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Conservation news for the herpetological community

Regional Focus *Sub Saharan Africa*

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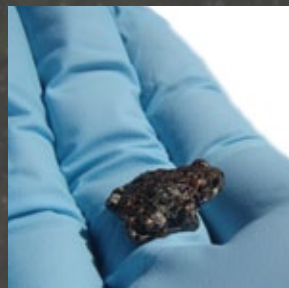
First New Frog Discovery for Angola in 40 Years

Chela Mountain Reed Frog
(*Hyperolius chelaensis*).
Photo: W. Conradie.



Conservation Evidence

Amphibian Conservation
Call for Evidence



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African Amphibian Working Group 2012 and IUCN Red List assessment of Threatened African Amphibians

By Simon Loader, Michele Menegon, Fabio Pupin, Ariadne Angulo & John Measey



Photo: Michele Menegon.

On May 28th at Museo delle Scienze in Trento, Italy, over 80 people gathered for the 15th meeting of the African Amphibian Working Group (AAWG). This meeting had the highest number of participants in the thirty year history of the AAWG. People from all over Africa, Europe, and North America attended to present their research on a range of topics. Highlights included talks on the current status of chytrid presence and absence across Africa (David Blackburn, David Gower, Johannes Penner and Che Weldon) and its likely origin in Africa (David Blackburn). Ecological and conservation studies conducted across East (Patrick Malonza, and James Vonesh), West (Laura Sandberger, and Mareike Hirschfeld) and Southern (Les Minter) Africa were also covered. Taxonomic issues were outlined for a range of groups (Rafael O. de Sá, Eli Greenbaum, Michael Barej, Victor Wasonga, and Elizabeth Scott-Prendini), and broader evolutionary studies on African amphibians were also addressed (Rayna Bell, Lucinda Lawson, Krystal Tolley and John Measey). Jos Kielgast and Bill Branch presented on exciting new work carried out in Democratic Republic of Congo and Mozambique, areas that still remain poorly sampled and understood. We were fortunate to have plenary talks on Madagascar (Franco Andreone), South African Batrachology (Louis du Preez), African caecilian biology (Mark Wilkinson), and a history of

AAWG (Alan Channing). Most importantly, the meeting was an opportunity to celebrate the contributions of Professor John Poynton, one of the premier herpetologists working on African amphibians. Talks were given by colleagues on John's academic contributions (Kim Howell and Don Broadley). We also had the pleasure to hear John give a plenary talk on the fauna of the Afrotemperate region of southern and eastern Africa, a topic that he has contributed towards since the start of his scientific career nearly 60 years ago. The contributions of John Poynton will be summarized in a forthcoming issue in the African Journal of Herpetology (Volume 62; Issue 1).

A reassessment workshop of Threatened and selected Data Deficient African amphibians was conducted following the AAWG meeting, given the gathering of a number of African amphibian experts. The aim was to update the Threatened African amphibian assessments in the IUCN Red List of Threatened Species™, as the last comprehensive assessment for this region was carried out in 2002 in Watamu, Kenya. The workshop was funded principally by a grant from the Mohammad Bin Zayed Species Conservation Fund, and further complementary funds were kindly provided by the IUCN Species Survival Commission (SSC) Chair's Office, the



IUCN SSC Amphibian Specialist Group Regional Chair for Southern Africa, John Measey, facilitating amphibian assessments. Photo: Jennifer Luedtke.

IUCN-CI Biodiversity Assessment Unit (BAU) and the Deutsche Gesellschaft für Herpetologie Terrarienkunde, all of which enabled the contributions of African amphibian experts, as well as workshop facilitation and preparatory work in advance of the workshop. In particular, a huge effort was made to obtain point locality data so as to generate the best possible maps for each species. The workshop took place between 1st – 4th June 2012, with the assessment of West and Central African species taking place between 1st – 2nd June with approximately 12 attending participants, and Eastern Afrotropical species being reassessed between June 2nd – 4th, with approximately 15 participants. Over the course of the workshop a total of 165 amphibians were preliminarily assessed (if recently described) or re-assessed, 57 of them corresponding to West and Central African species and 108 corresponding to Eastern

Afrotropical species. In the case of reassessments, several changes have been proposed: for Eastern Afrotropical species, there are 27 uplisting and 16 downlisting proposals, 12 changes in criteria but not category, and 11 calls for a Data Deficient assessment. A total of 42 assessments were maintained with the previous category/criteria combinations. For West and Central African species, there are two proposed uplistings, four downlistings, two changes in criteria but not category, and six proposals for Data Deficient. It is worth noting that there were 12 West and Central African species being assessed for the first time, of which 50% were assessed as Data Deficient and the remaining six were assessed as Critically Endangered (N=1), Vulnerable (N=2), Near Threatened (N=1) and Least Concern (N=2). However, it is quite likely that there will be further proposed changes, as there are a number of instances where additional follow-up is required in terms of accessing additional assessment-relevant information. Once assessments are completed they will be sent for external review; if reviewers agree with the assessments they will then be submitted for consideration to be published on the IUCN Red List of Threatened Species™ (www.redlist.org).

We wish to thank all workshop participants for their effort and input, as well as those experts who were not able to attend the event but who generously provided information in advance of the workshop and/or who are also assisting with the follow-up process. We are also grateful to the organizations that made the workshop possible, from providing funding to assisting with logistics.

The next meeting of the African Amphibian Working Group will take place in Uganda in two to three years' time. Watch for announcements in future issues of *FrogLog*.



The Critically Endangered *Nectophrynoides wendyae*. Photo: Michèle Menegon.

Conservation of the Western Leopard Toad by a Dedicated Multi-Stakeholder Group in the City of Cape Town

By John Measey¹, Suretha Dorse² & Alison Faraday³

Habitat change is still the biggest threat to amphibians globally. Of the different types of habitat change, urbanization is probably one of the most heterogeneous changes of an amphibians' environment. Although roads, paved areas and buildings represent amphibian free environments, parks and gardens have the opportunity of holding suitable breeding and foraging habitats for many anuran and urodele amphibians (e.g. 1, 2). In addition, these (often peri-urban) areas are the places where a majority of the human population have their encounters with amphibians, providing conservationists with a unique opportunity to engage in amphibian issues.

The City of Cape Town is situated at the south-westernmost tip of Africa with a population of 3.8 million people. It is a typical African city, with a rapidly increasing population (approximately 50,000 per annum), and going with that the intensification of urbanisation throughout its 2,460 km². However, it is situated in an extra-ordinary area, in the heart of the Cape floristic region: a mega-diverse area with 19 distinct vegetation types and an estimated 3,250 indigenous plants. Perhaps not surprisingly, 17 out of the 19 vegetation types are threatened (CR, EN & VU) in the latest national biodiversity assessment, mostly due to agriculture and the rapid expansion of the city since the 1940s, with little regard for conservation planning (3). The fynbos biome is also the centre of remarkable anuran diversity, and the peak of the endemic diversity happens to centre on the area encompassed by the City of Cape Town (Figure 1).

The Western leopard toad (*Amietophrynus pantherinus*) was first assessed as threatened in 1988. In the City, this toad breeds in the "southern suburbs" coinciding with acid soils of the Sand Fynbos (see Measey & Tolley 2011). Within these areas, this species appears to depend on a level of disturbance to keep water bodies open and foraging areas productive. Like many large bufonids, it undergoes an annual migration to and from large open water-bodies, in which large congregations of adults form during the antipodian winter (typically August). Migrations became notorious as mass mortality events during the 1940s, when roads neighbouring large breeding sites became impassable due to the build-up of toad carcasses. This coincided with the on-going expansion of these peri-urban areas (3), so that over a number of years populations quickly dwindled. More recently, a new threat from a domestic exotic congener, the Guttural toad (*Amietophrynus gutturalis*), has begun to expand its distribution within the City of Cape Town (see Measey & Davies 2011).

The decline of the Western leopard toad did not go unnoticed, and several volunteer groups formed in different areas of its range to raise awareness of the plight of this species and to help avoid casualties during the mass migration events. Each volunteer group operated within discrete peri-urban areas, and there was little involvement from other conservation stakeholders. Despite long hours on wet nights by many individual volunteers, the toad populations continued to decline so that in 2004, this species was listed as Endangered (EN) with much the same set of increasing threats.

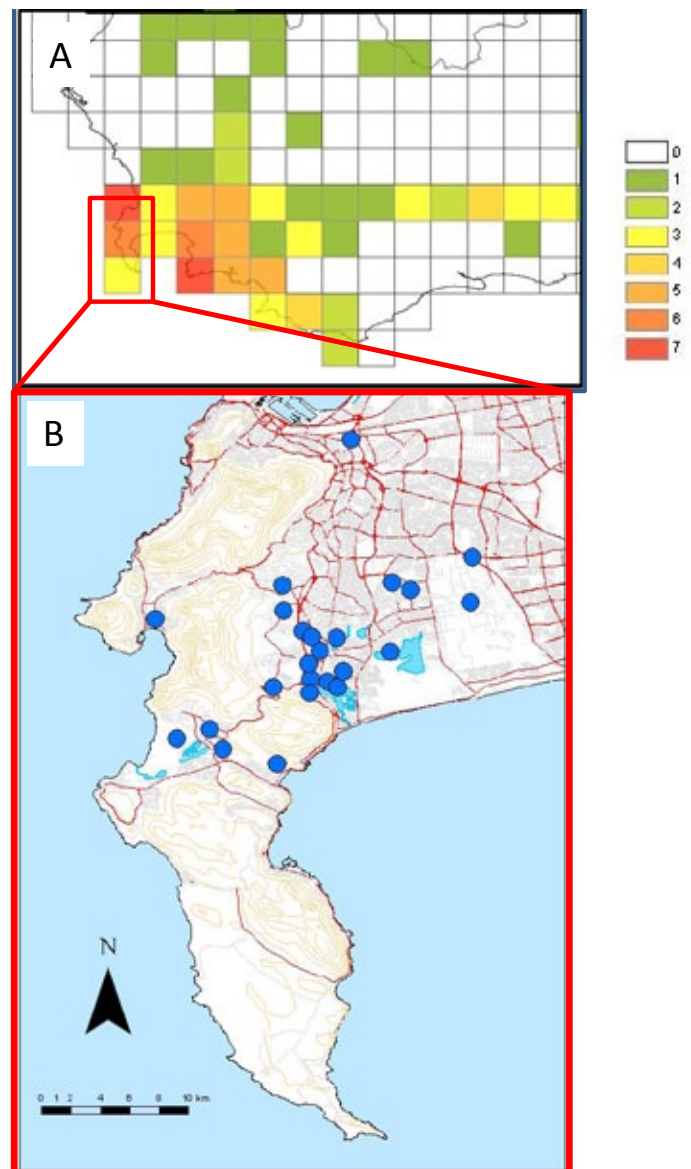


Fig. 1A: The southwestern Cape of South Africa has a remarkable assemblage of anurans demonstrated by the high level of endemicity (<20 quarter degree grid squares). B Despite the Cape Peninsula having a large area of protected land, the Western leopard toad breeds (blue points) in peri-urban areas.

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endangered
the Western Leopard Toad

Fig. 2: The Western leopard toad is a large charismatic bufonid which quickly wins over the help of volunteers. The Western leopard toad Conservation Committee logo emphasises the need for vigilance of this threatened species.

In addition, the conservation messages coming from the different volunteer groups were not consistent and covered only a fraction of the area that the toad inhabited.

In November 2009, the South African National Biodiversity Institute (SANBI) organized a stakeholders meeting, bringing together all parties interested in the conservation of the Endangered Western leopard toad. The objective was to assess conservation actions throughout the range of the species, as well as to plan a co-ordinated effort for future conservation activities. A major result of the meeting was the formation of the Western leopard toad Conservation Committee (WLT-CC), which constituted members from each of the extant volunteer groups as well as representatives from the official conservation bodies: SANBI, CapeNature, South African National Parks and the City of Cape Town. The goal of the WLT-CC is to reduce the threat level of the Western leopard toad through co-ordinated conservation actions from all stakeholders (Figure 2). Actions taken to improve the conservation of this species are considered in the light of aiding the conservation of all small native vertebrates in the region.

The result of a combined approach to conservation of this species has been remarkable. Existing and new volunteer groups became empowered by pooling resources and sharing knowledge with

conservation professionals. Here we highlight some of the achievements through examples, which we believe will make a lasting impact on the conservation of this species.

EDUCATION

Through a combined approach of educating homeowners (in whose gardens most toads reside), dispelling myths and misperceptions and teaching school children about the conservation needs of the Western leopard toad, a ground swell of awareness has been generated. Volunteer groups have enlisted schools, scout groups, conservation groups and homeowner associations in their areas to tell residents about the benefits and importance of conserving the animals. For example, in 2011 more than 1,000 school children learned about Lenny the Leopard toad. They also discovered how to prevent toads drowning in their swimming pools; how to cultivate the kind of gardens that suit toads; what to do if they find a toad in the road and how to educate their parents about toads. The talks are aimed at children in Primary Schools and are kept fun and interactive. The Year of the Frog (2010) saw the opening of an automated puppet show in Cape Town's Two Ocean's Aquarium, which is played to thousands of visitors every day, including hundreds of local school children. Consistent and complimentary messages provided in all of these conservation education initiatives, highlight the current and future needs of Western leopard toads.

CITY OF CAPE TOWN PLANNING GUIDELINES

With limited legislated environmental control over development applications on a local authority level, the City's environmental staff is continually investigating ways of ensuring the effective protection of the Western leopard toad (as well as other threatened species). Mapping of the known breeding sites and the detailed distribution range of the Western leopard toad is carried out on an annual basis by WLT-CC members and forms the basis for informing land use management and development applications assessed by the City's environmental department. This information has been incorporated into the City's GIS tool as part of the Biodiversity Network of the City of Cape Town. In collaboration with the WLT-CC, a Construction Phase Environmental Management Plan and Checklist, as well as a Development Design Checklist was compiled and incorporated into development applications within the distribution range of the Western leopard toad. Inappropriate building plans, such as impermeable boundary walls, are also influenced during the formal approval process while conditions of approval are imposed to regulate and guide future land use where possible. Additionally, brightly coloured stickers on building plans assist in creating awareness and guiding the actions of homeowners and construction teams. The City's environmental department has further signed service level agreements with other line functions responsible for the maintenance of public land within the Western leopard toad's distribution. These agreements changed the operational management of these spaces and watercourses to ensure the protection of the Western leopard toad during crucial periods of their life cycle, and are continuously reviewed in light of the changes in distribution informed by the GIS layer. The City also drives extensive awareness campaigns through their official web site, specific environmental education programmes and the production and distribution of information leaflets and posters.

HABITAT RESTORATION

Increasing urbanization regularly leads to a reduction of wetland areas, and this is also the case in Cape Town. However, the utilities of wetlands are increasingly recognised, resulting in restoration of areas, which were previously filled in. The City of Cape Town Environmental Resource Management Department provided funding for the restoration of a Western leopard toad breeding site on the Cape Peninsula. The breeding site was historically known as Skilpadsvlei and situated in the Kommetjie area. The wetland was drained and subsequently filled in by the then City Council during the 1940's. Skilpadsvlei used to be the only known breeding site for the Western leopard toad in the Kommetjie area and the restoration project entails the removal of the fill material followed by appropriate indigenous planting to restore as much as possible of the historic wetland system. With on-going awareness campaigns, proper veld management interventions and continued monitoring in partnership with the local community and relevant interest groups, the hope is to see active breeding at this site again within the next few years.

MIGRATION AWARENESS

As road kill during the annual breeding migration causes hundreds of deaths, awareness before and during the migration is essential. Car bumper stickers, education boards, posters and visible patrols all add to public awareness. In 2011 a series of Toad Traffic Reports aired on two local radio stations. Volunteers conduct recruitment drives annually, usually in local shopping centres. Shoppers are

made aware of the annual migration of the toads across our roads in search of their breeding grounds, and those interested are encouraged to become volunteers. The WLT-CC remains in close contact with volunteer co-ordinators during these periods and ensures service level agreements with city departments are adhered to.

In addition to each of these key areas, the volunteer groups continue to patrol targeted areas during the annual migration of adults, and later the movement from breeding sites by juveniles (typically in December). While the actions of many individuals have helped this threatened anuran in the past, we believe that the co-ordinated action of a greater community through the auspices of the WLT-CC will achieve our ultimate goal of reducing the threat level so that future generations will be able to enjoy this charismatic species.

For more information about the current activities of the WLT-CC, visit the web site: www.leopardtoad.co.za

Acknowledgements

The WLT-CC contains representatives from the City of Cape Town, SANParks, CapeNature, SANBI and co-ordinators for all of the volunteer groups. We extend our thanks to all members, past and present. We acknowledge the importance of the combined efforts of many individuals from each of these organisations in tackling the conservation of all small vertebrates. We extend our special thanks to all of the volunteers who go out on dark wet nights to move toads from the roads.

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