

MYCOLOGICAL REJUVENATION AND REVOLUTION

The 2010s are rapidly promising to become a pivotal decade of rejuvenation and revolution in mycology – and on several fronts. Increasingly, mycologists are appreciating that the destiny of the subject is in their hands. More importantly, there is an increasing recognition that mycologists have to act and be the drivers of change. Without drivers there can be no forward movement, and the drivers have to be mycologists. Mycologists need to have a destination in mind, and to plan a route circumventing possible obstacles that might divert or block their progress. But even the most experienced drivers may sometimes find unexpected obstacles in their way, or need to take detours that at first evoke protests from their passengers. What is key, however, is agreement as to the eventual destination – and the vision of that destination needs to be held in common by all on board.



In international mycology, the International Mycological Association (IMA), building on the success of the 9th International Mycological Congress (IMC9) in Edinburgh last year, is taking steps to rejuvenate the study of fungi wherever it can. This it is doing through support for regional mycological associations and committees, the series of six Young Mycologist Awards (for which nominations by regional committees are due by 1 October 2011; see *IMA Fungus* 1(2): (18)–(19), 2010), initiation of a newsletter, and an in-depth analysis of geographical activities and organisations. In addition, it has been encouraging to see an increase in the number and size of scientific journals devoted entirely to mycology, especially ones for which the driving force has been from mycologists based in Asia – notably *Fungal Diversity*, *Journal of Fungal Research*, *Mycology*, *Mycosphere Online*, and *Mycosystema*. This burgeoning of research output is a tangible testament to a growing interest in fungi, and another indicator of rejuvenation.

Mycology is also now acting to ensure that it is integrated into various global actions in biology more intensively than ever before. Examples of this are seen in involvement in the Consortium for the Barcode of Life (CBOL) initiative, discussed further in this

issue (pp. (5)–(6)), and increased involvement with IUCN – the world conservation union – especially through the efforts of the International Society for Fungal Conservation established last year (see *IMA Fungus* 1(2): (27)–(29), 2010). Mycologists are also increasingly striving to free themselves of the shackles of their botanical “parents”, both on the conservation front (this issue, pp. (14)–(18)) and in aspects of the nomenclature of fungi (see *IMA Fungus* 1(2): 143–147, 2010; this issue, 2(1): 105–112, 2011). The issue of responsibility for fungal nomenclature is the subject of formal proposals to be voted on at the Nomenclature Section meeting of the XVIIIth International Botanical Congress in Melbourne on 18–22 July 2011 – the issue may well be viewed as a revolution by traditional botanists, but is an aspect of mycology becoming sufficiently mature to be independent (see also this issue, pp. (14)–(18)). The results of the Nomenclature Section meeting will be reported in the next issue of *IMA Fungus* . . .

Currently the most contentious issue in mycology is how to progress from the system of dual nomenclature for pleomorphic fungi to a situation of one name for one fungus species. This is a case where, in the mycological community as a whole, there is a majority consensus as to the destination (see *IMA Fungus* 1(2): 143–147, 2010), but concern as to the route the drivers recommend and the projected time of arrival. Impatient with the *status quo*, and not prepared to wait for what they consider outdated rules to be changed, different approaches are being taken. This is not only a grass-roots revolution sparked by some of the most active and respected researchers of today, but one with factions of varying degrees of extremist views. Clear guidance on this matter is needed, and to that end a symposium to address the issue of ‘One Fungus = One Name’ was held in Amsterdam on 19–20 April under the auspices of

the International Commission on the Taxonomy of Fungi (ICTF). That occasion (see this issue, p. (7)–(8)) led to the drafting of the Amsterdam Declaration on Fungal Nomenclature also published in this issue (*IMA Fungus* 2(1): 105–112, 2011). The Declaration is intended as a road-map for the drafting of new regulations on this contentious matter, and though the ride will inevitably be bumpy in parts, it represents the smoothest route so far proposed to reach the desired destination within an acceptable time-frame.

One revolution which has come to be almost universally welcomed in mycology is the use of molecular phylogenetic methods to unravel evolutionary relationships and add precision to the circumscription of species, genera, families, and further levels of the classificatory hierarchy. While the approach is now increasingly routine where DNA can be recovered, it continues to excite and yield surprises, not least the newly recognized ‘cryptomycota’ basal to the main fungal clade (see this issue, pp. (21)–(22)) and the extent of novelty in sequences recovered from environmental samples – a system for the recognition of which is becoming urgent (see *IMA Fungus* 2(1): 105–112, 2011).

Revolutions are far from unique to mycology, and it may be of interest to reflect that Julian Huxley (1887–1975), evolutionary biologist and amongst other things also the first Director-General of UNESCO, stressed the need to enter a revolution consciously, with a set purpose, a proclamation of aims held in common, and with the determination not to be thrown off course by minor battles or other diversions (Huxley 1944).

Huxley JS (1944) *On Living in a Revolution*. London: Chatto & Windus.

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