

Obtaining cultures for teaching practicals in mycology

In order to run effective and inspiring microbiology practicals for undergraduate students, it is necessary to have access to cultures of suitable fungi and other microbes. Over the course of my time at Aberystwyth, I have on several occasions experienced the loss of valuable cultures used in teaching, usually due to reorganisation or staff changes affecting technical support staff. Such problems are exacerbated by the progressive reduction in technical support in all universities. Once lost, it can prove extremely difficult to obtain replacement cultures and the costs associated with obtaining fresh cultures from international culture collections (usually upwards of £70 each) can prove prohibitive.

One excellent example is *Phycomyces blakesleanus*, useful not only to exemplify sexual reproduction in fungi but also to illustrate phototrophic responses, following a convenient 7 days of incubation. Recent advances (e.g. Idnurm *et al.*, 2008; Sanza *et al.*, 2009) in our understanding of mating genes and light perception in this organism have also enhanced our ability to link theoretical concepts presented during lectures to experiments conducted by the students themselves. Doubtless others who put on undergraduate practical classes have other fungi that are similarly useful, and it is also likely that cultures of these organisms are also difficult to replace and, like *P. blakesleanus*, on occasion temperamental in long term storage.

For some years now, I have relied on cultures supplied by companies which specialise in the provision of microbial and other cultures (*Drosophila*, rotifers, *Daphnia* etc.), mainly to schools e.g. Sciento (<http://www.sciento.co.uk>), Blades Biological (<http://www.blades-bio.co.uk>) or Timstar, Crewe (<http://www.timstar.co.uk>). Since the costs are a fraction of those charged

by the larger international collections, these companies can in effect serve as a repository for longer term storage, essentially charging me an annual fee to provide these cultures. However, since these companies need to turn a profit, they are only likely to maintain their fungal collections if there is demand. It is quite possible that others exist in the UK or beyond, and if so it would be useful for such information to be shared via the pages of this Newsletter. In fact, some readers may be schoolteachers who may (presumably as ardent amateur mycologists) be keen to provide some mycological dimension to their 'A' level Biology courses, subject to curriculum constraints.

I would welcome feedback from any readers who might find this information useful. Others of you may have ideas for novel but tractable class experiments, details of which could be shared via short articles in *Mycological News*. An increase in the number of undergraduate and 'A' level students exposed to exciting lab experiments involving living cultures cannot fail to spread the word about the fascinating world of the fungi.

Gareth Griffith

References

Alexander Idnurm, I., F.J. Walton, A. Floyd & J. Heitman (2008). Identification of the sex genes in an early diverged fungus. *Nature*, **451**, pp.193-196.

Sanza, C., J. Rodríguez-Romerob, A. Idnurm, J.M. Christie, J. Heitman, L.M. Corrochano and A.P. Eslava (2009). *Phycomyces* MADB interacts with MADA to form the primary photoreceptor complex for fungal phototropism. *Proc. Natl. Acad. Sci. USA*, **106**(17), pp.7095-7100.

Newsletter Articles

Do you have any items you would like to see published in the Newsletter which would be of interest to members?

We would love to receive short reports of any activities, upcoming events, items of interest, etc.

Please send items to the office or email to: mycologistnews@britmycolsoc.info