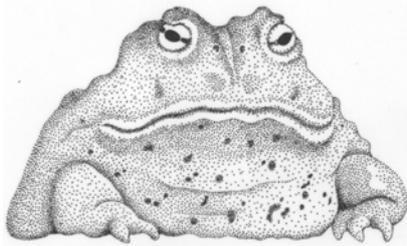


# FROGLOG

Newsletter of the IUCN /SSC Amphibian Specialist Group (ASG)

February 2007, Number 79



## Amphibian Declines in Africa

By Tim Halliday

The 8th meeting of the Herpetological Association of Africa (HAA) was held in Potchefstroom, South Africa from 24 to 27 November, 2006. The meeting, sponsored by the DAPTF, was organised by Louis du Preez. It provided a very interesting overview of work on amphibians currently going on in southern Africa, including a number of projects funded by the DAPTF.

In a workshop on amphibian declines, Les Minter reviewed the status of southern African amphibians; 20 endemic species are endangered, and habitat degradation threatens more species than any other factor. Ché Weldon summarised recent information about chytridiomycosis in Africa. The disease is widespread in southern and east Africa but does not appear to have caused mass mortality events. Kevin Smith discussed different methods for monitoring amphibians and suggested that determining occupancy over a large area provides more useful data than intensive monitoring of individual sites. James Harrison presented plans for the next stage in the development of the Southern Africa Frog Atlas.

During the main symposium, several talks dealt with amphibian decline issues. Ché Weldon reported a survey of frogs in Madagascar that suggests that chytridiomycosis is absent from the island, but warned that Madagascan frogs are probably highly susceptible to the disease, should it be introduced. Chytridiomycosis is endemic in southern Africa, but seems rarely

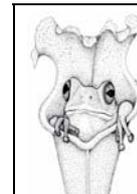
to cause mass mortality. Kevin Smith reported studies of stream frogs in the Drakensburg where mortality does occur, at higher altitudes, in *Strongylopus hymenopus*, but the impact of this on populations is not yet clear. He also reported that chytrid-infected tadpoles of *Heleophryne natalensis* develop distinctive markings around their mouthparts; no mass mortality in this species has been observed.

The African bullfrog *Pyxicephalus adspersus* is threatened by accelerating habitat loss in many parts of its range; while many breeding sites are protected, less attention has been paid to its terrestrial habitat. Using radio-telemetry, Caroline Yetman, has found that females disperse further from breeding sites than males, suggesting that loss of terrestrial habitat may threaten females more than males. James Harvey, working on the critically endangered moss frog *Arthroleptella ngongoniensis*, has located several new populations, revealing that its habitat requirements are not as constrained as was previously thought.

The endangered leopard toad *Bufo pantherinus* has a very restricted range that is seriously threatened by human development. It disperses more than 500 m from breeding sites and very large numbers are killed on roads. The long-term survival of this species depends on improving both town planning and public awareness. Atherton de Villiers reported on the continuing long-term monitoring of the Table Mountain ghost frog *Heleophryne rosei*. This very restricted population is reasonably stable,

but is under continuous threat from a variety of factors, including water extraction and climate change. Because its tadpoles take more than a year to reach metamorphosis, it is very dependent on perennial streams. John Measey described his work on the landscape genetics of the Kenyan frog *Schoutedenella xenodactyloides* which, surprisingly, suggests that this tiny frog can disperse long distances across unsuitable dry savannah.

Ernst Baard reported on recent changes in legislation and policy in South Africa with regard to protected, threatened, alien and invasive species, and was optimistic that these will open the way to more effective conservation of amphibians. Following the meeting, I visited the impressive new amphibian breeding facility at Johannesburg Zoo, which is starting its work by developing techniques to keep and breed frogs, using five common South African species.



An update on the amphibian richness of Gabon and its representation in national parks

By: Olivier S.G. Pauwels and Mark-Oliver Rödel

The Equatorial area between Cameroon and Congo has long been neglected by amphibian researchers. Nevertheless, the amphibian fauna of Gabon greatly benefitted from a series of intensive field studies within the last decade, which provided information on amphibian richness and the description of several new taxa. These recently described species are: the astylosternids *Leptodactylodon blanci* (the first

record of this genus from Gabon) and *L. stewarti*, the bufonid *Werneria iboundji* (the only representative of this genus from Gabon) and the hyperoliid *Leptopelis crystallinoron* (see Ohler, 1999; Burger *et al.*, 2005; Lötters *et al.*, 2005; Rödel & Pauwels, 2003; Rödel *et al.*, 2004).

A number of other additions to Gabon's amphibian fauna were also made during the same period, increasing the national species list from 72 (the number given in the first comprehensive list published for the country by Frétey & Blanc, 2000) to 88 species. However, a dozen new species records still require taxonomic investigations (see details in Pauwels & Rödel, 2006) as some of them might represent new taxa. The recent surveys were conducted at Crystal, Loango, Lopé and Moukalaba-Doudou National Parks and surrounding areas; Ivindo National Park was surveyed in the seventies. Eight national parks in Gabon remain data deficient. Detailed lists for the surveyed parks were provided by Burger *et al.* (2006) and Pauwels & Rödel (2006).

Of the 88 species currently recorded from Gabon, 76 (86.4%) are known from at least one Gabonese national park, including all near endemics (*sensu* Anderson, 2002), but only three (50%) of the endemics. *Werneria iboundji* (known from a single waterfall on Mount Iboundji in the heart of the Massif du Chaillu, south of Lopé National Park), *Phrynobatrachus ogoensis* and *Hymenochirus feae* are still yet to be found in a national park. Amphibian records are also available for only one additional national park, namely Pongara, with a single species record (*Arthroleptis variabilis*). Thus, for seven of the 13 national parks of Gabon, not a single species record is currently available.

A huge number of mountain peaks, caves, waterfalls, and possible Pleistocene refuges are yet to be explored inside the national parks of Gabon. No species is currently known from more than four parks, except *Silurana epitropicalis* recorded

from five. Among the surveyed national parks, Moukalaba-Doudou contains 57 described species and 13 species of unresolved taxonomic status.

Priority actions for amphibian conservation in Gabon should include (1) verifying the presence of all species not yet recorded (especially the three endemic species) in protected areas, by finding them in national parks or by creating biodiversity sanctuaries that contain viable populations; (2) inventory and explore sites of special interest (such as inselbergs, caves, waterfalls) outside the national parks to detect populations and species of possible conservation concern; (3) document possible short-term and long-term conservation threats in each of Gabon's national parks.

Currently, Gabon is trying to diversify its economy, predominantly based on oil and logging industries, alternatives like ecotourism are highly encouraged, and good species lists for parks and herp viewing are a possible ecotouristic product.

For more information, please see the full report by Pauwels & Rödel (2006) or contact Olivier S.G. Pauwels at [osgpauwels@yahoo.fr](mailto:osgpauwels@yahoo.fr).

#### Acknowledgements

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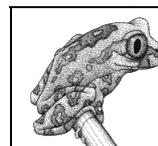
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#### The protection of threatened amphibians in Colombia

The Central Cordillera of Colombia is a 650 km-long mountain range that spurs northwards from the bifurcation of the northern Andes. Its diverse topography, broad altitudinal span and great climatic variations support a wide variety of ecosystems and associated high levels of endemism. Topographical and ecological isolation from other Andean ranges by the arid Cauca and Magdalena river valleys, which flank the Cordillera, has accentuated local endemism. Above 1000 m asl, the c.41,000

km<sup>2</sup> Central Cordillera supports one of the highest concentrations of range-restricted and threatened amphibian species in the world.

The Central Cordillera's rich volcanic soils and mild climate have attracted human colonization and exploitation for many centuries. Farming of Colombia's most important economic commodity, coffee, is based on the subtropical slopes of the Central Cordillera. Today, this supports the greatest population concentration in the country, including major cities such as Medellín, Ibagué, Pereira and Armenia. In addition, gold mining was rampant across the region in the early 20<sup>th</sup> century, with associated colonization and deforestation resulting in virtually no intact natural vegetation remaining in the region.

The plight of amphibians in the region is directly related to the continued severe landscape modification and lack of protected areas. Furthermore, most of the protected areas in the Central Cordillera are situated on the highest massifs dominated by páramo and snow-capped peaks (e.g. Parque Natural National Los Nevados), thus the subtropical forests remain at considerable risk. Less than 10% of original forest cover in the Central Cordillera remains but recent investigations estimate this figure to be closer to 4% between 1000-2000 m elevations.

Whilst much of the region is deforested, a few isolated forest patches survive. The largest of those fragments is called "La Forzosa" (6°59'58N; 75°08'33W), encompassing pristine upper premontane humid forest (1400-1820 m asl) within the watershed of the Quebrada La Soledad. CORANTIOQUIA, the local environmental authority, purchased 150 ha of this pristine forest fragment in 1999 following the discovery of a new bird species for science, the Chestnut-capped Piha, *Lipaugus weberi*.

With the combined support of Conservation International, The IUCN/SSC Amphibian Specialist Group, Robert Wilson, and Robert Giles, the American Birding Conservancy has purchased an

additional 1,300 acres to be owned and managed by Colombian partner, Fundación ProAves.

For further information please contact Don Church [dchurch@conservation.org](mailto:dchurch@conservation.org).

### Gloomy future of an Iranian newt; *Neurergus kaiseri*

By Farhang Torki

Based on a recent study (Torki, *in press*), two Iranian newts (*Neurergus kaiseri* and *N. microspilotus*) have shown unusually high longevity for salamanders. Unfortunately, they are receiving little conservation attention from local people as many specimens are caught for a feast held each year. In addition, many are captured for pets and die in captivity due to lack of proper care. As a result, the population density of *N. kaiseri* in the wild has decreased and become scattered.

This is very dangerous for the continuity of the species as it is distributed in only one type of locality. This is not necessarily true for *N. microspilotus*, as it is distributed over several localities and research shows that healthy populations still remain.

Although a government conservation programme does exist, it has not been successful because it lacks stability and continuity. It is my opinion that unless the government and local communities work to conserve both of these species, then *N. kaiseri* will become extinct in the near future with *N. microspilotus* possibly following close behind.

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### Former DAPTF Seed Grants

The following papers report work supported by previous DAPTF Seed Grants. Anyone wanting a copy of a report should contact the author in the first instance. If you cannot reach the author, please contact Tim Halliday at: [t.r.halliday@open.ac.uk](mailto:t.r.halliday@open.ac.uk).

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**PRESS RELEASE:  
Protecting the world from  
harmful introduced species**

People around the world can access information about harmful introduced species easier than ever thanks to the September 2006 launch of a new website for the Global Invasive Species Database (GISD). The world's premier source of free, authoritative information about introduced species that threaten native biodiversity and livelihoods now has improved content and functions.

While only a small proportion of the living organisms that are moved around the world with human activity and global trade actually cause harm, those that do can be devastating. Such "biological invasions" are now considered one of the biggest factors in biodiversity loss and extinctions. However, fighting back is possible provided communities and decision makers are aware of the threats and have access to information on what they can do about it.

"The Global Invasive Species Database alerts people to the causes and consequences of invasive species and provides practical information about effective prevention and management options. It helps protect natural resources and livelihoods," says Michael Browne from the Invasive Species Specialist Group of the Species Survival Commission of IUCN-The World Conservation Union.

The GISD, which has been online at [www.issg.org/database](http://www.issg.org/database) since 2000 and mirrored by the National Biological Information Infrastructure (NBII) of the US Geological Survey [www.invasivespecies.net/database](http://www.invasivespecies.net/database) currently receives more than 900 unique visitors per day (50,000 hits per day).

It is also available in CD-ROM format, allowing people to access up-to-date, comprehensive invasive species information where internet access is restricted or non-existent. In keeping with the philosophy that anyone should be able to access information that can help them to protect their environment, access to the GISD is free.

For more information, please contact Michael Browne at [issg@auckland.ac.nz](mailto:issg@auckland.ac.nz)



**Froglog Shorts**

**The ASG has a new website!**

Please see our newly created website [www.amphibians.org](http://www.amphibians.org).

**The Sabin Award for Amphibian Conservation**

Thanks to a generous donation from Andrew Sabin, the ASG announces a new annual award to recognize individuals and groups who have made a significant contribution to promoting the conservation of globally threatened amphibians. The award will be open to individuals or groups from all disciplines relevant to amphibian conservation and research anywhere in the world. Nominations of individuals from developing countries are highly encouraged.

Individuals or groups will be considered based on contributions in any area. Examples include:

- Habitat Protection
- Capacity Building
- Education / Awareness
- Policy
- Species recovery projects
- Advances in understanding threats and how they may be mitigated
- Improving knowledge of status and distribution of amphibians
- Innovative approaches to conservation

The award of 25,000 USD will be presented to the selected recipient at Conservation International's New York dinner in April. Award recipients and their work will be featured on the ASG website (<http://www.amphibians.org>)

Please submit nominations to: [asg@conservation.org](mailto:asg@conservation.org) before March 15. Nominations should include the name of the individual or group and a detailed description of what they have done and its significance for amphibian conservation. A review panel representing a broad cross-section of disciplines will assess nominees.



**Job Announcement**

**Executive Officer, Amphibian Specialist Group (ASG)**

The Amphibian Specialist Group (ASG) is seeking a conservation leader who can take on the global amphibian decline within the broader context of the biodiversity crisis. The ASG, a unit of the IUCN Species Survival Commission, strives to conserve biological diversity by stimulating, developing, and executing practical programs to study, save, restore, and manage amphibians and their habitats around the world. The ASG is taking IUCN's Specialist Group model to the next level of effectiveness through the establishment of a Secretariat that will serve as a dynamic hub to coordinate a global web of stakeholders and to leverage the intellectual, institutional, and financial capacity towards shared, strategic amphibian conservation goals. The Executive Officer will be responsible for coordinating the activities of the ASG to ensure a unified, strategic and sustainable approach to global amphibian conservation, effecting policy change and communicating the work of the ASG to raise the profile of amphibian issues in the public arena. Please see the full job announcement at <http://www.parcplace.org/2006-03-24CI.htm> for details.

**Instructions for Authors**

FROGLOG publishes a range of articles on any research, discoveries or conservation news relating to the amphibian decline phenomenon. We encourage authors describing original research to first make submissions to a refereed journal and then, if appropriate, to publish a synopsis in *Froglog*. Submissions should be in English, less than 1,000 words and follow the style of past FROGLOG issues (as should references). Due to space and formatting restrictions, please do not submit images, maps, figures or tables. Short news items and press releases are also acceptable. Please submit potential contributions to Jeanne McKay at: [J.E.Mckay@kent.ac.uk](mailto:J.E.Mckay@kent.ac.uk) Accepted submissions will be printed in order of receipt.

**FROGLOG is the bi-monthly newsletter of the IUCN / SSC Amphibian Specialist Group**