Impact factor-driven taxonomy: deterrent to Indian taxonomists?

The recognition of the value of biological diversity, especially after the famous Rio Convention a decade ago, has resulted in several national and international plans aimed at the exploration of biodiversity[1]. Biodiversity is a magic word that opens many doors in funding agencies[2]. The three definitions of biodiversity (subspecific, specific and supraspecific) involve genetic, organism, population and ecological approaches, even though the concern about biodiversity stems from the still unanswered question 'How many species are there on Earth?'[3].

India is one of the mega biodiversity centres with several plans on biodiversity research. But, the sad news is our poor efforts to strengthen science of species description, naming and classification, which include taxonomy and systematics. Insects being highest in number among total animals, research on insect taxonomy and systematics must be a concern at present[4]. The lack of big initiatives in public sector, lack of interest by private sector (this may be because of non-profitability) and hesitation of young researchers in taking taxonomic challenges are major concerns of current taxonomy.

Today's young researchers can become good taxonomists if they are mentored by experienced taxonomist, because expertise in taxonomy comes with experience. Unfortunately, at present world individual career growth as a researcher is important to obtain funds for research. Nowadays, standard measures of academic performance include impact factor[1] of the journals one publishes in, and an author's *h*-index which is based on citations. Unfortunately, most of the journals in which taxonomists publish are not included in the Institute for Scientific Information (ISI) *Journal Citation Reports*, and if they are included, the impact factor is very low when compared with other journals. The 'impact factor syndrome'[5] is one of the major reasons why young researchers are not attracted to taxonomy.

The present system of evaluation in many universities/research centres, encourages the workers having article in journals with greater impact factor compared to those who extensively worked on revisions of genera, descriptions and redescriptions of abundant new taxa, ecological and phylogenetic information, which have been published in journals of museum with no or less impact factor[6].

Another major setback is that several journals under influence of the 'impact factor effect' have shifted their editorial scope from descriptive taxonomy to phylogenetic and molecular research. The result is that today there are fewer communication channels for descriptive taxonomy, and these do not usually have wide circulation. Descriptive taxonomy nevertheless remains crucial for all biological disciplines, as we all use species and genus names to refer to organisms. In particular, biodiversity studies, including those on ecosystem services, ultimately rely on taxonomic frameworks.

More than a decade ago, many papers[7,8] addressed how the present impact factor calculations do not work to assess taxonomic contributions. But, nothing seems to have changed. Most of the present researchers take up molecular diversity work without proper taxonomic background of a particular insect. This results in misinterpretations of the science behind the work. Many Indian journals also prefer only molecular diversity aspects, because of the growing *h*-index and impact factor. At present we need a sound taxonomic framework with the main aim of attracting young taxonomists. By ignoring the traditional jobs of taxonomy it is only a matter of time when a misidentified disease vector or pest species at a port of entry or conflated species with similar barcode genes but significantly different attributes can contribute to decisions with disastrous consequences in applied or experimental biology.

In summary, taxonomic work has profound implications for all kinds of scientific disciplines, specially biodiversity analysis. We need to build a strong taxonomic foundation for documentation of biodiversity. There have been many previous attempts concerning taxonomic citations and impact factors[9,10]. We once again appeal to colleagues and editors of journals for a much broader acknowledgement of the scientific work of taxonomists.

1. Boero, F., *Trends Ecol. Evol*., 2001, **16**, 266.
2. Wall, D. *et al.*, *Trends Ecol. Evol*., 2001, **16**, 52–54.
3. May, R. M., *Science*, 1988, **241**, 1441–1449.
4. Narendran, T. C., *Curr. Sci*., 2001, **81**, 445–447.
5. Lakhotia, S. C., *Curr. Sci.*, 2010, **99**, 411.
6. García, J. M. G., Espinosa, F. and Gómez, J. C. G., *Zool. Baetica*, 2008, **19**, 15–49.
7. Krell, F. T., *Nature*, 2000, **405**, 507–508.
8. Garfield, E., *Nature*, 2001, **413**, 107.
9. Werner, Y. L., *J. Nat. Hist*., 2006, **40**, 1285–1286.
10. Venu, P. and Sanjappa, M., *Curr. Sci*., 2011, **101**, 1397.

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United Nations International Year of Water Cooperation–2013

In December 2010, the United Nations General Assembly declared 2013 as the United Nations International Year of Water Cooperation, and the 2013 World Water Day was dedicated to water cooperation. The objective of this International Year was to raise awareness, both on the potential for increased cooperation, and on the challenges facing water management in light of the increase in demand for water access, allocation and services. The year highlighted the history of successful water cooperation initiatives, and identified important issues on water education, water diplomacy, transboundary water management, financing cooperation, national/international legal frameworks and the linkages with the

Millennium Development Goals. It also provided an opportunity to capitalize on the momentum created at the United Nations Conference on Sustainable Development (Rio + 20), and to support the formulation of new objectives that will contribute towards developing water resources that are truly sustainable[1].

Also in December 2003, the United Nations General Assembly proclaimed the period 2005–2015 as the International Decade for Action 'Water for Life'. The decade officially started on World Water Day, 22 March 2005. The primary goal of the 'Water for Life' Decade has been to promote efforts to fulfil international commitments made on water and water-related issues by 2015. Focus is on furthering cooperation at all levels, so that the water-related goals of the Millennium Declaration, the Johannesburg Plan of Implementation of the World Summit for Sustainable Development, and Agenda 21 can be achieved[2].

The challenge of the Decade has been to focus attention on action-oriented activities and policies that ensure the long-term sustainable management of water resources, in terms of both quantity and quality, and include measures to improve sanitation. Achieving the goals of the 'Water for Life' Decade requires sustained commitment, cooperation and investment on the part of all stakeholders from 2005 to 2015 and far beyond. The Decade also provides an opportunity for everyone to get involved, and is active all around the world[2].

Access to safe drinking water remains an urgent necessity, as 30% of urban and more than 50% of rural households in India still depend completely on untreated surface or groundwater[3]. While access to drinking water in India has increased over the past decade, the tremendous adverse impact of unsafe water on health continues[4]. It is estimated that about 21% of communicable diseases in India is water-related[5]. The highest mortality from diarrhoea is said to be among children under the age of 5, highlighting an urgent need for focused intervention to prevent diarrhoeal disease in this age group[6]. Presently, about 62 million people in 20 states of India suffer from endemic fluorosis problem[7].

The United Nations is responsible for coordinating the 'Water for Life' Decade through UN-Water, the inter-agency mechanism for implementation of the Johannesburg Plan of Implementation of water-related provisions and the Millennium Development Goals (MDG) concerning freshwater. The target of the MDG formulated in 2000 was halving the number of people who do not have safe drinking water and basic sanitation facilities by the year 2015 (ref. 8). The UN General Assembly recognized safe drinking water and sanitation as a human right in its 2010 resolution[8]. According to the latest estimates of the WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation, released in early 2013, 36% of the world's population (2.5 billion) lacks improved sanitation facilities, and 768 million people still use unsafe drinking water sources. According to the report, the MDG drinking water target has been achieved globally, but the sanitation target is far off track and unlikely to be met by 2015. Presently, the main issue is sustainability of any project. Particularly in rural areas of developing countries some of the projects implemented are defunct due to non-involvement of stakeholders/people. So it is emphasized that community approach for sustainability should be adopted in these projects.

1. http://www.unwater.org/watercooperation-2013.html
2. http://www.un.org/waterforlifedecade/
3. Singh, R. K. *et al.*, *Curr. Sci.*, 2005, **89**, 794–811.
4. WHO/UNICEF, Meeting the drinking water and sanitation target, WHO, Geneva, 2004.
5. Brandon, C. *et al.*, Asia Environment Division, World Bank 7, October memo, 1995.
6. Gadgil, A., *Annu. Rev. Energy Environ.*, 1998, **23**, 243–286.
7. Susheela, A. K., 18th WEDC Conference, Kathmandu, Nepal, 1992, pp. 229–233.
8. http://www.un.org/apps/news/story.asp?-NewsID= 35456#.Uj_aefnn_IU

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The translocated Kurdi Angod sacred site – a conservatory of RET plants of the Western Ghats

Monuments that hold some historical and mythological significance are considered as sacred sites and are active centres of worship and symbols linking man with divinity[1]. Often situated in remote locations and forested areas, their vicinity is endowed with a rich floristic diversity consisting of many unique and rare medicinal plants endemic to the region. Plants belonging to such rare and threatened taxa are conserved in such sacred sites as they are mostly located away from human settlements. Kurdi Angod is one such site in Kurdi village, Sanguem taluka in south Goa. Located deep within a remote forest patch at the foothills of the Western Ghats, the site holds a laterite 'Shivalinga' that has survived the invasions and persecution by Muslim rulers and the Portuguese. This structure built by the Kadambas in the 10th century AD was originally situated 17 km southeast of the Kurdi village on the banks of the River Salaulem. It was systematically dismantled and reconstructed between 1975 and 1986 by the Archaeological Survey of India (ASI), which feared its submergence due to the construction of a dam nearby. Entrance to this unique laterite stone monument is under strict vigil of ASI and is completely secluded from human interferences as developmental activities are prohibited in the vicinity. Even religious offerings, touching or plucking of plants are strictly prohibited within its precincts. The site is bordered by high boundary walls on three sides with the rear side extending into the forest.

Human habitation in response to population increase has altered the natural vegetation to a large extent. As a result, forests now exist only in small fragmentary pockets and in areas that have