## **Obituary Note**

## **Dr Humphrey Graham Smith** 1945–2012

Humphrey Smith, a key figure in the ecology and biogeography of Antarctic Protozoa, died of cancer after a short illness on 3 July 2012. He grew up in Bolton in Northern England and an old school friend remembers a very clever but mischievous child who also had surprisingly adult musical tastes (especially the work of

Handel). Indeed music was to stay important to Humphrey throughout his life as a singer, pianist and organist — in later life he played the organ for several of his local churches.

Some academic ecologists are obsessive naturalists from their earliest years – bird watching, chasing

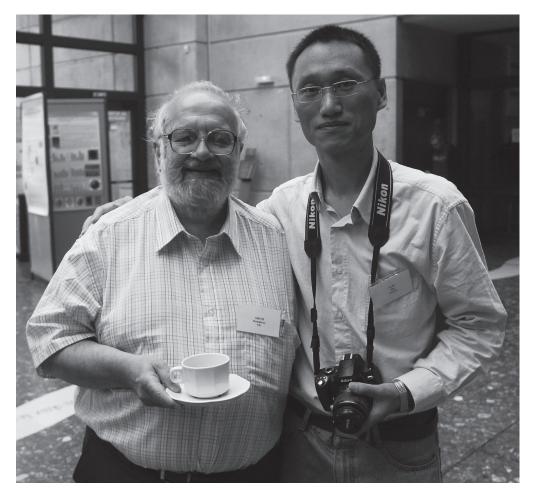


Fig. 1. Humphrey Smith with Jun Yang (Chinese Academy of Sciences and a co-author of two papers with Humphrey) at the 2009 International Testate Amoebae meeting in Montbéliard, France.

## 88 Humphrey G. Smith

butterflies or collecting plants as children – while others develop these interests later. At school Humphrey studied biology but was not a fanatical naturalist. However, the natural history end of biology clearly caught his interests and his first degree was a BSc in Ecology from The University of Edinburgh in 1967, followed by an MSc from Aberdeen in 1968 and a PhD on *Studies of the terrestrial protozoa of the maritime Antarctic* awarded by Edinburgh in 1973; his thesis was based on work done while employed as a microbiologist by the British Antarctic Survey (BAS) from 1968 to 1974. As far as I am aware his first scientific paper was a short report on the protozoa of the newly emerged volcanic island of Surtsey (Smith 1970), written while he

was a Masters student at the University of Aberdeen. However it was Antarctic protozoology that was to dominate his research publications. Humphrey spent a considerable time doing field work in the Antarctic during his PhD studies especially on Signy Island in the South Orkney Islands. He was on Singy during the austral summer of 1968–69 and returned and overwintered at the British Antarctic Survey base on this island in 1970, collecting samples to monitor the populations of the testate amoebae *Corythion dubium* throughout the winter months (Smith 1973). While returning from the 1970 trip he took the opportunity of collect biological samples from the remote and inaccessible St Pauls Rocks, in the tropical Atlantic Ocean, in May



Fig. 2. Humphrey in 2004 working in the lab at Coventry University in retirement. The sample he is looking at is from Ascension Island in the tropical south Atlantic (Wilkinson and Smith 2006).

1971 (Smith *et al.*, 1974). He also returned South again on sabbatical in the southern hemisphere summer of 1983/84 (his students organised a party in a Coventry night club to wish him well on the trip – much beer was consumed, especially by Humphrey!). The beer can't have helped with the weight problems he had most of his life and only serious dieting convinced BAS that he was fit enough for a sabbatical in the Antarctic. He also visited both the Antarctic and Arctic in retirement – these times as a tourist.

Humphrey's Antarctic work focused on the ecology and biogeography of the terrestrial protozoa. Much of his BAS work was summarised in a 104 page monograph on 124 taxa of protozoa from soil and moss samples from various Antarctic islands (Smith 1978). Most of his early papers were descriptive studies aimed at identifying the species present and in quantifying their population sizes and many were published in the British Antarctic Survey Bulletin and the monograph published in the British Antarctic Surveys 'scientific reports' series – arguably they would have had a wider influence if published in more readily accessible journals. These data later allowed both Humphrey himself, and other scientist, to make use of Antarctic information in global scale analyses of the factors influencing the distribution of protozoa - especially testate amoebae (e.g. Smith 1982, 1996; Wilkinson 2001; Yang et al. 2010). In collaboration with some of his students he also worked on the physiological ecology of Antarctic protozoa in the laboratory (e.g. Smith et al. 1990). Fifteen years ago in a paper in this journal Louis Beyons and Didier Chaedez (1997) named a new species of testate from Spitsbergen in the Arctic in Humphrey's honour. In their description of Schoenbornia smithi they summed up Humphreys importance writing that 'this species is named after Dr Humphrey G. Smith (Coventry University, U.K.), the main contributor to our knowledge of testate amoebae in the Antarctic'.

From 1974 he spent the rest of his career at Coventry Polytechnic (which later became Coventry University) continuing his association as an Honorary Research Fellow after his early retirement in 2002. He had a reputation as a charismatic and somewhat eccentric lecturer who always had a lot of time for his students. During his time at Coventry he also supervised approximately 15 PhD and MPhil students. It was at Coventry that I first met Humph (as he often signed himself in letters and emails) as I was an undergraduate there in the early 1980s. Taking about these times with former colleagues of Humphreys at his funeral what struck me

was the amount and ambition of the practical teaching in the early 1980's compared to what students receive in Britain today. Humphrey was very involved with the teaching of undergraduate ecology field courses around Dartmoor in S.W. England, which ran for many years, and I have memories of considerable amounts of analytical chemistry equipment being taken into the field in mini-buses for work on both plant and animal physiological ecology. My final year research project took over work that he had started on the biogeography of the testate genus Nebela in the Antarctic and sub-Antarctic zones and which he had been unable to find the time to work on properly himself (in the days before the internet this type of synthetic biogeography could be exceedingly time consuming involving chasing many obscure publications at specialist libraries). We published the results (Smith and Wilkinson 1987) but we were clearly ahead of the times in our interests, as it was some years before this paper started to be cited. Eventually Lara et al. (2008) used molecular methods that were almost unimaginable at the time of our original work, to show that one of the theoretical models we suggested for the history of the genus Nebela was probably incorrect.

In the 1990's Humphreys research output dropped off as he was very busy with administrative duties, being in charge of student admissions to environmental science and related degrees. During this time he also had an involvement in applied work on the role of microbes in breaking down hydrocarbon pollution in urban areas (Coupe et al. 2003). However following his early retirement he had more time for research, and the final decade of his life produced a series of papers mainly on aspects of testate biogeography. Of particular note was our joint paper on the distribution of Nebela (Apodera) vas (Smith and Wilkinson 2007) which has already become a textbook example of a free-living microbe with a geographically restricted distribution in Cox and Moore's (2010) Biogeography text - this textbook recognition rather pleased Humph.

This brief summary of Humphrey's achievements is in danger of missing out some the most important aspects of his life. Following the death of his mother he used money he inherited in 1998 to buy an area of woodland and set up Mabley Farm which is managed as a working farm and woodland, but also as a site for nature conservation and environmental education. The farm is run by two of his friends who he had met through his involvement with a local nature conservation charity. Woodland management and conservation

was another long running interest of Humphrey's – for example he contributed evidence to a British parliamentary report on the Scientific aspects of forestry in 1980 arguing that commercial forestry was potentially more compatible with nature conservation than usually assumed. In the many emails about Humph that I saw following his death the words that occurred repeatedly were 'friendly', 'nice' and 'kind'. Many also commented how supportive he had been to other scientists and students. Few of us could hope for a better epitaph!

Acknowledgements. I thank Bill Block, Jeffrey Haworth, Mark O'Brien and Mike Skidmore for biographical information and help with the British Antarctic Survey archives.

## REFERENCES

- Beyens L., Chardez D. (1997) New testate amoebae taxa from the polar regions. Acta Protozool. 36: 137–142
- Coupe S. J., Smith H. G., Newman A. P., Puehmeier T. (2003) Biodegradation and microbial diversity within permeable pavements. Europ. J. Protistol. 39: 495-498
- Cox C. B., Moore P. D. (2010) Biogeography; An ecological and evolutionary approach. 8th ed. John Wiley & Sons, New Jersey
- Lara E., Heger T. J., Ekelund F., Lamentowicz M., Mitchell E. A. D. (2008) Ribosomal RNA genes challenges the monophyly of the Hyalospheniidae (Amoebozoa: Arcellinida). Protist 159:
- Smith H. G. (1970) An analysis of Surtsey substratum for protozoa. Surtsey Reserach Progress Report 5: 78–79

- Smith H. G. (1973) The Signy Island terrestrial reference sites: III Population ecology of Corvthion dubium (Rhizopoda: Testacida) in site 1. Br. Antarct. Surv. Bull. 33&34: 123-135
- Smith H. G., Hardy P., Leith I. M., Spaull V. W., Twelves E. L. (1974) A biological survey of St Paul's Rocks in the equatorial Atlantic Ocean. Biol. J. Linn. Soc. 6: 89-96
- Smith H. G. (1978) The distribution and ecology of terrestrial protozoa of sub-Antarctic and Maritime Antarctic islands. British Antarctic Survey Scientific Reports No. 95
- Smith H. G. (1982) The terrestrial protozoan fauna of South Georgia. Polar Biology 1: 173-179
- Smith H. G. (1996) Diversity of Antarctic terrestrial protozoa. Biodiversity and Conservation. 5: 1379-1394
- Smith H. G., Hughes J., Moore S. J. (1990) Growth of Antarctic and temperate terrestrial protozoa under fluctuating temperature regimes. Antarctic Science 2: 313-320
- Smith H. G., Wilkinson D. M. (1987) Biogeography of testate rhizopods in the southern temperate and Antarctic zones. Comité Nat. Français. Rech. Antarctiques 58: 83-96
- Smith H. G., Wilkinson D. M. (2007) Not all free-living microorganisms have cosmopolitan distributions - the case of Nebela (Apodera) vas Certes (Protozoa: Amoebozoa: Arcellinida). J. Biogeogr. 34: 1822-1831
- Wilkinson D. M. (2001) What is the upper size limit for cosmopolitan distribution in free-living microorganisms? J. Biogeogr. 28: 285-291
- Wilkinson D. M., Smith H. G. (2006) An initial account of the terrestrial protozoa of Ascension Island. Acta Protozool. 45: 407-413
- Yang J., Smith H. G., Sherratt T. N., Wilkinson D. M. (2010) Is there a size limit for cosmopolitan distribution in free-living microorganisms? A biogeographical analysis of testate amoebae from polar areas. Microb. Ecol. 59: 635-645