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Amphibians in the November 2016 update of The IUCN Red List of Threatened Species

By Kelsey Neam^{1,2}

The mission of the Amphibian Red List Authority (ARLA) is to provide accurate and up-to-date information on the extinction risk of all amphibian species known to science. Following the November 2016 IUCN Red List update, 2,012 amphibian species have up-to-date IUCN Red List assessments, constituting over twenty-six percent (26.5%) of the 7,586 amphibian species currently recognized by Frost (1). A summary of the 121 assessments published in the November 2016 IUCN Red List update is described below.

GEOGRAPHIC EXTENT

Amphibian species published on the IUCN Red List (version 2016-3) have been submitted by nine ARLA Working Groups or regional Amphibian Specialist Group (ASG) members: East Africa, Madagascar, Mainland Southeast Asia, Mesoamerica, Mexico, Southern Africa, Sri Lanka, West and Central Africa, and West and Central Asia (Fig. 1).

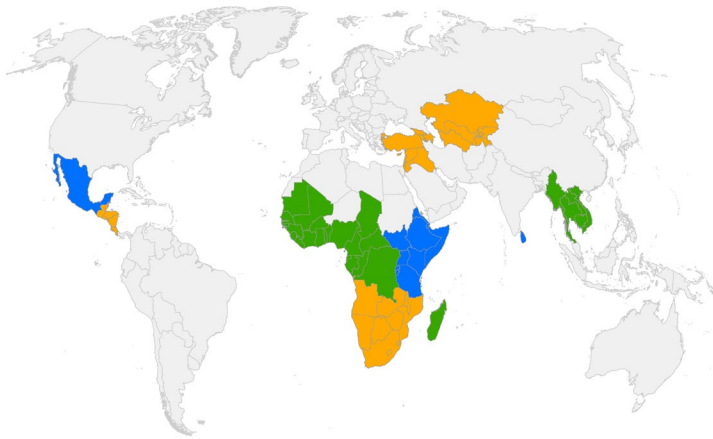


Fig. 1: Geographic scope of the ARLA Working Groups and regional ASG members that have published assessments in the November 2016 IUCN Red List update.

Additional assessments from these and many other ARLA Working Groups and regional ASG groups are in the process of being updated. Assessments that passed review following the August 2016 submission deadline will be published in the June 2017 update, so be on the lookout for further news!

LEVEL OF THREAT

The IUCN Red List is a global standard for assessing the conservation status of species. The main purpose of the IUCN Red List is to document, catalogue and highlight the species facing the highest risk of global extinction, specifically those in the three threatened categories: Critically Endangered (CR), Endangered (EN), and Vulnerable (VU).

Species classified as Least Concern (LC) comprise the greatest proportion of the assessments published in the November 2016 update (50.4% or 61 species). Also considerable is the proportion of species in a threatened category (39.6% or 48 species), including three species tagged as 'Possibly Extinct' (CR(PE)) (Fig. 2). These

figures are significantly higher than those of amphibian species globally, in both LC (38% or 2,485 species) and threatened (31.7% or 2,068 species) categories, at the end of 2016 (2).

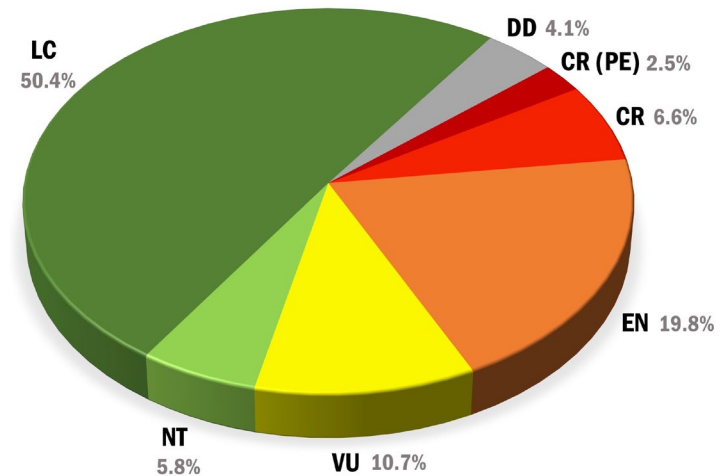


Fig. 2. Proportion of the 121 species assessments published in November 2016 IUCN Red List update in each category. Three species were assessed as CR(PE), however no species were assessed as Extinct (EX) or Extinct in the Wild (EW).

Most notably are the criteria triggering the threatened assessments. All 48 species assessed as threatened met the quantitative thresholds for Criteria B, either in the form of B1 and/or B2, as well as the Subcriteria b(iii). Thus, continuing decline in the area, extent and/or quality of species' habitat was a universal theme of the November update.

CATEGORY CHANGES

Of the 121 assessments published in November 2016, 13.2% (16 species) were first-time assessments. The remaining 86.8% (105 species) were re-assessments from previous years, including many that had not been re-assessed since the comprehensive amphibian assessment (Global Amphibian Assessment) completed in 2004 (3). Among these were 11 species (9.1%) that were uplisted (*i.e.*, moved to a higher category of threat), 24 species (19.8%) that were downlisted (*i.e.*, moved to a lower category of threat), 15 species (12.4%) that were deemed to now have sufficient information and were removed from the category Data Deficient (DD), and 55 species (45.5%) that remained the same category as their previous assessment (Fig. 3). Where change occurred, more species have moved to lower threat categories than to higher categories, however all category changes are because of non-genuine reasons (*i.e.*, new information, taxonomic revision, improved knowledge of the criteria, or incorrect data used previously) rather than genuine changes in extinction risk. A list of all the category changes for all species on the IUCN Red List is made available after each update on the Summary Statistics page of the website (4).

We continue to make progress towards our goal of updating all amphibians on the IUCN Red List. The ARLA relies on valuable research from around the world to provide new and improved information for amphibian species. The accomplishments thus far are largely because of the dedication and efforts of the ASG members

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who volunteer their time, including the ARLA national and regional coordinators, assessors, contributors, and interns, as well as the support of the ARLA partners. Our sincere gratitude is extended to all who have been and continue to be involved!

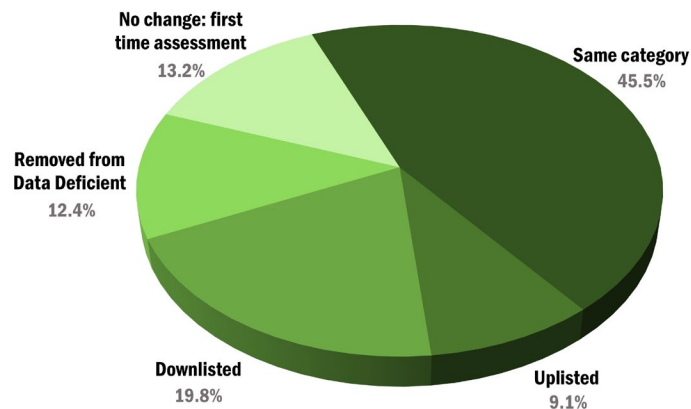


Fig. 3. Changes in IUCN Red List category for assessments published in the November 2016 IUCN Red List update.

We welcome any questions about the results, assessments or our strategy. If you have data or knowledge to contribute to an assessment, we would appreciate your input!

Discover additional information on the species highlighted in this article among thousands of others at: www.iucnredlist.org.

Mark Scherz of Zoologische Staatssammlung München catches us up on the 20 Madagascar amphibians included in the November 2016 IUCN Red List update, while Dr. John Measey, Alex Rebelo and Dr. Jeanne Tarrant of the South African Frog Re-assessment Group (SA-FRoG) fill us in on the conservation status of the 21 amphibian species from southern Africa.

SPOTLIGHT ON MADAGASCAR

MARK D. SCHERZ

Almost all 313 of Madagascar’s currently described frog species have now been re-assessed or assessed for the first time since the ACSAM2 (A Conservation Strategy for the Amphibians of Mada-



Fig. 4: The Savaka Diamond Frog (*Rhombophryne savaka*), described in June 2016, was recently assessed as EN because of its restricted range and ongoing habitat loss. Photo: Mark D. Scherz.

gascar) meeting in Madagascar in 2014. Most recently, twenty species, including two species described in 2016, were re-assessed. The majority of these are LC, because prioritization led to the least threatened species being re-assessed last. Among these LC species are twelve *Mantidactylus* species, a genus of mostly nocturnal frogs that tend to be found in the vicinity of flowing water. These frogs typically having rather wide distributions that preclude their listing in higher threat categories, and may also be tolerant to quite significant deforestation, though not in all cases.

Of great interest to international stakeholders will be the new statuses of two *Mantella* species, Madagascar’s poison dart frogs. *Mantella laevisgata* was downlisted from Near Threatened (NT) to LC, while *M. haraldmeieri* was uplisted from VU to EN. Both of these changes have more to do with the way that the IUCN Red List Categories and Criteria are applied than changes to our knowledge of the species, which has been a distinct trend throughout the re-assessments of Madagascar’s frogs. Two new species of *Rhombophryne* described in 2016 from Madagascar’s north east were published in the November 2016 update as well, both of which are assessed as Endangered due to their small distributions inside forest that is disappearing rapidly.

SPOTLIGHT ON SOUTHERN AFRICA

BY ALEX REBELO, JOHN MEASEY AND JEANNE TARRANT

The Southern African Frog Re-assessment Group (SA-FRoG) met in November 2015 with 16 representatives from Angola, Malawi, South Africa, and Zimbabwe, whose combined expertise on amphibians is considered to cover the entire region. During the workshop, 70 southern African species were assessed, and 21 of these have been officially updated in November. Of these, 13 did not change their status, six were downlisted and two uplisted. None of these represented genuine changes, but rather changes in data availability.

For example, Pickersgill’s Reed Frog, *Hyperolius pickersgilli*, has been downlisted from CR to EN based on an increase in survey and research effort since 2008. This has extended the previous range to the north and south of known sites, reaching a new total of 25 sites for the species. However, most of these sites are in unprotected areas. Furthermore, the development of a Biodiversity Management Plan (BMP-S) for *H. pickersgilli* has resulted in active management at several unprotected sites and at least one site has been acquired for long-term protection and several others have plans for future habitat protection action. In addition, monitoring protocols have been developed and employed at several sites to provide sub-population estimates and monitor impact of conservation interventions, such as removal of alien vegetation.

Uplisted from EN to CR was the Northern Moss Frog, *Arthroleptella subvoce*, for which 10 years of monitoring data show extreme fluctuations in abundance estimates that demonstrate the vulnerability of sub-populations to fire. Of concern is the increasing frequency of fires in the region coupled with the slow ability of this species to recover. Lastly, the Cave Squeaker, *Arthroleptis troglodytes**, was last seen in 1962 from high elevations of the western Chimanimani Mountains in eastern Zimbabwe. This species remains listed as CR(PE), as recent survey efforts have failed to find this species at its only known locality. Availability of locality data for South Africa enables increasingly accurate assessments for most of its 125 species, but assessments for species occurring in other countries continue to be hamstrung by data deficiency.



Fig. 5: Pickersgill's Reed Frog (*Hyperolius pickersgilli*) has been downlisted from CR to EN as a result of an increase in research efforts. Photo: Nick Evans

References:

1. Frost, D.R. Amphibian Species of the World, American Museum of Natural History, New York, USA, <http://research.amnh.org/herpetology/amphibia/index.html> (2016).
2. IUCN Red List of Threatened Species. Version 2016.3. Status category summary by major taxonomic group, http://cmsdocs.s3.amazonaws.com/summarystats/2016-3_Summary_Stats_Page_Documents/2016_3_RL_Stats_Table_3a.pdf (2016).

3. International Union for Conservation of Nature, Conservation International and NatureServe, Global Amphibian Assessment, http://www.natureserve.org/sites/default/files/projects/files/amphibian_fact_sheet.pdf (2004).
4. IUCN Red List of Threatened Species. Version 2016.3. Summary statistics, <http://www.iucnredlist.org/about/summary-statistics> (2016).

**Arthroleptis troglodytes* has since been rediscovered in Zimbabwe (see page 15).



What: Amphibian Conservation Research Symposium

Where: University of Kent, Canterbury, Kent, UK

When: 23rd to 25th June 2017

Keynote speakers:

Helen Meredith (Amphibian Survival Alliance)
 Phil Bishop (IUCN SSC Amphibian Specialist Group)
 Jean-Marc Hero (Griffith University)

Find out more, and register at
www.amphibians.org/acrs

Key dates:

March 2nd – abstract deadline (posters, oral presentation)
April 2nd – registration closes

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