it is ☐ Intensify existing program ☐ Decrease existing progam

13F. Are the techniques established for captive breeding?

☐ Techniques are known for this or similar taxon ☐ Some techniques are known for this or similar taxon

☐ Techniques not known for this or simialr taxon ☒ Unknown

14. Sources/References (complete citation):

Egan, D. 2007. Snakes of Arabia. A field guide to the Snakes of the Arabian Peninsula and its shores. Motivate Publishing.

Gasperetti, J. 1988. Snakes of Arabia. Fauna of Saudi Arabia 9:169-450

Werner, Y.L. 1991. Notable Herpetofaunal recordss from TransJordan. Zoology in the Middle East Vol.5:37-41

Van der Kooij, J. 2001. The Herpetofauna of the Sultinate of Oman. Part 4: Terrestrial snakes. Podarcus.

Schatte, B. & Gasparetti, J.A. Contribution to the herpetofauna of Southwestern Arabia. Fauna of Saudi Arabia Vol.14

Schatte, B & Desvolgnes, A. 1999. The Herpetofauna of southern Yemen and the Soqotra archipelago. Museum d'Histoire Naturelle. Geneve.

15. Compilers

William Branch, Damien Egan, Tony Phelps, Declan O'Donovan, Gavin Nel, Saud A. Al Farraj, Pritpal Soorae, Ehad Eid, Haithem Al Aamri, Peter Arras, Neelofa Ali, Masaa Al Jumaily, Khaled Al Rasbi and Patrick Paillat

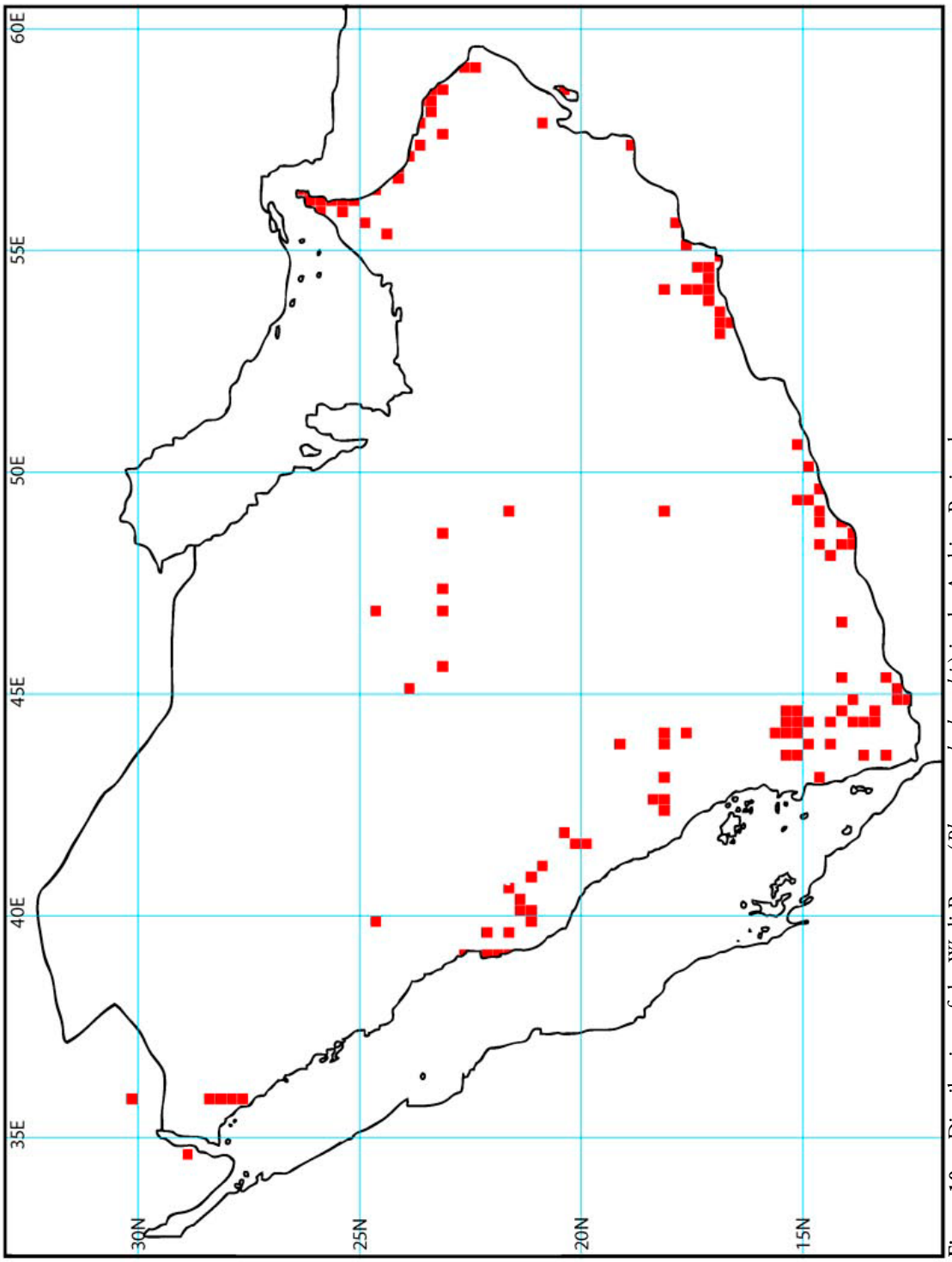

Figure 10. Distribution of the Wadi Racer (*Platyceps rhodorachis*) in the Arabian Peninsula.

Conservation Workshop for the Fauna of Arabia
Taxon Data Sheet

Working Group: Snakes **Date:** 3-5 February 2008

1. Taxonomy

1A. Scientific Name (Genus, species & subspecies): *Platyceps elegantissimus*

Authority: (Gunther) Date: 1878

1B. Synonyms (with authority & date):

1C. Common Name(s) with language/region:
Elegant racer

2. Distribution

2A. Historical Distribution (last 100 years):
Palestine, Jordan and Western Saudi Arabia

2B. Current Distribution (illustrate on map):
See 2A

2C. Habitat of the taxon (ecosystem level):
Varied: Arabian desert and east Sahero-Arabian xeric woodland, Red Sea Nubio-Sinian tropical desert and semi desert. Southwestern Arabian foothills and savannah

2D. Habitat specificity (elevation, etc.):
Rocky foothills and plains. No specific altitude

2E. Migration: ○ Yes ◉ No ○ Unknown

If Yes, describe:

3. Number of Populations & Subpopulations in which the Taxon is distributed:

Location of each:	Approx. Area Occupied:	Approx. No. of Individuals:
Western Saudi Arabia	425km2	Unknown

4. Population Trends

4A. Is the Population: ○ Increasing ○ Decreasing ○ Stable ◉ Unknown

4B. If declining, what has been the rate of decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has the population decline occured?

4C. If stable or unknown, do you predict a future decline in the population size? ○ Yes ◉ No

If Yes, please specify rate and factors e.g. habitat loss, trade, etc.:

5. Habitat Status

5A. Is the habitat distribution: ◉ Continuous ○ Fragmented ○ Unknown

5B. Is there any change in the range of the habitat where the Taxon occurs? ○ Yes ◉ No ○ Unknown

If Yes, is it: ○ Decreasing in Area ○ Increasing in Area

5C. If decreasing what has been the decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has this decline occured?

5D. Do you predict a future decline in the habitiat? ○ Yes ○ No

If Yes, what do you predict that decline will be? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years do you predict the decline will occur?

5E. State the primary cause of this change:

5F. Is there any change in the quality of the habitat where the Taxon occurs? ○ Yes ○ No ◉ Unknown

If Yes, is the habitat quality: ○ Declining ○ Improving

5G. State the primary cause of this change:

6. Threats

	Present	Future		Present	Future
Pollution	☐	☐	Disease	☐	☐
Urban Development	☐	☒	Hybridization	☐	☐
Road Kills	☐	☐	Decline in prey species	☐	☐
Damming	☐	☐	Loss of habitat	☐	☒
War	☐	☐	Genetic problems	☐	☐
Recreational activities	☐	☐	Grazing	☐	☐
Hunting (recreation or retail)	☐	☐	Habitat fragmentation	☐	☒
Harvest for medicine	☐	☐	Predation	☐	☐
Harvest for food/timber	☐	☐	Interspecific competition	☐	☐
Poisoning	☐	☐	Livestock competition (food, etc.)	☐	☐
Pesticides	☐	☐	Livestock conflicts (retaliation kills)	☐	☐
Persecution	☐	☐	Introduced species (non-livestock)	☐	☐
Trade of animals/parts	☐	☐	Nutritional disorders	☐	☐

Other (please specify):

6B. Would these threats result in (perceived or inferred) population decline? ○ Yes ◉ No ○ Unknown

Comment:

7. Trade

7A. Is the Taxon in trade? ○ Yes ◉ No ○ Unknown

If Yes, is it: ○ Local ○ Regional ○ International ○ Commercial

7B. Parts in trade:

☐ Skin ☐ Fur ☐ Hair ☐ Horn ☐ Bones ☐ Glands

☐ Meat ☐ Products ☐ Live Animal ☐ Taxidermy ☐ Organs

Comments/Other threats (please specify):

8. Data Quality

8A. Are the estimates you have supplied based on:

☐ Census or monitoring ☐ General field studies ☒ Informal field studies ☒ Literature
☒ Hearsay/popular belief ☐ Museum studies/records ☐ Indirect information from trade, etc.

9. Studies (field) conducted over the last 10 years (indicate the year of study not the year of publication):

Researchers	Location	Year	Topic

10. Conservation Status

10A. IUCN Red List Category: Global: Not listed Regional: Not listed

10B. National Red Data Book:
Not listed

10C. Workshop Assessment of Regional Red List Category: Least concern

10D. CITES: Not listed

10E. National Wildife Legislation:
Not listed

10F. Other Legislation (please specify):

10G. List existing Protected Areas within the Taxon's range:

Protected Area	Country	Size (km^2)
At Taysiyah, Al Jandaliyah. Possibly Al Khufah, Al Tubayq and Harrat al Harrah (KSA)		

10H. Recommended Protected Areas for the Taxon:

Area	Country	Size (km^2)

10I. Are there any Regional Conservation/Protection Action Plans: ○ Yes ◉ No ○ Unknown

If Yes, please list them:

11. Supporting Research

11A. Is research recommended? ◉ Yes ○ No

If Yes, what type of research would you recommend?

☐ Surveys ☐ Genetics ☒ Taxonomic ☒ Life History ☐ Public Awareness
☐ Trade ☐ Monitoring ☐ Reintroduction ☐ Human Impact
☐ Other (please specify):

12. Management

12A. What management is recommended for the Taxon?

- ☐ Habitat management
- ☐ Wild population management
- ☐ Captive breeding
- ☐ Monitoring
- ☐ Translocation
- ☐ Sustainable Use
- ☐ Public Awareness
- ☐ Limiting Factor Management
- ☐ Genome Research Banking
- ☐ Law Enforcement
- ☐ Work in Local Communities
- ☐ Address Policy Makers
- ☐ Other (please specify):

13. Captive Breeding

13A. Is captive breeding recommended for the taxon: ○ Yes ◉ No

13B. If captive breeding is recommeded , is it for:

- ☐ Species recovery
- ☐ Reintroduction
- ☐ Research
- ☐ Husbandry
- ☐ Education
- ☐ Preserve live genome

13C. Do Captive stocks already exist? ○ Yes ○ No ○ Unknown

If Yes, list the facilities:

Facility	Country	Males	Females	Unknown	Total

13D. Does a coordinated Species Management Plan exist? ○ Yes ◉ No ○ Unknown

If Yes, list the participating institutions:

If Not, is a Species Management Plan recommended: ○ Yes ◉ No

If Yes, list the institutions that should participate:

13E. Level of captive breeding recommended:

- ☐ Captive breeding program not neccessary
- ☐ Initiate program within 3 years
- ☐ Maintain existing program as it is
- ☐ Intensify existing program
- ☐ Decrease existing progam

13F. Are the techniques established for captive breeding?

- ☐ Techniques are known for this or similar taxon
- ☐ Some techniques are known for this or similar taxon
- ☐ Techniques not known for this or simialr taxon
- ☒ Unknown

14. Sources/References (complete citation):

Egan, D. 2007. Snakes of Arabia. A field guide to the Snakes of the Arabian Peninsula and its Shores. Motivate Publishing.

Gasperetti, J. 1988. Snakes of Arabia. Fauna of Saudi Arabia 9:169-450

Werner, Y.L. 1991. Notable Herpetofaunal Records from TransJordan. Zoology in the Middle East. Vol.5:37-41

15. Compilers

William Branch, Damien Egan, Tony Phelps, Declan O'Donovan, Gavin Nel, Saud A. Al Farraj, Pritpal Soorae, Ehad Eid, Haithem Al Aamri, Peter Arras, Neelofa Ali, Masaa Al Jumaily, Khaled Al Rasbi and Patrick Paillat

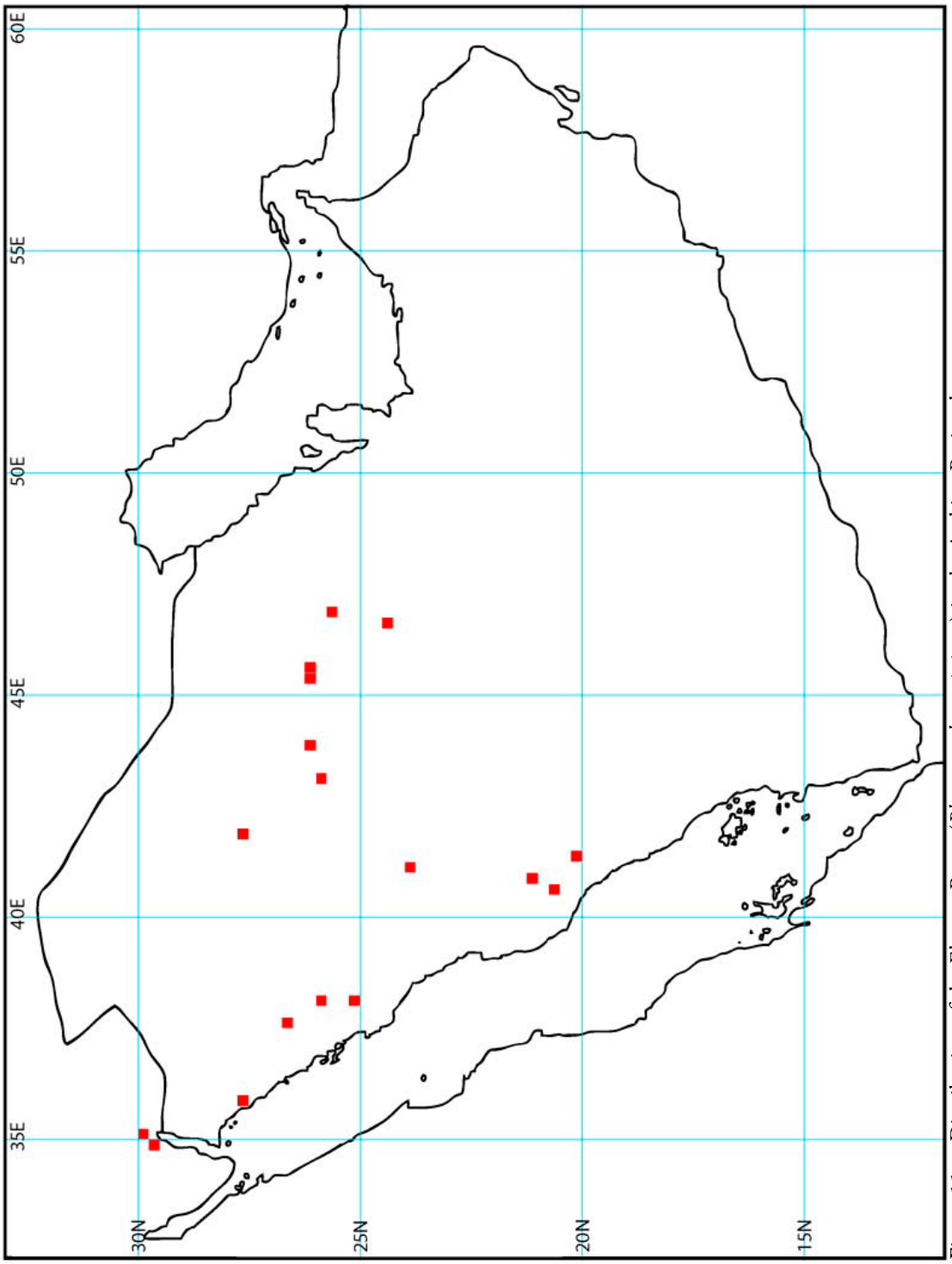

Figure 11. Distribution of the Elegant Racer (*Platyceps elegantissimus*) in the Arabian Peninsula.

Conservation Workshop for the Fauna of Arabia
Taxon Data Sheet

Working Group: Snakes **Date:** 3-5 February 2008

1. Taxonomy

1A. Scientific Name (Genus, species & subspecies): *Platyceps thomasi*

Authority: (Parker) Date: 1931

1B. Synonyms (with authority & date):

1C. Common Name(s) with language/region:
Thoma's racer

2. Distribution

2A. Historical Distribution (last 100 years):
Dhofar, Oman and adjacent Yemen border

2B. Current Distribution (illustrate on map):
See 2A

2C. Habitat of the taxon (ecosystem level):
Oman monsoon bet

2D. Habitat specificity (elevation, etc.):
Montain slopes, plateau and coastal plains

2E. Migration: ○ Yes ◉ No ○ Unknown

If Yes, describe:

3. Number of Populations & Subpopulations in which the Taxon is distributed:

Location of each:	Approx. Area Occupied:	Approx. No. of Individuals:
Dhofar and Yemen border	50km2	Unknown

4. Population Trends

4A. Is the Population: ○ Increasing ○ Decreasing ○ Stable ◉ Unknown

4B. If declining, what has been the rate of decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has the population decline occured?

4C. If stable or unknown, do you predict a future decline in the population size? ◉ Yes ○ No

If Yes, please specify rate and factors e.g. habitat loss, trade, etc.:

5. Habitat Status

5A. Is the habitat distribution: ◉ Continuous ○ Fragmented ○ Unknown

5B. Is there any change in the range of the habitat where the Taxon occurs? ◉ Yes ○ No ○ Unknown

If Yes, is it: ○ Decreasing in Area ○ Increasing in Area

5C. If decreasing what has been the decline? ◉ <20% ○ >20% ○ >50% ○ >80%

Over how many years has this decline occured?

5D. Do you predict a future decline in the habitiat? (•) Yes ( ) No

If Yes, what do you predict that decline will be? ( ) <20% (•) >20% ( ) >50% ( ) >80%

Over how many years do you predict the decline will occur? 10

5E. State the primary cause of this change:

Urban development of coastal plains in Dhofar

5F. Is there any change in the quality of the habitat where the Taxon occurs? ( ) Yes ( ) No ( ) Unknown

If Yes, is the habitat quality: (•) Declining ( ) Improving

5G. State the primary cause of this change:

Urban development in Dhofar coastal plains

6. Threats

	Present	Future		Present	Future
Pollution	☐	☐	Disease	☐	☐
Urban Development	☒	☒	Hybridization	☐	☐
Road Kills	☐	☐	Decline in prey species	☐	☐
Damming	☐	☐	Loss of habitat	☒	☒
War	☐	☐	Genetic problems	☐	☐
Recreational activities	☐	☐	Grazing	☐	☐
Hunting (recreation or retail)	☐	☐	Habitat fragmentation	☒	☒
Harvest for medicine	☐	☐	Predation	☐	☐
Harvest for food/timber	☐	☐	Interspecific competition	☐	☐
Poisoning	☐	☐	Livestock competition (food, etc.)	☐	☐
Pesticides	☐	☐	Livestock conflicts (retaliation kills)	☐	☐
Persecution	☐	☐	Introduced species (non-livestock)	☐	☐
Trade of animals/parts	☐	☐	Nutritional disorders	☐	☐

Other (please specify):

Possible decline as result of global warming on coastal plains

6B. Would these threats result in (perceived or inferred) population decline? (•) Yes ( ) No ( ) Unknown

Comment:

7. Trade

7A. Is the Taxon in trade? ( ) Yes (•) No ( ) Unknown

If Yes, is it: ( ) Local ( ) Regional ( ) International ( ) Commercial

7B. Parts in trade:

☐ Skin ☐ Fur ☐ Hair ☐ Horn ☐ Bones ☐ Glands

☐ Meat ☐ Products ☐ Live Animal ☐ Taxidermy ☐ Organs

Comments/Other threats (please specify):

8. Data Quality

8A. Are the estimates you have supplied based on:

☐ Census or monitoring ☐ General field studies ☐ Informal field studies ☒ Literature
☒ Hearsay/popular belief ☐ Museum studies/records ☐ Indirect information from trade, etc.

9. Studies (field) conducted over the last 10 years (indicate the year of study not the year of publication):

Researchers	Location	Year	Topic

10. Conservation Status

10A. IUCN Red List Category: Global: Not listed Regional: Not listed

10B. National Red Data Book:
Not listed

10C. Workshop Assessment of Regional Red List Category: Vulnerable

10D. CITES: Not listed

10E. National Wildife Legislation:
Not listed

10F. Other Legislation (please specify):

10G. List existing Protected Areas within the Taxon's range:

Protected Area	Country	Size (km^2)
Jebel Sanham, Dhofar	Oman	

10H. Recommended Protected Areas for the Taxon:

Area	Country	Size (km^2)

10I. Are there any Regional Conservation/Protection Action Plans: ○ Yes ◉ No ○ Unknown

If Yes, please list them:

11. Supporting Research

11A. Is research recommended? ◉ Yes ○ No

If Yes, what type of research would you recommend?

☒ Surveys ☐ Genetics ☒ Taxonomic ☐ Life History ☐ Public Awareness
☐ Trade ☐ Monitoring ☐ Reintroduction ☒ Human Impact
☐ Other (please specify):

12. Management

12A. What management is recommended for the Taxon?

☒ Habitat management ☐ Wild population management ☐ Captive breeding
☐ Monitoring ☐ Translocation ☐ Sustainable Use
☐ Public Awareness ☒ Limiting Factor Management ☐ Genome Research Banking
☐ Law Enforcement ☐ Work in Local Communities ☐ Address Policy Makers
☐ Other (please specify):

13. Captive Breeding

13A. Is captive breeding recommended for the taxon: ○ Yes ◉ No

13B. If captive breeding is recommeded , is it for:

☐ Species recovery ☐ Reintroduction ☐ Research ☐ Husbandry

☐ Education ☐ Preserve live genome

13C. Do Captive stocks already exist? ○ Yes ◉ No ○ Unknown

If Yes, list the facilities:

Facility	Country	Males	Females	Unknown	Total

13D. Does a coordinated Species Management Plan exist? ○ Yes ◉ No ○ Unknown

If Yes, list the participating institutions:

If Not, is a Species Management Plan recommended: ○ Yes ◉ No

If Yes, list the institutions that should participate:

13E. Level of captive breeding recommended:

☐ Captive breeding program not neccessary ☐ Initiate program within 3 years

☐ Maintain existing program as it is ☐ Intensify existing program ☐ Decrease existing progam

13F. Are the techniques established for captive breeding?

☐ Techniques are known for this or similar taxon ☐ Some techniques are known for this or similar taxon

☐ Techniques not known for this or simialr taxon ☒ Unknown

14. Sources/References (complete citation):

Egan, D. 2007. Snakes of Arabia. A field guide to the Snakes of the Arabian Peninsula and its Shores. Motivate Publishing.

Gasperetti, J. 1988. Snakes of Arabia. Fauna of Saudi Arabia 9:169-450.

Schatte, B & Desvolgnes, A. 1999. The Herpetofauna of southern Yemen and the Soqotra archipelago. Museum d'Histoire Naturelle, Geneve.

Schatte, B & Gasparetti, J.A. A contribution to the herpetofauna of Southwestern Arabia. Fauna of Saudi Arabia. Vol 14.

Van der Kooij, J. 2001. The Herpetofauna of the Sultinate of Oman. Part 4: Terrestrial Snakes. Podarcus.

15. Compilers

William Branch, Damien Egan, Tony Phelps, Declan O'Donovan, Gavin Nel, Saud A. Al Farraj, Pritpal Soorae, Ehad Eid, Haithem Al Aamri, Peter Arras, Neelofa Ali, Masaa Al Jumaily, Khaled Al Rasbi and Patrick Paillat

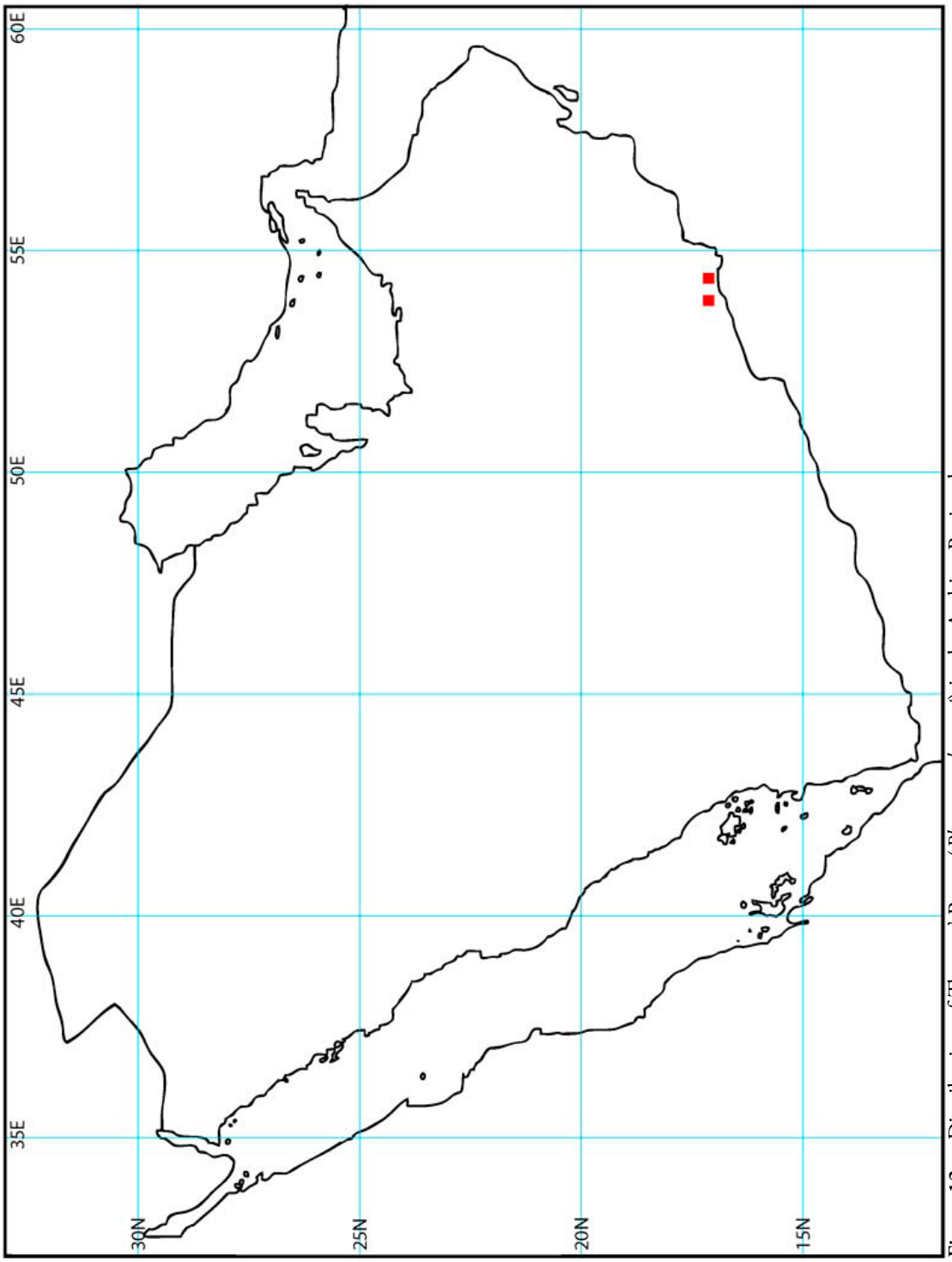

Figure 12. Distribution of 'Thomas' Racer (*Platyceps thomasi*) in the Arabian Peninsula.

Conservation Workshop for the Fauna of Arabia
Taxon Data Sheet

Working Group: Snakes **Date:** 3-5 February 2008

1. Taxonomy

1A. Scientific Name (Genus, species & subspecies): *Platyceps manseri*

Authority: (Leviton) Date: 1986

1B. Synonyms (with authority & date):

1C. Common Name(s) with language/region:
Manser's black snake, Manser's racer (English)

2. Distribution

2A. Historical Distribution (last 100 years):
From Jizan in SW Saudi Arabia to Al Hudaidah in adjoining Yemen

2B. Current Distribution (illustrate on map):
See 2A

2C. Habitat of the taxon (ecosystem level):
SW Arabian foothills and savannah

2D. Habitat specificity (elevation, etc.):
Varied from vegetated coastal plain to rocky terrian

2E. Migration: ○ Yes ◉ No ○ Unknown

If Yes, describe:

3. Number of Populations & Subpopulations in which the Taxon is distributed:

Location of each:	Approx. Area Occupied:	Approx. No. of Individuals:
SW Saudi Arabia to the Yemen border	25km2	Unknown

4. Population Trends

4A. Is the Population: ○ Increasing ○ Decreasing ○ Stable ◉ Unknown

4B. If declining, what has been the rate of decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has the population decline occured?

4C. If stable or unknown, do you predict a future decline in the population size? ○ Yes ◉ No

If Yes, please specify rate and factors e.g. habitat loss, trade, etc.:

5. Habitat Status

5A. Is the habitat distribution: ◉ Continuous ○ Fragmented ○ Unknown

5B. Is there any change in the range of the habitat where the Taxon occurs? ○ Yes ◉ No ○ Unknown

If Yes, is it: ○ Decreasing in Area ○ Increasing in Area

5C. If decreasing what has been the decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has this decline occured?

5D. Do you predict a future decline in the habitiat? ◯ Yes ◯ No

If Yes, what do you predict that decline will be? ◯ <20% ◯ >20% ◯ >50% ◯ >80%

Over how many years do you predict the decline will occur?

5E. State the primary cause of this change:

5F. Is there any change in the quality of the habitat where the Taxon occurs? ◯ Yes ◉ No ◯ Unknown

If Yes, is the habitat quality: ◯ Declining ◯ Improving

5G. State the primary cause of this change:

6. Threats

	Present	Future		Present	Future
Pollution	☐	☐	Disease	☐	☐
Urban Development	☐	☒	Hybridization	☐	☐
Road Kills	☐	☐	Decline in prey species	☐	☐
Damming	☐	☐	Loss of habitat	☐	☒
War	☐	☐	Genetic problems	☐	☐
Recreational activities	☐	☐	Grazing	☐	☐
Hunting (recreation or retail)	☐	☐	Habitat fragmentation	☐	☐
Harvest for medicine	☐	☐	Predation	☐	☐
Harvest for food/timber	☐	☐	Interspecific competition	☐	☐
Poisoning	☐	☐	Livestock competition (food, etc.)	☐	☐
Pesticides	☐	☐	Livestock conflicts (retaliation kills)	☐	☐
Persecution	☐	☐	Introduced species (non-livestock)	☐	☐
Trade of animals/parts	☐	☐	Nutritional disorders	☐	☐

Other (please specify):

6B. Would these threats result in (perceived or inferred) population decline? ◯ Yes ◉ No ◯ Unknown

Comment:

7. Trade

7A. Is the Taxon in trade? ◯ Yes ◉ No ◯ Unknown

If Yes, is it: ◯ Local ◯ Regional ◯ International ◯ Commercial

7B. Parts in trade:

☐ Skin ☐ Fur ☐ Hair ☐ Horn ☐ Bones ☐ Glands

☐ Meat ☐ Products ☐ Live Animal ☐ Taxidermy ☐ Organs

Comments/Other threats (please specify):

8. Data Quality

8A. Are the estimates you have supplied based on:

☐ Census or monitoring ☐ General field studies ☒ Informal field studies ☒ Literature
☐ Hearsay/popular belief ☒ Museum studies/records ☐ Indirect information from trade, etc.

9. Studies (field) conducted over the last 10 years (indicate the year of study not the year of publication):

Researchers	Location	Year	Topic

10. Conservation Status

10A. IUCN Red List Category: Global: Not listed Regional: Not listed

10B. National Red Data Book:
Not listed

10C. Workshop Assessment of Regional Red List Category: Vulnerable

10D. CITES: Not listed

10E. National Wildife Legislation:
Not listed

10F. Other Legislation (please specify):

10G. List existing Protected Areas within the Taxon's range:

Protected Area	Country	Size (km^2)

10H. Recommended Protected Areas for the Taxon:

Area	Country	Size (km^2)

10I. Are there any Regional Conservation/Protection Action Plans: ○ Yes ◉ No ○ Unknown

If Yes, please list them:

11. Supporting Research

11A. Is research recommended? ◉ Yes ○ No

If Yes, what type of research would you recommend?

☐ Surveys ☒ Genetics ☒ Taxonomic ☒ Life History ☐ Public Awareness
☐ Trade ☐ Monitoring ☐ Reintroduction ☐ Human Impact
☐ Other (please specify):

12. Management

12A. What management is recommended for the Taxon?

☒ Habitat management ☐ Wild population management ☐ Captive breeding
☐ Monitoring ☐ Translocation ☐ Sustainable Use
☐ Public Awareness ☒ Limiting Factor Management ☒ Genome Research Banking
☐ Law Enforcement ☐ Work in Local Communities ☐ Address Policy Makers
☐ Other (please specify):

Ascertain correct taxonomic status before assessing conservation status

13. Captive Breeding

13A. Is captive breeding recommended for the taxon: ○ Yes ◉ No

13B. If captive breeding is recommeded , is it for:

☐ Species recovery ☐ Reintroduction ☐ Research ☐ Husbandry

☐ Education ☐ Preserve live genome

13C. Do Captive stocks already exist? ○ Yes ○ No ○ Unknown

If Yes, list the facilities:

Facility	Country	Males	Females	Unknown	Total

13D. Does a coordinated Species Management Plan exist? ○ Yes ◉ No ○ Unknown

If Yes, list the participating institutions:

If Not, is a Species Management Plan recommended: ○ Yes ◉ No

If Yes, list the institutions that should participate:

13E. Level of captive breeding recommended:

☐ Captive breeding program not neccessary ☐ Initiate program within 3 years

☐ Maintain existing program as it is ☐ Intensify existing program ☐ Decrease existing progam

13F. Are the techniques established for captive breeding?

☐ Techniques are known for this or similar taxon ☐ Some techniques are known for this or similar taxon

☐ Techniques not known for this or simialr taxon ☒ Unknown

14. Sources/References (complete citation):

15. Compilers

William Branch, Damien Egan, Tony Phelps, Declan O'Donovan, Gavin Nel, Saud A. Al Farraj, Pritpal Soorae, Ehad Eid, Haithem Al Aamri, Peter Arras, Neelofa Ali, Masaa Al Jumaily, Khaled Al Rasbi and Patrick Paillat

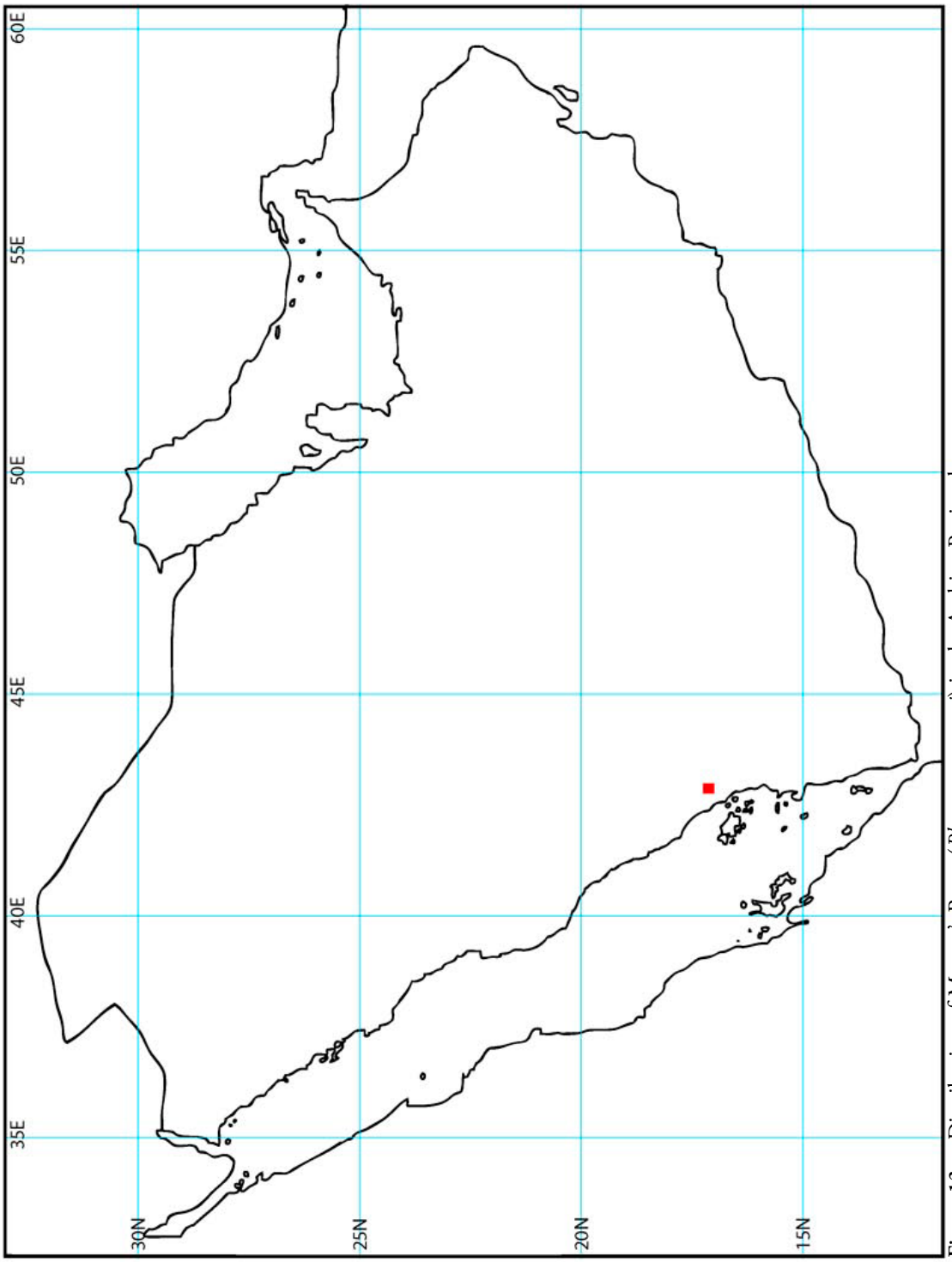

Figure 13. Distribution of Manser's Racer (*Platyceps manseri*) in the Arabian Peninsula.

Conservation Workshop for the Fauna of Arabia

Taxon Data Sheet

Working Group: Snakes **Date:** 3-5 February 2008

1. Taxonomy

1A. Scientific Name (Genus, species & subspecies): *Platyceps variabilis*

Authority: (Boulenger) Date: 1905

1B. Synonyms (with authority & date):

1C. Common Name(s) with language/region:
Variable racer

2. Distribution

2A. Historical Distribution (last 100 years):
Southwestern Yemen

2B. Current Distribution (illustrate on map):
See 2A

2C. Habitat of the taxon (ecosystem level):
Southwestern Arabian foothills and Savannah, rocky areas from sea level to 1800m a.s.l

2D. Habitat specificity (elevation, etc.):
Rocky terrain, apparently with access to moist retreats

2E. Migration: ○ Yes ◉ No ○ Unknown

If Yes, describe:

3. Number of Populations & Subpopulations in which the Taxon is distributed:

Location of each:	Approx. Area Occupied:	Approx. No. of Individuals:
Southwestern corner of Yemen		Unknown

4. Population Trends

4A. Is the Population: ○ Increasing ○ Decreasing ○ Stable ◉ Unknown

4B. If declining, what has been the rate of decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has the population decline occured?

4C. If stable or unknown, do you predict a future decline in the population size? ○ Yes ◉ No

If Yes, please specify rate and factors e.g. habitat loss, trade, etc.:

5. Habitat Status

5A. Is the habitat distribution: ◉ Continuous ○ Fragmented ○ Unknown

5B. Is there any change in the range of the habitat where the Taxon occurs? ○ Yes ◉ No ○ Unknown
If Yes, is it: ○ Decreasing in Area ○ Increasing in Area

5C. If decreasing what has been the decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has this decline occured?

5D. Do you predict a future decline in the habitiat? ◯ Yes ◯ No

If Yes, what do you predict that decline will be? ◯ <20% ◯ >20% ◯ >50% ◯ >80%

Over how many years do you predict the decline will occur?

5E. State the primary cause of this change:

Small scale habitat loss through subsistance agriculture but presumed insignificant

5F. Is there any change in the quality of the habitat where the Taxon occurs? ◯ Yes ◉ No ◯ Unknown

If Yes, is the habitat quality: ◯ Declining ◯ Improving

5G. State the primary cause of this change:

6. Threats

	Present	Future		Present	Future
Pollution	☐	☐	Disease	☐	☐
Urban Development	☐	☒	Hybridization	☐	☐
Road Kills	☐	☐	Decline in prey species	☐	☐
Damming	☐	☐	Loss of habitat	☐	☒
War	☐	☐	Genetic problems	☐	☐
Recreational activities	☐	☐	Grazing	☐	☐
Hunting (recreation or retail)	☐	☐	Habitat fragmentation	☐	☒
Harvest for medicine	☐	☐	Predation	☐	☐
Harvest for food/timber	☐	☐	Interspecific competition	☐	☐
Poisoning	☐	☐	Livestock competition (food, etc.)	☐	☐
Pesticides	☐	☐	Livestock conflicts (retaliation kills)	☐	☐
Persecution	☐	☐	Introduced species (non-livestock)	☐	☐
Trade of animals/parts	☐	☐	Nutritional disorders	☐	☐

Other (please specify):

6B. Would these threats result in (perceived or inferred) population decline? ◯ Yes ◯ No ◯ Unknown

Comment:

7. Trade

7A. Is the Taxon in trade? ◯ Yes ◯ No ◯ Unknown

If Yes, is it: ◯ Local ◯ Regional ◯ International ◯ Commercial

7B. Parts in trade:

☐ Skin ☐ Fur ☐ Hair ☐ Horn ☐ Bones ☐ Glands

☐ Meat ☐ Products ☐ Live Animal ☐ Taxidermy ☐ Organs

Comments/Other threats (please specify):

8. Data Quality

8A. Are the estimates you have supplied based on:

☐ Census or monitoring ☒ General field studies ☒ Informal field studies ☒ Literature
☐ Hearsay/popular belief ☐ Museum studies/records ☐ Indirect information from trade, etc.

9. Studies (field) conducted over the last 10 years (indicate the year of study not the year of publication):

Researchers	Location	Year	Topic
Masa et al. Snakes in Yemen			

10. Conservation Status

10A. IUCN Red List Category: Global: Not listed Regional: Not listed

10B. National Red Data Book:
Not listed

10C. Workshop Assessment of Regional Red List Category: Least concern

10D. CITES: Not listed

10E. National Wildife Legislation:
Not listed

10F. Other Legislation (please specify):

10G. List existing Protected Areas within the Taxon's range:

Protected Area	Country	Size (km^2)

10H. Recommended Protected Areas for the Taxon:

Area	Country	Size (km^2)

10I. Are there any Regional Conservation/Protection Action Plans: ○ Yes ◉ No ○ Unknown

If Yes, please list them:

11. Supporting Research

11A. Is research recommended? ◉ Yes ○ No

If Yes, what type of research would you recommend?

☒ Surveys ☐ Genetics ☒ Taxonomic ☒ Life History ☐ Public Awareness
☐ Trade ☐ Monitoring ☐ Reintroduction ☐ Human Impact
☐ Other (please specify):

12. Management

12A. What management is recommended for the Taxon?

☐ Habitat management ☐ Wild population management ☐ Captive breeding
☐ Monitoring ☐ Translocation ☐ Sustainable Use
☐ Public Awareness ☒ Limiting Factor Management ☒ Genome Research Banking
☐ Law Enforcement ☐ Work in Local Communities ☐ Address Policy Makers
☒ Other (please specify):

Assessment of taxonomic status will help in clarifying conservation status

13. Captive Breeding

13A. Is captive breeding recommended for the taxon: ○ Yes ◉ No

13B. If captive breeding is recommeded , is it for:

☐ Species recovery ☐ Reintroduction ☐ Research ☐ Husbandry

☐ Education ☐ Preserve live genome

13C. Do Captive stocks already exist? ○ Yes ○ No ○ Unknown

If Yes, list the facilities:

Facility	Country	Males	Females	Unknown	Total

13D. Does a coordinated Species Management Plan exist? ○ Yes ◉ No ○ Unknown

If Yes, list the participating institutions:

If Not, is a Species Management Plan recommended: ○ Yes ◉ No

If Yes, list the institutions that should participate:

13E. Level of captive breeding recommended:

☐ Captive breeding program not neccessary ☐ Initiate program within 3 years

☐ Maintain existing program as it is ☐ Intensify existing program ☐ Decrease existing progam

13F. Are the techniques established for captive breeding?

☐ Techniques are known for this or similar taxon ☐ Some techniques are known for this or similar taxon

☐ Techniques not known for this or simialr taxon ☒ Unknown

14. Sources/References (complete citation):

Egan, D. 2007. Snakes of Arabia. A field guide to the Snakes of the Arabian Peninsula and its Shores. Motivate Publishing.

Gasperetti, J. 1988. Snakes of Arabai. Fauna of Saudi Arabia 9:169-450

Schatte, B & Desvolgnes, A. 1999. The Herpetofauna of southern Yemen and the Soqotra archipelago. Museum d'Histoire Naturelle. Geneve.

Schatte, B & Gasparetti, J.A. Contributions to the herpetofauna of Southwestern Arabia. Fauna of Saudi Arabia. Vol.14

Van der Kooij, J. 2001. The Herpetofauna of the Sultinate of Oman. Part 4: Terrestrial Snakes. Pordarcus.

15. Compilers

William Branch, Damien Egan, Tony Phelps, Declan O'Donovan, Gavin Nel, Saud A. Al Farraj, Pritpal Soorae, Ehad Eid, Haithem Al Aamri, Peter Arras, Neelofa Ali, Masaa Al Jumaily, Khaled Al Rasbi and Patrick Paillat

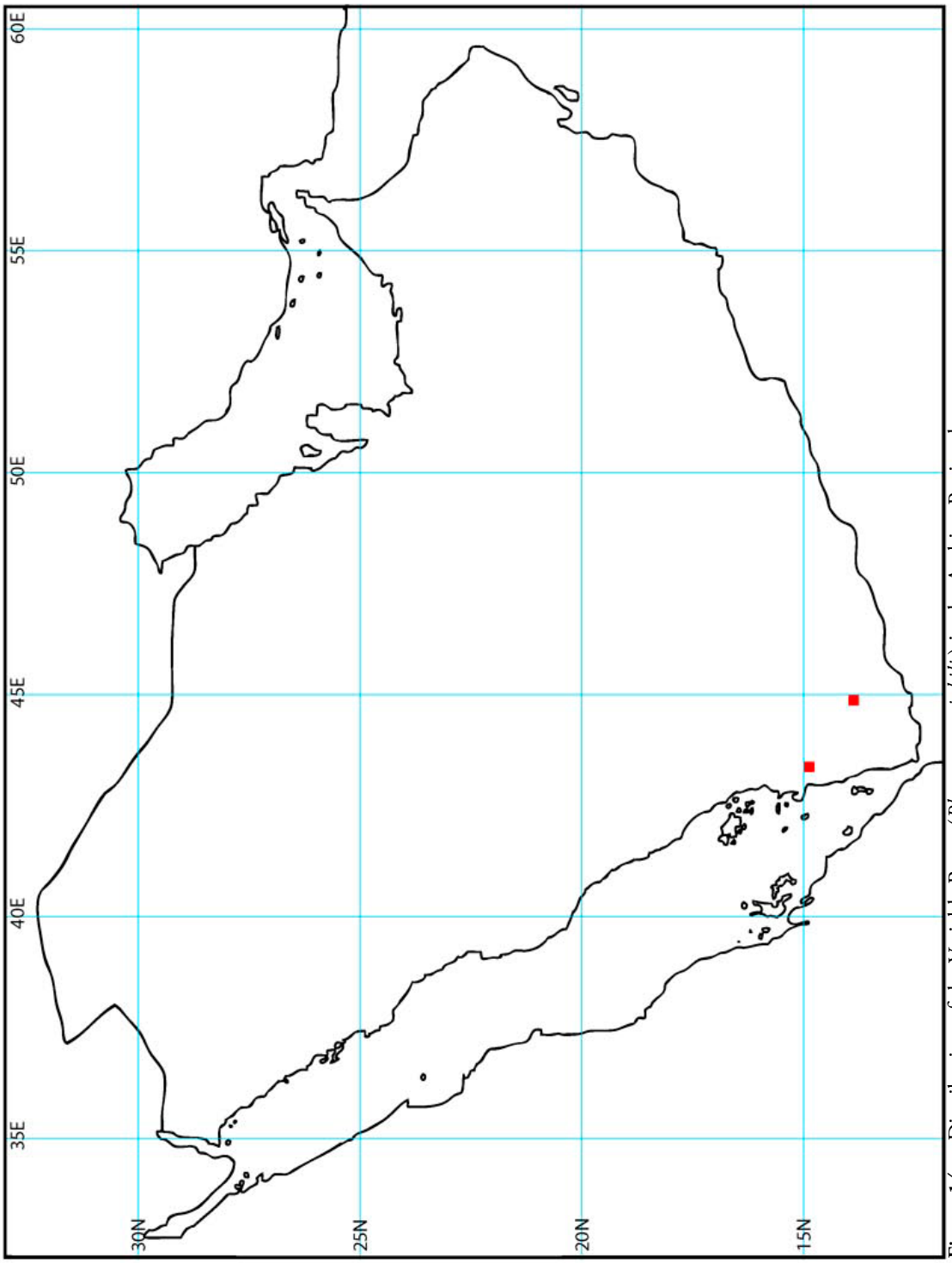

Figure 14. Distribution of the Variable Racer (*Platyceps variabilis*) in the Arabian Peninsula.

Conservation Workshop for the Fauna of Arabia
Taxon Data Sheet

Working Group: Snakes **Date:** 3-5 February 2008

1. Taxonomy

1A. Scientific Name (Genus, species & subspecies): *Dasypeltis scabra*

Authority: Linnaeus Date: 1758

1B. Synonyms (with authority & date):

1C. Common Name(s) with language/region:
Common Egg Eater (English), Rhombic Egg Eater (English).

2. Distribution

2A. Historical Distribution (last 100 years):
Western Yemen and southwestern Saudi Arabia.

2B. Current Distribution (illustrate on map):
See 2A.

2C. Habitat of the taxon (ecosystem level):
Southwestern Arabian foothill savannah and southwestern Arabian montane woodlands.

2D. Habitat specificity (elevation, etc.):
Non-specific. Up to 200 m.a.s.l.

2E. Migration: ○ Yes ◉ No ○ Unknown

If Yes, describe:

3. Number of Populations & Subpopulations in which the Taxon is distributed: 1

Location of each:	Approx. Area Occupied:	Approx. No. of Individuals:
Southwestern Arabia, Saudi Arabia & Yemen	275 km^2	~

4. Population Trends

4A. Is the Population: ○ Increasing ○ Decreasing ◉ Stable ○ Unknown

4B. If declining, what has been the rate of decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has the population decline occured?

4C. If stable or unknown, do you predict a future decline in the population size? ○ Yes ◉ No

If Yes, please specify rate and factors e.g. habitat loss, trade, etc.:

5. Habitat Status

5A. Is the habitat distribution: ◉ Continuous ○ Fragmented ○ Unknown

5B. Is there any change in the range of the habitat where the Taxon occurs? ○ Yes ◉ No ○ Unknown

If Yes, is it: ○ Decreasing in Area ○ Increasing in Area

5C. If decreasing what has been the decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has this decline occured?

5D. Do you predict a future decline in the habitiat? ○ Yes ◉ No

If Yes, what do you predict that decline will be? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years do you predict the decline will occur?

5E. State the primary cause of this change:

5F. Is there any change in the quality of the habitat where the Taxon occurs? ○ Yes ◉ No ○ Unknown

If Yes, is the habitat quality: ○ Declining ○ Improving

5G. State the primary cause of this change:

6. Threats

	Present	Future		Present	Future
Pollution	☐	☐	Disease	☐	☐
Urban Development	☐	☒	Hybridization	☐	☐
Road Kills	☐	☐	Decline in prey species	☐	☐
Damming	☐	☐	Loss of habitat	☐	☒
War	☐	☐	Genetic problems	☐	☐
Recreational activities	☐	☐	Grazing	☐	☐
Hunting (recreation or retail)	☐	☐	Habitat fragmentation	☐	☒
Harvest for medicine	☐	☐	Predation	☐	☐
Harvest for food/timber	☐	☐	Interspecific competition	☐	☐
Poisoning	☐	☐	Livestock competition (food, etc.)	☐	☐
Pesticides	☐	☐	Livestock conflicts (retaliation kills)	☐	☐
Persecution	☐	☐	Introduced species (non-livestock)	☐	☐
Trade of animals/parts	☐	☐	Nutritional disorders	☐	☐

Other (please specify):

6B. Would these threats result in (perceived or inferred) population decline? ○ Yes ◉ No ○ Unknown

Comment:

7. Trade

7A. Is the Taxon in trade? ◉ Yes ○ No ○ Unknown

If Yes, is it: ○ Local ○ Regional ◉ International ○ Commercial

7B. Parts in trade:

☐ Skin ☐ Fur ☐ Hair ☐ Horn ☐ Bones ☐ Glands

☐ Meat ☐ Products ☒ Live Animal ☐ Taxidermy ☐ Organs

Comments/Other threats (please specify):

8. Data Quality

8A. Are the estimates you have supplied based on:

☐ Census or monitoring ☐ General field studies ☒ Informal field studies ☒ Literature
☐ Hearsay/popular belief ☐ Museum studies/records ☒ Indirect information from trade, etc.

9. Studies (field) conducted over the last 10 years (indicate the year of study not the year of publication):

Researchers	Location	Year	Topic

10. Conservation Status

10A. IUCN Red List Category: Global: Not Listed. Regional: Not Listed.

10B. National Red Data Book:
Not Listed.

10C. Workshop Assessment of Regional Red List Category: Least Concern.

10D. CITES: Not Listed.

10E. National Wildife Legislation:
Not Listed.

10F. Other Legislation (please specify):

10G. List existing Protected Areas within the Taxon's range:

Protected Area	Country	Size (km^2)

10H. Recommended Protected Areas for the Taxon:

Area	Country	Size (km^2)

10I. Are there any Regional Conservation/Protection Action Plans: ○ Yes ◉ No ○ Unknown

If Yes, please list them:

11. Supporting Research

11A. Is research recommended? ◉ Yes ○ No

If Yes, what type of research would you recommend?

☐ Surveys ☒ Genetics ☒ Taxonomic ☐ Life History ☐ Public Awareness
☐ Trade ☐ Monitoring ☐ Reintroduction ☐ Human Impact
☐ Other (please specify):

12. Management

12A. What management is recommended for the Taxon?

☐ Habitat management ☐ Wild population management ☐ Captive breeding
☐ Monitoring ☐ Translocation ☐ Sustainable Use
☐ Public Awareness ☒ Limiting Factor Management ☒ Genome Research Banking
☐ Law Enforcement ☐ Work in Local Communities ☐ Address Policy Makers
☐ Other (please specify):

13. Captive Breeding

13A. Is captive breeding recommended for the taxon: ○ Yes ◉ No

13B. If captive breeding is recommeded , is it for:

☐ Species recovery ☐ Reintroduction ☐ Research ☐ Husbandry

☐ Education ☐ Preserve live genome

13C. Do Captive stocks already exist? ○ Yes ◉ No ○ Unknown

If Yes, list the facilities:

Facility	Country	Males	Females	Unknown	Total

13D. Does a coordinated Species Management Plan exist? ○ Yes ◉ No ○ Unknown

If Yes, list the participating institutions:

If Not, is a Species Management Plan recommended: ○ Yes ◉ No

If Yes, list the institutions that should participate:

13E. Level of captive breeding recommended:

☒ Captive breeding program not neccessary ☐ Initiate program within 3 years

☐ Maintain existing program as it is ☐ Intensify existing program ☐ Decrease existing progam

13F. Are the techniques established for captive breeding?

☒ Techniques are known for this or similar taxon ☐ Some techniques are known for this or similar taxon

☐ Techniques not known for this or simialr taxon ☐ Unknown

14. Sources/References (complete citation):

Egan, D. 2007. Snakes of Arabia: A field guide to the Snakes of the Arabian Peninsula and its Shores. Motivate Publishing, Dubai.

Gasparetti, J. 1988. Snakes of Arabia. *Fauna of Saudi Arabia* 9: 169-405.

Schätte, B. and Desvoignes, A. 1999. The Herpetofauna of southern Yemen and Sokotra Archipelago. Museum d'Historie Naturelle. Geneve.

Schätte, B. and Gasparetti, J.A. 1994. Contribution to the herpetofauna of Southwest Arabia. *Fauna of Saudi Arabia* 14: 348-432.

15. Compilers

William Branch, Damien Egan, Tony Phelps, Declan O'Donovan, Gavin Nel, Saud A. Al Farraj, Pritpal Soorae, Ehad Eid, Haithem Al Aamri, Peter Arras, Neelofa Ali, Masaa Al Jumaily, Khaled Al Rasbi and Patrick Paillat

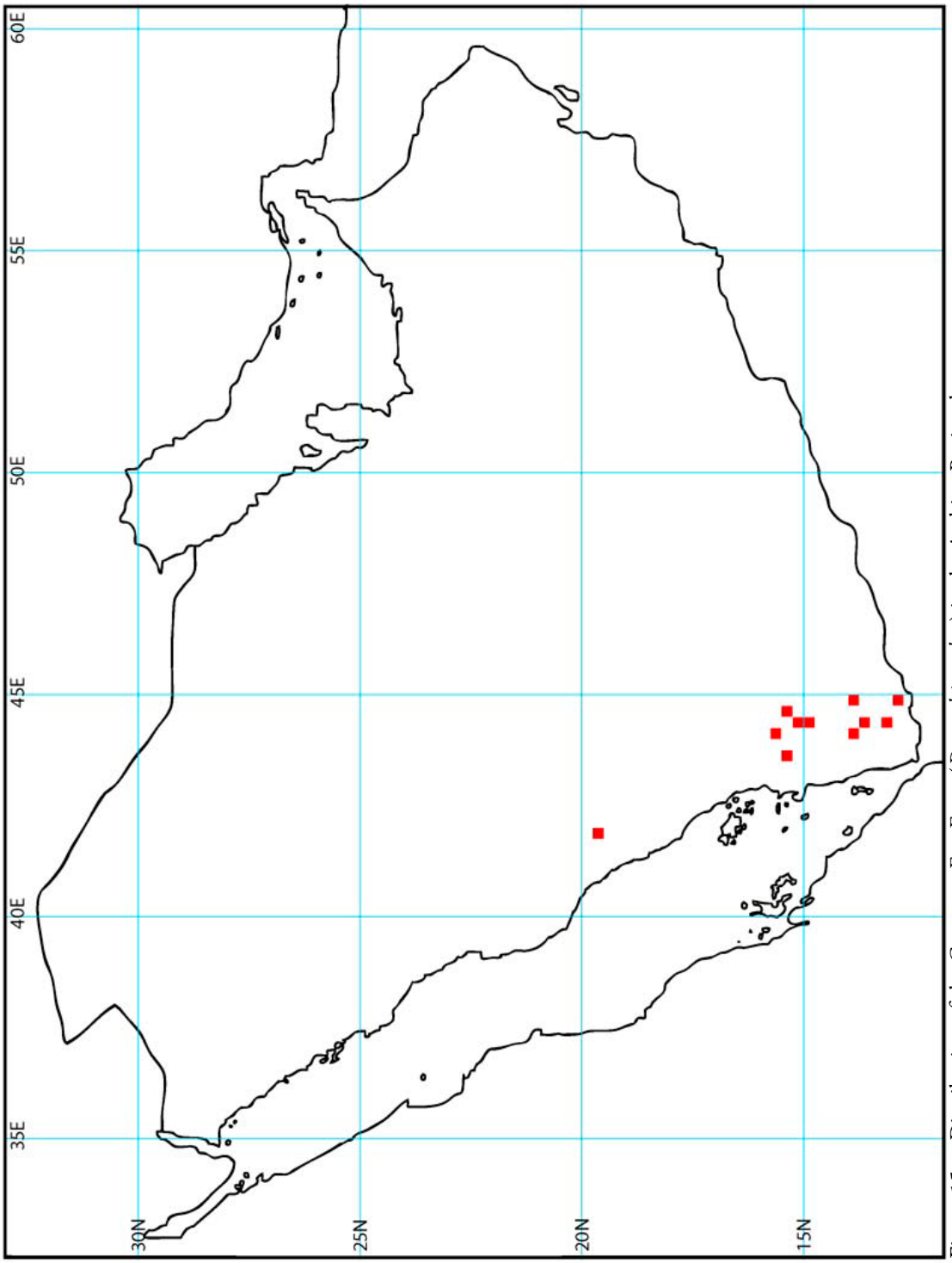

Figure 15. Distribution of the Common Egg Eater (*Dasypeltis scabra*) in the Arabian Peninsula.

Conservation Workshop for the Fauna of Arabia
Taxon Data Sheet

Working Group: Snakes **Date:** 3-5 February 2008

1. Taxonomy

1A. Scientific Name (Genus, species & subspecies): *Eirenis coronella coronella*

Authority: (Schlegel) Date: 1837

1B. Synonyms (with authority & date):

1C. Common Name(s) with language/region:
Crowned dwarf snake

2. Distribution

2A. Historical Distribution (last 100 years):
Widespread in the Middle East, just entering Eastern Saudi Arabia

2B. Current Distribution (illustrate on map):
See 2A.

2C. Habitat of the taxon (ecosystem level):
Arabian Desert and East Sahero xeric woodlands

2D. Habitat specificity (elevation, etc.):
Alluvial plains and desert

2E. Migration: ○ Yes ◉ No ○ Unknown

If Yes, describe:

3. Number of Populations & Subpopulations in which the Taxon is distributed:

Location of each:	Approx. Area Occupied:	Approx. No. of Individuals:
Eastern Province, Saudi Arabia	75km2	

4. Population Trends

4A. Is the Population: ○ Increasing ○ Decreasing ○ Stable ◉ Unknown

4B. If declining, what has been the rate of decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has the population decline occured?

4C. If stable or unknown, do you predict a future decline in the population size? ○ Yes ◉ No

If Yes, please specify rate and factors e.g. habitat loss, trade, etc.:

5. Habitat Status

5A. Is the habitat distribution: ◉ Continuous ○ Fragmented ○ Unknown

5B. Is there any change in the range of the habitat where the Taxon occurs? ○ Yes ◉ No ○ Unknown

If Yes, is it: ○ Decreasing in Area ○ Increasing in Area

5C. If decreasing what has been the decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has this decline occured?

5D. Do you predict a future decline in the habitiat? ○ Yes ◉ No

If Yes, what do you predict that decline will be? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years do you predict the decline will occur?

5E. State the primary cause of this change:

5F. Is there any change in the quality of the habitat where the Taxon occurs? ○ Yes ◉ No ○ Unknown

If Yes, is the habitat quality: ○ Declining ○ Improving

5G. State the primary cause of this change:

6. Threats

	Present	Future		Present	Future
Pollution	☐	☐	Disease	☐	☐
Urban Development	☐	☒	Hybridization	☐	☐
Road Kills	☐	☐	Decline in prey species	☐	☐
Damming	☐	☐	Loss of habitat	☐	☒
War	☐	☐	Genetic problems	☐	☐
Recreational activities	☐	☒	Grazing	☐	☐
Hunting (recreation or retail)	☐	☐	Habitat fragmentation	☐	☒
Harvest for medicine	☐	☐	Predation	☐	☐
Harvest for food/timber	☐	☐	Interspecific competition	☐	☐
Poisoning	☐	☐	Livestock competition (food, etc.)	☐	☐
Pesticides	☐	☐	Livestock conflicts (retaliation kills)	☐	☐
Persecution	☐	☐	Introduced species (non-livestock)	☐	☐
Trade of animals/parts	☐	☐	Nutritional disorders	☐	☐

Other (please specify):

6B. Would these threats result in (perceived or inferred) population decline? ○ Yes ◉ No ○ Unknown

Comment:

7. Trade

7A. Is the Taxon in trade? ○ Yes ◉ No ○ Unknown

If Yes, is it: ○ Local ○ Regional ○ International ○ Commercial

7B. Parts in trade:

☐ Skin ☐ Fur ☐ Hair ☐ Horn ☐ Bones ☐ Glands

☐ Meat ☐ Products ☐ Live Animal ☐ Taxidermy ☐ Organs

Comments/Other threats (please specify):

8. Data Quality

8A. Are the estimates you have supplied based on:

☐ Census or monitoring ☐ General field studies ☒ Informal field studies ☒ Literature
☐ Hearsay/popular belief ☐ Museum studies/records ☒ Indirect information from trade, etc.

9. Studies (field) conducted over the last 10 years (indicate the year of study not the year of publication):

Researchers	Location	Year	Topic

10. Conservation Status

10A. IUCN Red List Category: Global: Not listed Regional: Not listed

10B. National Red Data Book:
Not listed

10C. Workshop Assessment of Regional Red List Category: Least concern

10D. CITES: Not listed

10E. National Wildife Legislation:
Not listed

10F. Other Legislation (please specify):

10G. List existing Protected Areas within the Taxon's range:

Protected Area	Country	Size (km^2)

10H. Recommended Protected Areas for the Taxon:

Area	Country	Size (km^2)

10I. Are there any Regional Conservation/Protection Action Plans: ○ Yes ◉ No ○ Unknown

If Yes, please list them:

11. Supporting Research

11A. Is research recommended? ◉ Yes ○ No

If Yes, what type of research would you recommend?

☐ Surveys ☒ Genetics ☒ Taxonomic ☐ Life History ☐ Public Awareness
☐ Trade ☐ Monitoring ☐ Reintroduction ☐ Human Impact
☐ Other (please specify):

12. Management

12A. What management is recommended for the Taxon?

☒ Habitat management ☐ Wild population management ☐ Captive breeding
☐ Monitoring ☐ Translocation ☐ Sustainable Use
☐ Public Awareness ☐ Limiting Factor Management ☒ Genome Research Banking
☐ Law Enforcement ☐ Work in Local Communities ☐ Address Policy Makers
☐ Other (please specify):

13. Captive Breeding

13A. Is captive breeding recommended for the taxon: ○ Yes ◉ No

13B. If captive breeding is recommeded , is it for:

☐ Species recovery ☐ Reintroduction ☐ Research ☐ Husbandry

☐ Education ☐ Preserve live genome

13C. Do Captive stocks already exist? ○ Yes ○ No ○ Unknown

If Yes, list the facilities:

Facility	Country	Males	Females	Unknown	Total

13D. Does a coordinated Species Management Plan exist? ○ Yes ◉ No ○ Unknown

If Yes, list the participating institutions:

If Not, is a Species Management Plan recommended: ○ Yes ◉ No

If Yes, list the institutions that should participate:

13E. Level of captive breeding recommended:

☐ Captive breeding program not neccessary ☐ Initiate program within 3 years

☐ Maintain existing program as it is ☐ Intensify existing program ☐ Decrease existing progam

13F. Are the techniques established for captive breeding?

☐ Techniques are known for this or similar taxon ☐ Some techniques are known for this or similar taxon

☐ Techniques not known for this or simialr taxon ☒ Unknown

14. Sources/References (complete citation):

Egan, D. 2007. Snakes of Arabia. A field guide to the Snakes of the Arabian Peninsula and its Shores. Motivate Publishing.

Gasperetti, J. 1988. Snakes of Arabia. Fauna of Saudi Arabia 9:169-450

Sivan, N. & Werner, Y.L. 2003. Revision of the Middle Eastern dwarf snakes commonly assigned to Eirenis coronella (Colubriadae). Zoology of the Middle East 28:39-59.

Werner, Y.L. 1991. Notable Herpetofaunal Records from TransJordan. Zoology in the Middle East. Vol.5: 37-41

15. Compilers

William Branch, Damien Egan, Tony Phelps, Declan O'Donovan, Gavin Nel, Saud A. Al Farraj, Pritpal Soorae, Ehad Eid, Haithem Al Aamri, Peter Arras, Neelofa Ali, Masaa Al Jumaily, Khaled Al Rasbi and Patrick Paillat

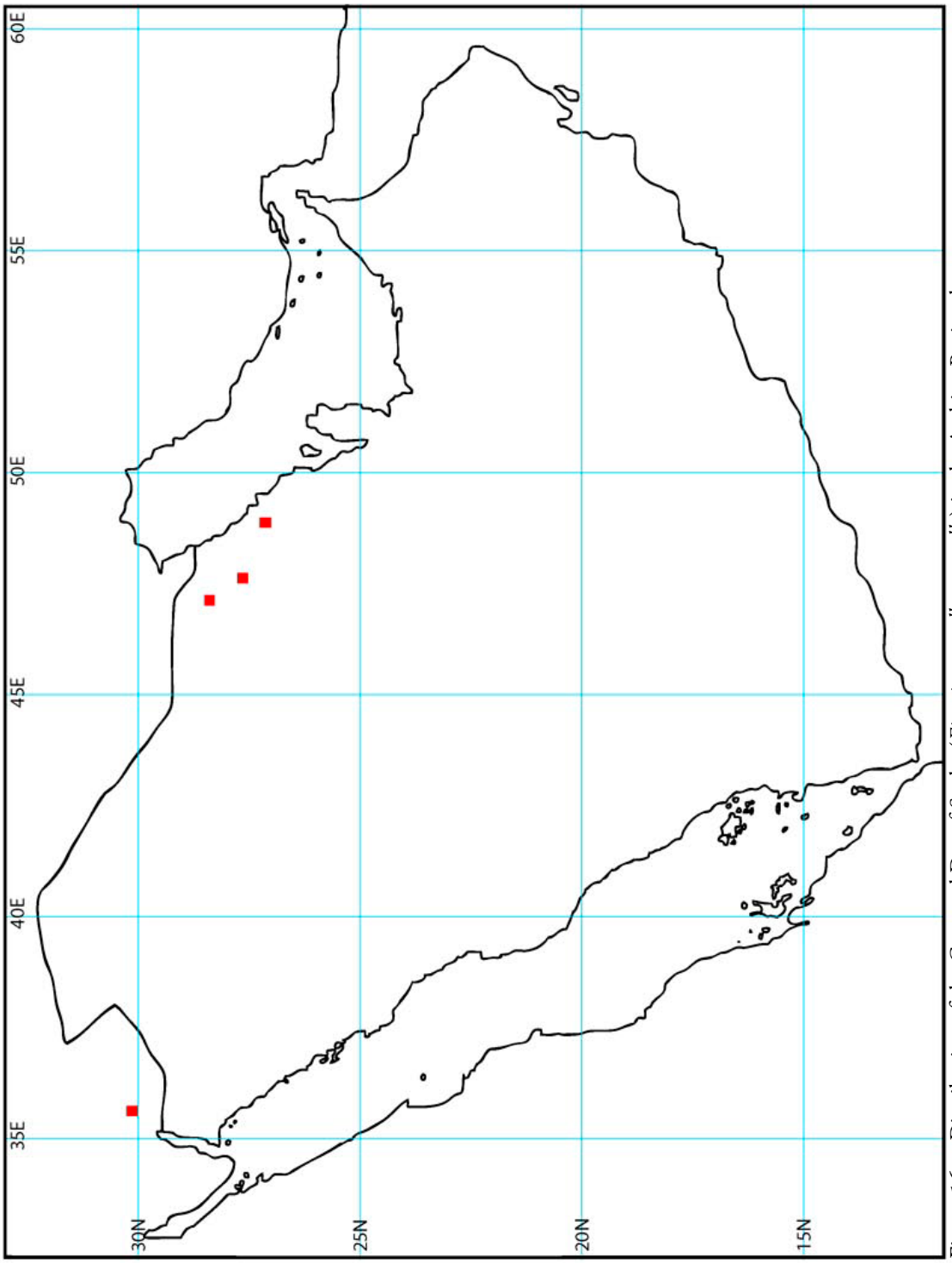

Figure 16. Distribution of the Crowned Dwarf Snake (*Eirenis coronella coronella*) in the Arabian Peninsula.

Conservation Workshop for the Fauna of Arabia
Taxon Data Sheet

Working Group: Snakes Date: 3-5 February 2008

1. Taxonomy

1A. Scientific Name (Genus, species & subspecies): *Eirenis coronella fennelli*

Authority: Arnold Date: 1982

1B. Synonyms (with authority & date):

1C. Common Name(s) with language/region:
Fennell's dwarf snake

2. Distribution

2A. Historical Distribution (last 100 years):
Asir Mountains of Western Saudi Arabia

2B. Current Distribution (illustrate on map):
See 2A.

2C. Habitat of the taxon (ecosystem level):
Red sea, Nubia-Sinian tropical desert and semi-desert: Southwestern Arabian foothills savannah: Arabian Peninsula coastal fog desert

2D. Habitat specificity (elevation, etc.):
Generally above 200m above sea level in areas of good precipitation

2E. Migration: ○ Yes ◉ No ○ Unknown

If Yes, describe:

3. Number of Populations & Subpopulations in which the Taxon is distributed:

Location of each:	Approx. Area Occupied:	Approx. No. of Individuals:
Asir Mountains: Western Saudi Arabia		

4. Population Trends

4A. Is the Population: ○ Increasing ○ Decreasing ○ Stable ◉ Unknown

4B. If declining, what has been the rate of decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has the population decline occured?

4C. If stable or unknown, do you predict a future decline in the population size? ○ Yes ◉ No

If Yes, please specify rate and factors e.g. habitat loss, trade, etc.:

5. Habitat Status

5A. Is the habitat distribution: ◉ Continuous ○ Fragmented ○ Unknown

5B. Is there any change in the range of the habitat where the Taxon occurs? ○ Yes ○ No ○ Unknown
If Yes, is it: ○ Decreasing in Area ○ Increasing in Area

5C. If decreasing what has been the decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has this decline occured?

5D. Do you predict a future decline in the habitiat? (•) Yes ( ) No

If Yes, what do you predict that decline will be? (•) <20% ( ) >20% ( ) >50% ( ) >80%

Over how many years do you predict the decline will occur? 10

5E. State the primary cause of this change:

Urban development, agriculture, roads

5F. Is there any change in the quality of the habitat where the Taxon occurs? ( ) Yes (•) No ( ) Unknown

If Yes, is the habitat quality: ( ) Declining ( ) Improving

5G. State the primary cause of this change:

6. Threats

	Present	Future		Present	Future
Pollution	☐	☐	Disease	☐	☐
Urban Development	☐	☒	Hybridization	☐	☐
Road Kills	☐	☒	Decline in prey species	☐	☐
Damming	☐	☐	Loss of habitat	☐	☒
War	☐	☐	Genetic problems	☐	☐
Recreational activities	☐	☐	Grazing	☐	☐
Hunting (recreation or retail)	☐	☐	Habitat fragmentation	☐	☒
Harvest for medicine	☐	☐	Predation	☐	☐
Harvest for food/timber	☐	☐	Interspecific competition	☐	☐
Poisoning	☐	☐	Livestock competition (food, etc.)	☐	☐
Pesticides	☐	☐	Livestock conflicts (retaliation kills)	☐	☐
Persecution	☐	☐	Introduced species (non-livestock)	☐	☐
Trade of animals/parts	☐	☐	Nutritional disorders	☐	☐

Other (please specify):

6B. Would these threats result in (perceived or inferred) population decline? ( ) Yes (•) No ( ) Unknown

Comment:

7. Trade

7A. Is the Taxon in trade? ( ) Yes (•) No ( ) Unknown

If Yes, is it: ( ) Local ( ) Regional ( ) International ( ) Commercial

7B. Parts in trade:

☐ Skin ☐ Fur ☐ Hair ☐ Horn ☐ Bones ☐ Glands

☐ Meat ☐ Products ☐ Live Animal ☐ Taxidermy ☐ Organs

Comments/Other threats (please specify):

8. Data Quality

8A. Are the estimates you have supplied based on:

☐ Census or monitoring ☐ General field studies ☐ Informal field studies ☒ Literature
☒ Hearsay/popular belief ☐ Museum studies/records ☐ Indirect information from trade, etc.

9. Studies (field) conducted over the last 10 years (indicate the year of study not the year of publication):

Researchers	Location	Year	Topic

10. Conservation Status

10A. IUCN Red List Category: Global: Not listed Regional: Not listed

10B. National Red Data Book:
Not listed

10C. Workshop Assessment of Regional Red List Category: Least concern

10D. CITES: Not listed

10E. National Wildife Legislation:
Not listed

10F. Other Legislation (please specify):

10G. List existing Protected Areas within the Taxon's range:

Protected Area	Country	Size (km^2)

10H. Recommended Protected Areas for the Taxon:

Area	Country	Size (km^2)

10I. Are there any Regional Conservation/Protection Action Plans: ○ Yes ◉ No ○ Unknown
If Yes, please list them:

11. Supporting Research

11A. Is research recommended? ◉ Yes ○ No

If Yes, what type of research would you recommend?

☐ Surveys ☒ Genetics ☒ Taxonomic ☐ Life History ☐ Public Awareness
☐ Trade ☐ Monitoring ☐ Reintroduction ☐ Human Impact
☐ Other (please specify):

12. Management

12A. What management is recommended for the Taxon?

☒ Habitat management ☐ Wild population management ☐ Captive breeding
☐ Monitoring ☐ Translocation ☐ Sustainable Use
☐ Public Awareness ☐ Limiting Factor Management ☐ Genome Research Banking
☐ Law Enforcement ☐ Work in Local Communities ☐ Address Policy Makers
☐ Other (please specify):

13. Captive Breeding

13A. Is captive breeding recommended for the taxon: ○ Yes ◉ No

13B. If captive breeding is recommeded , is it for:

☐ Species recovery ☐ Reintroduction ☐ Research ☐ Husbandry

☐ Education ☐ Preserve live genome

13C. Do Captive stocks already exist? ○ Yes ◉ No ○ Unknown

If Yes, list the facilities:

Facility	Country	Males	Females	Unknown	Total

13D. Does a coordinated Species Management Plan exist? ○ Yes ◉ No ○ Unknown

If Yes, list the participating institutions:

If Not, is a Species Management Plan recommended: ○ Yes ◉ No

If Yes, list the institutions that should participate:

13E. Level of captive breeding recommended:

☐ Captive breeding program not neccessary ☐ Initiate program within 3 years

☐ Maintain existing program as it is ☐ Intensify existing program ☐ Decrease existing progam

13F. Are the techniques established for captive breeding?

☐ Techniques are known for this or similar taxon ☐ Some techniques are known for this or similar taxon

☐ Techniques not known for this or simialr taxon ☒ Unknown

14. Sources/References (complete citation):

Egan, D. 2007. Snakes of Arabia. A field guide to the Snakes of the Arabian Peninsula and its Shores. Motivate Publishing.

Gasperetti, J. 1988. Snakes of Arabia. Fauna of Saudi Arabia 9:169-450

Sivan, N. & Werner, Y.L. 2003. Revision of the Middle Eastern dwarf snakes commonly assigned to Eirenis coronella (Colubridae). Zoology of the Middle East 28: 39-59.

15. Compilers

William Branch, Damien Egan, Tony Phelps, Declan O'Donovan, Gavin Nel, Saud A. Al Farraj, Pritpal Soorae, Ehad Eid, Haithem Al Aamri, Peter Arras, Neelofa Ali, Masaa Al Jumaily, Khaled Al Rasbi and Patrick Paillat

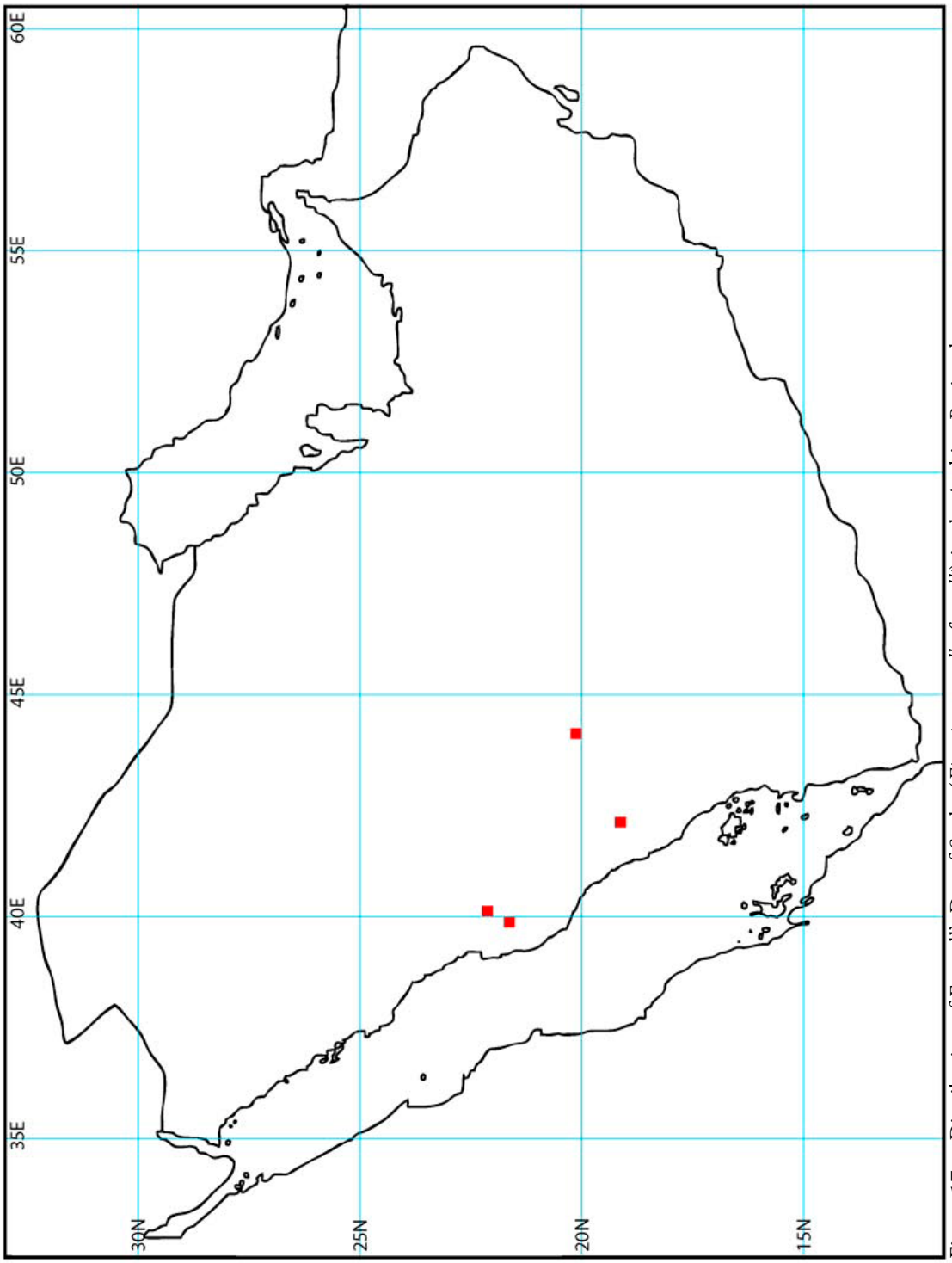

Figure 17. Distribution of Fennell's Dwarf Snake (*Eirenis coronella fennelli*) in the Arabian Peninsula.

Conservation Workshop for the Fauna of Arabia

Taxon Data Sheet

Working Group: Snakes Date: 3-5 February 2008

1. Taxonomy

1A. Scientific Name (Genus, species & subspecies): *Lamprophis fuliginosus arabicus*

Authority: (Parker) Date: 1930

1B. Synonyms (with authority & date):

1C. Common Name(s) with language/region:
Arabian house snake (English)

2. Distribution

2A. Historical Distribution (last 100 years):
Western Yemen

2B. Current Distribution (illustrate on map):
See 2A

2C. Habitat of the taxon (ecosystem level):
Southwestern Arabian foothills savannah, Southwestern Arabian montane woodlands

2D. Habitat specificity (elevation, etc.):
Sea level to 2000m- Generalist

2E. Migration: ○ Yes ◉ No ○ Unknown

If Yes, describe:

3. Number of Populations & Subpopulations in which the Taxon is distributed:

Location of each:	Approx. Area Occupied:	Approx. No. of Individuals:
Western Yemen	100km2	

4. Population Trends

4A. Is the Population: ○ Increasing ○ Decreasing ◉ Stable ○ Unknown

4B. If declining, what has been the rate of decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has the population decline occured?

4C. If stable or unknown, do you predict a future decline in the population size? ○ Yes ◉ No

If Yes, please specify rate and factors e.g. habitat loss, trade, etc.:

5. Habitat Status

5A. Is the habitat distribution: ◉ Continuous ○ Fragmented ○ Unknown

5B. Is there any change in the range of the habitat where the Taxon occurs? ○ Yes ◉ No ○ Unknown
If Yes, is it: ○ Decreasing in Area ○ Increasing in Area

5C. If decreasing what has been the decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has this decline occured?

5D. Do you predict a future decline in the habitiat? ○ Yes ○ No

If Yes, what do you predict that decline will be? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years do you predict the decline will occur?

5E. State the primary cause of this change:

5F. Is there any change in the quality of the habitat where the Taxon occurs? ◉ Yes ○ No ○ Unknown

If Yes, is the habitat quality: ◉ Declining ○ Improving

5G. State the primary cause of this change:

Urban sprawl and infrastructure development

6. Threats

	Present	Future		Present	Future
Pollution	☐	☐	Disease	☐	☐
Urban Development	☐	☒	Hybridization	☐	☐
Road Kills	☒	☒	Decline in prey species	☐	☐
Damming	☐	☐	Loss of habitat	☐	☐
War	☐	☐	Genetic problems	☐	☐
Recreational activities	☐	☐	Grazing	☐	☐
Hunting (recreation or retail)	☐	☐	Habitat fragmentation	☐	☐
Harvest for medicine	☐	☐	Predation	☐	☐
Harvest for food/timber	☐	☐	Interspecific competition	☐	☐
Poisoning	☐	☐	Livestock competition (food, etc.)	☐	☐
Pesticides	☐	☐	Livestock conflicts (retaliation kills)	☐	☐
Persecution	☐	☐	Introduced species (non-livestock)	☐	☐
Trade of animals/parts	☐	☐	Nutritional disorders	☐	☐

Other (please specify):

6B. Would these threats result in (perceived or inferred) population decline? ○ Yes ◉ No ○ Unknown

Comment:

Species successful even in urbanized areas

7. Trade

7A. Is the Taxon in trade? ○ Yes ○ No ◉ Unknown

If Yes, is it: ○ Local ○ Regional ○ International ○ Commercial

7B. Parts in trade:

☐ Skin ☐ Fur ☐ Hair ☐ Horn ☐ Bones ☐ Glands

☐ Meat ☐ Products ☐ Live Animal ☐ Taxidermy ☐ Organs

Comments/Other threats (please specify):

8. Data Quality

8A. Are the estimates you have supplied based on:

☐ Census or monitoring ☒ General field studies ☐ Informal field studies ☒ Literature
☐ Hearsay/popular belief ☐ Museum studies/records ☐ Indirect information from trade, etc.

9. Studies (field) conducted over the last 10 years (indicate the year of study not the year of publication):

Researchers	Location	Year	Topic
Snakes in Yemen- Masa et al			

10. Conservation Status

10A. IUCN Red List Category: Global: Not listed Regional: Not listed

10B. National Red Data Book:
Not listed

10C. Workshop Assessment of Regional Red List Category: Least concern

10D. CITES: Not listed

10E. National Wildife Legislation:
Not listed

10F. Other Legislation (please specify):

10G. List existing Protected Areas within the Taxon's range:

Protected Area	Country	Size (km^2)

10H. Recommended Protected Areas for the Taxon:

Area	Country	Size (km^2)

10I. Are there any Regional Conservation/Protection Action Plans: ○ Yes ◉ No ○ Unknown

If Yes, please list them:

11. Supporting Research

11A. Is research recommended? ◉ Yes ○ No

If Yes, what type of research would you recommend?

☐ Surveys ☒ Genetics ☒ Taxonomic ☐ Life History ☐ Public Awareness
☐ Trade ☐ Monitoring ☐ Reintroduction ☐ Human Impact
☐ Other (please specify):

12. Management

12A. What management is recommended for the Taxon?

☐ Habitat management ☐ Wild population management ☒ Captive breeding
☐ Monitoring ☐ Translocation ☐ Sustainable Use
☐ Public Awareness ☐ Limiting Factor Management ☒ Genome Research Banking
☐ Law Enforcement ☐ Work in Local Communities ☐ Address Policy Makers
☐ Other (please specify):

13. Captive Breeding

13A. Is captive breeding recommended for the taxon: ◉ Yes ○ No

13B. If captive breeding is recommeded , is it for:

☐ Species recovery ☐ Reintroduction ☐ Research ☐ Husbandry

☒ Education ☐ Preserve live genome

13C. Do Captive stocks already exist? ○ Yes ◉ No ○ Unknown

If Yes, list the facilities:

Facility	Country	Males	Females	Unknown	Total

13D. Does a coordinated Species Management Plan exist? ○ Yes ◉ No ○ Unknown

If Yes, list the participating institutions:

If Not, is a Species Management Plan recommended: ○ Yes ◉ No

If Yes, list the institutions that should participate:

13E. Level of captive breeding recommended:

☐ Captive breeding program not neccessary ☒ Initiate program within 3 years

☐ Maintain existing program as it is ☐ Intensify existing program ☐ Decrease existing progam

13F. Are the techniques established for captive breeding?

☒ Techniques are known for this or similar taxon ☐ Some techniques are known for this or similar taxon

☐ Techniques not known for this or simialr taxon ☐ Unknown

14. Sources/References (complete citation):

Egan, D. 2007. Snakes of Arabia. A field guide to the Snakes of the Arabian Peninsula and its Shores. Motivate Publishing.

Gasperetti, J. 1988. Snakes of Arabia. Fuana of Suaid Arabia 9: 169-450

Schatte, B & Desvolgnes, A. 1999. The Herpetofauna of southern Yemen and the Soqotra archipelago. Museum d'Histoire Naturelle. Geneve

Schatte, B & Gasparetti, J.A. Contribution to the herpetofauna of Southwestern Arabia. Fauna of Saudi Arabia. Vol 14.

15. Compilers

William Branch, Damien Egan, Tony Phelps, Declan O'Donovan, Gavin Nel, Saud A. Al Farraj, Pritpal Soorae, Ehad Eid, Haithem Al Aamri, Peter Arras, Neelofa Ali, Masaa Al Jumaily, Khaled Al Rasbi and Patrick Paillat

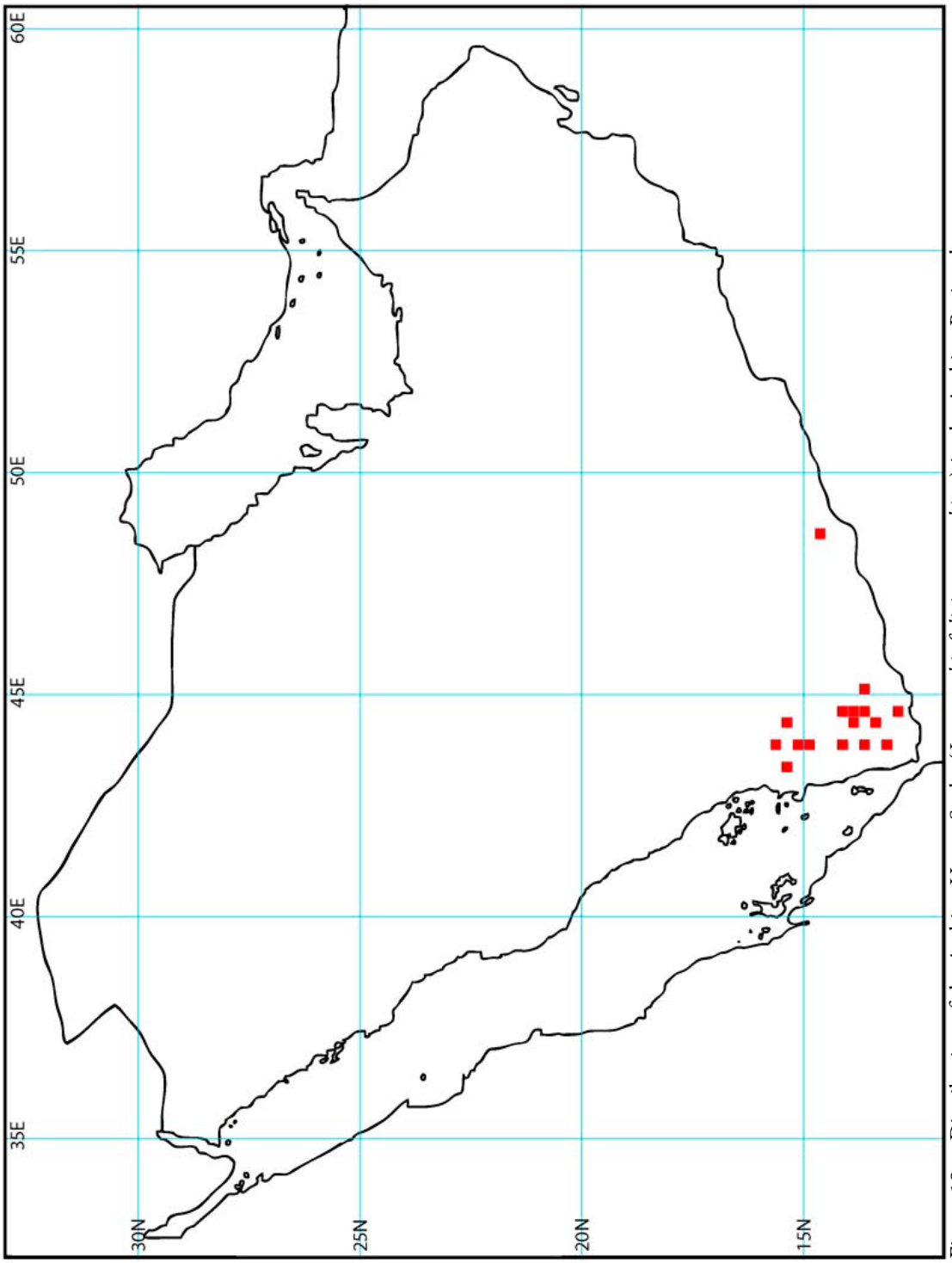

Figure 18. Distribution of the Arabian House Snake (*Lamprophis fuliginosus arabicus*) in the Arabian Peninsula.

Conservation Workshop for the Fauna of Arabia
Taxon Data Sheet

Working Group: Snakes **Date:** 3-5 February 2008

1. Taxonomy

1A. Scientific Name (Genus, species & subspecies): *Lytorhynchus diadema*

Authority: Dumeril, Bibron & Dumeril Date: 1854

1B. Synonyms (with authority & date):

1C. Common Name(s) with language/region:
Crowned leaf nosed snake

2. Distribution

2A. Historical Distribution (last 100 years):
North Africa, Mediterranean, Meddle East and Western Asia. Throughout Arabian Peninsula in suitable level 2000m

2B. Current Distribution (illustrate on map):
See 2 A

2C. Habitat of the taxon (ecosystem level):
Arabian Desert and East Sahero Arabian xeric woodlands. Red Sea Nudio-Sinian tropical desert and semi desert. SW Arabian foothills savannah. SW Arabian montain woodlands.

2D. Habitat specificity (elevation, etc.):
Generally sandy desert from sea level to 2000m

2E. Migration: ○ Yes ◉ No ○ Unknown

If Yes, describe:

3. Number of Populations & Subpopulations in which the Taxon is distributed:

Location of each:	Approx. Area Occupied:	Approx. No. of Individuals:
Throughout Arabian Peninsula	1350 km2	

4. Population Trends

4A. Is the Population: ○ Increasing ○ Decreasing ◉ Stable ○ Unknown

4B. If declining, what has been the rate of decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has the population decline occured?

4C. If stable or unknown, do you predict a future decline in the population size? ○ Yes ◉ No

If Yes, please specify rate and factors e.g. habitat loss, trade, etc.:

5. Habitat Status

5A. Is the habitat distribution: ◉ Continuous ○ Fragmented ○ Unknown

5B. Is there any change in the range of the habitat where the Taxon occurs? ◉ Yes ○ No ○ Unknown

If Yes, is it: ◉ Decreasing in Area ○ Increasing in Area

5C. If decreasing what has been the decline? ◉ <20% ○ >20% ○ >50% ○ >80%

Over how many years has this decline occured? 10

5D. Do you predict a future decline in the habitiat? (•) Yes ( ) No

If Yes, what do you predict that decline will be? ( ) <20% ( ) >20% (•) >50% ( ) >80%

Over how many years do you predict the decline will occur? 10

5E. State the primary cause of this change:
Urban development, Urban sprawl

5F. Is there any change in the quality of the habitat where the Taxon occurs? (•) Yes ( ) No ( ) Unknown

If Yes, is the habitat quality: (•) Declining ( ) Improving

5G. State the primary cause of this change:
Urban sprawl, desert egredation through livestock damage

6. Threats

	Present	Future		Present	Future
Pollution	☐	☐	Disease	☐	☐
Urban Development	☒	☒	Hybridization	☐	☐
Road Kills	☐	☐	Decline in prey species	☐	☐
Damming	☐	☐	Loss of habitat	☒	☒
War	☐	☐	Genetic problems	☐	☐
Recreational activities	☐	☐	Grazing	☒	☒
Hunting (recreation or retail)	☐	☐	Habitat fragmentation	☒	☒
Harvest for medicine	☐	☐	Predation	☐	☐
Harvest for food/timber	☐	☐	Interspecific competition	☐	☐
Poisoning	☐	☐	Livestock competition (food, etc.)	☐	☐
Pesticides	☐	☐	Livestock conflicts (retaliation kills)	☐	☐
Persecution	☐	☐	Introduced species (non-livestock)	☐	☐
Trade of animals/parts	☐	☒	Nutritional disorders	☐	☐

Other (please specify):

6B. Would these threats result in (perceived or inferred) population decline? ( ) Yes (•) No ( ) Unknown

Comment:
Would not significantly affect the habitat of taxon as a whole

7. Trade

7A. Is the Taxon in trade? (•) Yes ( ) No ( ) Unknown

If Yes, is it: ( ) Local (•) Regional ( ) International ( ) Commercial

7B. Parts in trade:

☐ Skin ☐ Fur ☐ Hair ☐ Horn ☐ Bones ☐ Glands
☐ Meat ☐ Products ☒ Live Animal ☐ Taxidermy ☐ Organs

Comments/Other threats (please specify):

8. Data Quality

8A. Are the estimates you have supplied based on:

☐ Census or monitoring ☒ General field studies ☒ Informal field studies ☒ Literature
☒ Hearsay/popular belief ☒ Museum studies/records ☒ Indirect information from trade, etc.

9. Studies (field) conducted over the last 10 years (indicate the year of study not the year of publication):

Researchers	Location	Year	Topic
Massa et Al: Snakes of Yemen			

10. Conservation Status

10A. IUCN Red List Category: Global: Not listed Regional: Not listed

10B. National Red Data Book:
Not listed

10C. Workshop Assessment of Regional Red List Category: Least concern

10D. CITES: Not listed

10E. National Wildife Legislation:
Not listed

10F. Other Legislation (please specify):

10G. List existing Protected Areas within the Taxon's range:

Protected Area	Country	Size (km^2)

10H. Recommended Protected Areas for the Taxon:

Area	Country	Size (km^2)

10I. Are there any Regional Conservation/Protection Action Plans: ○ Yes ○ No ○ Unknown

If Yes, please list them:

11. Supporting Research

11A. Is research recommended? ◉ Yes ○ No

If Yes, what type of research would you recommend?

☒ Surveys ☒ Genetics ☒ Taxonomic ☐ Life History ☐ Public Awareness
☒ Trade ☐ Monitoring ☐ Reintroduction ☒ Human Impact
☐ Other (please specify):

12. Management

12A. What management is recommended for the Taxon?

☐ Habitat management ☐ Wild population management ☐ Captive breeding
☐ Monitoring ☐ Translocation ☐ Sustainable Use
☐ Public Awareness ☒ Limiting Factor Management ☐ Genome Research Banking
☐ Law Enforcement ☐ Work in Local Communities ☐ Address Policy Makers
☐ Other (please specify):

13. Captive Breeding

13A. Is captive breeding recommended for the taxon: ○ Yes ◉ No

13B. If captive breeding is recommeded , is it for:

☐ Species recovery ☐ Reintroduction ☐ Research ☐ Husbandry

☐ Education ☐ Preserve live genome

13C. Do Captive stocks already exist? ○ Yes ○ No ○ Unknown

If Yes, list the facilities:

Facility	Country	Males	Females	Unknown	Total

13D. Does a coordinated Species Management Plan exist? ○ Yes ◉ No ○ Unknown

If Yes, list the participating institutions:

If Not, is a Species Management Plan recommended: ○ Yes ◉ No

If Yes, list the institutions that should participate:

13E. Level of captive breeding recommended:

☐ Captive breeding program not neccessary ☐ Initiate program within 3 years

☒ Maintain existing program as it is ☐ Intensify existing program ☐ Decrease existing progam

13F. Are the techniques established for captive breeding?

☐ Techniques are known for this or similar taxon ☐ Some techniques are known for this or similar taxon

☐ Techniques not known for this or simialr taxon ☒ Unknown

14. Sources/References (complete citation):

Egan, D. 2007. Snakes of Arabia. A field guide to the Snakes of the Arabian Peninsula and its Shores. Motivate Publishing.

Gasperetti, J. 1988. Snakes of Arabia. Fauna of Saudi Arabia 9: 169-450

Schatte, B & Desvolgnes, A. 1999. The Herpetofauna of southern Yemen and the Soqotra archipelago. Museum d'Histoire Naturelle. Geneve.

Schatte, B & Gasparetti, J.A. Contribution to the herpetofauna of Southwestern Arabia. Fauna of Saudi Arabia. Vol 14

15. Compilers

William Branch, Damien Egan, Tony Phelps, Declan O'Donovan, Gavin Nel, Saud A. Al Farraj, Pritpal Soorae, Ehad Eid, Haithem Al Aamri, Peter Arras, Neelofa Ali, Masaa Al Jumaily, Khaled Al Rasbi and Patrick Paillat

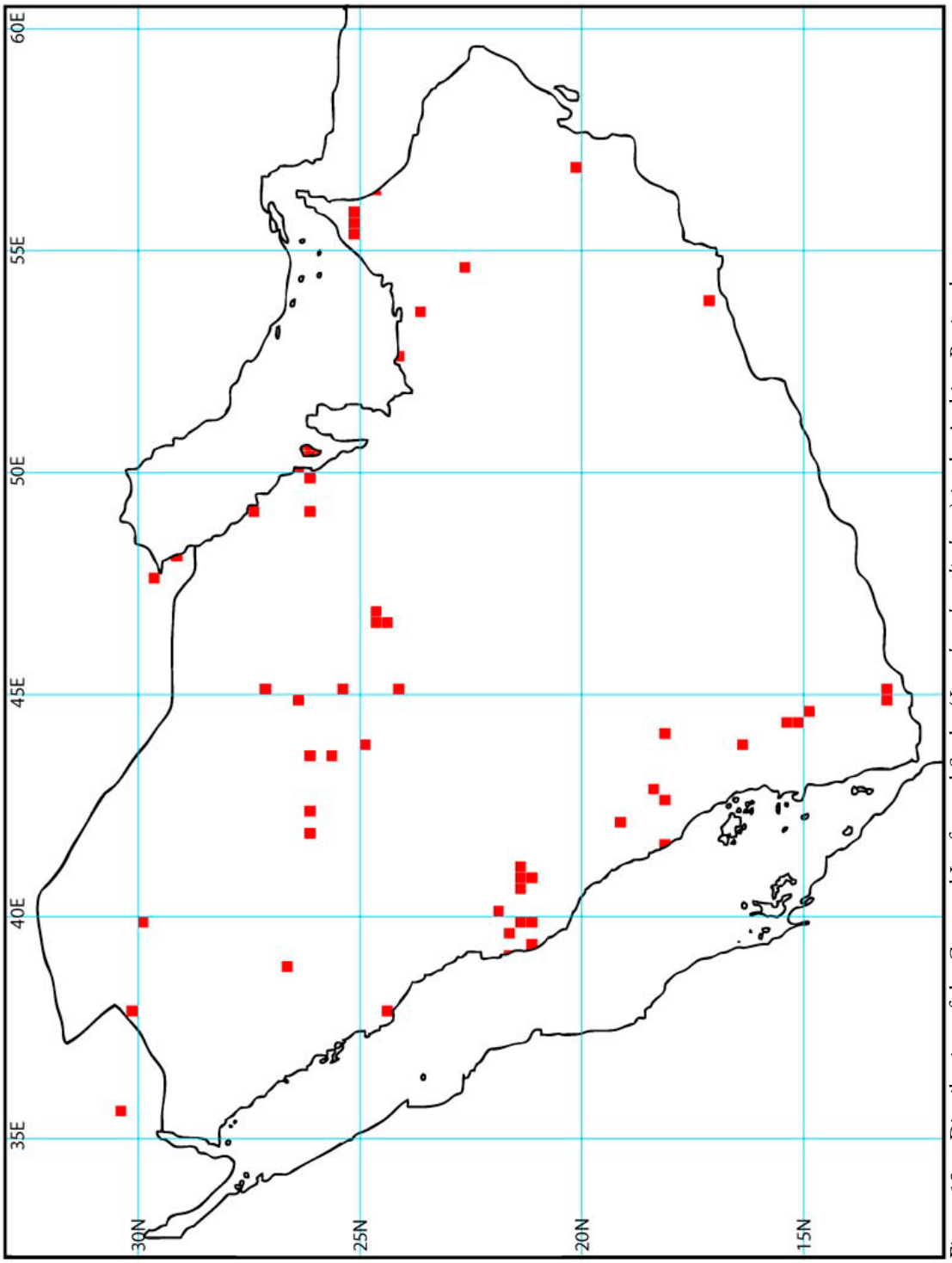

Figure 19. Distribution of the Crowned Leaf-nosed Snake (*Lytorhynchus diadema*) in the Arabian Peninsula.

Conservation Workshop for the Fauna of Arabia

Taxon Data Sheet

Working Group: Snakes Date: 3-5 February 2008

1. Taxonomy

1A. Scientific Name (Genus, species & subspecies): *Lytorhynchus gasperettii*

Authority: Leviton Date: 1977

1B. Synonyms (with authority & date):

1C. Common Name(s) with language/region:
Gasperetti's leaf-nosed snake (English)

2. Distribution

2A. Historical Distribution (last 100 years):
SW Saudi Arabia- Asir Mountains

2B. Current Distribution (illustrate on map):
See 2A

2C. Habitat of the taxon (ecosystem level):
SW Arabian foothills savannah

2D. Habitat specificity (elevation, etc.):
Montane slopes and rocky valleys

2E. Migration: ○ Yes ◉ No ○ Unknown

If Yes, describe:

3. Number of Populations & Subpopulations in which the Taxon is distributed:

Location of each:	Approx. Area Occupied:	Approx. No. of Individuals:
SW Saudi Arabia	75km2	7 known to science

4. Population Trends

4A. Is the Population: ○ Increasing ○ Decreasing ○ Stable ◉ Unknown

4B. If declining, what has been the rate of decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has the population decline occured?

4C. If stable or unknown, do you predict a future decline in the population size? ○ Yes ◉ No

If Yes, please specify rate and factors e.g. habitat loss, trade, etc.:

5. Habitat Status

5A. Is the habitat distribution: ◉ Continuous ○ Fragmented ○ Unknown

5B. Is there any change in the range of the habitat where the Taxon occurs? ○ Yes ◉ No ○ Unknown
If Yes, is it: ○ Decreasing in Area ○ Increasing in Area

5C. If decreasing what has been the decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has this decline occured?

5D. Do you predict a future decline in the habitiat? ○ Yes ◉ No

If Yes, what do you predict that decline will be? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years do you predict the decline will occur?

5E. State the primary cause of this change:

5F. Is there any change in the quality of the habitat where the Taxon occurs? ○ Yes ◉ No ○ Unknown

If Yes, is the habitat quality: ○ Declining ○ Improving

5G. State the primary cause of this change:

6. Threats

	Present	Future		Present	Future
Pollution	☐	☐	Disease	☐	☐
Urban Development	☐	☒	Hybridization	☐	☐
Road Kills	☐	☐	Decline in prey species	☐	☐
Damming	☐	☐	Loss of habitat	☐	☒
War	☐	☐	Genetic problems	☐	☐
Recreational activities	☐	☐	Grazing	☐	☐
Hunting (recreation or retail)	☐	☐	Habitat fragmentation	☐	☐
Harvest for medicine	☐	☐	Predation	☐	☐
Harvest for food/timber	☐	☐	Interspecific competition	☐	☐
Poisoning	☐	☐	Livestock competition (food, etc.)	☐	☐
Pesticides	☐	☐	Livestock conflicts (retaliation kills)	☐	☐
Persecution	☐	☐	Introduced species (non-livestock)	☐	☐
Trade of animals/parts	☐	☐	Nutritional disorders	☐	☐

Other (please specify):

6B. Would these threats result in (perceived or inferred) population decline? ◉ Yes ○ No ○ Unknown

Comment:

No direct threats identified, but any development potentially detrimental to the taxon

7. Trade

7A. Is the Taxon in trade? ○ Yes ◉ No ○ Unknown

If Yes, is it: ○ Local ○ Regional ○ International ○ Commercial

7B. Parts in trade:

☐ Skin ☐ Fur ☐ Hair ☐ Horn ☐ Bones ☐ Glands

☐ Meat ☐ Products ☐ Live Animal ☐ Taxidermy ☐ Organs

Comments/Other threats (please specify):

8. Data Quality

8A. Are the estimates you have supplied based on:

☐ Census or monitoring ☐ General field studies ☒ Informal field studies ☒ Literature
☐ Hearsay/popular belief ☐ Museum studies/records ☐ Indirect information from trade, etc.

9. Studies (field) conducted over the last 10 years (indicate the year of study not the year of publication):

Researchers	Location	Year	Topic

10. Conservation Status

10A. IUCN Red List Category: Global: Not listed Regional: Not listed

10B. National Red Data Book:
Not listed

10C. Workshop Assessment of Regional Red List Category: Vulnerable

10D. CITES: Not listed

10E. National Wildife Legislation:
Not listed

10F. Other Legislation (please specify):

10G. List existing Protected Areas within the Taxon's range:

Protected Area	Country	Size (km^2)

10H. Recommended Protected Areas for the Taxon:

Area	Country	Size (km^2)

10I. Are there any Regional Conservation/Protection Action Plans: ○ Yes ◉ No ○ Unknown

If Yes, please list them:

11. Supporting Research

11A. Is research recommended? ◉ Yes ○ No

If Yes, what type of research would you recommend?

☒ Surveys ☒ Genetics ☒ Taxonomic ☒ Life History ☐ Public Awareness
☐ Trade ☐ Monitoring ☐ Reintroduction ☒ Human Impact
☐ Other (please specify):

12. Management

12A. What management is recommended for the Taxon?

☒ Habitat management ☐ Wild population management ☐ Captive breeding
☒ Monitoring ☐ Translocation ☐ Sustainable Use
☐ Public Awareness ☒ Limiting Factor Management ☒ Genome Research Banking
☐ Law Enforcement ☐ Work in Local Communities ☐ Address Policy Makers
☐ Other (please specify):

13. Captive Breeding

13A. Is captive breeding recommended for the taxon: ○ Yes ◉ No

13B. If captive breeding is recommeded , is it for:

☐ Species recovery ☐ Reintroduction ☐ Research ☐ Husbandry

☐ Education ☐ Preserve live genome

13C. Do Captive stocks already exist? ○ Yes ◉ No ○ Unknown

If Yes, list the facilities:

Facility	Country	Males	Females	Unknown	Total

13D. Does a coordinated Species Management Plan exist? ○ Yes ◉ No ○ Unknown

If Yes, list the participating institutions:

If Not, is a Species Management Plan recommended: ○ Yes ◉ No

If Yes, list the institutions that should participate:

13E. Level of captive breeding recommended:

☐ Captive breeding program not neccessary ☐ Initiate program within 3 years

☐ Maintain existing program as it is ☐ Intensify existing program ☐ Decrease existing progam

13F. Are the techniques established for captive breeding?

☐ Techniques are known for this or similar taxon ☐ Some techniques are known for this or similar taxon

☐ Techniques not known for this or simialr taxon ☒ Unknown

14. Sources/References (complete citation):

Egan, D. 2007. Snakes of Arabia. A field guide to the Snakes of the Arabian Peninsula and its Shores. Motivate Publishing.

Gasperetti, J. 1988. Snakes of Arabia. Fauna of Saudi Arabia 9:169-450

Schatte, B & Gasparetti, J.A. Contribution to the herpetofauna of Southwestern Arabia. Fauna of Saudi Arabia. Vol.14

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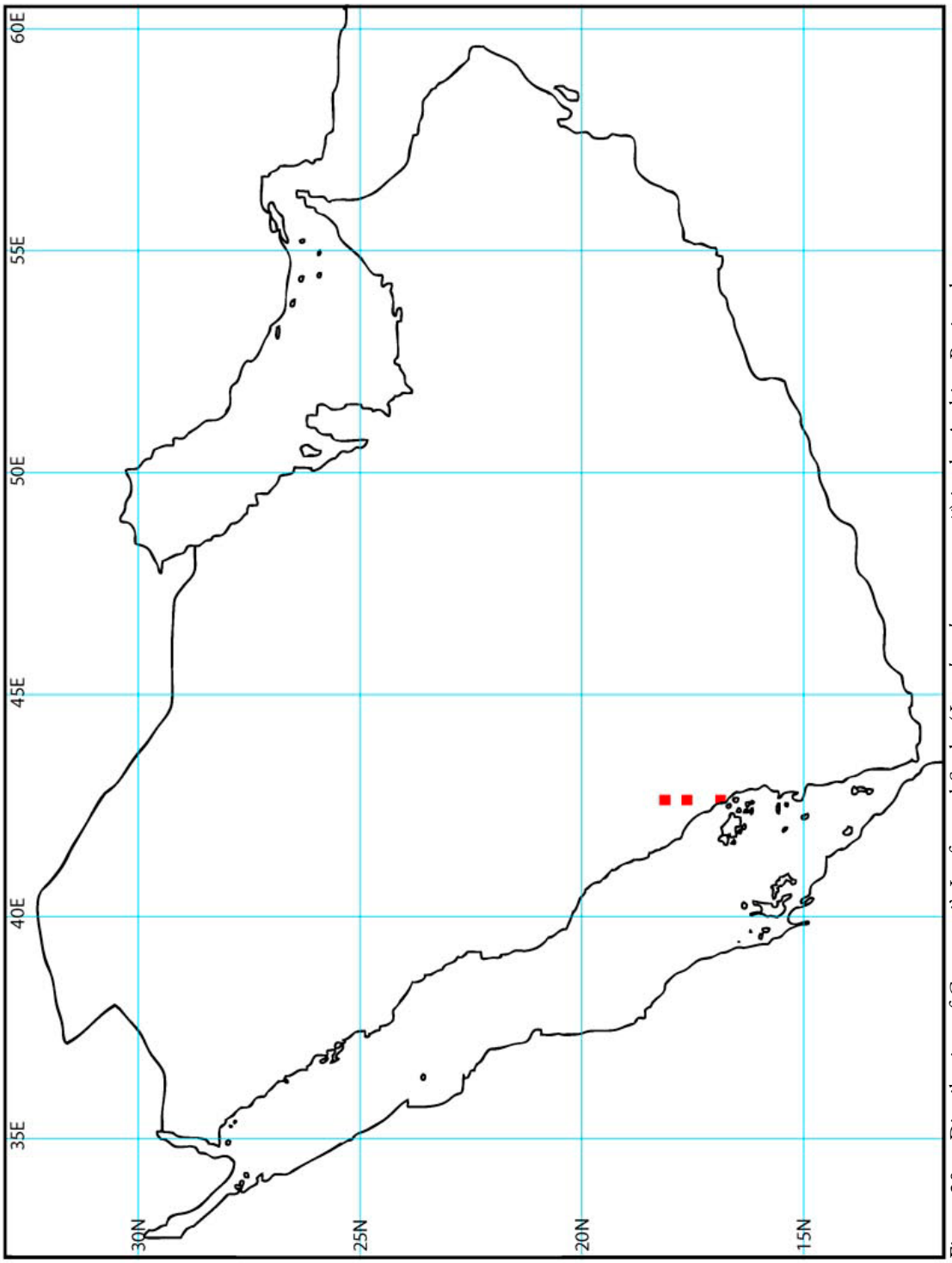

Figure 20. Distribution of Gasperetti's Leaf-nosed Snake (*Lytorhynchus gasperettii*) in the Arabian Peninsula.

Conservation Workshop for the Fauna of Arabia
Taxon Data Sheet

Working Group: Snakes **Date:** 3-5 February 2008

1. Taxonomy

1A. Scientific Name (Genus, species & subspecies): *Malpolon moilensis*

Authority: Reuss Date: 1834

1B. Synonyms (with authority & date):

1C. Common Name(s) with language/region:
Hooded malpolon, Moila snake, False cobra (English)

2. Distribution

2A. Historical Distribution (last 100 years):
NW Africa to Middle East- Throughout Arabian Peninsula in suitable habitat

2B. Current Distribution (illustrate on map):
See 2A

2C. Habitat of the taxon (ecosystem level):
Arabian desert and east Sahero-Arabian xeric woodlands; Red sea Nubio-Sinian tropical desert and semi-desert. SW Arabian foothills savannah. Gulf of Oman desert and semi desert

2D. Habitat specificity (elevation, etc.):
Sand and gravel desert from sea level to 2000m+

2E. Migration: ○ Yes ◉ No ○ Unknown

If Yes, describe:

3. Number of Populations & Subpopulations in which the Taxon is distributed:

Location of each:	Approx. Area Occupied:	Approx. No. of Individuals:
Throughout the Arabian Peninsula	2650km2	Unknown

4. Population Trends

4A. Is the Population: ○ Increasing ○ Decreasing ◉ Stable ○ Unknown

4B. If declining, what has been the rate of decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has the population decline occured?

4C. If stable or unknown, do you predict a future decline in the population size? ○ Yes ◉ No

If Yes, please specify rate and factors e.g. habitat loss, trade, etc.:

5. Habitat Status

5A. Is the habitat distribution: ◉ Continuous ○ Fragmented ○ Unknown

5B. Is there any change in the range of the habitat where the Taxon occurs? ◉ Yes ○ No ○ Unknown

If Yes, is it: ◉ Decreasing in Area ○ Increasing in Area

5C. If decreasing what has been the decline? ◉ <20% ○ >20% ○ >50% ○ >80%

Over how many years has this decline occured? 10

5D. Do you predict a future decline in the habitiat? (•) Yes ( ) No

If Yes, what do you predict that decline will be? (•) <20% ( ) >20% ( ) >50% ( ) >80%

Over how many years do you predict the decline will occur?

5E. State the primary cause of this change:

Urban sprawl and Urban development

5F. Is there any change in the quality of the habitat where the Taxon occurs? (•) Yes ( ) No ( ) Unknown

If Yes, is the habitat quality: (•) Declining ( ) Improving

5G. State the primary cause of this change:

Urban sprawl, development, over-grazing

6. Threats

	Present	Future		Present	Future
Pollution	☐	☐	Disease	☐	☐
Urban Development	☒	☒	Hybridization	☐	☐
Road Kills	☐	☐	Decline in prey species	☐	☐
Damming	☐	☐	Loss of habitat	☒	☒
War	☐	☐	Genetic problems	☐	☐
Recreational activities	☒	☒	Grazing	☒	☒
Hunting (recreation or retail)	☐	☐	Habitat fragmentation	☒	☒
Harvest for medicine	☐	☐	Predation	☐	☐
Harvest for food/timber	☐	☐	Interspecific competition	☐	☐
Poisoning	☐	☐	Livestock competition (food, etc.)	☐	☐
Pesticides	☐	☐	Livestock conflicts (retaliation kills)	☐	☐
Persecution	☐	☐	Introduced species (non-livestock)	☐	☐
Trade of animals/parts	☐	☐	Nutritional disorders	☐	☐

Other (please specify):

6B. Would these threats result in (perceived or inferred) population decline? ( ) Yes (•) No ( ) Unknown

Comment:

Non-specific habitat requirements and huge range

7. Trade

7A. Is the Taxon in trade? (•) Yes ( ) No ( ) Unknown

If Yes, is it: ( ) Local ( ) Regional (•) International ( ) Commercial

7B. Parts in trade:

☐ Skin ☐ Fur ☐ Hair ☐ Horn ☐ Bones ☐ Glands

☐ Meat ☐ Products ☒ Live Animal ☐ Taxidermy ☐ Organs

Comments/Other threats (please specify):

8. Data Quality

8A. Are the estimates you have supplied based on:

☐ Census or monitoring ☒ General field studies ☒ Informal field studies ☒ Literature
☐ Hearsay/popular belief ☐ Museum studies/records ☒ Indirect information from trade, etc.

9. Studies (field) conducted over the last 10 years (indicate the year of study not the year of publication):

Researchers	Location	Year	Topic
Masa et al. Snakes of Yemen			

10. Conservation Status

10A. IUCN Red List Category: Global: Not listed Regional: Not listed

10B. National Red Data Book:
Not listed

10C. Workshop Assessment of Regional Red List Category: Least concern

10D. CITES: Not listed

10E. National Wildife Legislation:
Not listed

10F. Other Legislation (please specify):

10G. List existing Protected Areas within the Taxon's range:

Protected Area	Country	Size (km^2)
All protected areas within the region		

10H. Recommended Protected Areas for the Taxon:

Area	Country	Size (km^2)

10I. Are there any Regional Conservation/Protection Action Plans: ○ Yes ◉ No ○ Unknown

If Yes, please list them:

11. Supporting Research

11A. Is research recommended? ◉ Yes ○ No

If Yes, what type of research would you recommend?

☐ Surveys ☒ Genetics ☒ Taxonomic ☐ Life History ☐ Public Awareness
☐ Trade ☐ Monitoring ☐ Reintroduction ☒ Human Impact
☐ Other (please specify):

12. Management

12A. What management is recommended for the Taxon?

☒ Habitat management ☐ Wild population management ☒ Captive breeding
☐ Monitoring ☐ Translocation ☐ Sustainable Use
☐ Public Awareness ☐ Limiting Factor Management ☐ Genome Research Banking
☐ Law Enforcement ☐ Work in Local Communities ☐ Address Policy Makers
☐ Other (please specify):

13. Captive Breeding

13A. Is captive breeding recommended for the taxon: (●) Yes ( ) No

13B. If captive breeding is recommeded , is it for:

☐ Species recovery ☐ Reintroduction ☒ Research ☐ Husbandry

☒ Education ☐ Preserve live genome

13C. Do Captive stocks already exist? (●) Yes ( ) No ( ) Unknown

If Yes, list the facilities:

Facility	Country	Males	Females	Unknown	Total
BCEAW	UAE	?	?	?	?

13D. Does a coordinated Species Management Plan exist? ( ) Yes (●) No ( ) Unknown

If Yes, list the participating institutions:

If Not, is a Species Management Plan recommended: ( ) Yes (●) No

If Yes, list the institutions that should participate:

13E. Level of captive breeding recommended:

☐ Captive breeding program not neccessary ☐ Initiate program within 3 years

☒ Maintain existing program as it is ☐ Intensify existing program ☐ Decrease existing progam

13F. Are the techniques established for captive breeding?

☐ Techniques are known for this or similar taxon ☐ Some techniques are known for this or similar taxon

☐ Techniques not known for this or simialr taxon ☒ Unknown

14. Sources/References (complete citation):

Egan, D. 2007. Snakes of Arabia. A field guide to the Snakes of the Arabian Peninsula and its Shores. Motivate Publishing.

Gasperetti, J. 1988. Snakes of Arabia. Fauna of Saudi Arabia 9:169-450

Schatte, B & Desvolgnes, A. 1999. The Herpetofauna of southern Yemen and the Soqotra archipelago. Museum d'Histoire Naturelle. Geneve.

Schatte, B & Gasperetti, J.A. Contribution to the herpetofauna of Southwestern Arabia. Fauna of Saudi Arabia. Vol. 14

Van der Kooij, J. 2001. The Herpetofauna of the Sultinate of Oman. Part 4: Terrestrial Snakes. Podarcus.

Werner, Y.L. 1991. Notable Herpetofaunal Records from TransJordan. Zoology in the Middle East. Vol 5: 37-41

15. Compilers

William Branch, Damien Egan, Tony Phelps, Declan O'Donovan, Gavin Nel, Saud A. Al Farraj, Pritpal Soorae, Ehad Eid, Haithem Al Aamri, Peter Arras, Neelofa Ali, Masaa Al Jumaily, Khaled Al Rasbi and Patrick Paillat

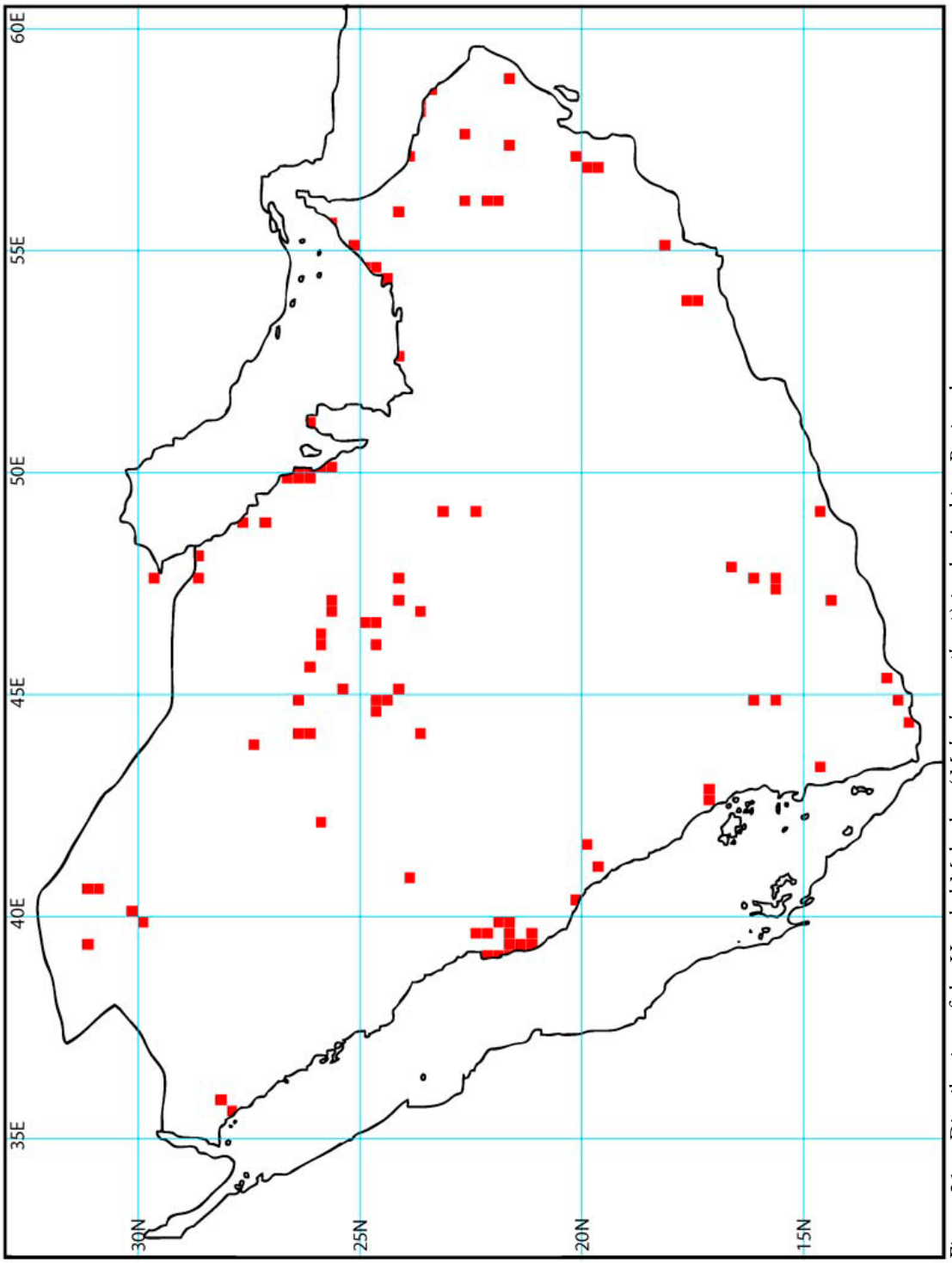

Figure 21. Distribution of the Hooded Malpolon (*Malpolon moilensis*) in the Arabian Peninsula.

Conservation Workshop for the Fauna of Arabia
Taxon Data Sheet

Working Group: Snakes **Date:** 3-5 February 2008

1. Taxonomy

1A. Scientific Name (Genus, species & subspecies): *Psammophis schokari schokari*

Authority: (Forskal) Date: 1775

1B. Synonyms (with authority & date):

1C. Common Name(s) with language/region:
Afro-Asian sand snake (English)

2. Distribution

2A. Historical Distribution (last 100 years):
NW Africa through Middle East as far as Nepal

2B. Current Distribution (illustrate on map):
See 2A

2C. Habitat of the taxon (ecosystem level):
Varied: Arabian Desert and east Sahero-Arabian xeric woodlands; Red Sea Nubio-Sinian tropical desert and semi-desert. Southwestern Arabian foothills savannah; Gulf of Oman desert and semi-desert

2D. Habitat specificity (elevation, etc.):
All elevations- Non-specific habitat requirements

2E. Migration: ○ Yes ◉ No ○ Unknown

If Yes, describe:

3. Number of Populations & Subpopulations in which the Taxon is distributed:

Location of each:	Approx. Area Occupied:	Approx. No. of Individuals:
Throughout the Arabian Peninsula		

4. Population Trends

4A. Is the Population: ○ Increasing ○ Decreasing ◉ Stable ○ Unknown

4B. If declining, what has been the rate of decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has the population decline occured?

4C. If stable or unknown, do you predict a future decline in the population size? ○ Yes ◉ No

If Yes, please specify rate and factors e.g. habitat loss, trade, etc.:

5. Habitat Status

5A. Is the habitat distribution: ◉ Continuous ○ Fragmented ○ Unknown

5B. Is there any change in the range of the habitat where the Taxon occurs? ○ Yes ◉ No ○ Unknown

If Yes, is it: ○ Decreasing in Area ○ Increasing in Area

5C. If decreasing what has been the decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has this decline occured?

5D. Do you predict a future decline in the habitiat? ○ Yes ◉ No

If Yes, what do you predict that decline will be? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years do you predict the decline will occur?

5E. State the primary cause of this change:

5F. Is there any change in the quality of the habitat where the Taxon occurs? ◉ Yes ○ No ○ Unknown

If Yes, is the habitat quality: ◉ Declining ○ Improving

5G. State the primary cause of this change:

Urban sprawl, but taxon is successful urban interloper

6. Threats

	Present	Future		Present	Future
Pollution	☐	☐	Disease	☐	☐
Urban Development	☒	☒	Hybridization	☐	☐
Road Kills	☐	☐	Decline in prey species	☐	☐
Damming	☐	☐	Loss of habitat	☐	☒
War	☐	☐	Genetic problems	☐	☐
Recreational activities	☒	☒	Grazing	☒	☒
Hunting (recreation or retail)	☐	☐	Habitat fragmentation	☐	☒
Harvest for medicine	☐	☐	Predation	☐	☐
Harvest for food/timber	☐	☐	Interspecific competition	☐	☐
Poisoning	☐	☐	Livestock competition (food, etc.)	☐	☐
Pesticides	☐	☐	Livestock conflicts (retaliation kills)	☐	☐
Persecution	☐	☐	Introduced species (non-livestock)	☐	☐
Trade of animals/parts	☐	☐	Nutritional disorders	☐	☐

Other (please specify):

6B. Would these threats result in (perceived or inferred) population decline? ○ Yes ◉ No ○ Unknown

Comment:

7. Trade

7A. Is the Taxon in trade? ◉ Yes ○ No ○ Unknown

If Yes, is it: ○ Local ○ Regional ◉ International ○ Commercial

7B. Parts in trade:

☐ Skin ☐ Fur ☐ Hair ☐ Horn ☐ Bones ☐ Glands

☐ Meat ☐ Products ☒ Live Animal ☐ Taxidermy ☐ Organs

Comments/Other threats (please specify):

8. Data Quality

8A. Are the estimates you have supplied based on:

☐ Census or monitoring ☐ General field studies ☒ Informal field studies ☒ Literature
☒ Hearsay/popular belief ☒ Museum studies/records ☒ Indirect information from trade, etc.

9. Studies (field) conducted over the last 10 years (indicate the year of study not the year of publication):

Researchers	Location	Year	Topic
Masa et al Snakes in Yemen			

10. Conservation Status

10A. IUCN Red List Category: Global: Not listed Regional: Not listed

10B. National Red Data Book:
Not listed

10C. Workshop Assessment of Regional Red List Category: Least concern

10D. CITES: Not listed

10E. National Wildife Legislation:
Not listed

10F. Other Legislation (please specify):

10G. List existing Protected Areas within the Taxon's range:

Protected Area	Country	Size (km^2)
All protected area within the region		

10H. Recommended Protected Areas for the Taxon:

Area	Country	Size (km^2)

10I. Are there any Regional Conservation/Protection Action Plans: ○ Yes ◉ No ○ Unknown

If Yes, please list them:

11. Supporting Research

11A. Is research recommended? ◉ Yes ○ No

If Yes, what type of research would you recommend?

☐ Surveys ☒ Genetics ☒ Taxonomic ☐ Life History ☐ Public Awareness
☐ Trade ☐ Monitoring ☐ Reintroduction ☒ Human Impact
☐ Other (please specify):

12. Management

12A. What management is recommended for the Taxon?

☒ Habitat management ☐ Wild population management ☒ Captive breeding
☐ Monitoring ☐ Translocation ☐ Sustainable Use
☐ Public Awareness ☐ Limiting Factor Management ☒ Genome Research Banking
☐ Law Enforcement ☐ Work in Local Communities ☐ Address Policy Makers
☐ Other (please specify):

13. Captive Breeding

13A. Is captive breeding recommended for the taxon: ◉ Yes ○ No

13B. If captive breeding is recommeded , is it for:

☐ Species recovery ☐ Reintroduction ☒ Research ☐ Husbandry

☒ Education ☐ Preserve live genome

13C. Do Captive stocks already exist? ○ Yes ○ No ○ Unknown

If Yes, list the facilities:

Facility	Country	Males	Females	Unknown	Total
BCEAW	UAE	?	?		?

13D. Does a coordinated Species Management Plan exist? ○ Yes ◉ No ○ Unknown

If Yes, list the participating institutions:

If Not, is a Species Management Plan recommended: ○ Yes ◉ No

If Yes, list the institutions that should participate:

13E. Level of captive breeding recommended:

☐ Captive breeding program not neccessary ☐ Initiate program within 3 years

☒ Maintain existing program as it is ☐ Intensify existing program ☐ Decrease existing progam

13F. Are the techniques established for captive breeding?

☒ Techniques are known for this or similar taxon ☐ Some techniques are known for this or similar taxon

☐ Techniques not known for this or simialr taxon ☐ Unknown

14. Sources/References (complete citation):

Egan, D. 2007. Snakes of Arabia. A field guide to the Snakes of the Arabian Peninsula and its Shores. Motivate Publishing.

Gasperetti, J. 1988. Snakes of Arabia. Fauna of Saudi Arabia 9: 169-450

Schatte, B & Desvolgnes, A. 1999. The Herpetofauna of southern Yemen and the Soqotra archipelago. Museum d'Histoire Naturelle. Geneve.

Schatte, B & Gasparetti, J.A. Contribution to the herpetofauna of Southwestern Arabia. Fauna of Saudi Arabia Vol 14.

Van der Kooij, J. 2001. The Herpetofauna of the Sultinate of Oman. Part 4: Terrestrial Snakes. Podarcus.

Werner,Y.L. 1991. Notable Herpetofaunal Records from TransJordan. Zoology in the Middle East. Vol5:37-41

15. Compilers

William Branch, Damien Egan, Tony Phelps, Declan O'Donovan, Gavin Nel, Saud A. Al Farraj, Pritpal Soorae, Ehad Eid, Haithem Al Aamri, Peter Arras, Neelofa Ali, Masaa Al Jumaily, Khaled Al Rasbi and Patrick Paillat

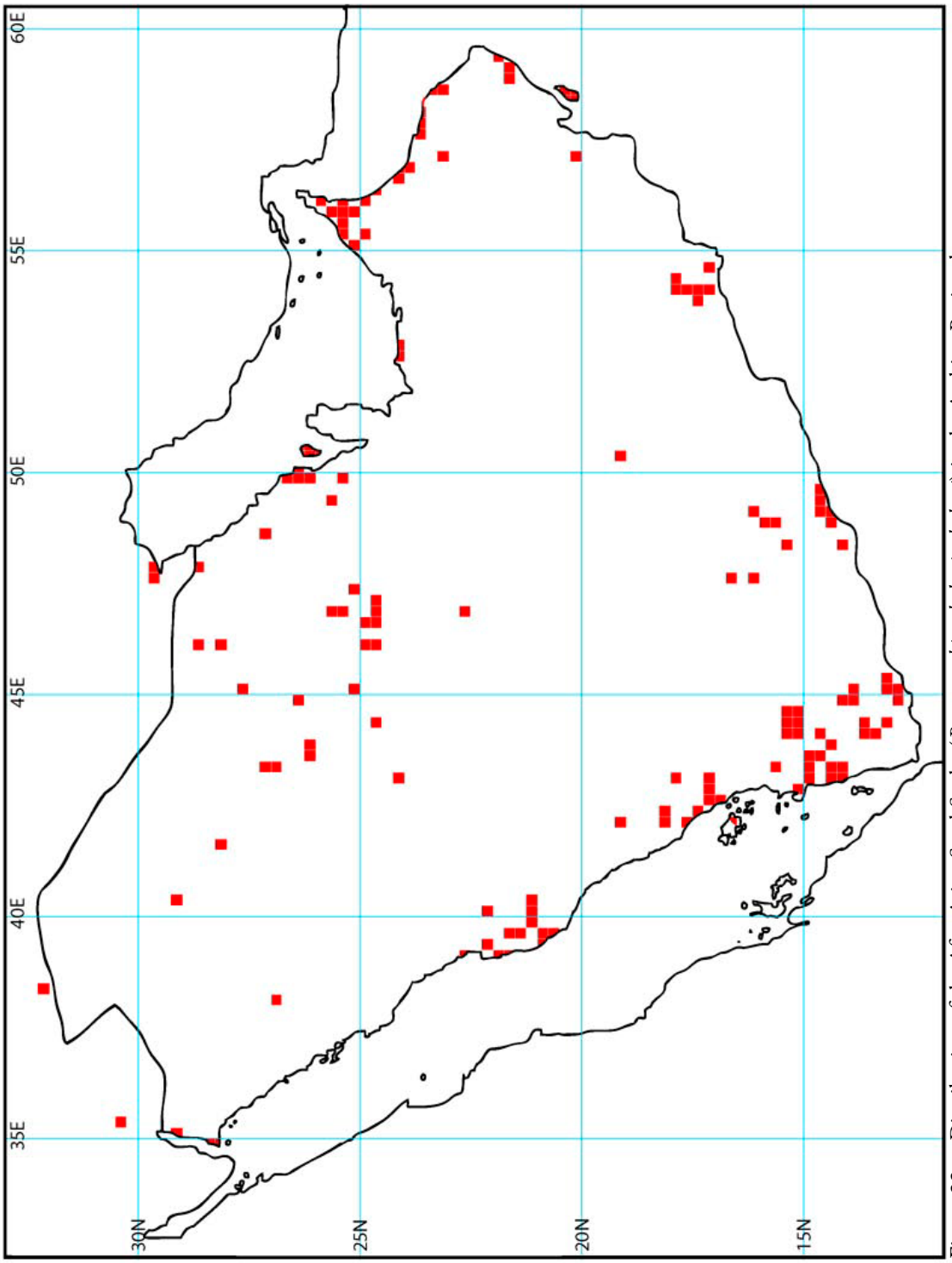

Figure 22. Distribution of the Afro-Asian Sand Snake (*Psammophis schokari schokari*) in the Arabian Peninsula.

Conservation Workshop for the Fauna of Arabia
Taxon Data Sheet

Working Group: Snakes **Date:** 3-5 February 2008

1. Taxonomy

1A. Scientific Name (Genus, species & subspecies): *Rhynchocalamus arabicus*

Authority: Schmidt Date: 1933

1B. Synonyms (with authority & date):

1C. Common Name(s) with language/region:
Aden black-headed sea snake

2. Distribution

2A. Historical Distribution (last 100 years):
Single specimen known from general vicinity of Aden

2B. Current Distribution (illustrate on map):
See 2A

2C. Habitat of the taxon (ecosystem level):
Unknown

2D. Habitat specificity (elevation, etc.):
Unknown

2E. Migration: ○ Yes ◉ No ○ Unknown

If Yes, describe:

3. Number of Populations & Subpopulations in which the Taxon is distributed:

Location of each:	Approx. Area Occupied:	Approx. No. of Individuals:
Specimen found near Aden		1

4. Population Trends

4A. Is the Population: ○ Increasing ○ Decreasing ○ Stable ◉ Unknown

4B. If declining, what has been the rate of decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has the population decline occured?

4C. If stable or unknown, do you predict a future decline in the population size? ○ Yes ◉ No

If Yes, please specify rate and factors e.g. habitat loss, trade, etc.:

5. Habitat Status

5A. Is the habitat distribution: ○ Continuous ○ Fragmented ◉ Unknown

5B. Is there any change in the range of the habitat where the Taxon occurs? ○ Yes ○ No ◉ Unknown

If Yes, is it: ○ Decreasing in Area ○ Increasing in Area

5C. If decreasing what has been the decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has this decline occured?

5D. Do you predict a future decline in the habitiat? ○ Yes ◉ No

If Yes, what do you predict that decline will be? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years do you predict the decline will occur?

5E. State the primary cause of this change:

5F. Is there any change in the quality of the habitat where the Taxon occurs? ○ Yes ○ No ◉ Unknown

If Yes, is the habitat quality: ○ Declining ○ Improving

5G. State the primary cause of this change:

6. Threats

	Present	Future		Present	Future
Pollution	☐	☐	Disease	☐	☐
Urban Development	☐	☒	Hybridization	☐	☐
Road Kills	☐	☐	Decline in prey species	☐	☐
Damming	☐	☐	Loss of habitat	☐	☒
War	☐	☐	Genetic problems	☐	☐
Recreational activities	☐	☐	Grazing	☐	☐
Hunting (recreation or retail)	☐	☐	Habitat fragmentation	☐	☒
Harvest for medicine	☐	☐	Predation	☐	☐
Harvest for food/timber	☐	☐	Interspecific competition	☐	☐
Poisoning	☐	☐	Livestock competition (food, etc.)	☐	☐
Pesticides	☐	☐	Livestock conflicts (retaliation kills)	☐	☐
Persecution	☐	☐	Introduced species (non-livestock)	☐	☐
Trade of animals/parts	☐	☐	Nutritional disorders	☐	☐

Other (please specify):

6B. Would these threats result in (perceived or inferred) population decline? ○ Yes ○ No ◉ Unknown

Comment:

7. Trade

7A. Is the Taxon in trade? ○ Yes ◉ No ○ Unknown

If Yes, is it: ○ Local ○ Regional ○ International ○ Commercial

7B. Parts in trade:

☐ Skin ☐ Fur ☐ Hair ☐ Horn ☐ Bones ☐ Glands

☐ Meat ☐ Products ☐ Live Animal ☐ Taxidermy ☐ Organs

Comments/Other threats (please specify):

8. Data Quality

8A. Are the estimates you have supplied based on:

☐ Census or monitoring ☐ General field studies ☐ Informal field studies ☒ Literature
☐ Hearsay/popular belief ☐ Museum studies/records ☐ Indirect information from trade, etc.

9. Studies (field) conducted over the last 10 years (indicate the year of study not the year of publication):

Researchers	Location	Year	Topic

10. Conservation Status

10A. IUCN Red List Category: Global: Not listed Regional: Not listed

10B. National Red Data Book:
Not listed

10C. Workshop Assessment of Regional Red List Category: Data deficient

10D. CITES: Not listed

10E. National Wildife Legislation:
Not listed

10F. Other Legislation (please specify):

10G. List existing Protected Areas within the Taxon's range:

Protected Area	Country	Size (km^2)

10H. Recommended Protected Areas for the Taxon:

Area	Country	Size (km^2)

10I. Are there any Regional Conservation/Protection Action Plans: ○ Yes ◉ No ○ Unknown

If Yes, please list them:

11. Supporting Research

11A. Is research recommended? ◉ Yes ○ No

If Yes, what type of research would you recommend?

☒ Surveys ☐ Genetics ☒ Taxonomic ☒ Life History ☐ Public Awareness
☐ Trade ☐ Monitoring ☐ Reintroduction ☒ Human Impact
☐ Other (please specify):

12. Management

12A. What management is recommended for the Taxon?

☐ Habitat management ☐ Wild population management ☐ Captive breeding
☐ Monitoring ☐ Translocation ☐ Sustainable Use
☐ Public Awareness ☒ Limiting Factor Management ☒ Genome Research Banking
☐ Law Enforcement ☐ Work in Local Communities ☐ Address Policy Makers
☐ Other (please specify):

13. Captive Breeding

13A. Is captive breeding recommended for the taxon: ○ Yes ◉ No

13B. If captive breeding is recommeded , is it for:

☐ Species recovery ☐ Reintroduction ☐ Research ☐ Husbandry

☐ Education ☐ Preserve live genome

13C. Do Captive stocks already exist? ○ Yes ○ No ○ Unknown

If Yes, list the facilities:

Facility	Country	Males	Females	Unknown	Total

13D. Does a coordinated Species Management Plan exist? ○ Yes ◉ No ○ Unknown

If Yes, list the participating institutions:

If Not, is a Species Management Plan recommended: ○ Yes ◉ No

If Yes, list the institutions that should participate:

13E. Level of captive breeding recommended:

☐ Captive breeding program not neccessary ☐ Initiate program within 3 years

☐ Maintain existing program as it is ☐ Intensify existing program ☐ Decrease existing progam

13F. Are the techniques established for captive breeding?

☐ Techniques are known for this or similar taxon ☐ Some techniques are known for this or similar taxon

☐ Techniques not known for this or simialr taxon ☒ Unknown

14. Sources/References (complete citation):

15. Compilers

William Branch, Damien Egan, Tony Phelps, Declan O'Donovan, Gavin Nel, Saud A. Al Farraj, Pritpal Soorae, Ehad Eid, Haithem Al Aamri, Peter Arras, Neelofa Ali, Masaa Al Jumaily, Khaled Al Rasbi and Patrick Paillat

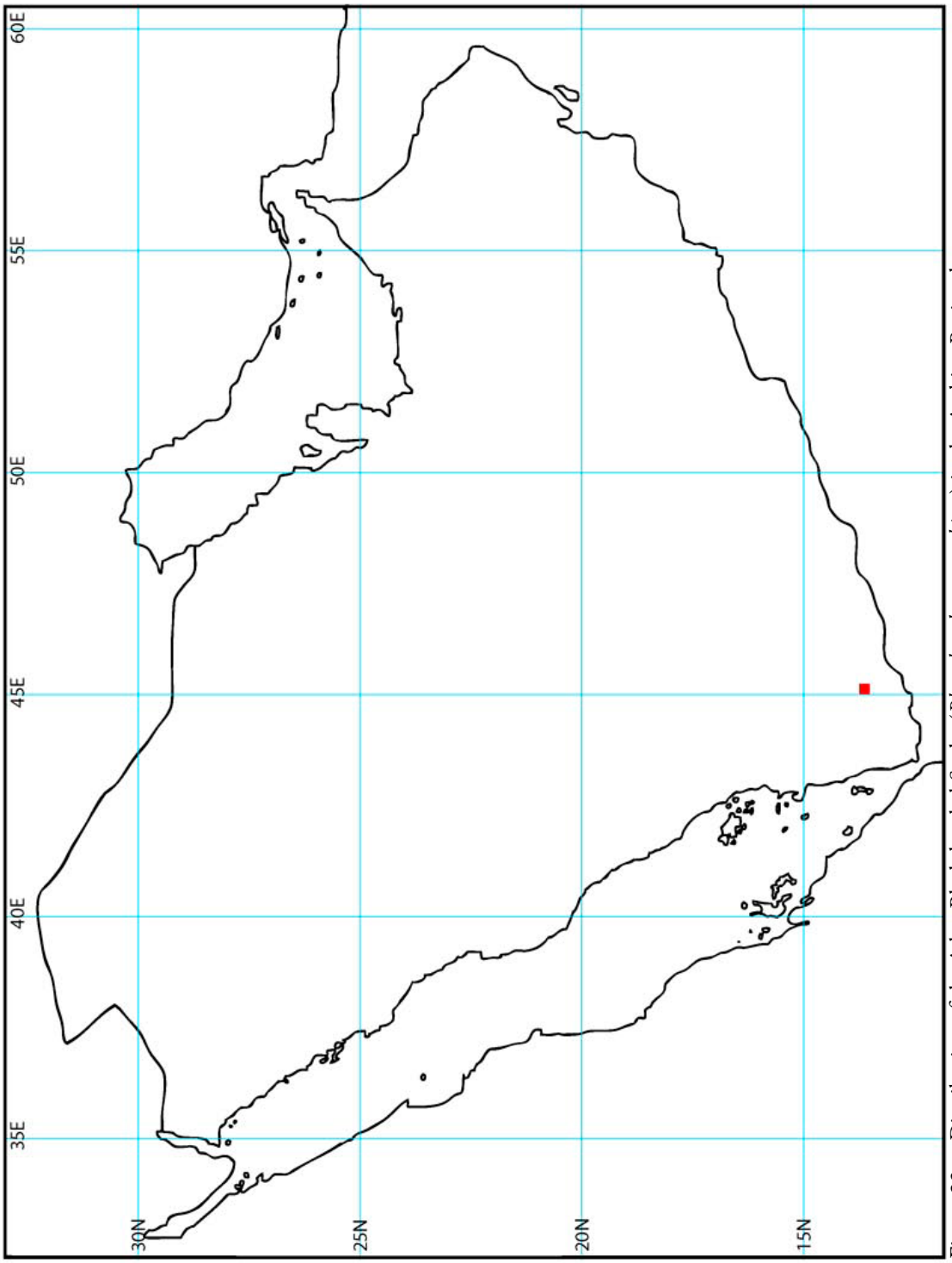

Figure 23. Distribution of the Aden Black-headed Snake (*Rhynchocalamus arabicus*) in the Arabian Peninsula.

Conservation Workshop for the Fauna of Arabia
Taxon Data Sheet

Working Group: Snakes **Date:** 3-5 February 2008

1. Taxonomy

1A. Scientific Name (Genus, species & subspecies): *Spalerosophis diadema cliffordi*

Authority: Schlegel Date: 1837

1B. Synonyms (with authority & date):

1C. Common Name(s) with language/region:
Clifford's diadem snake, Diadem rat snake

2. Distribution

2A. Historical Distribution (last 100 years):
From North Africa to Iran and throughout Arabia in suitable habitat

2B. Current Distribution (illustrate on map):
See 2A

2C. Habitat of the taxon (ecosystem level):
Varied: Arabian Desert and east Sahero-Arabian xeric woodlands. Red Sea Nubio-Sinian tropical desert and semi-desert; Southwestern Arabian foothills savannah; Southwestern Arabian montane woodlands. Habitat gravel plains.

2D. Habitat specificity (elevation, etc.):
From sea level to more than 3000m a.s.l. Found in most rocky habitats

2E. Migration: ○ Yes ◉ No ○ Unknown

If Yes, describe:

3. Number of Populations & Subpopulations in which the Taxon is distributed:

Location of each:	Approx. Area Occupied:	Approx. No. of Individuals:
Throughout the Arabian Peninsula in suitable habitat	1850km2	Unknown

4. Population Trends

4A. Is the Population: ○ Increasing ○ Decreasing ◉ Stable ○ Unknown

4B. If declining, what has been the rate of decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has the population decline occured?

4C. If stable or unknown, do you predict a future decline in the population size? ○ Yes ◉ No

If Yes, please specify rate and factors e.g. habitat loss, trade, etc.:

5. Habitat Status

5A. Is the habitat distribution: ◉ Continuous ○ Fragmented ○ Unknown

5B. Is there any change in the range of the habitat where the Taxon occurs? ◉ Yes ○ No ○ Unknown

If Yes, is it: ◉ Decreasing in Area ○ Increasing in Area

5C. If decreasing what has been the decline? ◉ <20% ○ >20% ○ >50% ○ >80%

Over how many years has this decline occured?

5D. Do you predict a future decline in the habitiat? (•) Yes ( ) No

If Yes, what do you predict that decline will be? (•) <20% ( ) >20% ( ) >50% ( ) >80%

Over how many years do you predict the decline will occur? 10

5E. State the primary cause of this change:
Urban development and rock quarrying

5F. Is there any change in the quality of the habitat where the Taxon occurs? (•) Yes ( ) No ( ) Unknown

If Yes, is the habitat quality: (•) Declining ( ) Improving

5G. State the primary cause of this change:
Urban development and rock quarrying

6. Threats

	Present	Future		Present	Future
Pollution	☐	☐	Disease	☐	☐
Urban Development	☒	☒	Hybridization	☐	☐
Road Kills	☐	☐	Decline in prey species	☐	☐
Damming	☐	☐	Loss of habitat	☒	☒
War	☐	☐	Genetic problems	☐	☐
Recreational activities	☐	☐	Grazing	☐	☐
Hunting (recreation or retail)	☐	☐	Habitat fragmentation	☒	☒
Harvest for medicine	☐	☐	Predation	☐	☐
Harvest for food/timber	☐	☐	Interspecific competition	☐	☐
Poisoning	☐	☐	Livestock competition (food, etc.)	☐	☐
Pesticides	☐	☐	Livestock conflicts (retaliation kills)	☐	☐
Persecution	☐	☐	Introduced species (non-livestock)	☐	☐
Trade of animals/parts	☐	☐	Nutritional disorders	☐	☐

Other (please specify):

6B. Would these threats result in (perceived or inferred) population decline? ( ) Yes (•) No ( ) Unknown

Comment:

7. Trade

7A. Is the Taxon in trade? (•) Yes ( ) No ( ) Unknown

If Yes, is it: ( ) Local ( ) Regional (•) International ( ) Commercial

7B. Parts in trade:

☐ Skin ☐ Fur ☐ Hair ☐ Horn ☐ Bones ☐ Glands
☐ Meat ☐ Products ☒ Live Animal ☐ Taxidermy ☐ Organs

Comments/Other threats (please specify):

8. Data Quality

8A. Are the estimates you have supplied based on:

☐ Census or monitoring ☐ General field studies ☒ Informal field studies ☒ Literature
☒ Hearsay/popular belief ☐ Museum studies/records ☐ Indirect information from trade, etc.

9. Studies (field) conducted over the last 10 years (indicate the year of study not the year of publication):

Researchers	Location	Year	Topic

10. Conservation Status

10A. IUCN Red List Category: Global: Not listed Regional: Not listed

10B. National Red Data Book:
Not listed

10C. Workshop Assessment of Regional Red List Category: Least concern

10D. CITES: Not listed

10E. National Wildife Legislation:
Not listed

10F. Other Legislation (please specify):

10G. List existing Protected Areas within the Taxon's range:

Protected Area	Country	Size (km^2)
At Taysiya ,Al Kunfah, Al Tubayq	KSA	

10H. Recommended Protected Areas for the Taxon:

Area	Country	Size (km^2)

10I. Are there any Regional Conservation/Protection Action Plans: ○ Yes ◉ No ○ Unknown

If Yes, please list them:

11. Supporting Research

11A. Is research recommended? ◉ Yes ○ No

If Yes, what type of research would you recommend?

☐ Surveys ☒ Genetics ☒ Taxonomic ☐ Life History ☐ Public Awareness
☐ Trade ☐ Monitoring ☐ Reintroduction ☐ Human Impact
☐ Other (please specify):

12. Management

12A. What management is recommended for the Taxon?

☐ Habitat management ☐ Wild population management ☒ Captive breeding
☐ Monitoring ☐ Translocation ☐ Sustainable Use
☐ Public Awareness ☐ Limiting Factor Management ☒ Genome Research Banking
☐ Law Enforcement ☐ Work in Local Communities ☐ Address Policy Makers
☐ Other (please specify):

13. Captive Breeding

13A. Is captive breeding recommended for the taxon: (•) Yes ( ) No

13B. If captive breeding is recommeded , is it for:

☐ Species recovery ☐ Reintroduction ☒ Research ☐ Husbandry

☒ Education ☐ Preserve live genome

13C. Do Captive stocks already exist? (•) Yes ( ) No ( ) Unknown

If Yes, list the facilities:

Facility	Country	Males	Females	Unknown	Total
BCEAW	UAE	?	?	?	?

13D. Does a coordinated Species Management Plan exist? ( ) Yes (•) No ( ) Unknown

If Yes, list the participating institutions:

If Not, is a Species Management Plan recommended: ( ) Yes (•) No

If Yes, list the institutions that should participate:

13E. Level of captive breeding recommended:

☐ Captive breeding program not neccessary ☐ Initiate program within 3 years

☒ Maintain existing program as it is ☐ Intensify existing program ☐ Decrease existing progam

13F. Are the techniques established for captive breeding?

☒ Techniques are known for this or similar taxon ☐ Some techniques are known for this or similar taxon

☐ Techniques not known for this or simialr taxon ☐ Unknown

14. Sources/References (complete citation):

Egan, D. 2007. Snakes of Arabia. A field guide to the Snakes of the Arabian Peninsula and its Shores. Motivate Publishing.

Gasperetti, J. 1988. Snakes of Arabia. Fauna of Saudi Arabia 9: 169-450.

Schatte, B & Desvolgnes, A. 1999. The Herpetofauna of southern Yemen and the Soqotra archipelago. Museum d'Histoire Naturelle. Geneve

Schatte, B & Gasparetti, J.A. Contribution to the herpetofauna of Southwestern Arabia. Fauna of Saudi Arabia. Vol 14.

Van der Kooij, J. 2001. The Herpetofauna of the Sultinate of Oman. Part 4: Terrestrial Snakes. Podarcus.

Werner, Y.L. 1991. Notable Herpetofaunal Records from TransJordan. Zoology in the Middle East. Vol.5 37-41

15. Compilers

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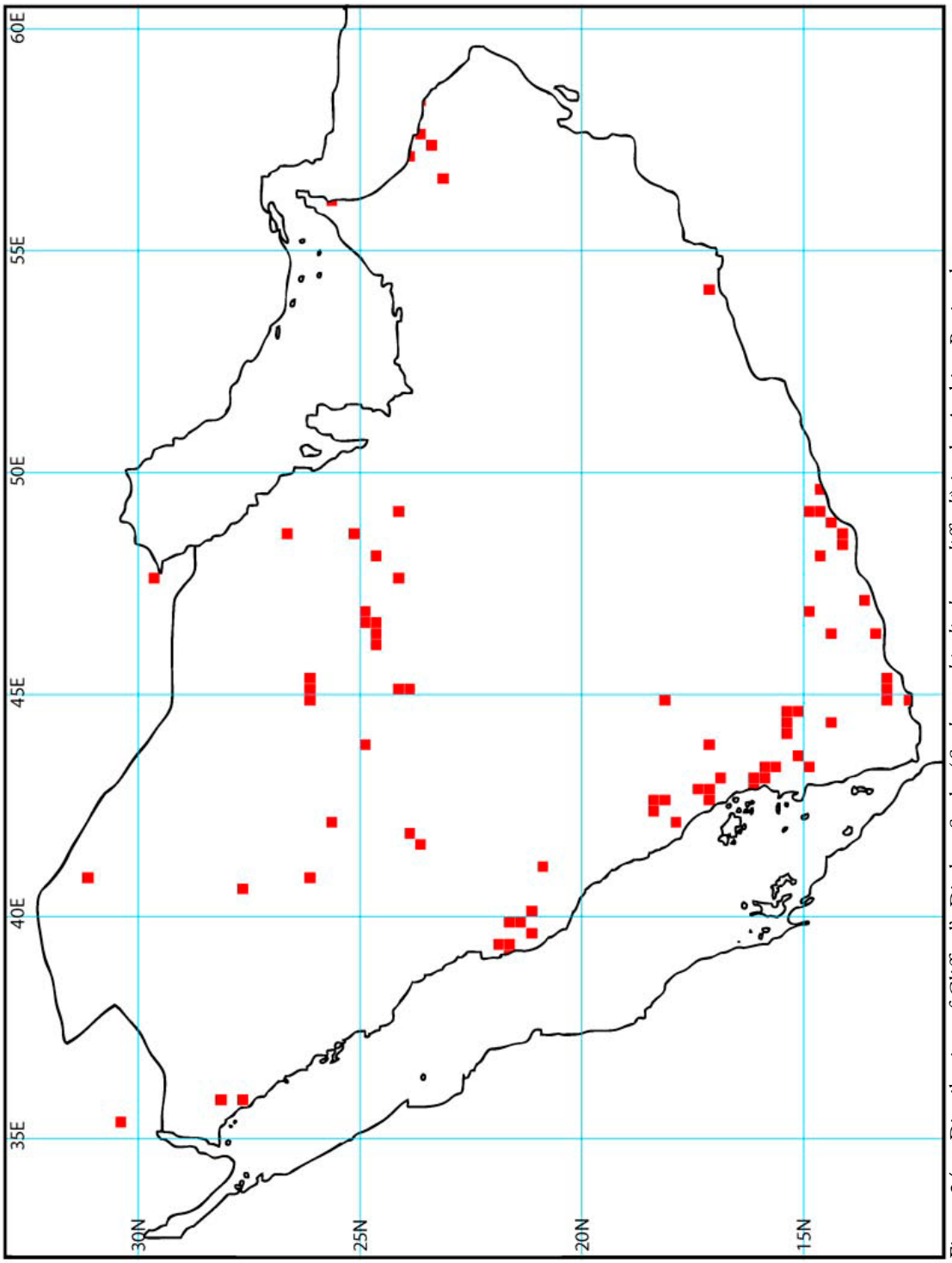

Figure 24. Distribution of Clifford's Diadem Snake (*Spalerosophis diadema cliffordi*) in the Arabian Peninsula.

Conservation Workshop for the Fauna of Arabia
Taxon Data Sheet

Working Group: Snakes **Date:** 3-5 February 2008

1. Taxonomy

1A. Scientific Name (Genus, species & subspecies): *Telescopus dhara dhara*

Authority: (Forskal) Date: 1775

1B. Synonyms (with authority & date):

1C. Common Name(s) with language/region:
Arabian cat snake

2. Distribution

2A. Historical Distribution (last 100 years):
North and East Africa through to the Middle East. In Arabia, known from the mountain periphery and Central mountains around Riyadh

2B. Current Distribution (illustrate on map):
See 2A

2C. Habitat of the taxon (ecosystem level):
Varied: Arabian Desert and east Sahero-Arabian xeric woodlands. Red Sea Nubio-Sinian tropical desert and semi-desert; Southwestern Arabian savannah; Southwestern Arabian montane woodlands. Habitat gravel

2D. Habitat specificity (elevation, etc.):
All elevations in rocky or gravel plain. Non-specific habitat requirements.

2E. Migration: ○ Yes ◉ No ○ Unknown

If Yes, describe:

3. Number of Populations & Subpopulations in which the Taxon is distributed:

Location of each:	Approx. Area Occupied:	Approx. No. of Individuals:
Mountain Periphery and central mountains	26550km2	

4. Population Trends

4A. Is the Population: ○ Increasing ○ Decreasing ◉ Stable ○ Unknown

4B. If declining, what has been the rate of decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has the population decline occured?

4C. If stable or unknown, do you predict a future decline in the population size? ○ Yes ◉ No

If Yes, please specify rate and factors e.g. habitat loss, trade, etc.:

5. Habitat Status

5A. Is the habitat distribution: ◉ Continuous ○ Fragmented ○ Unknown

5B. Is there any change in the range of the habitat where the Taxon occurs? ◉ Yes ○ No ○ Unknown

If Yes, is it: ◉ Decreasing in Area ○ Increasing in Area

5C. If decreasing what has been the decline? ◉ <20% ○ >20% ○ >50% ○ >80%

Over how many years has this decline occured? 10

5D. Do you predict a future decline in the habitiat? ◉ Yes ○ No

If Yes, what do you predict that decline will be? ◉ <20% ○ >20% ○ >50% ○ >80%

Over how many years do you predict the decline will occur? 10

5E. State the primary cause of this change:

Urban development, quarrying

5F. Is there any change in the quality of the habitat where the Taxon occurs? ◉ Yes ○ No ○ Unknown

If Yes, is the habitat quality: ◉ Declining ○ Improving

5G. State the primary cause of this change:

Quarrying and Urban development

6. Threats

	Present	Future		Present	Future
Pollution	☐	☐	Disease	☐	☐
Urban Development	☒	☒	Hybridization	☐	☐
Road Kills	☐	☐	Decline in prey species	☐	☐
Damming	☐	☐	Loss of habitat	☒	☒
War	☐	☐	Genetic problems	☐	☐
Recreational activities	☐	☐	Grazing	☐	☐
Hunting (recreation or retail)	☐	☐	Habitat fragmentation	☒	☒
Harvest for medicine	☐	☐	Predation	☐	☐
Harvest for food/timber	☐	☐	Interspecific competition	☐	☐
Poisoning	☐	☐	Livestock competition (food, etc.)	☐	☐
Pesticides	☐	☐	Livestock conflicts (retaliation kills)	☐	☐
Persecution	☐	☐	Introduced species (non-livestock)	☐	☐
Trade of animals/parts	☐	☐	Nutritional disorders	☐	☐

Other (please specify):

6B. Would these threats result in (perceived or inferred) population decline? ○ Yes ◉ No ○ Unknown

Comment:

7. Trade

7A. Is the Taxon in trade? ◉ Yes ○ No ○ Unknown

If Yes, is it: ○ Local ○ Regional ◉ International ○ Commercial

7B. Parts in trade:

☐ Skin ☐ Fur ☐ Hair ☐ Horn ☐ Bones ☐ Glands

☐ Meat ☐ Products ☐ Live Animal ☐ Taxidermy ☐ Organs

Comments/Other threats (please specify):

8. Data Quality

8A. Are the estimates you have supplied based on:

☐ Census or monitoring ☐ General field studies ☒ Informal field studies ☒ Literature
☐ Hearsay/popular belief ☒ Museum studies/records ☒ Indirect information from trade, etc.

9. Studies (field) conducted over the last 10 years (indicate the year of study not the year of publication):

Researchers	Location	Year	Topic
Masa et al Snakes of Yemen			

10. Conservation Status

10A. IUCN Red List Category: Global: Not listed Regional: Not listed

10B. National Red Data Book:
Not listed

10C. Workshop Assessment of Regional Red List Category: Least concern

10D. CITES: Not listed

10E. National Wildife Legislation:
Not listed

10F. Other Legislation (please specify):

10G. List existing Protected Areas within the Taxon's range:

Protected Area	Country	Size (km^2)
Al Tubaya, Al Khunfah, At Taysiya	KSA	
Arabian oryx reserve, Jebel Sanham	Oman	
Wadi Helo, Khor Kalba	UAE	

10H. Recommended Protected Areas for the Taxon:

Area	Country	Size (km^2)

10I. Are there any Regional Conservation/Protection Action Plans: ○ Yes ◉ No ○ Unknown

If Yes, please list them:

11. Supporting Research

11A. Is research recommended? ◉ Yes ○ No

If Yes, what type of research would you recommend?

☐ Surveys ☒ Genetics ☒ Taxonomic ☐ Life History ☐ Public Awareness
☐ Trade ☐ Monitoring ☐ Reintroduction ☐ Human Impact
☐ Other (please specify):

12. Management

12A. What management is recommended for the Taxon?

- ☐ Habitat management
- ☐ Wild population management
- ☒ Captive breeding
- ☐ Monitoring
- ☐ Translocation
- ☐ Sustainable Use
- ☐ Public Awareness
- ☐ Limiting Factor Management
- ☒ Genome Research Banking
- ☐ Law Enforcement
- ☐ Work in Local Communities
- ☐ Address Policy Makers
- ☐ Other (please specify):

13. Captive Breeding

13A. Is captive breeding recommended for the taxon: ◉ Yes ○ No

13B. If captive breeding is recommeded , is it for:

- ☐ Species recovery
- ☐ Reintroduction
- ☒ Research
- ☒ Husbandry
- ☒ Education
- ☐ Preserve live genome

13C. Do Captive stocks already exist? ◉ Yes ○ No ○ Unknown

If Yes, list the facilities:

Facility	Country	Males	Females	Unknown	Total
BCEAW	UAE	1			1

13D. Does a coordinated Species Management Plan exist? ○ Yes ◉ No ○ Unknown

If Yes, list the participating institutions:

If Not, is a Species Management Plan recommended: ○ Yes ◉ No

If Yes, list the institutions that should participate:

13E. Level of captive breeding recommended:

- ☐ Captive breeding program not neccessary
- ☐ Initiate program within 3 years
- ☐ Maintain existing program as it is
- ☒ Intensify existing program
- ☐ Decrease existing progam

13F. Are the techniques established for captive breeding?

- ☒ Techniques are known for this or similar taxon
- ☐ Some techniques are known for this or similar taxon
- ☐ Techniques not known for this or simialr taxon
- ☐ Unknown

14. Sources/References (complete citation):

Egan, D. 2007. Snakes of Arabia. A field guide to the Snakes of the Arabian Peninsula and its Shores. Motivate Publishing.

Gasperetti, J. 1988. Snakes of Arabia. Fauna of Saudi Arabia 9:169-450

Schatte, B & Desvolgnes, A. 1999. The Herpetofauna of southern Yemen and the Soqotra archipelago. Museum d'Histoire Naturelle. Geneve

Schatte, B & Gasparetti, J. A. Contribution to the herpetofauna of Southwestern Arabia. Fauna of Saudi Arabia. Vol 14.

Van der Kooij, J. 2001. The Herpetofauna of the Sultinate of Oman. Part 4: Terrestrial snakes. Podarcus.

Werner, Y.L. 1991. Notable Herpetofaunal Records from TransJordan. Zoology in the Middle East. Vol 5: 37-41

15. Compilers

William Branch, Damien Egan, Tony Phelps, Declan O'Donovan, Gavin Nel, Saud A. Al Farraj, Pritpal Soorae, Ehad Eid, Haithem Al Aamri, Peter Arras, Neelofa Ali, Masaa Al Jumaily, Khaled Al Rasbi and Patrick Paillat

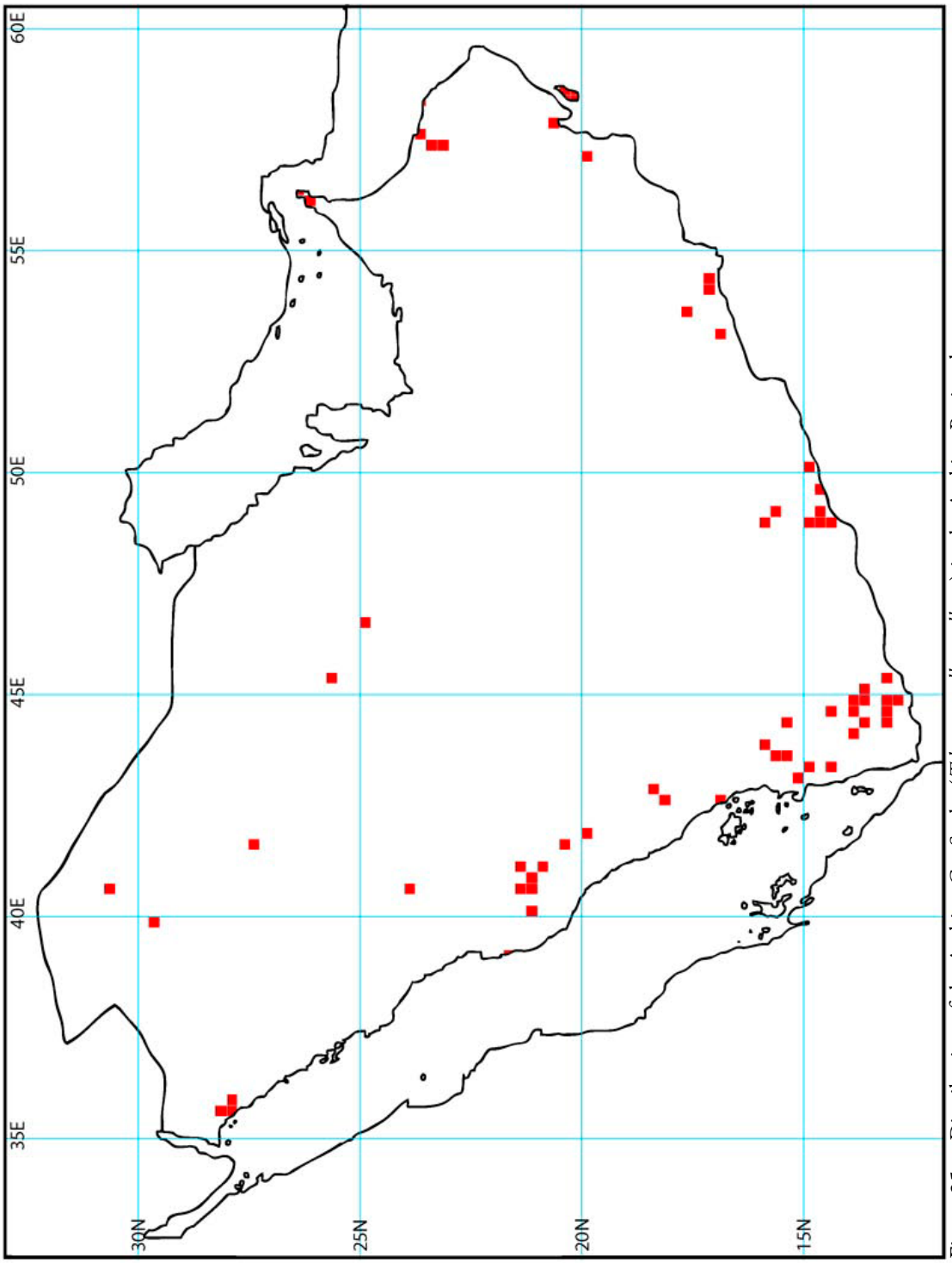

Figure 25. Distribution of the Arabian Cat Snake (*Telescopus dhara dhara*) in the Arabian Peninsula.

Conservation Workshop for the Fauna of Arabia

Taxon Data Sheet

Working Group: Snakes **Date:** 3-5 February 2008

1. Taxonomy

1A. Scientific Name (Genus, species & subspecies): *Atractaspis (microlepidota) andersoni*

Authority: Boulenger Date: 1905

1B. Synonyms (with authority & date):

1C. Common Name(s) with language/region:
Anderson's burrowing Asp (English)

2. Distribution

2A. Historical Distribution (last 100 years):
From the northern Asir Mountains to southwestern Yemen, east to Dhofar. Distribution likely to split up in Hadramaut.

2B. Current Distribution (illustrate on map):
See 2A.

2C. Habitat of the taxon (ecosystem level):
Varied: Arabian desert and east Sahero-Arabian xeric woodlands, Red Sea Nubio-Sinian desert and semi-desert. Southwestern Arabian foothill savannah and southwestern Arabian montane woodlands.

2D. Habitat specificity (elevation, etc.):
Non-specific habitat requirements. Favours loose soil, from sea level up to 2000 m.a.s.l.

2E. Migration: ○ Yes ◉ No ○ Unknown

If Yes, describe:

3. Number of Populations & Subpopulations in which the Taxon is distributed: 2

Location of each:	Approx. Area Occupied:	Approx. No. of Individuals:
Asir Mountains and southwestern Yemen	7,500 km²	~
Southeastern Yemen & Dhofar, Oman	6,400 km²	~

4. Population Trends

4A. Is the Population: ○ Increasing ○ Decreasing ◉ Stable ○ Unknown

4B. If declining, what has been the rate of decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has the population decline occured?

4C. If stable or unknown, do you predict a future decline in the population size? ○ Yes ◉ No

If Yes, please specify rate and factors e.g. habitat loss, trade, etc.:

5. Habitat Status

5A. Is the habitat distribution: ○ Continuous ◉ Fragmented ○ Unknown

5B. Is there any change in the range of the habitat where the Taxon occurs? ◉ Yes ○ No ○ Unknown

If Yes, is it: ◉ Decreasing in Area ○ Increasing in Area

5C. If decreasing what has been the decline? ◉ <20% ○ >20% ○ >50% ○ >80%

Over how many years has this decline occured?

5D. Do you predict a future decline in the habitiat? ◉ Yes ○ No

If Yes, what do you predict that decline will be? ◉ <20% ○ >20% ○ >50% ○ >80%

Over how many years do you predict the decline will occur? 10

5E. State the primary cause of this change:

Urban development, particularly on the coastal plains in Dhofar.

5F. Is there any change in the quality of the habitat where the Taxon occurs? ◉ Yes ○ No ○ Unknown

If Yes, is the habitat quality: ◉ Declining ○ Improving

5G. State the primary cause of this change:

Urban development on the coastal plains in Dhofar.

6. Threats

	Present	Future		Present	Future
Pollution	☐	☐	Disease	☐	☐
Urban Development	☒	☒	Hybridization	☐	☐
Road Kills	☐	☐	Decline in prey species	☐	☐
Damming	☐	☐	Loss of habitat	☒	☒
War	☐	☐	Genetic problems	☐	☐
Recreational activities	☐	☐	Grazing	☐	☐
Hunting (recreation or retail)	☐	☐	Habitat fragmentation	☒	☒
Harvest for medicine	☐	☐	Predation	☐	☐
Harvest for food/timber	☐	☐	Interspecific competition	☐	☐
Poisoning	☐	☐	Livestock competition (food, etc.)	☐	☐
Pesticides	☐	☐	Livestock conflicts (retaliation kills)	☐	☐
Persecution	☐	☐	Introduced species (non-livestock)	☐	☐
Trade of animals/parts	☐	☐	Nutritional disorders	☐	☐

Other (please specify):

6B. Would these threats result in (perceived or inferred) population decline? ○ Yes ◉ No ○ Unknown

Comment:

7. Trade

7A. Is the Taxon in trade? ○ Yes ◉ No ○ Unknown

If Yes, is it: ○ Local ○ Regional ○ International ○ Commercial

7B. Parts in trade:

☐ Skin ☐ Fur ☐ Hair ☐ Horn ☐ Bones ☐ Glands

☐ Meat ☐ Products ☐ Live Animal ☐ Taxidermy ☐ Organs

Comments/Other threats (please specify):

8. Data Quality

8A. Are the estimates you have supplied based on:

☐ Census or monitoring ☐ General field studies ☒ Informal field studies ☒ Literature
☒ Hearsay/popular belief ☒ Museum studies/records ☐ Indirect information from trade, etc.

9. Studies (field) conducted over the last 10 years (indicate the year of study not the year of publication):

Researchers	Location	Year	Topic

10. Conservation Status

10A. IUCN Red List Category: Global: Not Listed. Regional: Not Listed.

10B. National Red Data Book:
Not Listed.

10C. Workshop Assessment of Regional Red List Category: Least Concern.

10D. CITES: Not Listed.

10E. National Wildife Legislation:
Not Listed.

10F. Other Legislation (please specify):

10G. List existing Protected Areas within the Taxon's range:

Protected Area	Country	Size (km^2)
Jabel Samhan	Oman	3,460

10H. Recommended Protected Areas for the Taxon:

Area	Country	Size (km^2)

10I. Are there any Regional Conservation/Protection Action Plans: ○ Yes ◉ No ○ Unknown

If Yes, please list them:

11. Supporting Research

11A. Is research recommended? ◉ Yes ○ No

If Yes, what type of research would you recommend?

☐ Surveys ☒ Genetics ☒ Taxonomic ☒ Life History ☐ Public Awareness
☐ Trade ☐ Monitoring ☐ Reintroduction ☐ Human Impact
☐ Other (please specify):

12. Management

12A. What management is recommended for the Taxon?

☐ Habitat management ☐ Wild population management ☐ Captive breeding
☐ Monitoring ☐ Translocation ☐ Sustainable Use
☐ Public Awareness ☐ Limiting Factor Management ☒ Genome Research Banking
☐ Law Enforcement ☐ Work in Local Communities ☐ Address Policy Makers
☐ Other (please specify):

13. Captive Breeding

13A. Is captive breeding recommended for the taxon: ○ Yes ◉ No

13B. If captive breeding is recommeded , is it for:

☐ Species recovery ☐ Reintroduction ☐ Research ☐ Husbandry

☐ Education ☐ Preserve live genome

13C. Do Captive stocks already exist? ○ Yes ◉ No ○ Unknown

If Yes, list the facilities:

Facility	Country	Males	Females	Unknown	Total

13D. Does a coordinated Species Management Plan exist? ○ Yes ◉ No ○ Unknown

If Yes, list the participating institutions:

If Not, is a Species Management Plan recommended: ○ Yes ◉ No

If Yes, list the institutions that should participate:

13E. Level of captive breeding recommended:

☒ Captive breeding program not neccessary ☐ Initiate program within 3 years

☐ Maintain existing program as it is ☐ Intensify existing program ☐ Decrease existing progam

13F. Are the techniques established for captive breeding?

☐ Techniques are known for this or similar taxon ☐ Some techniques are known for this or similar taxon

☒ Techniques not known for this or simialr taxon ☐ Unknown

14. Sources/References (complete citation):

Egan, D. 2007. Snakes of Arabia: A field guide to the Snakes of the Arabian Peninsula and its Shores. Motivate Publishing, Dubai.

Gasparetti, J. 1988. Snakes of Arabia. *Fauna of Saudi Arabia* 9: 169-405.

Schätte, B. and Desvoignes, A. 1999. The Herpetofauna of southern Yemen and Sokotra Archipelago. Museum d'Historie Naturelle. Geneve.

Schätte, B. and Gasparetti, J.A. 1994. Contribution to the herpetofauna of Southwest Arabia. *Fauna of Saudi Arabia* 14: 348-432.

Scortecci, G. 1932. Rettili dello Yemen. Atti della Societá Italiana di Scienze Naturali e del Museo Civico di Storia Naturale, Milano 71: 39-49.

Trape, J.-F., Mané, Y. and Ineich, I. 2006. *Atractaspis microlepidota*, *A. micropholis et A. watsoni* en Afrique occidentaie et centrale. Bull Soc. Herp. Fr. 199: 5-16.

15. Compilers

William Branch, Damien Egan, Tony Phelps, Declan O'Donovan, Gavin Nel, Saud A. Al Farraj, Pritpal Soorae, Ehad Eid, Haithem Al Aamri, Peter Arras, Neelofa Ali, Masaa Al Jumaily, Khaled Al Rasbi and Patrick Paillat

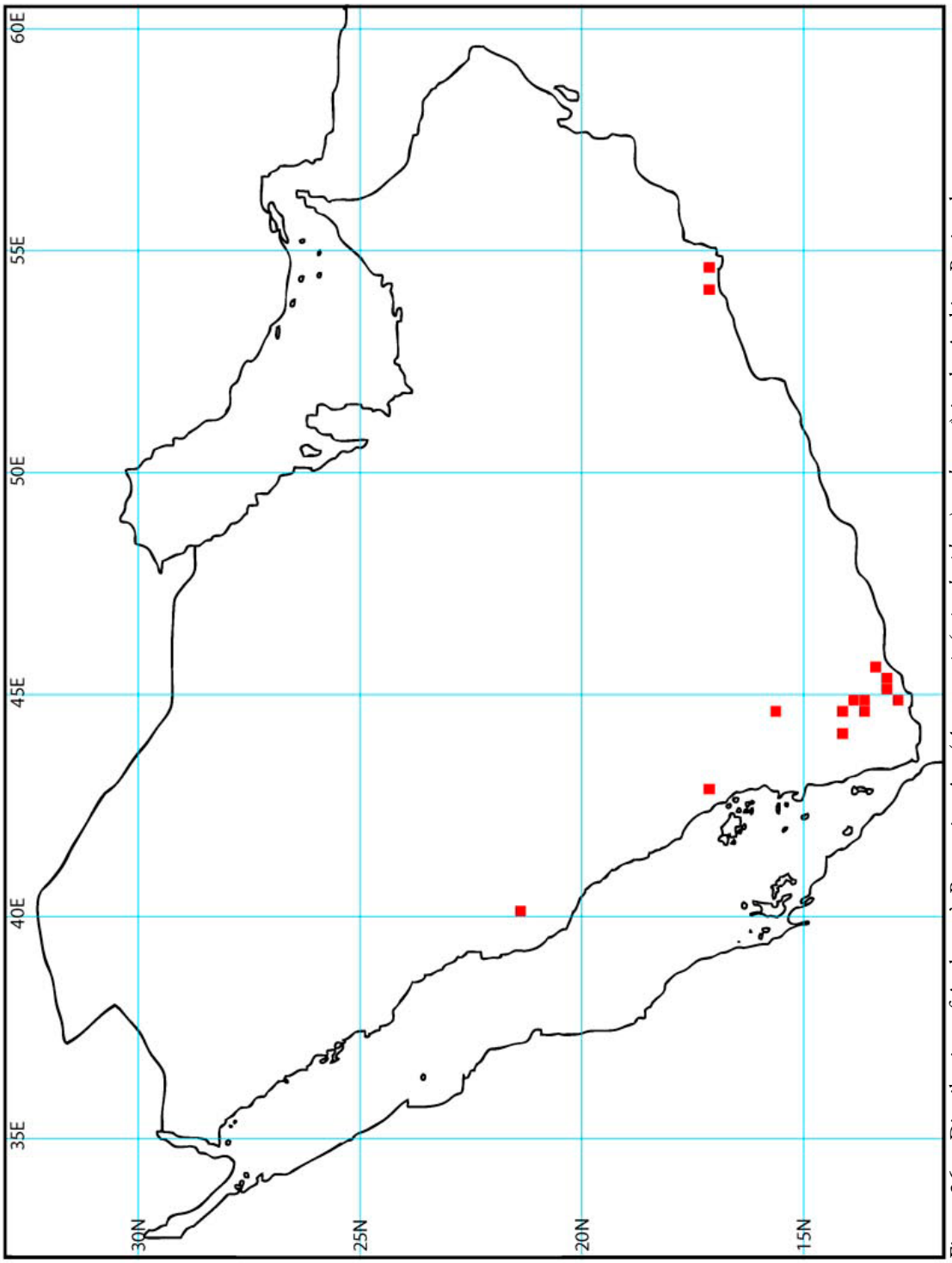

Figure 26. Distribution of Anderson's Burrowing Asp (*Atractaspis (microlepidota) andersoni*) in the Arabian Peninsula.

Conservation Workshop for the Fauna of Arabia
Taxon Data Sheet

Working Group: Snakes **Date:** 3-5 February 2008

1. Taxonomy

1A. Scientific Name (Genus, species & subspecies): *Atractaspis (microlepidota) engaddensis*

Authority: Haas Date: 1950

1B. Synonyms (with authority & date):

1C. Common Name(s) with language/region:
Ein Geddi Burrowing Asp (English)

2. Distribution

2A. Historical Distribution (last 100 years):
From the Sinai to the western and central mountains of Saudi Arabia.

2B. Current Distribution (illustrate on map):
See 2A.

2C. Habitat of the taxon (ecosystem level):
Varied: Arabian desert and east Sahero-Arabian xeric woodlands, Red Sea Nubio-Sinian tropical desert and semi-desert. Southwestern Arabian foothills savannah, southwestern Arabian montane woodlands.

2D. Habitat specificity (elevation, etc.):
From sea level up to 2000 m.a.s.l. + non-specific habitat requirements but favours loose soil conditions.

2E. Migration: ○ Yes ◉ No ○ Unknown

If Yes, describe:

3. Number of Populations & Subpopulations in which the Taxon is distributed:

Location of each:	Approx. Area Occupied:	Approx. No. of Individuals:
Sinai south to the Asir Mountains as far as Taif.	8,125 km^2	~

4. Population Trends

4A. Is the Population: ○ Increasing ○ Decreasing ◉ Stable ○ Unknown

4B. If declining, what has been the rate of decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has the population decline occured?

4C. If stable or unknown, do you predict a future decline in the population size? ○ Yes ◉ No

If Yes, please specify rate and factors e.g. habitat loss, trade, etc.:

5. Habitat Status

5A. Is the habitat distribution: ◉ Continuous ○ Fragmented ○ Unknown

5B. Is there any change in the range of the habitat where the Taxon occurs? ◉ Yes ○ No ○ Unknown
If Yes, is it: ◉ Decreasing in Area ○ Increasing in Area

5C. If decreasing what has been the decline? ◉ <20% ○ >20% ○ >50% ○ >80%

Over how many years has this decline occured?

5D. Do you predict a future decline in the habitiat? (•) Yes ( ) No

If Yes, what do you predict that decline will be? (•) <20% ( ) >20% ( ) >50% ( ) >80%

Over how many years do you predict the decline will occur?

5E. State the primary cause of this change:

Urban and agricultural expansion.

5F. Is there any change in the quality of the habitat where the Taxon occurs? (•) Yes ( ) No ( ) Unknown

If Yes, is the habitat quality: (•) Declining ( ) Improving

5G. State the primary cause of this change:

Urban and agricultural sprawl.

6. Threats

	Present	Future		Present	Future
Pollution	☐	☐	Disease	☐	☐
Urban Development	☒	☒	Hybridization	☐	☐
Road Kills	☐	☐	Decline in prey species	☐	☐
Damming	☐	☐	Loss of habitat	☒	☒
War	☐	☐	Genetic problems	☐	☐
Recreational activities	☐	☐	Grazing	☐	☐
Hunting (recreation or retail)	☐	☐	Habitat fragmentation	☐	☒
Harvest for medicine	☐	☐	Predation	☐	☐
Harvest for food/timber	☐	☐	Interspecific competition	☐	☐
Poisoning	☐	☐	Livestock competition (food, etc.)	☐	☐
Pesticides	☐	☐	Livestock conflicts (retaliation kills)	☐	☐
Persecution	☐	☐	Introduced species (non-livestock)	☐	☐
Trade of animals/parts	☐	☐	Nutritional disorders	☐	☐

Other (please specify):

6B. Would these threats result in (perceived or inferred) population decline? (•) Yes ( ) No ( ) Unknown

Comment:

7. Trade

7A. Is the Taxon in trade? ( ) Yes (•) No ( ) Unknown

If Yes, is it: ( ) Local ( ) Regional ( ) International ( ) Commercial

7B. Parts in trade:

☐ Skin ☐ Fur ☐ Hair ☐ Horn ☐ Bones ☐ Glands

☐ Meat ☐ Products ☐ Live Animal ☐ Taxidermy ☐ Organs

Comments/Other threats (please specify):

8. Data Quality

8A. Are the estimates you have supplied based on:

☐ Census or monitoring ☐ General field studies ☐ Informal field studies ☒ Literature
☐ Hearsay/popular belief ☐ Museum studies/records ☐ Indirect information from trade, etc.

9. Studies (field) conducted over the last 10 years (indicate the year of study not the year of publication):

Researchers	Location	Year	Topic

10. Conservation Status

10A. IUCN Red List Category: Global: Not Listed. Regional: Not Listed.

10B. National Red Data Book:
Not Listed.

10C. Workshop Assessment of Regional Red List Category: Least Concern.

10D. CITES: Not Listed.

10E. National Wildife Legislation:
Not Listed.

10F. Other Legislation (please specify):

10G. List existing Protected Areas within the Taxon's range:

Protected Area	Country	Size (km^2)
Hawtat Bani Tamim	Saudi Arabia	~

10H. Recommended Protected Areas for the Taxon:

Area	Country	Size (km^2)

10I. Are there any Regional Conservation/Protection Action Plans: ○ Yes ◉ No ○ Unknown

If Yes, please list them:

11. Supporting Research

11A. Is research recommended? ◉ Yes ○ No

If Yes, what type of research would you recommend?

☐ Surveys ☒ Genetics ☒ Taxonomic ☐ Life History ☐ Public Awareness
☐ Trade ☐ Monitoring ☐ Reintroduction ☐ Human Impact
☐ Other (please specify):

12. Management

12A. What management is recommended for the Taxon?

☐ Habitat management ☐ Wild population management ☐ Captive breeding
☐ Monitoring ☐ Translocation ☐ Sustainable Use
☐ Public Awareness ☐ Limiting Factor Management ☒ Genome Research Banking
☐ Law Enforcement ☐ Work in Local Communities ☐ Address Policy Makers
☐ Other (please specify):

13. Captive Breeding

13A. Is captive breeding recommended for the taxon: ○ Yes ◉ No

13B. If captive breeding is recommeded , is it for:

☐ Species recovery ☐ Reintroduction ☐ Research ☐ Husbandry

☐ Education ☐ Preserve live genome

13C. Do Captive stocks already exist? ○ Yes ◉ No ○ Unknown

If Yes, list the facilities:

Facility	Country	Males	Females	Unknown	Total

13D. Does a coordinated Species Management Plan exist? ○ Yes ◉ No ○ Unknown

If Yes, list the participating institutions:

If Not, is a Species Management Plan recommended: ○ Yes ◉ No

If Yes, list the institutions that should participate:

13E. Level of captive breeding recommended:

☒ Captive breeding program not neccessary ☐ Initiate program within 3 years

☐ Maintain existing program as it is ☐ Intensify existing program ☐ Decrease existing progam

13F. Are the techniques established for captive breeding?

☐ Techniques are known for this or similar taxon ☐ Some techniques are known for this or similar taxon

☒ Techniques not known for this or simialr taxon ☐ Unknown

14. Sources/References (complete citation):

Egan, D. 2007. Snakes of Arabia: A field guide to the Snakes of the Arabian Peninsula and its Shores. Motivate Publishing, Dubai.

Gasparetti, J. 1988. Snakes of Arabia. *Fauna of Saudi Arabia* 9: 169-405.

Schätte, B. and Desvoignes, A. 1999. The Herpetofauna of southern Yemen and Sokotra Archipelago. Museum d'Historie Naturelle. Geneve.

Schätte, B. and Gasparetti, J.A. 1994. Contribution to the herpetofauna of Southwest Arabia. *Fauna of Saudi Arabia* 14: 348-432.

Scortecci, G. 1932. Rettili dello Yemen. Atti della Societá Italiana di Scienze Naturali e del Museo Civico di Storia Naturale, Milano 71: 39-49.

Trape, J.-F., Mané, Y. and Ineich, I. 2006. *Atractaspis microlepidota*, *A. micropholis et A. watsoni* en Afrique occidentaie et centrale. Bull Soc. Herp. Fr. 199: 5-16.

15. Compilers

William Branch, Damien Egan, Tony Phelps, Declan O'Donovan, Gavin Nel, Saud A. Al Farraj, Pritpal Soorae, Ehad Eid, Haithem Al Aamri, Peter Arras, Neelofa Ali, Masaa Al Jumaily, Khaled Al Rasbi and Patrick Paillat

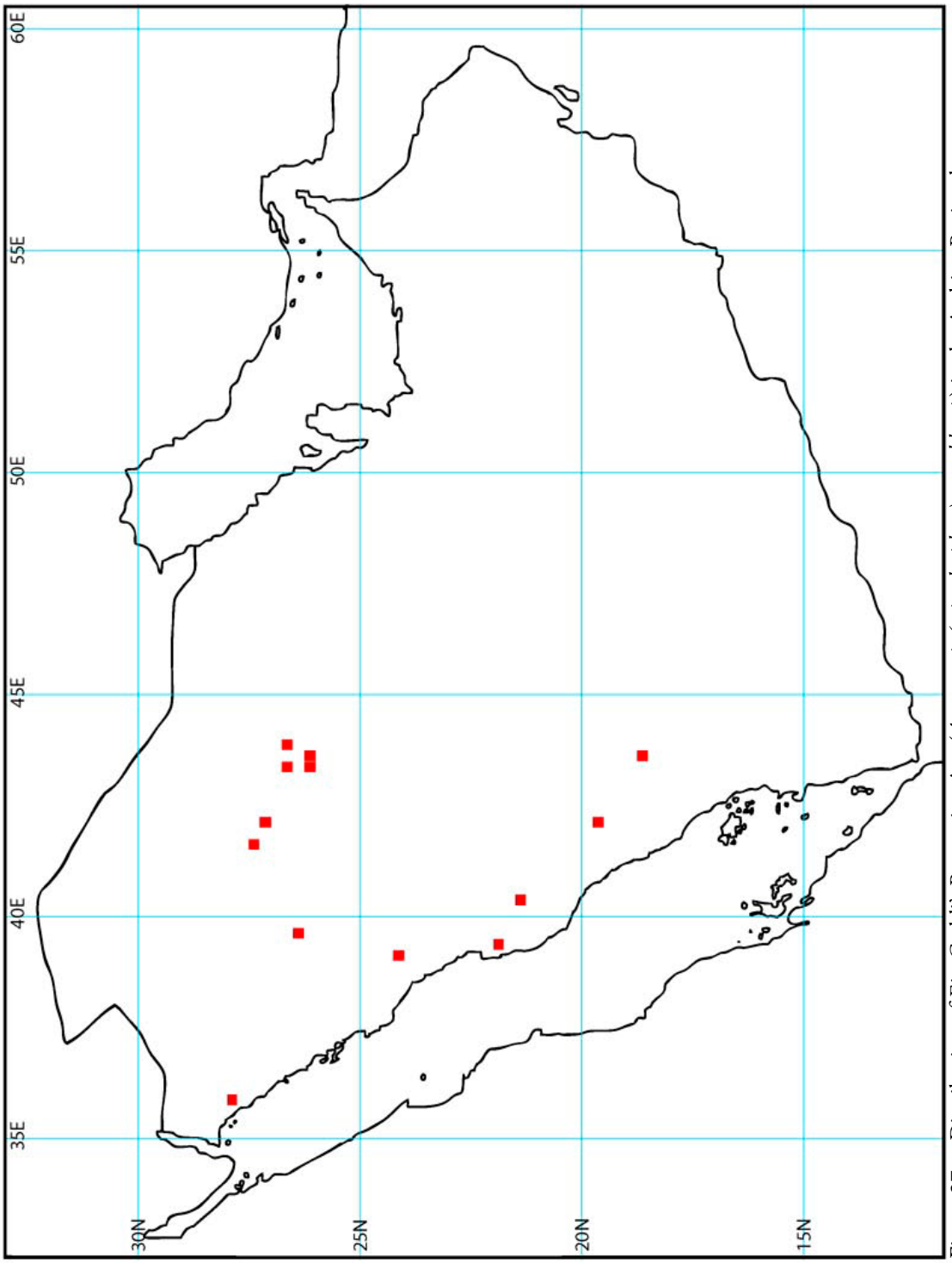

Figure 27. Distribution of Ein Geddi's Burrowing Asp (*Atractaspis (microlepidota) engaddensis*) in the Arabian Peninsula.

Conservation Workshop for the Fauna of Arabia
Taxon Data Sheet

Working Group: Snakes **Date:** 3-5 February 2008

1. Taxonomy

1A. Scientific Name (Genus, species & subspecies): *Naja arabica*

Authority: Scortecci Date: 1832

1B. Synonyms (with authority & date):

1C. Common Name(s) with language/region:
Arabian cobra (English)

2. Distribution

2A. Historical Distribution (last 100 years):
Southwestern Saudi Arabia, to SW Yemen, through Hadramaut to Dhofar, Oman

2B. Current Distribution (illustrate on map):
See 2A

2C. Habitat of the taxon (ecosystem level):
Varied: Red Sea Nubio-Sinian tropical desert and semi-desert. Southwestern Arabian foothills savannah: Southwestern Arabian montane woodlands

2D. Habitat specificity (elevation, etc.):
Non specific habitat requirements- generally found in the vicinity of permanent water

2E. Migration: ○ Yes ◉ No ○ Unknown

If Yes, describe:

3. Number of Populations & Subpopulations in which the Taxon is distributed:

Location of each:	Approx. Area Occupied:	Approx. No. of Individuals:
SW KSA to sw Yemen	12000km2	
Hadramaut		
Dhofar and SE Yemen		

4. Population Trends

4A. Is the Population: ○ Increasing ○ Decreasing ○ Stable ◉ Unknown

4B. If declining, what has been the rate of decline? ◉ <20% ○ >20% ○ >50% ○ >80%

Over how many years has the population decline occured? 10

4C. If stable or unknown, do you predict a future decline in the population size? ○ Yes ◉ No

If Yes, please specify rate and factors e.g. habitat loss, trade, etc.:

5. Habitat Status

5A. Is the habitat distribution: ○ Continuous ◉ Fragmented ○ Unknown

5B. Is there any change in the range of the habitat where the Taxon occurs? ◉ Yes ○ No ○ Unknown

If Yes, is it: ◉ Decreasing in Area ○ Increasing in Area

5C. If decreasing what has been the decline? ◉ <20% ○ >20% ○ >50% ○ >80%

Over how many years has this decline occured? 10

5D. Do you predict a future decline in the habitiat? ◉ Yes ○ No

If Yes, what do you predict that decline will be? ◉ <20% ○ >20% ○ >50% ○ >80%

Over how many years do you predict the decline will occur? 10

5E. State the primary cause of this change:

Urban development, quarrying

5F. Is there any change in the quality of the habitat where the Taxon occurs? ○ Yes ○ No ○ Unknown

If Yes, is the habitat quality: ○ Declining ○ Improving

5G. State the primary cause of this change:

6. Threats

	Present	Future		Present	Future
Pollution	☐	☐	Disease	☐	☐
Urban Development	☒	☒	Hybridization	☐	☐
Road Kills	☐	☐	Decline in prey species	☐	☐
Damming	☐	☐	Loss of habitat	☒	☒
War	☐	☐	Genetic problems	☐	☐
Recreational activities	☐	☐	Grazing	☐	☐
Hunting (recreation or retail)	☒	☒	Habitat fragmentation	☐	☒
Harvest for medicine	☐	☐	Predation	☐	☐
Harvest for food/timber	☐	☐	Interspecific competition	☐	☐
Poisoning	☐	☐	Livestock competition (food, etc.)	☐	☐
Pesticides	☐	☐	Livestock conflicts (retaliation kills)	☐	☐
Persecution	☒	☒	Introduced species (non-livestock)	☐	☐
Trade of animals/parts	☐	☐	Nutritional disorders	☐	☐

Other (please specify):

6B. Would these threats result in (perceived or inferred) population decline? ○ Yes ○ No ◉ Unknown

Comment:

7. Trade

7A. Is the Taxon in trade? ◉ Yes ○ No ○ Unknown

If Yes, is it: ○ Local ○ Regional ◉ International ○ Commercial

7B. Parts in trade:

☐ Skin ☐ Fur ☐ Hair ☐ Horn ☐ Bones ☐ Glands

☐ Meat ☐ Products ☒ Live Animal ☐ Taxidermy ☐ Organs

Comments/Other threats (please specify):

8. Data Quality

8A. Are the estimates you have supplied based on:

☐ Census or monitoring ☒ General field studies ☒ Informal field studies ☒ Literature
☐ Hearsay/popular belief ☐ Museum studies/records ☐ Indirect information from trade, etc.

9. Studies (field) conducted over the last 10 years (indicate the year of study not the year of publication):

Researchers	Location	Year	Topic
Masa et al	Snakes in Yemen		

10. Conservation Status

10A. IUCN Red List Category: Global: Not listed Regional: Not listed

10B. National Red Data Book:
Not listed

10C. Workshop Assessment of Regional Red List Category: Least concern

10D. CITES: Not listed

10E. National Wildife Legislation:
Not listed

10F. Other Legislation (please specify):

10G. List existing Protected Areas within the Taxon's range:

Protected Area	Country	Size (km^2)
Jebel Sanham	Oman	

10H. Recommended Protected Areas for the Taxon:

Area	Country	Size (km^2)

10I. Are there any Regional Conservation/Protection Action Plans: ○ Yes ○ No ○ Unknown

If Yes, please list them:

11. Supporting Research

11A. Is research recommended? ◉ Yes ○ No

If Yes, what type of research would you recommend?

☐ Surveys ☒ Genetics ☒ Taxonomic ☒ Life History ☐ Public Awareness
☐ Trade ☐ Monitoring ☐ Reintroduction ☐ Human Impact
☐ Other (please specify):

12. Management

12A. What management is recommended for the Taxon?

☐ Habitat management ☐ Wild population management ☒ Captive breeding
☐ Monitoring ☐ Translocation ☐ Sustainable Use
☐ Public Awareness ☒ Limiting Factor Management ☒ Genome Research Banking
☐ Law Enforcement ☐ Work in Local Communities ☐ Address Policy Makers
☐ Other (please specify):

13. Captive Breeding

13A. Is captive breeding recommended for the taxon: (•) Yes ( ) No

13B. If captive breeding is recommeded , is it for:

☐ Species recovery ☐ Reintroduction ☒ Research ☒ Husbandry

☒ Education ☐ Preserve live genome

13C. Do Captive stocks already exist? (•) Yes ( ) No ( ) Unknown

If Yes, list the facilities:

Facility	Country	Males	Females	Unknown	Total
BCEAW	UAE	5?			5

13D. Does a coordinated Species Management Plan exist? ( ) Yes (•) No ( ) Unknown

If Yes, list the participating institutions:

If Not, is a Species Management Plan recommended: ( ) Yes (•) No

If Yes, list the institutions that should participate:

13E. Level of captive breeding recommended:

☐ Captive breeding program not neccessary ☐ Initiate program within 3 years

☐ Maintain existing program as it is ☒ Intensify existing program ☐ Decrease existing progam

13F. Are the techniques established for captive breeding?

☒ Techniques are known for this or similar taxon ☐ Some techniques are known for this or similar taxon

☐ Techniques not known for this or simialr taxon ☐ Unknown

14. Sources/References (complete citation):

Egan, D. 2007. Snakes of Arabia. A field guide to the Snakes of the Arabian Peninsula and its Shores. Motivate Publishing.

Gasperetti, J. 1988. Snakes of Arabia. Fauna of Saudi Arabia 9:169-450

Schatte, B & Desvolgness, A. 1999. The Herpetofauna of southern Yemen and the Soqotra archipelago. Museum d'Histoire Naturelle. Geneve.

Schatte, B & Gasparetti, J.A. Contribution to the herpetofauna of Southwestern Arabia. Fauna of Saudi Arabia. Vol.14

Van der Kooij, J. 2001. The Herpetofauna of the Sultinate of Oman. Part 4: Terrestrial Snakes. Podarcus.

15. Compilers

William Branch, Damien Egan, Tony Phelps, Declan O'Donovan, Gavin Nel, Saud A. Al Farraj, Pritpal Soorae, Ehad Eid, Haithem Al Aamri, Peter Arras, Neelofa Ali, Masaa Al Jumaily, Khaled Al Rasbi and Patrick Paillat

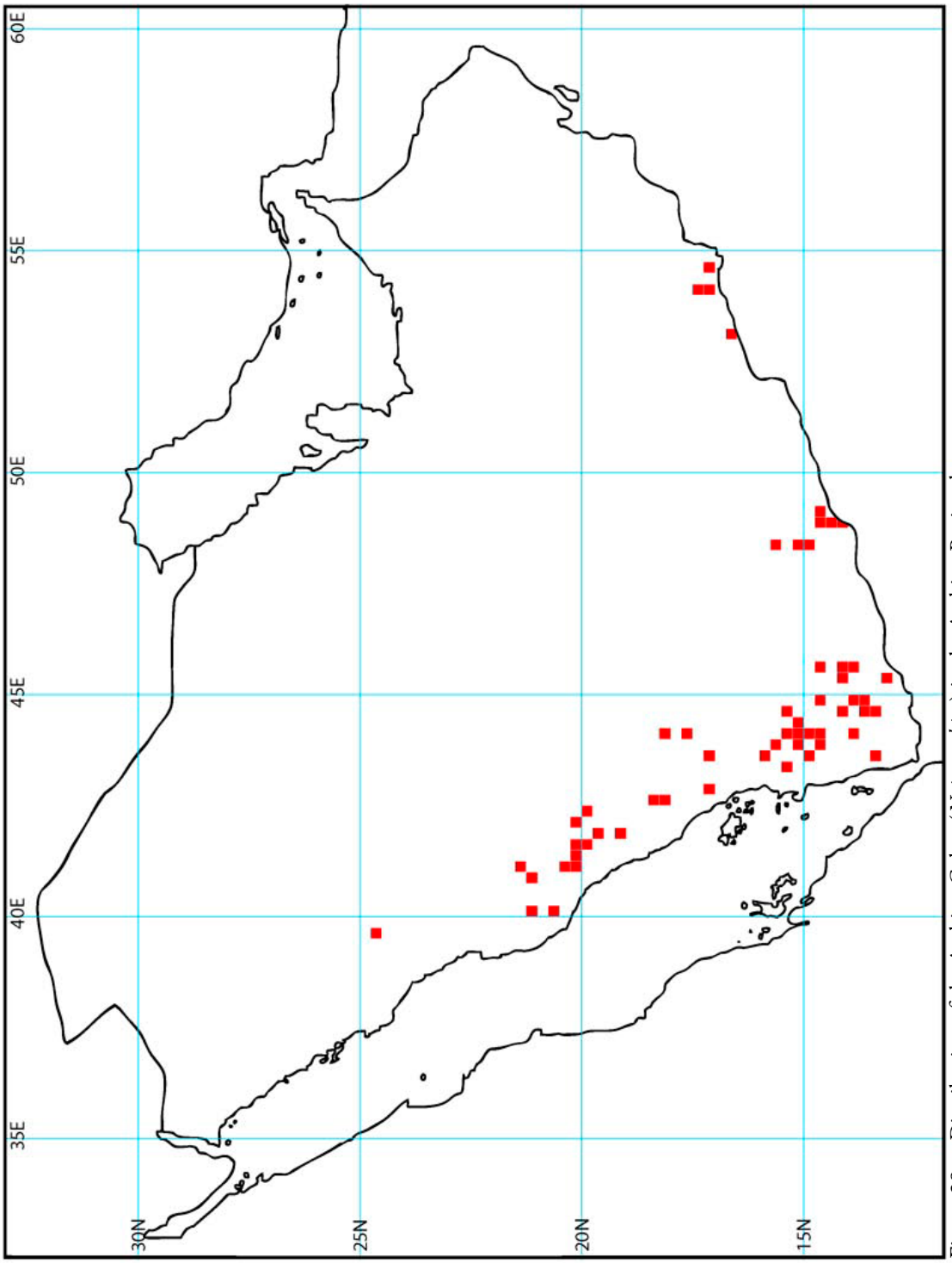

Figure 28. Distribution of the Arabian Cobra (*Naja arabica*) in the Arabian Peninsula.

Conservation Workshop for the Fauna of Arabia
Taxon Data Sheet

Working Group: Snakes Date: 3-5 February 2008

1. Taxonomy

1A. Scientific Name (Genus, species & subspecies): *Walterinnesia aegyptia*

Authority: Lataste Date: 1887

1B. Synonyms (with authority & date):

1C. Common Name(s) with language/region:
Desert black snake, black desert cobra (English)

2. Distribution

2A. Historical Distribution (last 100 years):
Northeast Africa with a scattered distribution in the Middle East. Northeast and Central Saudi Arabia. NW Saudi Arabia. Possible unconfirmed occurrence in Qatar.

2B. Current Distribution (illustrate on map):
See 2A

2C. Habitat of the taxon (ecosystem level):
Varied: Arabian Desert and east Sahero-Arabian xeric woodlands; Red Sea Nubio-Sinian tropical desert and semi-desert; Southwestern Arabian foothills savannah; Southwestern Arabian montane woodlands.

2D. Habitat specificity (elevation, etc.):
Habitat gravel plains; Uromastryx burrows and associated fauna

2E. Migration: ○ Yes ◉ No ○ Unknown

If Yes, describe:

3. Number of Populations & Subpopulations in which the Taxon is distributed:

Location of each:	Approx. Area Occupied:	Approx. No. of Individuals:

4. Population Trends

4A. Is the Population: ○ Increasing ○ Decreasing ○ Stable ◉ Unknown

4B. If declining, what has been the rate of decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has the population decline occured?

4C. If stable or unknown, do you predict a future decline in the population size? ◉ Yes ○ No

If Yes, please specify rate and factors e.g. habitat loss, trade, etc.:

5. Habitat Status

5A. Is the habitat distribution: ○ Continuous ◉ Fragmented ○ Unknown

5B. Is there any change in the range of the habitat where the Taxon occurs? ○ Yes ○ No ◉ Unknown

If Yes, is it: ○ Decreasing in Area ○ Increasing in Area

5C. If decreasing what has been the decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has this decline occured?

5D. Do you predict a future decline in the habitiat? ◉ Yes ○ No

If Yes, what do you predict that decline will be? ◉ <20% ○ >20% ○ >50% ○ >80%

Over how many years do you predict the decline will occur?

5E. State the primary cause of this change:

Urban development

5F. Is there any change in the quality of the habitat where the Taxon occurs? ◉ Yes ○ No ○ Unknown

If Yes, is the habitat quality: ◉ Declining ○ Improving

5G. State the primary cause of this change:

Urban development and possible secondary effects of over grazing from domestic livestock

6. Threats

	Present	Future		Present	Future
Pollution	☐	☐	Disease	☐	☐
Urban Development	☒	☒	Hybridization	☐	☐
Road Kills	☐	☐	Decline in prey species	☐	☐
Damming	☐	☐	Loss of habitat	☒	☒
War	☐	☐	Genetic problems	☐	☐
Recreational activities	☐	☐	Grazing	☒	☒
Hunting (recreation or retail)	☒	☒	Habitat fragmentation	☐	☐
Harvest for medicine	☐	☐	Predation	☐	☐
Harvest for food/timber	☐	☐	Interspecific competition	☐	☐
Poisoning	☐	☐	Livestock competition (food, etc.)	☐	☐
Pesticides	☐	☐	Livestock conflicts (retaliation kills)	☐	☐
Persecution	☐	☐	Introduced species (non-livestock)	☐	☐
Trade of animals/parts	☐	☐	Nutritional disorders	☐	☐

Other (please specify):

6B. Would these threats result in (perceived or inferred) population decline? ○ Yes ○ No ◉ Unknown

Comment:

Collection for venom extraction could have an effect as it is done of fairly large scale

7. Trade

7A. Is the Taxon in trade? ◉ Yes ○ No ○ Unknown

If Yes, is it: ○ Local ○ Regional ◉ International ○ Commercial

7B. Parts in trade:

☐ Skin ☐ Fur ☐ Hair ☐ Horn ☐ Bones ☐ Glands

☐ Meat ☐ Products ☒ Live Animal ☐ Taxidermy ☐ Organs

Comments/Other threats (please specify):

8. Data Quality

8A. Are the estimates you have supplied based on:

☐ Census or monitoring ☐ General field studies ☒ Informal field studies ☒ Literature
☐ Hearsay/popular belief ☒ Museum studies/records ☐ Indirect information from trade, etc.

9. Studies (field) conducted over the last 10 years (indicate the year of study not the year of publication):

Researchers	Location	Year	Topic

10. Conservation Status

10A. IUCN Red List Category: Global: Not listed Regional: Not listed

10B. National Red Data Book:
Not listed

10C. Workshop Assessment of Regional Red List Category: Least concern

10D. CITES: Not listed

10E. National Wildife Legislation:
Not listed

10F. Other Legislation (please specify):

10G. List existing Protected Areas within the Taxon's range:

Protected Area	Country	Size (km^2)
Al Jandaliyah, At Taysiyah, Al Khunfah, Harrat Al Harra	KSA	

10H. Recommended Protected Areas for the Taxon:

Area	Country	Size (km^2)

10I. Are there any Regional Conservation/Protection Action Plans: ○ Yes ◉ No ○ Unknown

If Yes, please list them:

11. Supporting Research

11A. Is research recommended? ◉ Yes ○ No

If Yes, what type of research would you recommend?

☐ Surveys ☒ Genetics ☒ Taxonomic ☒ Life History ☐ Public Awareness
☐ Trade ☐ Monitoring ☐ Reintroduction ☒ Human Impact
☐ Other (please specify):

12. Management

12A. What management is recommended for the Taxon?

☒ Habitat management ☐ Wild population management ☐ Captive breeding
☐ Monitoring ☐ Translocation ☒ Sustainable Use
☐ Public Awareness ☐ Limiting Factor Management ☐ Genome Research Banking
☐ Law Enforcement ☐ Work in Local Communities ☐ Address Policy Makers
☐ Other (please specify):

13. Captive Breeding

13A. Is captive breeding recommended for the taxon: ○ Yes ◉ No

13B. If captive breeding is recommeded , is it for:

☐ Species recovery ☐ Reintroduction ☐ Research ☐ Husbandry

☐ Education ☐ Preserve live genome

13C. Do Captive stocks already exist? ○ Yes ◉ No ○ Unknown

If Yes, list the facilities:

Facility	Country	Males	Females	Unknown	Total

13D. Does a coordinated Species Management Plan exist? ○ Yes ◉ No ○ Unknown

If Yes, list the participating institutions:

If Not, is a Species Management Plan recommended: ○ Yes ◉ No

If Yes, list the institutions that should participate:

13E. Level of captive breeding recommended:

☐ Captive breeding program not neccessary ☐ Initiate program within 3 years

☐ Maintain existing program as it is ☐ Intensify existing program ☐ Decrease existing progam

13F. Are the techniques established for captive breeding?

☒ Techniques are known for this or similar taxon ☐ Some techniques are known for this or similar taxon

☐ Techniques not known for this or simialr taxon ☐ Unknown

14. Sources/References (complete citation):

Egan, D. 2007. Snakes of Arabia. A field guide to the Snakes of the Arabian Peninsula and its Shores. Motivate Publishing.

Gasperetti, J. 1988. Snakes of Arabia. Fauna of Saudi Arabia 9: 169-450

Werner, Y.L. 1991. Notable Herpetofaunal Records from TransJordan. Zoology in the Middle East. Vol 5: 37-41

15. Compilers

William Branch, Damien Egan, Tony Phelps, Declan O'Donovan, Gavin Nel, Saud A. Al Farraj, Pritpal Soorae, Ehad Eid, Haithem Al Aamri, Peter Arras, Neelofa Ali, Masaa Al Jumaily, Khaled Al Rasbi and Patrick Paillat

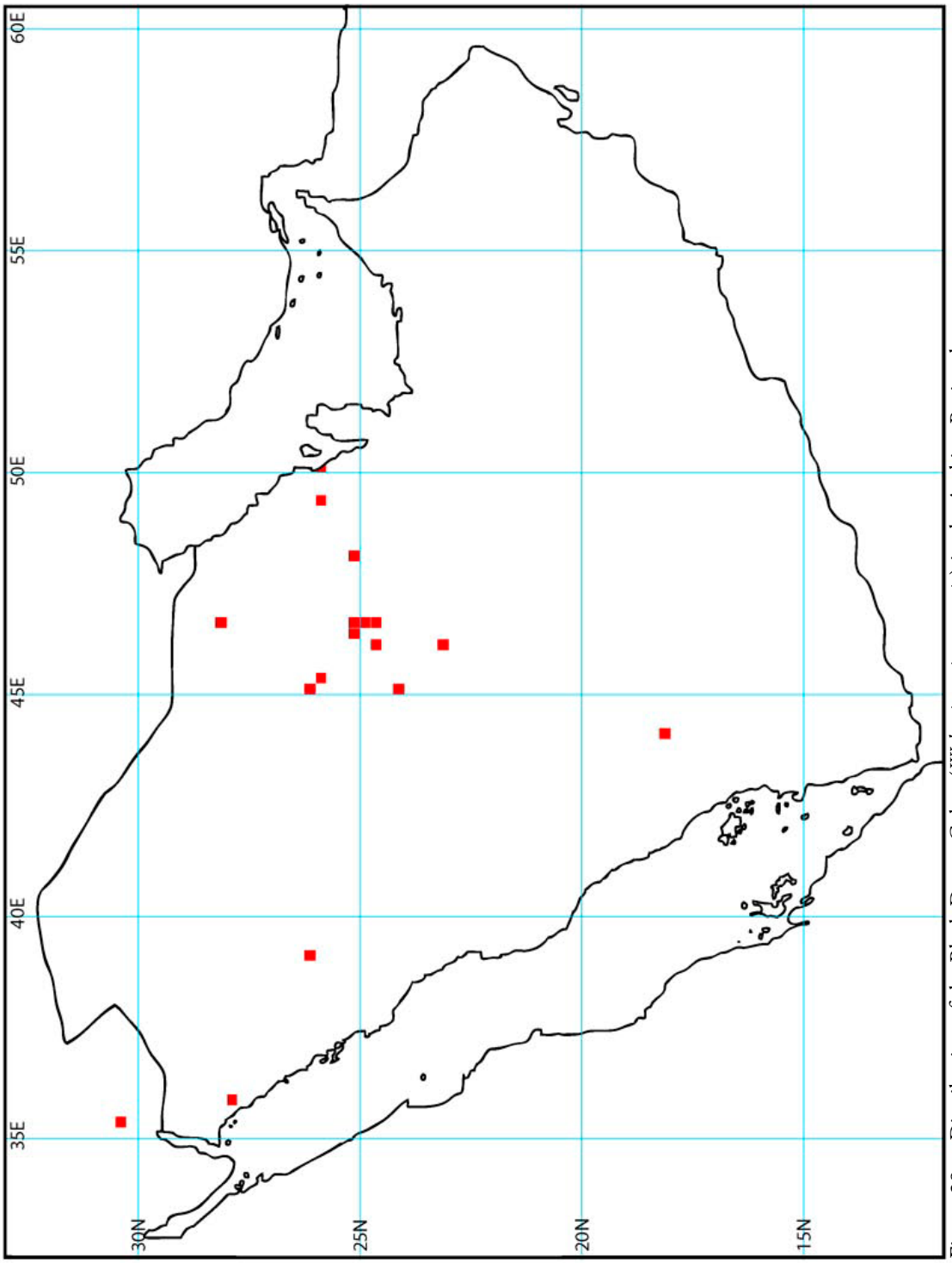

Figure 29. Distribution of the Black Desert Cobra (*Walterinnesia aegyptia*) in the Arabian Peninsula.

Conservation Workshop for the Fauna of Arabia
Taxon Data Sheet

Working Group: Snakes **Date:** 3-5 February 2008

1. Taxonomy

1A. Scientific Name (Genus, species & subspecies): *Bitis arietans arietans*

Authority: Merrem Date: 1820

1B. Synonyms (with authority & date):

1C. Common Name(s) with language/region:
Puff Adder (English).

2. Distribution

2A. Historical Distribution (last 100 years):
Known from southwestern Saudi Arabia, Yemen and southwestern Oman.

2B. Current Distribution (illustrate on map):
See 2A.

2C. Habitat of the taxon (ecosystem level):
Varied: Red Sea Nubio-Sinian tropical desert and semi-desert, southwestern Arabian foothill savannah and southwestern Arabian montane woodlands.

2D. Habitat specificity (elevation, etc.):
Non-specific habitat requirements, found from sea level up to 2000 m.a.s.l.

2E. Migration: ○ Yes ◉ No ○ Unknown

If Yes, describe:

3. Number of Populations & Subpopulations in which the Taxon is distributed: 3

Location of each:	Approx. Area Occupied:	Approx. No. of Individuals:
Southwestern Arabia	23,125 km^2	~
Dhofar, Sultanate of Oman	2,500 km^2	~
Possible Hadramaut complex, Yemen	~	~

4. Population Trends

4A. Is the Population: ○ Increasing ○ Decreasing ◉ Stable ○ Unknown

4B. If declining, what has been the rate of decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has the population decline occured?

4C. If stable or unknown, do you predict a future decline in the population size? ○ Yes ◉ No

If Yes, please specify rate and factors e.g. habitat loss, trade, etc.:

5. Habitat Status

5A. Is the habitat distribution: ○ Continuous ◉ Fragmented ○ Unknown

5B. Is there any change in the range of the habitat where the Taxon occurs? ◉ Yes ○ No ○ Unknown

If Yes, is it: ◉ Decreasing in Area ○ Increasing in Area

5C. If decreasing what has been the decline? ◉ <20% ○ >20% ○ >50% ○ >80%

Over how many years has this decline occured? 10

5D. Do you predict a future decline in the habitiat? ◉ Yes ○ No

If Yes, what do you predict that decline will be? ◉ <20% ○ >20% ○ >50% ○ >80%

Over how many years do you predict the decline will occur? 10

5E. State the primary cause of this change:

Urban development on Dhofar coastal plains.

5F. Is there any change in the quality of the habitat where the Taxon occurs? ◉ Yes ○ No ○ Unknown

If Yes, is the habitat quality: ◉ Declining ○ Improving

5G. State the primary cause of this change:

Urban development on Dhofar coastal plains.

6. Threats

	Present	Future		Present	Future
Pollution	☐	☐	Disease	☐	☐
Urban Development	☒	☒	Hybridization	☐	☐
Road Kills	☐	☐	Decline in prey species	☐	☐
Damming	☐	☐	Loss of habitat	☒	☒
War	☐	☐	Genetic problems	☐	☐
Recreational activities	☐	☐	Grazing	☐	☐
Hunting (recreation or retail)	☒	☒	Habitat fragmentation	☒	☒
Harvest for medicine	☐	☐	Predation	☐	☐
Harvest for food/timber	☐	☐	Interspecific competition	☐	☐
Poisoning	☐	☐	Livestock competition (food, etc.)	☐	☐
Pesticides	☐	☐	Livestock conflicts (retaliation kills)	☐	☐
Persecution	☐	☐	Introduced species (non-livestock)	☐	☐
Trade of animals/parts	☐	☐	Nutritional disorders	☐	☐

Other (please specify):

Collection in Saudi Arabia for venom extraction a possible threat but not confirmed.

6B. Would these threats result in (perceived or inferred) population decline? ○ Yes ○ No ◉ Unknown

Comment:

7. Trade

7A. Is the Taxon in trade? ◉ Yes ○ No ○ Unknown

If Yes, is it: ○ Local ○ Regional ◉ International ○ Commercial

7B. Parts in trade:

☐ Skin ☐ Fur ☐ Hair ☐ Horn ☐ Bones ☐ Glands

☐ Meat ☐ Products ☒ Live Animal ☐ Taxidermy ☐ Organs

Comments/Other threats (please specify):

8. Data Quality

8A. Are the estimates you have supplied based on:

☐ Census or monitoring ☐ General field studies ☒ Informal field studies ☒ Literature
☒ Hearsay/popular belief ☒ Museum studies/records ☒ Indirect information from trade, etc.

9. Studies (field) conducted over the last 10 years (indicate the year of study not the year of publication):

Researchers	Location	Year	Topic

10. Conservation Status

10A. IUCN Red List Category: Global: Not Listed. Regional: Not Listed.

10B. National Red Data Book:
Not Listed.

10C. Workshop Assessment of Regional Red List Category: Least Concern.

10D. CITES: Not Listed.

10E. National Wildife Legislation:
Not Listed.

10F. Other Legislation (please specify):

10G. List existing Protected Areas within the Taxon's range:

Protected Area	Country	Size (km^2)
Jabel Samhan	Oman	3,460

10H. Recommended Protected Areas for the Taxon:

Area	Country	Size (km^2)

10I. Are there any Regional Conservation/Protection Action Plans: ○ Yes ◉ No ○ Unknown

If Yes, please list them:

11. Supporting Research

11A. Is research recommended? ◉ Yes ○ No

If Yes, what type of research would you recommend?

☐ Surveys ☐ Genetics ☐ Taxonomic ☐ Life History ☐ Public Awareness
☐ Trade ☐ Monitoring ☐ Reintroduction ☒ Human Impact
☐ Other (please specify):

12. Management

12A. What management is recommended for the Taxon?

☐ Habitat management ☐ Wild population management ☒ Captive breeding
☐ Monitoring ☐ Translocation ☐ Sustainable Use
☐ Public Awareness ☐ Limiting Factor Management ☒ Genome Research Banking
☐ Law Enforcement ☐ Work in Local Communities ☐ Address Policy Makers
☐ Other (please specify):

13. Captive Breeding

13A. Is captive breeding recommended for the taxon: (•) Yes ( ) No

13B. If captive breeding is recommeded , is it for:

☐ Species recovery ☐ Reintroduction ☒ Research ☒ Husbandry
☒ Education ☐ Preserve live genome

13C. Do Captive stocks already exist? ( ) Yes ( ) No ( ) Unknown

If Yes, list the facilities:

Facility	Country	Males	Females	Unknown	Total
BCEAW	UAE	~	~	~	~

13D. Does a coordinated Species Management Plan exist? ( ) Yes (•) No ( ) Unknown

If Yes, list the participating institutions:

If Not, is a Species Management Plan recommended: ( ) Yes (•) No

If Yes, list the institutions that should participate:

13E. Level of captive breeding recommended:

☐ Captive breeding program not neccessary ☐ Initiate program within 3 years
☒ Maintain existing program as it is ☐ Intensify existing program ☐ Decrease existing progam

13F. Are the techniques established for captive breeding?

☒ Techniques are known for this or similar taxon ☐ Some techniques are known for this or similar taxon
☐ Techniques not known for this or simialr taxon ☐ Unknown

14. Sources/References (complete citation):

Egan, D. 2007. Snakes of Arabia: A field guide to the Snakes of the Arabian Peninsula and its Shores. Motivate Publishing, Dubai.
Gasparetti, J. 1988. Snakes of Arabia. *Fauna of Saudi Arabia* 9: 169-405.
Schätte, B. and Desvoignes, A. 1999. The Herpetofauna of southern Yemen and Sokotra Archipelago. Museum d'Historie Naturelle. Geneve.
Schätte, B. and Gasparetti, J.A. 1994. Contribution to the herpetofauna of Southwest Arabia. *Fauna of Saudi Arabia* 14: 348-432.
Scortecci, G. 1932. Rettili dello Yemen. Atti della Societá Italiana di Scienze Naturali e del Museo Civico di Storia Naturale, Milano 71: 39-49.
Van der Kooij, J. 2001. The herpetofauna of the Sultanate of Oman. Part 4: The Terrestrial Snakes. Podarcis 2 (2): 54-64.

15. Compilers

William Branch, Damien Egan, Tony Phelps, Declan O'Donovan, Gavin Nel, Saud A. Al Farraj, Pritpal Soorae, Ehad Eid, Haithem Al Aamri, Peter Arras, Neelofa Ali, Masaa Al Jumaily, Khaled Al Rasbi and Patrick Paillat

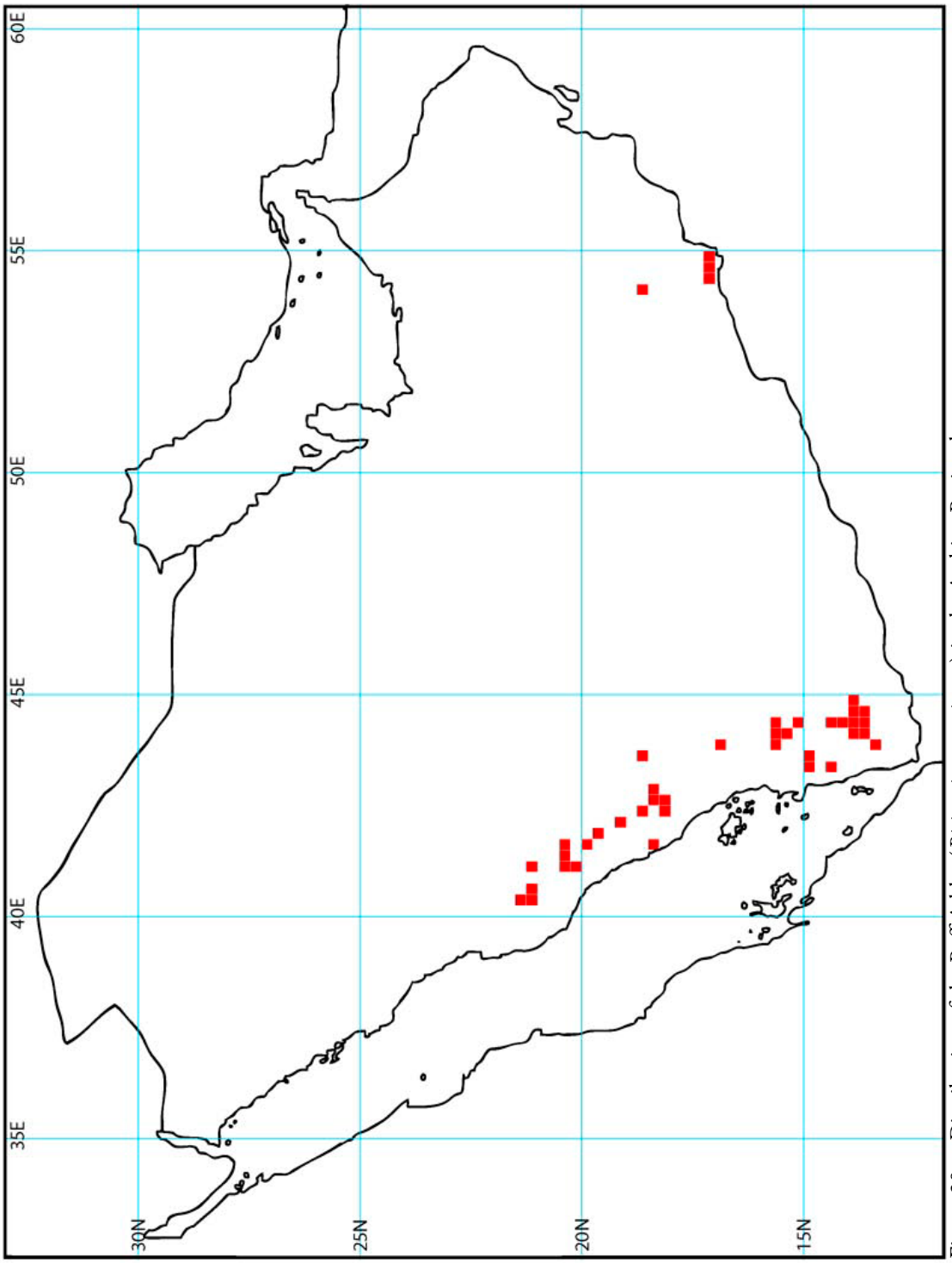

Figure 30. Distribution of the Puff Adder (*Bitis arietans arietans*) in the Arabian Peninsula.

Conservation Workshop for the Fauna of Arabia
Taxon Data Sheet

Working Group: Snakes **Date:** 3-5 February 2008

1. Taxonomy

1A. Scientific Name (Genus, species & subspecies): *Cerastes cerastes hoofieni*

Authority: Werner & Sivan Date: 1999

1B. Synonyms (with authority & date):

1C. Common Name(s) with language/region:
Hoofien's Horned Viper

2. Distribution

2A. Historical Distribution (last 100 years):
Southwestern Arabia between Saudi Arabia and Yemen.

2B. Current Distribution (illustrate on map):
See 2A.

2C. Habitat of the taxon (ecosystem level):
Southwestern Arabian foothill savannah and Arabian Peninsula coastal fog desert.

2D. Habitat specificity (elevation, etc.):
Sandy locations on coastal plains (Tihama).

2E. Migration: ○ Yes ◉ No ○ Unknown

If Yes, describe:

3. Number of Populations & Subpopulations in which the Taxon is distributed: 1

Location of each:	Approx. Area Occupied:	Approx. No. of Individuals:
On coast between Saudi Arabia and Yemen.	3750 km^2	~

4. Population Trends

4A. Is the Population: ○ Increasing ○ Decreasing ○ Stable ◉ Unknown

4B. If declining, what has been the rate of decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has the population decline occured?

4C. If stable or unknown, do you predict a future decline in the population size? ○ Yes ◉ No

If Yes, please specify rate and factors e.g. habitat loss, trade, etc.:

5. Habitat Status

5A. Is the habitat distribution: ◉ Continuous ○ Fragmented ○ Unknown

5B. Is there any change in the range of the habitat where the Taxon occurs? ○ Yes ◉ No ○ Unknown

If Yes, is it: ○ Decreasing in Area ○ Increasing in Area

5C. If decreasing what has been the decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has this decline occured?

5D. Do you predict a future decline in the habitiat? ◯ Yes ◯ No

If Yes, what do you predict that decline will be? ◯ <20% ◯ >20% ◯ >50% ◯ >80%

Over how many years do you predict the decline will occur?

5E. State the primary cause of this change:

5F. Is there any change in the quality of the habitat where the Taxon occurs? ◯ Yes ◯ No ◯ Unknown

If Yes, is the habitat quality: ◯ Declining ◯ Improving

5G. State the primary cause of this change:

6. Threats

	Present	Future		Present	Future
Pollution	☐	☐	Disease	☐	☐
Urban Development	☐	☒	Hybridization	☐	☐
Road Kills	☐	☐	Decline in prey species	☐	☐
Damming	☐	☐	Loss of habitat	☐	☒
War	☐	☐	Genetic problems	☐	☐
Recreational activities	☐	☐	Grazing	☐	☐
Hunting (recreation or retail)	☐	☐	Habitat fragmentation	☐	☐
Harvest for medicine	☐	☐	Predation	☐	☐
Harvest for food/timber	☐	☐	Interspecific competition	☐	☐
Poisoning	☐	☐	Livestock competition (food, etc.)	☐	☐
Pesticides	☐	☐	Livestock conflicts (retaliation kills)	☐	☐
Persecution	☐	☐	Introduced species (non-livestock)	☐	☐
Trade of animals/parts	☐	☐	Nutritional disorders	☐	☐

Other (please specify):

6B. Would these threats result in (perceived or inferred) population decline? ◯ Yes ◉ No ◯ Unknown

Comment:

7. Trade

7A. Is the Taxon in trade? ◯ Yes ◉ No ◯ Unknown

If Yes, is it: ◯ Local ◯ Regional ◯ International ◯ Commercial

7B. Parts in trade:

☐ Skin ☐ Fur ☐ Hair ☐ Horn ☐ Bones ☐ Glands

☐ Meat ☐ Products ☐ Live Animal ☐ Taxidermy ☐ Organs

Comments/Other threats (please specify):

8. Data Quality

8A. Are the estimates you have supplied based on:

☐ Census or monitoring ☐ General field studies ☐ Informal field studies ☒ Literature
☐ Hearsay/popular belief ☒ Museum studies/records ☐ Indirect information from trade, etc.

9. Studies (field) conducted over the last 10 years (indicate the year of study not the year of publication):

Researchers	Location	Year	Topic

10. Conservation Status

10A. IUCN Red List Category: Global: Not Listed. Regional: Not Listed.

10B. National Red Data Book:
Not Listed.

10C. Workshop Assessment of Regional Red List Category: Near Threatened.

10D. CITES: Not Listed.

10E. National Wildife Legislation:
Not Listed.

10F. Other Legislation (please specify):

10G. List existing Protected Areas within the Taxon's range:

Protected Area	Country	Size (km^2)

10H. Recommended Protected Areas for the Taxon:

Area	Country	Size (km^2)

10I. Are there any Regional Conservation/Protection Action Plans: ○ Yes ◉ No ○ Unknown

If Yes, please list them:

11. Supporting Research

11A. Is research recommended? ◉ Yes ○ No

If Yes, what type of research would you recommend?

☐ Surveys ☒ Genetics ☒ Taxonomic ☐ Life History ☐ Public Awareness
☐ Trade ☐ Monitoring ☐ Reintroduction ☒ Human Impact
☐ Other (please specify):

12. Management

12A. What management is recommended for the Taxon?

☒ Habitat management ☐ Wild population management ☐ Captive breeding
☐ Monitoring ☐ Translocation ☐ Sustainable Use
☐ Public Awareness ☐ Limiting Factor Management ☐ Genome Research Banking
☐ Law Enforcement ☐ Work in Local Communities ☐ Address Policy Makers
☐ Other (please specify):

13. Captive Breeding

13A. Is captive breeding recommended for the taxon: ○ Yes ◉ No

13B. If captive breeding is recommeded , is it for:

☐ Species recovery ☐ Reintroduction ☐ Research ☐ Husbandry

☐ Education ☐ Preserve live genome

13C. Do Captive stocks already exist? ○ Yes ◉ No ○ Unknown

If Yes, list the facilities:

Facility	Country	Males	Females	Unknown	Total

13D. Does a coordinated Species Management Plan exist? ○ Yes ◉ No ○ Unknown

If Yes, list the participating institutions:

If Not, is a Species Management Plan recommended: ○ Yes ◉ No

If Yes, list the institutions that should participate:

13E. Level of captive breeding recommended:

☒ Captive breeding program not neccessary ☐ Initiate program within 3 years

☐ Maintain existing program as it is ☐ Intensify existing program ☐ Decrease existing progam

13F. Are the techniques established for captive breeding?

☒ Techniques are known for this or similar taxon ☐ Some techniques are known for this or similar taxon

☐ Techniques not known for this or simialr taxon ☐ Unknown

14. Sources/References (complete citation):

Egan, D. 2007. Snakes of Arabia: A field guide to the Snakes of the Arabian Peninsula and its Shores. Motivate Publishing, Dubai.

Gasparetti, J. 1988. Snakes of Arabia. *Fauna of Saudi Arabia* 9: 169-405.

Werner, Y., Sivan, N., Kusher, V. & Motro, U. 1999. A statistical approach to variations in Cerastes (Ophidia: Viperidae) with the description of two endemic subspecies. In U. Joger. (ed.): Phylogeny and Systematics of the Viperidae. Kaupia (Darmstad) 8: 83-97.

15. Compilers

William Branch, Damien Egan, Tony Phelps, Declan O'Donovan, Gavin Nel, Saud A. Al Farraj, Pritpal Soorae, Ehad Eid, Haithem Al Aamri, Peter Arras, Neelofa Ali, Masaa Al Jumaily, Khaled Al Rasbi and Patrick Paillat

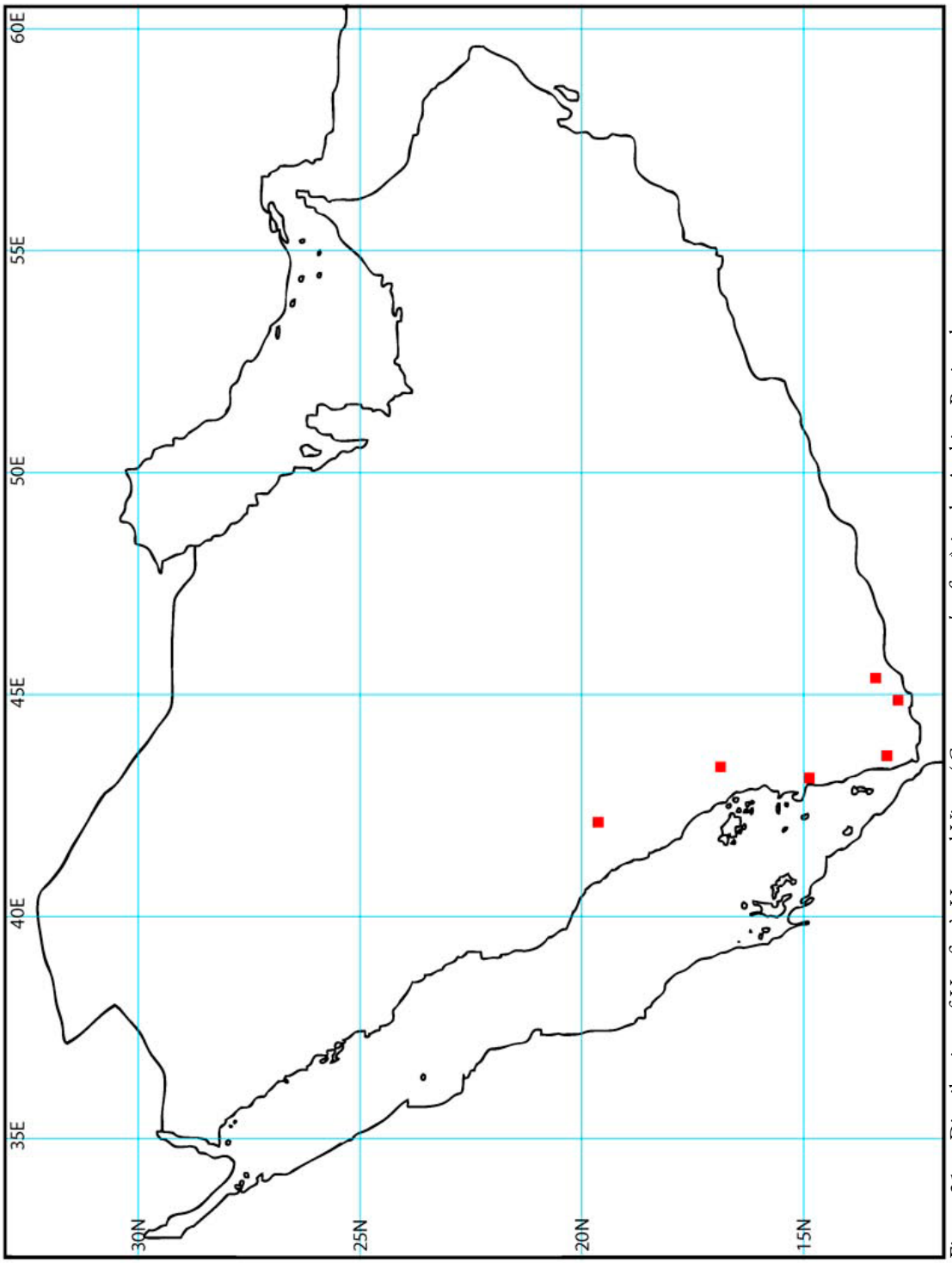

Figure 31. Distribution of Hoofien's Horned Viper (*Cerastes cerastes hoofieni*) in the Arabian Peninsula.

Conservation Workshop for the Fauna of Arabia
Taxon Data Sheet

Working Group: Snakes **Date:** 3-5 February 2008

1. Taxonomy

1A. Scientific Name (Genus, species & subspecies): *Cerastes gasperettii*

Authority: Leviton & Anderson Date: 1984

1B. Synonyms (with authority & date):

1C. Common Name(s) with language/region:
Arabian Horned Viper (English)

2. Distribution

2A. Historical Distribution (last 100 years):
Throughout the Arabian Peninsula where there is suitable habitat.

2B. Current Distribution (illustrate on map):
See 2A.

2C. Habitat of the taxon (ecosystem level):
Varied: Arabian desert and east Sahero-Arabian xeric woodlands, Red Sea Nubio-Sinian tropical desert and semi-desert. Southwestern Arabian foothill savannah and Gulf of Oman desert and semi-desert.

2D. Habitat specificity (elevation, etc.):
Generally loose sand conditions.

2E. Migration: ○ Yes ◉ No ○ Unknown

If Yes, describe:

3. Number of Populations & Subpopulations in which the Taxon is distributed: 1

Location of each:	Approx. Area Occupied:	Approx. No. of Individuals:
Throughout the Arabian Peninsula in suitable habitat.	50800 km^2	~

4. Population Trends

4A. Is the Population: ○ Increasing ○ Decreasing ○ Stable ◉ Unknown

4B. If declining, what has been the rate of decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has the population decline occured?

4C. If stable or unknown, do you predict a future decline in the population size? ○ Yes ◉ No

If Yes, please specify rate and factors e.g. habitat loss, trade, etc.:

5. Habitat Status

5A. Is the habitat distribution: ◉ Continuous ○ Fragmented ○ Unknown

5B. Is there any change in the range of the habitat where the Taxon occurs? ◉ Yes ○ No ○ Unknown

If Yes, is it: ◉ Decreasing in Area ○ Increasing in Area

5C. If decreasing what has been the decline? ◉ <20% ○ >20% ○ >50% ○ >80%

Over how many years has this decline occured? 10

5D. Do you predict a future decline in the habitiat? (•) Yes ( ) No

If Yes, what do you predict that decline will be? (•) <20% ( ) >20% ( ) >50% ( ) >80%

Over how many years do you predict the decline will occur? 10

5E. State the primary cause of this change:

Urban development.

5F. Is there any change in the quality of the habitat where the Taxon occurs? (•) Yes ( ) No ( ) Unknown

If Yes, is the habitat quality: (•) Declining ( ) Improving

5G. State the primary cause of this change:

Overgrazing, offroad driving, urban development and sprawl.

6. Threats

	Present	Future		Present	Future
Pollution	☐	☐	Disease	☐	☐
Urban Development	☒	☒	Hybridization	☐	☐
Road Kills	☐	☐	Decline in prey species	☐	☐
Damming	☐	☐	Loss of habitat	☒	☒
War	☐	☐	Genetic problems	☐	☐
Recreational activities	☐	☐	Grazing	☒	☒
Hunting (recreation or retail)	☐	☐	Habitat fragmentation	☐	☐
Harvest for medicine	☐	☐	Predation	☐	☐
Harvest for food/timber	☐	☐	Interspecific competition	☐	☐
Poisoning	☐	☐	Livestock competition (food, etc.)	☒	☒
Pesticides	☐	☐	Livestock conflicts (retaliation kills)	☐	☐
Persecution	☐	☐	Introduced species (non-livestock)	☐	☐
Trade of animals/parts	☐	☐	Nutritional disorders	☐	☐

Other (please specify):

6B. Would these threats result in (perceived or inferred) population decline? ( ) Yes (•) No ( ) Unknown

Comment:

7. Trade

7A. Is the Taxon in trade? (•) Yes ( ) No ( ) Unknown

If Yes, is it: ( ) Local ( ) Regional (•) International ( ) Commercial

7B. Parts in trade:

☐ Skin ☐ Fur ☐ Hair ☐ Horn ☐ Bones ☐ Glands

☐ Meat ☐ Products ☒ Live Animal ☐ Taxidermy ☐ Organs

Comments/Other threats (please specify):

8. Data Quality

8A. Are the estimates you have supplied based on:

☐ Census or monitoring ☐ General field studies ☒ Informal field studies ☒ Literature
☒ Hearsay/popular belief ☒ Museum studies/records ☒ Indirect information from trade, etc.

9. Studies (field) conducted over the last 10 years (indicate the year of study not the year of publication):

Researchers	Location	Year	Topic

10. Conservation Status

10A. IUCN Red List Category: Global: Not Listed. Regional: Not Listed.

10B. National Red Data Book:
Not Listed.

10C. Workshop Assessment of Regional Red List Category: Least Concern.

10D. CITES: Not Listed.

10E. National Wildife Legislation:
Not Listed.

10F. Other Legislation (please specify):

10G. List existing Protected Areas within the Taxon's range:

Protected Area	Country	Size (km^2)

10H. Recommended Protected Areas for the Taxon:

Area	Country	Size (km^2)

10I. Are there any Regional Conservation/Protection Action Plans: ○ Yes ◉ No ○ Unknown

If Yes, please list them:

11. Supporting Research

11A. Is research recommended? ○ Yes ○ No

If Yes, what type of research would you recommend?

☐ Surveys ☒ Genetics ☒ Taxonomic ☐ Life History ☐ Public Awareness
☐ Trade ☐ Monitoring ☐ Reintroduction ☐ Human Impact
☐ Other (please specify):

12. Management

12A. What management is recommended for the Taxon?

☐ Habitat management ☐ Wild population management ☒ Captive breeding
☐ Monitoring ☐ Translocation ☐ Sustainable Use
☐ Public Awareness ☐ Limiting Factor Management ☒ Genome Research Banking
☐ Law Enforcement ☐ Work in Local Communities ☐ Address Policy Makers
☐ Other (please specify):

13. Captive Breeding

13A. Is captive breeding recommended for the taxon: ◉ Yes ○ No

13B. If captive breeding is recommeded , is it for:

☐ Species recovery ☐ Reintroduction ☒ Research ☒ Husbandry

☒ Education ☐ Preserve live genome

13C. Do Captive stocks already exist? ◉ Yes ○ No ○ Unknown

If Yes, list the facilities:

Facility	Country	Males	Females	Unknown	Total
BCEAW	UAE	~	~	~	~

13D. Does a coordinated Species Management Plan exist? ○ Yes ◉ No ○ Unknown

If Yes, list the participating institutions:

If Not, is a Species Management Plan recommended: ○ Yes ◉ No

If Yes, list the institutions that should participate:

13E. Level of captive breeding recommended:

☐ Captive breeding program not neccessary ☐ Initiate program within 3 years

☒ Maintain existing program as it is ☐ Intensify existing program ☐ Decrease existing progam

13F. Are the techniques established for captive breeding?

☒ Techniques are known for this or similar taxon ☐ Some techniques are known for this or similar taxon

☐ Techniques not known for this or simialr taxon ☐ Unknown

14. Sources/References (complete citation):

Egan, D. 2007. Snakes of Arabia: A field guide to the Snakes of the Arabian Peninsula and its Shores. Motivate Publishing, Dubai.

Gasparetti, J. 1988. Snakes of Arabia. *Fauna of Saudi Arabia* 9: 169-405.

Schätte, B. and Desvoignes, A. 1999. The Herpetofauna of southern Yemen and Sokotra Archipelago. Museum d'Historie Naturelle. Geneve.

Schätte, B. and Gasparetti, J.A. 1994. Contribution to the herpetofauna of Southwest Arabia. *Fauna of Saudi Arabia* 14: 348-432.

Scortecci, G. 1932. Rettili dello Yemen. Atti della Societá Italiana di Scienze Naturali e del Museo Civico di Storia Naturale, Milano 71: 39-49.

Van der Kooji, J. 2001. The herpetofauna of the Sultanate of Oman. Part 4: Terrestrial Snakes. Podarcus 2 (2): 54-64.

Werner, Y.L. 1991. Notable herpetofaunal records from Transjordan. *Zoology in the Middle East* 5: 37-41.

Werner, Y., Sivan, N., Kusher, V. & Motro, U. 1999. A statistical approach to variations in Cerastes (Ophidia: Viperidae) with the description of two endemic subspecies. In U. Joger. (ed.): Phylogeny and Systematics of the Viperidae. Kaupia (Darmstad) 8: 83-97.

15. Compilers

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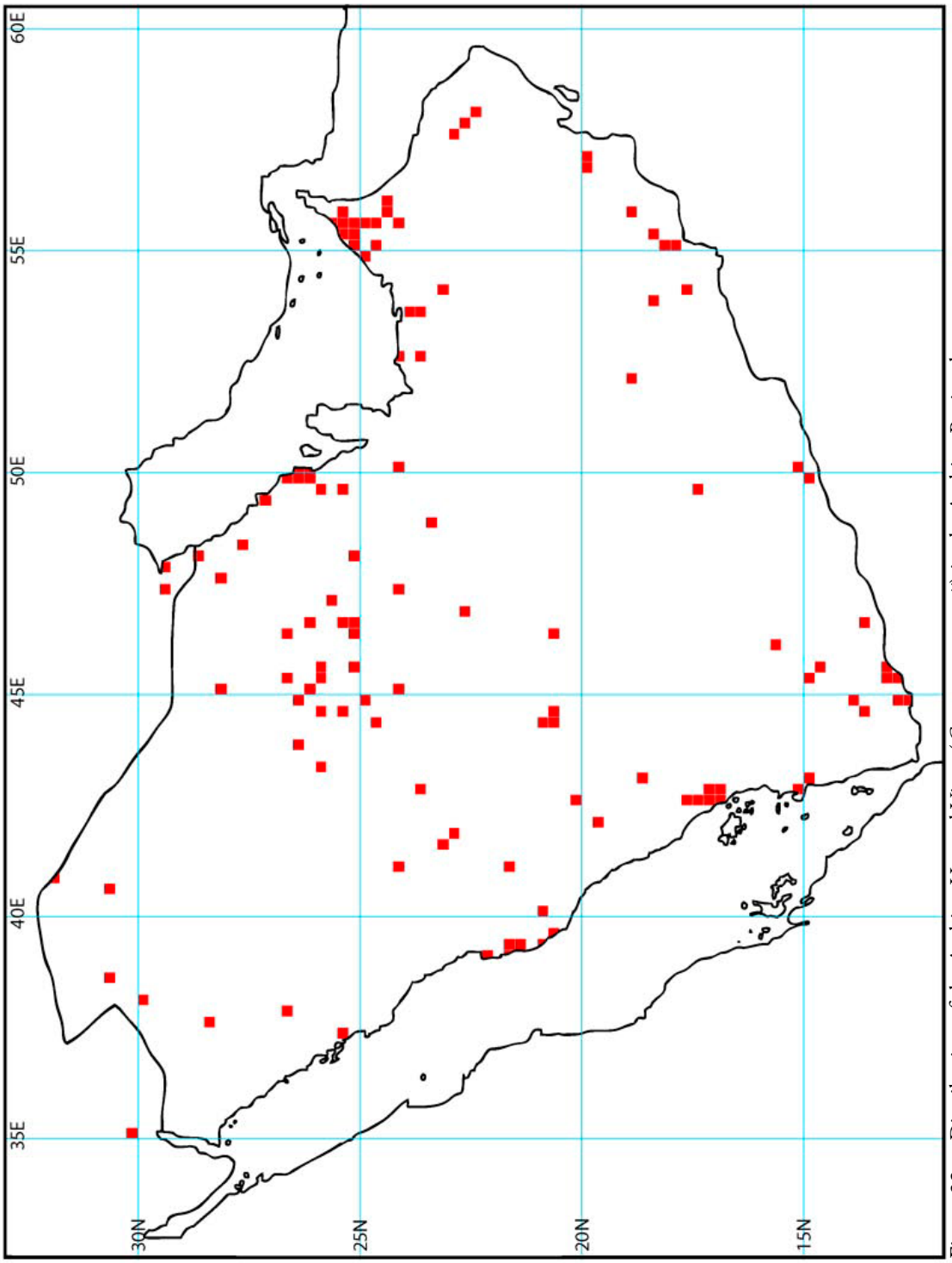

Figure 32. Distribution of the Arabian Horned Viper (*Cerastes gasperettii*) in the Arabian Peninsula.

Conservation Workshop for the Fauna of Arabia
Taxon Data Sheet

Working Group: Snakes Date: 3-5 February 2008

1. Taxonomy

1A. Scientific Name (Genus, species & subspecies): *Echis pyramidum*

Authority: (Geofry, St Hillaire) Date: 1827

1B. Synonyms (with authority & date):

1C. Common Name(s) with language/region:
Northeast African Carpet Viper

2. Distribution

2A. Historical Distribution (last 100 years):
From NE Africa to Sinai. In Arabia, eastern Saudi Arabia to South Yemen

2B. Current Distribution (illustrate on map):
See 2A

2C. Habitat of the taxon (ecosystem level):
Varied: Southwestern Arabian foothills savannah: may extend further east into Hadramaut

2D. Habitat specificity (elevation, etc.):
Non-specific habitat requirements

2E. Migration: ○ Yes ◉ No ○ Unknown

If Yes, describe:

3. Number of Populations & Subpopulations in which the Taxon is distributed:

Location of each:	Approx. Area Occupied:	Approx. No. of Individuals:
Eastern watershed of Saudi Arabia and Yemen to South Yemen and possibly Hadrmaut	9200 km2	

4. Population Trends

4A. Is the Population: ○ Increasing ○ Decreasing ○ Stable ◉ Unknown

4B. If declining, what has been the rate of decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has the population decline occured?

4C. If stable or unknown, do you predict a future decline in the population size? ○ Yes ◉ No

If Yes, please specify rate and factors e.g. habitat loss, trade, etc.:

5. Habitat Status

5A. Is the habitat distribution: ○ Continuous ○ Fragmented ◉ Unknown

5B. Is there any change in the range of the habitat where the Taxon occurs? ○ Yes ○ No ◉ Unknown
If Yes, is it: ○ Decreasing in Area ○ Increasing in Area

5C. If decreasing what has been the decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has this decline occured?

5D. Do you predict a future decline in the habitiat? (•) Yes ( ) No

If Yes, what do you predict that decline will be? (•) <20% ( ) >20% ( ) >50% ( ) >80%

Over how many years do you predict the decline will occur? 10

5E. State the primary cause of this change:

General urbanization

5F. Is there any change in the quality of the habitat where the Taxon occurs? ( ) Yes ( ) No (•) Unknown

If Yes, is the habitat quality: ( ) Declining ( ) Improving

5G. State the primary cause of this change:

6. Threats

	Present	Future		Present	Future
Pollution	☐	☐	Disease	☐	☐
Urban Development	☒	☒	Hybridization	☐	☐
Road Kills	☐	☐	Decline in prey species	☐	☐
Damming	☐	☐	Loss of habitat	☒	☒
War	☐	☐	Genetic problems	☐	☐
Recreational activities	☐	☐	Grazing	☐	☐
Hunting (recreation or retail)	☐	☐	Habitat fragmentation	☒	☒
Harvest for medicine	☐	☐	Predation	☐	☐
Harvest for food/timber	☐	☐	Interspecific competition	☐	☐
Poisoning	☐	☐	Livestock competition (food, etc.)	☐	☐
Pesticides	☐	☐	Livestock conflicts (retaliation kills)	☐	☐
Persecution	☐	☐	Introduced species (non-livestock)	☐	☐
Trade of animals/parts	☐	☐	Nutritional disorders	☐	☐

Other (please specify):

6B. Would these threats result in (perceived or inferred) population decline? ( ) Yes (•) No ( ) Unknown

Comment:

7. Trade

7A. Is the Taxon in trade? (•) Yes ( ) No ( ) Unknown

If Yes, is it: ( ) Local ( ) Regional (•) International ( ) Commercial

7B. Parts in trade:

☐ Skin ☐ Fur ☐ Hair ☐ Horn ☐ Bones ☐ Glands

☐ Meat ☐ Products ☒ Live Animal ☐ Taxidermy ☐ Organs

Comments/Other threats (please specify):

8. Data Quality

8A. Are the estimates you have supplied based on:

☐ Census or monitoring ☐ General field studies ☒ Informal field studies ☐ Literature
☒ Hearsay/popular belief ☒ Museum studies/records ☒ Indirect information from trade, etc.

9. Studies (field) conducted over the last 10 years (indicate the year of study not the year of publication):

Researchers	Location	Year	Topic

10. Conservation Status

10A. IUCN Red List Category: Global: Not listed Regional: Not listed

10B. National Red Data Book:
Not listed

10C. Workshop Assessment of Regional Red List Category: Least concern

10D. CITES: Not listed

10E. National Wildife Legislation:
Not listed

10F. Other Legislation (please specify):

10G. List existing Protected Areas within the Taxon's range:

Protected Area	Country	Size (km^2)

10H. Recommended Protected Areas for the Taxon:

Area	Country	Size (km^2)

10I. Are there any Regional Conservation/Protection Action Plans: ○ Yes ◉ No ○ Unknown

If Yes, please list them:

11. Supporting Research

11A. Is research recommended? ◉ Yes ○ No

If Yes, what type of research would you recommend?

☒ Surveys ☒ Genetics ☒ Taxonomic ☐ Life History ☐ Public Awareness
☐ Trade ☐ Monitoring ☐ Reintroduction ☐ Human Impact
☐ Other (please specify):

12. Management

12A. What management is recommended for the Taxon?

☐ Habitat management ☐ Wild population management ☐ Captive breeding
☐ Monitoring ☐ Translocation ☐ Sustainable Use
☐ Public Awareness ☐ Limiting Factor Management ☒ Genome Research Banking
☐ Law Enforcement ☐ Work in Local Communities ☐ Address Policy Makers
☐ Other (please specify):

13. Captive Breeding

13A. Is captive breeding recommended for the taxon: ○ Yes ◉ No

13B. If captive breeding is recommeded , is it for:

☐ Species recovery ☐ Reintroduction ☐ Research ☐ Husbandry

☐ Education ☐ Preserve live genome

13C. Do Captive stocks already exist? ○ Yes ○ No ○ Unknown

If Yes, list the facilities:

Facility	Country	Males	Females	Unknown	Total

13D. Does a coordinated Species Management Plan exist? ○ Yes ◉ No ○ Unknown

If Yes, list the participating institutions:

If Not, is a Species Management Plan recommended: ○ Yes ◉ No

If Yes, list the institutions that should participate:

13E. Level of captive breeding recommended:

☐ Captive breeding program not neccessary ☐ Initiate program within 3 years

☐ Maintain existing program as it is ☐ Intensify existing program ☐ Decrease existing progam

13F. Are the techniques established for captive breeding?

☒ Techniques are known for this or similar taxon ☐ Some techniques are known for this or similar taxon

☐ Techniques not known for this or simialr taxon ☐ Unknown

14. Sources/References (complete citation):

Egan, D. 2007. Snakes of Arabia. A field guide to the Snakes of the Arabian Peninsula and its Shores. Motivate Publishing.

Gasperetti, J. 1988. Snakes of Arabia. Fauna of Saudi Arabia 9:169-450

Schatte, B & Desvolgnes, A. 1999. The herpetofauna fo southern Yemen and the Soqotra archipelago. Museum d'Histoire Naturelle, Geneve.

Schatte, B & Gasparetti, J.A. Contribution to the herpetofauna of Southwestern Arabia. Fauna of Saudi Africa. Vol.14

Scortecci, G. 1932. Rettill dello Yemen. Atti della. Societa Italiana di Scienze Naturali e del Musea Civico Storia Naturale di Milano 71:39-49.

Van der Kooij, J. 2001. The Herpetofauna of the Sultinate of Oman. Part 4: Terrestrial Snakes. Podarcus

Werner, Y.L. 1991. Notable Herpetofauanal Records from TransJordan. Zoology in the Middle East. Vo.5:37-41

15. Compilers

William Branch, Damien Egan, Tony Phelps, Declan O'Donovan, Gavin Nel, Saud A. Al Farraj, Pritpal Soorae, Ehad Eid, Haithem Al Aamri, Peter Arras, Neelofa Ali, Masaa Al Jumaily, Khaled Al Rasbi and Patrick Paillat

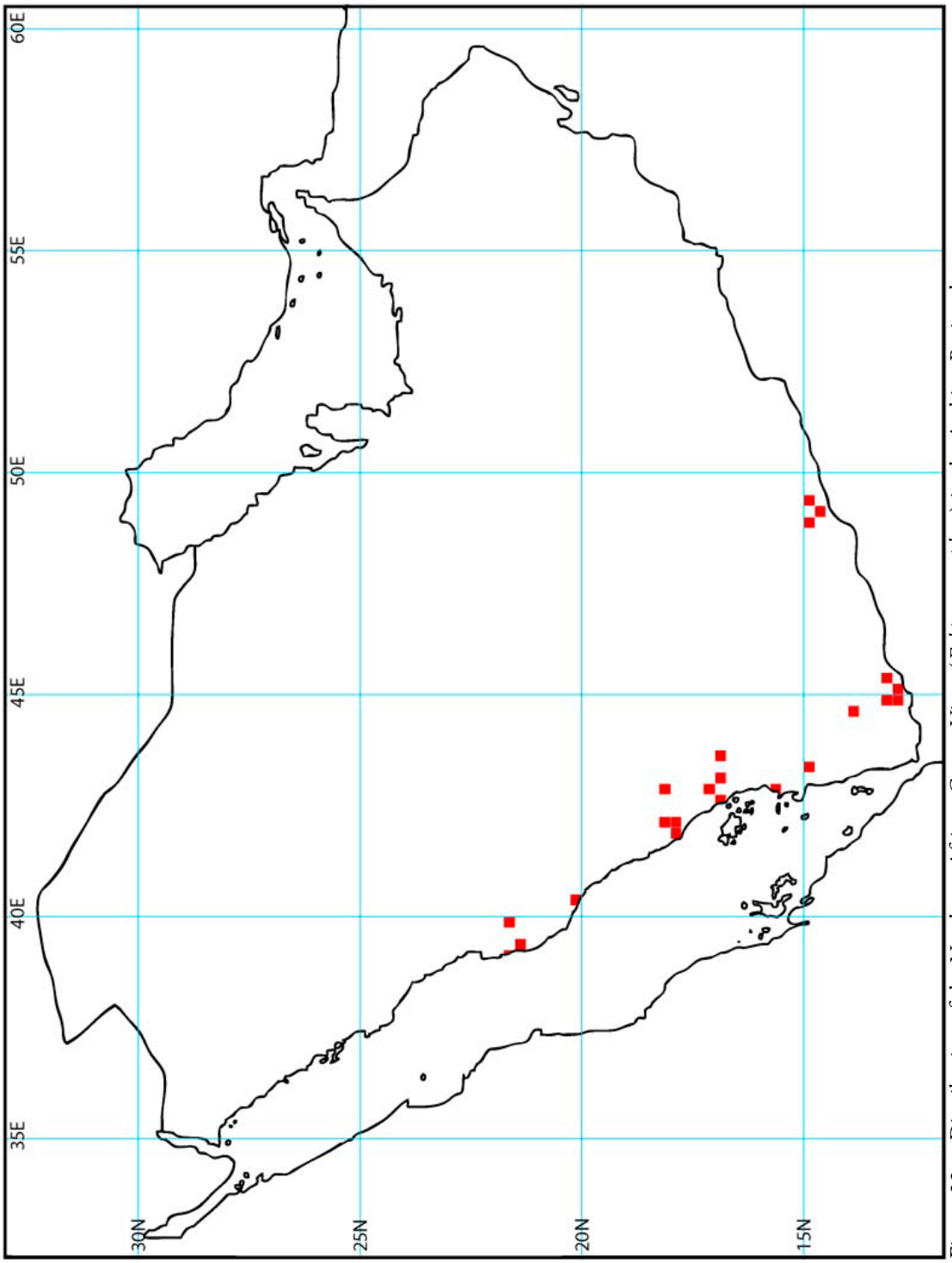

Figure 33. Distribution of the Northeast African Carpet Viper (*Echis pyramidum*) in the Arabian Peninsula.

Conservation Workshop for the Fauna of Arabia
Taxon Data Sheet

Working Group: Snakes **Date:** 3-5 February 2008

1. Taxonomy

1A. Scientific Name (Genus, species & subspecies): *Echis khosatzkii*

Authority: Cherlin Date: 1990

1B. Synonyms (with authority & date):

1C. Common Name(s) with language/region:
Khosatzki's saw scale viper

2. Distribution

2A. Historical Distribution (last 100 years):
Dhofar, Oman and possible adjacent SW Yemen

2B. Current Distribution (illustrate on map):
See 2A.

2C. Habitat of the taxon (ecosystem level):
Varied: Red Sea Nubio-Sinian tropical desert and semi-desert: South western Arabian foothills savannah: Arabian Peninsula coastal fog desert

2D. Habitat specificity (elevation, etc.):
Apparently non-specific habitat requirements

2E. Migration: ○ Yes ◉ No ○ Unknown

If Yes, describe:

3. Number of Populations & Subpopulations in which the Taxon is distributed:

Location of each:	Approx. Area Occupied:	Approx. No. of Individuals:
Dhofar	525 km2	

4. Population Trends

4A. Is the Population: ○ Increasing ○ Decreasing ○ Stable ◉ Unknown

4B. If declining, what has been the rate of decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has the population decline occured?

4C. If stable or unknown, do you predict a future decline in the population size? ○ Yes ◉ No

If Yes, please specify rate and factors e.g. habitat loss, trade, etc.:

5. Habitat Status

5A. Is the habitat distribution: ◉ Continuous ○ Fragmented ○ Unknown

5B. Is there any change in the range of the habitat where the Taxon occurs? ◉ Yes ○ No ○ Unknown

If Yes, is it: ◉ Decreasing in Area ○ Increasing in Area

5C. If decreasing what has been the decline? ◉ <20% ○ >20% ○ >50% ○ >80%

Over how many years has this decline occured? 5

5D. Do you predict a future decline in the habitiat? (•) Yes ( ) No

If Yes, what do you predict that decline will be? ( ) <20% (•) >20% ( ) >50% ( ) >80%

Over how many years do you predict the decline will occur? 10

5E. State the primary cause of this change:
Development of coastal plains in Dhofar

5F. Is there any change in the quality of the habitat where the Taxon occurs? (•) Yes ( ) No ( ) Unknown

If Yes, is the habitat quality: (•) Declining ( ) Improving

5G. State the primary cause of this change:
Urban development

6. Threats

	Present	Future		Present	Future
Pollution	☐	☐	Disease	☐	☐
Urban Development	☒	☒	Hybridization	☐	☐
Road Kills	☐	☐	Decline in prey species	☐	☐
Damming	☐	☐	Loss of habitat	☒	☒
War	☐	☐	Genetic problems	☐	☐
Recreational activities	☐	☐	Grazing	☐	☐
Hunting (recreation or retail)	☐	☐	Habitat fragmentation	☒	☒
Harvest for medicine	☐	☐	Predation	☐	☐
Harvest for food/timber	☐	☐	Interspecific competition	☐	☐
Poisoning	☐	☐	Livestock competition (food, etc.)	☐	☐
Pesticides	☐	☐	Livestock conflicts (retaliation kills)	☐	☐
Persecution	☐	☐	Introduced species (non-livestock)	☐	☐
Trade of animals/parts	☐	☐	Nutritional disorders	☐	☐

Other (please specify):

6B. Would these threats result in (perceived or inferred) population decline? ( ) Yes ( ) No (•) Unknown

Comment:
Status pending further distribution investigation

7. Trade

7A. Is the Taxon in trade? ( ) Yes (•) No ( ) Unknown

If Yes, is it: ( ) Local ( ) Regional ( ) International ( ) Commercial

7B. Parts in trade:

☐ Skin ☐ Fur ☐ Hair ☐ Horn ☐ Bones ☐ Glands
☐ Meat ☐ Products ☐ Live Animal ☐ Taxidermy ☐ Organs

Comments/Other threats (please specify):

8. Data Quality

8A. Are the estimates you have supplied based on:

☐ Census or monitoring ☒ General field studies ☒ Informal field studies ☒ Literature
☒ Hearsay/popular belief ☐ Museum studies/records ☐ Indirect information from trade, etc.

9. Studies (field) conducted over the last 10 years (indicate the year of study not the year of publication):

Researchers	Location	Year	Topic
Wuster, W; Pook, C. (Pers.com)	Dhofar	2007	Arabian viperidae

10. Conservation Status

10A. IUCN Red List Category: Global: Not listed Regional: Not listed

10B. National Red Data Book:
Not listed

10C. Workshop Assessment of Regional Red List Category: Near Threatened

10D. CITES: Not listed

10E. National Wildife Legislation:
Not listed

10F. Other Legislation (please specify):

10G. List existing Protected Areas within the Taxon's range:

Protected Area	Country	Size (km^2)
Possibly Jebel Samhan	Oman	

10H. Recommended Protected Areas for the Taxon:

Area	Country	Size (km^2)

10I. Are there any Regional Conservation/Protection Action Plans: ○ Yes ◉ No ○ Unknown

If Yes, please list them:

11. Supporting Research

11A. Is research recommended? ◉ Yes ○ No

If Yes, what type of research would you recommend?

☒ Surveys ☒ Genetics ☒ Taxonomic ☒ Life History ☐ Public Awareness
☐ Trade ☐ Monitoring ☐ Reintroduction ☒ Human Impact
☐ Other (please specify):

12. Management

12A. What management is recommended for the Taxon?

☒ Habitat management ☐ Wild population management ☒ Captive breeding
☐ Monitoring ☐ Translocation ☐ Sustainable Use
☐ Public Awareness ☒ Limiting Factor Management ☒ Genome Research Banking
☐ Law Enforcement ☐ Work in Local Communities ☐ Address Policy Makers
☐ Other (please specify):

13. Captive Breeding

13A. Is captive breeding recommended for the taxon: ◉ Yes ○ No

13B. If captive breeding is recommeded , is it for:

☐ Species recovery ☐ Reintroduction ☒ Research ☒ Husbandry

☒ Education ☒ Preserve live genome

13C. Do Captive stocks already exist? ○ Yes ◉ No ○ Unknown

If Yes, list the facilities:

Facility	Country	Males	Females	Unknown	Total

13D. Does a coordinated Species Management Plan exist? ○ Yes ◉ No ○ Unknown

If Yes, list the participating institutions:

If Not, is a Species Management Plan recommended: ○ Yes ◉ No

If Yes, list the institutions that should participate:

13E. Level of captive breeding recommended:

☐ Captive breeding program not neccessary ☒ Initiate program within 3 years

☐ Maintain existing program as it is ☐ Intensify existing program ☐ Decrease existing progam

13F. Are the techniques established for captive breeding?

☒ Techniques are known for this or similar taxon ☐ Some techniques are known for this or similar taxon

☐ Techniques not known for this or simialr taxon ☐ Unknown

14. Sources/References (complete citation):

Egan, D. 2007. Snakes of Arabia. *A field guide to the Snakes of the Arabian Peninsula and its Shores*. Motivate Publishing.

Gasperetti, J. 1988. Snakes of Arabia. *Fauna of Saudi Arabia* 9: 169-450

Schatte, B & Desvolgnes, A. 1999. *The Herpetofauna of southern Yemen and the Soqotra archipelago*. Museum d'Histoire Naturelle, Geneve.

Schatte, B & Gasperetti, J.A. *Contribution to the herpetofauna of Southwestern Arabia*. Fauna of Saudi Arabia Vol. 14.

Scartecci, G. 1932. Rettili dello Yemen. *Atti della. Societa Italiana di Scienze Naturalle del Museo Civico Storia Naturale di Milario* 71: 39-49.

Van der Kooij, J. 2001. *The Herpetofauna of the Sultinate of Oman*. Part 4: Terrestrial Snakes: Podarcus.

Werner, Y.L. 1991. Notable Herpetofauna Records from TransJordan. *Zoology in the Middle East*. Vol.5: 37-42

15. Compilers

William Branch, Damien Egan, Tony Phelps, Declan O'Donovan, Gavin Nel, Saud A. Al Farraj, Pritpal Soorae, Ehad Eid, Haithem Al Aamri, Peter Arras, Neelofa Ali, Masaa Al Jumaily, Khaled Al Rasbi and Patrick Paillat

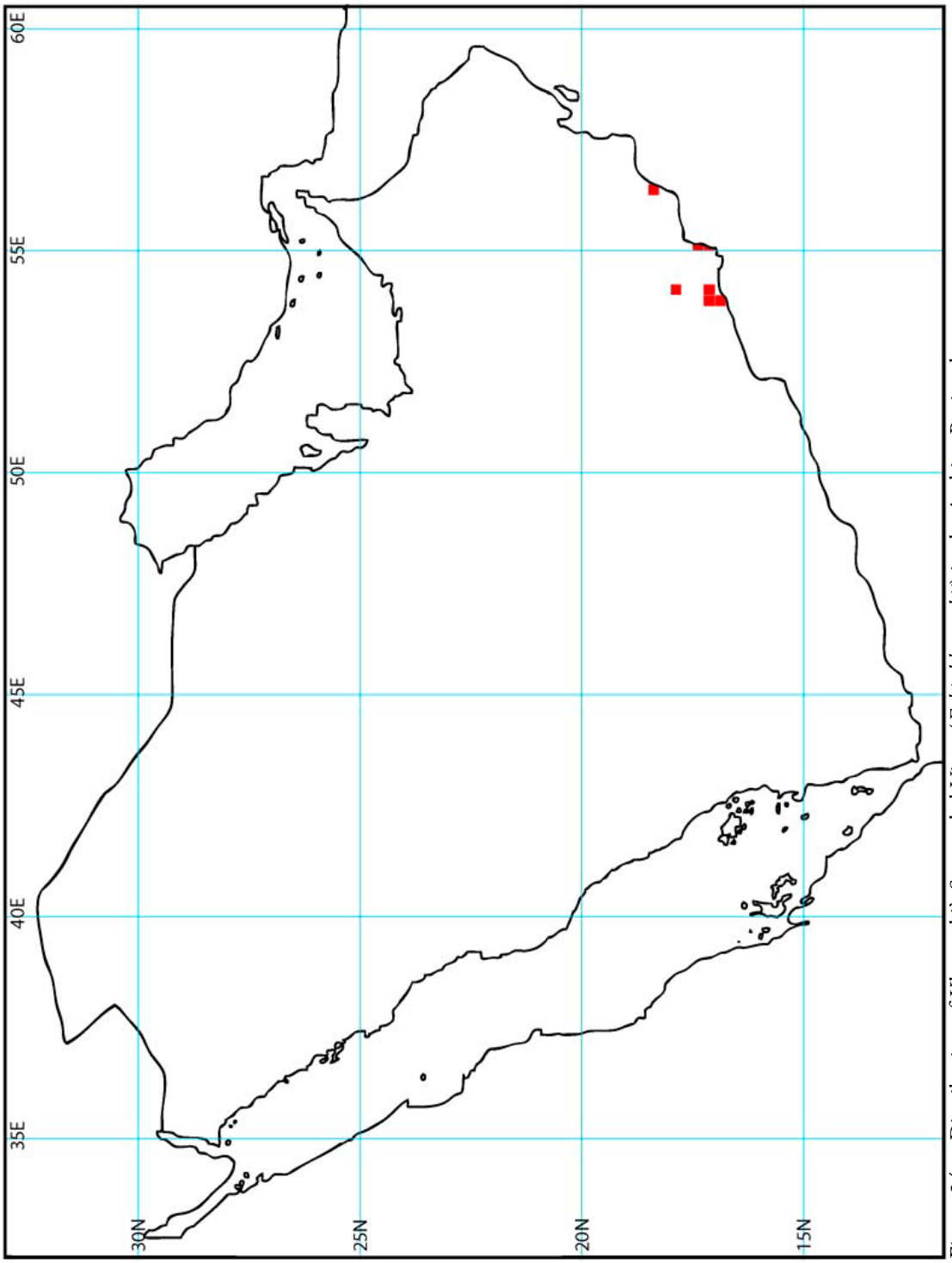

Figure 34. Distribution of Khosatzki's Saw-scaled Viper (*Echis khosatzkii*) in the Arabian Peninsula.

Conservation Workshop for the Fauna of Arabia
Taxon Data Sheet

Working Group: Snakes **Date:** 3-5 February 2008

1. Taxonomy

1A. Scientific Name (Genus, species & subspecies): *Echis coloratus coloratus*

Authority: Gunther Date: 1878

1B. Synonyms (with authority & date):

1C. Common Name(s) with language/region:
Burton's carpet viper, Painted carpet viper (English)

2. Distribution

2A. Historical Distribution (last 100 years):
NE Africa to Sinai. Western Saudi Arabia to Southern Yemen. One population in Northern Dhofar, Oman.

2B. Current Distribution (illustrate on map):
See 2A.

2C. Habitat of the taxon (ecosystem level):
Varied: Arabian Desert and east Sahero-Arabian xeric woodlands. Red Sea Nubio-Sinian tropical desert and semi-desert: South western Arabian foothills savannah

2D. Habitat specificity (elevation, etc.):
Non-specific habitat requirements. Generally associated with rocky situations.

2E. Migration: ○ Yes ◉ No ○ Unknown

If Yes, describe:

3. Number of Populations & Subpopulations in which the Taxon is distributed:

Location of each:	Approx. Area Occupied:	Approx. No. of Individuals:
Western Saudi Arabia to Southern Yemen	24 375 km2	
Dhofar	25 km2	

4. Population Trends

4A. Is the Population: ○ Increasing ○ Decreasing ○ Stable ◉ Unknown

4B. If declining, what has been the rate of decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has the population decline occured?

4C. If stable or unknown, do you predict a future decline in the population size? ◉ Yes ○ No

If Yes, please specify rate and factors e.g. habitat loss, trade, etc.:
(Dhofar population)

5. Habitat Status

5A. Is the habitat distribution: ◉ Continuous ○ Fragmented ○ Unknown

5B. Is there any change in the range of the habitat where the Taxon occurs? ◉ Yes ○ No ○ Unknown

If Yes, is it: ◉ Decreasing in Area ○ Increasing in Area

5C. If decreasing what has been the decline? ◉ <20% ○ >20% ○ >50% ○ >80%

Over how many years has this decline occured?

5D. Do you predict a future decline in the habitiat? ◉ Yes ○ No

If Yes, what do you predict that decline will be? ◉ <20% ○ >20% ○ >50% ○ >80%

Over how many years do you predict the decline will occur? 10

5E. State the primary cause of this change:

Urban development

5F. Is there any change in the quality of the habitat where the Taxon occurs? ◉ Yes ○ No ○ Unknown

If Yes, is the habitat quality: ◉ Declining ○ Improving

5G. State the primary cause of this change:

Urban development

6. Threats

	Present	Future		Present	Future
Pollution	☐	☐	Disease	☐	☐
Urban Development	☒	☒	Hybridization	☐	☐
Road Kills	☐	☐	Decline in prey species	☐	☐
Damming	☐	☐	Loss of habitat	☒	☒
War	☐	☐	Genetic problems	☐	☐
Recreational activities	☐	☐	Grazing	☐	☐
Hunting (recreation or retail)	☐	☐	Habitat fragmentation	☒	☒
Harvest for medicine	☐	☐	Predation	☐	☐
Harvest for food/timber	☐	☐	Interspecific competition	☐	☐
Poisoning	☐	☐	Livestock competition (food, etc.)	☐	☐
Pesticides	☐	☐	Livestock conflicts (retaliation kills)	☐	☐
Persecution	☐	☐	Introduced species (non-livestock)	☐	☐
Trade of animals/parts	☐	☐	Nutritional disorders	☐	☐

Other (please specify):

6B. Would these threats result in (perceived or inferred) population decline? ○ Yes ○ No ◉ Unknown

Comment:

Dhofar population at possible risk from development due to isolated small population

7. Trade

7A. Is the Taxon in trade? ◉ Yes ○ No ○ Unknown

If Yes, is it: ○ Local ○ Regional ◉ International ○ Commercial

7B. Parts in trade:

☐ Skin ☐ Fur ☐ Hair ☐ Horn ☐ Bones ☐ Glands

☐ Meat ☐ Products ☒ Live Animal ☐ Taxidermy ☐ Organs

Comments/Other threats (please specify):

8. Data Quality

8A. Are the estimates you have supplied based on:

☐ Census or monitoring ☒ General field studies ☒ Informal field studies ☒ Literature
☐ Hearsay/popular belief ☒ Museum studies/records ☒ Indirect information from trade, etc.

9. Studies (field) conducted over the last 10 years (indicate the year of study not the year of publication):

Researchers	Location	Year	Topic
Wuster, W; Pook, C.	Dhofar	2007	Viperidae- Arabia (Pers.com)

10. Conservation Status

10A. IUCN Red List Category: Global: Not listed Regional: Not listed

10B. National Red Data Book:
Not listed

10C. Workshop Assessment of Regional Red List Category: Least concern

10D. CITES: Not listed

10E. National Wildife Legislation:
Not listed

10F. Other Legislation (please specify):
Not listed

10G. List existing Protected Areas within the Taxon's range:

Protected Area	Country	Size (km^2)

10H. Recommended Protected Areas for the Taxon:

Area	Country	Size (km^2)

10I. Are there any Regional Conservation/Protection Action Plans: ○ Yes ◉ No ○ Unknown

If Yes, please list them:

11. Supporting Research

11A. Is research recommended? ◉ Yes ○ No

If Yes, what type of research would you recommend?

☐ Surveys ☒ Genetics ☒ Taxonomic ☐ Life History ☐ Public Awareness
☐ Trade ☐ Monitoring ☐ Reintroduction ☒ Human Impact
☐ Other (please specify):

12. Management

12A. What management is recommended for the Taxon?

☐ Habitat management ☐ Wild population management ☒ Captive breeding
☐ Monitoring ☐ Translocation ☐ Sustainable Use
☐ Public Awareness ☒ Limiting Factor Management ☒ Genome Research Banking
☐ Law Enforcement ☐ Work in Local Communities ☐ Address Policy Makers
☐ Other (please specify):

13. Captive Breeding

13A. Is captive breeding recommended for the taxon: ○ Yes ○ No

13B. If captive breeding is recommeded , is it for:

☐ Species recovery ☐ Reintroduction ☒ Research ☒ Husbandry

☒ Education ☒ Preserve live genome

13C. Do Captive stocks already exist? ○ Yes ◉ No ○ Unknown

If Yes, list the facilities:

Facility	Country	Males	Females	Unknown	Total

13D. Does a coordinated Species Management Plan exist? ○ Yes ◉ No ○ Unknown

If Yes, list the participating institutions:

If Not, is a Species Management Plan recommended: ○ Yes ◉ No

If Yes, list the institutions that should participate:

13E. Level of captive breeding recommended:

☐ Captive breeding program not neccessary ☒ Initiate program within 3 years

☐ Maintain existing program as it is ☐ Intensify existing program ☐ Decrease existing progam

13F. Are the techniques established for captive breeding?

☒ Techniques are known for this or similar taxon ☐ Some techniques are known for this or similar taxon

☐ Techniques not known for this or simialr taxon ☐ Unknown

14. Sources/References (complete citation):

Babocsay, G. 2001. Sexual differences in geographic variation of some morphological characters in *Echis coloratus* (Viperidae, Ophidia. Pp. 39-42. In Lymberakis: P.E, Valakos; P.Pafilis & M. Mylonas (eds.) *Herpetologia Candiana*. S.E.H. Irakleio.

Babocsay, G. 2003. Geographic variation in Echis coloratus (Viperidae, Ophidia) in the Levant with the description of a new subspecies. *Zoology of the Middle East*, 29: 13-32.

Babocsay, G. 2004. A new species of saw-scaled viper of the Echis coloratus complex (Ophidia: Viperidae) from Oman,

Eastern Arabia. *Systematics and Biodiversity* 1 (4): 503-514

Gasperetti, J. 1988. Snakes of Arabia. *Fauna of Saudi Arabia* 9: 169-450.

15. Compilers

William Branch, Damien Egan, Tony Phelps, Declan O'Donovan, Gavin Nel, Saud A. Al Farraj, Pritpal Soorae, Ehad Eid, Haithem Al Aamri, Peter Arras, Neelofa Ali, Masaa Al Jumaily, Khaled Al Rasbi and Patrick Paillat

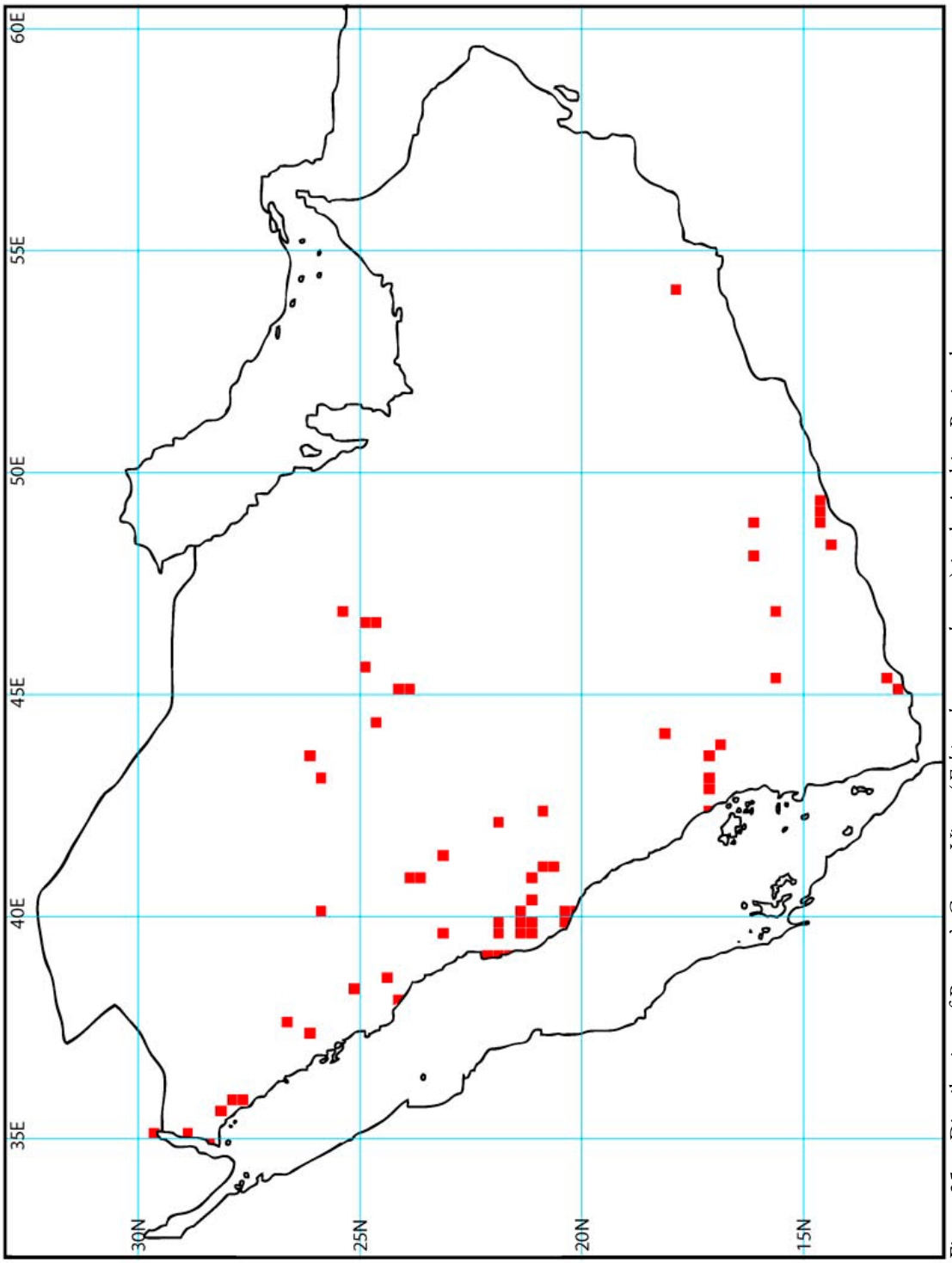

Figure 35. Distribution of Burton's Carpet Viper (*Echis coloratus coloratus*) in the Arabian Peninsula.

Conservation Workshop for the Fauna of Arabia
Taxon Data Sheet

Working Group: Snakes **Date:** 3-5 February 2008

1. Taxonomy

1A. Scientific Name (Genus, species & subspecies): *Echis omanensis*

Authority: Babocsay Date: 2004

1B. Synonyms (with authority & date):

1C. Common Name(s) with language/region:
Oman carpet viper, Oman saw scaled viper (English)

2. Distribution

2A. Historical Distribution (last 100 years):
Hajar moutains, UAE and Oman

2B. Current Distribution (illustrate on map):
See 2A

2C. Habitat of the taxon (ecosystem level):
Gulf of Oman desert and semi-desert

2D. Habitat specificity (elevation, etc.):
All altitudes within range- Rocky wadis and slopes

2E. Migration: ○ Yes ◉ No ○ Unknown

If Yes, describe:

3. Number of Populations & Subpopulations in which the Taxon is distributed:

Location of each:	Approx. Area Occupied:	Approx. No. of Individuals:
Musandam to Ras Al Djins	875km2	

4. Population Trends

4A. Is the Population: ○ Increasing ○ Decreasing ○ Stable ◉ Unknown

4B. If declining, what has been the rate of decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has the population decline occured?

4C. If stable or unknown, do you predict a future decline in the population size? ◉ Yes ○ No

If Yes, please specify rate and factors e.g. habitat loss, trade, etc.:

5. Habitat Status

5A. Is the habitat distribution: ◉ Continuous ○ Fragmented ○ Unknown

5B. Is there any change in the range of the habitat where the Taxon occurs? ◉ Yes ○ No ○ Unknown

If Yes, is it: ◉ Decreasing in Area ○ Increasing in Area

5C. If decreasing what has been the decline? ◉ <20% ○ >20% ○ >50% ○ >80%

Over how many years has this decline occured? 10

5D. Do you predict a future decline in the habitiat? (•) Yes ( ) No

If Yes, what do you predict that decline will be? ( ) <20% (•) >20% ( ) >50% ( ) >80%

Over how many years do you predict the decline will occur? 10

5E. State the primary cause of this change:
Quarrying, recreational activity

5F. Is there any change in the quality of the habitat where the Taxon occurs? (•) Yes ( ) No ( ) Unknown

If Yes, is the habitat quality: (•) Declining ( ) Improving

5G. State the primary cause of this change:
Quarrying, recreational activity

6. Threats

	Present	Future		Present	Future
Pollution	☐	☐	Disease	☐	☐
Urban Development	☒	☒	Hybridization	☐	☐
Road Kills	☐	☐	Decline in prey species	☐	☐
Damming	☐	☐	Loss of habitat	☒	☒
War	☐	☐	Genetic problems	☐	☐
Recreational activities	☒	☒	Grazing	☐	☐
Hunting (recreation or retail)	☐	☐	Habitat fragmentation	☒	☒
Harvest for medicine	☐	☐	Predation	☐	☐
Harvest for food/timber	☐	☐	Interspecific competition	☐	☐
Poisoning	☐	☐	Livestock competition (food, etc.)	☐	☐
Pesticides	☐	☐	Livestock conflicts (retaliation kills)	☐	☐
Persecution	☒	☒	Introduced species (non-livestock)	☐	☐
Trade of animals/parts	☐	☐	Nutritional disorders	☐	☐

Other (please specify):

6B. Would these threats result in (perceived or inferred) population decline? ( ) Yes ( ) No (•) Unknown

Comment:

7. Trade

7A. Is the Taxon in trade? ( ) Yes (•) No ( ) Unknown

If Yes, is it: ( ) Local ( ) Regional ( ) International ( ) Commercial

7B. Parts in trade:

☐ Skin ☐ Fur ☐ Hair ☐ Horn ☐ Bones ☐ Glands
☐ Meat ☐ Products ☐ Live Animal ☐ Taxidermy ☐ Organs

Comments/Other threats (please specify):

8. Data Quality

8A. Are the estimates you have supplied based on:

☐ Census or monitoring ☐ General field studies ☒ Informal field studies ☒ Literature
☒ Hearsay/popular belief ☒ Museum studies/records ☒ Indirect information from trade, etc.

9. Studies (field) conducted over the last 10 years (indicate the year of study not the year of publication):

Researchers	Location	Year	Topic

10. Conservation Status

10A. IUCN Red List Category: Global: Not listed Regional: Not listed

10B. National Red Data Book:
Not listed

10C. Workshop Assessment of Regional Red List Category: Least concern

10D. CITES: Not listed

10E. National Wildife Legislation:
Not listed

10F. Other Legislation (please specify):

10G. List existing Protected Areas within the Taxon's range:

Protected Area	Country	Size (km^2)
Wadi Helo, Sharjah	UAE	

10H. Recommended Protected Areas for the Taxon:

Area	Country	Size (km^2)

10I. Are there any Regional Conservation/Protection Action Plans: ○ Yes ◉ No ○ Unknown

If Yes, please list them:

11. Supporting Research

11A. Is research recommended? ◉ Yes ○ No

If Yes, what type of research would you recommend?

☐ Surveys ☐ Genetics ☐ Taxonomic ☒ Life History ☐ Public Awareness
☐ Trade ☐ Monitoring ☐ Reintroduction ☒ Human Impact
☐ Other (please specify):

12. Management

12A. What management is recommended for the Taxon?

☒ Habitat management ☐ Wild population management ☒ Captive breeding
☒ Monitoring ☐ Translocation ☐ Sustainable Use
☐ Public Awareness ☒ Limiting Factor Management ☐ Genome Research Banking
☐ Law Enforcement ☐ Work in Local Communities ☐ Address Policy Makers
☐ Other (please specify):

13. Captive Breeding

13A. Is captive breeding recommended for the taxon: (•) Yes ( ) No

13B. If captive breeding is recommeded , is it for:

☐ Species recovery ☐ Reintroduction ☒ Research ☒ Husbandry

☒ Education ☒ Preserve live genome

13C. Do Captive stocks already exist? (•) Yes ( ) No ( ) Unknown

If Yes, list the facilities:

Facility	Country	Males	Females	Unknown	Total
BCEAW	UAE	?	?	?	?

13D. Does a coordinated Species Management Plan exist? ( ) Yes (•) No ( ) Unknown

If Yes, list the participating institutions:

If Not, is a Species Management Plan recommended: ( ) Yes (•) No

If Yes, list the institutions that should participate:

13E. Level of captive breeding recommended:

☐ Captive breeding program not neccessary ☐ Initiate program within 3 years

☒ Maintain existing program as it is ☐ Intensify existing program ☐ Decrease existing progam

13F. Are the techniques established for captive breeding?

☒ Techniques are known for this or similar taxon ☐ Some techniques are known for this or similar taxon

☐ Techniques not known for this or simialr taxon ☐ Unknown

14. Sources/References (complete citation):

15. Compilers

William Branch, Damien Egan, Tony Phelps, Declan O'Donovan, Gavin Nel, Saud A. Al Farraj, Pritpal Soorae, Ehad Eid, Haithem Al Aamri, Peter Arras, Neelofa Ali, Masaa Al Jumaily, Khaled Al Rasbi and Patrick Paillat

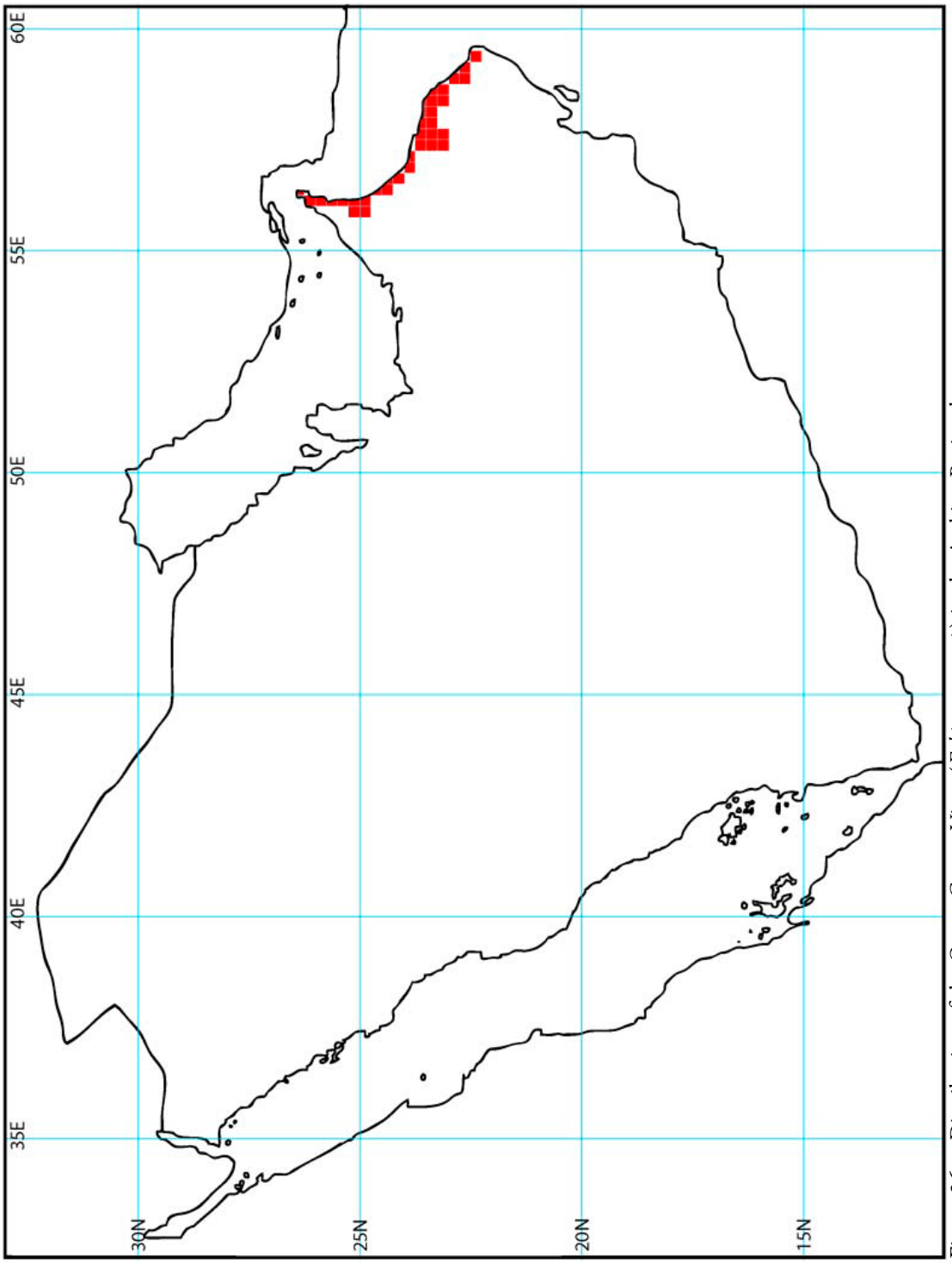

Figure 36. Distribution of the Oman Carpet Viper (*Echis omanensis*) in the Arabian Peninsula.

Conservation Workshop for the Fauna of Arabia
Taxon Data Sheet

Working Group: Snakes **Date:** 3-5 February 2008

1. Taxonomy

1A. Scientific Name (Genus, species & subspecies): *Echis carinatus sochureki*

Authority: Stemmler Date: 1969

1B. Synonyms (with authority & date):

1C. Common Name(s) with language/region:
Sindh Saw Scaled Viper (English).

2. Distribution

2A. Historical Distribution (last 100 years):
Eastern Arabian sand deserts.

2B. Current Distribution (illustrate on map):
See 2A.

2C. Habitat of the taxon (ecosystem level):
Gulf of Oman desert and semi-desert.

2D. Habitat specificity (elevation, etc.):
Generally below 300 m.a.s.l.

2E. Migration: ○ Yes ◉ No ○ Unknown

If Yes, describe:

3. Number of Populations & Subpopulations in which the Taxon is distributed: 1

Location of each:	Approx. Area Occupied:	Approx. No. of Individuals:
Southeastern Saudi Arabia, UAE & Oman.	19,500 km^2	~

4. Population Trends

4A. Is the Population: ○ Increasing ○ Decreasing ◉ Stable ○ Unknown

4B. If declining, what has been the rate of decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has the population decline occured?

4C. If stable or unknown, do you predict a future decline in the population size? ○ Yes ◉ No

If Yes, please specify rate and factors e.g. habitat loss, trade, etc.:

5. Habitat Status

5A. Is the habitat distribution: ◉ Continuous ○ Fragmented ○ Unknown

5B. Is there any change in the range of the habitat where the Taxon occurs? ◉ Yes ○ No ○ Unknown

If Yes, is it: ◉ Decreasing in Area ○ Increasing in Area

5C. If decreasing what has been the decline? (•) <20% ( ) >20% ( ) >50% ( ) >80%

Over how many years has this decline occured? 10

5D. Do you predict a future decline in the habitiat? (•) Yes ( ) No

If Yes, what do you predict that decline will be? (•) <20% ( ) >20% ( ) >50% ( ) >80%

Over how many years do you predict the decline will occur? 10

5E. State the primary cause of this change:

Urban development.

5F. Is there any change in the quality of the habitat where the Taxon occurs? (•) Yes ( ) No ( ) Unknown

If Yes, is the habitat quality: (•) Declining ( ) Improving

5G. State the primary cause of this change:

Urban development.

6. Threats

	Present	Future		Present	Future
Pollution	☐	☐	Disease	☐	☐
Urban Development	☒	☒	Hybridization	☐	☐
Road Kills	☐	☐	Decline in prey species	☐	☐
Damming	☐	☐	Loss of habitat	☐	☐
War	☐	☐	Genetic problems	☐	☐
Recreational activities	☒	☒	Grazing	☒	☒
Hunting (recreation or retail)	☐	☐	Habitat fragmentation	☒	☒
Harvest for medicine	☐	☐	Predation	☐	☐
Harvest for food/timber	☐	☐	Interspecific competition	☐	☐
Poisoning	☐	☐	Livestock competition (food, etc.)	☐	☐
Pesticides	☐	☐	Livestock conflicts (retaliation kills)	☐	☐
Persecution	☐	☐	Introduced species (non-livestock)	☐	☐
Trade of animals/parts	☐	☐	Nutritional disorders	☐	☐

Other (please specify):

Recreational Activities: Off road driving.

6B. Would these threats result in (perceived or inferred) population decline? ( ) Yes ( ) No ( ) Unknown

Comment:

7. Trade

7A. Is the Taxon in trade? (•) Yes ( ) No ( ) Unknown

If Yes, is it: ( ) Local ( ) Regional (•) International ( ) Commercial

7B. Parts in trade:

☐ Skin ☐ Fur ☐ Hair ☐ Horn ☐ Bones ☐ Glands

☐ Meat ☐ Products ☒ Live Animal ☐ Taxidermy ☐ Organs

Comments/Other threats (please specify):

8. Data Quality

8A. Are the estimates you have supplied based on:

☐ Census or monitoring ☐ General field studies ☒ Informal field studies ☒ Literature
☐ Hearsay/popular belief ☒ Museum studies/records ☒ Indirect information from trade, etc.

9. Studies (field) conducted over the last 10 years (indicate the year of study not the year of publication):

Researchers	Location	Year	Topic

10. Conservation Status

10A. IUCN Red List Category: Global: Not Listed. Regional: Not Listed.

10B. National Red Data Book:
Not Listed.

10C. Workshop Assessment of Regional Red List Category: Least Concern.

10D. CITES: Not Listed.

10E. National Wildife Legislation:
Not Listed.

10F. Other Legislation (please specify):

10G. List existing Protected Areas within the Taxon's range:

Protected Area	Country	Size (km^2)

10H. Recommended Protected Areas for the Taxon:

Area	Country	Size (km^2)

10I. Are there any Regional Conservation/Protection Action Plans: ○ Yes ◉ No ○ Unknown

If Yes, please list them:

11. Supporting Research

11A. Is research recommended? ◉ Yes ○ No

If Yes, what type of research would you recommend?

☐ Surveys ☒ Genetics ☒ Taxonomic ☐ Life History ☐ Public Awareness
☐ Trade ☐ Monitoring ☐ Reintroduction ☒ Human Impact
☐ Other (please specify):

12. Management

12A. What management is recommended for the Taxon?

☐ Habitat management ☐ Wild population management ☒ Captive breeding
☐ Monitoring ☐ Translocation ☐ Sustainable Use
☐ Public Awareness ☐ Limiting Factor Management ☐ Genome Research Banking
☐ Law Enforcement ☐ Work in Local Communities ☐ Address Policy Makers
☐ Other (please specify):

13. Captive Breeding

13A. Is captive breeding recommended for the taxon: ◉ Yes ○ No

13B. If captive breeding is recommeded , is it for:

☐ Species recovery ☐ Reintroduction ☒ Research ☒ Husbandry
☒ Education ☐ Preserve live genome

13C. Do Captive stocks already exist? ◉ Yes ○ No ○ Unknown

If Yes, list the facilities:

Facility	Country	Males	Females	Unknown	Total
BCEAW	UAE	~	~	~	~

13D. Does a coordinated Species Management Plan exist? ○ Yes ◉ No ○ Unknown

If Yes, list the participating institutions:

If Not, is a Species Management Plan recommended: ○ Yes ◉ No

If Yes, list the institutions that should participate:

13E. Level of captive breeding recommended:

☐ Captive breeding program not neccessary ☐ Initiate program within 3 years
☒ Maintain existing program as it is ☐ Intensify existing program ☐ Decrease existing progam

13F. Are the techniques established for captive breeding?

☒ Techniques are known for this or similar taxon ☐ Some techniques are known for this or similar taxon
☐ Techniques not known for this or simialr taxon ☐ Unknown

14. Sources/References (complete citation):

Egan, D. 2007. Snakes of Arabia: A field guide to the Snakes of the Arabian Peninsula and its Shores. Motivate Publishing, Dubai.

Gasparetti, J. 1988. Snakes of Arabia. *Fauna of Saudi Arabia* 9: 169-405.

Schätte, B. and Desvoignes, A. 1999. The Herpetofauna of southern Yemen and Sokotra Archipelago. Museum d'Historie Naturelle. Geneve.

Schätte, B. and Gasparetti, J.A. 1994. Contribution to the herpetofauna of Southwest Arabia. *Fauna of Saudi Arabia* 14: 348-432.

Scortecci, G. 1932. Rettili dello Yemen. Atti della Societá Italiana di Scienze Naturali e del Museo Civico di Storia Naturale, Milano 71: 39-49.

15. Compilers

William Branch, Damien Egan, Tony Phelps, Declan O'Donovan, Gavin Nel, Saud A. Al Farraj, Pritpal Soorae, Ehad Eid, Haithem Al Aamri, Peter Arras, Neelofa Ali, Masaa Al Jumaily, Khaled Al Rasbi and Patrick Paillat

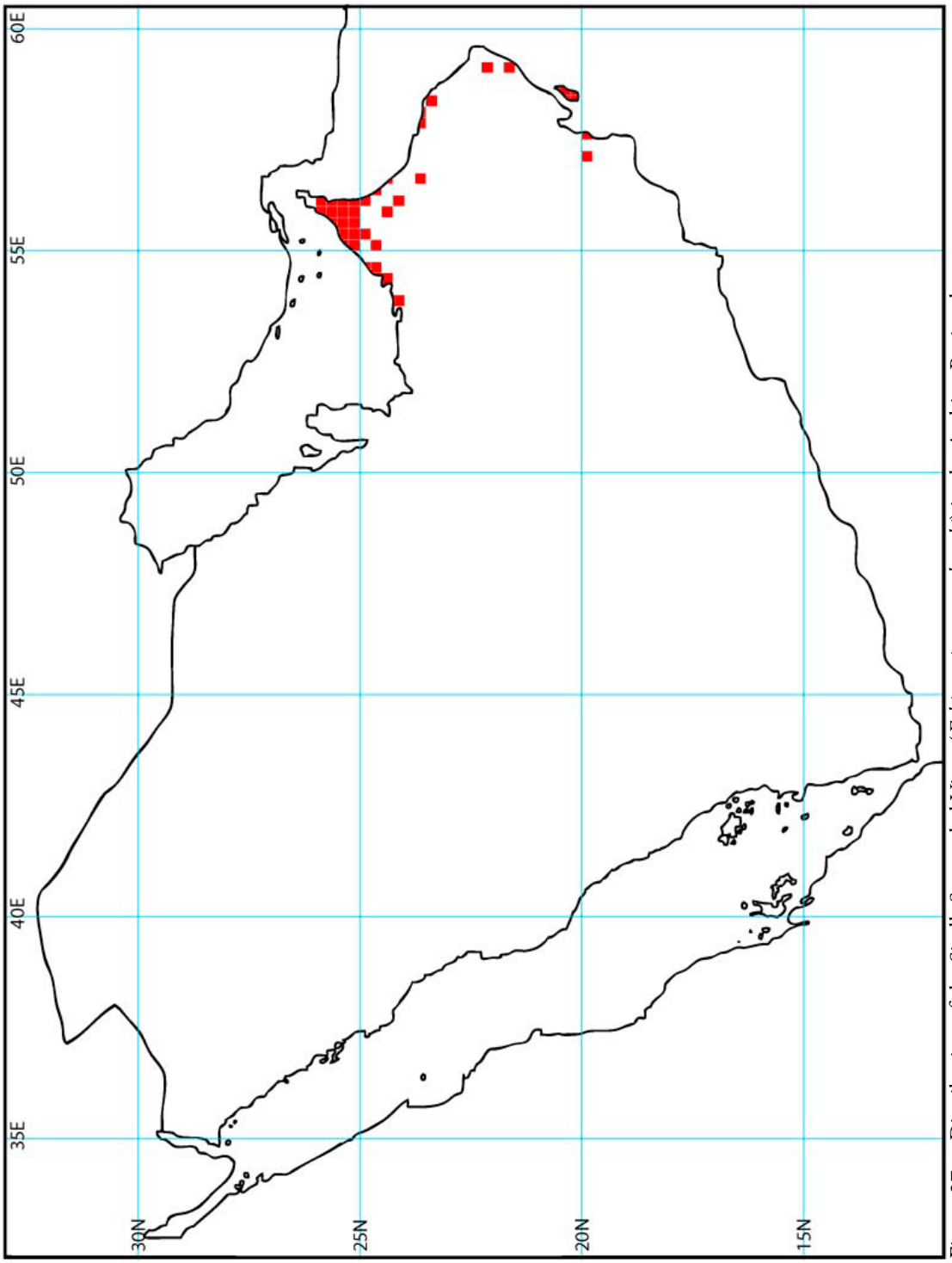

Figure 37. Distribution of the Sindh Saw-scaled Viper (*Echis carinatus sochureki*) in the Arabian Peninsula.

Conservation Workshop for the Fauna of Arabia
Taxon Data Sheet

Working Group: Snakes **Date:** 3-5 February 2008

1. Taxonomy

1A. Scientific Name (Genus, species & subspecies): *Pseudocerastes persicus*

Authority: Dumeri, Bibron & Dumeril Date: 1854

1B. Synonyms (with authority & date):

1C. Common Name(s) with language/region:
Persian horned viper, false-horned viper

2. Distribution

2A. Historical Distribution (last 100 years):
Iran, Pakistan and Afghanistan. Known from Al Hajar Mountains of the UAE and Oman

2B. Current Distribution (illustrate on map):
See 2A

2C. Habitat of the taxon (ecosystem level):
Al Hajar montane woodlands

2D. Habitat specificity (elevation, etc.):
above 600m a.s.l

2E. Migration: ○ Yes ◉ No ○ Unknown

If Yes, describe:

3. Number of Populations & Subpopulations in which the Taxon is distributed:

Location of each:	Approx. Area Occupied:	Approx. No. of Individuals:
Al Hajar mountain complex	175km2	

4. Population Trends

4A. Is the Population: ○ Increasing ○ Decreasing ○ Stable ◉ Unknown

4B. If declining, what has been the rate of decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has the population decline occured?

4C. If stable or unknown, do you predict a future decline in the population size? ◉ Yes ○ No

If Yes, please specify rate and factors e.g. habitat loss, trade, etc.:

5. Habitat Status

5A. Is the habitat distribution: ○ Continuous ◉ Fragmented ○ Unknown

5B. Is there any change in the range of the habitat where the Taxon occurs? ◉ Yes ○ No ○ Unknown

If Yes, is it: ◉ Decreasing in Area ○ Increasing in Area

5C. If decreasing what has been the decline? ◉ <20% ○ >20% ○ >50% ○ >80%

Over how many years has this decline occured? 10

5D. Do you predict a future decline in the habitiat? (•) Yes ( ) No

If Yes, what do you predict that decline will be? ( ) <20% (•) >20% ( ) >50% ( ) >80%

Over how many years do you predict the decline will occur? 10

5E. State the primary cause of this change:

Quarrying and Urban expansion

5F. Is there any change in the quality of the habitat where the Taxon occurs? (•) Yes ( ) No ( ) Unknown

If Yes, is the habitat quality: (•) Declining ( ) Improving

5G. State the primary cause of this change:

Quarrying

6. Threats

	Present	Future		Present	Future
Pollution	☐	☐	Disease	☐	☐
Urban Development	☒	☒	Hybridization	☐	☐
Road Kills	☐	☐	Decline in prey species	☐	☐
Damming	☐	☐	Loss of habitat	☒	☒
War	☐	☐	Genetic problems	☐	☐
Recreational activities	☒	☒	Grazing	☐	☐
Hunting (recreation or retail)	☐	☐	Habitat fragmentation	☒	☒
Harvest for medicine	☐	☐	Predation	☐	☐
Harvest for food/timber	☐	☐	Interspecific competition	☐	☐
Poisoning	☐	☐	Livestock competition (food, etc.)	☐	☐
Pesticides	☐	☐	Livestock conflicts (retaliation kills)	☐	☐
Persecution	☒	☒	Introduced species (non-livestock)	☐	☐
Trade of animals/parts	☐	☐	Nutritional disorders	☐	☐

Other (please specify):

6B. Would these threats result in (perceived or inferred) population decline? ( ) Yes ( ) No (•) Unknown

Comment:

7. Trade

7A. Is the Taxon in trade? ( ) Yes ( ) No ( ) Unknown

If Yes, is it: ( ) Local ( ) Regional (•) International ( ) Commercial

7B. Parts in trade:

☐ Skin ☐ Fur ☐ Hair ☐ Horn ☐ Bones ☐ Glands

☐ Meat ☐ Products ☒ Live Animal ☐ Taxidermy ☐ Organs

Comments/Other threats (please specify):

8. Data Quality

8A. Are the estimates you have supplied based on:

☐ Census or monitoring ☐ General field studies ☐ Informal field studies ☐ Literature
☐ Hearsay/popular belief ☐ Museum studies/records ☐ Indirect information from trade, etc.

9. Studies (field) conducted over the last 10 years (indicate the year of study not the year of publication):

Researchers	Location	Year	Topic

10. Conservation Status

10A. IUCN Red List Category: Global: Not listed Regional: Not listed

10B. National Red Data Book:
Not listed

10C. Workshop Assessment of Regional Red List Category: Not listed

10D. CITES: Not listed

10E. National Wildife Legislation:
Not listed

10F. Other Legislation (please specify):

10G. List existing Protected Areas within the Taxon's range:

Protected Area	Country	Size (km^2)

10H. Recommended Protected Areas for the Taxon:

Area	Country	Size (km^2)

10I. Are there any Regional Conservation/Protection Action Plans: ◯ Yes ◯ No ◯ Unknown

If Yes, please list them:

11. Supporting Research

11A. Is research recommended? ◯ Yes ◯ No

If Yes, what type of research would you recommend?

☐ Surveys ☐ Genetics ☐ Taxonomic ☐ Life History ☐ Public Awareness
☐ Trade ☐ Monitoring ☐ Reintroduction ☐ Human Impact
☐ Other (please specify):

12. Management

12A. What management is recommended for the Taxon?

☐ Habitat management ☐ Wild population management ☐ Captive breeding
☐ Monitoring ☐ Translocation ☐ Sustainable Use
☐ Public Awareness ☐ Limiting Factor Management ☐ Genome Research Banking
☐ Law Enforcement ☐ Work in Local Communities ☐ Address Policy Makers
☐ Other (please specify):

13. Captive Breeding

13A. Is captive breeding recommended for the taxon: ◯ Yes ◯ No

13B. If captive breeding is recommeded , is it for:

☐ Species recovery ☐ Reintroduction ☐ Research ☐ Husbandry

☐ Education ☐ Preserve live genome

13C. Do Captive stocks already exist? ◯ Yes ◯ No ◯ Unknown

If Yes, list the facilities:

Facility	Country	Males	Females	Unknown	Total

13D. Does a coordinated Species Management Plan exist? ◯ Yes ◯ No ◯ Unknown

If Yes, list the participating institutions:

If Not, is a Species Management Plan recommended: ◯ Yes ◯ No

If Yes, list the institutions that should participate:

13E. Level of captive breeding recommended:

☐ Captive breeding program not neccessary ☐ Initiate program within 3 years

☐ Maintain existing program as it is ☐ Intensify existing program ☐ Decrease existing progam

13F. Are the techniques established for captive breeding?

☐ Techniques are known for this or similar taxon ☐ Some techniques are known for this or similar taxon

☐ Techniques not known for this or simialr taxon ☐ Unknown

14. Sources/References (complete citation):

Van der Kooij, J. 2001. The Herpetofauna of the Sultinate of Oman. Part 4: Terrestrial Snakes. Podarcus.

Egan, D. 2007. Snakes of Arabia. A field guide to the Snakes of the Arabian Peninsula and its Shores. Motivate Publishing.

Gasperetti, J. 1988. Snakes of Arabia. Fauna of Saudi Arabia 9: 169-450

15. Compilers

William Branch, Damien Egan, Tony Phelps, Declan O'Donovan, Gavin Nel, Saud A. Al Farraj, Pritpal Soorae, Ehad Eid, Haithem Al Aamri, Peter Arras, Neelofa Ali, Masaa Al Jumaily, Khaled Al Rasbi and Patrick Paillat

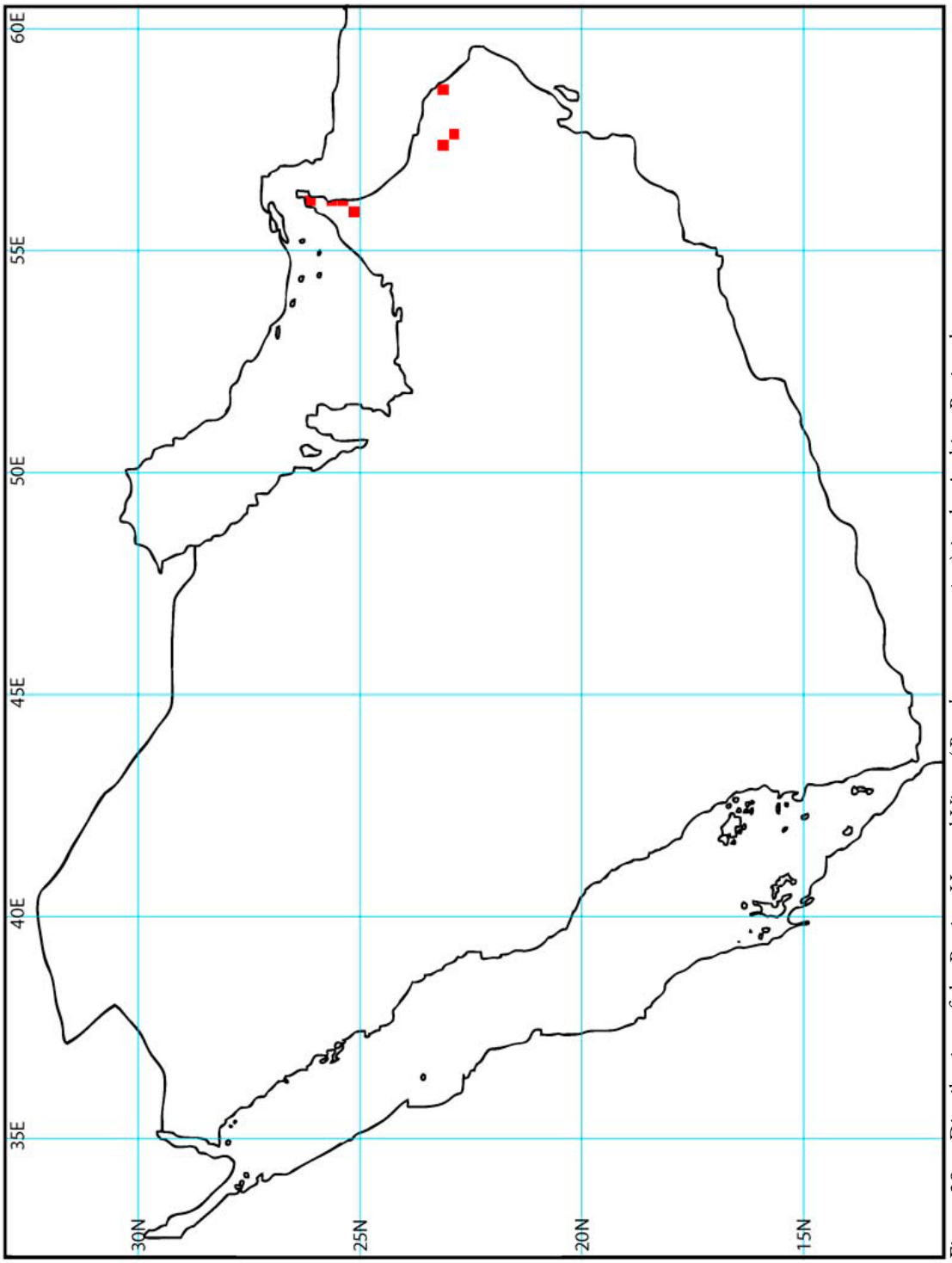

Figure 38. Distribution of the Persian Horned Viper (*Pseudocerastes persicus*) in the Arabian Peninsula.

Conservation Workshop for the Fauna of Arabia
Taxon Data Sheet

Working Group: Snakes **Date:** 3-5 February 2008

1. Taxonomy

1A. Scientific Name (Genus, species & subspecies): *Pseudocerastes fieldi*

Authority: Schmidt Date: 1930

1B. Synonyms (with authority & date):

1C. Common Name(s) with language/region:
Field's horned viper, False horned viper

2. Distribution

2A. Historical Distribution (last 100 years):
Northern Iran, Sinai and extreme northern tip of Saudi Arabia

2B. Current Distribution (illustrate on map):
See 2A

2C. Habitat of the taxon (ecosystem level):
Arabian Desert and east Sahero-Arabian xeric woodlands

2D. Habitat specificity (elevation, etc.):
Hard substrates, lava fields and basalt desert

2E. Migration: ○ Yes ◉ No ○ Unknown

If Yes, describe:

3. Number of Populations & Subpopulations in which the Taxon is distributed:

Location of each:	Approx. Area Occupied:	Approx. No. of Individuals:
Northern Saudi Arabia	2100km2	

4. Population Trends

4A. Is the Population: ○ Increasing ○ Decreasing ○ Stable ◉ Unknown

4B. If declining, what has been the rate of decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has the population decline occured?

4C. If stable or unknown, do you predict a future decline in the population size? ○ Yes ◉ No

If Yes, please specify rate and factors e.g. habitat loss, trade, etc.:

5. Habitat Status

5A. Is the habitat distribution: ◉ Continuous ○ Fragmented ○ Unknown

5B. Is there any change in the range of the habitat where the Taxon occurs? ○ Yes ◉ No ○ Unknown

If Yes, is it: ○ Decreasing in Area ○ Increasing in Area

5C. If decreasing what has been the decline? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years has this decline occured?

5D. Do you predict a future decline in the habitiat? ○ Yes ○ No

If Yes, what do you predict that decline will be? ○ <20% ○ >20% ○ >50% ○ >80%

Over how many years do you predict the decline will occur?

5E. State the primary cause of this change:

5F. Is there any change in the quality of the habitat where the Taxon occurs? ○ Yes ◉ No ○ Unknown

If Yes, is the habitat quality: ○ Declining ○ Improving

5G. State the primary cause of this change:

6. Threats

	Present	Future		Present	Future
Pollution	☐	☐	Disease	☐	☐
Urban Development	☐	☒	Hybridization	☐	☐
Road Kills	☐	☐	Decline in prey species	☐	☐
Damming	☐	☐	Loss of habitat	☐	☒
War	☐	☐	Genetic problems	☐	☐
Recreational activities	☐	☐	Grazing	☐	☐
Hunting (recreation or retail)	☐	☒	Habitat fragmentation	☐	☒
Harvest for medicine	☐	☐	Predation	☐	☐
Harvest for food/timber	☐	☐	Interspecific competition	☐	☐
Poisoning	☐	☐	Livestock competition (food, etc.)	☐	☐
Pesticides	☐	☐	Livestock conflicts (retaliation kills)	☐	☐
Persecution	☐	☒	Introduced species (non-livestock)	☐	☐
Trade of animals/parts	☐	☐	Nutritional disorders	☐	☐

Other (please specify):

6B. Would these threats result in (perceived or inferred) population decline? ○ Yes ○ No ◉ Unknown

Comment:

7. Trade

7A. Is the Taxon in trade? ◉ Yes ○ No ○ Unknown

If Yes, is it: ○ Local ○ Regional ◉ International ○ Commercial

7B. Parts in trade:

☐ Skin ☐ Fur ☐ Hair ☐ Horn ☐ Bones ☐ Glands

☐ Meat ☐ Products ☒ Live Animal ☐ Taxidermy ☐ Organs

Comments/Other threats (please specify):

8. Data Quality

8A. Are the estimates you have supplied based on:

☐ Census or monitoring ☐ General field studies ☒ Informal field studies ☒ Literature

☒ Hearsay/popular belief ☒ Museum studies/records ☒ Indirect information from trade, etc.

9. Studies (field) conducted over the last 10 years (indicate the year of study not the year of publication):

Researchers	Location	Year	Topic

10. Conservation Status

10A. IUCN Red List Category: Global: Not listed Regional: Not listed

10B. National Red Data Book:
Not listed

10C. Workshop Assessment of Regional Red List Category: Least concern

10D. CITES: Not listed

10E. National Wildife Legislation:
Not listed

10F. Other Legislation (please specify):

10G. List existing Protected Areas within the Taxon's range:

Protected Area	Country	Size (km^2)

10H. Recommended Protected Areas for the Taxon:

Area	Country	Size (km^2)

10I. Are there any Regional Conservation/Protection Action Plans: ○ Yes ◉ No ○ Unknown

If Yes, please list them:

11. Supporting Research

11A. Is research recommended? ◉ Yes ○ No

If Yes, what type of research would you recommend?

☒ Surveys ☒ Genetics ☒ Taxonomic ☒ Life History ☐ Public Awareness
☐ Trade ☐ Monitoring ☐ Reintroduction ☒ Human Impact
☐ Other (please specify):

12. Management

12A. What management is recommended for the Taxon?

☐ Habitat management ☐ Wild population management ☐ Captive breeding
☐ Monitoring ☐ Translocation ☐ Sustainable Use
☐ Public Awareness ☒ Limiting Factor Management ☒ Genome Research Banking
☐ Law Enforcement ☐ Work in Local Communities ☐ Address Policy Makers
☐ Other (please specify):

13. Captive Breeding

13A. Is captive breeding recommended for the taxon: ○ Yes ◉ No

13B. If captive breeding is recommeded , is it for:

☐ Species recovery ☐ Reintroduction ☐ Research ☐ Husbandry
☐ Education ☐ Preserve live genome

13C. Do Captive stocks already exist? ○ Yes ○ No ○ Unknown

If Yes, list the facilities:

Facility	Country	Males	Females	Unknown	Total

13D. Does a coordinated Species Management Plan exist? ○ Yes ◉ No ○ Unknown

If Yes, list the participating institutions:

If Not, is a Species Management Plan recommended: ○ Yes ◉ No

If Yes, list the institutions that should participate:

13E. Level of captive breeding recommended:

☐ Captive breeding program not neccessary ☐ Initiate program within 3 years
☐ Maintain existing program as it is ☐ Intensify existing program ☐ Decrease existing progam

13F. Are the techniques established for captive breeding?

☒ Techniques are known for this or similar taxon ☐ Some techniques are known for this or similar taxon
☐ Techniques not known for this or simialr taxon ☐ Unknown

14. Sources/References (complete citation):

Egan, D. 2007. Snakes of Arabia. A field guide to the Snakes of the Arabian Peninsula and its Shores. Motivate Publishing.

Gasperetti, J. 1988. Snakes of Arabia. Fauna of Saudi Arabia 9: 169-450

Werner, Y.L. 1991. Notable Herpetofaunal Records from TransJordan. Zoology in the Middle East. Vol 5: 37-41

15. Compilers

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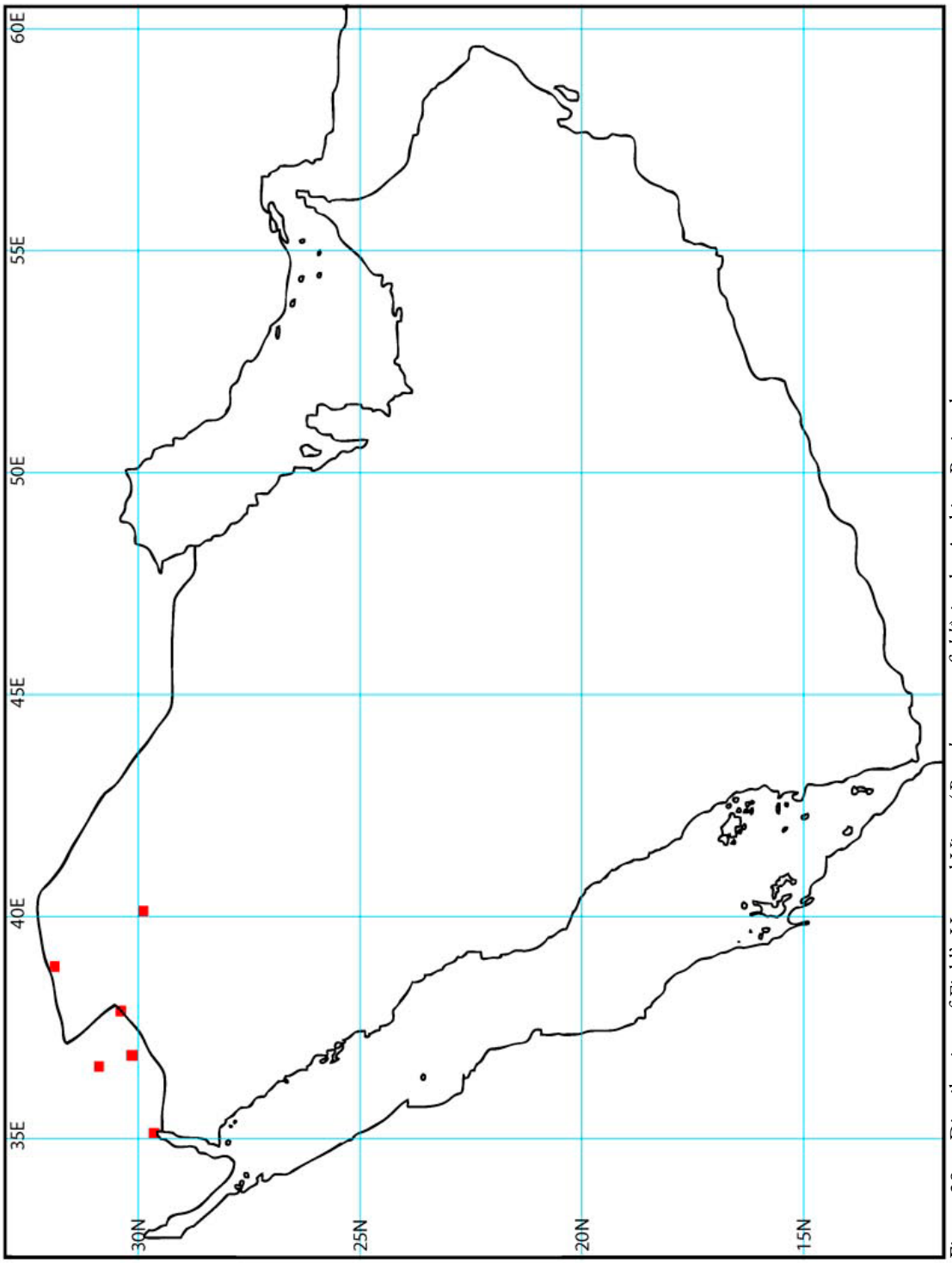

Figure 39. Distribution of Field's Horned Viper (*Pseudocerastes fieldi*) in the Arabian Peninsula.

APPENDIX 2

Collection of Tissue for DNA Studies

1. Kill specimen by either freezing or injection with euthanase (or equivalent)
   DO NOT USE FORMALIN
2. Cut small piece of liver tissue (2-3 mm square) and place in labelled vial (which contains conc. salt/DSMO solution).
3. Seal and shake well.
4. Write name of species on vial (with permanent ink) and/or on paper (in pencil) and place in vial with specimen.
5. Store vial in cool place (do not freeze).
6. Preserve voucher specimen in formalin.
7. Tie label with full collecting details and vial number to specimen.
8. Store in dark, dry place or forward voucher specimen and vial to appropriate museum or researcher.

APPENDIX 3

Participants List

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