

### Book Reviews

by physicians, surgeons, and apothecaries. This was administered by a Health Commission which consisted of four Knights Grand Cross and two Knights, who worked through the chief physician—'princeps medicorum'—who was appointed by the Grandmaster for life.

When the era of the Knights ended with their surrender to General Bonaparte there was a short interregnum until the British took over government and re-established the Infirmary as a Military hospital. It was largely destroyed by the air-raids of the last war.

Medical education started in Malta with the establishment in the seventeenth century of a School of Anatomy by Grandmaster Nicholas Cottoner at his own expense. This developed into a Faculty of Medicine when the Royal University was founded in 1771, its Statutes being based upon those of Bologna. The French abolished it, but it was rapidly re-founded by the first English Governor in 1800, and has flourished since.

Scientific medicine in Malta finds its highlights in the identification of the course of Brucellosis ('Malta Fever'), by Sir David Bruce in 1886, and in the discovery by Professor Sir Themostocles Zammit, in 1905, that the goat is the reservoir of the micrococcus causative of this disease. The latter also introduced the modern agglutination tests for this group of diseases, basing his technique upon that previously described by Widal for the diagnosis of typhoid fever.

There are full descriptions of the present-day medical, social and administrative institutions and services which bear upon the public health of this colourful little island. All this and much more is told very readably, in detail. This must be the definitive work on the Medical History of Malta.

W. S. C. COPEMAN

*Vor und nach Paracelsus. Untersuchungen über Hohenheims Traditionsverbundenheit und Nachrichten über seine Anhänger*, by GERHARD EIS, (*Medizin in Geschichte und Kultur*, ed. R. Herrlinger and K. E. Roths Schuh, vol. VIII), Stuttgart, G. Fischer, 1965, pp. 183, 6 plates, DM. 26.

*Before and after Paracelsus; his debt to tradition and new material on the Paracelsists* is the title of the present volume in which seventeen papers published between 1941 and 1964 have been reprinted. Some of these are difficult of access and all contain new and important manuscript material, mostly from the period immediately preceding Paracelsus and from the personal collections of the author. Dr. Eis is Professor of Germanic Philology in the University of Heidelberg and has to his credit substantial contributions to the history of medicine, especially on late medieval tradition. Paracelsus is in many respects not as original as generally believed; he was anticipated by less well known, but quite important, medieval naturalists whose achievements can only be evaluated from manuscripts here published for the first time. This is the key-note of the present book. It is well proven where the author can show that certain words and phrases supposedly coined by Paracelsus were in fact older and transmitted to post-Paracelsian generations from earlier sources, and where he can demonstrate or make probable Paracelsus' acquaintance with the parlance or substance of late medieval tracts (e.g. on venesection) or prescriptions (e.g. of wound ointments

and plasters) or ethical codes (e.g. sexual abstinence on the part of the physician or operator).

The situation is not as simple and clear in the author's first example which is of eminent interest in medical history at large and concerns Paracelsus' isolation of ether-like products of the interaction of alcohol and sulphuric acid ('vitriol') and the testing of their narcotic properties in chickens. The author's new evidence from manuscripts shows that various animals, including birds, had been treated before Paracelsus with a variety of substances with the intention of inducing sleep or unconsciousness—namely by hunters and fishermen who employed them as bait. Paracelsus' interest in folklore and the traditional methods used by common men is well known and he is likely to have been conversant with the ingredients of baits that had proved effective in the period preceding him. The idea that he was influenced in testing his new substances in animals by the experimental and practical experience of previous generations is indeed plausible, and to have pointed this out, a distinct merit of Eis's research.

And yet the manuscript material submitted, however valuable and interesting in the history of science and technology, does not seem to prove what the author meant to demonstrate—namely that Paracelsus did not operate with ether-like substances and that he was not original in testing them in chickens. This calls for comment which the reviewer would briefly summarize as follows:

(1) The unanimous verdict of the historians of chemistry from Kopp to Partington is that the new substance of Paracelsus was indeed ether or related products with narcotic properties.

(2) That not ether, but simple alcohol (in the form of wine) was used by a confirmed Paracelsist (alongside with hyoscyamus and deadly nightshade) as bait for 'catching fish by hand'. This does not suggest, let alone prove, that Paracelsus used alcohol and not ether. For the latter was not prescribed by Paracelsus for the prosaic purpose of catching prey, but for the treatment of disease in man, notably epilepsy and other nervous complaints requiring sedation. On the contrary, then, the use of wine rather than ether by a Paracelsist for baiting would bring out in relief the new departure of Paracelsus rather than his dependence upon late medieval baiting practice in this matter.

(3) None of the many bait ingredients tested by the medieval authors in animals comes anywhere near the ether-like substances of Paracelsus—the nearest being beer.

(4) Indeed the former had experimented with birds including pheasants, but no chickens were used. In this respect a much closer contact with Paracelsus can be found in the medieval English designation of narcotic hyoscyamus as *henbane*. This usage was adopted in French (*hanebane, mort aux poules*). For detail *Gesnerus*, 1964, 21, 113–125, should be consulted.

(5) That birds having eaten henbane can be caught by hand is found in Konrad von Megenberg's *Buch der Natur* (c.1350). This went through six printed editions in the pre-Paracelsian period (i.e. before 1500) and we have good evidence of Paracelsus' familiarity with it (*Bull. Hist. Med.* 1960, 34, 274–77, and *Gesnerus* 1964, *loc. cit.*). In other words there is no need for recourse to manuscript material in the question at issue.

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The reviewer would conclude: Paracelsus is likely to have been influenced by medieval vocabulary as well as by baiting practice as transmitted in a printed source (Konrad von Megenberg) with which he was familiar. This, however, in no way affects his originality in having (a) used ether-like products in human conditions requiring sedation such as notably epilepsy and (b) devised a true pharmacological test in the experimental animal which in purport and make-up went far beyond medieval baiting experiments.

From the rest of the essays which deal with Paracelsists, confirmed as well as secret, and the actual influence of Paracelsus that comes to light in many unexpected places we would select in particular that on methods of *inducing fever for cure* in the sixteenth and seventeenth centuries (Ant. Mizaldus). The book as a whole and each of the essays forms a publication of great importance not only for the history of Paracelsus, but also for the periods preceding and following him, based as it is on original source material and the profound scholarship and literary resourcefulness of the author. It is an elegant volume and well illustrated.

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