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Scope: Global Language: English



Breviceps macrops, Desert Rain Frog

Assessment by: IUCN SSC Amphibian Specialist Group, South African Frog Reassessment Group (SA-FRoG)



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Taxonomy

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Amphibia	Anura	Brevicipitidae

Taxon Name: Breviceps macrops Boulenger, 1907

Common Name(s):

• English: Desert Rain Frog

Taxonomic Source(s):

Frost, D.R. 2016. Amphibian Species of the World: an Online Reference. Version 6.0 (31 March 2016). New York, USA. Available at: http://research.amnh.org/herpetology/amphibia/index.html.

Assessment Information

Red List Category & Criteria: Near Threatened <u>ver 3.1</u>

Year Published: 2017

Date Assessed: August 1, 2016

Justification:

Listed as Near Threatened because its extent of occurrence (EOO) and area of occupancy (AOO) meet the thresholds for the Vulnerable category under criterion B. Furthermore, there is continuing decline in the quality and extent of habitat in part of its range due to residential development at one location (McDougall's Bay and Port Nolloth). However, the number of locations exceed the threatened thresholds, the species is no longer thought to be severely fragmented, and there it is unknown whether there is continuing decline or extreme fluctuations in the number of locations, subpopulations, or mature individuals. Strip mining, which was regarded as the major threat to this species in the previous assessment, has recently ceased (in South Africa) and this, together with attempts by the mining companies to restore large areas of habitat, could mean that in future this species is no longer threatened, but there is currently no evidence that the species has recolonised restored habitats.

Previously Published Red List Assessments

2004 - Vulnerable (VU)

http://dx.doi.org/10.2305/IUCN.UK.2004.RLTS.T3070A9571128.en

1996 - Vulnerable (VU)

1994 - Rare (R)

Geographic Range

Range Description:

This species occurs from just south of Kleinzee on the Namaqualand coast of South Africa, north to Lüderitz in coastal southwestern Namibia (Channing and Wahlberg 2011). It occurs in 11 threat-defined

locations and its EOO is 13,246 km². It ranges from close to the high-water mark to several kilometers from the coast, and appears to be limited to white sand dunes giving it an AOO of 1,446 km².

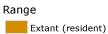
Country Occurrence:

Native: Namibia; South Africa (Northern Cape Province)

Distribution Map

Breviceps macrops





Compiled by:

IUCN (International Union for Conservation of Nature), Conservation International and South African Frog Reassessment Group (SA-FRoG).



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



Population

There is a lack of information on its population size and trends, but it is not considered to be severely

fragmented.

Current Population Trend: Unknown

Habitat and Ecology (see Appendix for additional information)

It burrows into sand dunes vegetated with low, succulent shrubs and other xerophytic vegetation in the fog belt during the day and emerges at night to feed. It is most active during foggy nights. It is a terrestrial breeder, presumably laying a batch of eggs in a chamber below the surface on vegetated

dunes.

Systems: Terrestrial

Use and Trade

There are no records of this species being utilized.

Threats (see Appendix for additional information)

This species was historically threatened by loss of its habitat as a result of coastal opencast diamond mining but this is ceasing in many areas. The recovery of this species relies on habitat restoration by mine agencies to restore degraded habitat, but there is currently no evidence to suggest that it occurs in restored areas (Channing and Whalberg 2011). Development of roads, increasing pressure from housing development (e.g. in McDougal's Bay), and changing land use (e.g. increased grazing) pose additional

ongoing threats.

Conservation Actions (see Appendix for additional information)

Conservation Actions

It is not known from any protected areas.

Conservation Needed

There is a need to establish conservation areas within the range of the species and restore its habitat.

Research Needed

Studies on its population size, distribution and trends, life history and ecology (including breeding biology) and threats are needed. Studies on establishing whether this species can utilise regenerated land following past negative impacts of mining are ongoing. Population trends should be researched and

monitored.

Credits

Assessor(s): IUCN SSC Amphibian Specialist Group, South African Frog Re-assessment Group

(SA-FRoG)

Reviewer(s):

Luedtke, J.

Contributor(s): Channing, A., Rebelo, A., Turner, A.A., de Villiers, A., Becker, F., Harvey, J., Tarrant,

J., Measey, G.J., Tolley, K., Minter, L., du Preez, L., Baptista, N., Cunningham, M.J.,

Hopkins, R., Conradie, W. & Chapeta, Y.

Facilitators(s) and Compiler(s):

Rebelo, A., Garollo, E., Measey, G.J., Neam, K.

Bibliography

Channing, A. 2001. *Amphibians of Central and Southern Africa*. Cornell University Press, Ithaca and London.

Channing, A. and Griffin, M. 1993. An annotated checklist of the frogs of Namibia. *Madoqua* 18: 101-116.

Channing, A. and van Wyk, A. 1987. *Breviceps macrops*: Distribution and ecology. *Journal of Herpetological Association of Africa* 33: 33.

Channing, A & Wahlberg, K. 2011. Distribution and conservation status of the desert rain frog Breviceps macrops. *African Journal of Herpetology* 60(2): 101-102.

De Villiers, A. L. 1988. *Breviceps macrops*: Species account. In: Branch, W.R. - South African Red Data Book (ed.), *Reptiles and Amphibians. South African National Scientific Programmes Report 151. CSIR*, pp. 116-118. Pretoria.

du Preez, L. and Carruthers, V. 2009. *A Complete Guide to the Frogs of Southern Africa*. Struik Nature, Cape Town.

IUCN. 2017. The IUCN Red List of Threatened Species. Version 2017-2. Available at: www.iucnredlist.org. (Accessed: 14 September 2017).

Minter, L.R. 2004. *Breviceps macrops*: Species account. In: Minter, L.R., Burger, M., Harrison, J.A., Braack, H.H., Bishop, P.J. and Knoepfer, D. (eds), *Atlas and Red Data Book of the Frogs of South Africa, Lesotho and Swaziland*. *SI/MAB Series 9*. *Smithsonian Institution*, pp. 180-182. Washington DC.

Minter, L.R., Burger, M., Harrison, J.A., Braack, H.H., Bishop, P.J. and Knoepfer, D. 2004. *Atlas and Red Data Book of the Frogs of South Africa, Lesotho and Swaziland*. SI/MAB Series No. 9, Washington, D.C.

Passmore, N.I. and Carruthers, V.C. 1995. *South African Frogs, 2nd Edition*. Southern Book Publishers and Witwatersrand University Press, Johannesburg.

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External Resources

For Images and External Links to Additional Information, please see the Red List website.

Appendix

Habitats

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

Habitat	Season	Suitability	Major Importance?
3. Shrubland -> 3.5. Shrubland - Subtropical/Tropical Dry		Suitable	Yes
8. Desert -> 8.2. Desert - Temperate	Resident	Suitable	Yes

Threats

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

Threat	Timing	Scope	Severity	Impact Score
 Residential & commercial development -> 1.1. Housing & urban areas 	Ongoing	Minority (50%)	Slow, significant declines	Low impact: 5
	Stresses: 1. Ecosystem stresses -> 1.1. Ecosystem conversion		m conversion	
		1. Ecosystem stresses -> 1.2. Ecosystem degradation		
1. Residential & commercial development -> 1.3. Tourism & recreation areas	Ongoing	Minority (50%)	Slow, significant declines	Low impact: 5
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation		
2. Agriculture & aquaculture -> 2.3. Livestock farming & ranching -> 2.3.2. Small-holder grazing, ranching or farming	Ongoing	-	-	-
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion		m conversion
3. Energy production & mining -> 3.2. Mining & quarrying	Past, unlikely to return	Majority (50- 90%)	Slow, significant declines	Past impact
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion		m conversion
		1. Ecosystem stresses -> 1.2. Ecosystem degradation		
4. Transportation & service corridors -> 4.1. Roads & railroads	Ongoing	-	-	-
	Stresses:	1. Ecosystem stre	esses -> 1.2. Ecosyste	m degradation

Conservation Actions in Place

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

Conservation Actions in Place	
In-Place Research, Monitoring and Planning	
Action Recovery plan: No	
Systematic monitoring scheme: No	
In-Place Land/Water Protection and Management	

Conservation Actions in Place

Conservation sites identified: No

Occur in at least one PA: No

Percentage of population protected by PAs (0-100): 0

Area based regional management plan: No

In-Place Species Management

Subject to ex-situ conservation: No

In-Place Education

Subject to recent education and awareness programmes: No

Included in international legislation: No

Conservation Actions Needed

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

Conservation Actions Needed

- 1. Land/water protection -> 1.1. Site/area protection
- 2. Land/water management -> 2.1. Site/area management
- 2. Land/water management -> 2.3. Habitat & natural process restoration

Research Needed

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

Research Needed

- 1. Research -> 1.2. Population size, distribution & trends
- 1. Research -> 1.3. Life history & ecology
- 1. Research -> 1.5. Threats
- 3. Monitoring -> 3.1. Population trends

Additional Data Fields

Distribution

Estimated area of occupancy (AOO) (km²): 1446.03

Estimated extent of occurrence (EOO) (km²): 13246.16

Number of Locations: 11

Continuing decline in number of locations: No

Distribution

Extreme fluctuations in the number of locations: No

Population

Continuing decline of mature individuals: No

Extreme fluctuations: Unknown

Population severely fragmented: No

Habitats and Ecology

Continuing decline in area, extent and/or quality of habitat: Yes

Movement patterns: Not a Migrant

The IUCN Red List Partnership



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<u>Programme</u>, the <u>IUCN Species Survival Commission</u> (SSC) and <u>The IUCN Red List Partnership</u>.

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