

scientists to predict likely and unlikely achievements in science and technology, by John Meurig Thomas FRS; and 'History of science and technology in education and training in Europe' by Professor Claude Debru of Paris, an abstract of a lecture given at an international conference on the subject. There are also a number of articles for biologists: Brian Ford on 'The Royal Society and the microscope', a well illustrated account of its history from 1663 to the present, best on the later period; Graham E Budd on the ideas of various Royal Society Fellows on palaeontology, from the seventeenth century to the present, also best on the later period (specifically note 5 is incorrect and the citation is erroneous); G E Fogg FRS, 'The Royal Society and the South Seas', the longest article and the most like usual articles in the journal, an excellent factual survey; and two brief articles by the editor, 'Pictures of plants illustrating exotic collections' (in the Society's archives) and 'Royal weather' surveying a few of the Society's contributions to meteorology. Less relevant are two further articles by the editor, 'Time and the Royal Society' and 'The centenary of the National Physical Laboratory,' and 'Zenographic longitude systems and Jupiter's differential rotation' by Raymond Hide, only for the mathematically and astronomically competent.

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Robert Arnott (ed.), *The archaeology of medicine. Papers given at a session of the annual conference of the Theoretical Archaeology Group held at the University of Birmingham on 20 December 1998*, BAR International series 1046, Oxford, Archaeopress, 2002, pp. v, 128, illus., £25.00 (paperback 1-84171-427-5).

Collaboration between medical historians and archaeologists, which was a feature of the Theoretical Archaeology Group conference held in Birmingham University in 1998, is vital. A concern that emerges from many of the papers in this collection is the difficulty of interpreting

historic, textual information: enlightenment comes when it is analysed in conjunction with the examination of archaeological evidence. The papers encompass almost 4000 years of history from the Hittites of Asia Minor, ancient Egyptians, Greek and Roman medicine, Anglo-Saxon and Tudor periods until the near present.

An overview of palaeopathology by Charlotte Roberts explores sources such as skeletal and mummified remains and historical documented evidence, and discusses the importance of archaeologists having some medical knowledge and interested clinicians receiving archaeological training. She cautions against damage to skeletal material with no clearly defined aim as it is a non-renewable resource. Macroscopic and radiographic examinations are of fundamental importance. The CT scanning of the mummies illustrated by Joyce Filer provides maximum information without destruction of the specimens.

Chrissie Freeth notes the universality of dental disease. From Babylonian times until the eighteenth century, toothache was believed to be caused by the "tooth worm". There were many weird suggestions for curing toothache and for the spontaneous exfoliation of a tooth. One example is a prescription by Pliny to touch the offending tooth with the frontal bone of a lizard during a full moon. Despite evidence of dental therapeutics in papyri and other texts, it is surprising that there is so little archaeological verification.

Robert Arnott, the editor, describes written evidence concerning magical medicine in the Hittite Empire and in contemporaneous correspondence which indicates that treatments were imported from Mesopotamia and Egypt. He advises the instigation of the study of skeletal material as the next step.

Caution is advocated by Niall Mckeown in the reading of literary evidence. The Hippocratics considered that invasive medical intervention of the body was likely to result in death. The most common procedures were draining of pus and amputations. Most treatments were based on exercise, diet and pharmacology. In her paper about Roman military valetudinaria, Patricia Baker writes about the problematic identification

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of buildings as hospitals and warns against comparison with the layout of modern hospitals. Sites previously believed to be hospitals may have been used for storage.

Ralph Jackson finds that instruments identified as surgical were finely crafted, and the more common “quasi medical implements” might have had a cosmetic use. From the first century AD there was consistency in form of the mainly bronze or brass instruments. However, Roman blacksmiths could produce steel instruments and in some regions ore yielded natural steel.

Several papers deal with pharmacology. Marina Ciaraldi warns that the “use of modern knowledge of medicinal plants to interpret archaeological assemblages can lead to erroneous conclusions”. Plant remains in *dolia* in the Villa Vesuvio were compared and were consistent with preparations found in writings by Pliny and Dioscorides.

Debby Banham uses a compilation of four collections of recipes for her investigation of Anglo-Saxon *materia medica*. However, this is complicated by botanical name changes throughout history. Sally Crawford and Tony Randall also examine an Anglo-Saxon text, *Bald's Leechbook*, and are of the opinion that, although the described medicine was highly developed, archaeological resources are necessary to confirm the recipes. In his paper about the Mary Rose medical chest, Brendan Derham describes how he examined the contents of the forty-four artefacts found in the barber-surgeon's cabin by various analytical techniques and found medicaments still in use today.

The final papers deal with more recent discoveries. Mouli Start writes about the burials at the Newcastle Infirmary between 1753 and 1845. The majority of skeletons are disarticulated and she speculates that some of the bodies were dissected while this was illegal before the Anatomy Act of 1832. The paper by Megan Brickley concerns the recognition of osteoporosis-related fractures in the eighteenth and nineteenth centuries using historical sources.

These papers, edited by Robert Arnott, emphasize the importance of co-operation between medical historians and archaeologists in

revealing everything possible about medical archaeology.

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**Bernadette Bensaude-Vincent and
Christine Blondel** (eds), *Des savants face à
l'occulte, 1870–1940*, Sciences et Société, Paris,
Éditions la Découverte, 2002, pp. 234, €17.50
(paperback 2-7071-3616-6).

This collection of articles explores the relationship between French science and what ended up being termed the paranormal or occult. In fact the entire volume is devoted to the social and cultural construction of these terms as two polarities in the field of knowledge. The term *occulte* in the 1870s referred to an as yet unexplained but natural phenomenon likely to be scientifically explained in the imminent future. Science, on the other hand, had a broad spectrum of applications and could be combined with a multitude of apparently contradictory beliefs. Philippe Murray in his controversial *Le Dix-neuvième siècle à travers les âges* (1984–1999) explored these apparent contradictions. As this collection demonstrates, the revival of magnetism and spiritualism from the mid-1850s always faced a mixture of scientific fury and open-minded puzzlement that led the spiritualists to establish their lines of enquiry and their publications in a para-scientific manner.

These articles are for the best part descriptive rather than analytical but they all illustrate, in varying degrees of depth, how scientists, journalists such as Camille Flammarion making a trade of disseminating scientific knowledge, or philosophers, could engage with notions of magnetism harking back to Mesmer or even spiritualism imported from the United States in the 1850s. It is less the breadth of support for notions of the occult than the combination of occultism and positivism that is specific to France. Flammarion, discussed by Nicole Edelman, is in this sense archetypal of a scientific interest in the occult. Named by the spirit leader Allan Kardec as his heir,