

## Book Reviews

CHRISTIAN ANDREE, *Rudolf Virchow als Prähistoriker*, Band 1, *Virchow als Begründer der neueren deutschen Ur- und Früh-geschichtswissenschaft*, Band 2, *Briefe Virchows und seiner Zeitgenossen*, Cologne, Böhlau-Verlag, 1976, 8vo, pp. 267, 541, Bd. 1, DM.86; Bd. 2, DM.120.

Virchow is often said to be the most outstanding medical scientist of the nineteenth century and there is a great deal to support this claim. However, he was, in addition, a politician of great ability, and he also carried out extensive research in prehistory and published extensively on it. This latter part of his career has, on the whole, received less attention than it merits, and the present author now remedies this defect.

The first volume begins with a chronology of Virchow's life (pp. 17–48) and a consideration of the field and its origins, the contributions of Virchow and the foundation of the German society. There is also a long chapter (pp. 57–149) on his relationships with fellow workers, who are dealt with in alphabetical sequence. His important role in the discovery of Neanderthal man is described and in conclusion his significance to present-day prehistory discussed. Virchow's voluminous publications on prehistory (1,103 in number), on prehistorical anthropology (246), and on ethnology and German folk-lore (502) are listed and secondary references also given. This remarkable record indicates the extent of his studies. It excels in quality and quantity the publications of many of those who have worked all their lives in this field of endeavour and shows that Virchow was as outstanding in it as he was in medicine.

The second volume consists entirely of 410 transcribed letters written to Virchow, with a few from him. They are almost all from Germans and none is from a British scientist. Together they give further insight into his work and after perusing them and the contents of the first volume one's admiration for Virchow increases even further. No other man contributed so significantly and extensively to so many fields in the nineteenth century as he did.

SILVIO A. BEDINI, *Thinkers and tinkers. Early American men of science*, New York, Charles Scribner's Sons, 1975, 8vo, pp. xix, 520, illus., \$17.50.

The author, who is Deputy Director of the Smithsonian Institution in Washington, D.C., is dealing exclusively with the evolution of the mathematical practitioner involved with practical science during the period from the first British plantations in North America to the first quarter of the nineteenth century. These were the surveyors, cartographers, navigators, and scientific instrument-makers who were usually self-taught, but who have been neglected at the expense of the "pure" scientist of natural philosophy and natural science; the "tinkers" as opposed to the "thinkers". However, their combined efforts contributed significantly to the advancement of the nation and certainly deserve the noble treatment here accorded to them. They were in fact occasionally responsible for important developments in science.

Bedini has produced an excellent book, well written, fully documented and lavishly illustrated; there is also a "Glossary" for the lay reader, and a selected bibliography. It is a pity, however, that he makes little reference to medicine and biology and because of this the book's sub-title is somewhat misleading. So far no-one has explored in depth the influence of the "tinkers" in these fields and the role of the scientific instrument and technology in the evolution of medicine.