

## Weather Parallels and Paradoxes

### (1) Through the Weather House :

or, The Wind, the Rain, and Six Hundred Miles Above. By R. A. Watson Watt. Pp. xi+192+8 plates. (London: Peter Davies, Ltd., 1935.) 7s. 6d. net.

### (2) Weather Proverbs and Paradoxes

By Dr. W. J. Humphreys. Second edition. Pp. xii+126+16 plates. (Baltimore, Md.: The Williams and Wilkins Co.; London: Baillière, Tindall and Cox, 1934.) 9s.

(1) **E**ARLY in 1934, Mr. Watson Watt gave a series of broadcast talks on weather which attracted considerable interest from the novelty of the treatment and the vividness of the imagery. These talks have now been published in a very readable book, illustrated by some good cloud pictures. The "Weather House" as pictured in the frontispiece is a super-sky-scraper of ultra-modern design, with a hundred stories each six miles high, fitted with all modern conveniences in the form of electric lighting, heating and decoration, and all supplied by 'wireless'.

The matter is the familiar matter of any popular textbook on meteorology, with a few additions from the author's special sphere of research, but the exposition is very clear and is certainly helped by the analogies with domestic appliances, though to the meteorologist these become a little tedious at times. Water in various forms naturally plays a large part—"Damp in the Weather House", "Cloud-Weaving", and "The Water Supply", but the author is most at home in the upper stories and his treatment of atmospheric electricity, the ionosphere, ozone and meteors ("Throwing Stones at the Weather House") is especially good. Unusual also is his account of the organisation of synoptic forecasting in a meteorological office—"The Servants' Quarters"—for when looking at a

weather map one is apt to forget, for example, the "comrade in Moscow stamping through the snow" to read his instruments. There is much sound sense if little enthusiasm in the short chapters on "Saws, Saints and Sages", "Controlling the Weather", and "Further Outlook—?"; the last chapter in fact is definitely pessimistic; but the warning is timely.

(2) Weather proverbs are many and varied; some are useless but others contain a grain of truth. Prof. Humphreys sets out to rescue the latter from their undesirable companions, and to clothe them in a garb of logic. The result is an attractive essay in popular science, though not everyone would agree that all the selections are justified, and a few of the explanations seem a little far-fetched. The belief that a grey morning sky betokens a fine day may be capable of explanation, but a 'grey' sky is presumably an overcast sky, and in Great Britain the observations of Spencer Russell have shown that an overcast sky at sunrise is about as likely to be followed by rain before sunset as is a red morning sky. One proverb with at least as much justification as the grey sky at morning has been omitted from the chosen company, namely:

"Rain before seven  
Lift before eleven."

We should like to see more of these proverbs subjected to the test of observation. A few of them are probably true of North America, but will not bear transplanting to Great Britain. Some of the "paradoxes" of part 2 are rather forced, but a few provide interesting examples of the curious working of physical laws. On the whole, the selection, like that of the proverbs, is good, while there can be no two opinions about the excellence of the sixteen plates.

### Spektroskopie

Von Prof. Dr. Karl Wilh. Meissner. (Sammlung Götschen, Band 1091.) Pp. 180. (Berlin und Leipzig: Walter de Gruyter und Co., 1935.) 1.62 gold marks.

THIS little book is not intended for spectroscopists, but rather for non-specialised students of physics who need a straightforward elementary account of spectroscopic principles and methods. The scope is wide, scarcely any major branch of the subject escaping at least brief notice, the presentation orderly and clear, and the diagrams astonishingly numerous in

relation to the low price of the book. The emphasis is laid, on the whole, on the instrumental side of the subject, and the explanations of the various types of high-resolution spectroscopy are particularly well done.

It is, in fact, just the right kind of book for an honours student of physics who wishes to read some German, for, though simple in style and in matter, it is yet sufficiently informative to be read for its own sake and not merely for reading practice.

**Numerical Studies in Differential Equations**

By Prof. H. Levy and E. A. Baggott. Vol. 1. Pp. viii+238. (London: Watts and Co., 1934.) 12s. 6d. net.

THE teaching of differential equations in English universities usually follows an unsatisfactory middle path. General theory is omitted as too difficult, while numerical methods are considered unworthy of notice. In consequence, the student is made acquainted with only a small number of special types of equation and is left to believe that nothing can be discovered about the solutions of other types. A reading of even the first two chapters of this book by Prof. Levy and Mr. Baggott would alter the outlook of many such students completely. The second chapter, on graphical methods of solution, would form an excellent addendum to a course in curve-tracing, the two together being used to illuminate wide tracts of algebra, geometry, and the calculus.

The main portion of the book is concerned with the numerical solutions of ordinary differential equations of the first and higher orders, consideration of partial differential equations being reserved for the second volume. Many methods, some well-known, some apparently new, are given and their degrees of accuracy are discussed and compared. It is impossible to estimate the value of these methods without long experience in their use, but they appear to be sufficient for most purposes and some of them are of considerable theoretical interest.

There are a few obscurities which might have been removed by careful revision, and a larger number of examples for practice might well have been included. These are minor criticisms, and detract but little from the value of a book which should be in the hands of all who are engaged in research in applied mathematics and of all who are interested in the improvement of mathematical teaching.

**Faune de France**

28: Dipteres (Brachycères), (Muscidae Acalypterae et Scatophagidae). Par E. Seguy. (Federation française des Sociétés naturelles: Office central de faunistique.) Pp. iii+832+27 plates. (Paris: Paul Lechevalier et fils, 1934.) 300 francs.

THIS systematic survey of the acalyptrate muscid flies testifies to the skill and industry of its author. Numerous keys in the form of tables, short clear descriptions with remarks on differential characters of the families, genera and species, and 903 text figures in addition to 27 plates facilitate, so far as is possible, the identification of these flies. Under each species is a note of the area of distribution and, where known, the period of occurrence of the imago. In those species, the larvæ of which are phytophagous or parasitic, the food-plant or host is stated. In nine pages is a summary of the bionomics of these lower muscids, and at the end of the volume are alphabetical lists of their animal hosts, with their respective parasites and commensals, and of the plants and their respective muscid parasites. A good bibliography and systematic index complete this very satisfactory work.

**Wild Flowers of the Great Dominions of the British Empire**

By The Lady Rockley. Pp. xii+380+32 plates. (London: Macmillan and Co., Ltd., 1935.) 16s. net.

THE non-botanical traveller, who is unable to use a technical flora, often feels in need of a book which will help him to appreciate the vegetation of the various lands he visits and which will indicate what floral treasures are especially worth his notice in particular areas. Lady Rockley, in the present volume, has given the traveller in the British Dominions just such a guide, and her book will undoubtedly appeal to a large public of flower-lovers.

The countries dealt with include Canada and Newfoundland, Australia, New Zealand, South Africa, Rhodesia and Kenya. An immense amount of information has been packed into Lady Rockley's attractively written pages, and the coloured illustrations, many of them painted by the author during her travels, with no thought of publication, add greatly to the value of the volume.

**Birth Control and its Opponents**

By Frank W. White. Pp. xi+164. (London: John Bale, Sons and Danielsson, Ltd., 1935.) 3s. 6d. net.

IN this little book, the facts of population and over-population, and the wastage of human life that results under uncontrolled conditions of mass reproduction, are first marshalled. The regulation of births and limitation of population by artificial methods are then detailed, and the benefits likely to arise therefrom stated. Finally, the arguments of the opposition to artificial methods for the control of pregnancy are set out and examined.

No better brief and popular summary of the subject of birth control could be found than is given here, and as Lord Horder says in his foreword, Dr. White deals patiently and convincingly with the arguments that are advanced against it by a small section of the community. It may be hoped that a growing public opinion will in time convert religious authority, from which the chief opposition at present emanates.

R. T. H.

**A Flower Book for the Pocket**

By Prof. Macgregor Skene. Pp. 380. (London: Oxford University Press, 1935.) 7s. 6d. net.

THIS pocket-book is meant for the layman and also as a first 'flora' for use in schools. 501 flowering plants are illustrated in coloured plates, most of which are reproductions of the paintings by the late Miss C. G. Trower. The rest, together with 28 black and white drawings of grasses, are the work of Miss Ruth Weston. To our knowledge, there is no other book at the price which is so profusely and well illustrated. So far as is possible, technical terms have been avoided. The key includes all British families, and the sequence follows that of the standard British 'floras'. It has been compiled by Prof. Macgregor Skene. Thus, the book has the stamp of authority, is well produced and, unlike many 'floras', is easy to follow. This, together with its low price, should ensure the book of the success that it clearly deserves.