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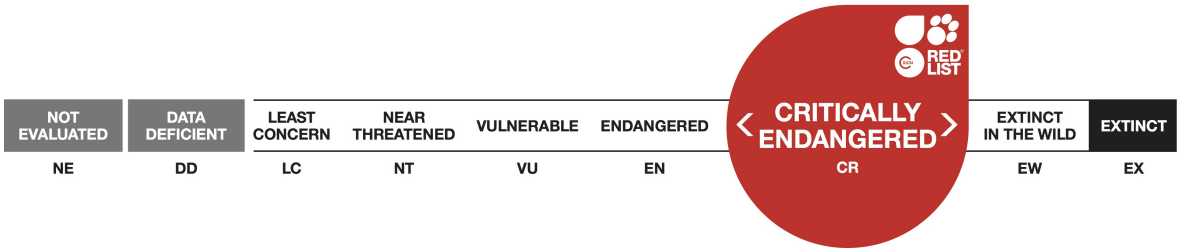
Arthroleptides dutoiti, Du Toit's Torrent Frog

Assessment by: IUCN SSC Amphibian Specialist Group



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Taxonomy

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Amphibia	Anura	Petropedetidae

Taxon Name: *Arthroleptides dutoiti* Loveridge, 1935

Synonym(s):

- *Petropedetes dutoiti* (Loveridge, 1935)

Common Name(s):

- English: Du Toit's Torrent Frog

Taxonomic Source(s):

Frost, D.R. 2014. Amphibian Species of the World: an Online Reference. Version 6 (27 January 2014). New York, USA. Available at: http://research.amnh.org/herpetology/amphibia/index.html. (Accessed: 27 January 2014).

Assessment Information

Red List Category & Criteria: Critically Endangered () C2a(ii) ver 3.1

Year Published: 2016

Date Assessed: December 18, 2015

Justification:

Listed as Critically Endangered Possibly Extinct because repeated, unsuccessful surveys of the small type locality and several other sites in the area have failed to record the species. There is only a small chance that it is still extant within its historic range, but information is lacking to declare it Extinct. In the absence of further evidence, it is therefore reasonable to infer that the population size is less than 250 mature individuals, that any surviving individuals are in the only known subpopulation of the species within the single known threat-defined location.

Date last seen: 1962

Previously Published Red List Assessments

2004 – Critically Endangered (CR) – http://dx.doi.org/10.2305/IUCN.UK.2004.RLTS.T2119A9255572.en

1996 – Extinct (EX)

1994 – Extinct? (Ex?)

Geographic Range

Range Description:

This species is known from its type locality on the Kooitobos River in the northeast of Mount Elgon in Kenya; and a site along the Suam River which divides Kenya and Uganda at the northeast base of Mount

Elgon. Its known elevational range is 2,100-2,200 m asl. It is expected to occur along other drainage basins on both the Kenyan and Ugandan sides of Mount Elgon. However surveys on the Ugandan side have not taken place. Its range map has been slightly revised to include the Suam River sites which were missing from the previous map. As such, its extent of occurrence (EOO) is 973 km^2 and these two sites are considered a single threat-defined location.

Country Occurrence:

Possibly extinct: Kenya; Uganda

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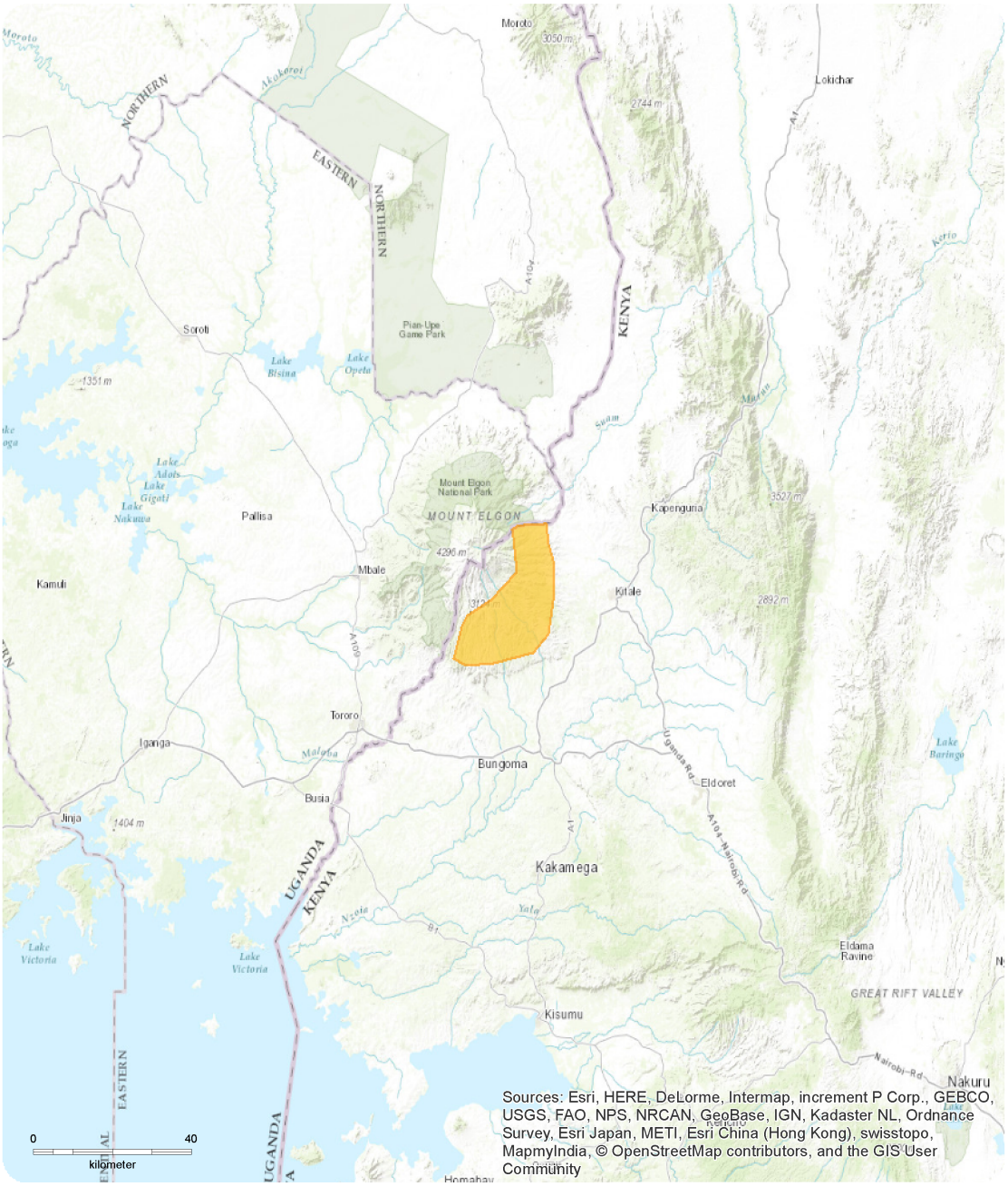
Distribution Map

Arthroleptides dutoiti

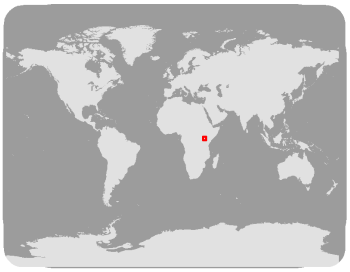


NE | DD | LC | NT | VU | EN | CR CRITICALLY ENDANGERED | EW | EX

Range

Extant (resident)

Compiled by:
International Union for Conservation of Nature (IUCN)



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

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Population

The species has not been recorded despite extensive targeted surveys. A single specimen was recorded in 1934 during the rainy season by Loveridge (1935) and last recorded in 1962 along the Suam River. Between 2001-2006 five attempts to locate the species at the type locality along the Koitobos River (in wet and dry seasons) were unsuccessful (P.K. Malonza and V. Wasonga pers. comm. June 2012). Four targeted surveys (two wet season and two dry season, each 15 days long) from February 2013 to December 2014 at the type locality and adjacent farmland also failed to record the species (Ngwava 2015a). The preferred microhabitat - rapids, fast moving water and waterfalls - means that it can be hard to sample (P.K. Malonza and V. Wasonga pers. comm. June 2012). However, congeners are relatively easily sampled and in high abundance at known localities, so it would be fair to assume the same would be true for this species (S. Loader pers. comm. November 2015).

Current Population Trend: Decreasing

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

It is associated with seeps and fast-flowing streams in montane forest. It is unknown to what degree the species disperses from its stream habitat. Breeding is presumably as with other species in genus, with eggs laid on wet rocks close to torrential streams and waterfalls, and the larvae developing on the rocks, out of the water.

Systems: Terrestrial, Freshwater

Use and Trade

There are no reports of this species being utilized.

Threats **(see Appendix for additional information)**

The type locality is presumed to be outside the protected area and is now mostly farmland (P.K. Malonza and V. Wasonga pers. comm. June 2012). Montane forest on Mt. Elgon is being adversely impacted by logging, charcoal burning, shifting cultivation (extending to river banks) and the use of agrochemicals (Ngwava 2015a). However, suitable habitat stilll exists within the Mt. Elgon National Park and Kenya Forest Service managed land, but habitat managed by the Forest Service is not stable due to ongoing commerical logging and permitted clearing of land for crop cultivation (Ngwava 2015b). In view of the disappearance of other montane stream-dwelling species elsewhere in the humid tropics, the potential impact of disease, such as chytridiomycosis, cannot be ruled out as a cause of population declines.

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

Conservation Actions

The type locality, which is not very precise, might be inside - or very close to Mount Elgon National Park - although its presence there has not been confirmed.

Conservation and Research Needed

Further survey work is urgently needed to determine the status of this species in the wild. Because repeated surveys in and around the type locality have not been successful, future surveys should be extended to other areas of the Mount Elgon region.

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Credits

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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?
1. Forest -> 1.9. Forest - Subtropical/Tropical Moist Montane	-	Suitable	-
5. Wetlands (inland) -> 5.1. Wetlands (inland) - Permanent Rivers/Streams/Creeks (includes waterfalls)	-	Suitable	-

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

Threat	Timing	Scope	Severity	Impact Score
2. Agriculture & aquaculture -> 2.1. Annual & perennial non-timber crops -> 2.1.2. Small-holder farming	Ongoing	-	-	-
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation		
5. Biological resource use -> 5.3. Logging & wood harvesting -> 5.3.5. Motivation Unknown/Unrecorded	Ongoing	-	-	-
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation		
8. Invasive and other problematic species, genes & diseases -> 8.2. Problematic native species/diseases -> 8.2.2. Named species (Batrachochytrium dendrobatidis)	Unknown	-	-	-
	Stresses:	2. Species Stresses -> 2.1. Species mortality		

Conservation Actions in Place
(http://www.iucnredlist.org/technical-documents/classification-schemes)

Conservation Actions in Place
In-Place Land/Water Protection and Management
Occur in at least one PA: Unknown

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

Research Needed
1. Research -> 1.2. Population size, distribution & trends

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Additional Data Fields

Distribution
Estimated extent of occurrence (EOO) (km²): 973
Number of Locations: 1
Lower elevation limit (m): 2100
Upper elevation limit (m): 2200
Population
Number of mature individuals: 249
Continuing decline of mature individuals: Yes
Population severely fragmented: Unknown
No. of subpopulations: 1
All individuals in one subpopulation: Yes
Habitats and Ecology
Continuing decline in area, extent and/or quality of habitat: Yes

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