

canonical work of Wrigley and Schofield, *The population history of England* (1981). The section on the decline in infant mortality in this century (p. 237) about which so much has been learnt in the last twenty-five years, is hopelessly inadequate. Instead we get a brief statement of numbers and precious little analysis or discussion.

The author shares with Mr Gradgrind an intense love of facts and lists. Rivers can be polluted, he says, on page 62, and he proceeds to name twenty-four rivers which contained water of “poor to bad quality” in 1985. In the section on ionizing radiation, instead of discussing the dangers of nuclear power and the very difficult problem of interpreting clusters of diseases which has attracted so much attention, he lists the names and locations of fourteen British nuclear and reprocessing plants. How much of a hazard are these plants, and what is the evidence? We are not told.

There are sections for which the kindest word is banal. Believing, as all the inhabitants of these islands do, that the weather affects their health, much space is devoted to maps of rainfall, sunny days, foggy days, air masses and mean temperatures. More facts. Lots of them. But there is also a comic map (fig. 3.6) which purports to show in *exact* detail which areas of Britain are “very bracing”, “bracing”, “average”, “relaxing” or “very relaxing”. Since the author admits that “bracing” and “relaxing” are qualities that cannot be defined or measured I am astonished it was published. Another paragraph, cited because it conveys so much of the character of the book, deals with the effect of wind on health: “Winds can impair acoustal [*sic*] comfort. The noise they generate (‘unwanted sound’) causes degrees of nervous irritation even if it is merely audible. Gales and hurricane-force winds cause structural damage leading to injury and loss of life from collapsing buildings, crashing trees, overturned motor vehicles and motor cycles” (p. 23).

In many sections—for instance table 12.1 on ‘The main causes of death at the end of the Victorian era’, for which no source is given—

there are good reasons for doubting the author’s assertions. Distrust increases as one encounters numerous errors. Many are slight and if they stood alone could be ignored, but collectively they come close to the intolerable. There is no such word as “acoustal”, even if we can guess what he means. The definition of perinatal mortality (p. 238) is badly wrong, the significance of perinatal mortality is not explained, and the values for perinatal mortality given in the text are meaningless without specification of place (England and Wales? Scotland? Britain? the UK?) or year. The definition of incidence (of disease) is wrong (p. 271); the organism involved in peptic ulcer is *Helicobacter pylori*, not *Helicoblaster* (p. 223); Osler is misquoted on p. 231 and on the same page comensal [*sic*] has two ‘m’s. The tragedy of haemophiliacs infected with HIV was not due to blood transfusion (p. 250) but to the fact that factor VIII was derived from pooled plasma. “The Pox” was not a synonym for smallpox (p. 274) but for syphilis, the “Great Pox”. To define “psychopaths” as “persons suffering from an emotional disorder” (p. 236) is about as wrong as it could be.

This is only a sample of the errors. And yet the sad thing is that buried along with the misunderstandings, the banalities, and the errors (slight and not so slight) there is much of a factual nature that is of great interest—as long as one remembers that there are times when, at least as far as detail is concerned, the author cannot always be trusted.

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**D Aichele, M Golte-Bechtle, *Was blüht denn da? Wildwachsende Blütenpflanzen Mitteleuropas*, new revised edition, Stuttgart, Franckh-Kosmos, 1997, pp. 447, illus., DM 29.80 (3-440-07244-4).**

**Werner Rothmaler, *Exkursionsflora von Deutschland*, Bd 1: *Niedere Pflanzen*, eds Rudolf Schubert, Horst Herbert Handke and Helmut Pankow, pp. 811, illus.; Bd 2:**

## Book Reviews

*Gefäßpflanzen: Grundband*, eds Manfred Bässler, Eckehart J Jäger and Klaus Werner, pp. 639, illus.; Bd 3: *Gefäßpflanzen: Atlasband*, eds Eckehart J Jäger and Klaus Werner, pp. 753, illus.; Bd 4: *Gefäßpflanzen: Kritischer Band*, eds Rudolph Schubert and Walter Vent, pp. 811, illus., Stuttgart, Gustav Fischer, 1994–96, DM 185.00 (the set) (3-334-60831-X).

The history of science is doubtless one of the most difficult aspects of historical research. Apart from being a good linguist, a historian of science is required to possess expert knowledge in at least two different subjects—history and science. However, one has to admit, that this constellation of knowledge and interests is rather rare. That is why historians of science are not always able to use special scientific literature, including manuals on science in their research. Therefore, the aim of the present review is to demonstrate how two reference-books on botany, professional herbal and a popular herbal can be used in modern botanico-historical research.

The first of these manuals is a popular herbal by the late D Aichele and M Golte-Bechtle (hereafter Aichele), which since 1965 has been re-edited fifty-six times. It gives laymen without any previous botanical knowledge access to precise definitions of plants. The book consists of a flower atlas (with approximately 600 colour illustrations) of Central European plants and a valuable introduction which contains basic yet indispensable botanical information.

As a starting point in the plant definition the authors use the colour of the flower, considering it to be the most remarkable characteristic of plants. Consequently, the book is divided into five colour sections (white, yellow, red, blue/violet, green/brown), in which the proprieties of different plants are described. The reader is then invited to count the number of petals and to compare the flower with the relevant pictogram (from four to five petals and upwards) in the margins, which in its turn refers to an appropriate picture in the atlas. The final step is to compare the plant under

investigation to several available illustrations of the representatives of the plant family and to make a final definition.

The reader is supplied with useful information about the medical properties of the plant and warned in cases where it is poisonous. A list of German and Latin plant names is also provided at the end of the book.

*Exkursionsflora von Deutschland* launched by the late Professor W Rothmaler has been edited more than a dozen times by a team of the German botanists since it first appeared. Originally this book was also designed to be used by non-professionals (cf. vol. 1, p. 7). However, the information in the current edition is more detailed than in its predecessors, and requires more knowledge of theoretical botany. Its four volumes describe diverse primitive and vascular plants, which are arranged according to their genus, species and families.

As a layman I found that these two books were particularly helpful when used in combination. Plants described (or pictured) in medieval Arabic and Byzantine herbals as well as more modern herbals could be easily identified.

Some examples of personal usage include the following. (1) In the thirteenth-century manuscript of an Arabic translation of Dioscorides' *Materia Medica* (photograph kindly given to me by Dr Alain Touwaide, CSIC) there is a picture of a plant which is defined as a "mountain-mint" *futandj djabali* (*Nepeta cataria* L., var). A comparison of the flower with those given in the coloured atlas in Aichele (p. 312) reveals that the plant under investigation really belongs to the *Labiatae* and is a kind of mint. However, the comparison with the Rothmaler atlas shows that the picture does not entirely correspond to the *Nepeta cataria* L., var. Although its flowers are similar, its leaves and roots correspond to another species—*Nepeta pannonica*. (Rothmaler, vol. 3, p. 474).

(2) There are two illustrations of lily of the valley (*Convallaria majalis* L.) in Adam Lonitzer's *Kreuterbuch* (Frankfurt, 1630). Although one resembles the picture in Aichele (p. 120) the other bears no resemblance at all.

A comparison with the *Liliaceae* in Rothmaler (pp. 605–6) shows that the second plant is in fact Solomon's seal (*Polygonatum multiflorum* L., var., also called *Meyglockchen*). These examples reiterate a common pattern among medieval herbals. The pictures do not always show the plant in question. Rather, they reflect the botanical biases of the illustrator.

Though these volumes are undoubtedly valuable, readers may also find it useful to supplement them with Edourd Ghaleb's *Dictionnaire des sciences de la nature*, 3 vols. Beirut, 1965 (Arabic-Latin-English-German-French), and, more recently, Albert Dietrich (ed.), *Dioscurides triumphans. Ein anonym arabischer Kommentar (Ende 12. Jahrh. n. Chr.) zur Materia medica. Arabischer text nebst kommentierter deutscher Übersetzung. Teil 1,2* Göttingen 1988.

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**Fédéric Obringer,** *L'Aconit et l'orpiment. Drogues et poison en Chine ancienne et médiévale*, Penser la médecine, Paris, Fayard, 1997, FF 150.00 (2-213-59891-6).

More than a study of drugs and poisons in ancient China, this is an analysis of the concept of toxicity in Chinese medicine and culture, from the first written documents to the dynasty of the Sung (960–1279).

The author deals first with the use of toxic substances for therapeutic purposes, a widespread practice in ancient China which shows a deep ambivalence about the notions of drug and toxic agent, perfectly expressed in the chapter title: 'Les drogues toxiques en médecine ou l'art de l'attaque' (toxic drugs in medicine or the art of attack). Further, he focuses on two main classes of toxic agents, widely diffused in China: snakes and the various species of aconite (chapters 2 and 3). Here the analysis is factual: he identifies, as far as possible, the toxic agents, and studies the symptoms of their toxicity or their therapeutic action, as well as therapeutic strategies, the

indications and doses of therapeutics, as well as all other relevant information, using, when necessary and possible, modern data in order to clarify the ancient texts.

In the fourth chapter, Obringer considers the so-called "powder of cold eating": a mixture, supposed to have a therapeutic effect, which became very fashionable from the third century onwards, and which is diversely described in the treatises. He lists its ingredients (among them arsenic), studies its indications and uses, and looks at the social phenomenon it represented. After that, he focuses on what was called *gu*, a very large concept, which extended from magic to true pathologies, and included: social subversion, political fighting or devils, with probably a common notion underlying all these phenomena, that of cannibalism. In conclusion, the author tries to identify the general concept linking all the aspects of toxicity he has studied, which he compares with that of *pharmakon*, associated in ancient Greece with the "seduction of the word". There are differences, however. While in Greece the harm lay in the writing, in China it was located in the word itself; moreover, in Greece the *pharmakon* was considered as an artefact opposed to the reality of being, in China, on the other hand, it was perceived as one of two forces pertaining to being, and in perpetual transformation.

In each chapter the analysis is followed by the French translation (with notes) of ancient Chinese texts dealing with the argument of the chapter (mainly the so-called *Zhubing yuanhou lun* written in 610). At the end there is a bibliography with sources and modern studies; a Chinese index in alphabetical order of the transcriptions into the Latin alphabet accompanied by the original Chinese writing; and index of proper names and of subjects (among others Linnean identification of plants, medical products and active principles).

This book covers a large range of disciplines—from botany and zoology to anthropology and ethnology, including pharmacology and pharmacy—with a skilful use of the sources, translated from the original texts by the author himself. The view is thus