



IDENTIFICATION MANUAL

for Hands on Training workshop in Herpetology

August 2-5, 2016



Organized By:

**Herpetology Division and Training and Extension Division
Zoological Survey of India, Kolkata**

Is Taxonomy Still Important in Herpetology?

Indraneil Das

Institute of Biodiversity and Environmental Conservation
Universiti Malaysia Sarawak, 94300 Kota Samarahan
Sarawak, Malaysia.

e-mail: idas@ibec.unimas.my

From the discovery of new food and drugs, material for clothing, construction, and serendipitously, even the discovery of new cultures and continents, taxonomy has been vital for human welfare.

Now, well into the Twenty-First Century, can pickled specimens in ancient jars, flattened skins stored in cupboards and the like hold attention of the public? Can natural history museums compete for attention, for instance, with the variety on offer on television, online gaming and the internet?

Let's examine where natural history collection impacts us daily. Museums have not lived their usefulness. In fact, it can be claimed that never before have botanical and zoological collections been more relevant to human welfare. Briefly, such collections impact as diverse fields as taxonomy, systematics, ecology, ethology, palaeontology, population genetics, parasitology, agronomy, biogeography, art, music, history, ethnobiology, conservation, land use and resource management. It supports a multitude of industries in these fields, employing scientists, historians, technicians, painters and illustrators, information technology, and many others. Specifically, the roles played by such collections include:

1. Confirm identity of specimens
2. Document past concepts of species
3. Provide locality data
4. Serve as repository for new collections
5. Provide data for taxonomic/systematic revisions
6. Help verify scientific names of species
7. Provide secure repository for type specimens
8. Facilitate exchange of specimens and ideas among institutions
9. Documentation of phenology and life cycles
10. Provide basis for illustrations
11. Provide material for genetic analysis
12. Provide information for spatial studies of past and present distributions
13. Curate voucher photographs for distributional studies
14. Provide information on threatened or extinct species
15. Provide specimens for comparisons with fossils
16. Provide reference samples for the identification of food plants and animals
17. Provide material for anatomy and morphology, including variations
18. Repository for voucher specimens in environmental impact analyses, ethnobiology, etc
19. Provide material for analysis for pollution, bioprospecting, etc
20. Provide information for studies of early expeditions
21. Provide material for teaching
22. Promote appreciation of biodiversity

In the field of herpetology in the Subcontinent, taxonomy plays a critical role. Species don't exist in terms of many purposes, including conservation and management, unless they are named, a primary role of taxonomy.

Yet, we don't know the true extent of diversity of the world's or the region's herpetofauna. Of the world's 10,391 species of reptiles known till April 2016, 54 were described in the current year alone (Uetz and Hošek, 2016. The Reptile Database. <http://www.reptile-database.org>). For amphibians, 7,520 species were described till June 2016, of which 36 were described in 2016 (Frost 2016. Amphibian Species of the World. <http://research.amnh.org/vz/herpetology/amphibia>).

These figures, along with the rapidly accelerating quantum of species descriptions for the Indian region, are suggestive of resurgence in interest in taxonomic studies of the region's herpetofauna.