David George Mann (age 55), currently Senior Principal Research Scientist (Individual Merit Promotion) Royal Botanic Garden Edinburgh (1996, renewed 2002, 2008). Previously University Demonstrator, then Lecturer, Botany Department, University of Edinburgh (1978-1990; Director of Studies, University of Edinburgh (1989-90); Deputy Director (Deputy Keeper) and Head of Science, Royal Botanic Garden Edinburgh (1990-96). Education: BSc Hons (class I) Botany, University of Bristol 1974; BA Combined Studies, Edinburgh College of Art, 2006; PhD, "Studies in the Family Nitzschiaceae (Bacillariophyta)", University of Bristol, 1978; DSc, Phycology, University of Bristol, 2006. G.W. Prescott Award (Phycological Society of America) 1990/1 (with Prof. F.E. Round & Dr R.M. Crawford); G.W. Prescott Award (Phycological Society of America) 1995/6 (with Prof. C. van den Hoek & Prof. Hans-Martin Jahns). Honorary Professor, University of Glasgow (1996–). 1st prize and Highly Commended, Novartis–Daily Telegraph Visions of Science photographic competition: Close-up and Art categories (2003); The Visual Arts Award, Scottish International Education Trust (awarded annually to an undergraduate student in the Scottish Art Colleges) (2004); Graduate printmaker scheme, Glasgow Print Studio (2005/6).

After Higher Education in Bristol, I have spent the whole of my working life in Scotland. I hope I have made a useful contribution to fundamental research in the biodiversity and systematics of diatoms. After my PhD on *Nitzschia* and its relatives (mostly never written up for publication) I focused on higher-level relationships among raphid diatoms, introducing or reintroducing new sets of characters based on developmental, cytological and reproductive characters, as well as working with the SEM, then still a relatively recent introduction to diatom studies, This phase culminated in a major (c. 50%) contribution to the major work on diatom biodiversity published by Round, Crawford and Mann (1990. The Diatoms. CUP). I have played a significant role in research on the diatom life cycle and sexuality and have developed collaborations that have demonstrated the diversity of mating systems in diatoms, overturning previous assumptions of free inbreeding. Building on life cycle studies in natural populations and clonal cultures, we have demonstrated through mating experiments (not undertaken previously in diatoms) that traditional species-level classifications of diatoms, based on morphology, were too coarse-grained: morphospecies often comprised several or many reproductively isolated 'biological species'. Now we have turned to molecular systematic studies, confirming the extreme species diversity of diatoms and making the first evaluation of DNA barcoding for the group. We have also investigated the possibilities of automated identification based on images. We have developed *Sellaphora* as a model species complex system (*Sellaphora*) for diatom systematics.

I have been concerned throughout my career to try to promote knowledge of diatoms and algae, through lectures, two major textbooks, several contributions as an editor (including 'Diatom Research' and 'Phycologia'), and most recently through art. A full publication list and other information are available on the Algae World website at http://rbg-web2.rbge.org.uk/algae/index.html.

Prospectus: The field of 'diatomology' is more active now than at any time during my career, in climate change research, genomics, biotechnology, silicification biochemistry, ecological monitoring and palaeoecological reconstruction, as well as systematics and taxonomy. Exciting new developments appear almost every week. I think the main challenge for ISDR is to become as inclusive as possible of the new disciplines, while retaining the sympathy and support of those working in more 'traditional' fields. There has not always been good understanding between diatomists from different countries or different research groups; indeed, this has affected my own working life negatively. I would therefore work hard to overcome remaining barriers and seek new ways to encourage collaboration across subject areas and national frontiers. ISDR could play a major role in promoting better knowledge of diatom biodiversity via the Web.