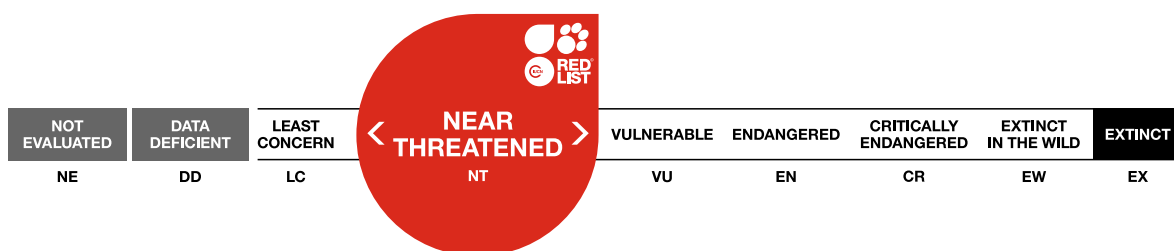


## *Eryx johnii*, Red Sand Boa

Assessment by: Anderson, S., Papenfuss, T., Srinivasulu, C., Kulkarni, N.U., Mohapatra, P., Milto, K., Bhattarai, S., Vyas, R., Ganesh, S.R. & Thakur, S.



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## Taxonomy

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Reptilia	Squamata	Boidae

**Scientific Name:** *Eryx johnii* (Russell, 1801)

**Synonym(s):**

- *Boa johnii* Russell, 1801

**Common Name(s):**

- English: Red Sand Boa, Baluchistani Blind Snake, Brown Sand Boa, Indian Sand Boa
- German: Indische Sandboa

**Taxonomic Source(s):**

Uetz, P., Freed, P. and Hošek, J. (eds). 2021. The Reptile Database. Available at: <http://www.reptile-database.org>. (Accessed: 1 June 2021).

**Taxonomic Notes:**

*Eryx johnii* was first described by Russell in 1801 based on specimen from Tranquebar (=Tharangambadi), India (Smith 1943). The status of the subspecies *Eryx johnii persicus* is not clear; Sindaco *et al.* (2013) consider, based on an unpublished manuscript, that the name *persicus* is preoccupied by a different taxon (Wagner *et al.* 2016). The taxonomic status of *E. j. persicus* is in need of clarification (Vyas pers. comm.).

## Assessment Information

**Red List Category & Criteria:** Near Threatened [ver 3.1](#)

**Year Published:** 2021

**Date Assessed:** September 5, 2019

**Justification:**

Although a widespread species, it is listed as Near Threatened as it is suspected to be in significant global decline (but at a rate of less than 30% over ten years) because it is being over-harvested for the pet trade and traditional medicine, making the species close to qualifying for Vulnerable.

## Geographic Range

**Range Description:**

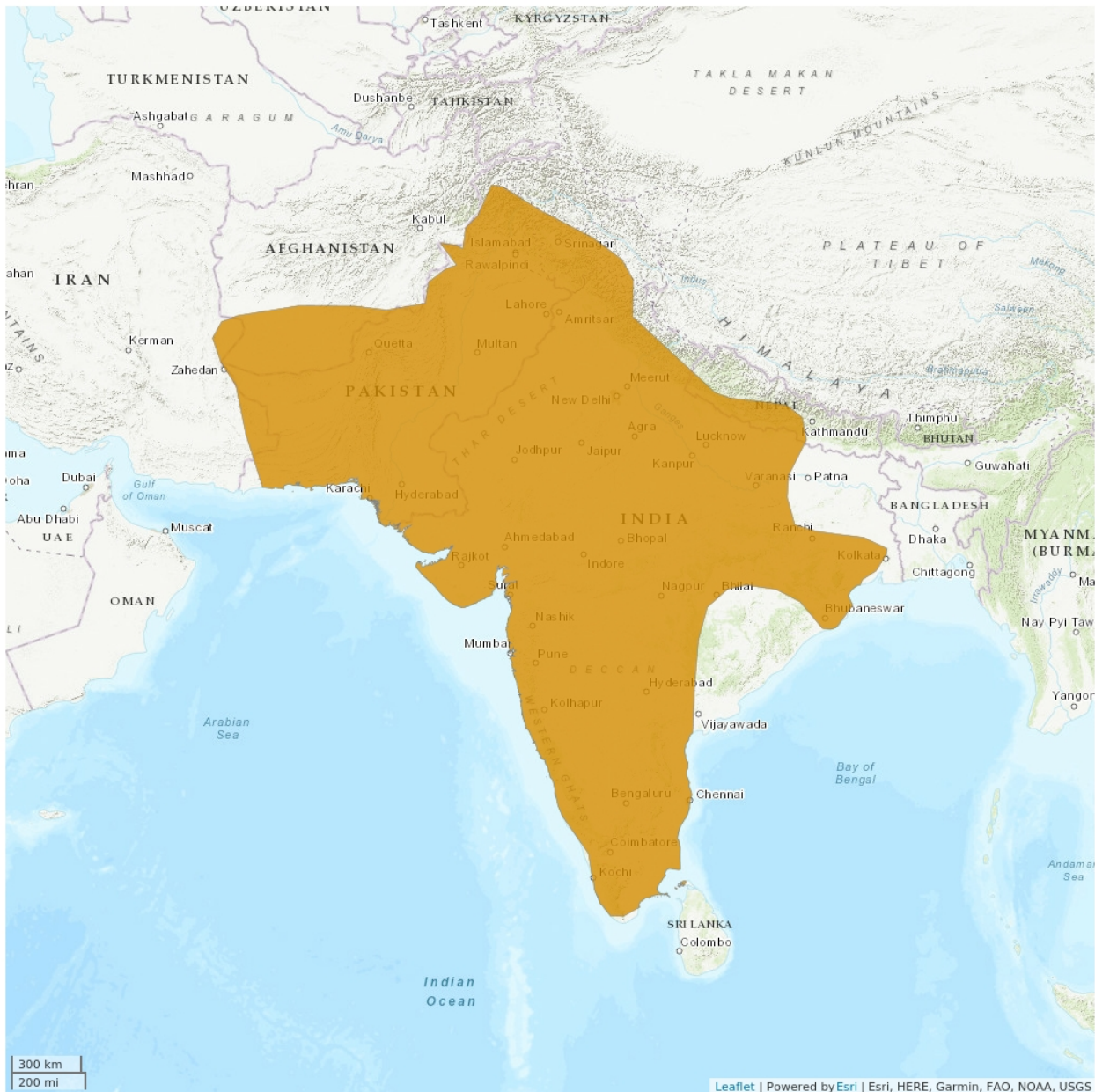
This species ranges throughout most of Pakistan, and is present in adjoining parts of eastern Afghanistan and southeastern Iran (Khan 2006, Mohammad *et al.* 2017), ranging eastward through mainland India (except the northeast). It has been recorded from Nepal, in Chitwan National Park (Bhattarai *et al.* 2017) and Parsa, in 2012 (Bhattarai *et al.* 2018), and appears to occur throughout the Terai. In Iran, this species is known only from three specimens collected from Zabol and Sistan va Baluchistan Provinces (Latifi 1991, T. Papenfuss pers. comm. September 2008); it may occur more widely in this country but there are

no records yet (K. Milto pers. comm. 2016). It is known from a single locality - "Mundi, Hissar south of Kandahar" - in Afghanistan (Wagner *et al.* 2016). Sindaco *et al.* (2013) consider the Iranian and Afghan records doubtful, but do not justify this; in contrast T. Papenfuss (pers. comm. 2016) suggests that it is likely to occur throughout the southern third of the country. It is found below 200 m asl (Khan 2006).

**Country Occurrence:**

**Native, Extant (resident):** Afghanistan; India (Andhra Pradesh, Chattisgarh, Goa, Gujarat, Himachal Pradesh, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Orissa, Rajasthan, Tamil Nadu, Uttaranchal, West Bengal); Iran, Islamic Republic of; Nepal; Pakistan

# Distribution Map

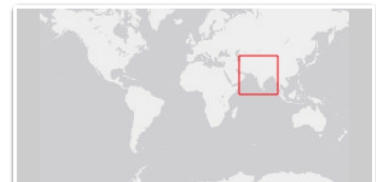


## Legend

EXTANT (RESIDENT)

Compiled by:

IUCN 2020



The boundaries and names shown and the designations used on this map do not imply any official endorsement, acceptance or opinion by IUCN.

## Population

It is common in Pakistan and in west, central and southern India. It is uncommon in Nepal (S. Bhattarai pers. comm. 2019). The species is a human commensal and may benefit to some extent from land use changes that increase the abundance of rodent prey, however, declines have been reported in southern India. Based on researchers' observations, sighting records have declined in some areas, and it is thought that illegal collectors have to put increasing efforts into harvesting animals for trade. It was formerly common in agricultural areas, but now appears to be rare (S. Thakur pers. comm. 2019). Rescue numbers report high numbers of confiscated animals being taken from trade markets (C. Srinivasulu pers. comm. 2019). Population trends in Nepal, where it is encountered in lower numbers than many other snakes, are unclear (S. Bhattarai pers. comm. 2019).

**Current Population Trend:** Decreasing

## Habitat and Ecology (see Appendix for additional information)

It is a generally nocturnal and fossorial species found in flat desert with loose clay soil and sparse grasses. It can be found in sandy deserts and similar open areas with loose soil, although it is less common in these habitats (Minton 1966, Latifi 1991, Khan 2006), and is also rare on stony and damp soils (Khan 2006). In India it is also found in dry deciduous forest and scrub (Srinivasulu), and moist lowland forest in the northern Western Ghats (R. Vyas pers. comm. 2019). It can be found in a wide variety of modified habitats. In India, the females bear 6–14 live young around June and September; in Pakistan much smaller litters, of 2–8 animals born from April to June, have been reported (Khan 2006). Recorded prey items include Hardwicke's spiny-tailed lizard (*Saara hardwickii*) (Pardeshi *et al.* 2008).

**Systems:** Terrestrial

## Use and Trade

In India, this species is traded illegally for national markets (for medicine and snake charmers) and in international markets (including China where it is believed to be an aphrodisiac). In India, it is collected also for the national and international pet trade, where it is in high demand (R. Vyas pers. comm. 2019). Live animals are used in zoo therapy in Pakistan (Khan *et al.* 2011). It is sold for high prices, indicating high demand, and is sold online. Reports exist of animals having been stolen from zoos (S.R. Ganesh pers. comm. 2019).

## Threats (see Appendix for additional information)

In India, the species is threatened by illegal overcollection for the pet trade and for its use in traditional medicines in China and Southeast Asia, as well as in India itself. It is a highly prized species in traditional remedies for skin disease (Subramanean and Reddy 2012). This collection, while illegal, is largely uncontrolled and may be on the increase, as market prices have increased drastically due to recently established beliefs that the snake acts as a lucky charm or has supernatural powers (TRAFFIC Post 2011). The species is also subject to deliberate persecution (Balakrishan 2010). The region where it occurs in Afghanistan is sparsely populated so it is unlikely to be threatened here, although its range in this country is essentially unknown. Modern agricultural practices, including soil compaction and the use of pesticides and poisons that kill its rodent prey, and which remove areas of natural habitat retained under traditional management, are also likely to threaten this species (C. Srinivasulu and S. Thakur pers.

comm. 2019). Harvesting is illegal in Nepal, but illegal poaching from hunters entering the border from India has been reported (S. Bhattarai pers. comm. 2019). Even within peri-urban and semi-urban areas, remnant habitat quality is in decline and development exposes greater numbers of animals to persecution and capture (S. Narayanan pers. comm. 2019). Generation length is thought to be around two years (R. Vyas pers. comm. 2019).

## **Conservation Actions (see Appendix for additional information)**

It is not known if the species is present in any protected areas in Iran. It is present in protected areas in Pakistan, including Nara Desert Wildlife Sanctuary (Ghalib *et al.* 2008). In India, it is protected by Schedule IV of the Wildlife (Protection) Act, 1972 and is found in many protected areas. This species is listed in Appendix II of CITES. The impact of collection subpopulations needs to be monitored to clarify the impacts of collection, and systematic efforts are needed to quantify rates of decline.

## **Credits**

**Assessor(s):** Anderson, S., Papenfuss, T., Srinivasulu, C., Kulkarni, N.U., Mohapatra, P., Milto, K., Bhattarai, S., Vyas, R., Ganesh, S.R. & Thakur, S.

**Reviewer(s):** Auliya, M.

**Contributor(s):** Deepak, V., Kulkarni, N.U., Thakur, S., Vyas, R., Das, A., Shankar, G., Mohapatra, P., Achyuthan, N.S., Aengals, A., Jose, J. & Sawant, N.S.

**Facilitator(s) and Compiler(s):** Cox, N.A. & Bowles, P.

**Authority/Authorities:** IUCN SSC Boa and Python Specialist Group

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## External Resources

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## Appendix

### Habitats

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

Habitat	Season	Suitability	Major Importance?
1. Forest -> 1.5. Forest - Subtropical/Tropical Dry	Resident	Suitable	-
1. Forest -> 1.6. Forest - Subtropical/Tropical Moist Lowland	Resident	Suitable	-
3. Shrubland -> 3.5. Shrubland - Subtropical/Tropical Dry	Resident	Suitable	Yes
4. Grassland -> 4.5. Grassland - Subtropical/Tropical Dry	Resident	Marginal	-
8. Desert -> 8.1. Desert - Hot	Resident	Suitable	-
14. Artificial/Terrestrial -> 14.1. Artificial/Terrestrial - Arable Land	Resident	Marginal	-
14. Artificial/Terrestrial -> 14.2. Artificial/Terrestrial - Pastureland	Resident	Marginal	-
14. Artificial/Terrestrial -> 14.4. Artificial/Terrestrial - Rural Gardens	Resident	Suitable	Yes
14. Artificial/Terrestrial -> 14.5. Artificial/Terrestrial - Urban Areas	Resident	Suitable	No
14. Artificial/Terrestrial -> 14.6. Artificial/Terrestrial - Subtropical/Tropical Heavily Degraded Former Forest	Resident	Marginal	-

### Use and Trade

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

End Use	Local	National	International
Medicine - human & veterinary	No	Yes	Yes
Pets/display animals, horticulture	No	Yes	Yes

### Threats

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

Threat	Timing	Scope	Severity	Impact Score
5. Biological resource use -> 5.1. Hunting & trapping terrestrial animals -> 5.1.1. Intentional use (species is the target)	Ongoing	Majority (50-90%)	Rapid declines	Medium impact: 7
	Stresses:	2. Species Stresses -> 2.1. Species mortality		
5. Biological resource use -> 5.1. Hunting & trapping terrestrial animals -> 5.1.3. Persecution/control	Ongoing	Majority (50-90%)	Unknown	Unknown
	Stresses:	2. Species Stresses -> 2.1. Species mortality		

### Conservation Actions in Place

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

<b>Conservation Action in Place</b>
In-place land/water protection
Occurs in at least one protected area: Yes
In-place education
Included in international legislation: Yes
Subject to any international management / trade controls: Yes

## Conservation Actions Needed

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

<b>Conservation Action Needed</b>
3. Species management -> 3.1. Species management -> 3.1.1. Harvest management
3. Species management -> 3.1. Species management -> 3.1.2. Trade management

## Research Needed

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

<b>Research Needed</b>
1. Research -> 1.2. Population size, distribution & trends
1. Research -> 1.3. Life history & ecology
3. Monitoring -> 3.1. Population trends
3. Monitoring -> 3.2. Harvest level trends
3. Monitoring -> 3.3. Trade trends

## Additional Data Fields

<b>Distribution</b>
Continuing decline in area of occupancy (AOO): No
Extreme fluctuations in area of occupancy (AOO): Unknown
Continuing decline in extent of occurrence (EOO): Unknown
Extreme fluctuations in extent of occurrence (EOO): Unknown
Upper elevation limit (m): 200
<b>Population</b>
Population severely fragmented: No

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