Vernon H. Heywood

Professor Frank Ainley Bisby
(24 April 1945 – 25 October 2011)

Frank A. Bisby at work.

The sudden and premature death on 25 October 2011 of Professor Frank Bisby, Professor emeritus of Botany in the University of Reading and a leading figure in the biodiversity informatics world, came as a profound shock to all who knew him. He had just returned from a conference in New Orleans and was continuing his hectic schedule of work.

Frank Bisby was educated at Abingdon School and at St. John's College, University of Oxford where after his BA he obtained a DPhil in 1970. He spent the first part of his career at the University of Southampton where he was successively Lecturer, Senior Lecturer, Reader and Royal Society/ Leverhulme Trust Senior Fellow in the School of Biological Sciences. In 1997 he was appointed to the Chair of Botany in the University of Reading and on his retirement in October 2010 he was made an emeritus professor.

In his own words his central research interest was in 'the functioning of the taxonomic profession as a whole, and how it both synthesizes knowledge from myriad sources worldwide and provides the key information infrastructure to all biodiversity knowledge'.

Initially he worked on legume systematics and numerical taxonomy (his DPhil at Oxford was on Numerical techniques in Plant Taxonomy). This interest in legumes was to continue throughout his career and included research on taxonomy, character coding, pollination, aphid resistance. He also worked on plant genetic resources of legumes and undertook germplasm collecting expeditions in Portugal, Syria, Turkey, the Caucasus and Tanzania

although regrettably for the last 20 years or so he devoted little time to this side of his work.

In the next phase of his career he combined his interest in numerical and computer methods in taxonomy and in legumes, developing the Vicieae database which then led in 1984 to his setting up ILDIS, the International Legume Database & Information Service. (ILDIS, http://www.ildis.org/), which was probably the first global species database and a precursor of the building blocks from which global taxonomic systems were later to be built. ILDIS was one of the earliest significant projects to use information technology to develop a global information resource for a major group of plants.

He became deeply interested in global master databases (Bisby 1994) which he described as ones in which data on species prepared carefully by specialists are made available to biologists at large. In 1990 he organized and ran the Delphi symposium 'Designs for a Global Plant Species Information System' funded by the European Community and the U.S. National Science Foundation (Bisby & al. 1993). This then led to his developing the project that was to be his main interest during the past 25 years – the Species 2000 programme and, with the Integrated Taxonomic Information System (ITIS), this provides the 'Catalogue of Life' resource for the GBIF, EoL and other portals and is used by numerous projects around the world.. In effect it became the default classification for many biodiversity informatics projects and Frank argued it was the original 'Encyclopaedia of Life'. The latest version of 24 October 2011 contained 1,370,276 species from 101 databases, a remarkable and outstanding achievement. Frank was not only the *auctor intellectualis* of Species 2000 and its leading advocate but was its Executive Director and was tireless in his efforts to secure the major national and international funding that allowed it develop and achieve its potential as a major tool for the assessment and conservation of biological diversity.

Managing and holding together such a complex organization required enormous dedication and commitment together with a punishing schedule of travel that took its toll on his other professional activities and on his personal life. It almost certainly contributed to his early demise.

As well as his academic duties at the University of Reading, and directing Species 2000, Project Coordinator of ILDIS, and leader of the 4D4Life and i4Life projects of the European Commission e-Infrastructures Programme, Frank was a member of the Governing Board of the Global Biodiversity Information Forum (GBIF), member of Database Committee of Consortium for the Barcode of Life (CBOL) and member of the UK BBSRC Bioinformatics & e-Science Co-ordinating group. He had been Treasurer of the Society for the Management of Electronic Biodiversity Data (SMEBD); delegate to International Council of Scientific Unions Committee on Data for Science and Technology (CODATA) and convenor of its commission on Standardized Terminology for Access to Biological Data Banks. He was the first Secretary of the Taxonomic Databases Working Group and its chair from 1989-92 (TDWG, http://www.tdwg.org/) and remained active in the organisation. He was a Research Associate Missouri Botanical Garden. He played an active role in the Linnean Society of London and was Honorary Botanical Secretary (1984-90) and Vice President (1987-89) and was Honorary Botanical Secretary of the Systematics Association (1970-87). He participated in the UK DEFRA Brogdale National (Apple) Collection project and was thus able to combines his interest in informatics with an

amateur interest in his own collection of early apple cultivars. He was Curator of the UK national collection of Vicieae.

His publications included c. 100 papers, two books, and three edited volumes (see Annex).

I was fortunate to know Frank Bisby during the whole of his professional career and worked closely with him on several projects. In 1985, when I was asked by Professor Gilbert Bocquet, then Director of Conservatoire et jardin botaniques, Geneva to convene a meeting of a small number of colleagues on the standardization of certain database fields in taxonomy, Frank was an obvious choice to include and was nominated as the first Secretary of the group that became in due course the Taxonomic Databases Working Group. We worked closely together in the subsequent years in establishing the organization that still flourishes today as Biodiversity Information Standards (TDWG). Again, when editing the UNEP *Global Biodiversity Assessment*, I called upon him to coordinate section 2 Characterization of Biodiversity (Bisby 1995), a task which he undertook with enormous enthusiasm. He was very supportive of my own database projects and was a constant source of good advice. His appointment to the Chair of Botany in 1998, meant that the Secretariats for the Species 2000 and ILDIS projects moved to Reading to add to the range of taxonomic and biodiversity informatics activities and he established there the Centre for Plant Diversity and Systematics.

When away from his desk and computer screen, Frank enjoyed outdoor life, walking and swimming. He ran many successful field courses in Spain for his students which were greatly enjoyed by the participants. I remember once waiting with him for a flight connection at Athens airport. We had two or three hours to wait and typically Frank decided to get down to the coast and go for a swim, thereby nearly missing his flight, rather than sit around. He was quite a private man and nothing gave him greater pleasure than escaping at weekends (when not travelling the world) to spend time with his partner Victoria (Vicky) at their home in Tisbury.

It is a tragedy that he died at the beginning of what should have been a long and no doubt full and active retirement. He had agreed to stay on at the University to see through his current projects and was closely involved in the process of seeking a new hosting agreement for Species 2000 Secretariat after the current agreement at the University of Reading ends in 2012. He will be sorely missed by many friends and colleagues across the world.

Annex: Publications of Professor Frank A. Bisby

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