

*Spectrophotometric Determination of Elements.* By Zygmunt Marczenko. Pp. xi+643. (Ellis Horwood: Chichester, February 1976.) £19.50; \$42.90.

THIS volume is one of a series on analytical chemistry being produced by Ellis Horwood Ltd. It is based on original Polish (1968) and Russian (1971) editions, but it has been extensively revised and up-dated for the English version, and now includes nearly 7,000 references, up to the end of 1973.

Part I (100pp) deals with the general principles of spectrophotometric analysis, a survey of available spectrophotometric reagents, and a discussion of preconcentration and separation procedures for the elements. Part II (520pp) is a thorough and systematic practical guide to the separation and determination of the individual elements.

The theoretical background to analytical spectrophotometry is briefly but adequately described in Section I, but this is essentially a practical handbook. Descriptions of the determinations of individual elements are presented in a standardised format, and these descriptions are written in a clear and easy-to-follow style. Several possible analytical procedures are outlined in all cases, and the listing of useful colorimetric reagents is extremely thorough.

A useful feature of Marczenko's book for readers in Western Europe and the US is that it covers the Russian and East European literature comprehensively, and includes references to some journals not readily accessible.

The book is well produced, seems to be reasonably free from typographical errors, and although not cheap it should be a useful acquisition for analytical laboratories, or individual research workers needing to use spectrophotometry to analyse for a wide range of elements.

**G. Davidson**

*Migration and Homing in Animals.* (Zoophysiology and Ecology, Vol. 6.) By Klaus Schmidt-Koenig. Pp. xii+99. (Springer: Berlin and New York, 1975.) DM46; \$18.90.

THIS book provides a short, useful summary of the literature, but its excessive price (the text is only 77 small pages) will prohibit its intended audience of laymen and students from buying it. In any case the style of the book makes it more suitable for a reader who is already familiar with some of the original work than for

the whole clear, if uninspired; however, the text is often too terse and dogmatic for the uninitiated. For example, on p48, orientation experiments with turtles and lizards are dismissed as "methodologically . . . not convincing" with no further explanation. Similarly on p65, it is stated as fact that clock-shifting experiments with pigeons refute the sun-arc hypothesis, without explaining why. I would have thought that an introductory book should not only present results but also explain, where possible, the reasoning behind their interpretation.

The organisation of the book is taxonomic: the author works through various groups of arthropods and vertebrates, in each case summarising the field evidence on migration and homing before outlining the experimental work aimed at elucidating

## Books brief

a complete novice. The writing is on mechanisms of orientation or navigation. The literature survey seems to be accurate and fairly up to date (especially the section on birds—the author's own interest), and the text is well illustrated. Inexplicably, the book ends with an appendix on statistical methods for the analysis of orientation data, which is rather esoteric for an introductory book.

**John R. Krebs**

*The Papers of Joseph Henry.* Vol. 2: November 1832–December 1835—The Princeton Years. Edited by Nathan Reingold. Pp. xxxix+524. (Smithsonian Institution: Washington, DC, December 1975.) \$30.

THIS second volume maintains the high standard and interest of the first (for review, see *Nature*, 242, 481–482, 1973). It consists of letters from and to—and occasionally about—Joseph Henry during his early years as a professor at Princeton, interspersed with notebook entries describing his work on electromagnetic induction and other topics. At first there is little about his research; but once really settled in Princeton, and having established contacts with men of science in Philadelphia, Henry got down to work once more. We see

some of the frustrations of working in what was then a provincial situation, far from the great centres of science in Europe; for although Henry anticipated Faraday in some discoveries his work did not quickly become known outside the USA, and it is only as this volume ends that Henry can be seen making contact with physicists in Europe. These volumes, with their very full and helpful footnotes and indices, not only give us an excellent picture of Henry's social and intellectual life, but are particularly valuable also for casting much light on the gradual formation of a scientific community in the US. Historians will turn to these papers to learn not only about Henry, but about men of science and learning, scientific institutions, and technology in his day as well.

**David M. Knight**

*The Food in Your Future: Steps to Abundance.* By Keith C. Barrons. Pp. 180. (Van Nostrand Reinhold: New York and London, November 1975.) £4.

I TOOK an immediate dislike to Dr Barrons' book, and with each chapter my dislike intensified. It is surely unreasonable of him to collect together as enemies of good nutrition everyone from conservationists to the Pope. He is also out of date. One might expect 'The Great Protein War' to be about the reappraisal by nutritionists of the status of protein in the dietary pantheon. To Dr Barrons it is the basis for future agricultural strategy, although he does not seem to be aware it was an obsolescent one a decade ago.

The final chapter, entitled 'You—A Part of the Solution?', crystallised his view. Future world food needs are to be met by technology, and somebody called Johnny Q. Citizen eating less, wasting less and lobbying congress. Decency, democracy and technology, these three—a strange recipe in an era when the Green Revolution has witted and political cynicism become a way of life. But overall, although Dr Barrons' book is a tedious, stylistic nightmare, his optimism about both the technological fix and the goodness of man is attractive. His claim that agricultural technology has delivered the goods is true. His belief that it would continue to do so is impressive.

I don't like the book, but I admire it for the optimism that pervades it. I shall therefore read it again, and I recommend my colleagues to do the same.

**John Rivers**