



A response to the article “Taxonomic errors and inaccuracies in Sri Lanka’s Red List, 2007: a cautionary note”

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As members of the team that was involved in the preparation of the ‘2007 Red List of Threatened Fauna and Flora of Sri Lanka’ (IUCN Sri Lanka & the Ministry of Environment and Natural Resources, 2007), we have paid careful attention to a recent article published by Bahir & Gabadage (2009) in the *Journal of Threatened Taxa*, which has attempted to judge or interpret the quality of this publication. After careful review of the article under reference, we have decided to submit a response in order to address erroneous interpretations and misleading statements contained therein, based on reasoned judgment or analysis. The 2007 Red List of Threatened Fauna and Flora of Sri Lanka will be referred to herein, as the 2007 National Red List.

The 2007 National Red List was the result of a three-year collaborative project implemented by IUCN (International Union for Conservation of Nature) in Sri Lanka and the Ministry of Environment and Natural Resources. This project, evaluated the conservation status of selected fauna and flora species in Sri Lanka using IUCN’s Global

Red List Categories and Criteria, adapted to a regional level. The project was steered by the National Species Conservation Advisory Group (NSCAG) appointed by the Biodiversity Secretariat of the Ministry of Environment and Natural Resources.

As elaborated on page 11 of the 2007 National Red List, the project followed an extensive consultative process, involving a group of expert reviewers appointed by the Biodiversity Secretariat. These reviewers consisted of over 50 researchers, taxonomists and naturalists, within 11 taxonomic groups. It also consulted relevant stakeholders such as protected area managers, and non-governmental environmental organizations in the country. It is evident that Bahir & Gabadage (2009) have not read this section of the document as the statements made in the background as well as conclusions in their article have implied that appropriate specialists have not been consulted in the preparatory process of this national document. Ironically the first author, Mr. Mohamed Bahir was one of the appointed expert reviewers as can be seen from the list contained in page viii.

Bahir & Gabadage (2009) have ignored facts, in their effort to point out errors in taxonomy, nomenclature, citations, and data, in the 2007 National Red List. We will address all of their unsubstantiated allegations, with relevant facts, in the following sections.

The science of taxonomy is dynamic and fluid, continuously evolving and changing as new data emerges. Taxonomists often find themselves at odds with each other in changes relating to nomenclature. Therefore it is obvious that the taxonomic changes emerging *after* the publication of the 2007 National Red List could only be addressed in its future revisions.

Bahir & Gabadage (2009) have pointed out nomenclatural issues relating to the amphibians in the 2007 National Red List, without noting the fact that the document has chosen to adopt the list of threatened amphibians from the Global Amphibian Assessment (www.globalamphibians.org). The decision to adopt the threatened amphibians list from the Global Amphibian Assessment was taken in order to avoid duplication of efforts, a decision which was endorsed by the National Species Conservation Advisory Group (NSCAG) of Sri Lanka, as well as the expert reviewers, including the foremost amphibian taxonomists and researchers in the country. This fact is mentioned in the methodology section of the document (page 12). It is to be noted however, that the national list was further supplemented with evaluations of amphibian species described more recently from Sri Lanka (Meegaskumbura & Manamendra-Arachchi 2005; Fernando et al. 2007; Meegaskumbura et al. 2007).

Bahir & Gabadage (2009) have further highlighted *Cnemaspis tropidogaster* (Boulenger 1885) as being

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erroneously evaluated as an endangered species in the 2007 National Red List, when it is actually an extinct species known only from its lectotype. However, they have evaded the fact that the paper which described *C. tropidogaster* as an extinct species (Manamendra-Arachchi et al. 2007) was actually published two weeks after the release of the 2007 National Red List. It is noted that they have also refrained from citing this paper, the first author of which was a member of the expert review team (mentioned in page vii of the 2007 National Red List) that evaluated and endorsed the list of threatened reptiles included in the 2007 National Red List.

Bahir & Gabadage (2009) have commented on the taxonomic validity of a recently described endemic lizard, *Cophotis dumbara* (Samarawickrama et al. 2006). Since another group of researchers concurrently described the same species as *Cophotis dumbarae* (Manamendra-Arachchi, Silva & Amarasinghe, 2006), in the preparation of the 2007 Red list, the relevant articles of the International Code of Zoological Nomenclature (ICZN, 1999) were carefully reviewed, with the available background information relating to these two publications, in order that the valid scientific name of the species could be determined. Based on our review of ICZN, and further consultations with the International Commission on Zoological Nomenclature, the taxonomic validity of *Cophotis dumbara* Samarawickrama, Ranawana, Rajapaksha, Ananjeva, Orlov, Ranasinghe & Samarawickrama 2006 was confirmed. The taxonomic validity of *Cophotis dumbara* was further verified by Hallermann & Böhme (2007). This species is also listed in reputed world faunal and/or reptile databases, including the Encyclopedia of Life (www.eol.org). It is cited in this manner in the recent IUCN global list of threatened species (www.redlist.org) as well. Amidst this clear backdrop, we find it quite puzzling to understand the attempts by Bahir & Gabadage (2009) to downgrade the discovery of Samarawickrama et al. (2006). Their allegation that Samarawickrama et al. (2006) did not consult local agamid taxonomists is a subjective personal opinion, which is irrelevant to the 2007 National Red List.

Bahir & Gabadage (2009) have pointed out a few typographical errors in the 2007 National Red List of Sri Lanka. Although the document was peer reviewed and carefully proof read during the publishing process, a few errors have crept in. Typographical errors could easily occur in any publication, as evident from such errors even in the article by Bahir & Gabadage (2009). They have also highlighted instances of authors' names being misspelled in the 2007 National Red List of Sri Lanka. Such typographical errors are common in any publication and are also seen in the paper under reference in the misspelling of "Goonatilake" as "Goonatileke".

Bahir & Gabadage (2009) have also attempted to mislead readers through erroneous interpretations of citation issues in the 2007 National Red List, highlighting

three publications (i.e., Bossuyt et al. 2004; Bahir & Surasinghe 2005; Bambaradeniya 2006a). As clearly mentioned in the methodology section of the 2007 National Red List (page 12), the distribution data on the taxonomic groups selected for evaluation were compiled using published papers, articles, unpublished technical reports and checklists, museum records and herbarium records. Bahir & Surasinghe (2005) only discuss the conservation status of Agamid lizard species, without including the distribution data of species. As this paper lacked relevant information on the distribution of Agamid species in Sri Lanka, it was not used for the evaluation of species, hence not cited under data sources of the 2007 National Red List.

The valuable scientific work of Bossuyt et al. (2004) was also not considered for species evaluations, for the same reason stated above. However, the inadvertent omission of this paper, which provides an insight to local endemism within the Western Ghats-Sri Lanka Biodiversity Hotspot, within the overview section of the document is regretted. A table that depicts statistics on the species richness of inland and marine fauna of Sri Lanka was adapted from the editorial article (Bambaradeniya 2006b) of a publication on the fauna of Sri Lanka (Bambaradeniya, 2006a) for the overview section of the 2007 National Red List (page 3), and this paper is correctly referenced, in contrary to the erroneous statement made by Bahir & Gabadage (2009), referring to it as an expanded reference.

Bahir & Gabadage (2009) have also misinterpreted information related to endemic freshwater fish species in Sri Lanka, stated in the 2007 National Red List. The Red list publication highlights 44 endemic freshwater fish species in Sri Lanka. This list is based on an article written by the eminent freshwater fish researcher and taxonomist of Sri Lanka Mr. Rohan Pethiyagoda (Pethiyagoda 2006), which appeared in an IUCN publication on the status of fauna of Sri Lanka (Bambaradeniya 2006). Bahir & Gabadage (2009) have assumed that this data was obtained from Goonatilake (2007), which is not a taxonomic publication, but a useful field identification guide.

Open constructive criticism on any publication is very valuable especially in a nationally significant document such as the 2007 National Red List. This will enable revision and improvement for future updates, through the institutional mechanism established by the Biodiversity Secretariat of the Ministry of Environment and Natural Resources.

Having been closely involved in the document preparation process, we feel we are in a position to regretfully state that the article by Bahir & Gabadage (2009) appears to be aimed at undermining a consolidated national effort to enhance biodiversity conservation and management in Sri Lanka. This is further evidenced by their attempt to provide undue publicity to their article through a newly established NGO - The Taprobanica Nature Conservation Society, casual and irresponsible

