

A new resource for China

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In my country, as elsewhere in the world, when one wants information about animals, such as amphibians, one typically seeks out a field guide or a monograph. As the amphibian fauna around the world has grown (from about 4 000 species in 1985 to nearly 7 500 today), the books, too, have become thicker, heavier, and more and more unwieldy. These books might contain features to assist identification—written descriptions, keys, photographs and maps of the polygon variety and encompass known sites of occurrence. But the books quickly become out-of-date as knowledge increases and they rarely have information about phylogenetic relationships or display trees. But, we now live in a digital age, and young people, in particular, view books as old-fashioned and inadequate for their needs. The time is ripe for a new approach.

Welcome to the world of *AmphibiaChina* (2015). This is a new venture, from the Kunming Institute of Zoology, Chinese Academy of Sciences, and it is off to an impressive start. It was inspired by *AmphibiaWeb* (2015), a website that I initiated with colleagues in 2000 to try to centralize and keep up-to-date information concerning amphibians and their biology and conservation status. In addition, the *Amphibian Species of the World* (ASW) website (Frost, 2015), operated by Darrel Frost and sponsored by the American Museum of Natural History, provides access to the formal taxonomy of amphibians and additional information (for example, verbal descriptions of species ranges). Both are worldwide in scope and cover all amphibian species.

AmphibiaChina is more restricted in scope, to China, but that country has a very large amphibian fauna (over 400 species, typically with many new species described each year). The new site has some of the features of both of the worldwide sites, but is in a position to go into much more detail. I look forward to seeing not one or a few photos of species, but many. I encourage the use of maps showing specific locations, although these can be challenging to produce and maintain, because they are far superior to the kinds of maps one finds in books. Further, the new site offers novel features, such as an identification system based on DNA barcoding and phylogenetic trees of different clades. *AmphibiaChina* will be dynamic, constantly undergoing modification in accordance with newly generated knowledge, and improved according to experience and feedback as the site comes into use.

The need for an up-to-date resource, such as *AmphibiaChina* promises, can be illustrated by our rapidly changing understanding of Chinese amphibians. My own specialty is salamanders, Order Caudata, first considered in depth by the late Chinese biologist Mangven L. Y. CHANG (1936, *Contribution à l'étude Morphologique, Biologique et systématique des Amphibiens urodèles de la Chine* [in French]. Paris, Librairie Picart) (Chang, 1936), is especially well represented in China, where Chang reported three families and 16 species. Er-Mi ZHAO and Kraig Adler made Chinese herpetology accessible to the world in their grand summary of 1993 (*Herpetology of China, Contributions to Herpetology 10: 1-521*) (Zhao & Adler, 1993). They recognized 35 species. The time period from the mid-1990s to the present has witnessed a rapid growth of herpetology as a field of science in China, with the development of many active centers of research, and much emphasis was placed on discovery and taxonomy. The most recent published compendium of Chinese amphibians is the massive (629 pp; 260 mm×345 mm; more than 4 kg) book written by Fei et al (2012). This book recognizes 67 salamanders. However, there have been a number of changes since this book appeared and some are no longer recognized and some new ones have been discovered. Thus, at the present time *AmphibiaWeb* recognizes 73 species of salamanders (including Taiwan, which was also done by Fei et al, 2012). The only effective way to keep track of the rapidly growing knowledge base for Chinese amphibians is through the use of modern digital technology, and that is what *AmphibiaChina* promises to do.

It takes much effort to maintain a database such as has been established, especially in a period of intense research activity, including controversies over criteria for species recognition. The literature is very dynamic and ever-changing. We are learning more about the biology of these organisms daily and keeping track of the literature is possible only by constantly consulting journals, books and formal and informal reports. The internet/World Wide Web enables tracking knowledge in ways

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unimaginable just a few years ago.

A particular challenge for a website devoted to amphibians is the issue of population declines and disappearances of populations, and even species, around the world. Although this has been well-documented (AmphibiaWeb publishes an extensive list of new literature on this topic every month), despite the intense focus on this general phenomenon, we still lack a full understanding. Certainly the phenomenon is multifactorial, with many immediate causes: habitat modification, invasive species, infectious diseases, human exploitation, and others. However, in the background are more profound and even sinister issues related to global climate change. It will be a continuing challenge to sift through the available information and present a coherent picture of the status of amphibians in the world.

I will follow the development and evolution of AmphibiaChina with great interest. I hope to learn from it, and use it, and I hope that we can develop a good synergy between it and AmphibiaWeb, to our mutual benefit. My very best wishes for success to this new venture, which is off to an impressive start.

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