



comment

chronicling microbiology

If you search for 'Microbiology' on Access-2-Archives (www.a2a.org), the online catalogue of UK archives, you will find 39 entries. Not bad? Well you find 63 for genetics, 96 for biochemistry and 216 for physiology. Moreover, microbiology's 39 is misleading – about half are single items of little significance, and the only major collections identified are those of Ernst Chain, Donald Woods, Graham Selby Wilson and Kenneth Smith. Of course, this search misses some important archives – Fleming's papers at the British Library, the Lister Institute records at the Wellcome Library and many of those in Scotland, but the overall result is clear – there are relatively few good microbiology archives, and what there is can be hard to find.

Does this matter? I think it does, but as a historian of bacteriology I would say that. However, I believe that it also matters to microbiologists. Indeed, it matters to all scientists – past, present and future – that those who write the history of science have full and accurate data for their work. This means there must be comprehensive, catalogued and preserved records that are continually supplemented and updated. I'll come back to what should be kept and how after a digression into why the history of science matters.

To begin with, we can only learn how science works by studying it with the perspective of history. And past science does not necessarily mean work at some distant time; history

begins yesterday, if not earlier today! A generation ago it was thought that philosophers of science could tell us how science worked, but their prescriptive ideas on 'the scientific method' were unable to capture the changing diversity of the methods, techniques, analytical styles and forms of knowledge that have been used across the specialisms, disciplines and institutions of modern science. Rather, it is historians of science who study exactly how scientists worked, and why they did what they did, in both the micro-context of the laboratory or field site and the macro-context of institutional and societal factors, that have produced the best understanding of modern sciences. The new histories of science are also different from those of 30 years ago – they are no longer about the discoveries of a few great men, but rather they try to consider all scientific workers, to reflect the routine as well as the exceptional, to understand why and how knowledge is produced, to follow the spread of knowledge and techniques, to understand scientific institutions, and to consider science in society.

What does this mean for records and archives? It is important that all scientists think about their legacy, not just in their publications, but also their notebooks, laboratory protocols, equipment, grant applications and reports, and their professional correspondence. All scientists should leave a representative record of their work, warts and all; politicians and novelists do this routinely, why shouldn't scientists? And do not just think about

The discoveries and work of microbiologists are important to all our lives. But as **Michael Worboys** explains, it's not always easy to research the history of microbiology.

your papers. Do you know of the papers of former colleagues that may soon be lost? It is crucial that we have records of all types of scientific work; who knows what future turn of events will lead to the mundane work of today being seen as a breakthrough tomorrow. Scientists should ideally deposit their papers and other material locally, either with their institution or their professional or disciplinary society, or failing that look to one of the national repositories. It is also important to take advice from professional archivists, not least on how to safely store electronic records.

Microbiology has been and remains an important subject, yet its history is hard to write because of the paucity of sources. This situation needs to be addressed and now is a good time to start. There is no doubt that future historians will regard recent decades as a period of revolutionary change in biology due to the impact of molecularization. Thus, it is now more important than ever that microbiologists ensure that the material is available to study the radical changes, and the continuities, that characterize their subject today.

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